



# **GEO, the Group on Earth Observations**

## **An Intergovernmental Organization with 73 Members and 52 Participating Organizations**





# The Cape Town Ministerial Summit 2007

The Summit was the opportunity:

- To highlight early progress of GEO and key achievements in the Implementation of GEOSS (The First 100 Steps to GEOSS, The Full Picture)
- For Ministers to commit to emerging priorities through The Cape Town Declaration.





## The Cape Town Declaration

- **Value of Earth Observations**
- **Data Sharing Principles**
- **Commitment to Sustainable, Interoperable Systems**
- **Protection of Frequencies**
- **Need to Explore Ways and Means for the Sustained Operations of GEOSS Components**



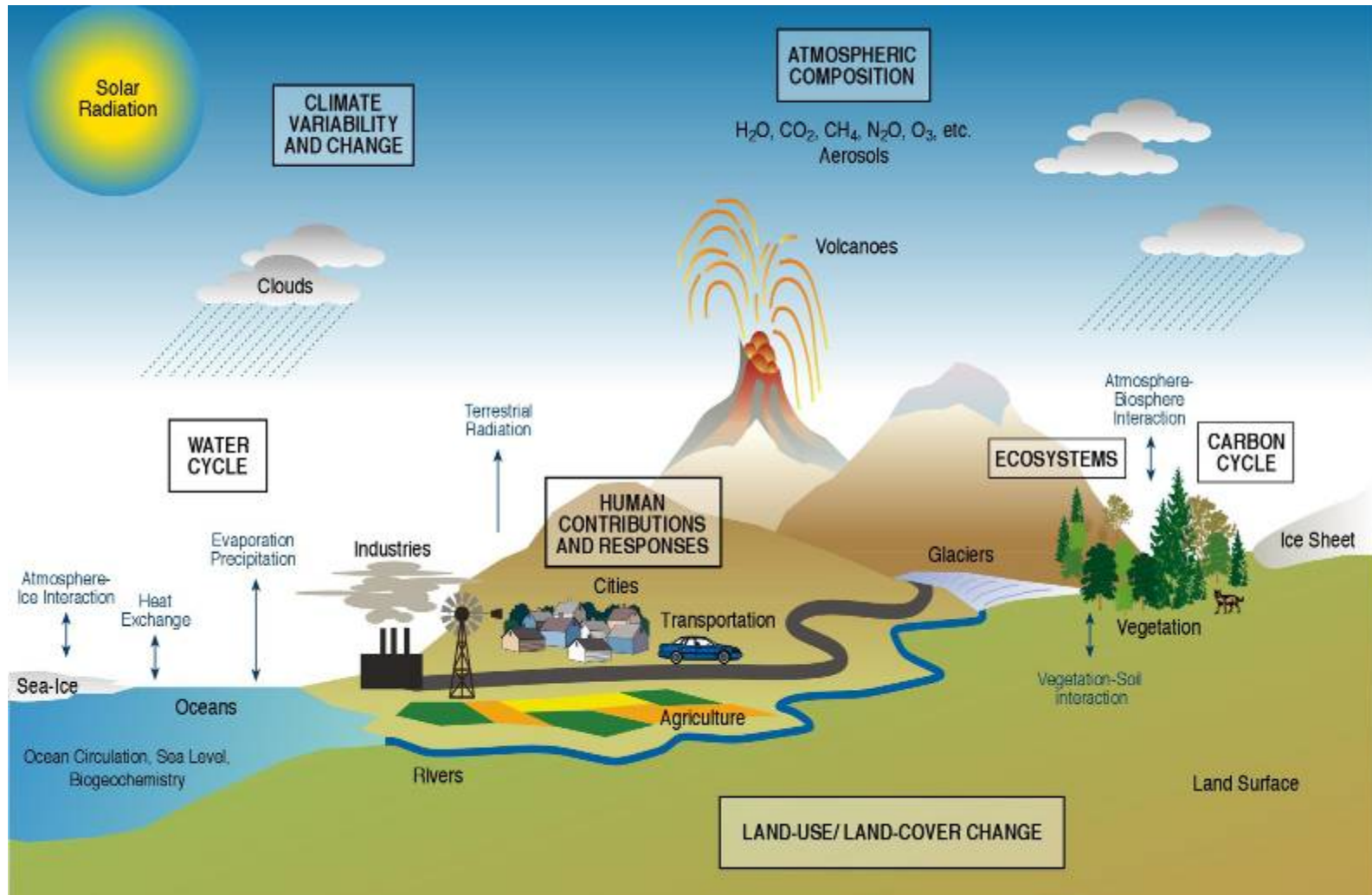


## THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS





# The Earth is a complex system of systems





**Any Single Problem Requires Many  
Data Sets**

**A Single Data Set Will Serve Many  
Communities**



- **Coordinate and Sustain Observation Systems**
- **Provide Easier and More Open Data Access**
- **Foster Use (Science, Applications, Capacity Bldg)**

**... to answer Society's need  
for informed decision making**



## **GEOSS Implementation Requires Interoperability of Systems**

- **Technical Specifications for Collecting, Processing, Storing, and Disseminating Data and Products**
- **Based on Non-proprietary Standards**
- **Defining What Systems Should Comply With to be Contributed to GEOSS**

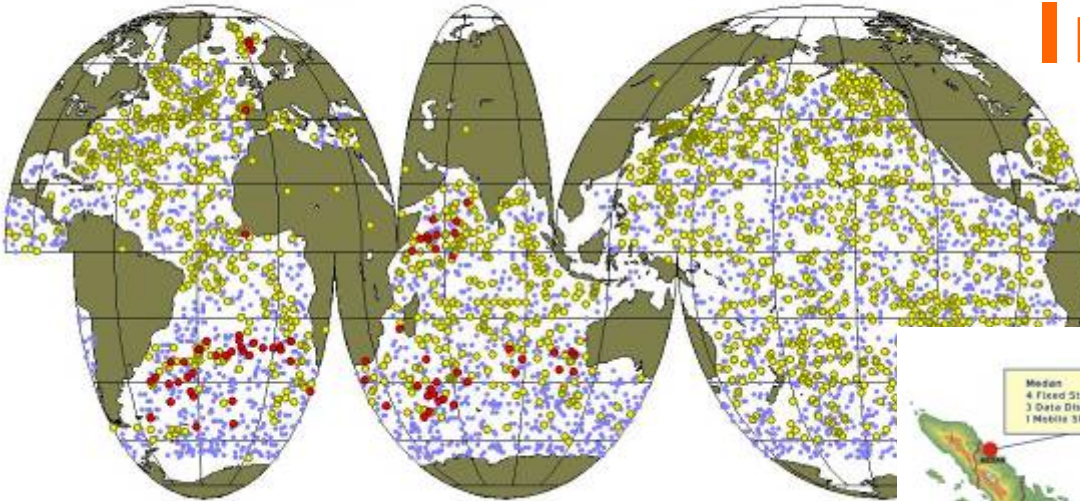




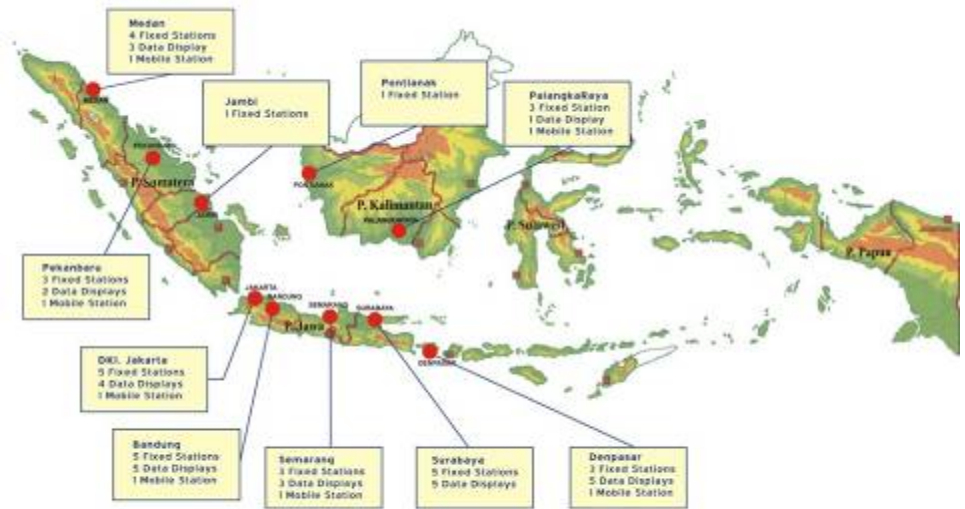
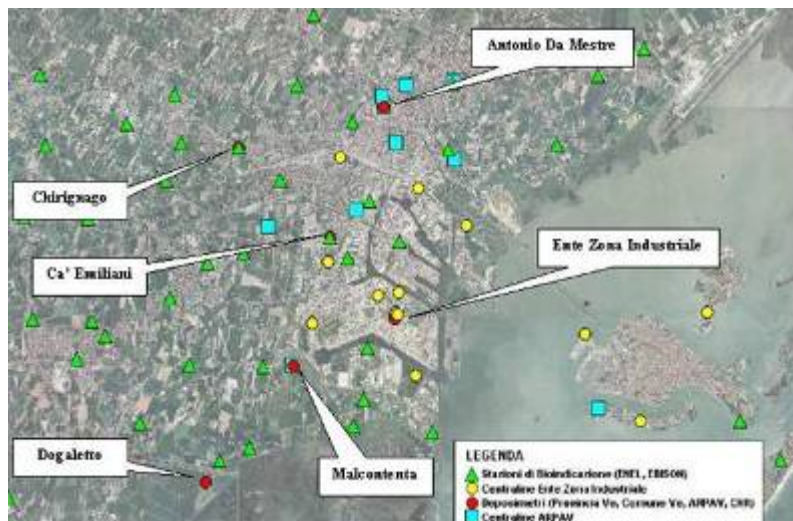
# Space Observation Systems



Global Argo Float Array (red – Argo UK; yellow – all Argo; blue – proposed array)



# In Situ Observation Systems



Assistant Deputy for Environmental Impact Control Facility  
 Deputy Minister for Technical Infrastructure for Environmental Management  
 Ministry Environment



Let's not forget aerial ....



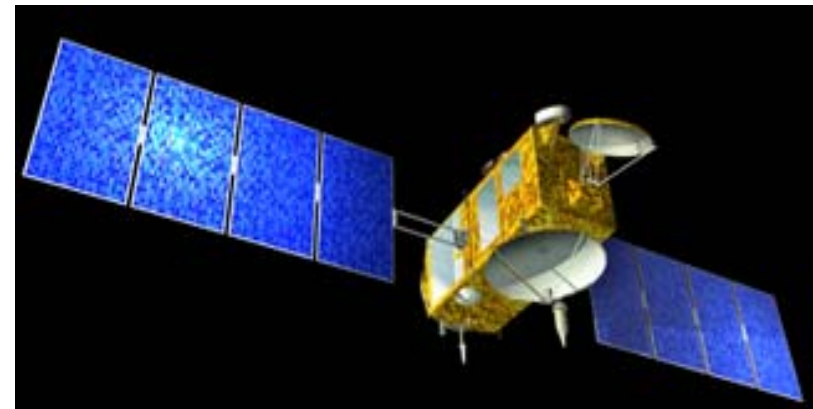


# Ensure the Transition from Research to Operations and the Continuity of Observing Systems



1992

**TOPEX/POSEIDON**

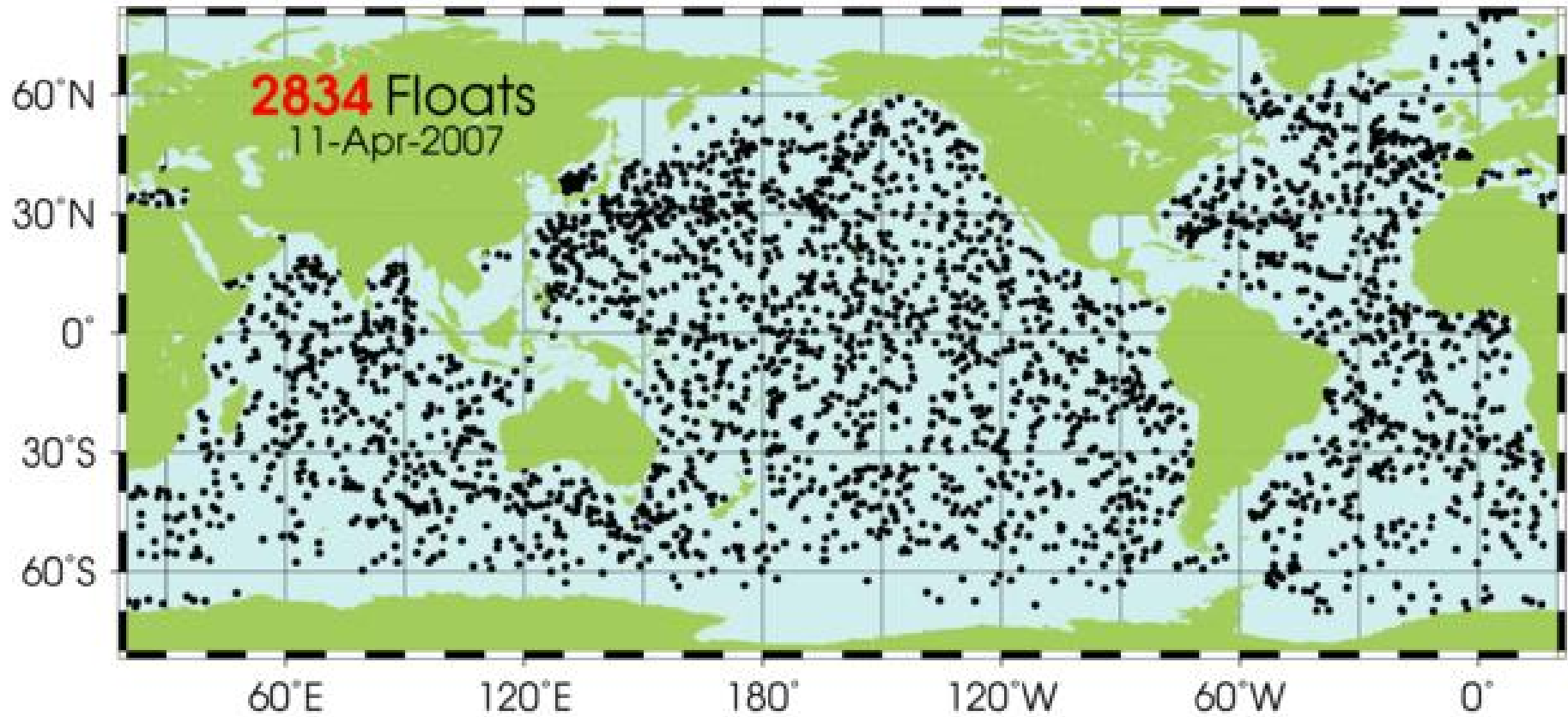


2001

**JASON**

2006

**JASON-2**



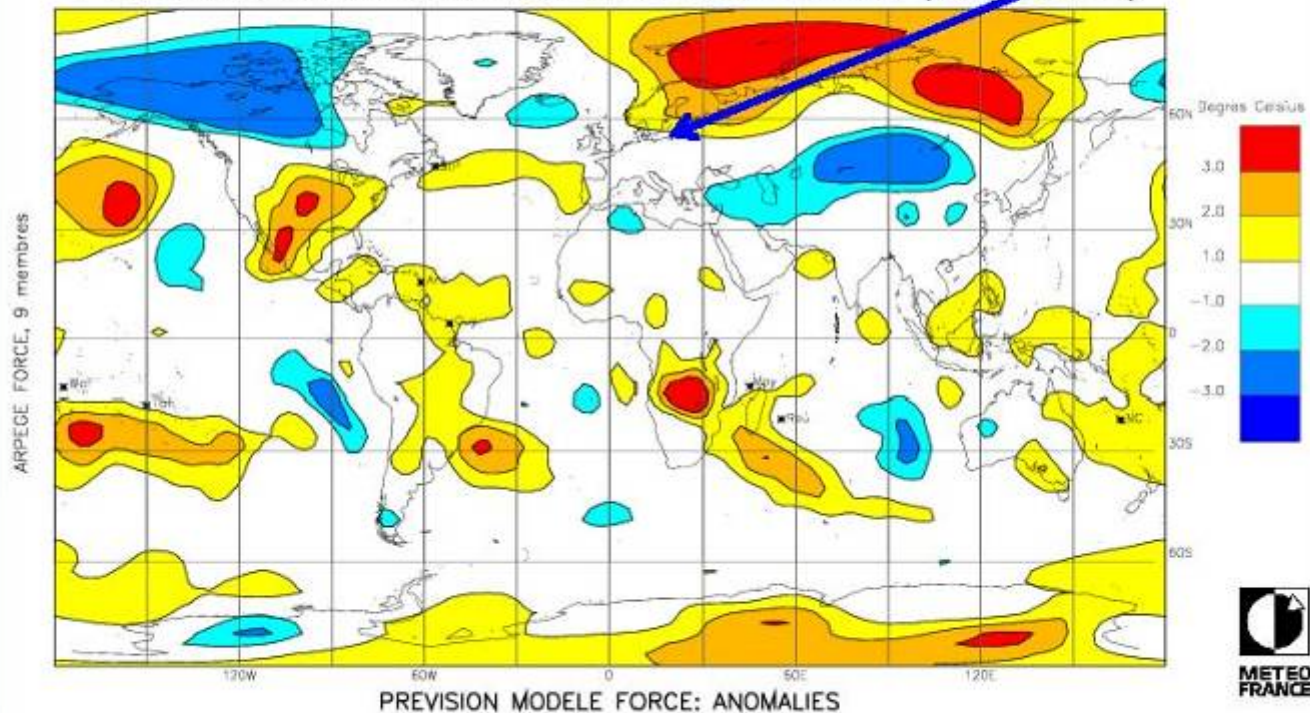


# Seasonal Forecasting without Mercator

This forecast missed the cold anomaly over Europe

Europe

T 850 hPa valide DECEMBRE-JANVIER-FEVRIER 20052006 (BASE=200510)



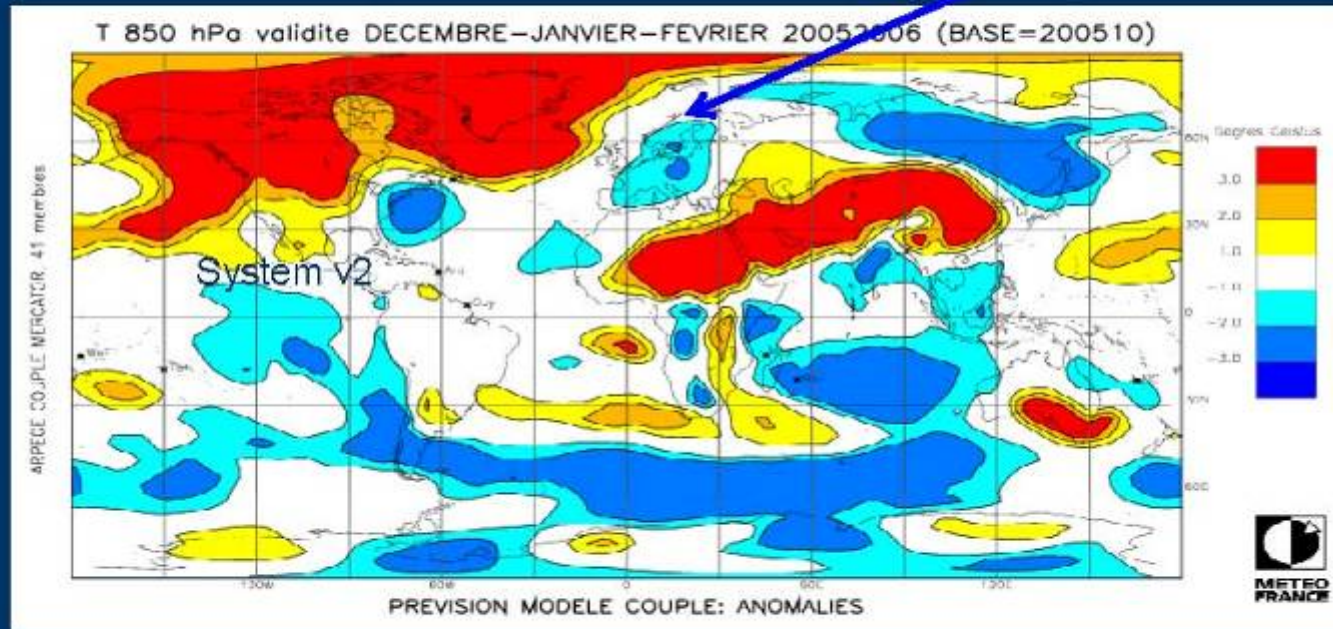
Temperature anomalies for Dec2005-Fevrier 2006



# Mercator: Seasonal Forecasting

Europe

This forecast captured the cold anomaly over Europe

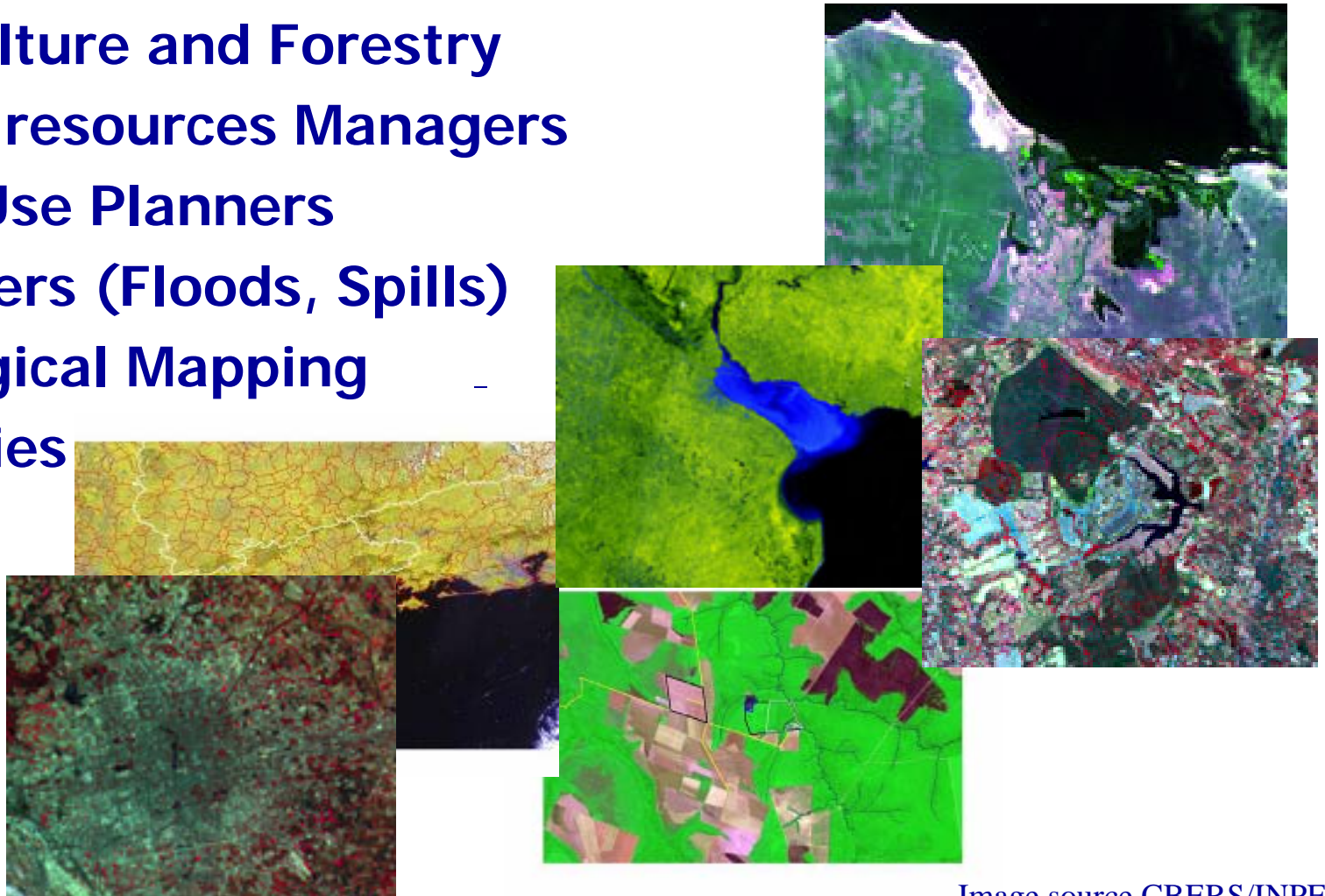


Temperature anomalies for Dec2005-Fevrier 2006



# Applications and End-users

- Agriculture and Forestry
- Water resources Managers
- Land Use Planners
- Disasters (Floods, Spills)
- Geological Mapping
- Fisheries





- Browse Resources by Societal Benefit Areas
- DISASTERS**
  - HEALTH
  - ENERGY
  - CLIMATE
  - WATER
  - WEATHER
  - ECOSYSTEMS
  - AGRICULTURE
  - BIODIVERSITY
- Resources Provided by
- Select GEO Member
- GEO Clearinghouse

### Browse Resources by Location

Map navigation controls:  Overview Map, Select Location

### Breaking News

Intense rainfall and the rise of the Parana and Gualeguay rivers produced severe flooding in the Santa Fe and Entre Rios provinces, affecting mainly the cities of Santa Fe, Rosario and Gualeguay in Argentina. Three people were killed and the total number of evacuees was estimated at between 30,000 and 40,000.

[more...](#)

### Welcome to GEOportal

The GEOportal provides an entry point to access remote sensing, geospatial static and in-situ data, information and services. The site is currently under construction with a planned release of the operational ESA contribution to the

### EVENTS

**IGARSS, 23-27 July 2007, Barcelona, Spain**  
The 27th International Geoscience And Remote

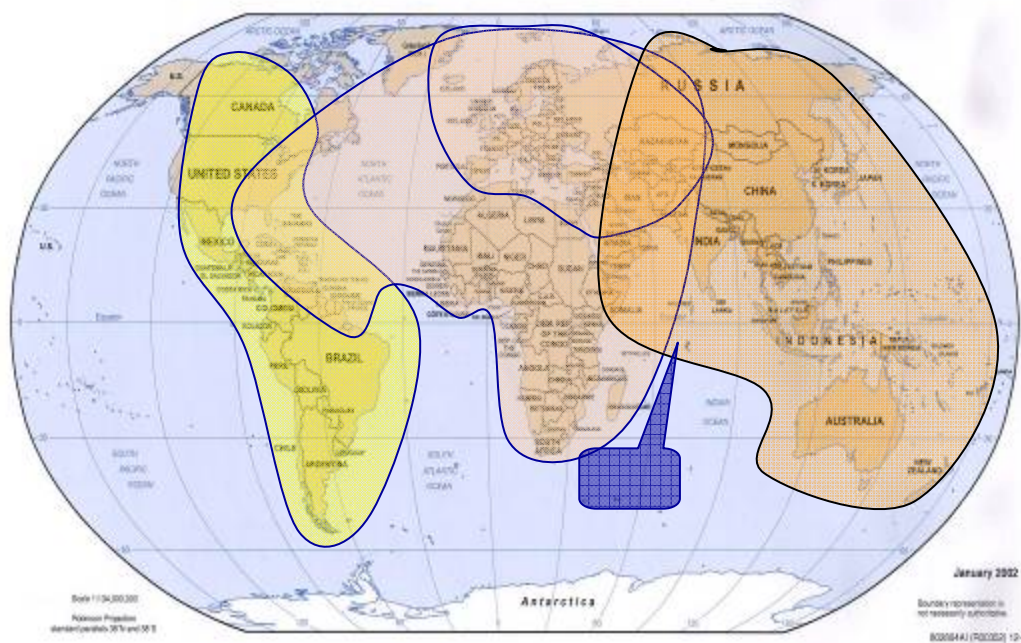
### SHOWCASE

The Elbe region in Saxony was affected by heavy flooding following strong rainfall in conjunction with snowmelt in the Krkonose



# GEONETCast To Disseminate Space-based, Airborne and In Situ Data and Products to Users Addressing all Nine Societal Benefit Areas

## Contributors



## Global Coverage



EUMETSAT



CMA

中国气象局  
www.cma.gov.cn



NOAA

ROSHYDROMET



# CBERS Data for Africa and the Caribbean



**\*China Brazil Earth Resources Satellite**

# GREENHOUSE GAS MARKET 2007

**BUILDING UPON A SOLID FOUNDATION:  
THE EMERGENCE OF A GLOBAL EMISSIONS TRADING SYSTEM**

Opportunities and  
Challenges –

Carbon Markets Loom  
on the Horizon - €500  
Billion





## **Concluding Remarks – GEO BON**

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- **Biodiversity conservation is one of the nine GEO Societal Benefit Areas (SBAs)**
- **Biodiversity transcends all SBAs: Water, Agriculture, Health, Weather, Climate, Energy, Disasters and Ecosystems**



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- **Earth Observations are critical to understanding, monitoring and modelling biodiversity now and in the future**



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- **Earth Observations are critical to understanding, monitoring and modelling biodiversity now and in the future**
- **GEO BON will play a critical role in achieving this**

Thank you!

