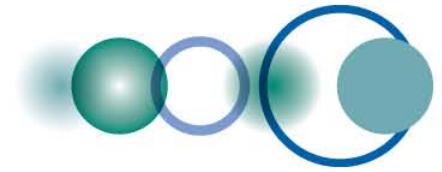


# Bridging the Data Gap in Earth Observations to Inform Decisions and Actions

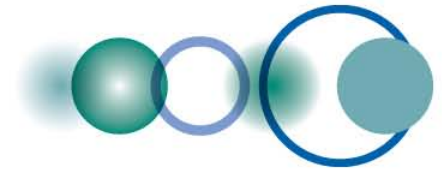
**José Achache**  
**Executive Director**





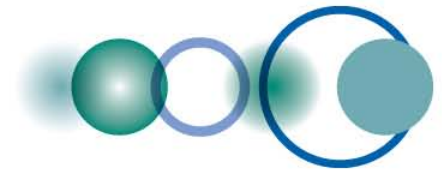
# A Changing World

- Population increasing to 9 billion
- GDP increasing in the developing world
- Climate warming
- Biodiversity decreasing
- Ecosystems disappearing



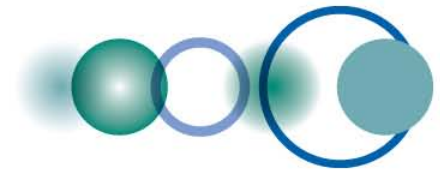
# A Demanding Future

- More energy
- More food
- More water
- More housing space
- More healthy living conditions
  
- (financial crisis)



# Two Threads of Solutions

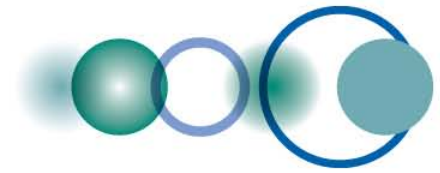
- Technological solutions
  - New energy sources
  - Better crops
  - More efficient buildings and cities
  - New vaccines, treatments
- Environmental management solutions
  - Based on Earth Observations



# Two Alternative Solutions for Maintaining Urban Water Quality



New York City gets  
90% of its drinking  
water from the  
Catskill/Delaware  
watershed



# Land Management vs Filtration Plant

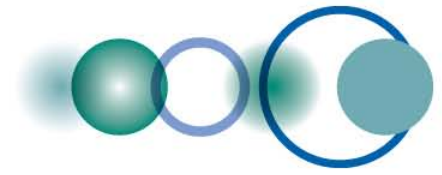
## Cost issues:

- Filtration plant for the Catskill system was estimated to be \$6-10 billion with annual operating costs of \$110 million
- The total cost of watershed rehabilitation and maintenance programs is less than \$100 million a year

## Health and safety issues:

- Disinfecting chemicals needed to purify the water. By-products from these chemicals pose serious health risks and their use is limited by law
- High levels of chlorine damage the delivery system

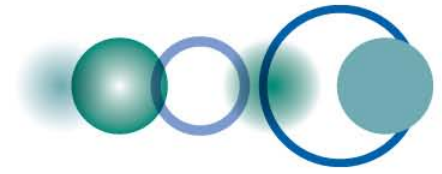




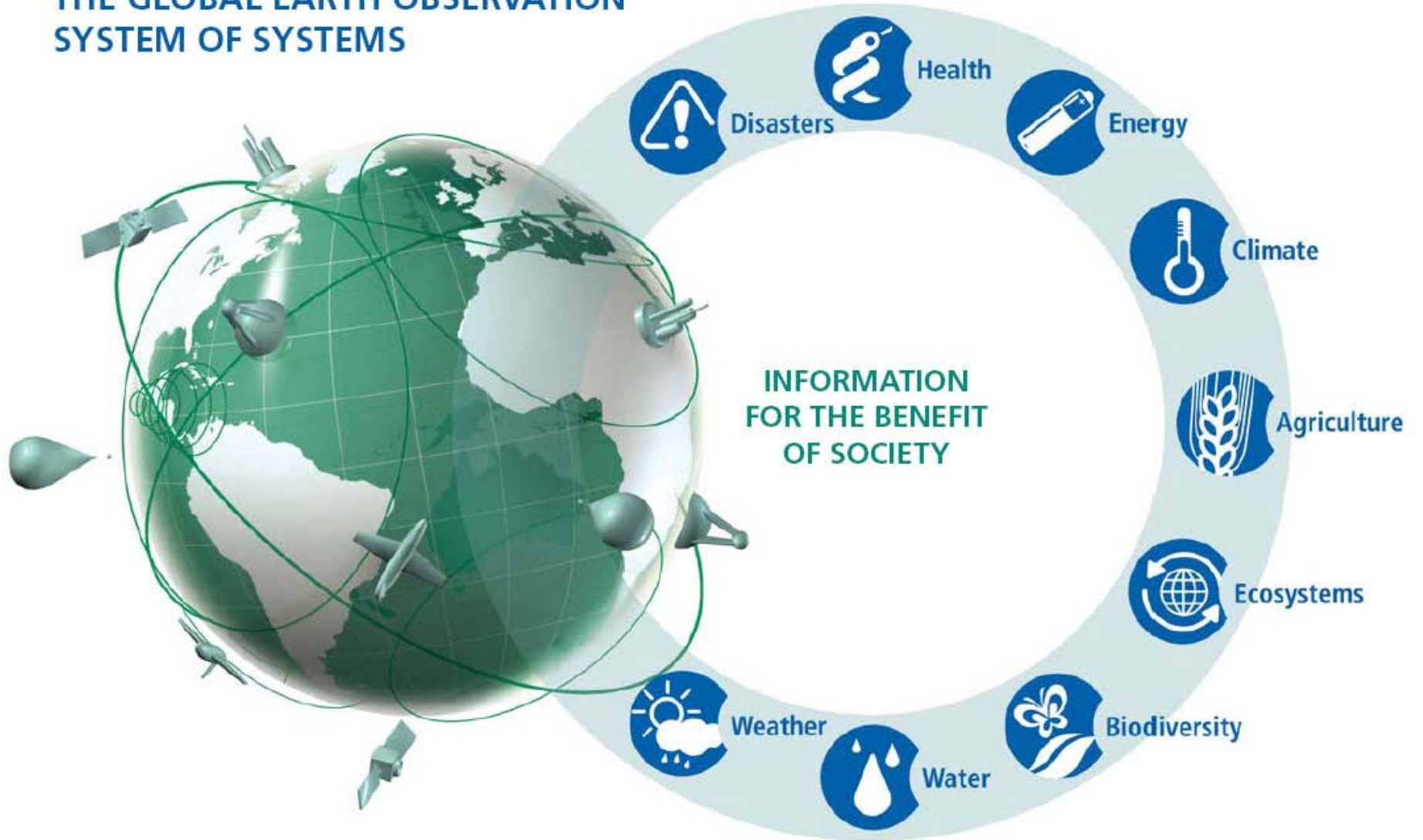
# GEO, the Group on Earth Observations

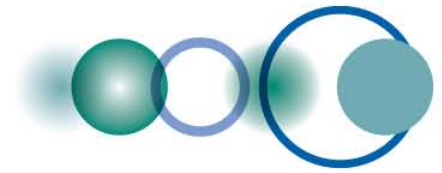
An Intergovernmental Organization with 83 Members  
and 58 Participating Organizations





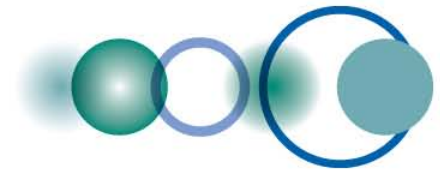
## THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS



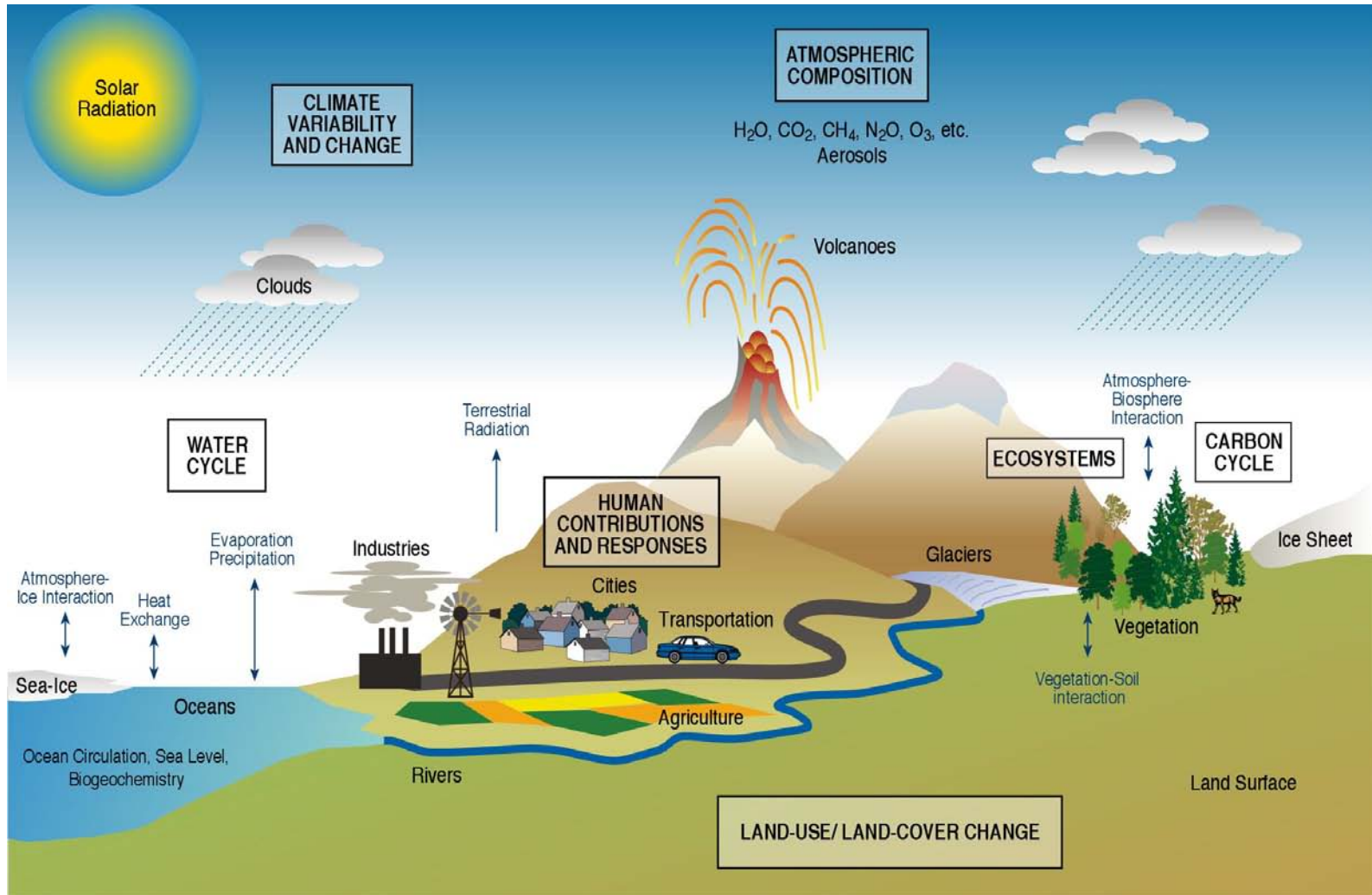


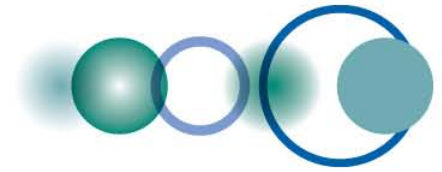
## The Vision for GEOSS...

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

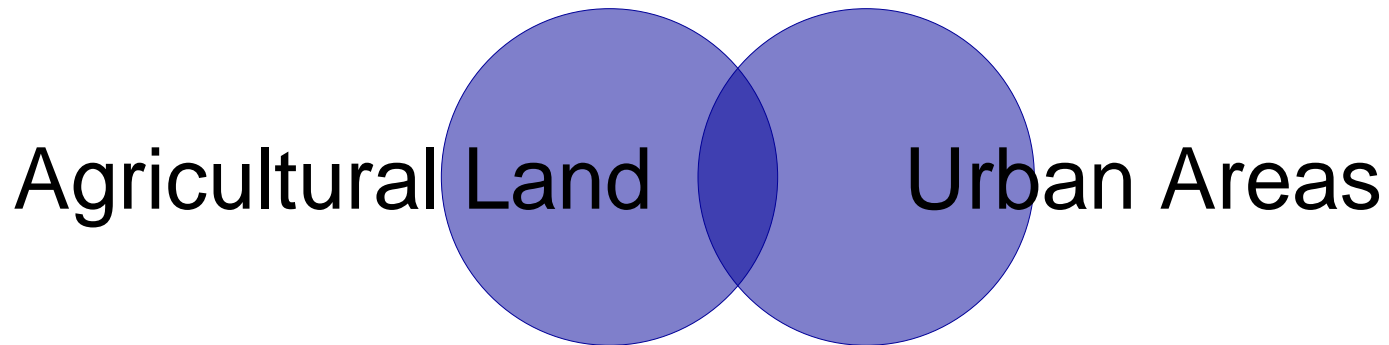


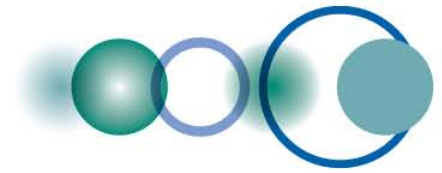
# Our Planet is a System of Systems





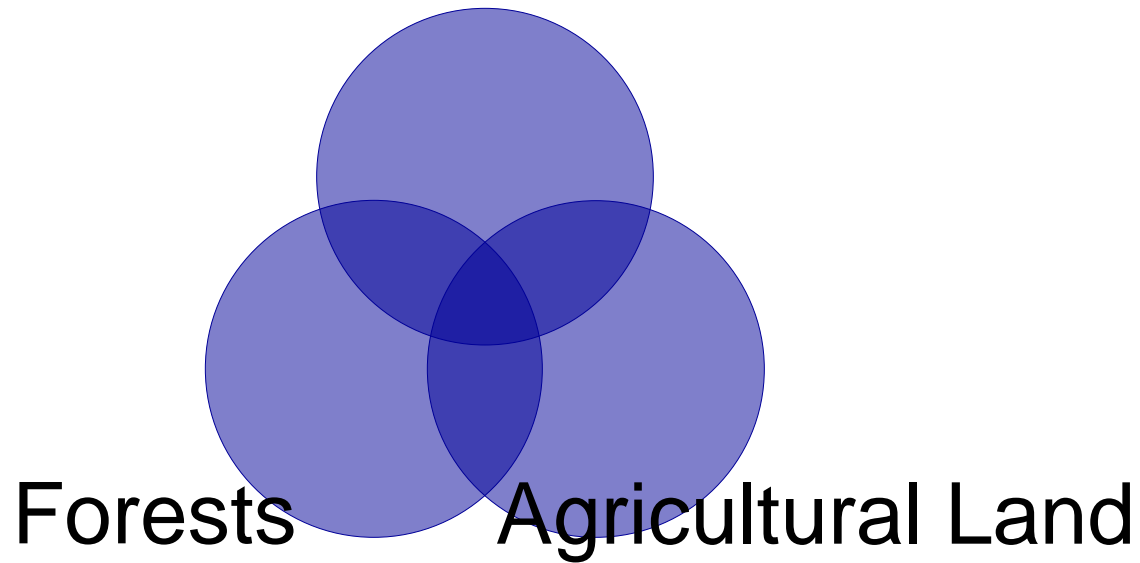
# Attributing Land Use

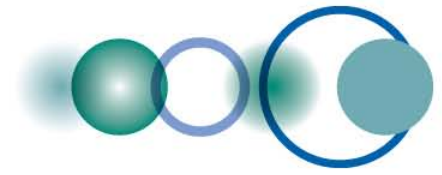




# Attributing Land Use

## Urban Areas

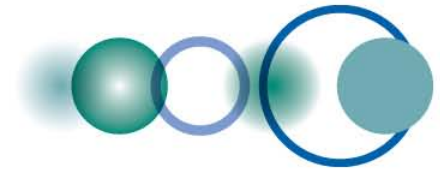




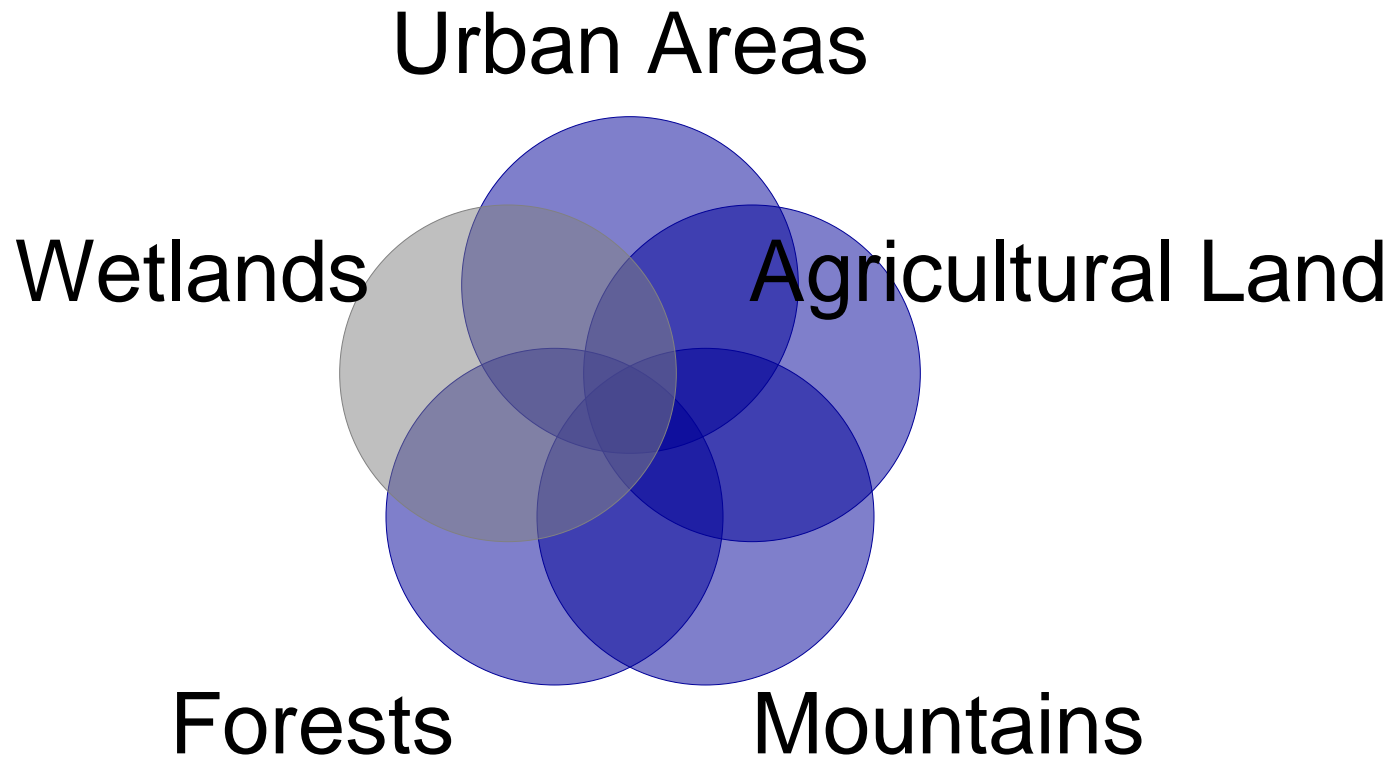
# Mangroves Protect Coastal Villages and Towns from Coastal Hazards

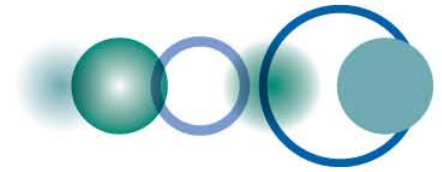


Studies Following the Indian Ocean Tsunami showed that villages located behind mangrove forests suffered little destruction, and other areas unshielded by vegetation at the same distance from the coast were severely damaged.

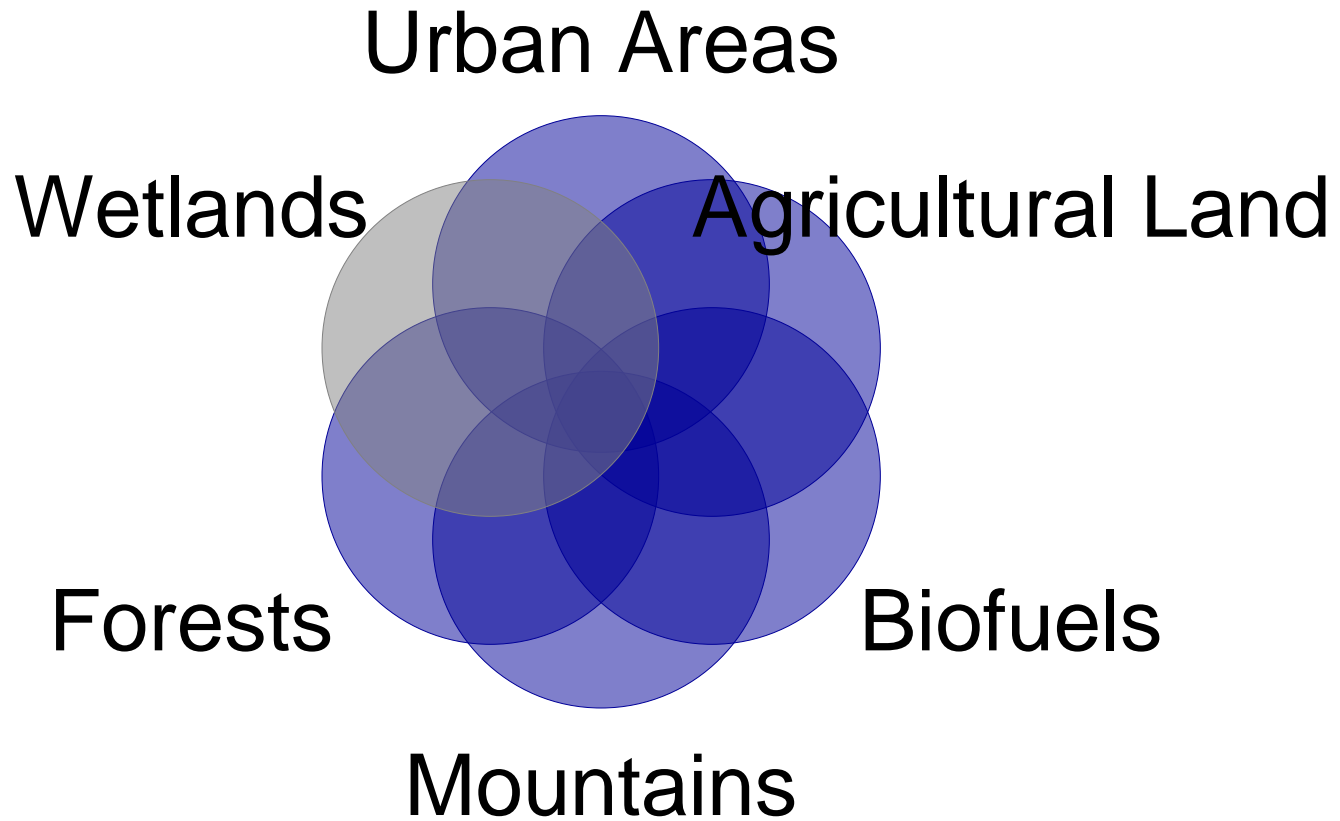


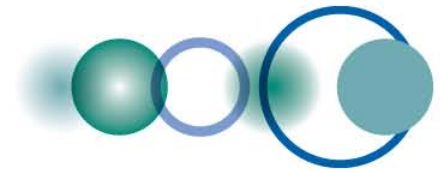
# Attributing Land Use





# Attributing Land Use

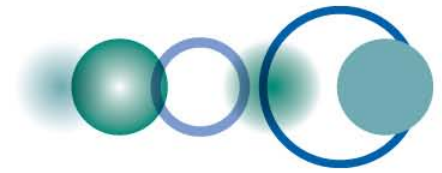




# A Need for a **Cross-cutting** Geo-information System of Systems

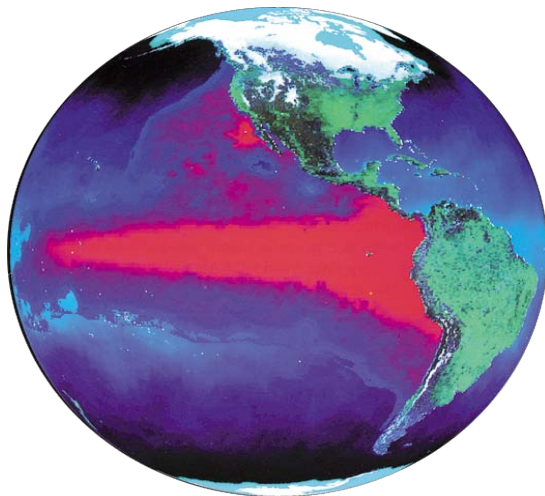
THE GLOBAL EARTH OBSERVATION  
SYSTEM OF SYSTEMS





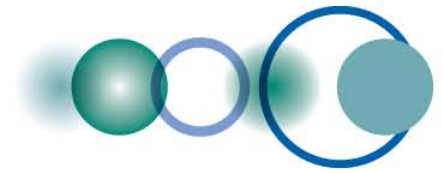
# Bridging the Data Gap

To Provide the right Information, in the right Place, at the right Time, to the right People to Make the Right Decisions.



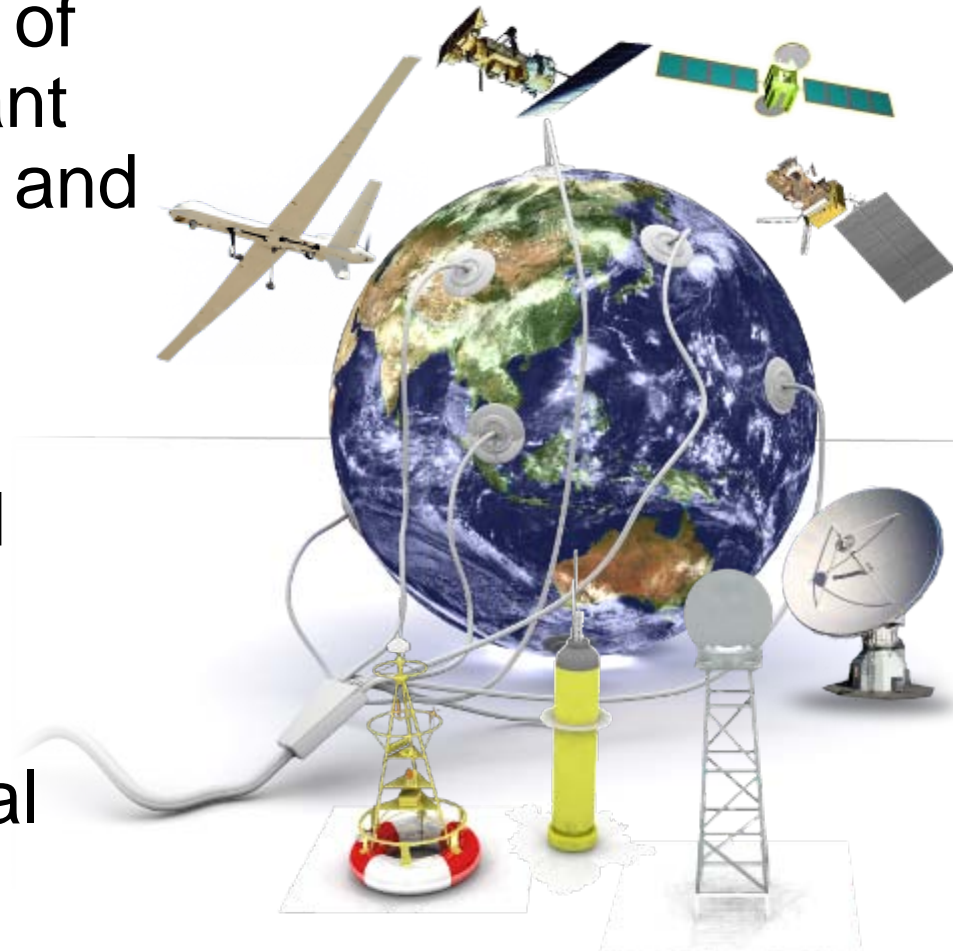
© GEO Secretariat

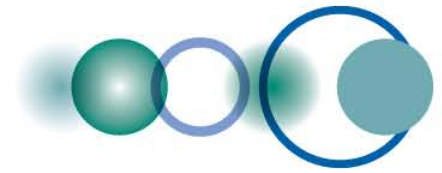




# Implement GEO Data Sharing Principles

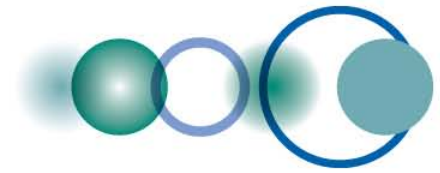
- Full and Open Exchange of Data, recognizing Relevant International Instruments and National Policies
- Data and Products at Minimum Time delay and Minimum Cost
- Free of Charge or minimal Cost for Research and Education



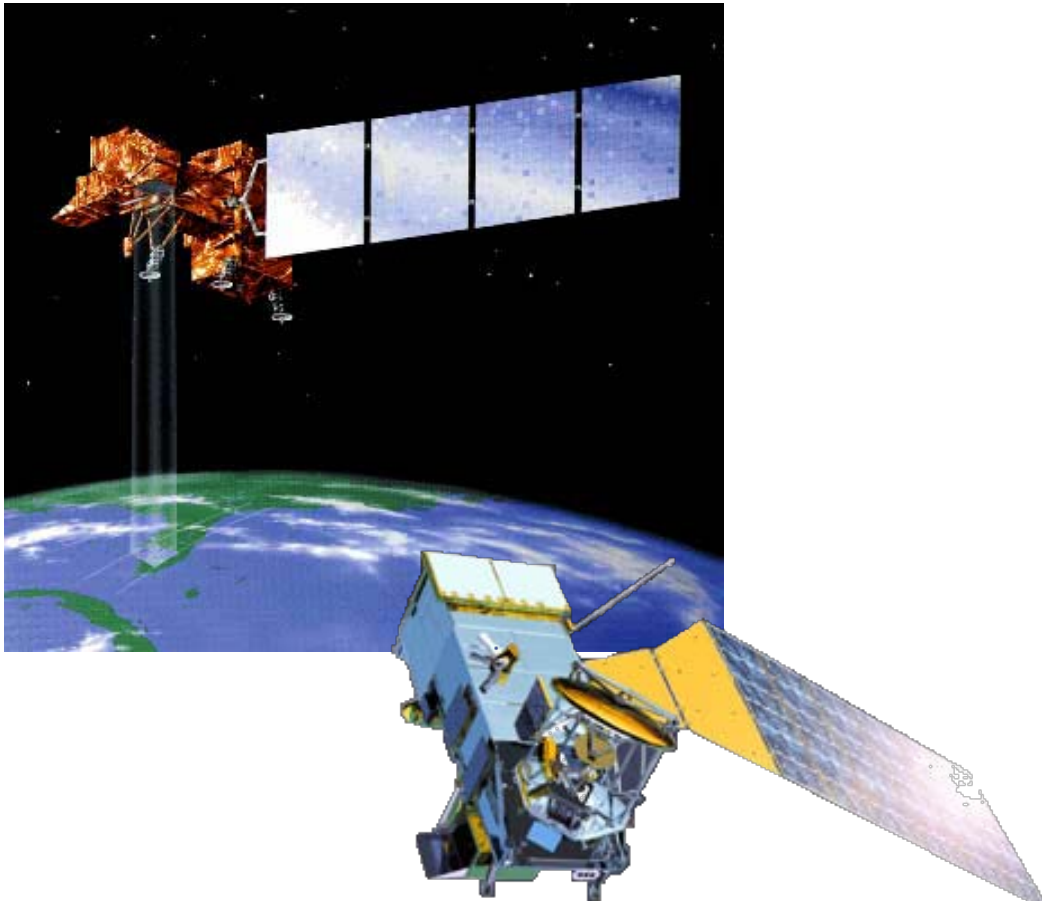


# Free and Open Access to CBERS Data (China, Brazil)





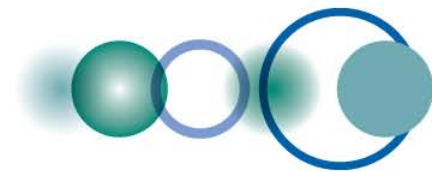
# Free and Open Access to the LANDSAT Archive (USA)



April 13, 2006



March 19, 2006



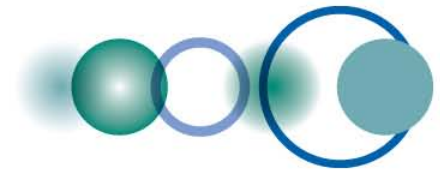
# Ensure Access to Data and Information

Users  
discover  
and exploit  
resources  
contributed  
to GEOSS

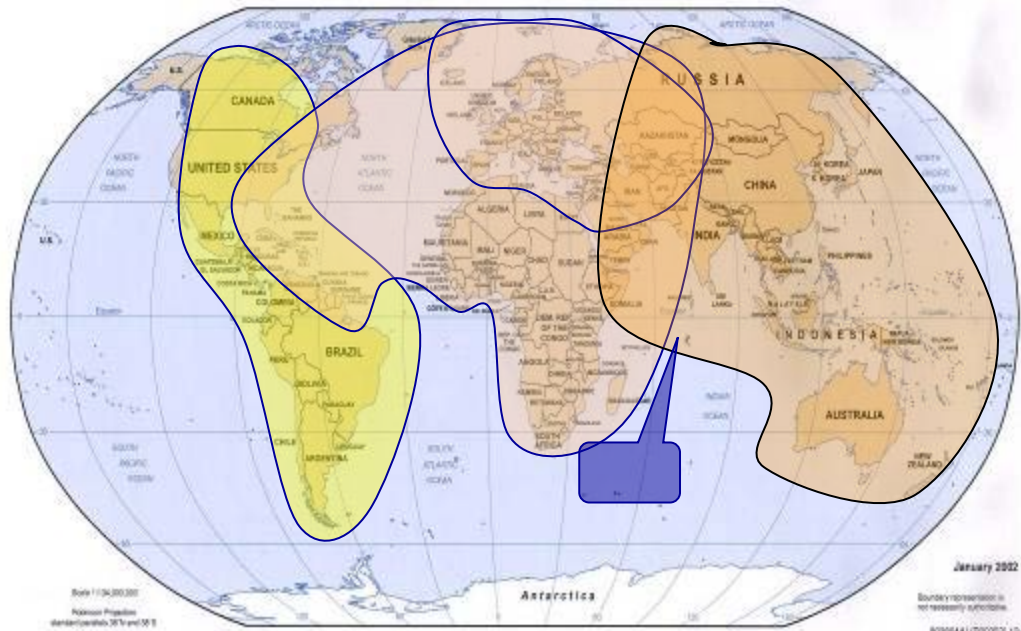


Contributors  
register  
observation  
systems,  
data sets and  
services





# GEONETCast



## Contributors



EUMETSAT



CMA

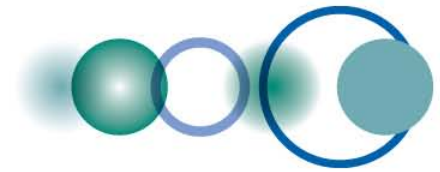
中国气象局  
[www.cma.gov.cn](http://www.cma.gov.cn)



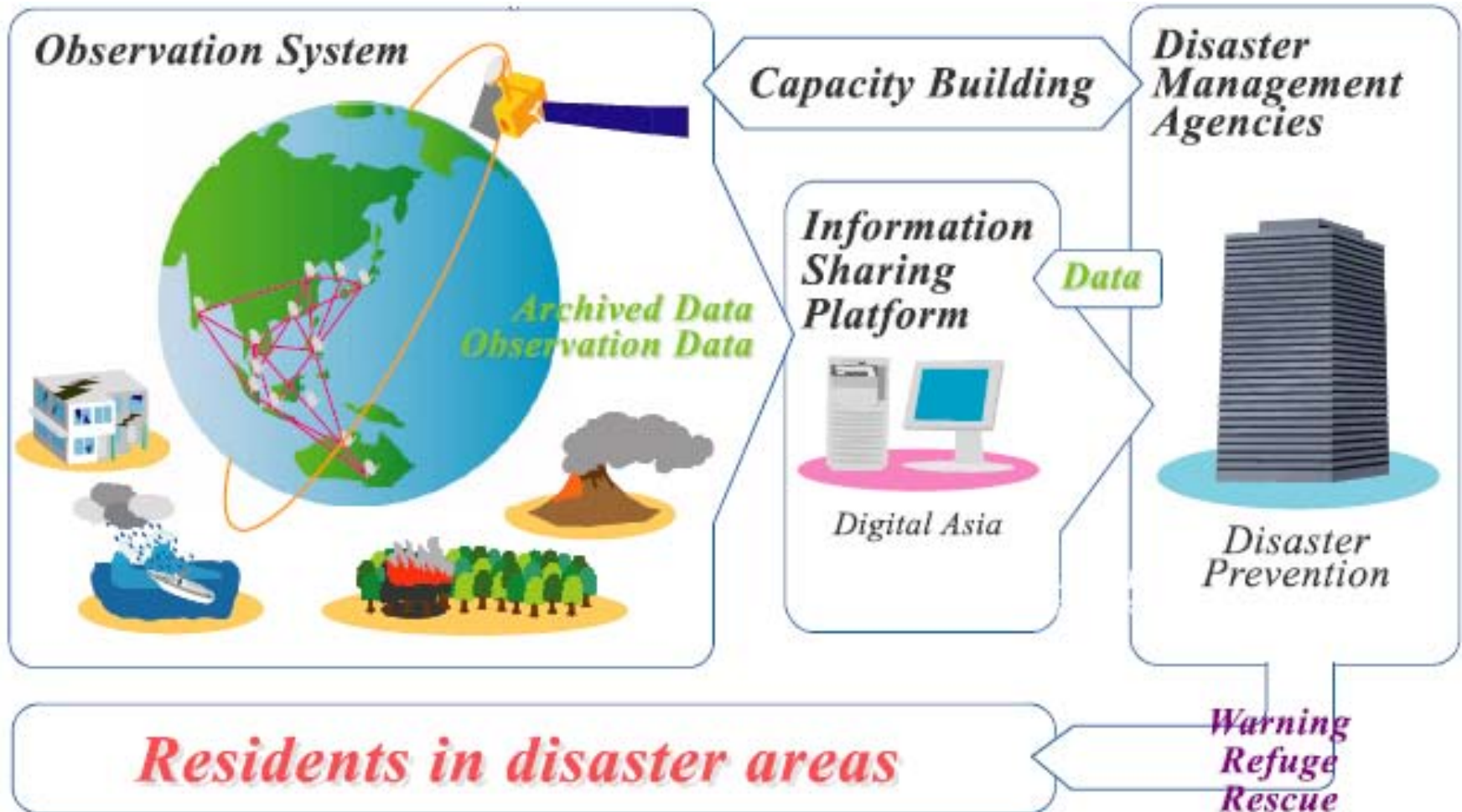
NOAA

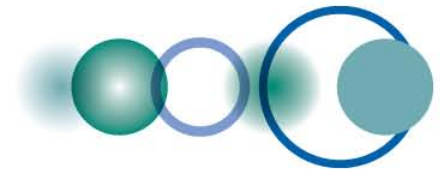
ROSHYDROMET

Global Broadcast of Environmental  
Information

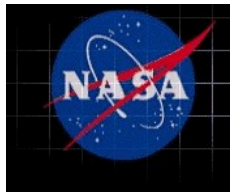


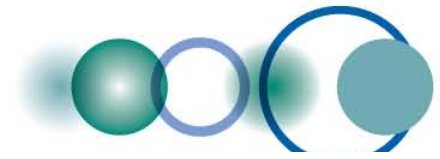
# Sentinel Asia: Disaster Management Support for Asia-Pacific Region





# SERVIR: One Stop Shop for Disaster Management in Central America





# SERVIR-Africa and SERVIR-Himalaya

Firefox  
marks | Tools | Help  
http://www.servir.net/africa/

**SERVIR** search...

HOME | DATA & SERVICES | TOOLS & MODELS | LIBRARY | COMMUNITY | ABOUT US

**The SERVIR-Africa website is under development.**  
Over the next few weeks, we will continue to add new content and functionality. Please check back soon, or [subscribe](#) to receive notification of changes!

Coming Soon - Online Map Tools

Featured Map | Viewer 2D | Viewer 3D

Title: SERVIR-Viz Climate Mapper  
Source: SERVIR  
Date: Future decadal scenarios [More info...](#)

Lat: 0.000°  
Lon: 25.426°

Average Annual Change in Precipitation (DJF)  $\rightarrow +15.9$   
Average Annual Change in Precipitation (JFM)  $\rightarrow -2.1$   
Average Annual Change in Precipitation (JFMJ)  $\rightarrow +16.7$

Average Change in Precipitation for 2010-2049 by Month  
SAC Scenario (AR5, GCM: MIROC5)

Actions: Close Map

Search: [ ]

Show Spatial Coverage Data  
Show Country Boundaries

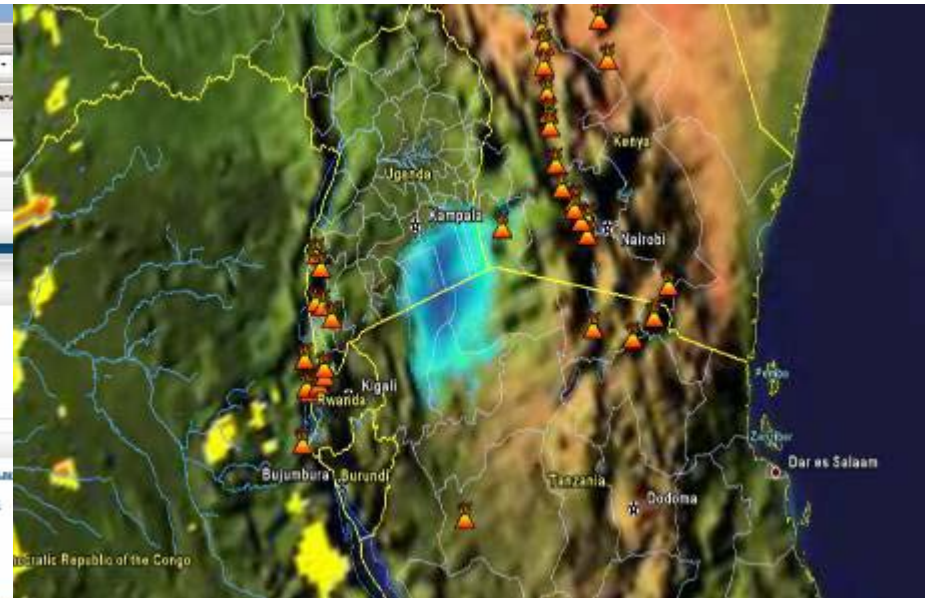
SLRVIR Mission  
*Enabling the use of Earth observations and predictive models for timely decision making to benefit society*

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**Thank you!**

