

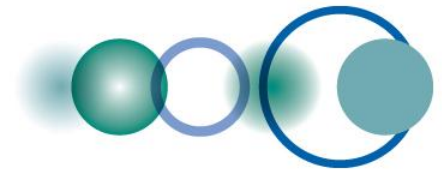


Unleashing the Power of Earth Observations – Together

RDA 6th Plenary
Paris, France
23 September 2015

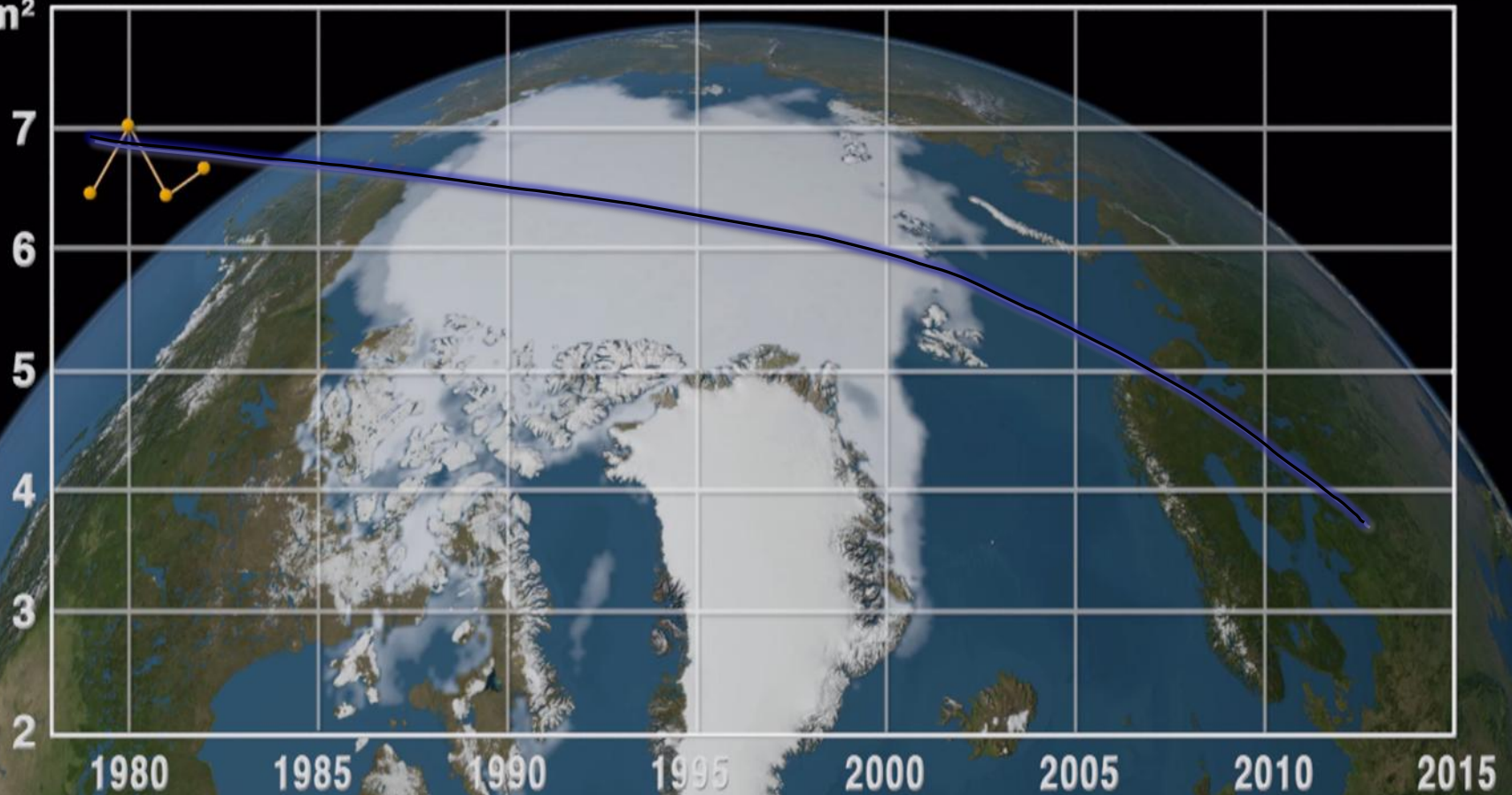
Barbara J. Ryan
Director, GEO Secretariat
Geneva, Switzerland

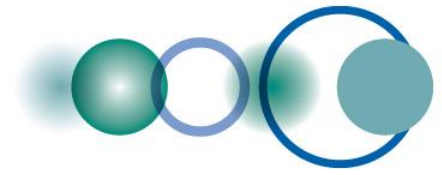




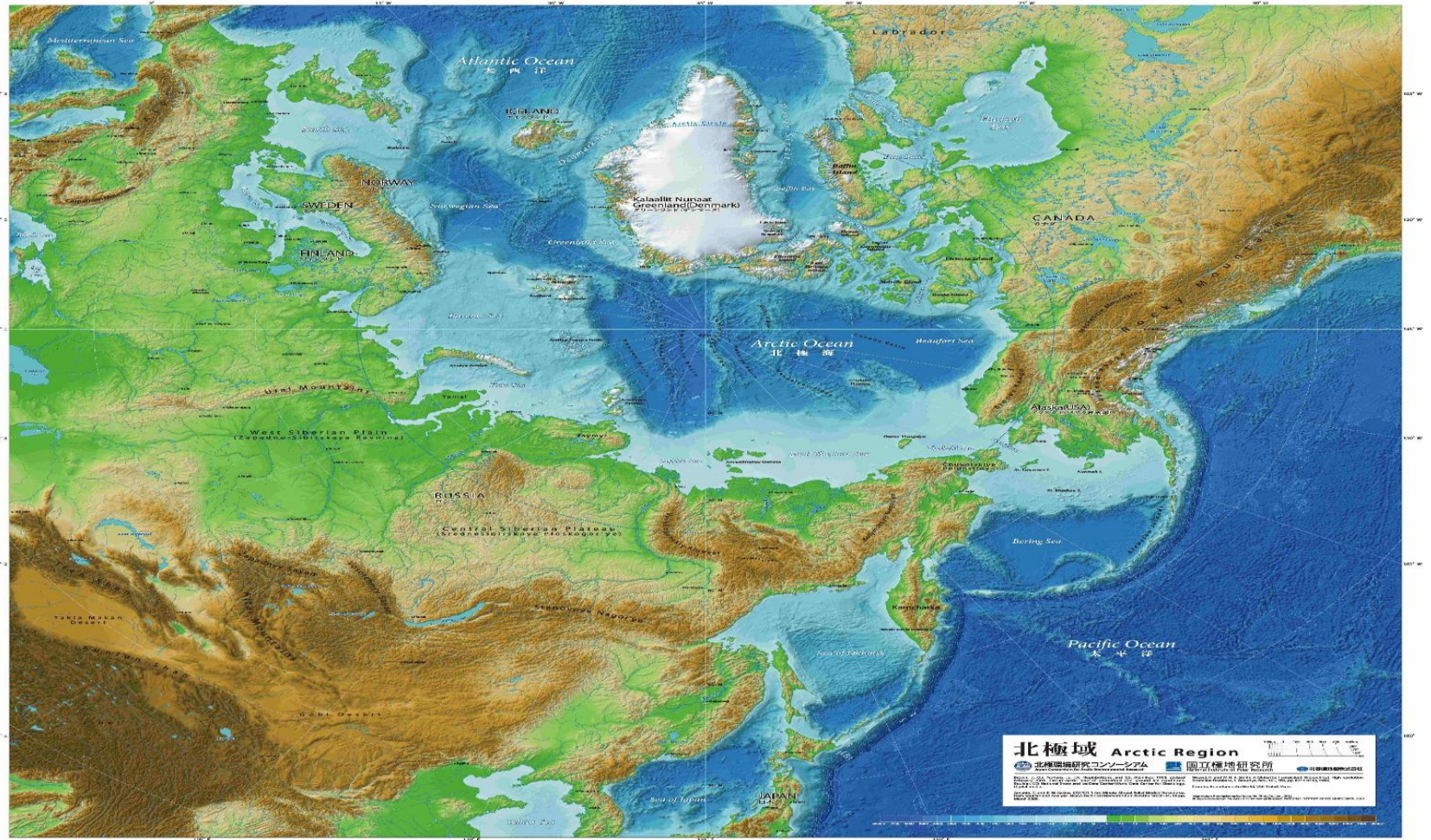
ARCTIC SEA ICE AREA

Millions
km²

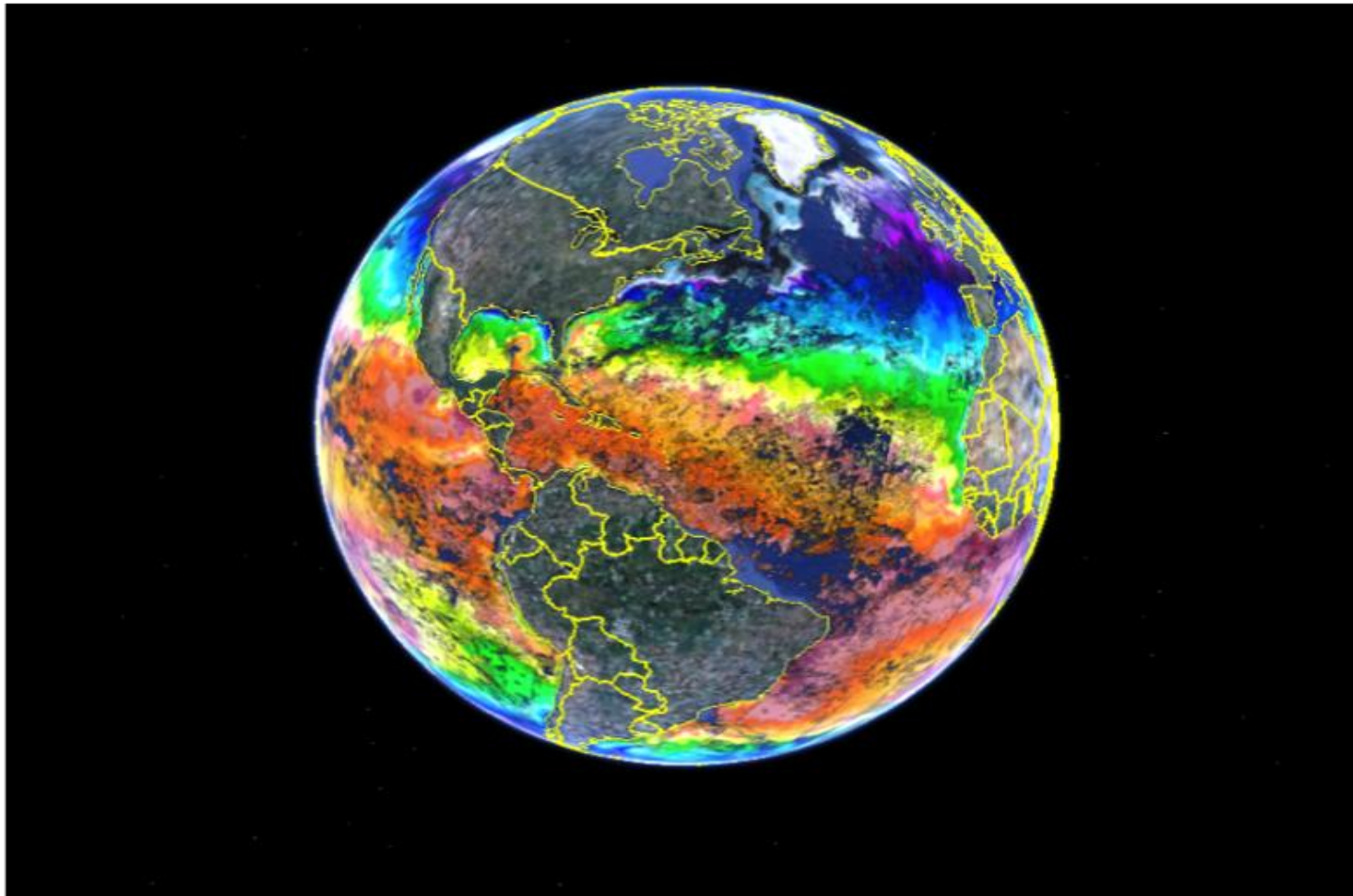


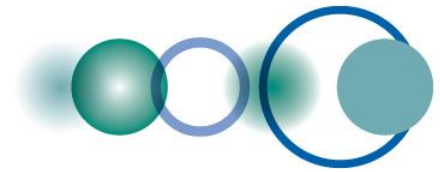


The Arctic Region Impacts the Globe

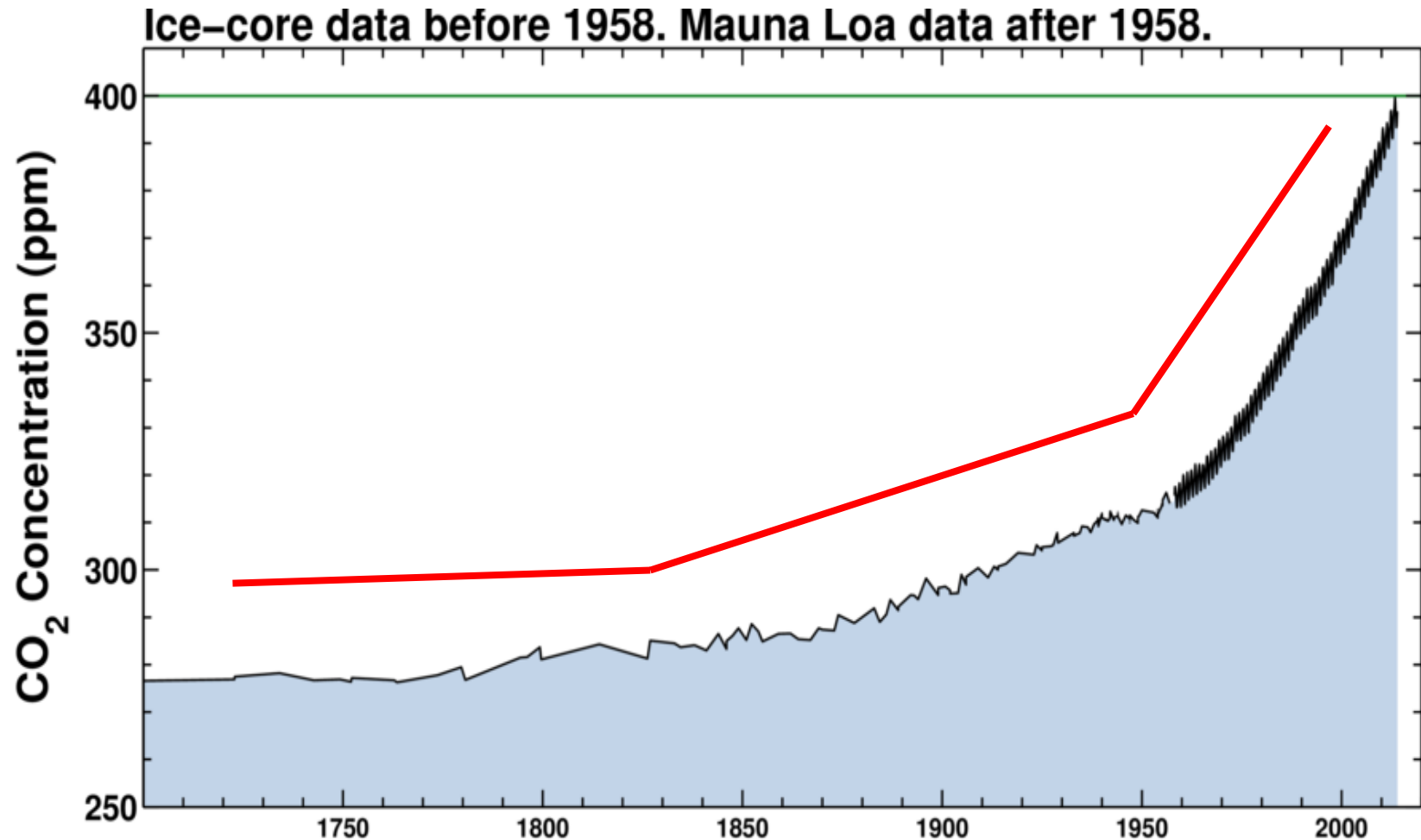


Global Sea Surface Temperatures

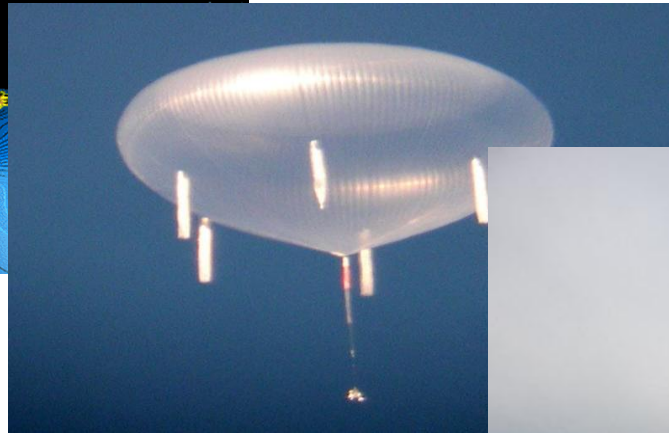
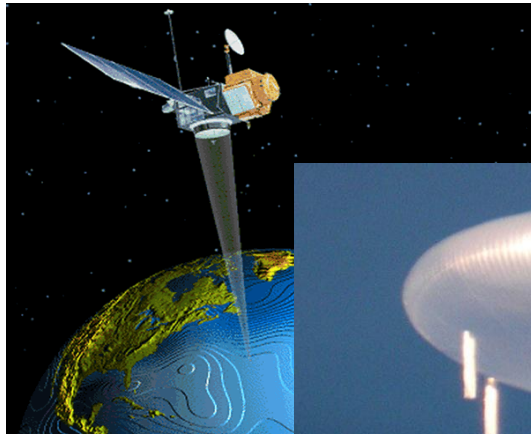


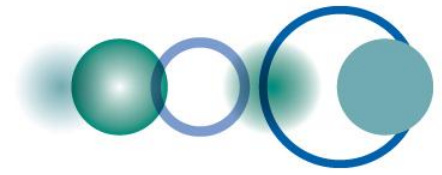


Global Atmospheric Concentrations of CO₂



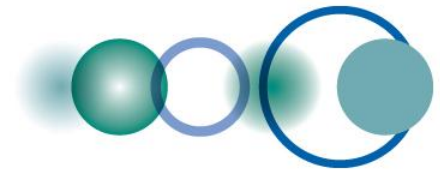
Observations – In, On, and Around the Earth





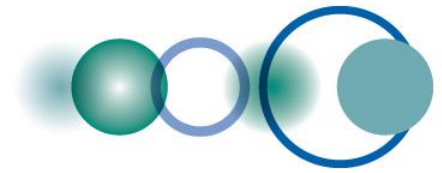
GEO Vision

**To realize a future wherein decisions and actions,
for the benefit of humankind, are informed by
coordinated, comprehensive and sustained
Earth observations and information.**



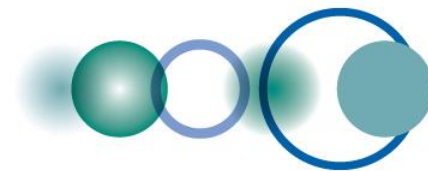
A Global System of Systems





GEO Objectives

- **Improve and coordinate observation systems globally**
- **Provide access to data & information**
- **Advance broad open data policies/practices**
- **Build capacity**



GEO Member States

GEO Member Map for the year 2015

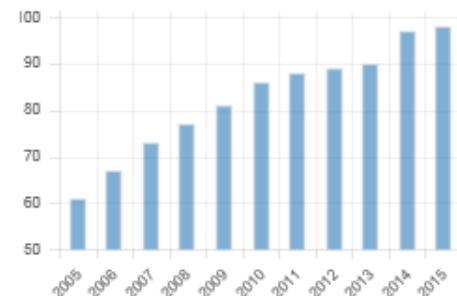


2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Number of Members (2015)

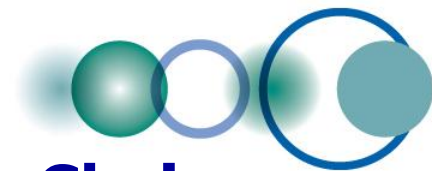
Africa:	25
Americas:	15
Asia/Oceania:	17
C.I.S.:	7
Europe:	34
Total:	98

Number of Members by year



87 Participating Organizations





Commercial Sector Spans the Entire Information Value Chain

Data Providers

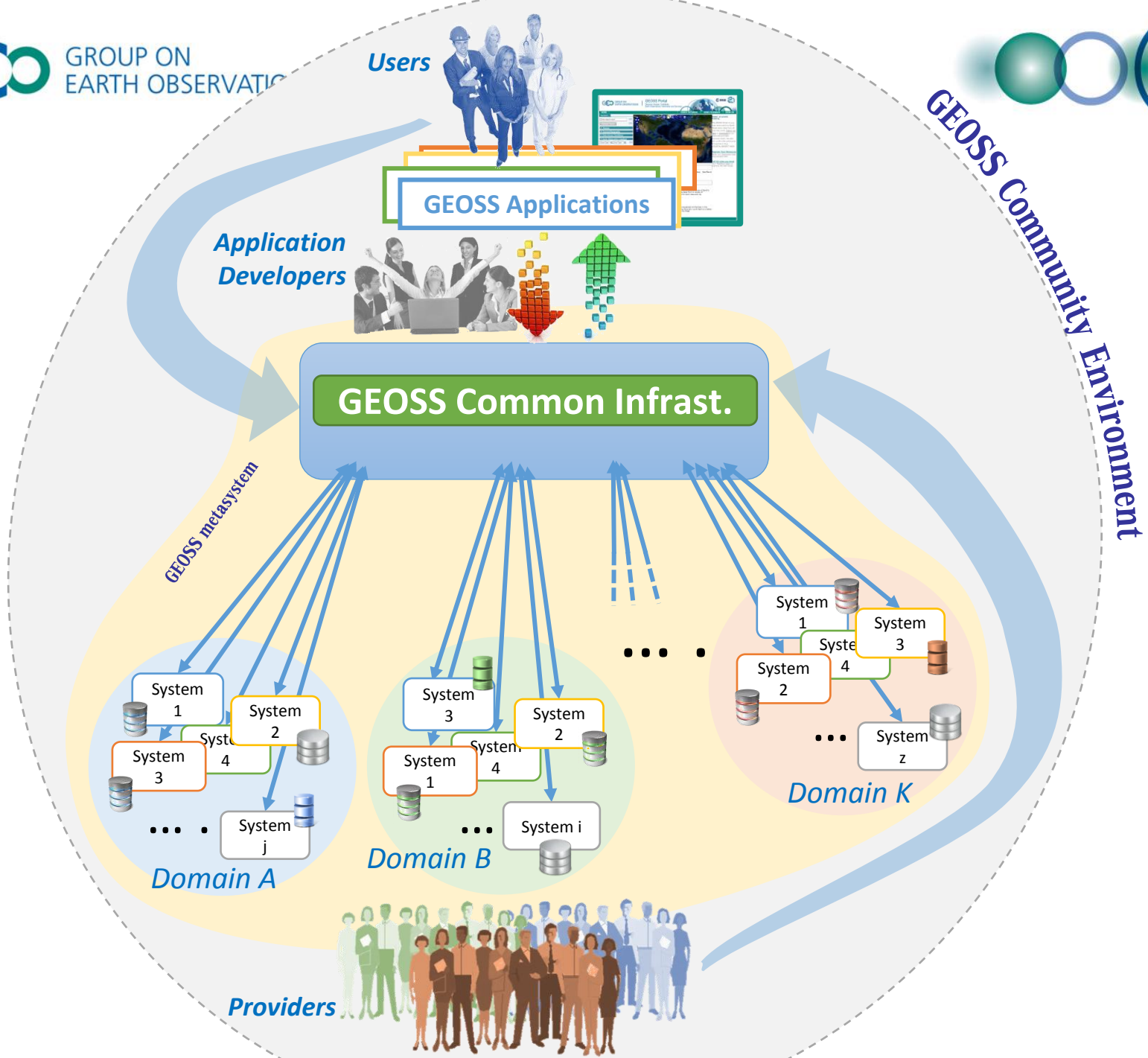


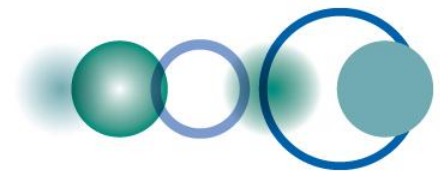
Value-Added Providers



Downstream Users

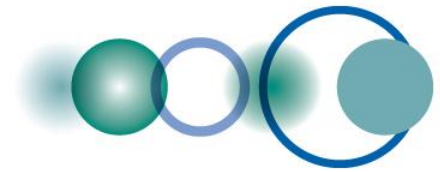






GEOSS Information System





GCI Providers Evolution and Statistics

Discoverable and potentially Accessible Elements

Introduction of the

Number of Brokered Enterprise Systems

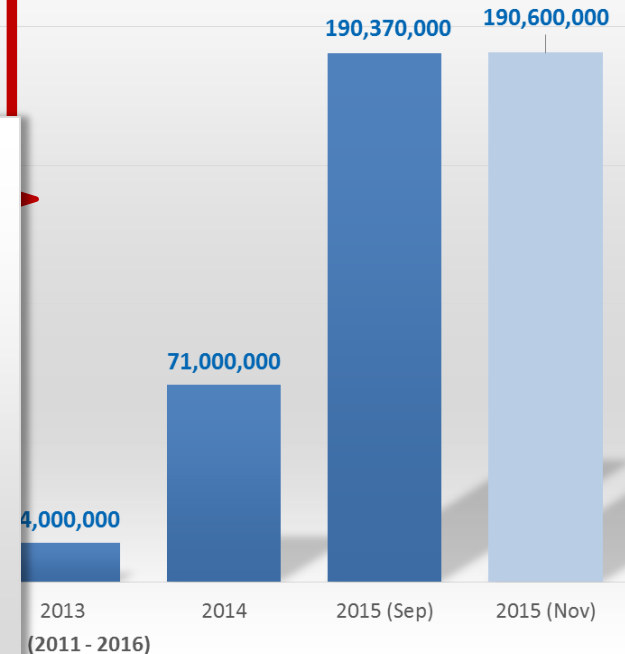
Introduction of the
Brokering approach

CSR
brokering

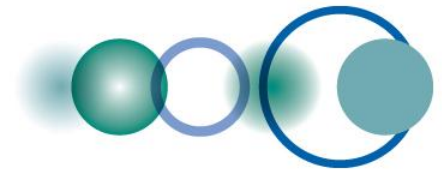
Brokered sources

2010 2011 2012 (Jul) 2013 (Oct) 2014 (May) 2015 (Sep) 2015 (Nov)

Time (2011 - 2016)



(2011 - 2016)



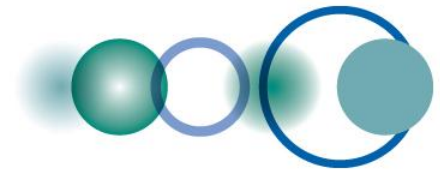
Brokering Organizations



U B E R

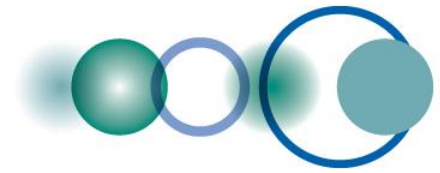


airbnb

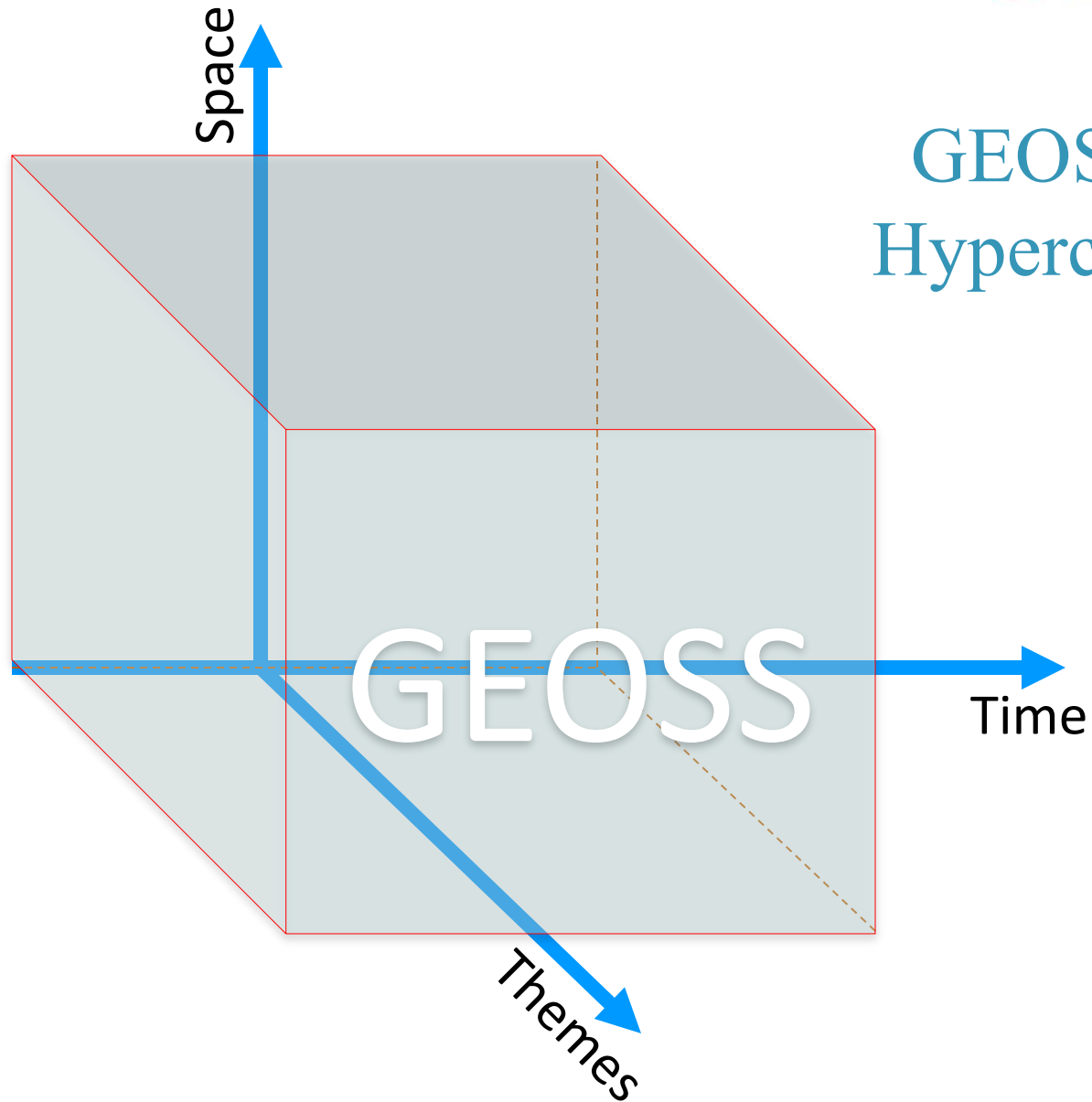


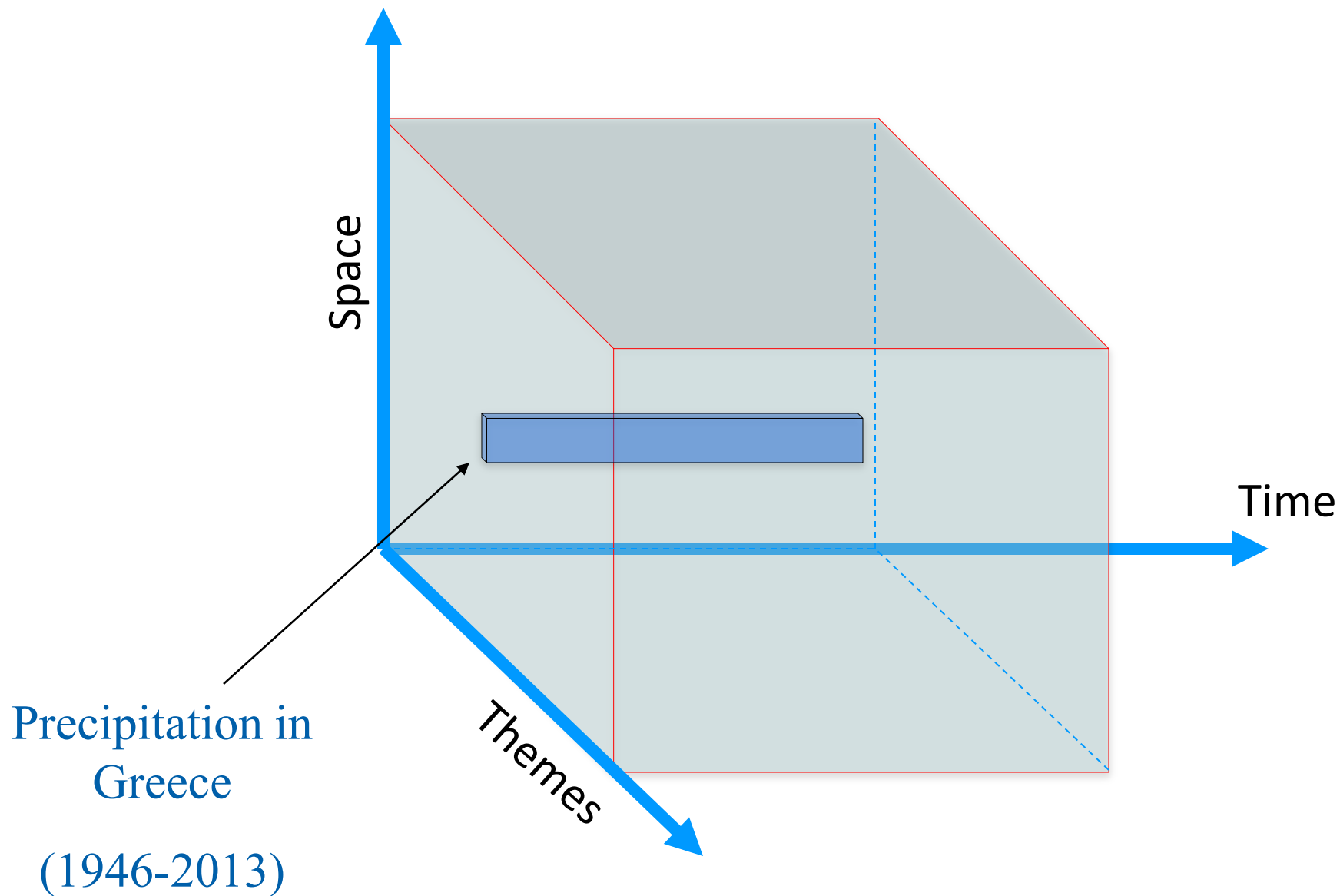
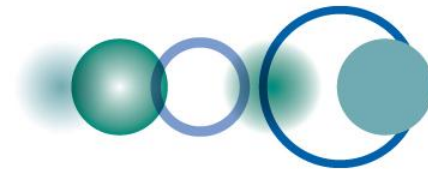
GEOSS Discovery and Access Infrastructure

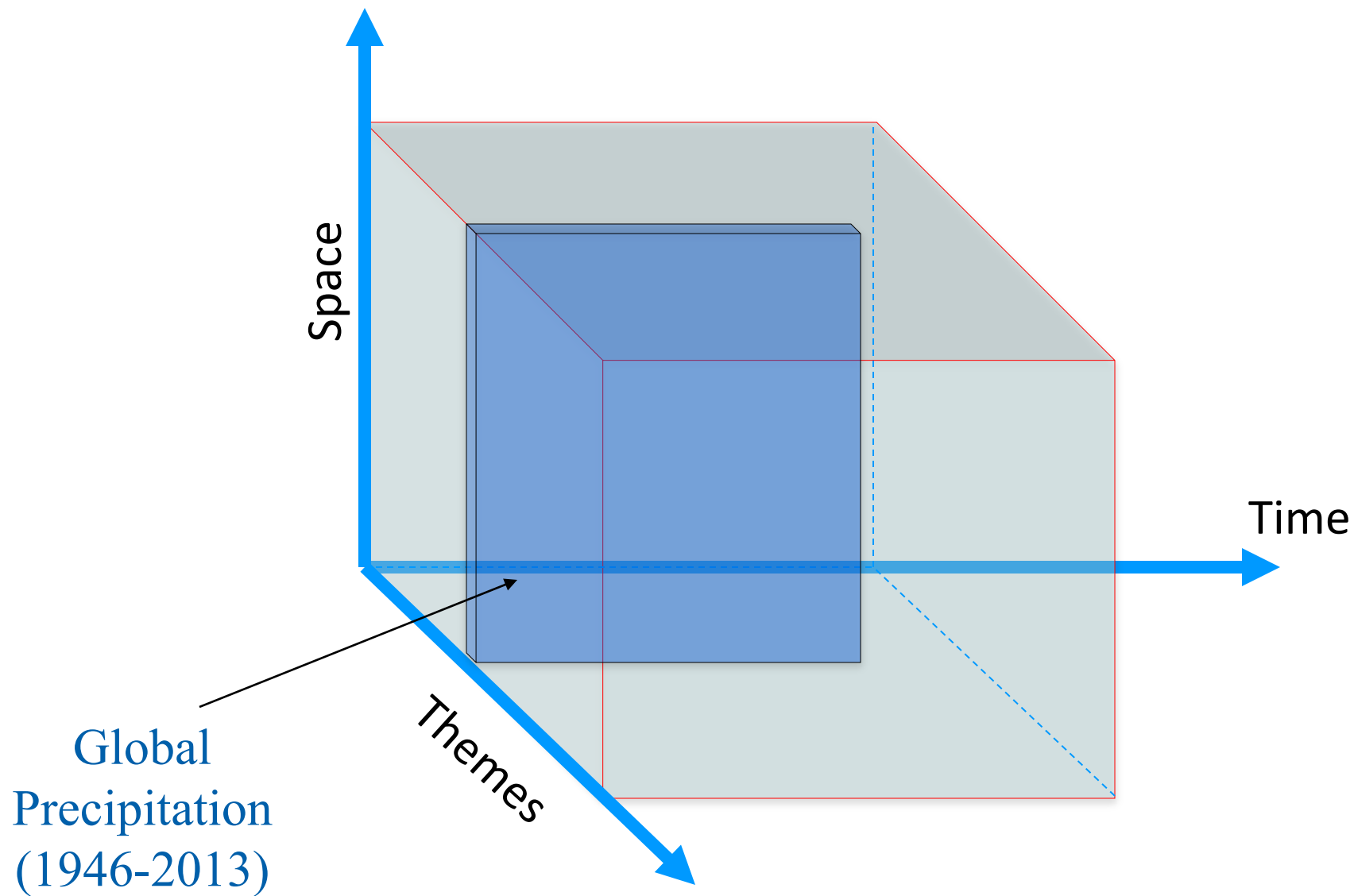
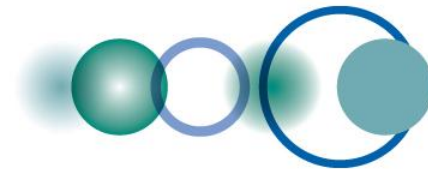


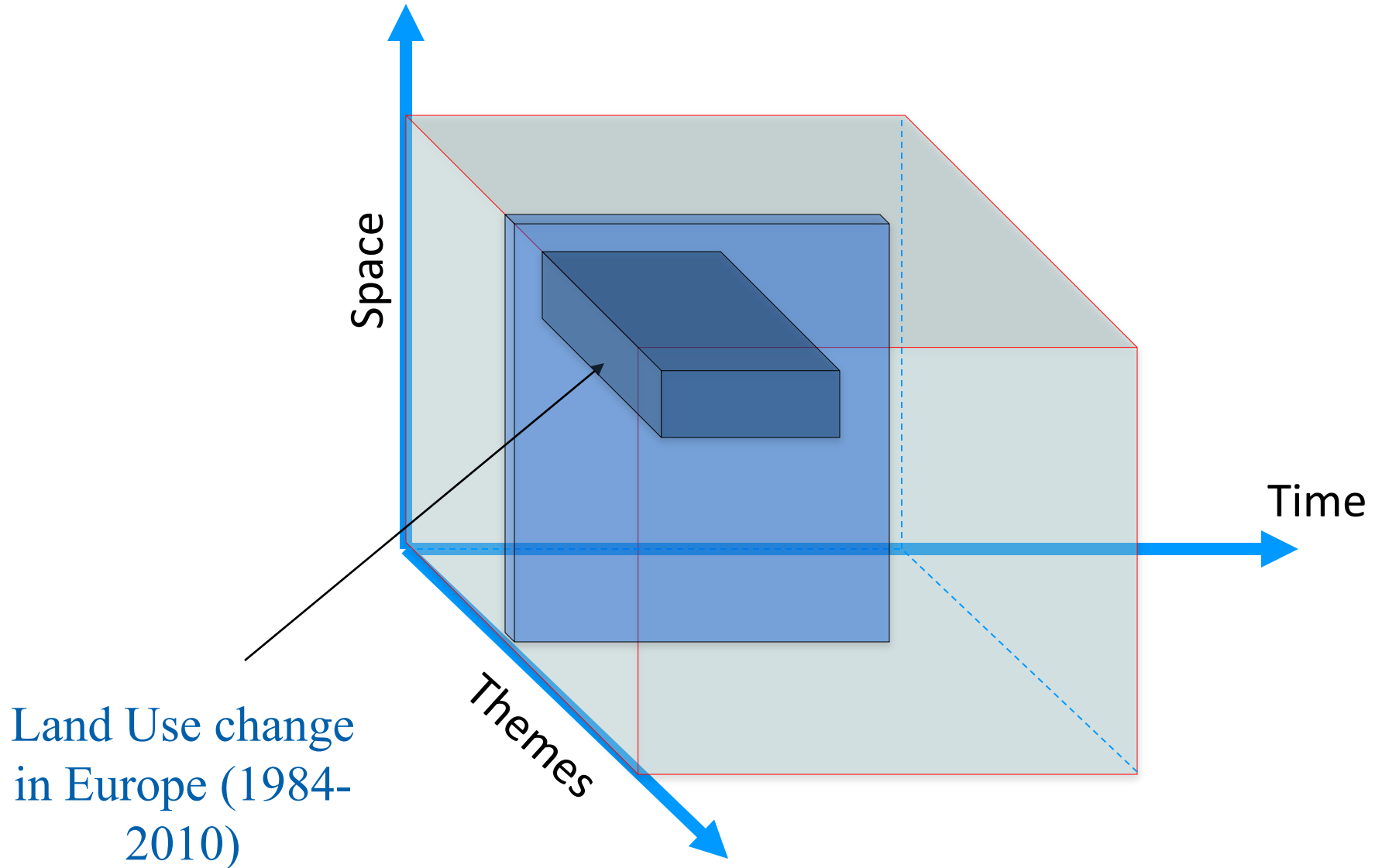
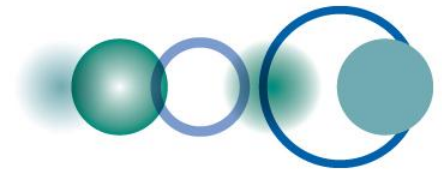


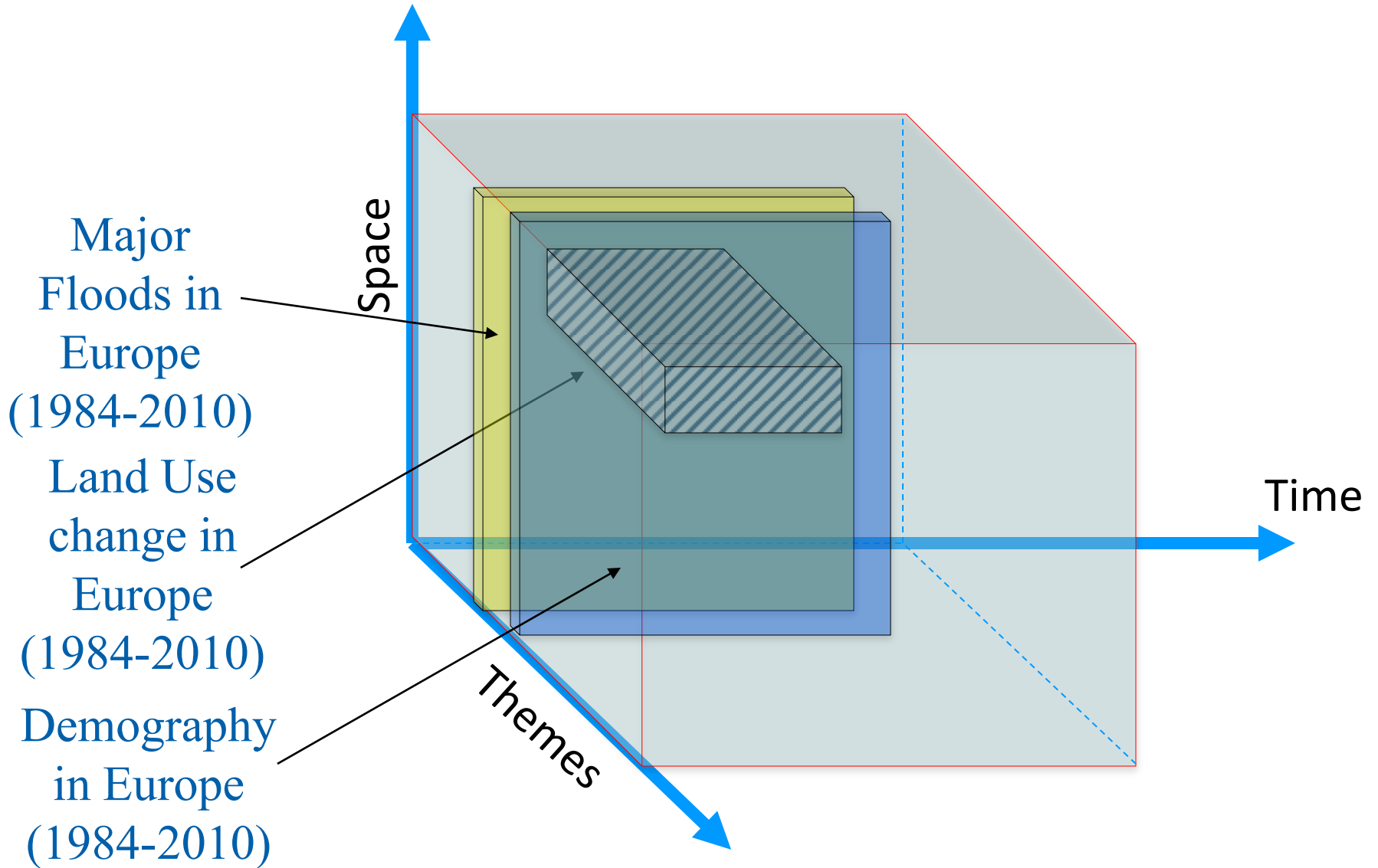
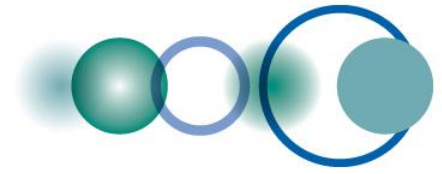
GEOSS Hypercube

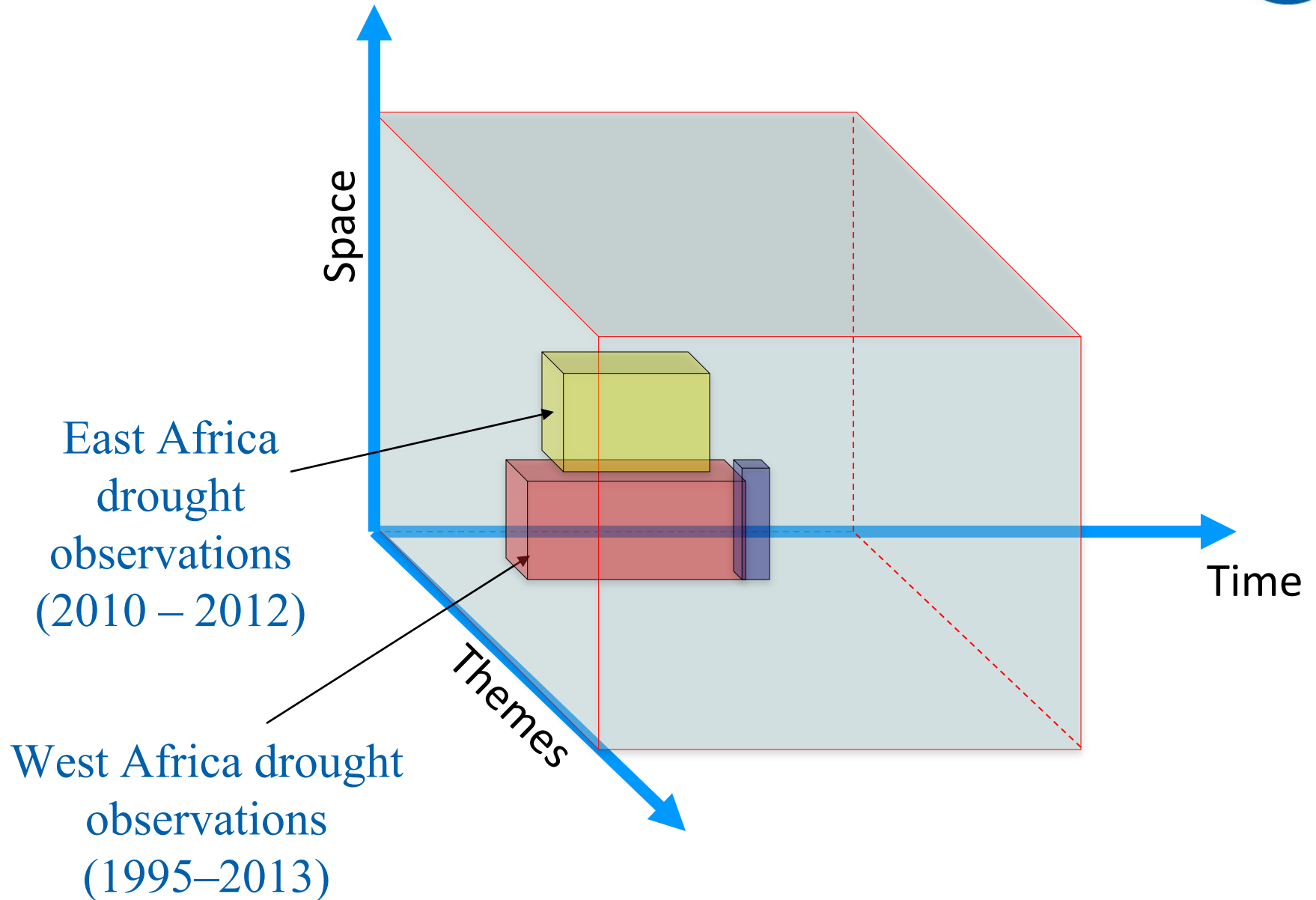
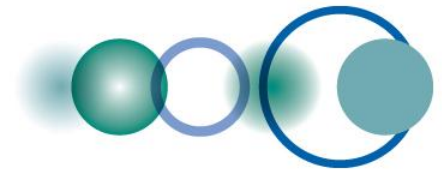


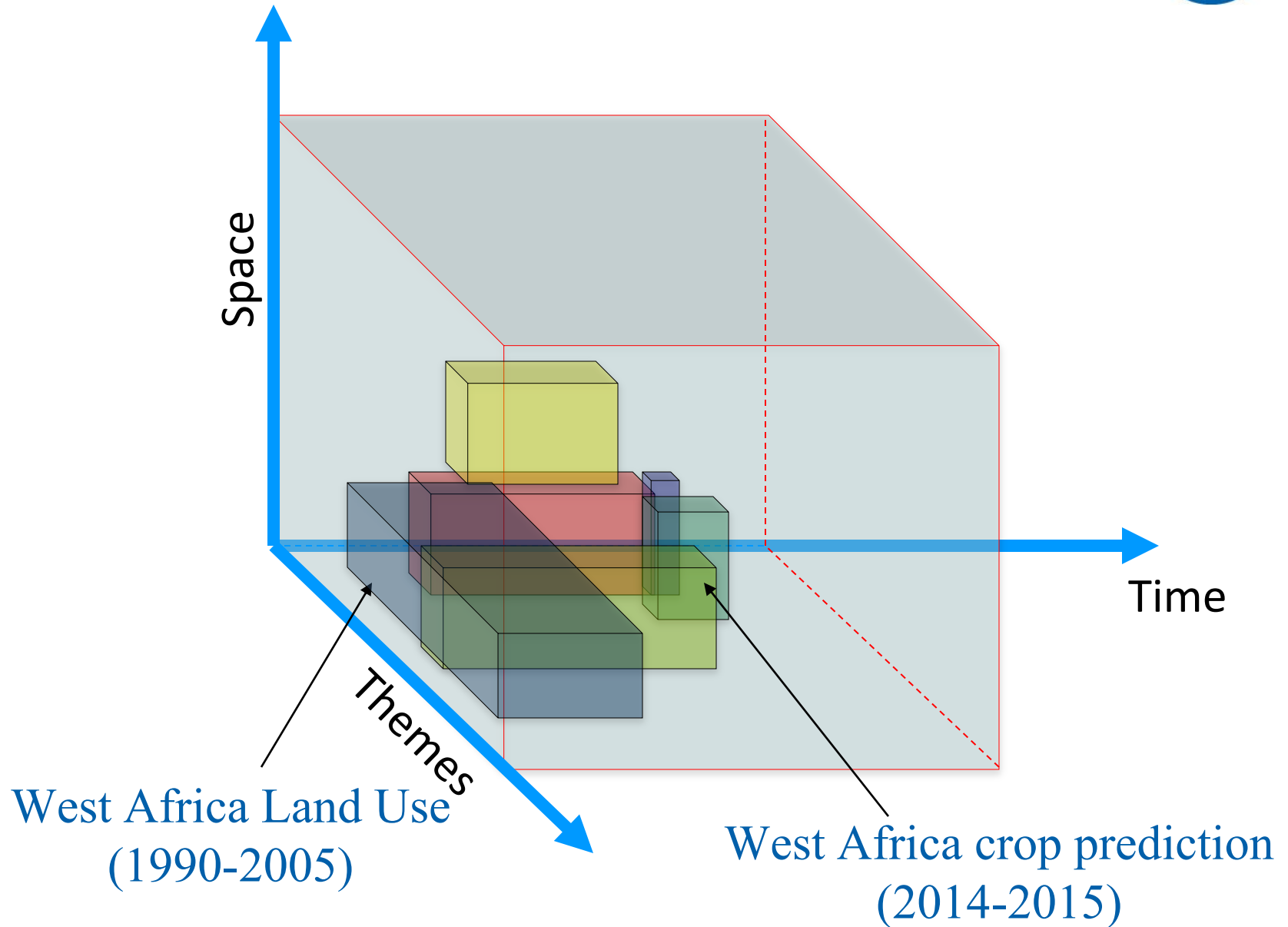
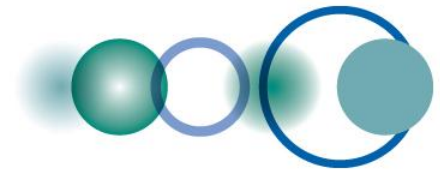


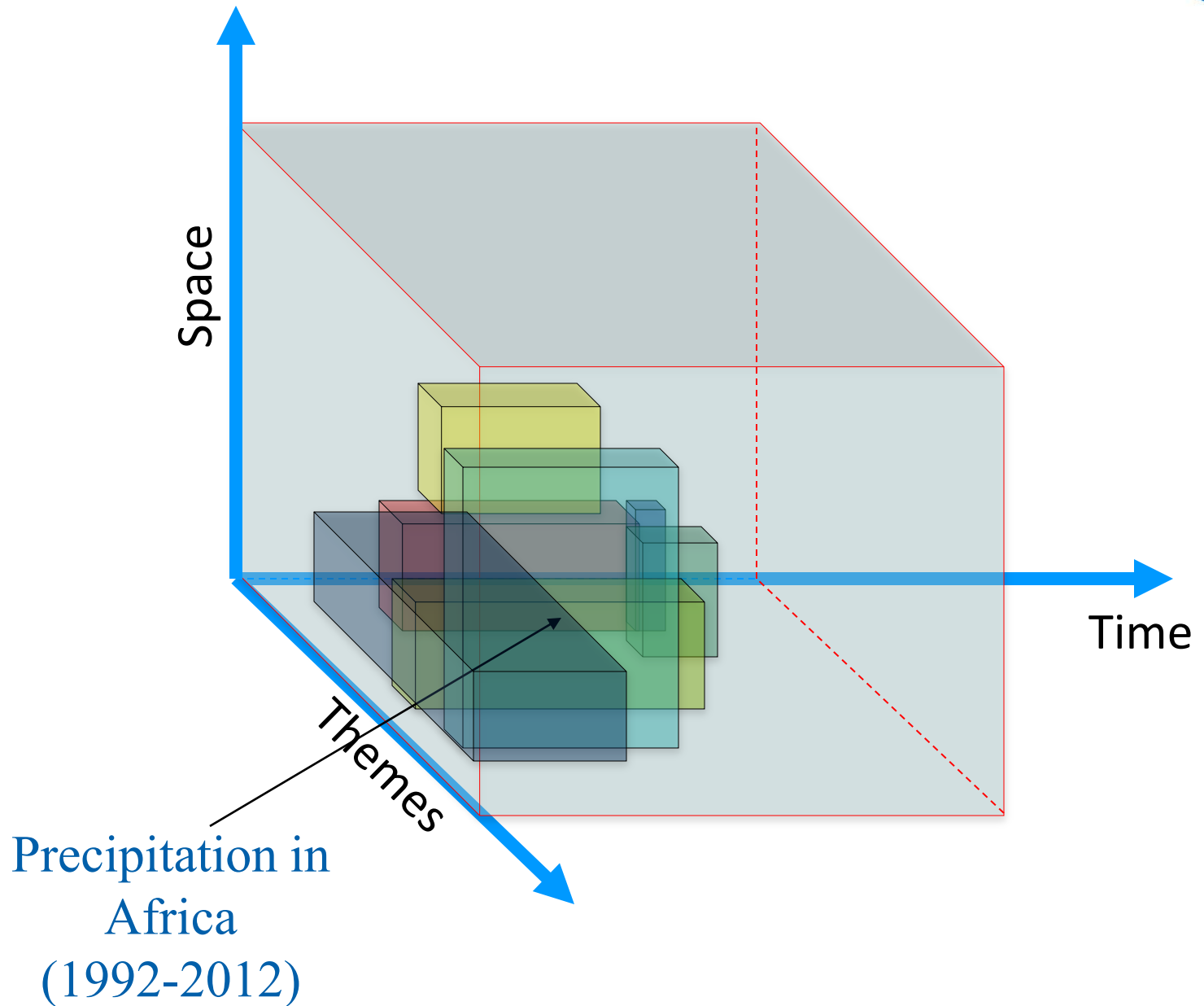
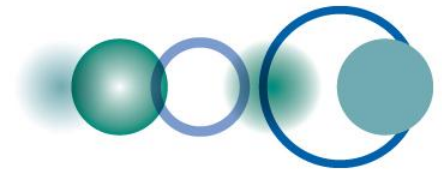


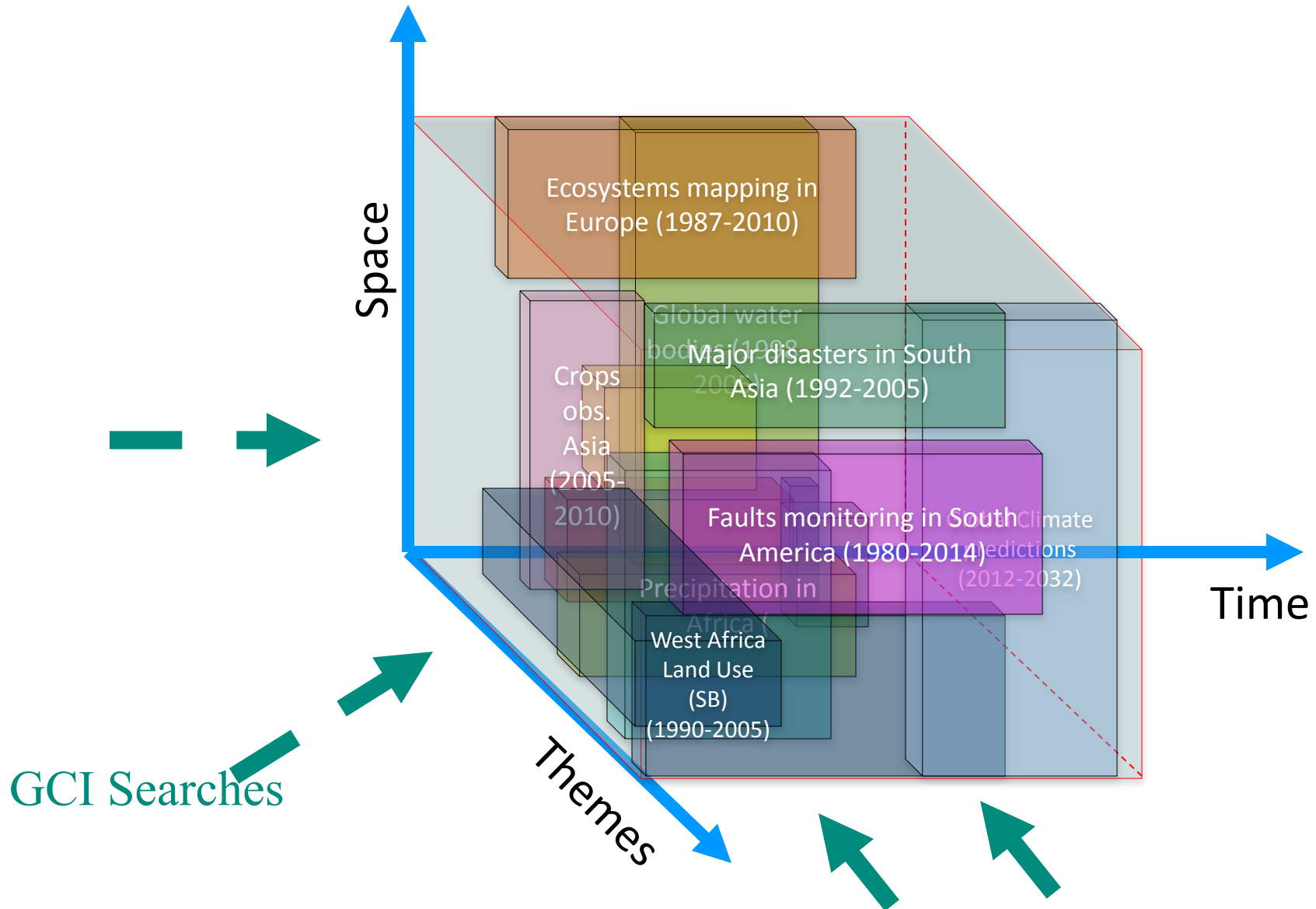
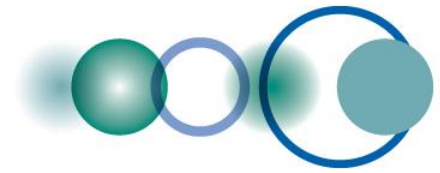


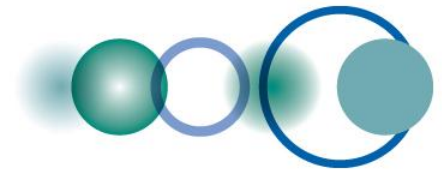












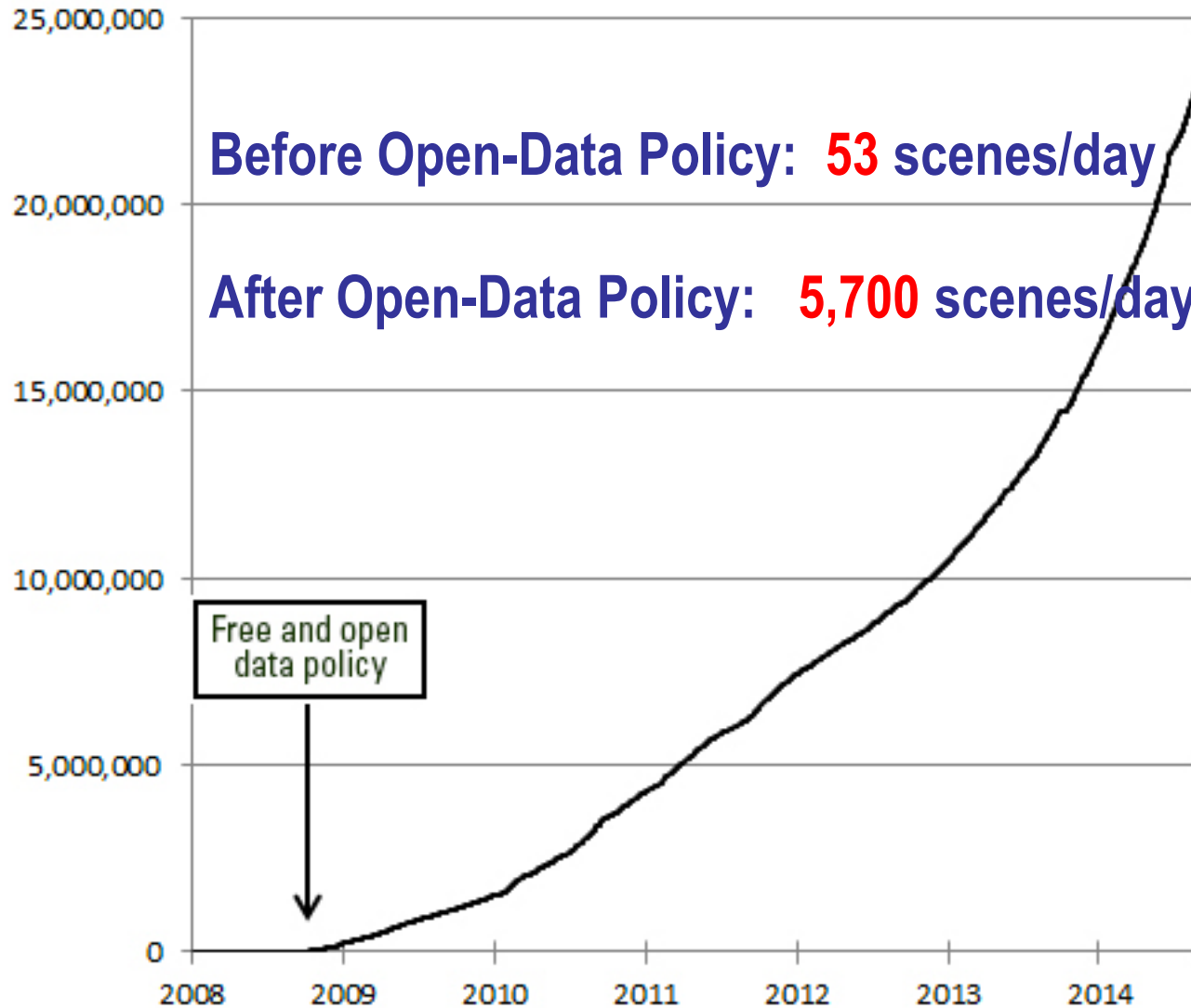
GEOSS Implementation Requires:

Data Sharing Principles

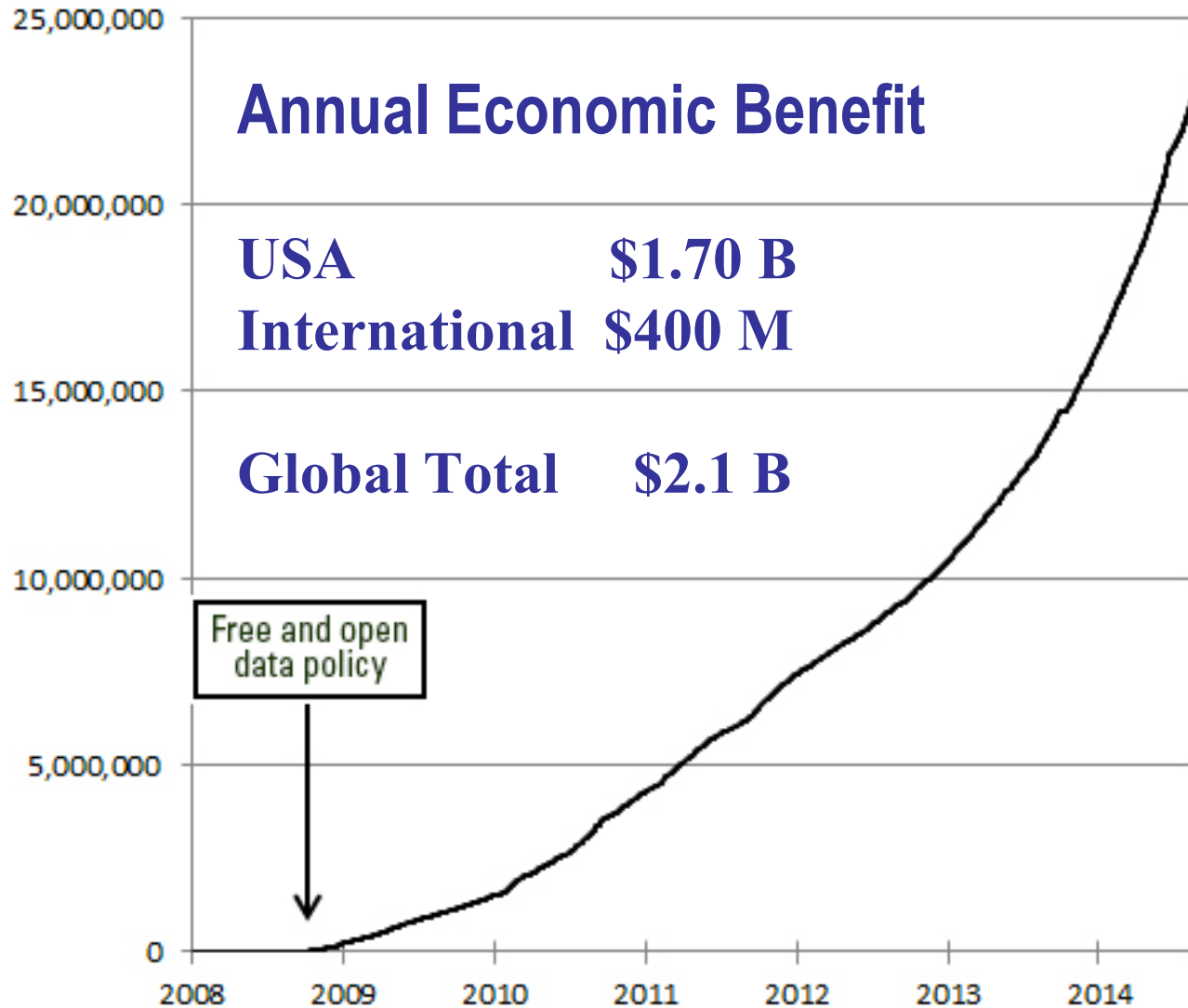
- **Full and Open Exchange of Data**
- **Data and Products at Minimum Time Delay and at Minimum Cost**
- **Free of Charge or Cost of Reproduction**

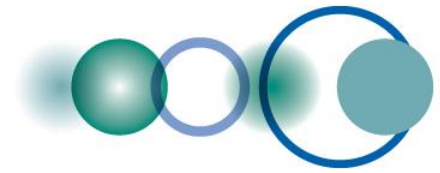


Landsat Scenes Downloaded from USGS EROS Center (Cumulative)



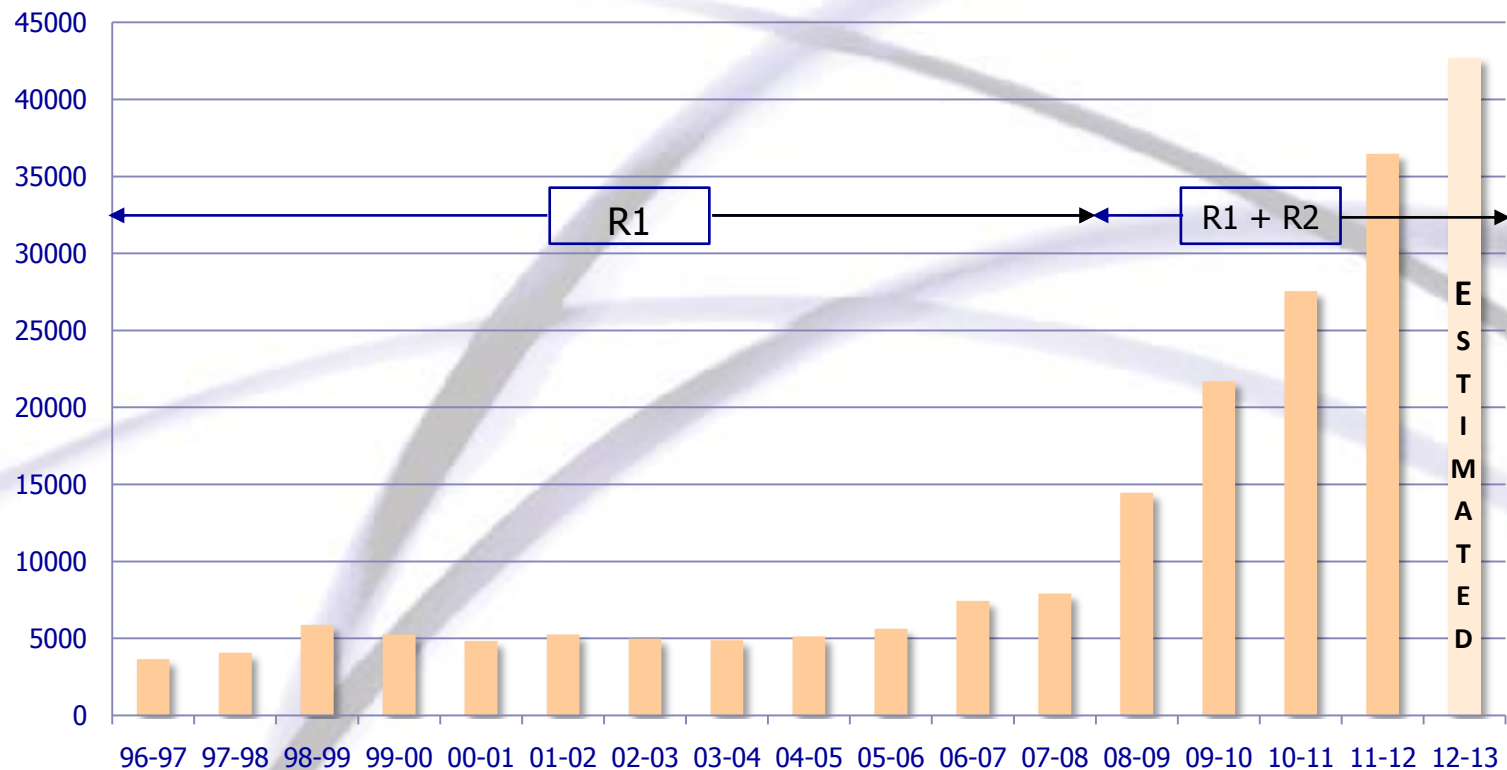
Landsat Scenes Downloaded from USGS EROS Center (Cumulative)

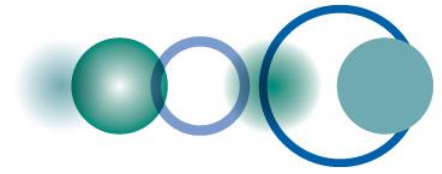




Canada's Experience

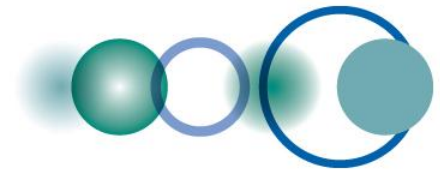
RADARSAT Images Acquired by the Government of Canada



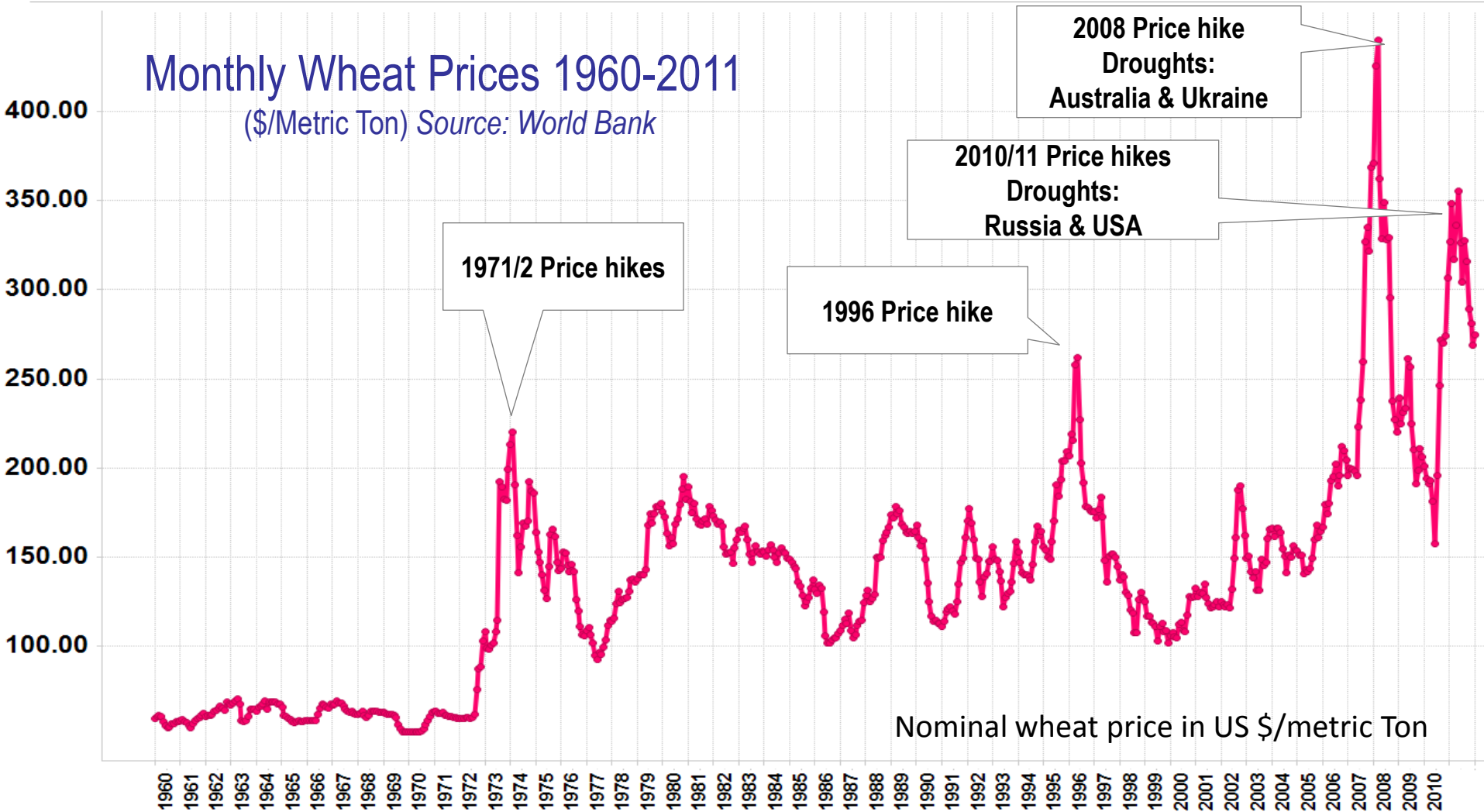


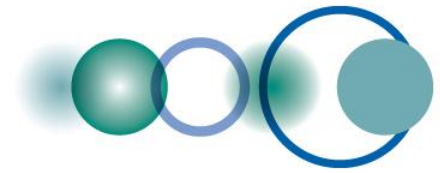
**“Uncertainty is the enemy of investment;
shared information is the antidote to
uncertainty.”**

Dylan Ratigan
Co-Founder, Helical Outposts



Leveraging Earth Observations for Reducing Price Volatility





Crop Information for Decision-Making

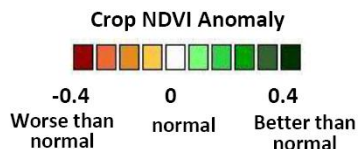
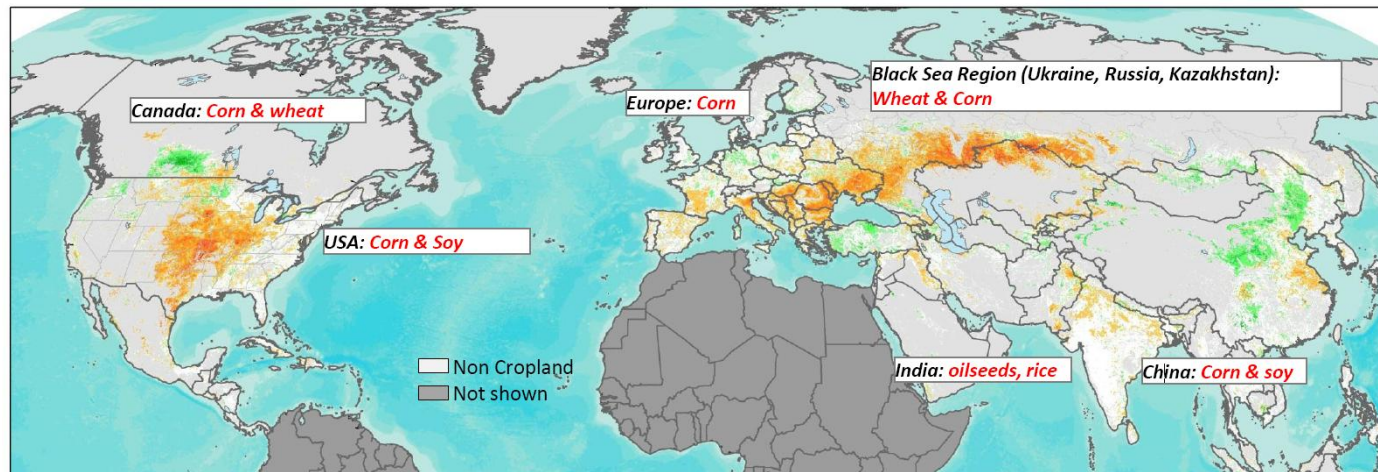
(Canada, China, EC, France, Japan, Kazakhstan, India, Mexico, Russia, USA, CEOS, FAO, WMO)



Northern Hemisphere NDVI Crop Anomaly, August 13th, 2012

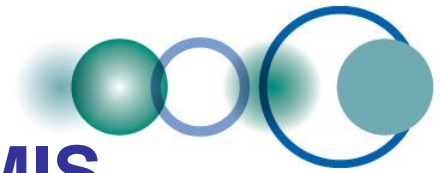


- * GEOGLAM part of G20 Action Plan on Food Price Volatility
- * New crop outlook
- * Rice crop monitoring



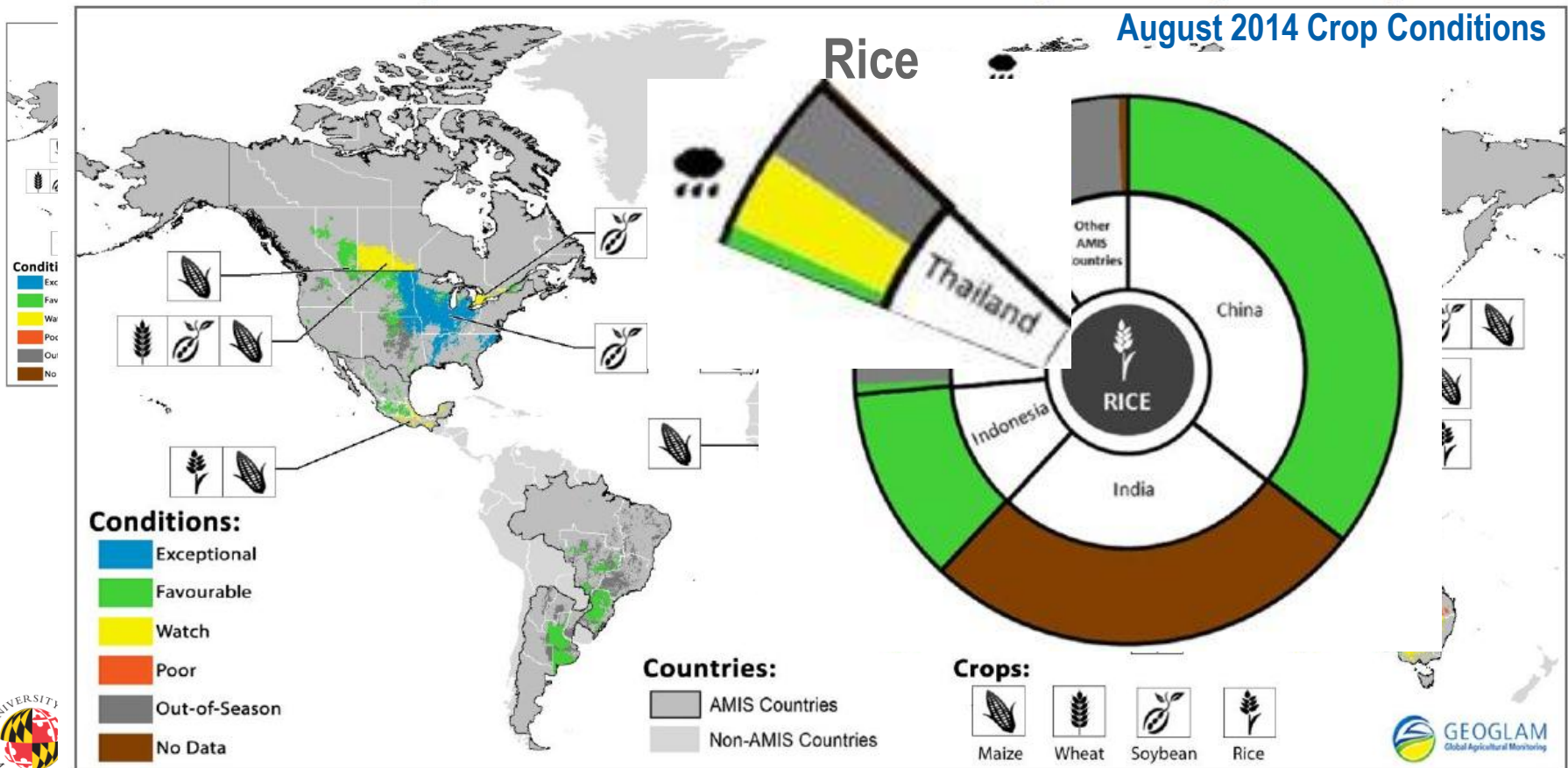
Observed highlights:

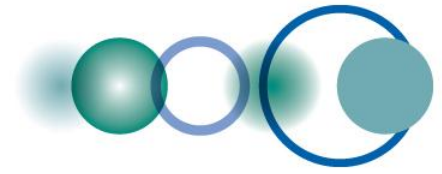
- Drought conditions persist in US, south eastern Ukraine, Russia, and Kazakhstan, with slight improvement in some areas in northern Kazakhstan
- Rains in India mitigate dry conditions



GEOGLAM Crop Monitor for AMIS

- Operational since September 2013
- 36 institutions, 22 countries + 7 international organizations
- Global map for the 4 AMIS crops (Maize, Wheat, Soybean, Rice)





Countries have borders; Earth observations don't.

Barbara Ryan

**Modified from advertisement in NY Times,
11 September 2015**



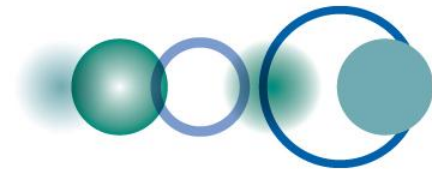
Mexico City Ministerial Summit and GEO-XII

GEO Week
9-13 November 2015
Mexico City

bryan@geosec.org

www.earthobservations.org





Back-Up Slides