



The Ice2sea Programme Office

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Chile: Centro de Estudios Científicos

Denmark: Danish Meteorological Institute;
DTU-Space, Danmarks Tekniske Universitet;
Geological Survey of Denmark and Greenland;
University of Copenhagen, Niels Bohr Institute

Finland: CSC – Teiteellinen Laskenta Oy

France: Centre National de la Recherche Scientifique

Germany: Alfred-Wegener-Institut für Polar
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Iceland: Institute of Earth Sciences,
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Ente per le Nuove tecnologie, l'Energia e l'Ambiente

The Netherlands: Universiteit Utrecht

Norway: University of Oslo;
Norwegian Polar Institute

Poland: University of Silesia;
Instytut Geofizyki Polskiej Akademii Nauk

Switzerland: University of Zurich

United Kingdom: British Antarctic Survey;
Met Office Hadley Centre; University of Bristol;
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Estimating the future contribution of continental ice to sea-level rise.

2009-2013



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Framework 7 Programme



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Sea-level rise

Fifteen EU countries have substantial coastlines that will be affected by global sea-level rise. Within these coastal regions

- ▲ economic assets within 500 metres of the sea have an estimated value between €500 and €1,000 billion;
- ▲ 47,500 km² of sites within 500 m of the coastline are identified as having high ecological value;
- ▲ the population has more than doubled to 70 million people – currently 14% of the entire EU population.

In many of these coastal areas, future sea-level rise will increase rates of coastal erosion, accelerate the destruction of natural sea defences and increase the risk of coastal flooding. Developing policies to protect our coastlines, and reduce the impact on lives and livelihoods of EU citizens demand the best projections of sea-level rise available.



U.S. Coast Guard & NSIDC

Nansen Glacier, Greenland

Overview

Ice2sea is a collaborative research programme involving 24 institutional partners. Ice2sea is specifically focussed on the contribution to sea-level rise that will arise from loss of continental glaciers and ice sheets and which give rise to the largest part of the uncertainty in the projections.

The ice2sea programme receives funding from the European Commission through the Framework 7 Programme (FP7) and from the many national agencies funding the institutional partners.

The programme will run for four years, (2009-2013) with a schedule designed to provide input to the next Intergovernmental Panel on Climate Change (IPCC) assessment of climate change and its impacts.

Research themes

Ice2sea has twin goals of improving the science behind sea-level prediction, and of providing new sea-level projections based on the most up-to-date climate projections. These goals will be realised through

- * targeted studies of key processes in mountain glaciers, ice caps, and in the polar ice sheets (Greenland and Antarctica);
- * improved satellite determinations of current changes in continental ice mass;
- * development of more reliable techniques for predicting the response of ice-sheets and glaciers to environmental change;
- * delivery of comprehensive projections of the contribution of continental ice to sea-level rise over the next 200 years.

We will deliver these results in forms accessible to scientists, policy-makers and the general public, and include clear presentations of the sources of uncertainty.

North Sea Protection Barrier, The Netherlands



The Programme

The ice2sea consortium consists of 24 project partners, from the institutes listed overleaf. These include universities, research institutes, and commercial companies, from 13 European countries.

The various aspect of science research, management and delivery, are undertaken through five interrelated work packages, each led by an expert in the field.

W1 – Programme management
(David Vaughan)

W2 – Key glacial processes
(Frank Pattyn)

W3 – Model foundation and validation
(Andreas Ahlstrøm)

W4 – Projection of climate forcing
(Hartmut Hellmer)

W5 – Projection of glacial change
(Tony Payne)

W6 – Synthesis and dissemination
(Jonathan Bamber)



Environment Agency

Thames Barrier, London, United Kingdom