



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:**

**M8.2 Statistical analysis of means and extremes in precipitation and  
temperature fields completed; global and regional drought indices due to new  
feedbacks in ESMs**

**Lead work package for this milestone: WP8**

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

**Due date of milestone: 1.09.2013**

**Actual submission date: 30.10.2013**

We have analysed the output of six different Earth System Models used within the Combine project:

1. MPI-ESM-LR
2. IPSL-CM5A-LR
3. HADGEM2-ES
4. ECEARTH
5. CNRM-CM5
6. CMCC-CESM

For all ESM's except for the CMCC-CESM model the historical, the rcp85 and rcp45 data were collected. For CMCC-CESM only the historical and the rcp85 data series were available.

The meteorological variables included in the series are: windspeed, maximum temperature, minimum temperature, mean daily temperature, surface downwelling shortwave radiation, surface downwelling longwave radiation, precipitation and snowfall.

Bias corrected datasets at half degree grid for the land surface were created for the abovementioned variables using the methods described in Deliverable 8.2.

The datasets were used for the statistical analyses of different meteorological indicators.

In addition these dataset were used to force the Global Impact Models LPJml, VIC and WaterGap.

Datasets are stored at the server at Wageningen University and are available upon request, to other institutions.