

# The AVOID Programme

## Providing key advice to the UK Government on avoiding dangerous climate change

### Policy-relevant evidence and research

The ultimate objective of the UNFCCC is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system – (Article 2, UNFCCC).

The international community has taken steps to reduce greenhouse gas emissions during the first commitment period of the Kyoto Protocol (2008 to 2012). However, scientific evidence indicates that the commitments accepted during this first period, on their own, will not deliver the UNFCCC's greenhouse gas stabilisation objective.

Hence there are a number of vital questions that need to be further explored in the run up to the 15th Conference of the Parties to the UNFCCC in Copenhagen

(December 2009) and beyond, including:

- How much do global greenhouse gas emissions need to be reduced to avoid dangerous climate change?
- How soon do we need to begin making reductions?
- How can we achieve those reductions?
- What are the impacts and risks of different levels of climate change?
- What will we need to do to adapt to climate change that can't be avoided?

To explore these questions, the Department of Energy and Climate Change (DECC) and the Department for Environment, Food and Rural Affairs (Defra) are funding a programme to provide policy-relevant evidence and research on avoiding dangerous climate change.

*“Copenhagen 2009 will be the moment in history in which humanity has the opportunity to rise to the challenge and decisively deal with climate change. It is beyond the shadow of doubt that greenhouse gas emissions have to be radically reduced to keep climate change from sliding into climate chaos. Once we slide into climate chaos, there will be no place left to hide for anybody.”*

Ivo de Boer, Executive Secretary to the UNFCCC – 26 January 2009, London

### AVOID will provide the following:

The three main outcomes of the programme will be:

- Policy-relevant evidence and research needed to achieve international agreement on greenhouse gas emission reductions for CoP15 and beyond.
- Core research for understanding dangerous climate change and its implications (including impacts, economic and social consequences and responses).
- A framework that will further encourage the integration and communication of scientific and socio-economic research on climate change.

During the first year of the Programme AVOID's main aim will be to provide targeted evidence and guidance on the climatic impacts and economic consequences of potential climate policies, ahead of CoP15 in Copenhagen.

The programme will work – both in 2009 and beyond – to fill gaps in knowledge of climate change and its consequences more broadly. At the same time, AVOID will be developed to involve more stakeholder partners and a wider research effort, with additional expertise from the UK and elsewhere.



AVOID will help us understand how climate change might affect the frequency of extreme events like floods and droughts.

## The benefits of AVOID will be:

- The UK Government better placed to achieve international agreement on emissions reductions.
- Mitigation and adaptation policy even more strongly grounded in scientific evidence.
- Scientific information more accessible and relevant to a wide range of stakeholders.
- Research on all aspects of climate change more effectively integrated in the UK.



Climate change is likely to reduce food production potential, especially in some already food-short areas. AVOID will help to quantify the changes that can be expected.

## The implementing consortium – four leaders in the field

The AVOID Programme brings together, for the first time, four of the most established providers of climate change advice in the UK:

- Met Office Hadley Centre
- Walker Institute, University of Reading
- Tyndall Centre
- Grantham Institute, Imperial College

The combined expertise of the consortium includes climate research, impacts analysis, economic modelling, integrated assessment modelling, and analysis of mitigation technology and socio-economic changes. Thus the AVOID outcomes will be delivered across the whole range of needs

– from up-stream science to the implications for, and responses of, society.

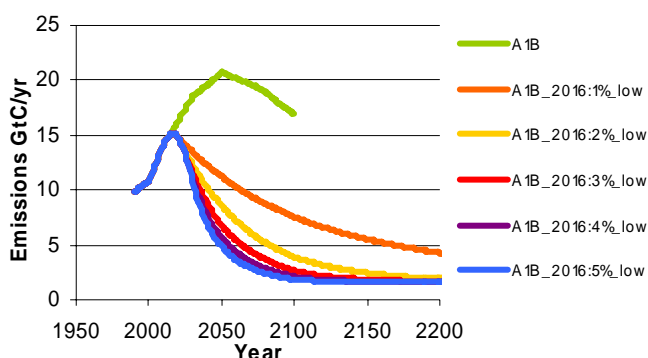
The consortium members will work together to provide evidence needed by stakeholders to underpin climate change negotiations and to inform future mitigation and adaptation policy. They will also put in place a framework that will allow further integration and communication of research into this vital issue, and will work to involve other stakeholders and researchers in AVOID – with the aim of building it into a multi-faceted, multi-stakeholder programme.

### Some programme outcomes:

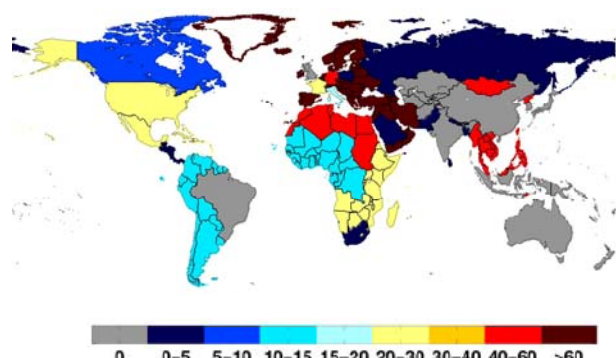
- Quantification of the emissions reductions needed to avoid dangerous climate change
- Characterisation of the impacts avoided by different levels of emissions reductions
- Improved understanding of adaptation measures needed to cope with unavoidable climate change
- Economic implications of mitigation and adaptation
- Communication of climate change research to a wide range of stakeholders
- Coordination and integration of climate change research

## Examples of products from AVOID

**Emissions of greenhouse gases** for AVOID scenarios with peak emissions in 2016 and eventual reduction rates of 1-5% leading to a low emissions floor. The A1B scenario is shown for comparison.



**Impacts of climate change – water stress:** Millions of people at increased risk of water stress in 2050 under an AVOID mitigation scenario, peaking in 2016, with a subsequent low emissions floor.



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If you would like to receive updates on the progress of the AVOID programme please send an e-mail to: [avoiding@metoffice.gov.uk](mailto:avoiding@metoffice.gov.uk)