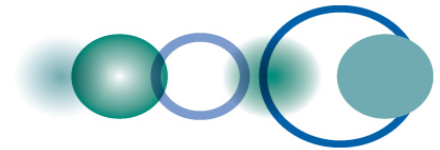


GEO Forest Carbon activities, from FCT to GFOI *(from demonstration to implementation)*

**Updates since the November 2011
Plenary**

Miriam Baltuck, CSIRO



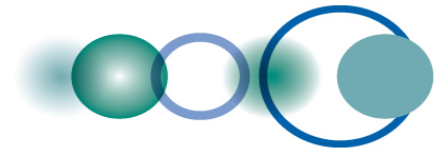


The Need for Forest Observations

Latest UNFCCC COP's (15 in Copenhagen, 16 in Cancun and 17 in Durban) have confirmed that comprehensive, continuous and systematic information on forests is a key component of national Measurement, Monitoring, Reporting and Verification (MRV) Systems for REDD+.

The Conference has also invited developing countries to move towards implementing these systems, taking into account the need and the opportunity of using all available observations (from satellite Remote Sensing data to ground measurements).

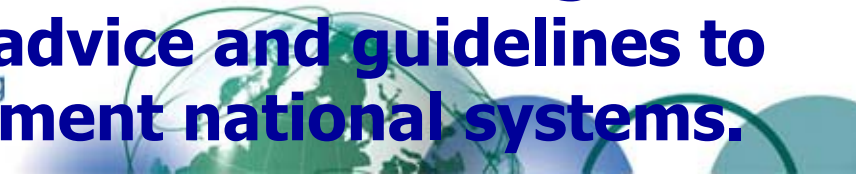




GEO established in 2008 the Forest Carbon Tracking (FCT) task demonstrate that coordinated Observations from satellites, validated by in situ measurements and properly linked to carbon modeling can provide reliable, accurate, consistent and continuous information to address the monitoring component of national MRVs.

The FCT overall goals are

- 1.to show the feasibility of performing coordinated, large scale satellite observations and**
- 2.to test and compare the use of various observations, models, tools and methodologies in order to provide options, advice and guidelines to Countries willing to implement national systems.**



FCT logic and activities

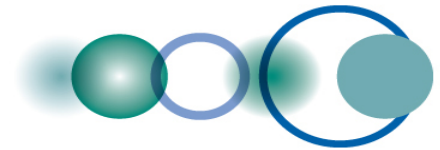


GEO FCT has built a cooperating framework, which has progressively involved the scientific and technical community, the space community and countries willing to implement MRV systems for REDD+.

FCT is currently organized along four main lines of support activities:

- **Satellite data** coordinated acquisitions and data provision, as needed by the demonstration campaigns
- **Demonstration campaigns**, through the involvement of countries, the NDs, the appointment of a dedicated Product Development Team and processing of FCT products over the ND's
- **R&D**, definition of R&D topics, R&D plan, development of Guidance Documents, requirements for demonstration planning, with a yearly review cycle to feed back demonstrations results into Guidance Documents
- **Associated Capacity Building actions**





Co-leads

- **Norway (NSC)**
- **Japan (JAXA)**
- **Australia (Department of Climate Change & CSIRO)**
- **Canada (CFS-CSA)**
- **USA (USGS)**
- **FAO**
- **CEOS (ESA)**

Additional partners contributing space and forest research data and expertise are Brazil, France, the Netherlands, United Kingdom, European Commission and GOFC-GOLD. The GEO Secretariat supports activities coordination and

facilitate their execution.
Including the 11 National Demonstrators, Organizations from more than 30 Countries are contributing to the GEO task.

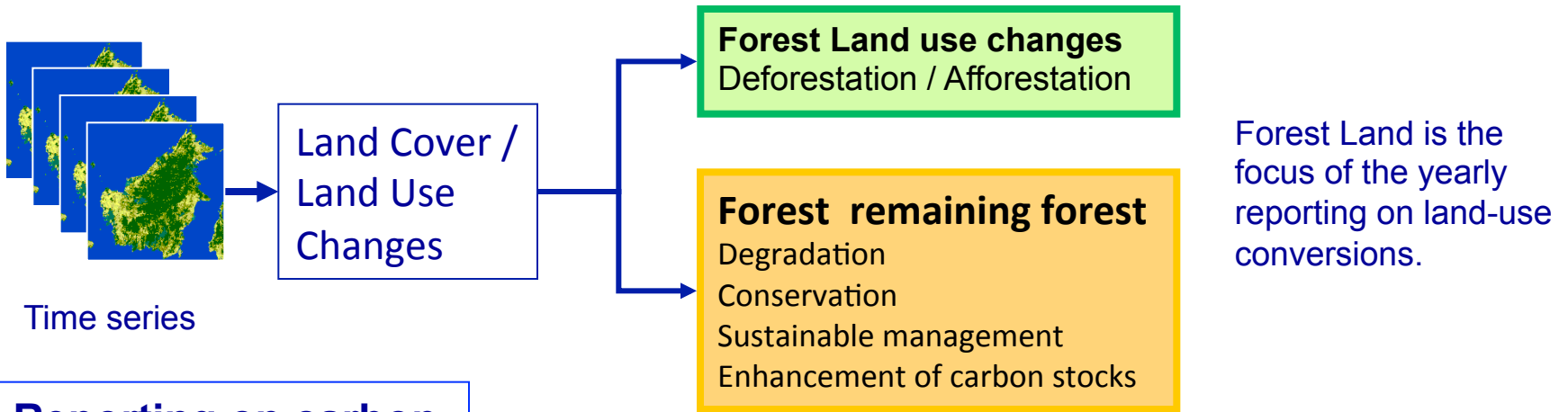




Support to Countries for REDD+ reporting

Support in the construction of consistent time series of observations and of comparable land use/land use conversion products, as well as in improving the determination of emission factors, will enable Countries to build their baselines and to report yearly on land use and carbon stock changes, so to address all REDD+ current objectives.

Reporting on land use changes



Reporting on carbon stock changes

Assessment of carbon stock changes is based, according to IPCC guidelines, on land use changes (“activities”) and emission factors.





FCT Network of "National Demonstrators"



11 ND Countries

- Australia (Tasmania)
- Brazil
- Cameroon
- Colombia
- DR Congo
- Guyana
- Indonesia (Sumatra, Kalimantan)
- Mexico
- Nepal
- Peru
- Tanzania.

From 2009

- Brazil
- Guyana
- Mexico
- Indonesia (Kalimantan)
- Australia (Tasmania)
- Cameroon
- Tanzania

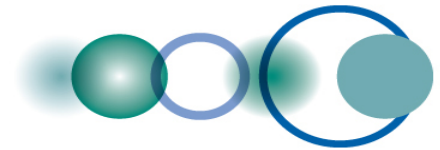
From June 2010

- Colombia
- DR Congo
- Peru, and adding Sumatra to Indonesia

From June 2011

- Nepal





GEO-FCT – EO Data Coordination

CEOS

Commercial

OPTICAL

LSI Constellation

- USGS (USA)
- CNES (France)
- INPE (Brazil)
- ISRO (India)
- GISTDA (Thailand)
- JAXA (Japan)

SAR

- JAXA (Japan)
- CSA (Canada)
- ESA (Europe)
- ASI (Italy)
- DLR (Germany)

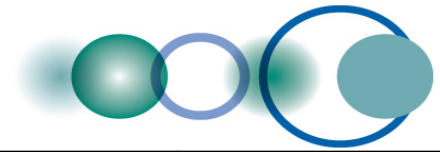
(V)HR

- GeoEye
- Ikonos
- Quickbird
- RapidEye
- DMC
- (Spot)
- (CSM e-Geos)
- (TSX Astrium GIS)
- (RS-2 MDA)





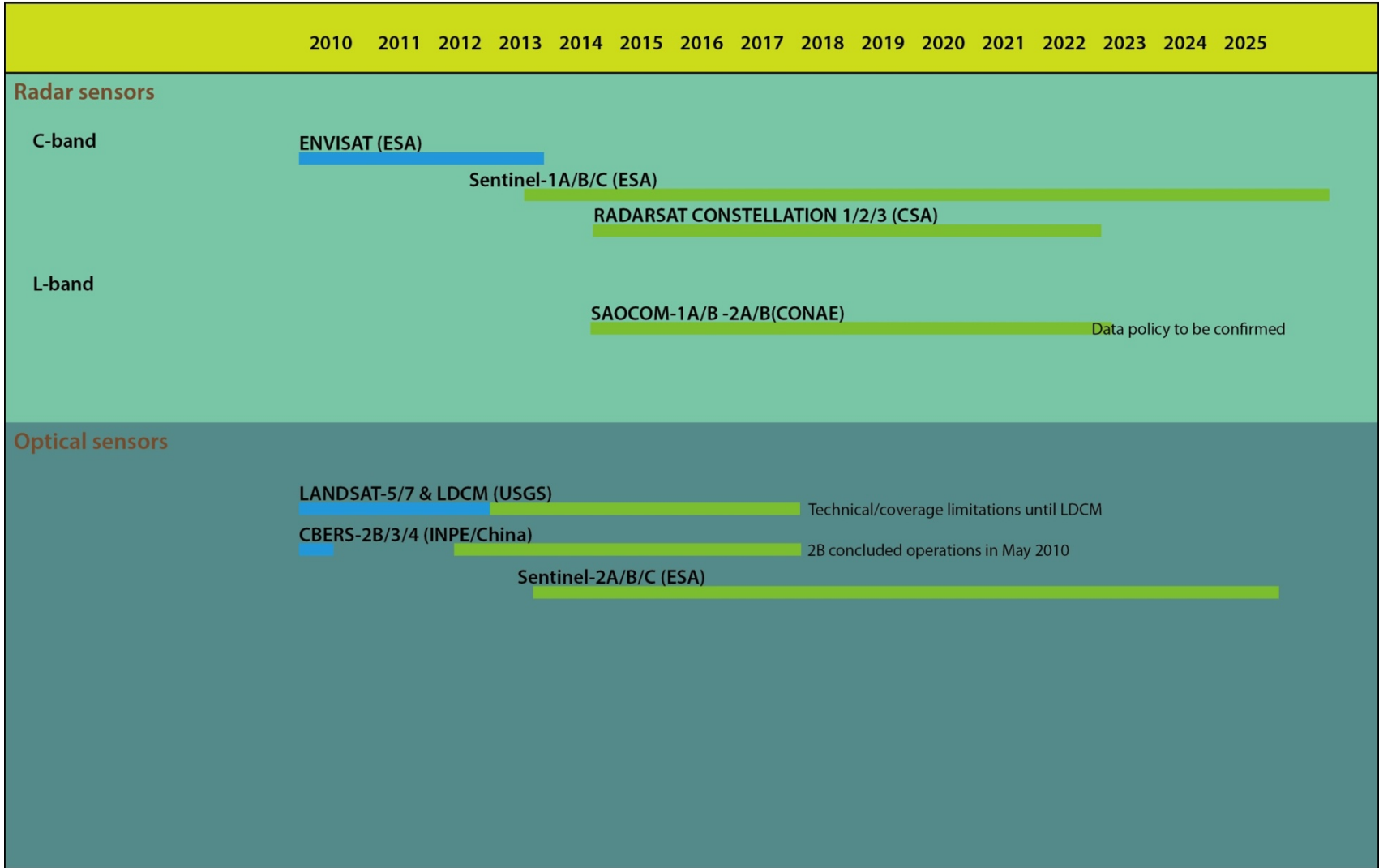
FCT Acquisition Summary

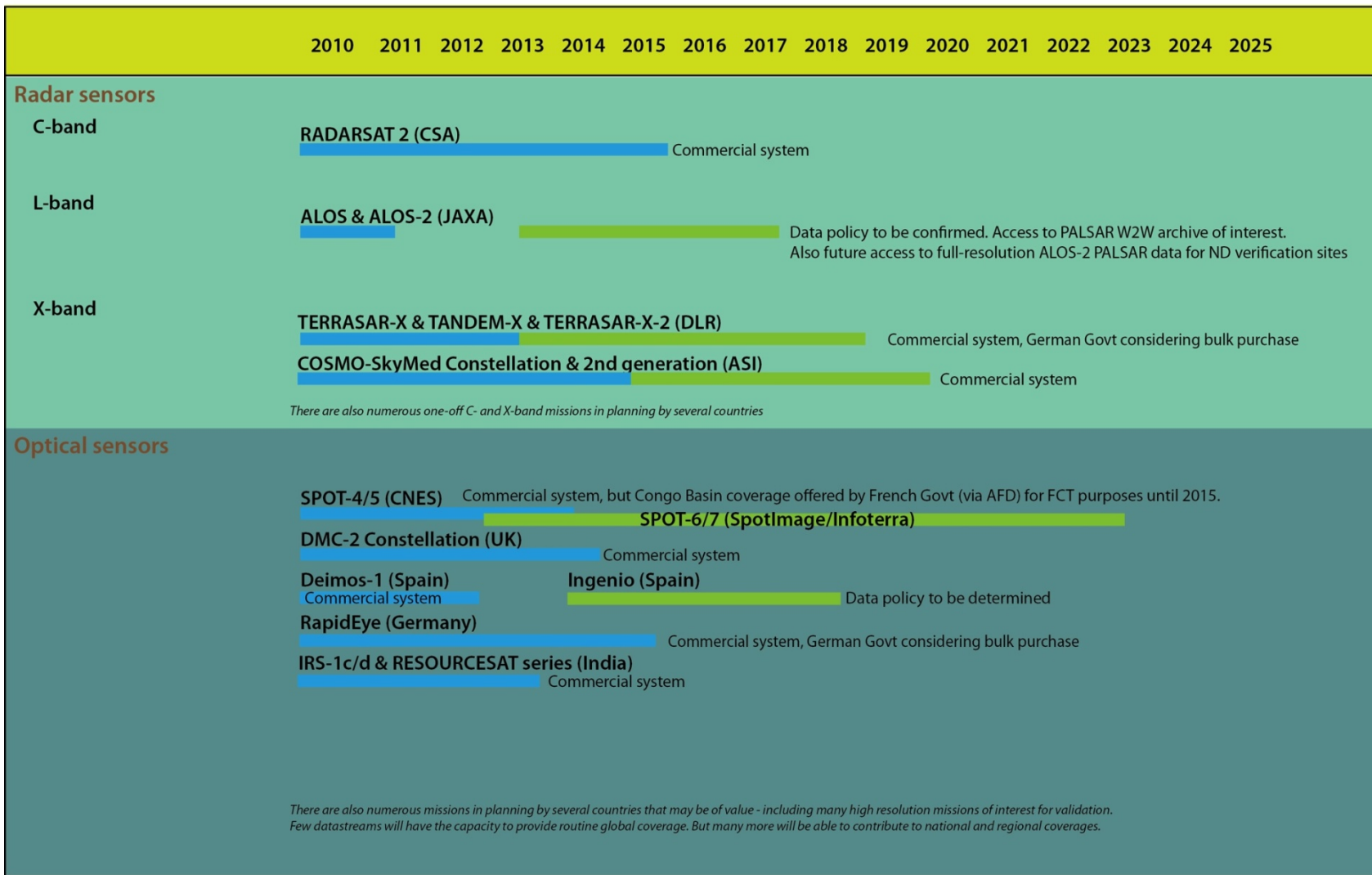


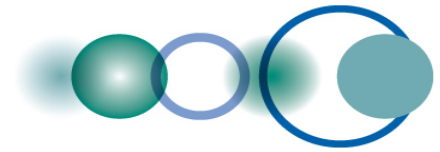
Campaign	Summer 2009	Spring 2010	Summer 2010	Spring 2011	Summer 2011	Total
ALOS PALSAR	6189	7531	13746	15079	mission lost	42545
RADARSAT-2	595	1278	875	1160	1093	5001
ENVISAT ASAR	684	1419	2785	1547	3318	9753
COSMO - Skymed	not planned	183	N/A	N/A	91	274
TerraSAR-X	not planned	243	19	170	217	756
Landsat 5 & 7	388	5280	11362	11691	10149	44770
SPOT	TPM by ESA, but restrictions related to repatriation		2252	2810	6192	11254
CBERS-2B	3580	N/A	mission lost	mission lost	mission lost	3580
IRS	not planned	100	13674	6015	1187	20976

more than 139,000 scenes!!!

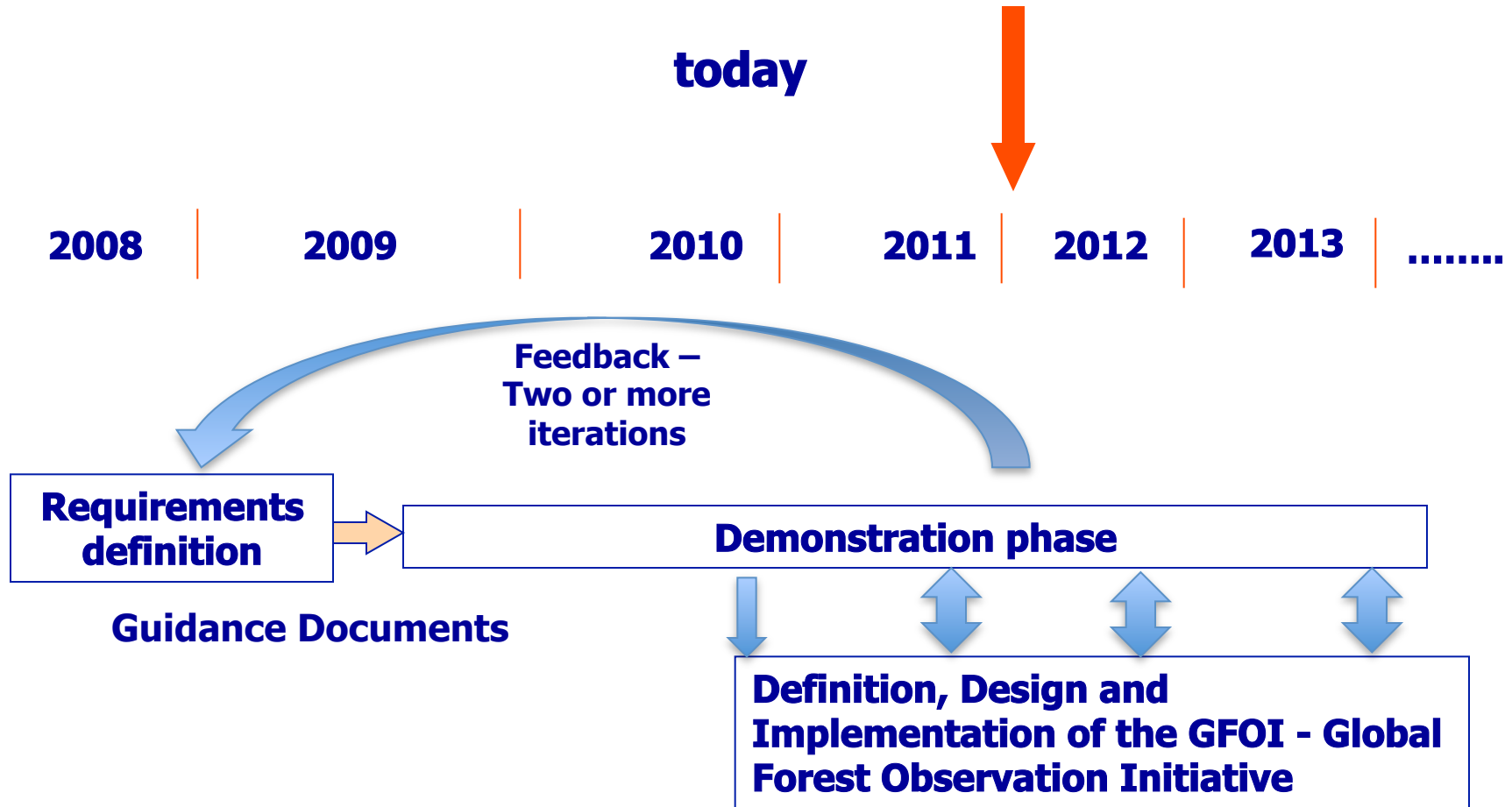


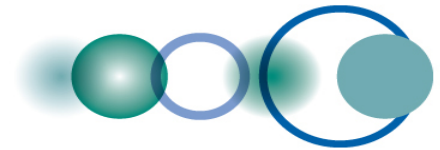






Task Implementation Logic





The Global Forest Observation Initiative (GFOI) builds on the accomplishments of the FCT

The GFOI Implementation Plan was approved at the November 2011 GEO Plenary

GFOI aims:

- **fostering the sustained availability of observations in support of national forest information systems**
- **supporting countries in the use of observations in national forest information systems and reporting commitments – respecting national choices of data and tools**

First GFOI Task Force meeting in Geneva January 2012

Third Science Data Summit in Tanzania February 2012

First meeting of the Space Data Coordination Group in Montreal March 2012





Approach of the GFOI

Chain of countries' support



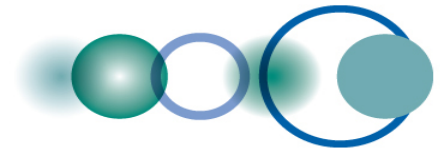
GFOI will not be prescriptive.

- **GFOI can help outline the options that are available to national governments.**
- **The country will decide the data requirements based on its national circumstances and heritage and experience.**

GFOI will not provide one-stop support

- **Support the country to build its own capacity**





Climate R³ (Regional Readiness Review)

- Australia leading APRSAF initiative to improve space data coordination aspects of climate policies in the region**
- Interested in supporting stronger regional data coordination activities and processes in support of key GEO activities – such as GFOI and GEO-GLAM**
- Ideally including participation of main data providers – Japan, China, India, Korea**
- Climate R3 workshop in Perth on 24-25 May will aim to promote a resolution on regional data coordination for APRSAF to consider**