

# SPECIAL PROJECT INTERIM REPORT

Interim Reports should be 2 to 10 pages in length, depending on importance of the project. All the following mandatory information needs to be provided.

**Reporting year** 2016

**Project Title:** Land surface interaction and climate change over Africa by means of a coupled Regional climate Model to a biogeochemical land-surface scheme.

**Computer Project Account:** SPJRCFIR

**Principal Investigator(s):** Alessandro Dosio

**Affiliation:** European Commission – DG Joint Research Centre, Institute for Environment and Sustainability (IES) Climate Risk Management Unit  
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**Name of ECMWF scientist(s) collaborating to the project** .....  
(if applicable) .....

**Start date of the project:** 2014

**Expected end date:** 2016

**Computer resources allocated/used for the current year and the previous one**  
(if applicable)

**Please answer for all project resources**

		Previous year		Current year	
		Allocated	Used	Allocated	Used
<b>High Performance Computing Facility</b>	(units)	400000	0	400000	0
<b>Data storage capacity</b>	(Gbytes)	100	0	100	0

**Summary of project objectives**

(10 lines max)

The main objective of the project is to couple the regional model COSMO-CLM to the biogeophysical land surface scheme CLM4.0 and to assess the performances of the new coupled model over Africa. The main objective of the first phase of the project is the technical implementation of the models (both COSMO-CLM and CLM4.0) and the coupler OASIS. In addition, before running climate simulations, a long spin-up needs to be run in order to get the biospheric carbon pools in in equilibrium. Planned simulations include a 20 year evaluation run with perfect boundary conditions (ERA-Interim) over the period 1989-2008, following the CORDEX guidelines. Focus will be on the analysis of the differences between the new coupled model and the standard COSMO-CLM, on the reproduction of the present African climate.

**Summary of problems encountered (if any)**

(20 lines max)

Unfortunately, this year the planned work has not been completed due to a series of factors:

- 1) Technical problems: the porting of the code on the Cray machine has not been fully completed, yet.
- 2) Lack of human resources: the JRC has undergone a reduction of staff, making impossible to recruit or replace personnel, even on temporary basis
- 3) A major reorganization of the JRC with change in the Institutes and Units' structures, resources and activities

**Summary of results of the current year (from July of previous year to June of current year)**

See point above (problems encountered)

**List of publications/reports from the project with complete references**

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**Summary of plans for the continuation of the project**

(10 lines max)

*Planned runs and validation:*

We still plan to use some SBUs to test the implementation of CCLM and CLM4.0, including the coupler OASIS. Unfortunately, at the moment it is not possible to foresee precisely the amount of resources (person and time) that can be allocated to the project.