## Head line: `New EU- South America research on Amazon die-back, climate and deforestation starts in October'

Deforestation in the Amazon has been decreasing over the last 6 years, but it appears that the downward trend may have stopped, this year. Apart from deforestation, the Amazon rainforests are also reported to be sensitive to climate change. In turn, the forests play an important role in regulating climate, rainfall and South-American water supply. Are the Amazon forests, its waters, climate and society are under threat of degradation over the coming decades because of global climate change and regional deforestation?

Scientists from 14 renowned European and South-American research institutes have started a new, ambitious research programme, called 'AMAZALERT' to forecast what may happen to the Amazon over the coming decades. Some reports have suggested that under continued climate change and deforestation the forests of the Amazon may be vulnerable to some form of die-back. The aim of AMAZALERT is to test how likely this prediction is, and if so, to forecast where in the region, when and how this may happen.

This team, led by Dr. Bart Kruijt of the Dutch Wageningen University and Research Centre (WUR) and Dr. Carlos Nobre of the Brazilian National Space Research Institute (INPE) will design a system to detect the signs of widespread forest degradation and to enable early warning if irreversible forest loss appears likely. AMAZALERT will also evaluate the impact and effectiveness of public policies and measures to prevent Amazon degradation.

The 4.7 Million Euro AMAZALERT project, jointly funded by the European 7<sup>th</sup> Framework programme and national organizations, will hold an inaugural meeting from 3-5<sup>th</sup> October, at the premises of the Centre for Earth System Science of, INPE, in São José dos Campos, São Paulo state, Brazil.

## **Background**

To reach its ambitious goals, the AMAZALERT team will bring together information available from previous work on regional climate, sensitivities of forests and the water cycle, deforestation, the impact of laws and human responses to change in the Amazon Basin. For example there is a wealth of observations from programmes such as the Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) and simulations of global climate change, carried out for IPPC reports will be explored in detail as well.

However, models of climate, vegetation, and their interactions are constantly evolving and systematic information on the role of people and society in the functioning of the Amazon as a region is scarce. In particular, better understanding is needed of the feed-backs in the system, for example, the interactions between the changing land surface and the climate in the Amazon region. An important goal is to understand the workings and impact of the recycling of rainfall by the presence of forest. If this process altered, perhaps through large-scale forest loss, deterioration of Amazonia's ecosystems might follow.

AMAZALERT will also improve our understanding of the role of fire, and how people, agriculture and governments will respond to changes in the climate and environment. The team will directly involve stakeholders from institutions and governments to include their perspectives in modelling and to assist in development of a blueprint for an Early Warning System.

In 3 years' time, the project should provide a set of greatly improved tools to evaluate, and assist in decision-making on the future management of the Amazon region, including ways to monitor the functioning of the Amazon to avoid irreversible changes to its environment.

Web site: www.eu-amazalert.org

**Key words**: Amazon, rainforest, climate change, environmental degradation, climate models, vegetation models, society adaptation, early warning system, policies.

Time and place: 3-5 October Kick-off meeting at INPE, Sao Jose dos Campos, SP, Brazil;

Project: 2011-2014 project duration, Brazil, Bolivia, Colombia, Peru, Europe

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