

AMAZALERT Newsletter



A research project on impacts of climate change and land-use change in Amazonia

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Editorial

The AMAZALERT project is at its half-way point. Time to have a look at how far we have come and where we are going. Time also to proudly present the first AMAZALERT newsletter. At a glance, you will find news on AMAZALERT's project life, project outputs, and project people. Keep updated and enjoy!

Why AMAZALERT?

The Amazon region is under severe threat from both deforestation and climate change. Scientists have already shown that it may suffer from accelerated degradation if certain thresholds are crossed. AMAZALERT aims to investigate the likelihood and the predictability of this happening and the influence people and policies are having on the processes. We will advise on possible early warning systems.



Project Midterm Meeting (March 11-15, 2013)

This March, the project was at its half-way point. A meeting was held at Wageningen UR to review progress and plan ahead. Whole-day special sessions were held on 1) the principles and set-up of early warning systems and 2) the use of new science insights in policy evaluation. Moreover, AMAZALERT scientists met representatives of other relevant projects represented in Wageningen.



This issue's

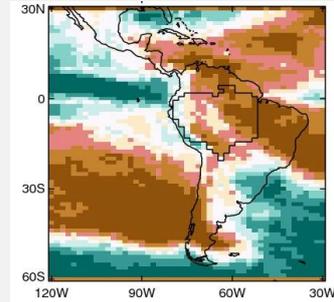
highlights:

- Editorial
- Why AMAZALERT?
- Project Midterm Meeting
- Projections of climate and land use change in Amazonia
- News from the field
- Policy analysis
- Just published
- Amazalert work to be presented

Projections of climate and land use change in Amazonia

The report on **DELIVERABLE 3.1.** presents multi-model projections for the Amazon basin from the state-of-the-art in climate and earth system modelling. The simulations were carried out according to different IPCC scenarios of greenhouse gas concentrations, and include land use change consistent with development pathway and policy decisions. The implications of these IPCC scenarios on Amazonia can thus be explored.

[Read more](#)



News from the field

Bart Krujit reports:

"We travelled to the Caxiua reserve, a 24-hour boat trip west of Belem, to study the temperature response of photosynthesis and photosynthetic capacity in combination with the long-term drought (rainfall exclusion) experiments carries out there.

A team of six Brazilian and Dutch scientists spent 10 days in the area. We measured leaf photosynthesis at several temperatures, CO₂ values and light values throughout the day.

We also installed heaters to heat up leaves over long time periods. In May 2013, we will come back to these leaves and re-measure photosynthesis, to see whether the temperature response has acclimated to higher temperature. In May, data will also be collected on the relationship of carbon use in trees and drought".



Policy analysis

Both national and international policies and initiatives affect land use in the Amazon – directly and indirectly. **DELIVERABLE 4.1** reviewed the international context as well as Brazilian policies.

On international level, climate and energy policies, REDD efforts, bioenergy mandates and international standards and certification systems are of high importance. In Brazil, the reform of the Forest Code, the Action Plan for Prevention and Control of the Legal Amazon Deforestation, as well as land tilling and agricultural zoning form major elements for steering land use in the Amazon and beyond.

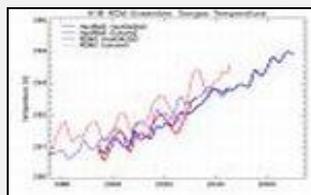
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AMAZALERT work to be presented at IMPACTS WORLD 2013

The IMPACTS WORLD 2013 conference in Potsdam assembles the results from the Inter-Sectoral Impact Model Intercomparison Project (ISI-MIP). The goal is to provide a global impact assessment based on newly developed climate and socio-economic scenarios. **Anja Rammig (PIK)** will present a regional in-depth analysis on the fate of the Amazon under climate- and land-use change to contrast these results with results from global models.

[Read more](#)



Just published ...

Recently reported uncertainties in the simulated climate responses to land-use changes urge the development of benchmarking methods based on observations. Techniques similar to that developed by **Juan P. Boisier** and colleagues, to estimate the past large-scale changes in surface albedo based on satellite data, are applied regionally, and in key variables for Amazon climate/ hydrology such as evapotranspiration. [Read more](#)

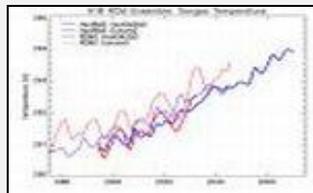
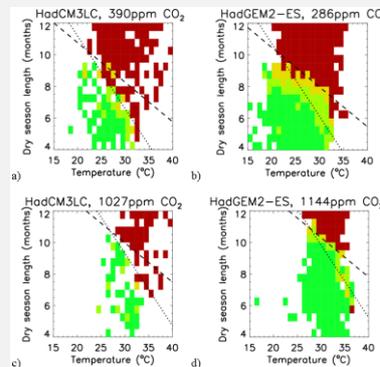
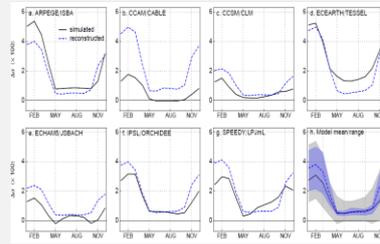
Understanding climate change impacts on the Amazon. **Peter Good's** (MetOffice) article examines how the science has moved on since the first Met Office climate model to simulate vegetation response projected extensive Amazon dieback from climate change alone.

[Read more](#)

Model simulated resilience of tropical forests to climate change, though large uncertainties remain.

A study led by **Chris Huntingford** (CEH, UK), but including several AMAZALERT researchers, explores the effects on tropical forests of uncertainties in projected climate changes and in representation of vegetation processes in models.

Read article in [Nature GeoScience](#) and in [Nature](#)



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Next Newsletter

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