
Publishable Summary: 18 Month Update

The objective of the ClimateCost project is to advance the knowledge on the economics of climate change, focusing in three key areas:

- The economic costs of climate change (the costs of inaction).
- The costs and benefits of adaptation.
- The costs and benefits of long-term targets and mitigation.

To progress this, the study has work package objectives to:

1. Identify and develop consistent climate and socio-economic scenarios, including for mitigation.
2. Quantify the effects of climate change in Europe, in physical terms and economic costs (for coastal zones, health, ecosystems, energy, water and infrastructure), and identify the costs and benefits of adaptation.
3. Assess the impacts and economic costs of major catastrophic and socially contingent events.
4. Update the costs of mitigation, including (induced) technological change, non-CO₂ GHG and sinks, and recent abatement technologies.
5. Quantify and monetise the ancillary air-quality co-benefits of mitigation in Europe, China and India.
6. Develop a number of global level economic Integrated Assessment Models (IAMs).
7. Provide policy relevant output, including modelling analysis of policy scenarios.

The project aims to advance multi-disciplinary research, developing integrated bottom-up and top-down analysis, and directly engaging policy makers to provide policy relevant outputs.

The research work performed during the reporting period by work packages, and the main results achieved, are summarised below.

The study also has a focus on producing high quality research with an aim to publish this in academic papers. Within this first reporting period, two papers from the study have been published – several are due for publication shortly – and at least a further ten are submitted or in final preparation.

Work performed and results so far for scientific tasks

WP	Work performed	Main results so far
1	Review of research needs, existing climate change and socio-economic scenarios. Recommended guidance on scenarios. Synthesis and dissemination of data.	Successfully identified research needs (Deliverable 1.1). Reviewed, proposed and agreed scenarios (Milestone 1, Deliverable 1.2) for the study and supplied to the consortium (Milestone 2) (see web-site climatecost.dmi.dk).
2	Sectoral review of the literature on the economic costs of climate change and the costs and benefits of adaptation. Updates and methods agreed for sectoral analysis.	Successfully completed six detailed sectoral reviews of the literature (Deliverable 2.1, Milestone 3). Sectoral models have been updated (Milestone 4) and most have completed a first run for Europe.
3	Literature review on major tipping elements and advanced progress on socially contingent effects. Identification of case studies.	Successfully completed a review on major tipping elements (Deliverable 3.1) and agreed subsequent work (Milestone 5), which will include a case study on major sea level rise.
4	Review of endogenous technological change and R&D accounts for mitigation models. Developed technological detail of new technologies in POLES model. Developed GEM-E3 model, including agriculture sector (including mitigation) and marginal abatement costs	Successfully built a database of satellite R&D accounts for the models (Deliverable 4.1). Updated new technological detail in the POLES model. Updated GEM-E3 model to improve agriculture sector (including mitigation) and marginal abatement cost (Deliverable 4.2).
5	Advanced work on ancillary air quality benefits. Review and development of method for health quantification and valuation. Set-up models with scenarios to produce outputs for economic analysis.	Work on new method for health quantification and valuation near to completion, ready for assessment. Models ready for producing outputs for economic analysis (Milestone 7)
6	Update of General Circulation Models (GCMs) and Integrated Assessment Models (IAM), with work activities brought forward. Major re-development of the PAGE model, the tool used to estimate economic costs in the Stern Review. New modules and developments to FUND model. New module for impacts for GEM-E3 model.	A new version of the PAGE (09) model has been successfully developed completed, reviewed and ready for dissemination: early model results were presented at COP15. New developments to FUND model have been completed, including storm module, work on equity (inequity aversion), sensitivity of functions and deep uncertainty.
7	Programme of policy engagement undertaken, and review of potential policy uses and frameworks to maximise the relevance of project outputs.	Numerous meetings with policy makers (DG Env. and other relevant organisations). Successfully completed review of policy approaches and existing policy use (Deliverable 7.1) and developed frameworks (Milestone 10).

In addition to the scientific tasks, the project has undertaken relevant dissemination and management activities during the period.

Work performed and results so far for dissemination and management tasks

WP	Work performed/results so far
8	<p>The study has produced a website, (Deliverable 1) and maintained and updated this (Milestone 11), a dissemination plan (Deliverable 8.1) and undertaken a wide range of dissemination activities including at COP14 and COP15, presentations at EC working group, UNFCCC meetings and other events.</p> <p>The project has successfully undertaken consortium management tasks (Work Package 9). This includes a project presentation and overview (Deliverable 9.1) a project plan (Deliverable 9.2), and the successful organisation of the first reporting period, including the 18 month periodic report (Deliverable 9.3) and financial statements.</p>
9	<p>The management team has set up an internet based knowledge management system (deskaway) to manage activities electronically within the project. The project has held four successful project team meetings (half yearly, as per milestones).</p> <p>The team also supported specific requests by the Commission services, including side-events at UNFCCC meetings (Poznan, COP14 and Copenhagen, COP 15). The project has also, at the request of EC RTD, participated in an EU-JAPAN climate research cooperation meeting (in Tokyo) and a joint event in Moscow on Global Climate Change and Adaptation research. The team has also networked extensively with other FWP6 and FWP7 programmes.</p>

The expected final results will lead to a more complete, updated assessment of cost of mitigation, impacts and economic costs of climate change, and the costs and benefits of adaptation. The potential impact of the project will be primarily through the outputs and results, which will be highly relevant for European Commission climate policy, as well as for Member States. A key aim of the project is to adopt a strong policy focus, providing outputs that link directly to policy needs, e.g.

- The project will provide relevant information for Commission Services in relation to the Adaptation White Paper, particularly under the proposed EU action area 3.1, '*developing the knowledge base*'. This includes information for the Impacts, Vulnerability and Adaptation Clearing House, as well as for the action to '*assess the cost and benefit of adaptation options by 2011*'. This information will also be of benefit for other organisations (European Environment Agency) and Member states.
- The study will also provide updated models and results that will be of high relevance for the Commission and others, in relation to short- and long-term GHG emission reduction targets. This includes information on the economic consequences of tipping elements, case studies on major sea level rise, an updated suite of policy mitigation models (e.g. POLES, GEM-E3, PACE), estimates of the co-benefits of mitigation for Europe, China and India, an updated suite of global economic IAM models for use in policy analysis, and new results on the costs of climate change, and costs and benefits of policy.

These outputs and results will be disseminated through workshops, as well as study brochures, synthesis reports, electronic media and press releases, and will produce a mix of technical and non-technical outputs. The results of the project will also provide valuable research inputs, as measured through the publication of academic papers.

Project contacts

Project Co-ordinator

– Tom Downing +44(0)1865 426316, tomdowning.sei@gmail.com

Project Technical Co-ordinator

– Paul Watkiss +44(0)797 104 9682, paul_watkiss@btinternet.com



Further information

To find out more about ClimateCost, please visit

www.climatecost.eu

ClimateCost