

ECONADAPT

The Economics of Adaptation



ECONADAPT is a research project funded by the European Union Seventh Framework Programme (FP7). The objectives are to build the knowledge base on the economics of adaptation to climate change and to convert this into practical information for decision makers, in order to help support adaptation planning.

To advance these objectives, the project is focusing on key methodological issues and producing empirical data for a range of adaptation problems, and centring the research on the main challenges for European adaptation.

The project aims to work closely with policy makers to co-develop analysis and outputs, and to ensure that the research is grounded in practice. This will also encourage dissemination and transferability of the information in a user-orientated form. To help achieve this, the programme of research aims to:

- Focus on user needs, defined by stakeholders, that inform the methodological and empirical research gaps and priorities;
- Embed the economic assessment of adaptation within a framework of existing policy analysis, emerging policy developments and other socio-economic trends;
- Derive new and improved estimates of key parameters that influence the economic assessments of adaptation, including social preferences across time and space;
- Develop approaches that encourage and facilitate consistency in the treatment of scale, uncertainty, aggregation and transferability of economic assessments of adaptation;

- Develop and test approaches that are fit-for-purpose for cost and effect/benefit estimation in adaptation economic assessment, including non-monetary metrics;
- Expand the range of adaptation actions, and types of costs and benefits considered, including non-technical options;
- Apply the methods and data into decision contexts where the economic costs and benefits of adaptation will be significant, and where results have high spatial transferability;
- Facilitate the effective dissemination of methodological and empirical outputs.

The project frames the overall research by asking two questions, each addressed in a separate but linked work -stream.

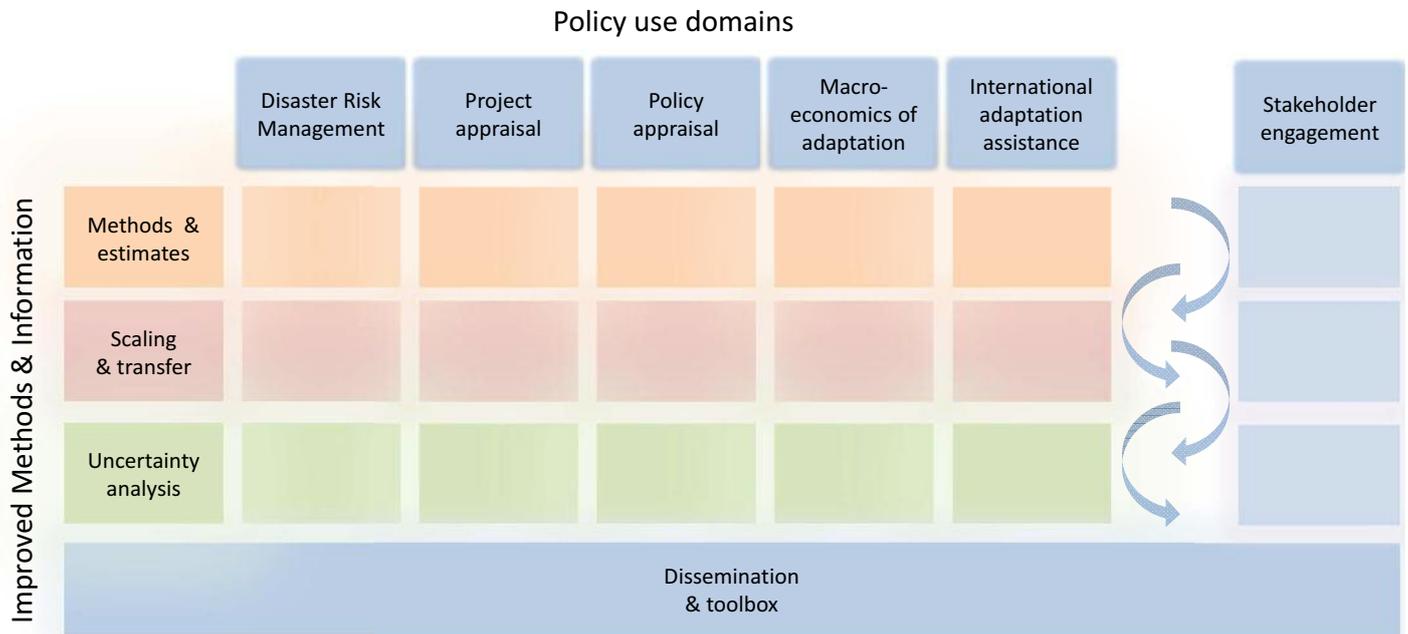
First, what are the key methodological advances needed to improve the economic assessment of adaptation?

Second, what are the big adaptation decisions facing Europe in the next decade where these improved economic methods could be applied?

The first stream of research therefore focuses on improving the analytical methods to tackle the challenges of adaptation and to enhance the information base.

The second stream frames the project from an end-user perspective, focusing on those areas (policy domains) which are likely to need more advanced economic analysis of adaptation.

The two are brought together as shown below.



Methodological Advances

The first major work stream is advancing the methodological approaches for the economics of adaptation, shown on the left in the figure above. This involves three major areas of research.

Methods and estimates

This task will advance the analysis of adaptation, including: the quantification of capacity building; the consideration of distributional and non-monetary aspects; and the consideration of adaptation and mitigation /adaptation and development frameworks. It will also collate and analyse data on the costs and benefits of adaptation and advances the analysis of future values, including risk and ambiguity, learning and option values, and changing preferences. The task will also undertake primary valuation studies in three countries to survey preferences for different types of adaptation.

Scaling, transfer, aggregation

The second area of research focuses on the consistency and comparability of estimates. It will address the problem of how to transfer adaptation cost and benefit values from one study to another, taking account of time and location, and the issues in aggregation from local to macro-economic scales. The task will develop transfer guidance and also investigate methods for assessing systemic changes and adaptation transformation.

Uncertainty

The final area of focus is on uncertainty. This addresses the question of how to quantify uncertainty, extending existing methods and tools, and developing new techniques that are applicable in policy decision support.

Policy Domains

The second work stream takes the methodological advances and applies them to five key policy areas for Europe, using case studies to test the developments in each of these contexts.

1) Disaster Risk Reduction

Current climate variability already leads to high economic costs in Europe, including from major floods. Climate change is likely to increase these extremes, even in the short-medium term. As these will be amongst the highest near-term economic costs, managing these risks is an early priority for adaptation.



2) Project appraisal

A major priority is to include adaptation into economic policy appraisal of large infrastructure projects, because of the long life-times and high exposure to future climate change. This includes existing planned investment (risk screening), but also new future investment specifically designed to respond to climate change, recognising the need to consider uncertainty for both.



3) Policy appraisal

The mainstreaming of adaptation in policy appraisal – especially where there are large flows associated with including adaptation in major EU funding areas – requires additional elements to current (regulatory) impact assessment, including the need to address scale and time preference issues.



4) Macro-economics of adaptation

There is an increasing interest in the macro-economic effects of adaptation, and how to assess goals relating to competitiveness, growth and public finances. This involves addressing challenging scale and aggregation issues.



5) International Adaptation Assistance

One of the major flows of adaptation funding – consistent with international pledges – will be from Europe (EU and MS) to developing countries. The effective use of this overseas assistance to address current climate variability and future climate change involves additional challenges, set within the wider context of development



Stakeholders, dissemination and toolbox

ECONADAPT has a policy-centred approach. The research incorporates stakeholder involvement throughout the project, and a series of policy workshops are planned to ensure a dialogue with potential end-users. The final major activity is to develop a toolbox that provides guidance on the methodological approaches and summarises the case study findings. This will help inform the wider application of economic assessment to adaptation decision-making.

The toolbox will include a data-repository on cost and benefit estimates and guidance on application. The tools and outputs will be provided using a two-track approach. The first set of outputs will provide information for a technical audience, i.e. users of economic information. The second set will have a more accessible light-touch approach – to ensure broader dissemination and use by a non-economist audience.

The ECONADAPT project commenced in October 2013 and will run for 36 months. The research has received funding from the European Union Seventh Framework Programme (FP7/2007–2013).

To find out more about the ECONADAPT project, please visit the web-site: www.econadapt.eu.

For further information on the project contact Alistair Hunt at: ecsasph@bath.ac.uk

For further information on the policy applications, co-production and stakeholder engagement, contact Paul Watkiss at: paul_watkiss@btinternet.com

The views expressed in this publication are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Commission. The European Community is not liable for any use made of this information.

Photos: Project team / I-Stock (©iStockphoto.com)

ECONADAPT is co-ordinated by the University of Bath (UK) and involves 14 teams across Europe.



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH



WAGENINGEN UNIVERSITY
WAGENINGENUR