



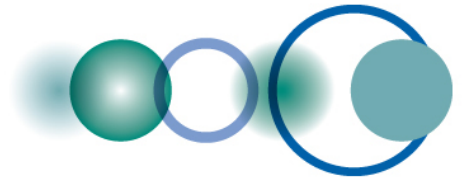
# Group on Earth Observations (GEO) Future Directions

## ICES Biennial Workshop

**Barbara J. Ryan**  
Director, GEO Secretariat

**Geneva, Switzerland**  
**12 November 2013**





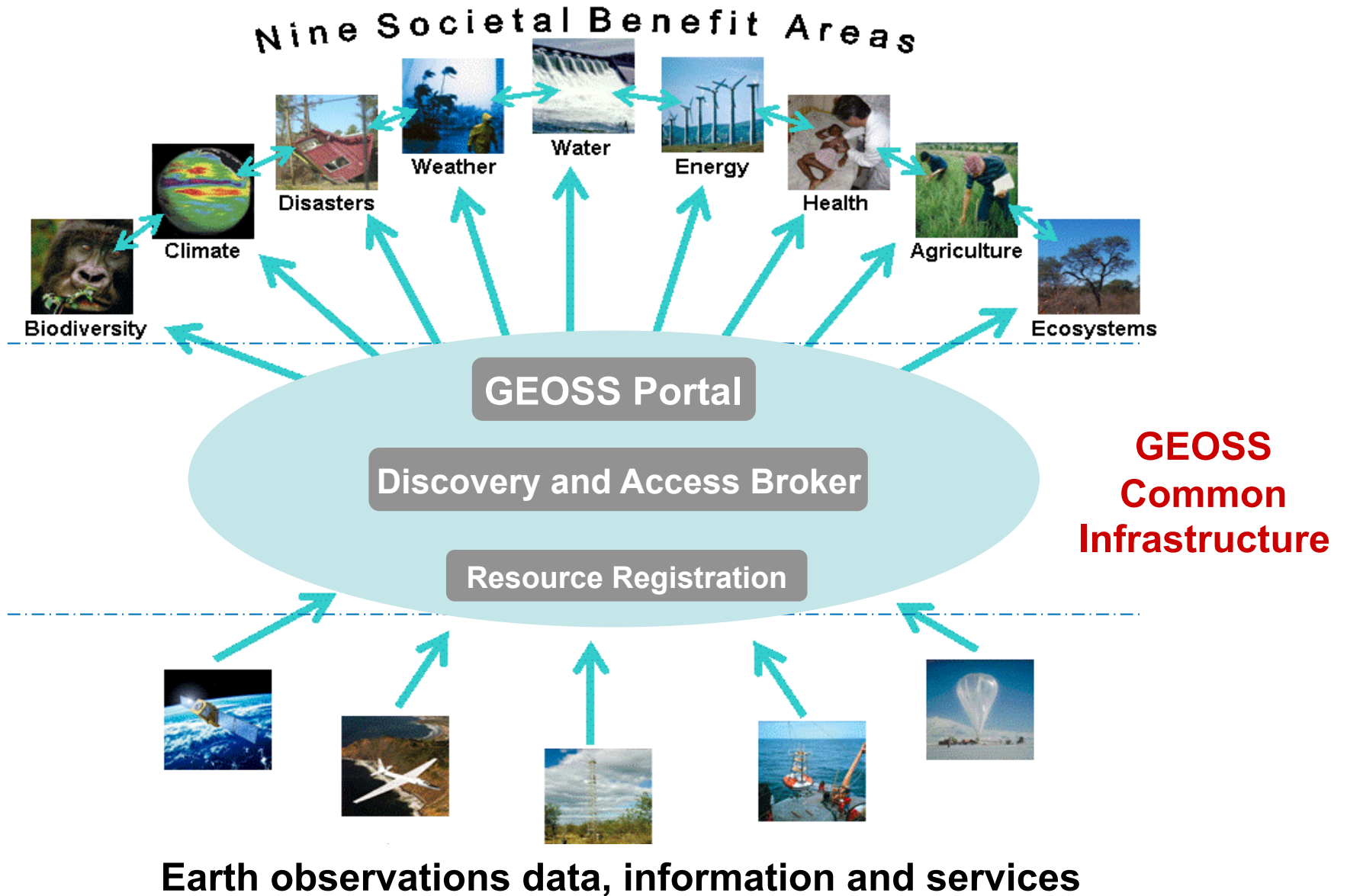
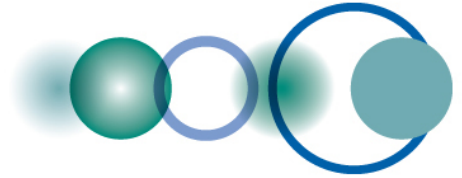
# The Group on Earth Observations (GEO)

## Earth Observation Summit



U.S. Department of State  
Washington DC  
31 July 2003





# Enabling a System of Systems



Data Providers Brokered (capacities, systems, networks, etc.)

GEOSS Portal



GEO Home Page



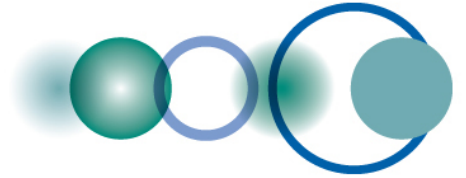
Data Providers successfully Tested (coming soon)





# A Global, Coordinated, Comprehensive and Sustained System of Observing Systems





**Created in 2005, to develop a coordinated and sustained  
Global Earth Observation System of Systems (GEOSS) to  
enhance decision making in nine Societal Benefit Areas  
(SBAs)**

**GEO today:**

**90 Members**

**67 Participating**

**Organizations**





# 67 Participating Organizations

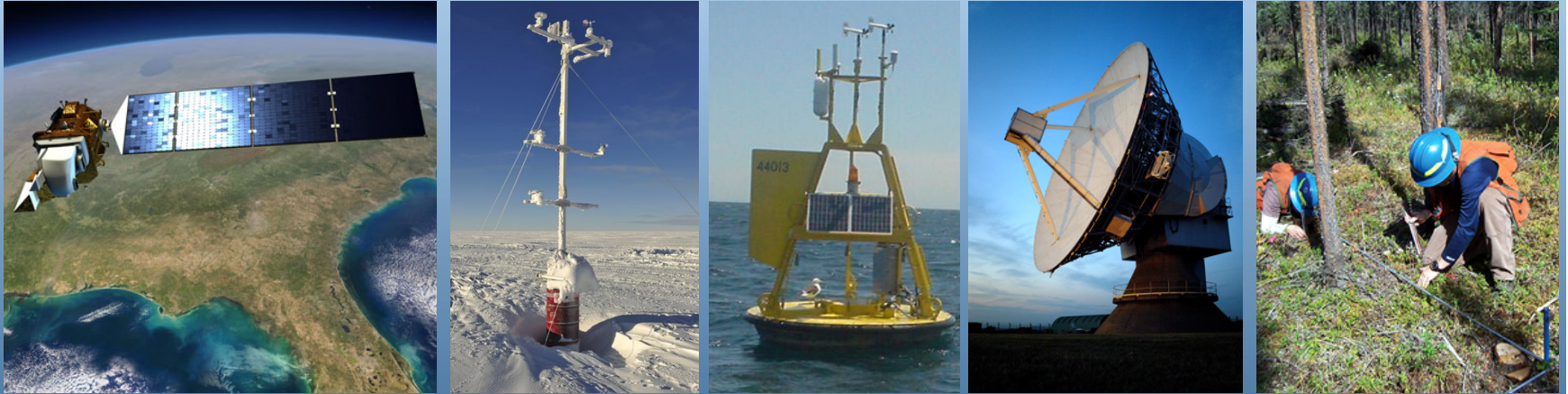






# A broad Commercial Sector spans the entire information value chain

**Data  
providers**



**Value-Added  
providers**



**Downstream  
users**

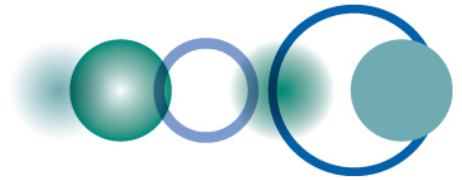




# GEO Objectives

- Improve and Coordinate Observation Systems
- Advance Broad Open Data Policies/Practices
- Foster Increased Use of EO Data and Information
- Build Capacity



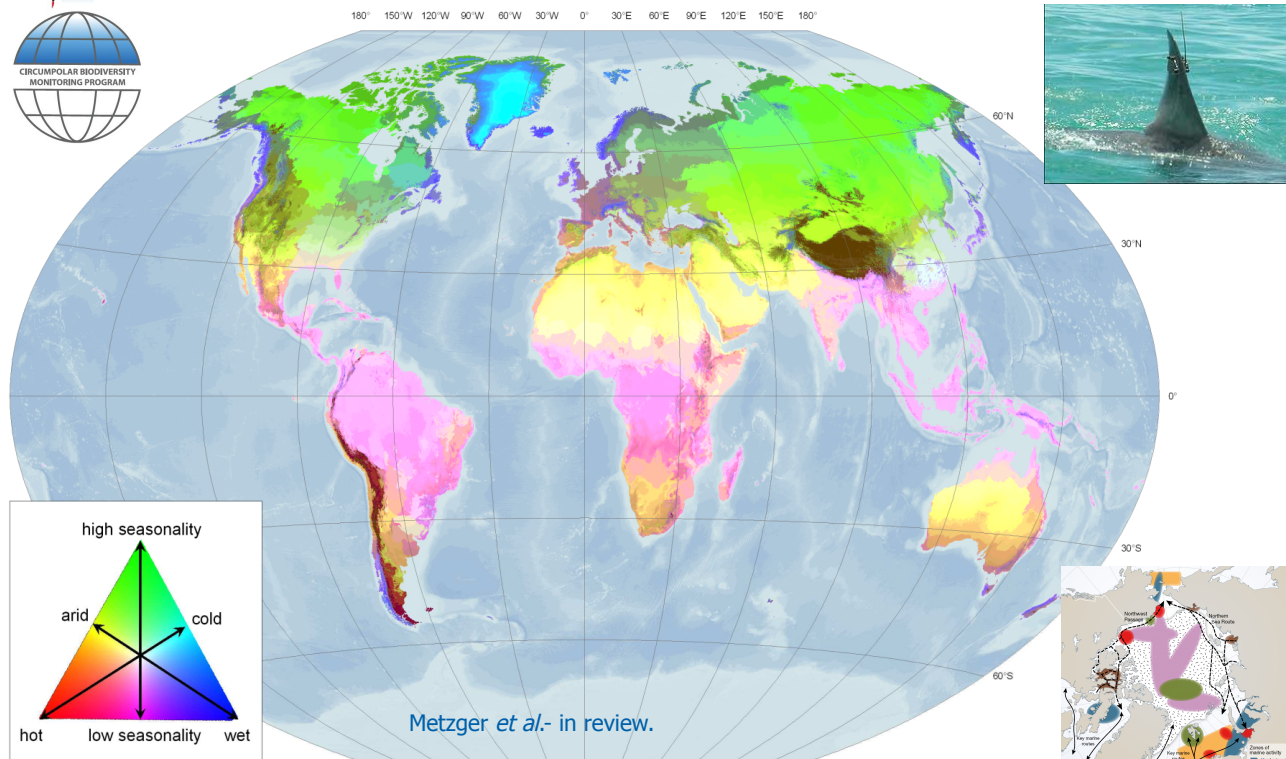


# GEO Biodiversity Observation Network

(France, Germany, Japan, Netherlands, Spain, Sweden, South Africa, USA, Diversitas, GBIF, IUCN)



High-resolution bioclimatic map of the world



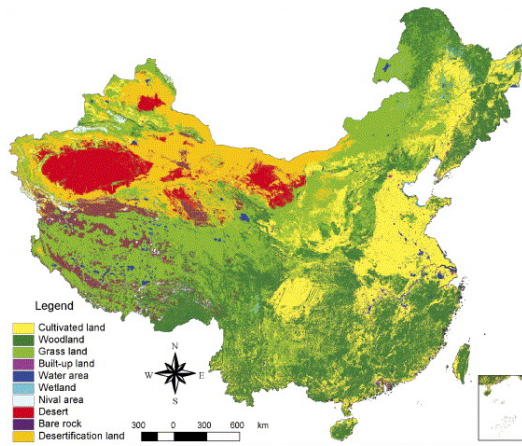
- \* Response to CBD
- \* Essential Biodiversity Variables (EBVs)
- \* Global high-res bio-climatic map
- \* Arctic and French Biodiversity Networks
- \* Strong outreach



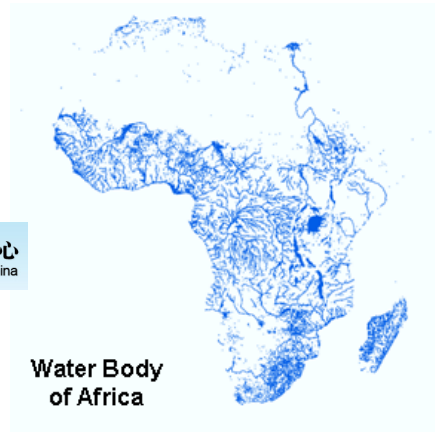


# Advanced Land-Cover Products

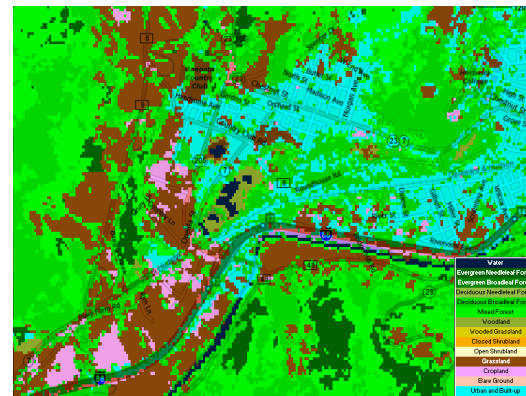
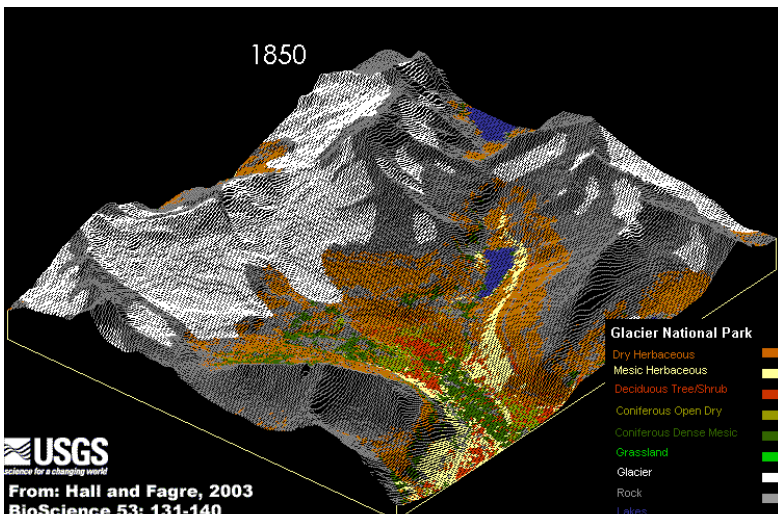
*(Canada, China, EC, Greece, Japan, Netherlands, Nigeria, Spain, Sweden, UK, USA, Spain, EEA, ESA, GTOS, ISPRS)*

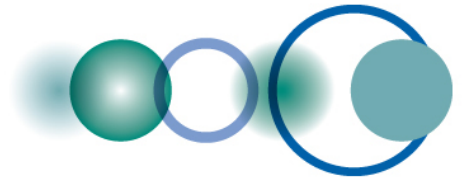


国家基础地理信息中心  
NGCC National Geomatics Center of China



- \* Global 30m products
- \* Major land cover types (eg. wetland)
- \* Independent validation databases
- \* Global Land Cover Portal
- \* Growing int'l consensus

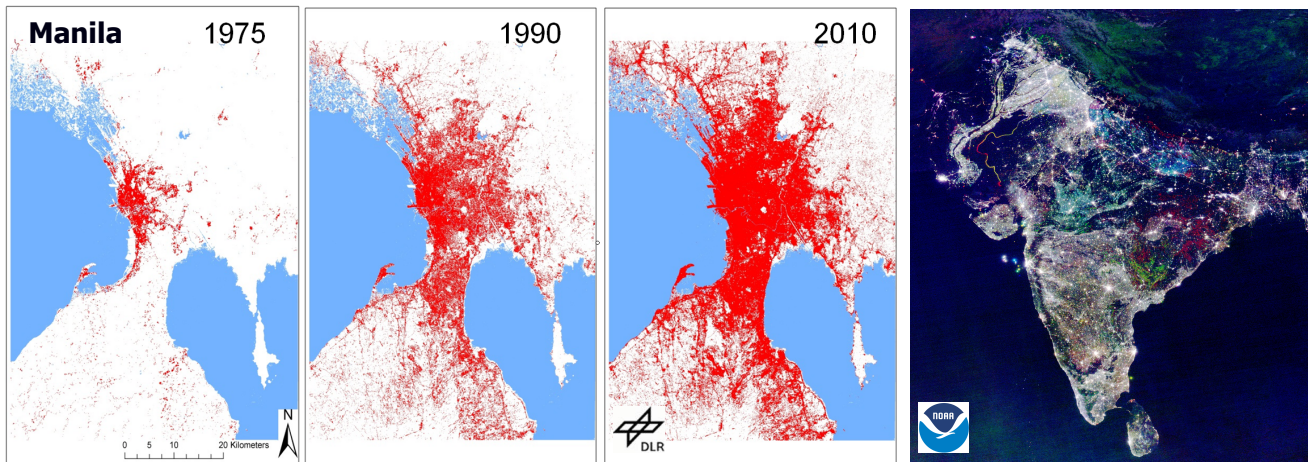




# Global & Local Urban Footprints (China, EC, Germany, Greece, Italy, Pakistan, USA)



- \* 35-yr evolution of 26 mega-cities
- \* Global night-time lights for 2012
- \* Urban Heat Island patterns
- \* Over 3'700 cities mapped using ASTER (15m)





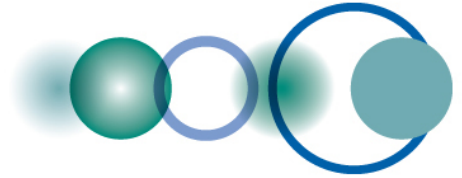


## **GEOSS Implementation Requires: *Data Sharing Principles***

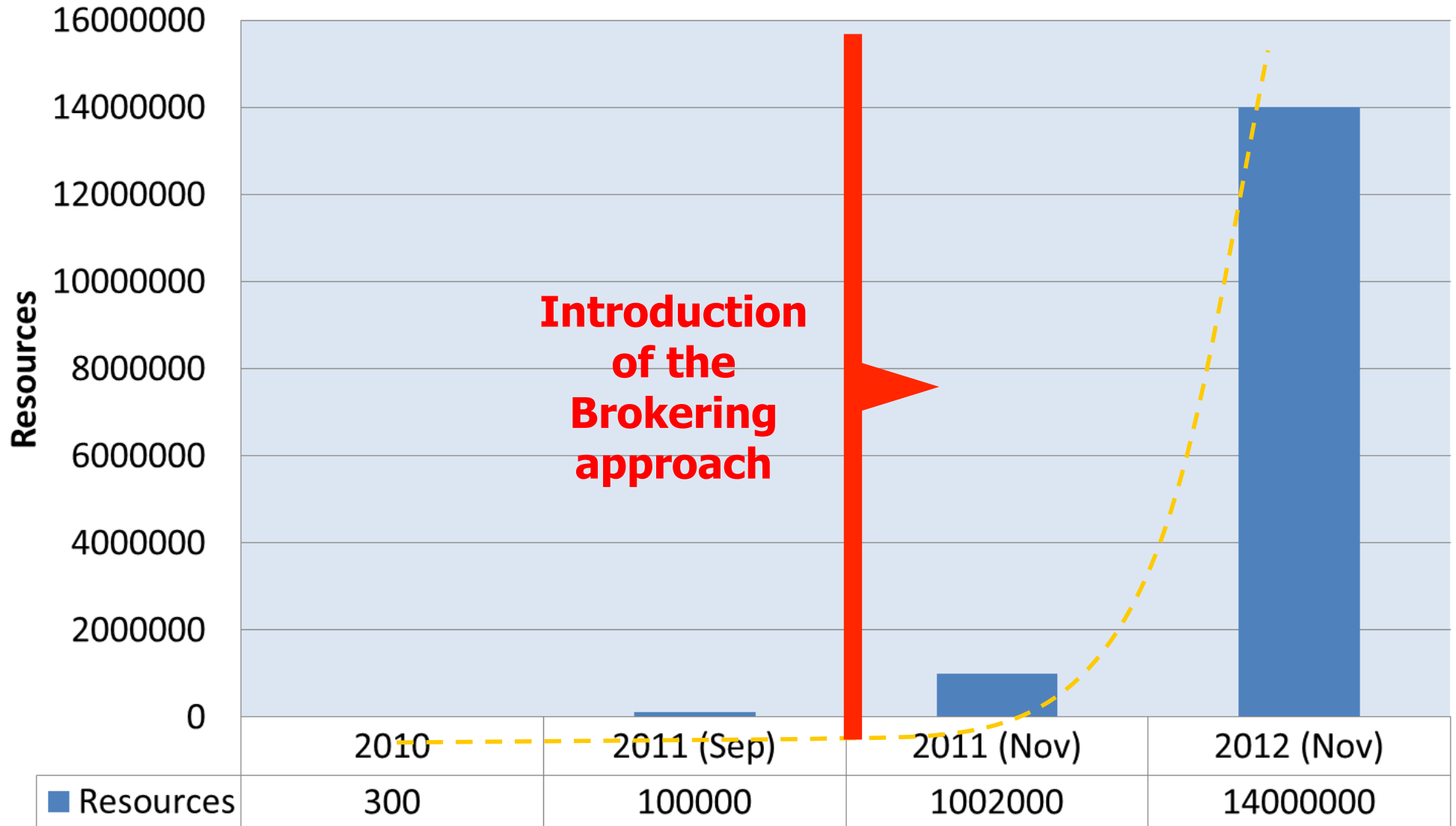
- **Full and Open Exchange of Data**
- **Data and Products at Minimum Time Delay and at Minimum Cost**
- **Free of Charge or Cost of Reproduction**







## GEOS Resources





About **20** brokered data providers – capacities, systems, Communities



*Publish*

More than **7 Million** (**1.2 Million** GEOSS Data Core) Discoverable and potentially Accessible resources (mix of data collections, datasets and individual images)



*Contain [source: data providers]*

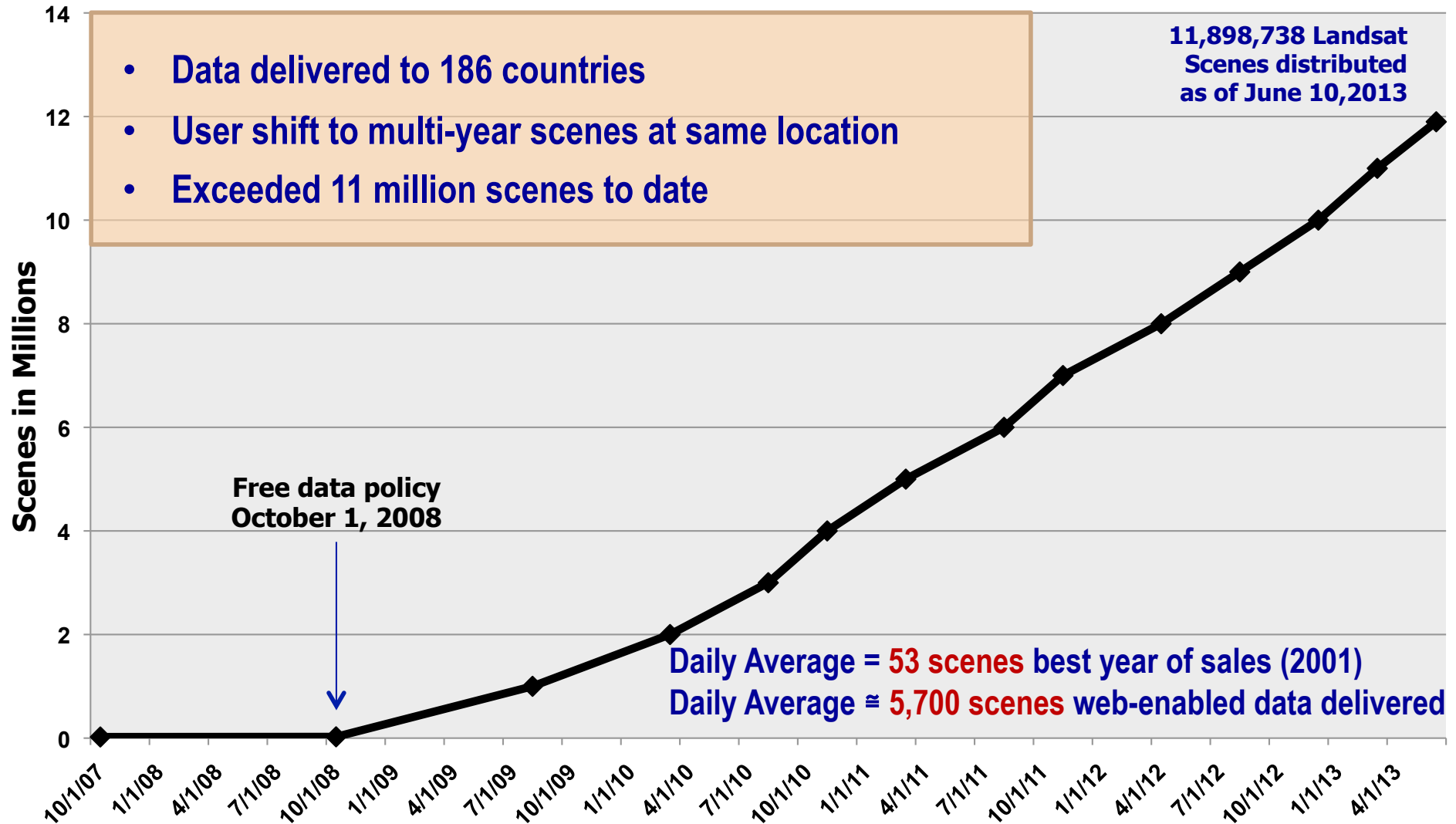
More than **65 Million** (**50 Million** GEOSS Data Core) Discoverable and potentially Accessible granules (e.g. satellite scene, raingauge record)



**Resources**



# Increasing Demand for Free Landsat Data







# Week at a Glance

**Provisional**

	8	9	10	11	12	13	14	15	16	17	18	19	20	
Sunday 12		<b>Side Events</b>												
Monday 13		<b>Side Events</b>												
		<b>GEO Boards Meetings</b>												
Tuesday 14		<b>GEO Executive Committee Meeting</b>												
		<b>Side Events</b>												
Wednesday 15		<b>GEO-X</b>				<b>Side Events</b>			<b>GEO-X</b>			<b>GEO-X Reception</b>		
Thursday 16		<b>GEO-X</b>				<b>Side Events</b>			<b>GEO-X</b>		<b>Hi-level Event</b>		<b>Ministers Dinner</b>	
Friday 17		<b>Ministerial Summit</b>						<b>Ministerial Summit</b>						
		<b>Side Events</b>												

**Exhibition opens at 10.00 Tuesday and closes at 14.00 Friday**



# Summary

- *In situ* observations and their networks still need support
- Global monitoring Initiatives will be key elements of future strategy
- Continue advocating broad open data policies/practices -- essential for publically funded collections
- Economic value in downstream elements – value-added products and services
- National, Regional and International efforts need to be coordindated

**Barbara J. Ryan**  
[bryan@geosec.org](mailto:bryan@geosec.org)

<http://www.earthobservations.org>

