

# SPECIAL PROJECT PROGRESS REPORT

Progress 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** .....2014.....

**Project Title:** **Influence of tropical land-use transformations on local and regional climate in Sumatra/Indonesia**  
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**Computer Project Account:** .....

**Principal Investigator(s):** Merja Tölle  
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**Affiliation:** University of Göttingen, Germany

**Name of ECMWF scientist(s) collaborating to the project (if applicable)**  
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**Start date of the project:** 1.1.2014

**Expected end date:** 31.12.2016

**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)				
<b>Data storage capacity</b>	(Gbytes)				

**Summary of project objectives**

(10 lines max)

To gain knowledge of the ecological impacts of transformation of rainforest into agricultural systems in Indonesia this project will combine measurements and modeling approaches to upscale the fluxes of carbon, nitrogen, biotic and abiotic drivers to landscape level and study their interactions between land and atmosphere. Climate projections (A1B) modeled by General Circulation Model (planned: ECHAM5-MPIOM) will be dynamically downscaled to regional and local scales by means of a Regional Climate Model. The uncertainties of projections will be evaluated. The models' outputs will be tested for biases. The land surface model coupled with the regional climate model will be parameterized with the help of our water, energy and greenhouse gas measurements and remote sensing. The effects of spatial and temporal variability on ecological functions will be quantified. With this we will improve the sustainability of land use in lowland tropical regions.

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

(20 lines max)

Later start of Cray system.  
Problems with porting and installation of the RCM on the new Cray system.

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

This section should comprise 1 to 8 pages and can be replaced by a short summary plus an existing scientific report on the project

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Due to pregnancy with health difficulties which disabled me from work in 2014 it was not feasible to start with the project as planned. During my parental leave I started to port and install the regional climate model to the new Cray system which is ongoing work.

**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)

Continuation of installation of the RCM on the new Cray system.  
After first test runs, simulations can then be started as planned.