



European Commission's 7th 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:
M6.2 Potential predictability experiments Stream 1**

Lead work package for this milestone: WP6

Organization name of lead contractor for this milestone: CMCC

**Due date of milestone: October 2010
Actual submission date: October 2010**

M6.2 Potential predictability Experiments (Stream 1)

One of the major objectives of WP6 is the assessment of the predictability of the climate system on decadal time scales and, to this aim, a series of experiments have been planned within the work-package. In particular, the experiments have been designed to assess the potential impact of new model components and initialization schemes on the decadal predictability. Table 1 summarizes very concisely the major characteristics of the planned Stream 1 potential predictability experiments.

Partner	Models	Initialization	New Model Components
CMCC	CMCC	Ocean and Sea-ice from a spin-up state	Stratosphere
MPG	COSMOS	Ocean and Sea-ice from a spin-up state	Stratosphere, Carbon cycle (diagnostic), interactive aerosols
EC-Earth: KNMI,DMI, SMHI, UCL	EC-Earth	SMHI, UCL sea-ice	Stratosphere (DMI) Sea-ice (SMHI, UCL) Land surface (KNMI)
MF-CNRM	CNRM-CM	Sea-ice from ERA40 analysis and Satellite obs.	Sea-ice

Table 1. Summary of the planned potential predictability experiments, reporting names of the partners involved, names of the models used, initialization techniques and model components specifically considered in the tests.

The Milestone M6.2 consists of producing the simulation experiments aimed at assessing the predictability of the climate system on decadal time scales, focusing in particular on the role of specific model components and initialization.

Means of verification: the milestone is reached once the Stream 1 of the predictability experiments have been performed by all of the partners as summarized in Table 1.

As reported in the first activity report of WP6, during the first 18 months of the project, all of the partners involved in the Stream 1 predictability experiments have worked to achieve the objective of the task. Specifically, they have implemented the model components and initialization methodologies according to planned design of the experiments. Then, the models and the experimental set-ups have been tested and the experiments initiated. Now, the experiments have been either completed or they are expected to be finished by the end of December 2010.

The results of the Stream 1 predictability experiments will then be analyzed and discussed in the COMBINE deliverable D6.2.