



European Commission's 7<sup>th</sup> Framework Programme  
Grant Agreement No. **226520**

Project acronym: **COMBINE**

Project full title: **Comprehensive Modelling of the Earth System for Better  
Climate Prediction and Projection**

Instrument: Collaborative Project & Large-scale Integrating Project

Theme 6: *Environment*

Area 6.1.1.4: *Future Climate*

ENV.2008.1.1.4.1: *New components in Earth System modelling  
for better climate projections*

Start date of project: 1 May 2009

Duration: 48 Months

**Milestone Reference Number and Title:  
M5.3. Strategy 2 for ocean initialization completed**

**Lead work package for this milestone: WP5**

**Organization name of lead contractor for this milestone: ECMWF**

**Due date of milestone: October 2011**

**Actual submission date: November 2011**

## M5.3: Strategy 2 for Ocean Initialisation

The initialization of the ocean is at the core of the decadal prediction efforts. The first objective of WP5 was to implement feasible ocean initialization strategies for the Earth System models in the project that will take part on the CMIP-5 comparison. The second objective is to evaluate the adequacy of different initialization strategies, namely full initialization and anomaly initialization. To this end, a limited number of models have implemented an alternative initialization strategy in addition to their baseline one. This will allow the assessment at a later date.

The table below shows a summary of the Earth System model initialization strategies. There are 3 models (HadCM3, EC-EARTH and ECMWF) where the full initialization and anomaly initialization have been implemented.

Model	Partner	Ocean initialization
HadCM3	METO	Full field Anomaly
EC-Earth	KNMI SMHI	Full field Anomaly
ECMWF	ECMWF ECMWF	Full field Anomaly

**Table 1:** Summary of ocean initialisation implemented in a range of models