

The AVOID Programme

AVOIDnote Number 1 (updated September 2010)

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). International negotiations aim to reduce greenhouse gas emissions to achieve this objective. But, by how much do we need to reduce emissions? is there an “acceptable” upper limit of global temperature rise that would prevent dangerous climate change?

There is an urgent need for further information on:

- How to **achieve 2°C temperature** limit to inform adaptation and mitigation policy.
- How to **address key gaps and uncertainties** in climate and socio-economic science, impacts of climate change and adaptation strategies.

The AVOID programme

The aim of the AVOID programme is to provide policy-relevant scientific and technical evidence to improve understanding of dangerous climate change to inform domestic and international mitigation and adaptation strategy. In particular the programme address three core questions:

- What levels of climate change are potentially dangerous?
- What emissions pathways will avoid “dangerous” climate change?
- What is the technical and economic feasibility of such pathways?

A key aspect of the programme is to communicate results and information on dangerous climate change to the public through a range of channels (website, newsletters, museums).

The AVOID programme quantifies and communicates the avoided impacts and residual impacts for a range of mitigation policies.

The UK Committee on Climate Change recommended a limit of 2°C or less above pre-industrial levels. Greater warming could lead to unacceptable levels of climate impacts and is more likely to trigger accelerated or irreversible environmental changes. This limit has been endorsed by the G8/G20 and by the Copenhagen Accord.



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

Our approach

To address the challenge of providing policy-relevant information on avoiding dangerous climate change, an extendable consortium approach combining expertise from different institutions was needed. The UK Department of Energy and Climate Change (DECC) and the UK Department for Environment, Food and Rural Affairs (Defra) stepped up to the challenge and are funding this unique programme.

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. The programme promotes cross-disciplinary work and communicates its policy-relevant findings to stakeholders

Delivering the AVOID programme involves drawing on expertise from a wide network of UK and international research institutes. The organisations and individuals who contribute results or provide advice make up the **AVOID network** of researchers.

Further growth of the programme from stakeholders outside DECC and Defra is also taking place. AVOID has been accredited under the UK Research Council-led 'Living with Environmental Change Programme (LWEC)', which aims to provide UK's decision makers with the best information to manage and protect vital ecosystem services. In addition to the AVOID programme engaging with LWEC to support the aims of that programme, AVOID is also taking on projects which are aligned with and support AVOID core research.



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

Available results:

- A range of mitigation emission scenarios to explore the change in climate and associated impacts of different policy decisions.
- Characterisation of the impacts avoided by different levels of emissions reductions on different sectors: water resources and availability, ecosystems and biodiversity, food security, health, coastal systems.
- Implications of emission reductions on ocean acidifications.
- Economic implications of different mitigation options and adaptation strategies.
- Assessment of the technical feasibility of some of the mitigation policies.
- Future changes in extremes under aggressive emissions reductions.

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