GSE FM *newsletter*

February 2009, 5th issue

Dear Reader,
We are happy to inform you with news about GSE FM in our fifth newsletter. While approaching the end of GSE FM Stage 2, our cooperation is still going strong and gaining momentum.
With kind regards, Stefanie Linser (Austrian Environment Agency, UEB Chair)

In this issue:

REDD Activities in GSE FM within the process of the COP13 and COP14

By Sharon Gomez, GAF-AG, Germany

The Reducing Emissions from Deforestation and Degradation (REDD) Pilot Projects for Cameroon and Bolivia which began implementation in 2007 under the GSE FM are both progressing with various technical developments and different levels of donor support. ESA supported the inception of both pilots and funds were used primarily for the Earth Observation (EO) Task; thus the funds made possible the acquisition of EO data (national coverage) for both countries, for the periods 1990, 2000 and 2005/2006. In both countries progress towards producing the forest mask for these epochs and mapping the related land use change between these time periods is underway. In Bolivia also first attempts at designing and implementing a sampling system for collection of field data for degradation is well underway.

In October 2008 the German Development Bank KfW, further supported the REDD Pilot Project in Cameroon in the context of the GSE FM activities. The GTZ-COMIFAC programme has also been supporting in-country activities in the REDD pilot in Cameroon. The REDD Pilot in Cameroon provides a framework for implementation of such projects in the Congo Basin region. Key activities that the Cameroon case has thus far implemented are:

- The formation of a national REDD Steering Committee in Cameroon which is comprised of the main stakeholders who are required to drive the process. The committee had its first meeting in December 2008.
- Methods for monitoring deforestation and degradation using satellite data (national coverage) are being developed and tested in different test areas.
- The technique proposed by Souza et al. (2007) to monitor degradation has been modified and implemented in another focus area in the South-east of Cameroon.

It is anticipated that national results for Cameroon will be finalised in 2009 before the 15th UNFCCC Conference of Parties (COP15), thereby providing Cameroon with an opportunity to assess the viability-technically and economically-of implementing REDD as a post-Kyoto mechanism.

At the end of 2007, the COP13 in Bali concluded with a Bali Action Plan which outlined clear activities for countries to engage in related to REDD. It also was stressed that the needs of local and indigenous communities should be addressed when action is taken to reduce emissions from deforestation and forest degradation in developing countries.

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Decisions at the COP14 in Poland further affirmed these activities and recommended technical meetings in 2009 to further methodological issues relating to reference emission levels for deforestation and forest degradation and their relationship with relevant reference levels, and also relating to as well as to the role and contribution of conservation, sustainable management of forests, changes in forest cover and associated carbon stocks and greenhouse gas emissions and the enhancement of forest carbon stocks to enhance action on mitigation of climate change and to the consideration of reference levels.

Thus it is envisaged that the REDD activities for Cameroon and Bolivia initiated under the GSE FM with new donor funds will follow the processes presented at the COP13 and 14, in order to present viable country results for the policy development which should be finalised at the COP15 in Copenhagen, December 2009. The COP15 aims to finalise the post-Kyoto mechanisms and countries are required to have adequate national REDD demonstration activities and results which will provide practical experiences to assist in the formation of the policies.

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GSE FM Service Case for Indonesia

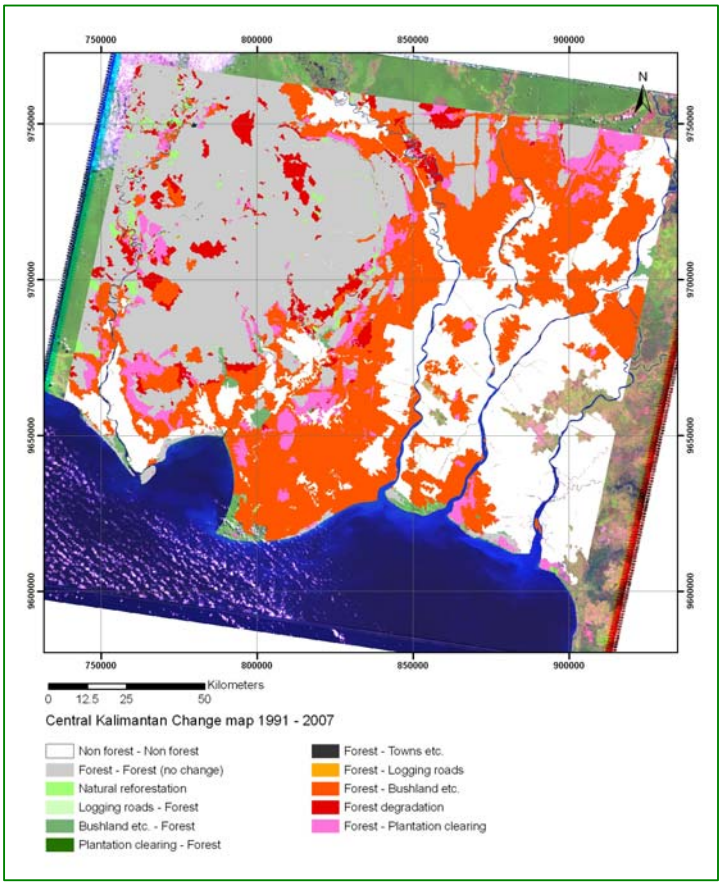
By Florian Moder, RSS GmbH, Munich, Germany

Indonesia is endowed with some of the most extensive tropical forests in the world, which have an exceptional biological richness. Millions of people depend directly on the forests for their livelihoods. In addition, these forests serve as a carbon sink, and thus reduce emissions of greenhouse gases. Nationwide ground-level forest inventories are unavailable; thus, data on afforestation, reforestation, and deforestation, and their corresponding carbon fluxes are needed. An operational service providing this information is required to satisfy Indonesia's commitments with respect to the Kyoto Protocol, ratified in December 2004.

Within the GMES project, 'GSE Forest Monitoring', Remote Sensing Solutions GmbH, based in Munich, developed an operational information service to support the Indonesian forestry administration. Five sites, representative of various landcover change processes, such as logging, industrial plantations, and fire were investigated to provide a basis for service development. A methodology was developed to assess the land use/land cover and different forest types (LULCaFT) and their changes over time based on remote sensing data, and link them to field data of above ground biomass (AGB) and carbon content. The methodology used for estimating annual greenhouse gas inventories from the 'Agriculture, Forestry and Other Land Use' sector follows recently issued IPCC 2006 Guidelines for National Greenhouse Gas Inventories. The IPCC Guidelines provide approaches to estimate emissions from removals and changes in biomass, dead organic matter, soils, and livestock.

Top: Pristine peat swamp forest, bottom: burnt peat swamp forest, Central Kalimantan.

One study site is located in Central Kalimantan / Indonesia, where three landcover classifications and related biomass assessments were completed for 3 different points in time (1990, 2000, 2007). Major drivers of biomass loss and correlated CO2 emissions (from deforestation), including land use conversions from forests to plantation, fires, and illegal logging were observed here (Figure 2). Results showed that about 403 Mt of CO2 (equivalent to about 50% of the anthropogenic CO2 emissions from Germany in 2006) were released through deforestation at the site over the past 16 years. This equates to a loss of 110 Mt C. Even more carbon was released through the decomposition and burning of peat soils; but, those emissions are not the subject of the GSE FM project.



Change Map 1991 – 2007, Central Kalimantan

GSE FM Catalogue – Check it out!

If you want to find out more about the GSE-FM service cases please visit the GSE FM catalogue: www.informus.de:8080/portal

The catalogue informs about the background of GSE FM, presents the offered services, introduces the service providers and users, and provides GSE FM resources such as documents or data products for download possible.

Users warmly welcome to Stage 2 final meeting!

Please mark in your calendars that the 12th progress and final meeting in stage 2 of GSE Forest Monitoring will be held during three days in the period of 20-24 April 2009. All users are warmly welcome to this event. A special session dedicated to continuity of networking forest sector users and advocating their interests in GMES, will be organized in a parallel event. We will send you more details as soon as they become available.