Space Base Information to Support Forest Management in Indonesia

National Institute of Aeronautics and Space (LAPAN)
Indonesia

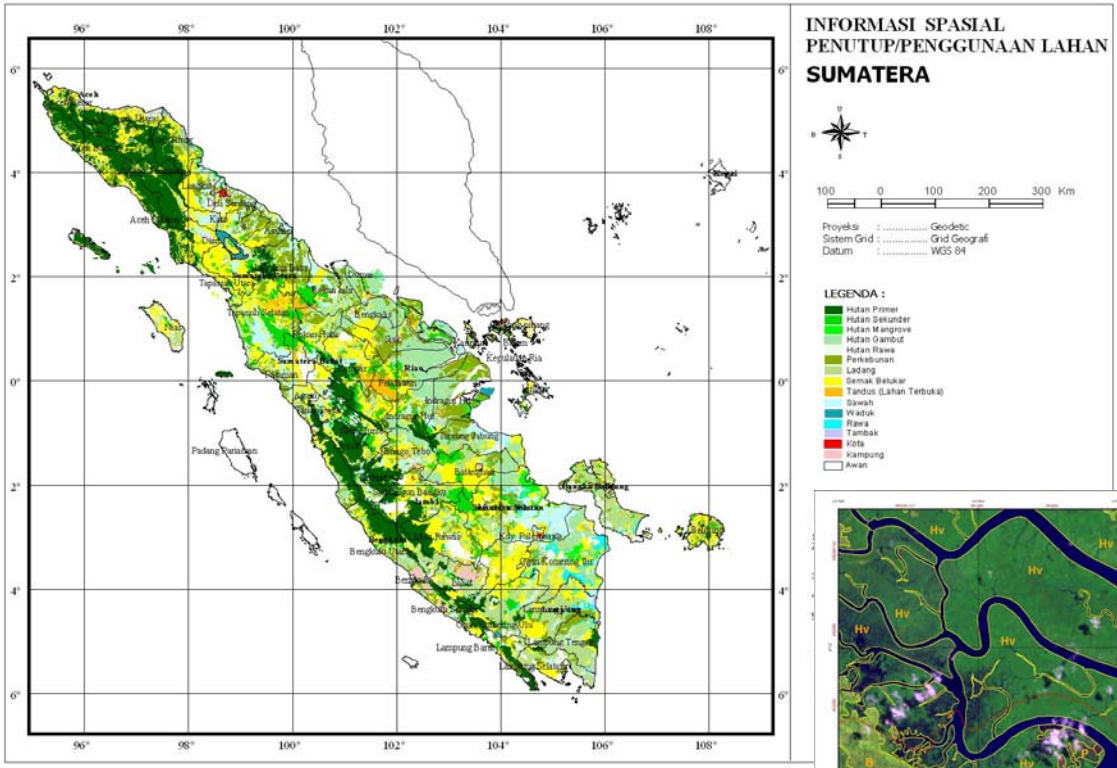
The 49th Session of the UN Committee on the Peaceful Uses of Outer Space (COPUOS)
Vienna, 7-16 June 2006

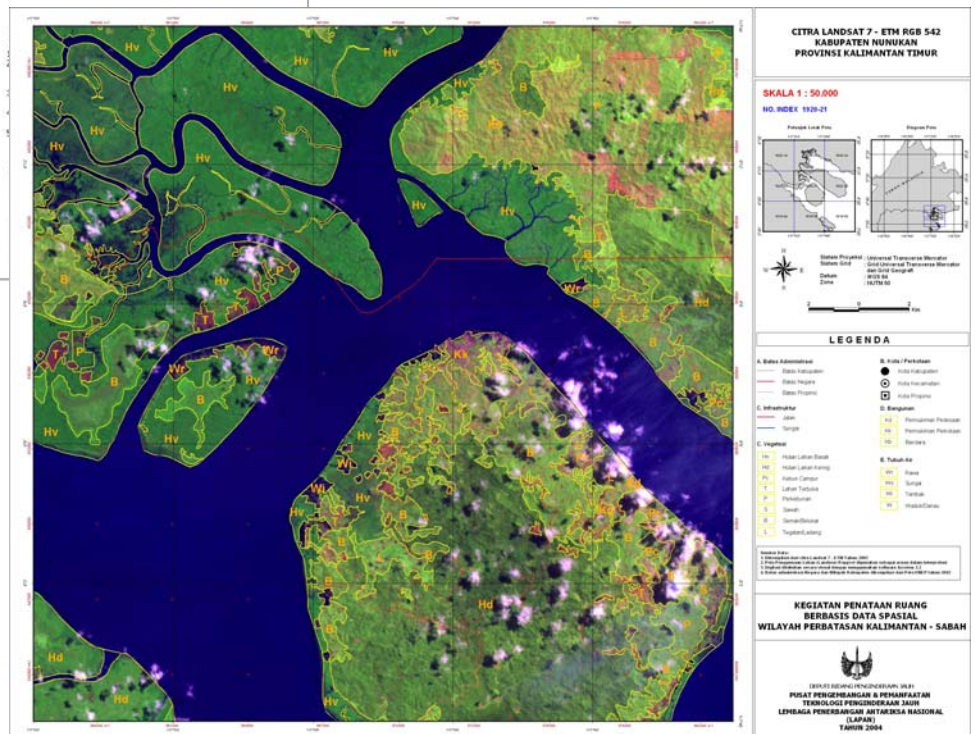
LAPAN

Space Base Information Delivered a.o.:

- Land Cover (Landsat ETM, 1:100.000)
- Forest Concession Map (Landsat ETM, 1:100.000)
- Hotspot and Smoke Monitoring
  (NOAA/AVHRR, Terra/Aqua MODIS)
- Vegetation Index Monitoring
  (NOAA/AVHRR, Terra/Aqua MODIS)
- Burned Scar Mapping (Terra/Aqua MODIS)
- Fire Danger Rating System Monitoring (NOAA/AVHRR, Terra/Aqua MODIS)
- Rainfall Estimation Monitoring
  (GOES, NOAA/AVHRR, and Feng Yun)
- Rainfall Prediction (Outgoing Longwave Radiation)

Land Cover

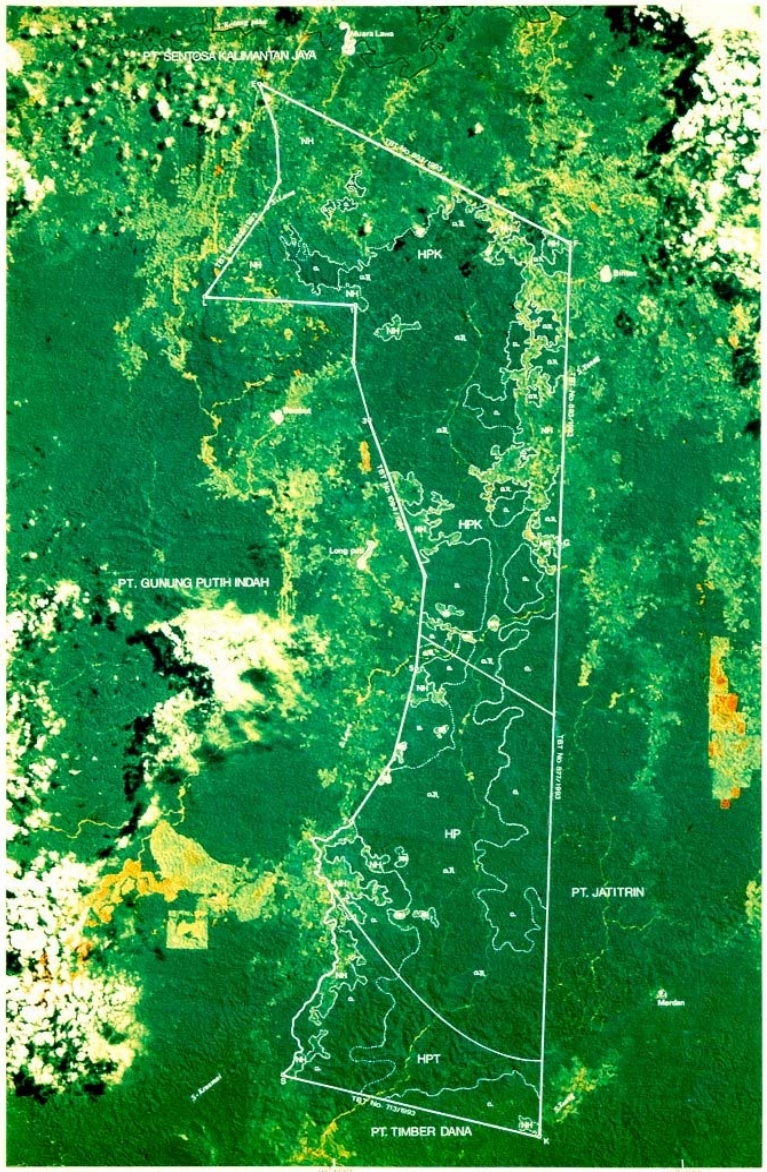




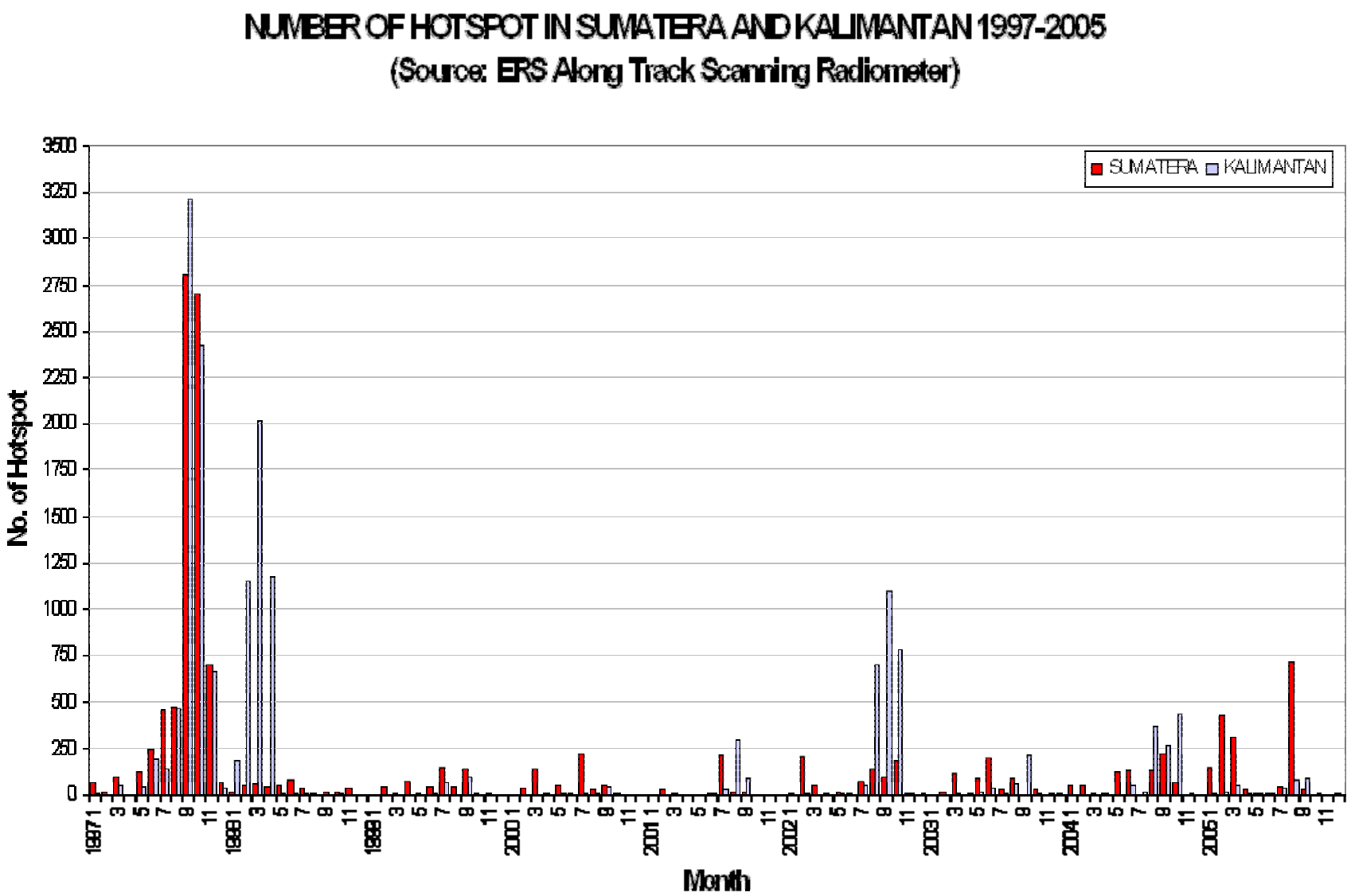
General information on the type, area, and location of certain land cover to define specific land use.

Forest Concession Map

To extend their concession permit, the company has to submit the results of their timber operation in the form of satellite imagery (a.o. Landsat scale 1:100.000) which shows the compliance to the selective cutting program allowed by the regulation.

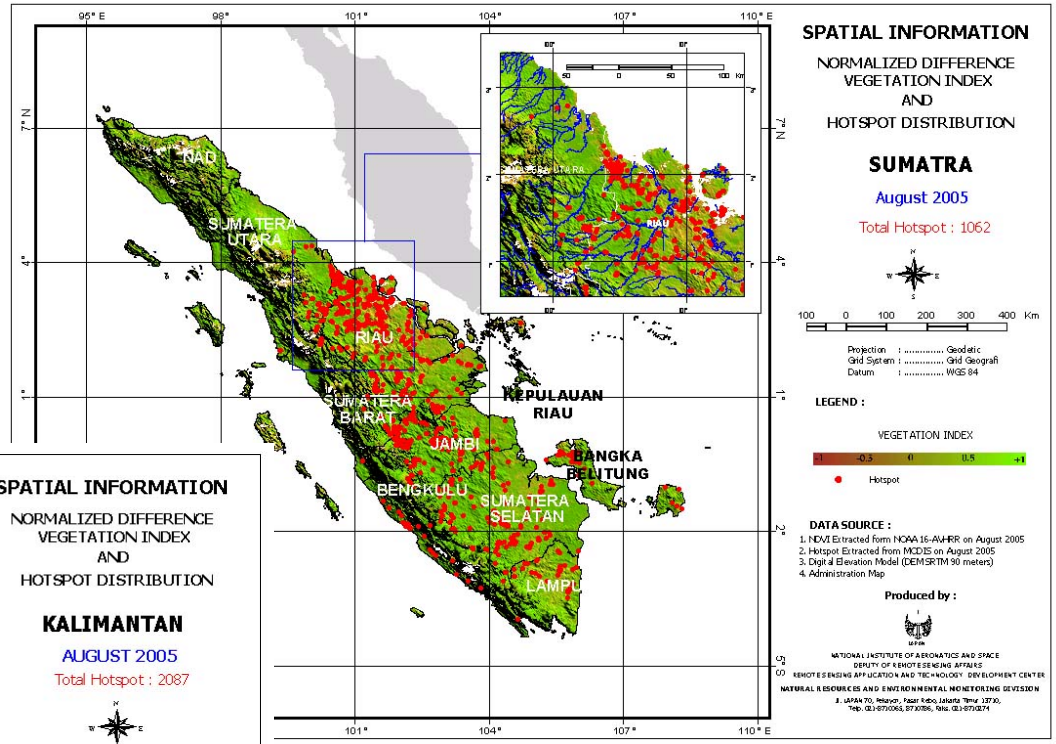


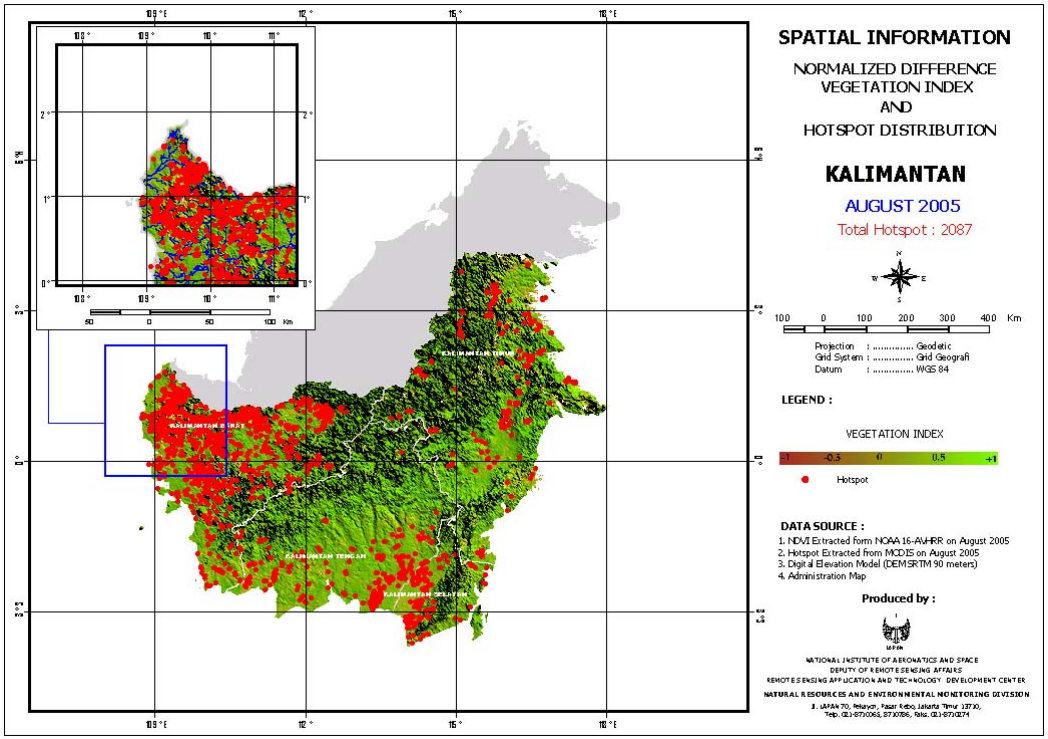
Forest/Land Fires in Indonesia



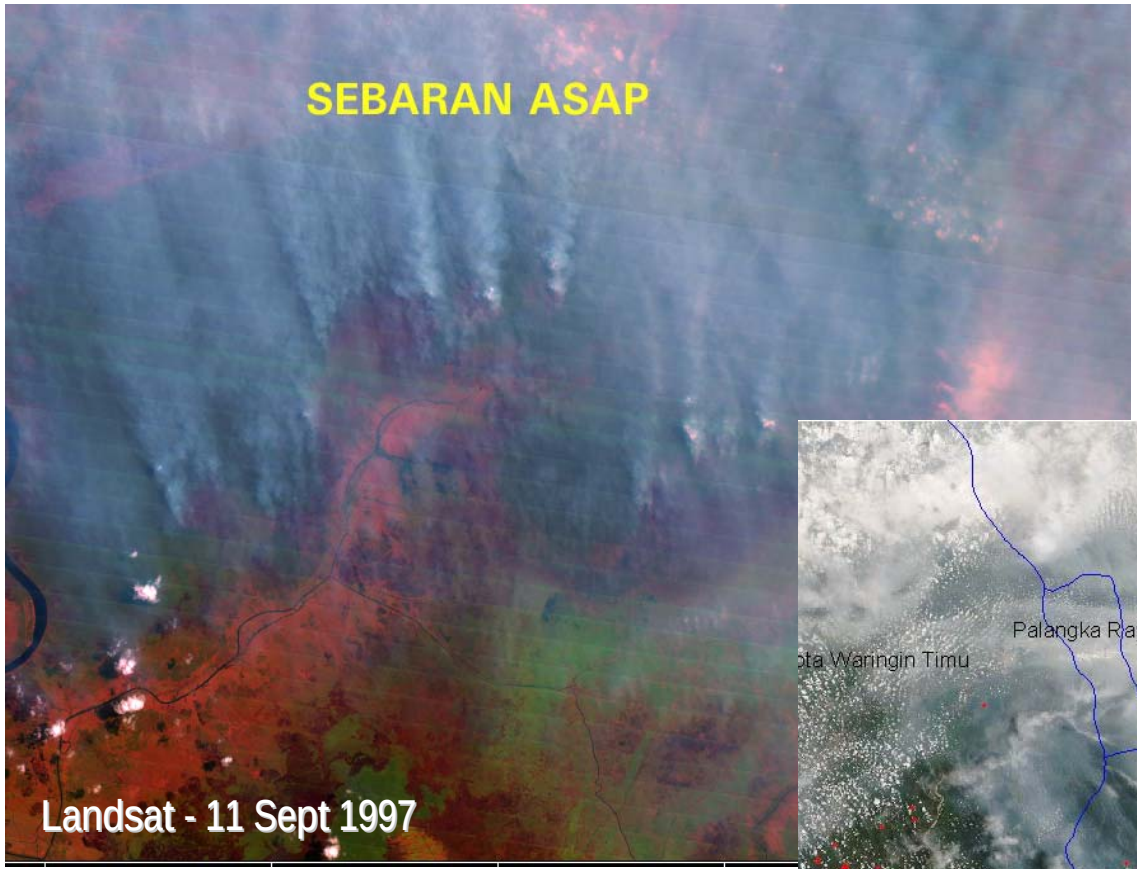
Vegetation Index and Hotspot Monitoring

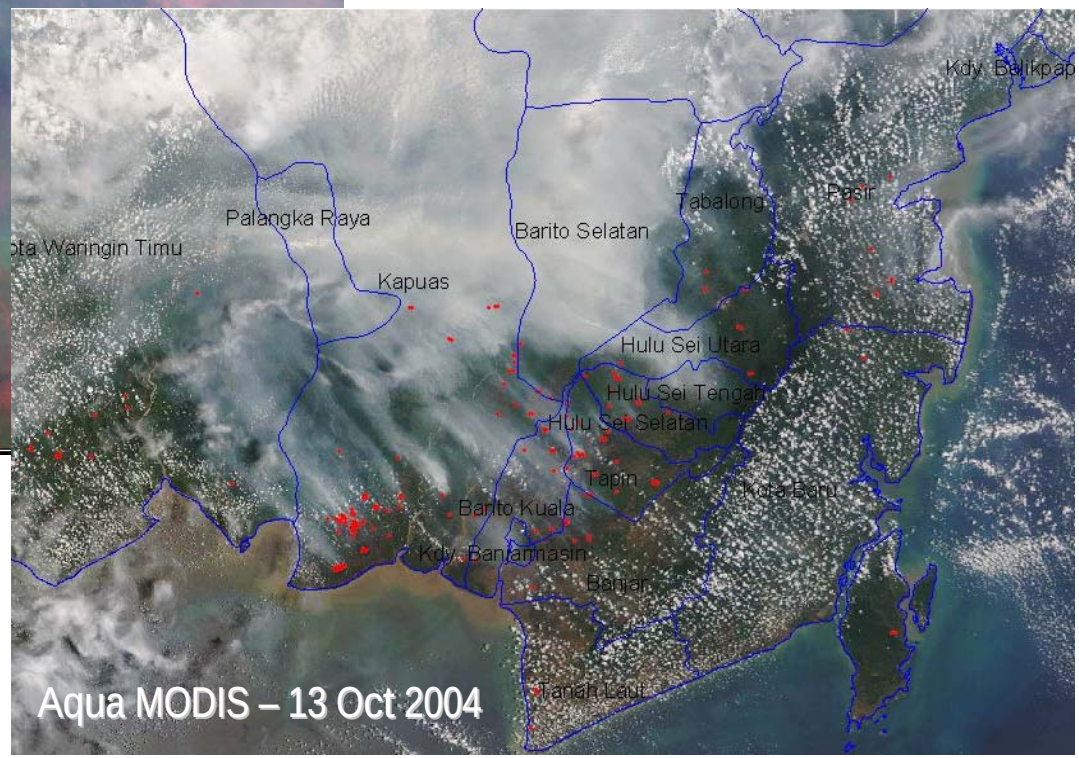
Information produced and delivered daily, weekly, and monthly



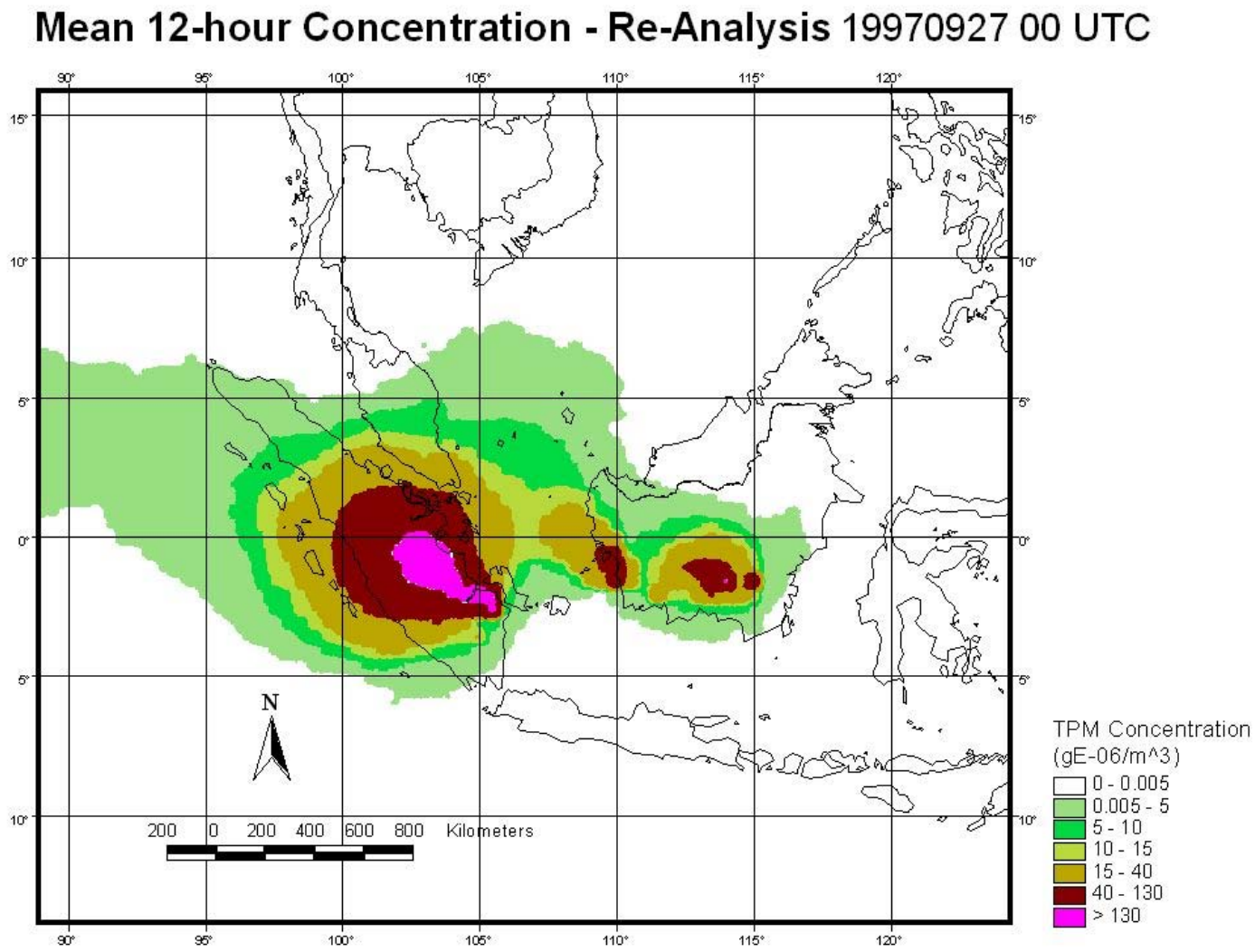


Smoke Dispersion and Transport Detection

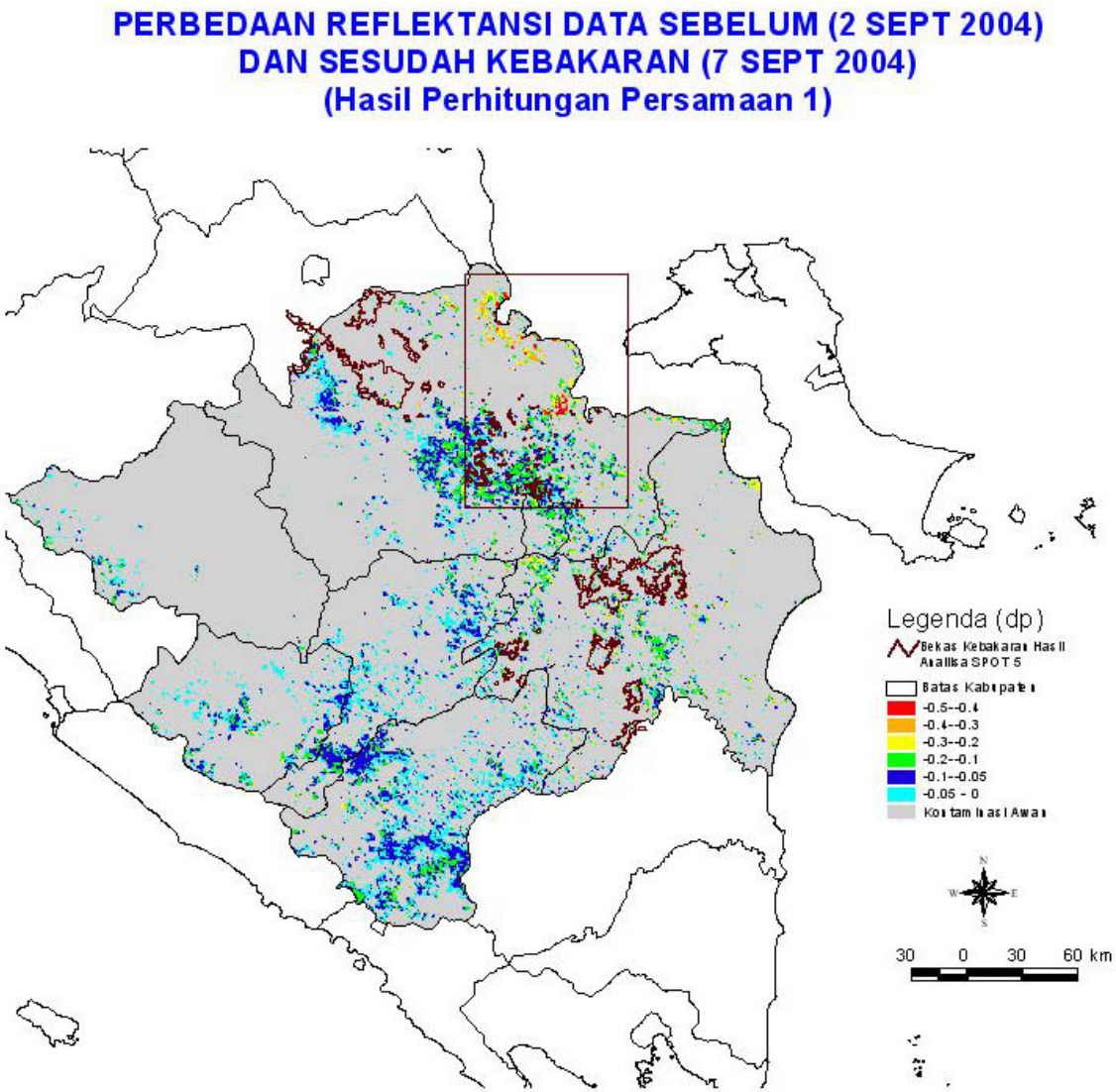




Smoke Dispersion and Transport Prediction

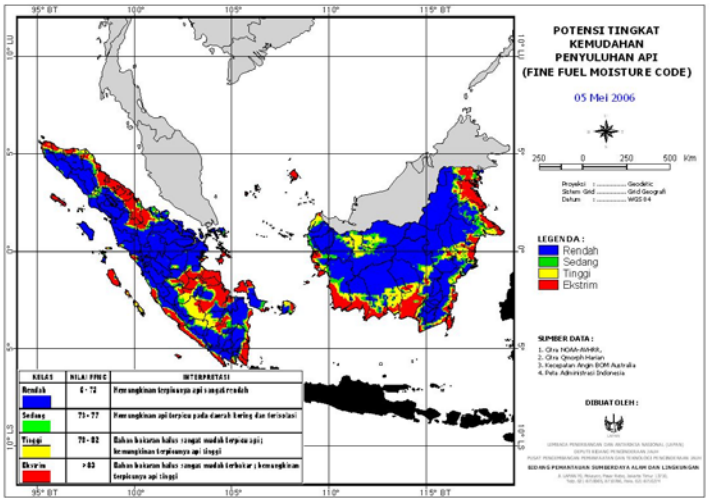


Burned Scar Mapping

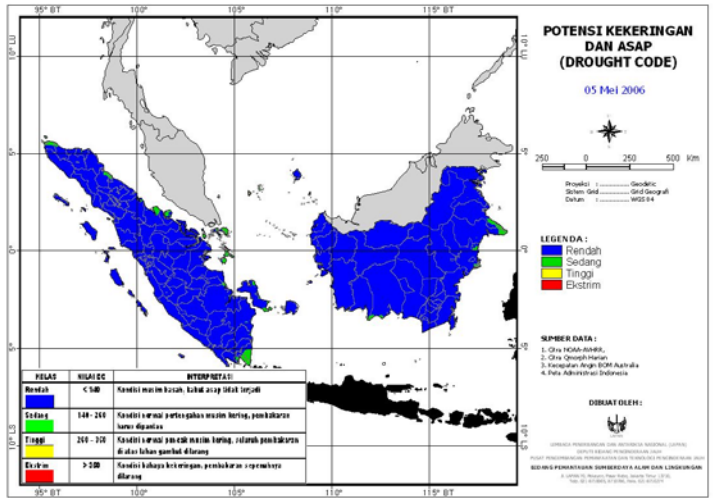


Fire Danger Rating System Monitoring

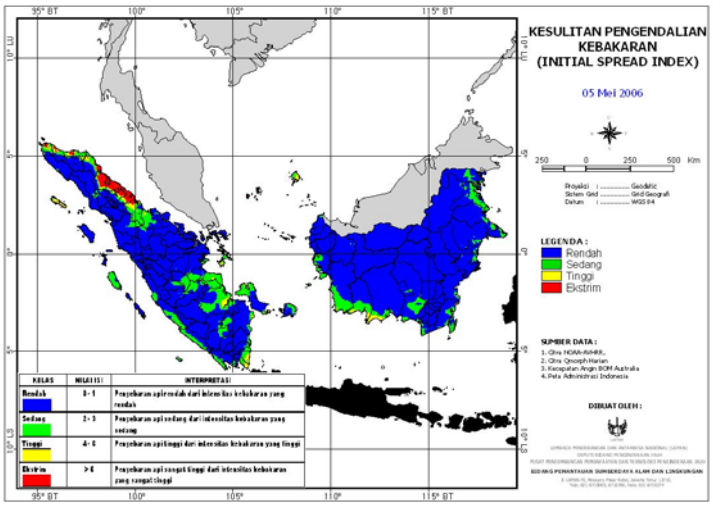
IGNITION POTENTIAL



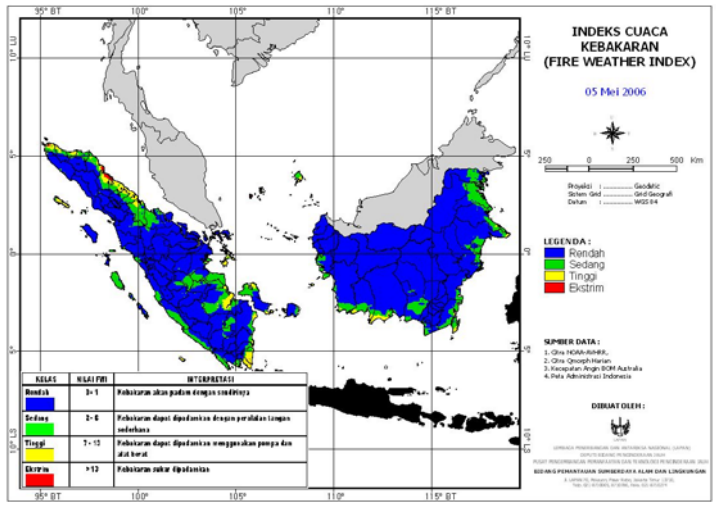
DROUGHT AND SMOKE POTENTIAL



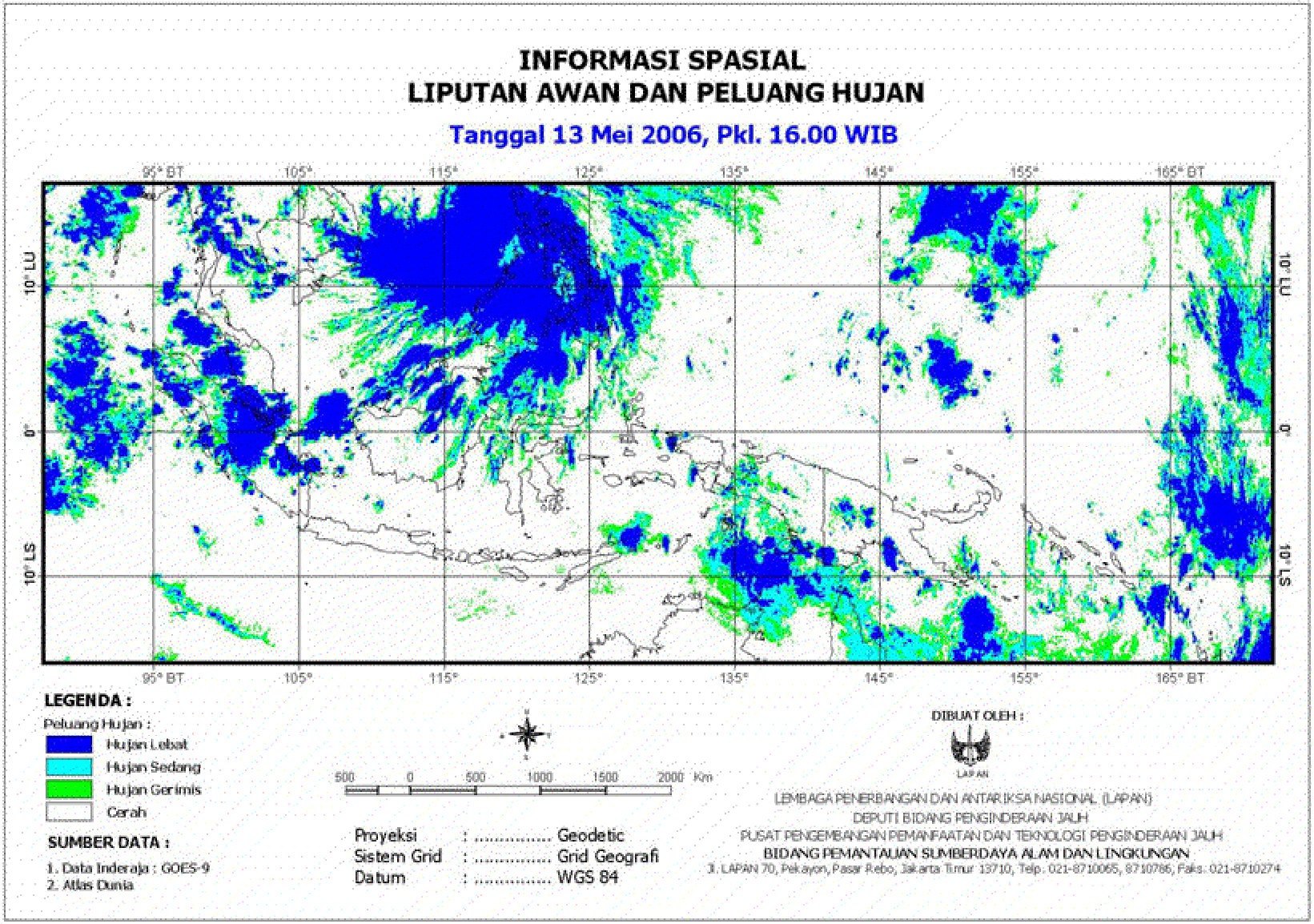
DIFFICULTY OF CONTROL



FIRE WEATHER INDEX

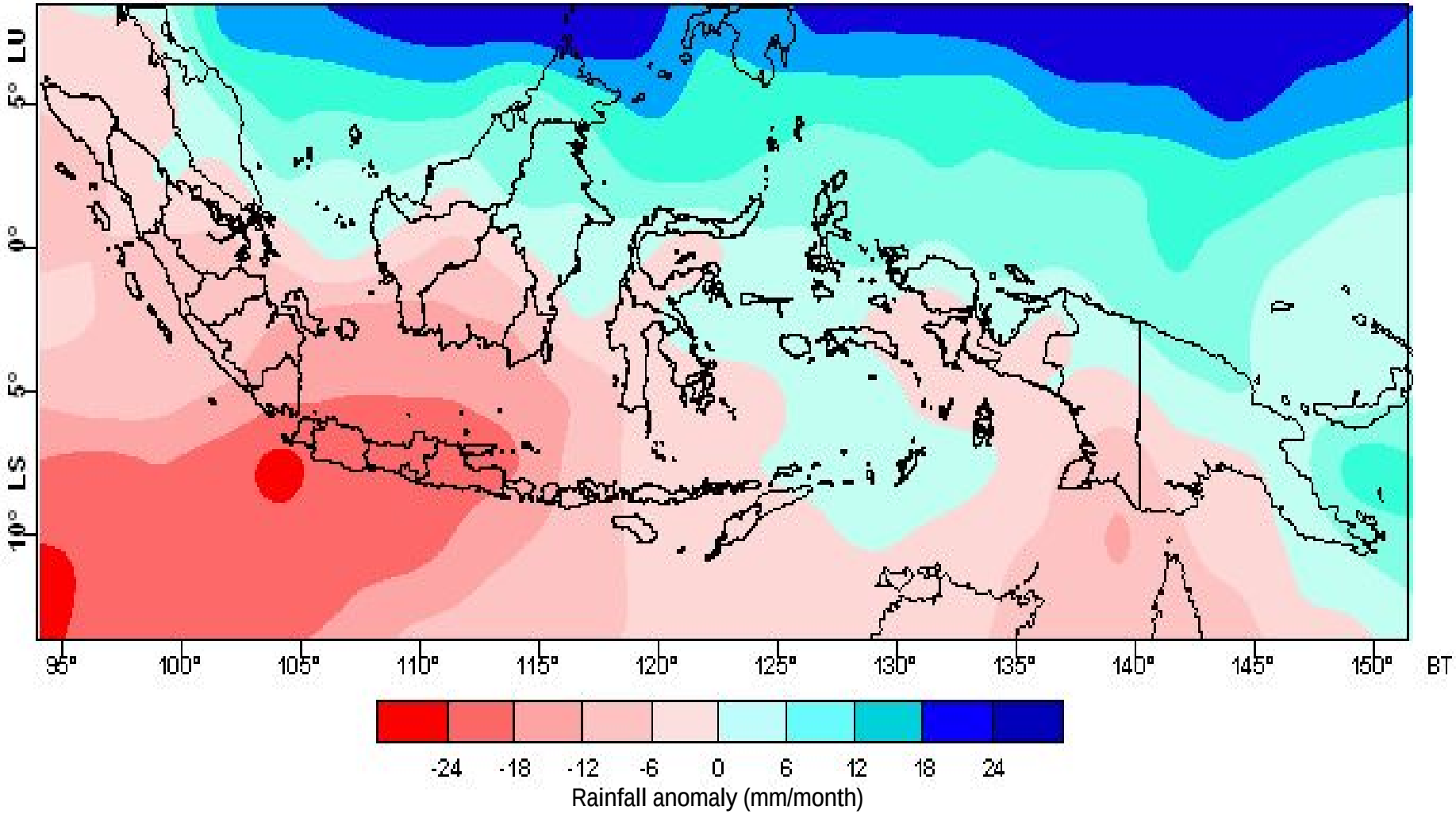


Rainfall Estimation Monitoring



Rainfall Estimation Prediction

Rainfall Anomaly Prediction – May 2006



Information Dissemination

REPORT SEND TO:

- Ministry of Forestry
- Ministry of Environment
- Ministry of Agriculture
- Ministry of Research and Technology
- Meteorology and Geophysics Agency
- Coordinating Agency for Disaster Management
- Provinces and Districts
- NGOs
- Timber Company
- Other related agencies

Information Dissemination (continued)

http://www.rs.lapan.go.id/SIMBA

Concluding Remarks

- Space remote sensing technology has been and will always be applied to support the forest management in Indonesia.
- Taking into account the large extent of the country, space remote sensing technology is considered the most cost effective method.
- Further development of capability in the country to enhance the application of the technology especially for forest management is continuously carried out. International cooperation in this regard is highly appreciated
- However, Indonesia is willing to share its experiences a.o. in the form of training for other developing countries for such applications.

Thank You