



GEO Global Forest Observations Initiative: Brazil's Contribution





GEO, the Group on Earth Observations

An Intergovernmental Organization with **87**
Members and **61** Participating Organizations



U.S. Department of State,
Washington DC



The Vision for GEOSS

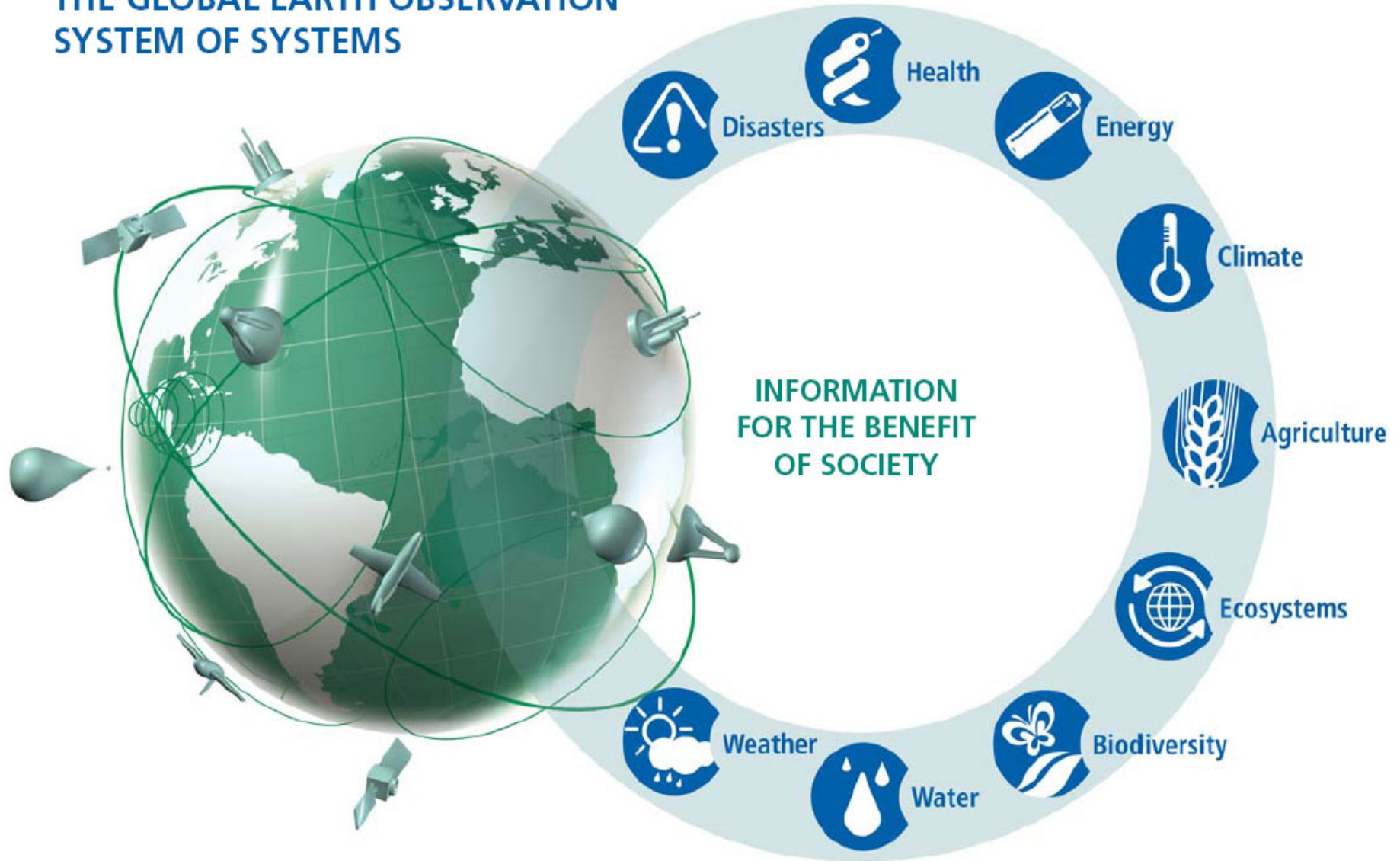
The Group on Earth Observations is coordinating efforts to build the GEOSS:

Global Earth Observation System of Systems

To create a world where decisions and actions are informed by coordinated, comprehensive and sustained Earth observations.



THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS





Access to Data and Information

Users
discover
and exploit
resources
contributed
to GEOSS



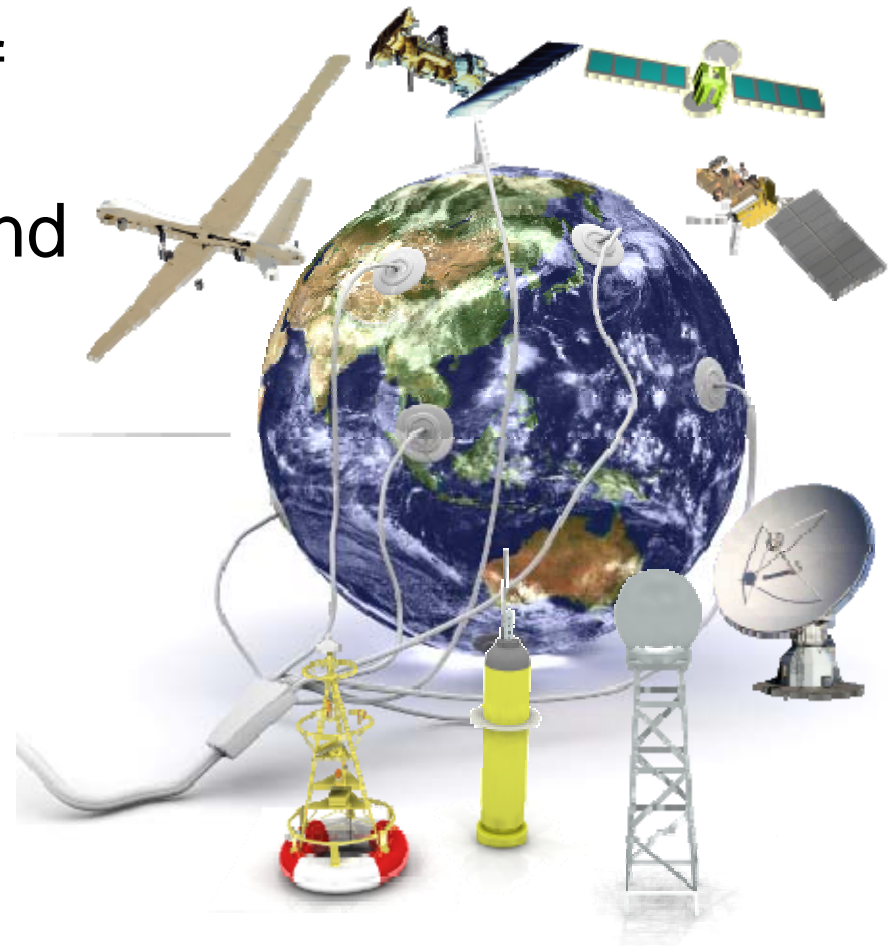
Contributors
register
observation
systems,
data sets and
services





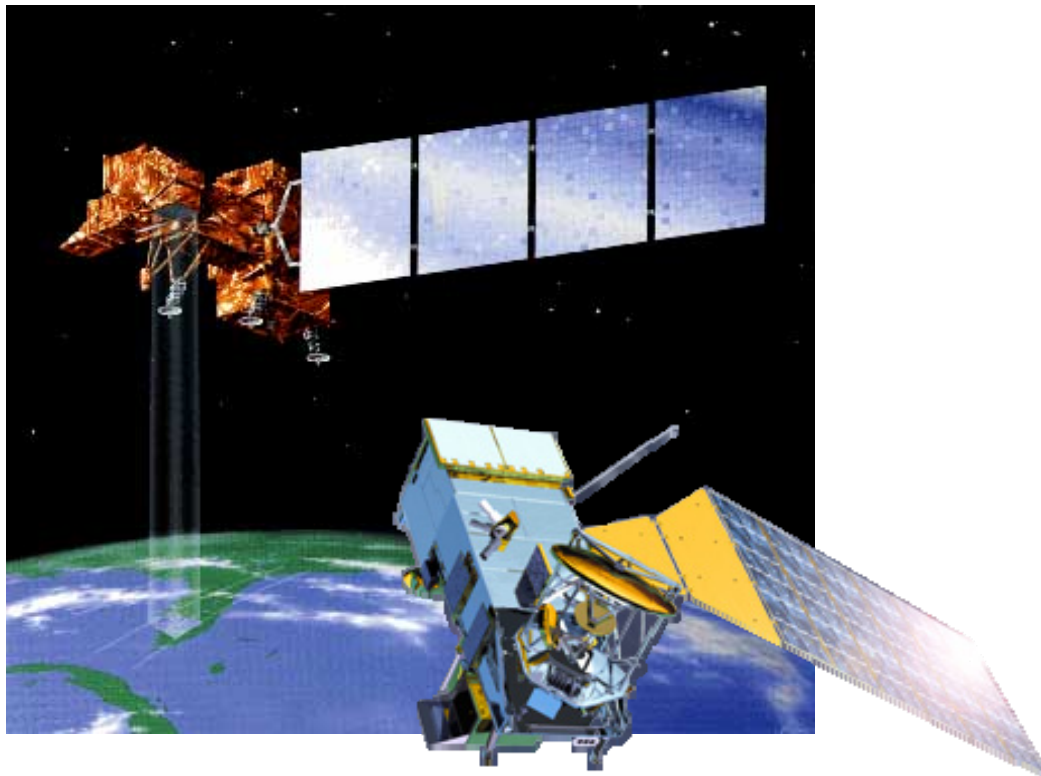
GEO Data Sharing Principles

- Full and Open Exchange of Data, recognizing Relevant International Instruments and National Policies
- Data and Products at Minimum Time delay and Minimum Cost
- Free of Charge or minimal cost for Research and Education





Free and Open Access to Satellite Images: CBERS (China/Brazil), LANDSAT (USA)



April 13, 2006



March 19, 2006



Forest Carbon

- **15 to 20% of global carbon emissions are thought to arise from tropical deforestation**
- **Reduced deforestation and increased reforestation is a rapid response mechanism for reducing emissions**
- **Significant environmental, social and economic benefits parallel the climate benefit (biodiversity, ecosystem services,...)**



GFOI - Background

- ✓ Significant investments are being made by governments worldwide to reduce greenhouse gas emissions resulting from deforestation and forest degradation.
- ✓ Actions to conserve and enhance forests are expected to deliver about one third of the total climate mitigation effort across all sectors – and the effectiveness of these actions is critically dependent on the capabilities of national forest information and reporting systems, and their ability to provide the necessary data.
- ✓ Multilateral frameworks such as the REDD+ Partnership and the Forest Carbon Partnership Facility (FCPF) of the World Bank and various bilateral agreements often underpin these investments. Approximately US\$ 4 billion has been dedicated towards fast-start funding to support developing countries in their efforts to reduce emissions from forests during 2010-2012.



GFOI - Background

- ✓ The need for robust national monitoring, reporting and verification (MRV) systems is **widely accepted as pre-requisite for countries to participate in new international agreements and markets related to forest carbon** .
- ✓ Continuity, timeliness and affordability in the supply of observations for these national MRV systems is essential for their efficient and sustainable operation.
- ✓ **This is the need being addressed by the Global Forest Observations Initiative (GFOI) of the intergovernmental Group on Earth Observations.**



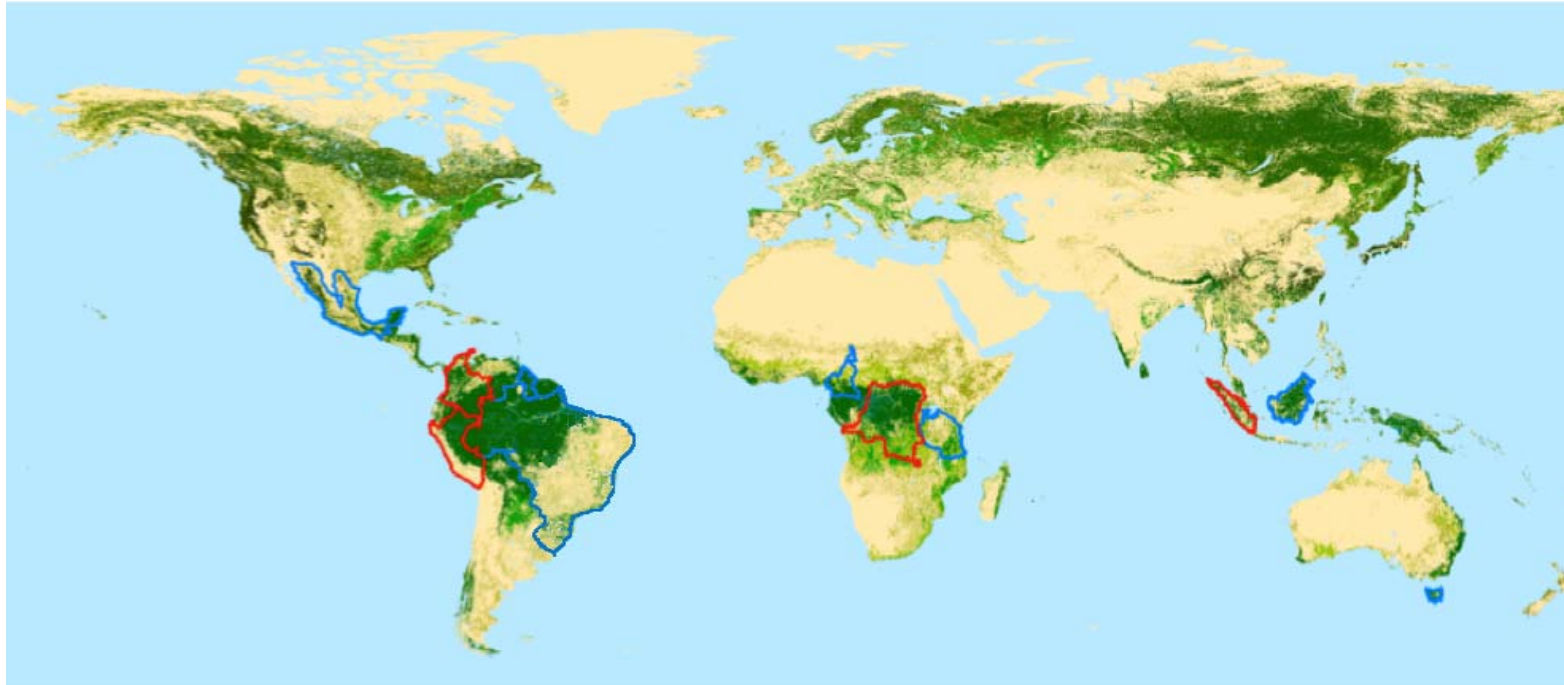
The Global Forest Observations Initiative

Provide reliable information of suitable consistency, accuracy and continuity to support deforestation Monitoring, Reporting and Verification (MRV)

The screenshot displays the web interface for the Global Forest Observations Initiative. On the left is a navigation menu with links for Welcome, About, Use Guide, ND, Visualisation, Browser, FAQ, Forest Carbon, Tracking, Task, Organisation, National, and Demonstrators. The main content area is titled "Brazil" and features a tree view of data layers. The "FCT" layer is expanded, showing "National Demonstrators", "Medium Res Sat Cover", "ASAR", "LANDSAT", "PALSAR", "RADARSAT", and "Sample Map Products". Each layer has a checkbox and a date range. The "ASAR" layer is selected, showing a date of "2009: 55". The "LANDSAT" layer is also selected, showing a date of "2009: 1888 (301)". The "RADARSAT" layer is selected, showing a date of "2009: 561". Below the tree view is a slider for "Opacity percent: 100" and a checkbox for "Show borders: []". The map shows a satellite image of Brazil with a grid overlay. The date "Sep 30, 2009" is displayed on the map. The map includes a north arrow, a scale bar, and a Google logo. The bottom of the map shows coordinates: "22°18'49.12" S 63°51'01.54" W", elevation "elev 1703 m", and eye altitude "Eye alt 8148.48 km".



National Demonstrators



- Brazil
- Guyana
- Mexico
- Indonesia
- Australia
- Cameroon
- Tanzania
- Colombia
- DR Congo
- Peru

From 2011 onwards
Progressive
inclusion of countries
from UN-REDD &
World Bank FCPF is
being planned.



Brazil's Contribution to GEO

- INPE runs the world's most sophisticated and operational large-scale tropical forest monitoring system.
- Deforestation monitoring for the Brazilian Amazon has been carried on annually by INPE since 1988, under the PRODES (Brazilian Amazonian Deforestation Assessment) program.



Potential new Contributions to GFOI

- In 2010, an advanced center in Belém do Pará, in the Amazon region, INPE Amazonia started its operations, to become the world reference center in the monitoring of tropical forests, focusing on Capacity Building.
- Focusing on Capacity Building, INPE Amazonia offers training on tropical forest monitoring in three languages (Spanish, English and French), using the open-source system TerraAmazon: the Amazon rainforest monitoring system of the Brazilian PRODES project.



INPE Amazonia:
Local and international capacity building for
monitoring tropical forests

New facilities





INPE Amazonia - Numbers

Partnership with FAO and JICA

3 Courses, in English, 37 people trained from:
France / Guyana / USA / Mexico/ Ecuador/ Papua New
Guinea / Democratic Republic of Congo / Vietnam /
Thailand / Indonesia / Cambodia

1 Course in Portuguese, 12 people trained from:
Paraguay / Mozambique / Angola

1 Course in Spanish, 12 people trained from: Peru /
Ecuador / Guatemala/ Colombia



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Recently on the News

Congo advances in forest monitoring for REDD due to support of Brazilian technology

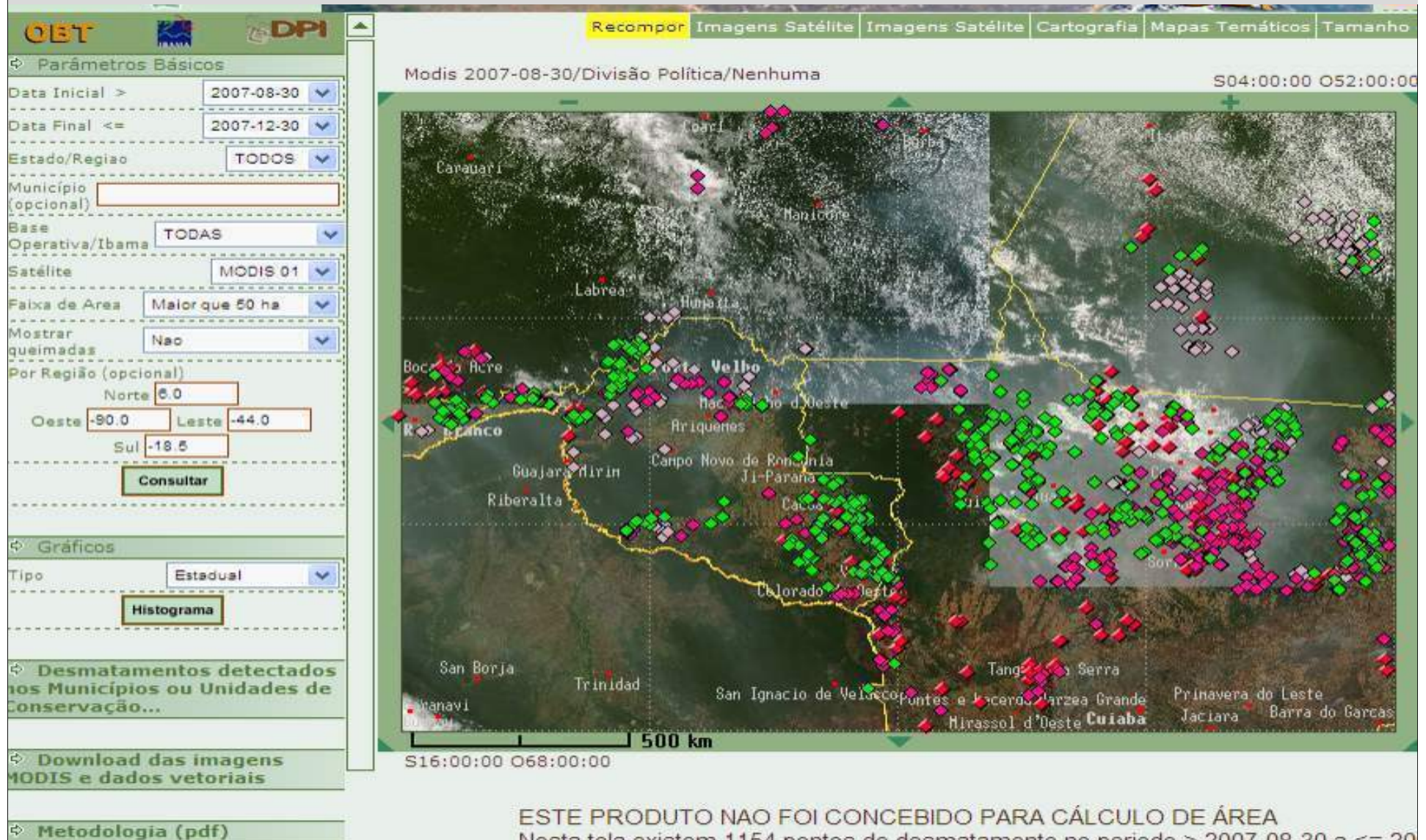
The Democratic Republic of Congo (DRC) has adopted the technology developed by the Brazilian National Institute for Space Research (INPE), for a satellite-based forest monitoring system. The goal of the government of the DRC is to use the results monitoring to design and implement national forest policies. DRC has the second largest tropical forest resource in the world, after Brazil. The operation and utilization of the Brazilian satellite monitoring system has been promoted in several countries but the DRC is the first country to adopt the Brazilian technology.



Another Contributions to GFOI

- DETER (Near Real Time Deforestation Detection System) program complements PRODES giving a faster response of clear cut and degradation activities (twice a month).

DETER: Real-time deforestation monitoring



15-day alerts of newly deforested large areas



INPE's wish...

- To be a central node for sharing and improving global forest data and modelling, developing best practices for national inventories, and capacity building for developing countries.



THANKS!

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