



# REDD-ALERT

<b>Project title:</b>	Reducing emissions from deforestation and degradation through alternative land-uses in rainforests of the tropics (REDD-ALERT)
<b>Project contact:</b>	Meine van Noordwijk
<b>Timeframe:</b>	May 2009–April 2012
<b>Funding partner:</b>	European Union (EU)
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<b>Location:</b>	Indonesia (Jambi), Vietnam (Bac Kan), Cameroon (Central Plateau), Peru (Ucayali)
<b>Partners:</b>	Macaulay Land Use Research Institute, UK (lead agency); Université Catholique de Louvain, Belgium; Vrije Universiteit Amsterdam, Netherlands; Georg August University of Göttingen, Germany; Center for International Forestry Research; International Institute of Tropical Agriculture, Nigeria; Centro Internacional de Agricultura Tropical, Columbia; Indonesian Soils Research Institute; Research Centre for Forest Ecology and Environment, Vietnam; Institut de Recherché Agricole pour le Développement, Cameroon; Instituto Nacional de Investigacion y Extension Agraria, Peru
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## Background

REDD-ALERT builds on the ongoing work of the Alternatives to Slash and Burn Partnership for the Tropical Forest Margins, which has been focusing since 1994 on local and global causes and consequences of deforestation by smallholder farmers. We bring together partners with experience in international climate policy analysis, deforestation drivers, greenhouse-gas measurement and human-environment modelling.

The aim of REDD-ALERT is to understand what influences attitudes to deforestation, how these attitudes then affect individual and societal behaviour and, finally, how this behaviour influences greenhouse-gas emissions.

The findings will be interpreted in relation to current and future United Nations Framework Convention on Climate Change (UNFCCC) policy on deforestation and emissions and within the broader context of the sustainable use of tropical forests.

## Activities

As part of the Centre's contribution to the wider project, we sought to understand the drivers of land-use change. We collected time-series data using remote sensing, GIS and socio-economic surveys and established a

comprehensive database. To quantify and monitor land-use change, we built a hierarchical legend of land-use systems, including associated multiple phases of land cover and created a 'groundtruth' database that includes carbon-stock density and determinants of private and social profitability of land uses. We also analysed satellite images with quantified and controlled overall uncertainty in carbon-stock estimations and analysed changes in carbon stocks both inside and outside the defined 'forest' areas. We carried out a spatial analysis of 'abatement cost curves' (CO<sub>2</sub> emissions per unit change in net present value) and began design of a monitoring system that can be used for (sub) national reporting of gross and net emissions. To quantify greenhouse-gas emissions from land-use change we conducted year-round sampling and carried out laboratory analyses of soil carbon, fertiliser application and emission rates.

Policy options addressing tropical deforestation have been developed through a series of regional case studies. We selected high and low deforestation sites to identify effective policy levers for reducing deforestation and how those policies affect the drivers of deforestation that have already been identified. We paid special attention to the bio-fuel sector and experience gained from Clean Development Mechanism forestry projects.

To help develop a REDD negotiation support system we created a Fair and Efficient REDD Value Chains Allocation (FERVA) methodology that synthesised local people's and policy makers' perceptions, fears, ambitions and expectations for any potential REDD scheme in their area. This helps educate and prepare potential participants in any such scheme. We were able to give the results of the FERVA method to national representatives, empowering their discussions with EU negotiators at UNFCCC forums.

## What remains to be done?

The project team will work on completing inventory data and a definitive boundary of the Hutan Desa Lubuk Beringin with KKI-WARSI; continue the efforts to establish a monitoring system that can be used for (sub) national reporting of gross and net emissions, relating the costs of monitoring to the expected benefits; and finalise a soil carbon map for the province of Jambi in Sumatra.

We are also preparing a number of publications such as an article on contributions of oil palm root and the effect of applications of N fertiliser on CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emission rates; a comprehensive report on reducing emissions from all land uses (REALU); accounting for emissions beyond the carbon link using the Forest, Agroforest, Low-Value Landscape or Wasteland (FALLOW) model; an article, 'Diversity deficits in modelled landscape mosaics', by GB Villamor in the journal *Ecological Informatics*; policy briefs on the way local perspectives on REDD can be compared with those at the international negotiations level and used in quantitative scenario models; and publications on participatory scenario analyses of plausible REDD mechanisms in benchmarks in Asia, Africa and Latin America.

## Publications

Akiefnawati R, Villamor GB, Zulfikar F, Budisetiawan I, Mulyoutami E, Ayat A, van Noordwijk M. 2010. *Stewardship agreements to reduce emissions from deforestation and degradation (REDD): Lubuk Beringin's hutan desa as the first village forest in Indonesia*. ASB Policybriefs 18. Nairobi: ASB Partnership for the Tropical Forest Margins.

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