



GEO
CARBON AND
GHG INITIATIVE



GEO-C – The GEO initiative on Carbon and Greenhouse Gases:

Toward policy-relevant global C & GHG observations

A. Bombelli et al.



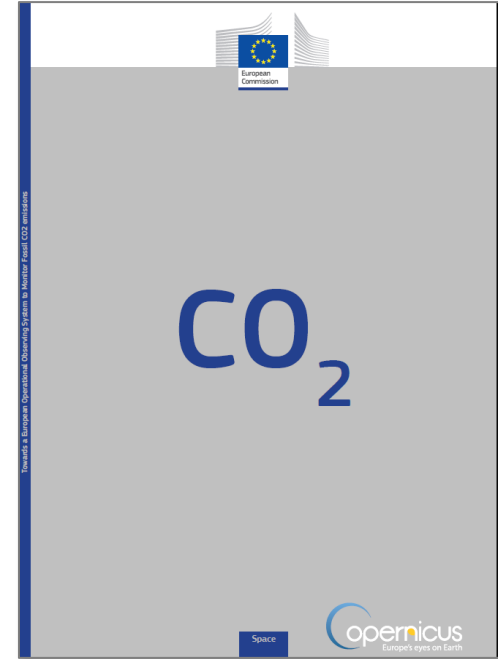
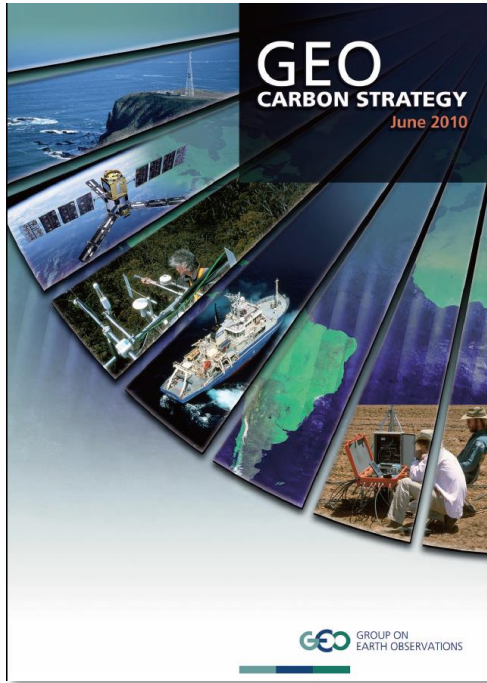
cmcc Euro-Mediterranean Center on Climate Change, Italy



GEOSS ASIA-PACIFIC SYMPOSIUM

Hanoi 18-20 September 2017

GEO-C: Background



“GEO through its Members and Participating Organizations, has begun work to implement a global carbon observation and analysis system addressing the three components of the carbon cycle (atmosphere, land and ocean) to provide high quality information on carbon dioxide (CO₂) and methane (CH₄) concentrations, and emission variations.”

“This report, the *CEOS Strategy for Carbon Observations from Space*, is a response from the Committee on Earth Observation Satellites (CEOS) to the *GEO Carbon Strategy*. It details the adequacy of past, present, and planned satellite measurements of carbon in the land, oceans and inland waters, and atmosphere domains to support GEO...”

“Improve the inter-operability with other carbon observation systems, contributing to the new GEO Strategy and the new GEO 10 years Implementation Plan (IP) for 2016-2025.”

GEO-C: Policy Context

Paris Agreement:

- recognizes the importance of scientific knowledge, including research and systematic observations, to support the commitment of reducing GHG emissions to keep global warming below 1.5-2.0°C

Systematic observations, data and information can support:

- National reporting
- Mitigation (adaptation)
- Global stocktake
- Transparency process
- Technical experts review
- Public access to information
- Etc.



Policy makers and inventory agencies strongly need GHG-related observations and knowledge

GEO-C: Objectives

A joint effort

- GEO-C is a global joint effort that builds on existing initiatives and networks, ensures their continuity and coherence, and facilitates their cooperation and the interoperability of their data and efforts.

Monitor and evaluate changes

- monitor and evaluate changes in the carbon and GHG cycles, and GHG emissions as they relate to human activities and global change, to support the UNFCCC process and to provide decision makers with timely and reliable policy-relevant information.

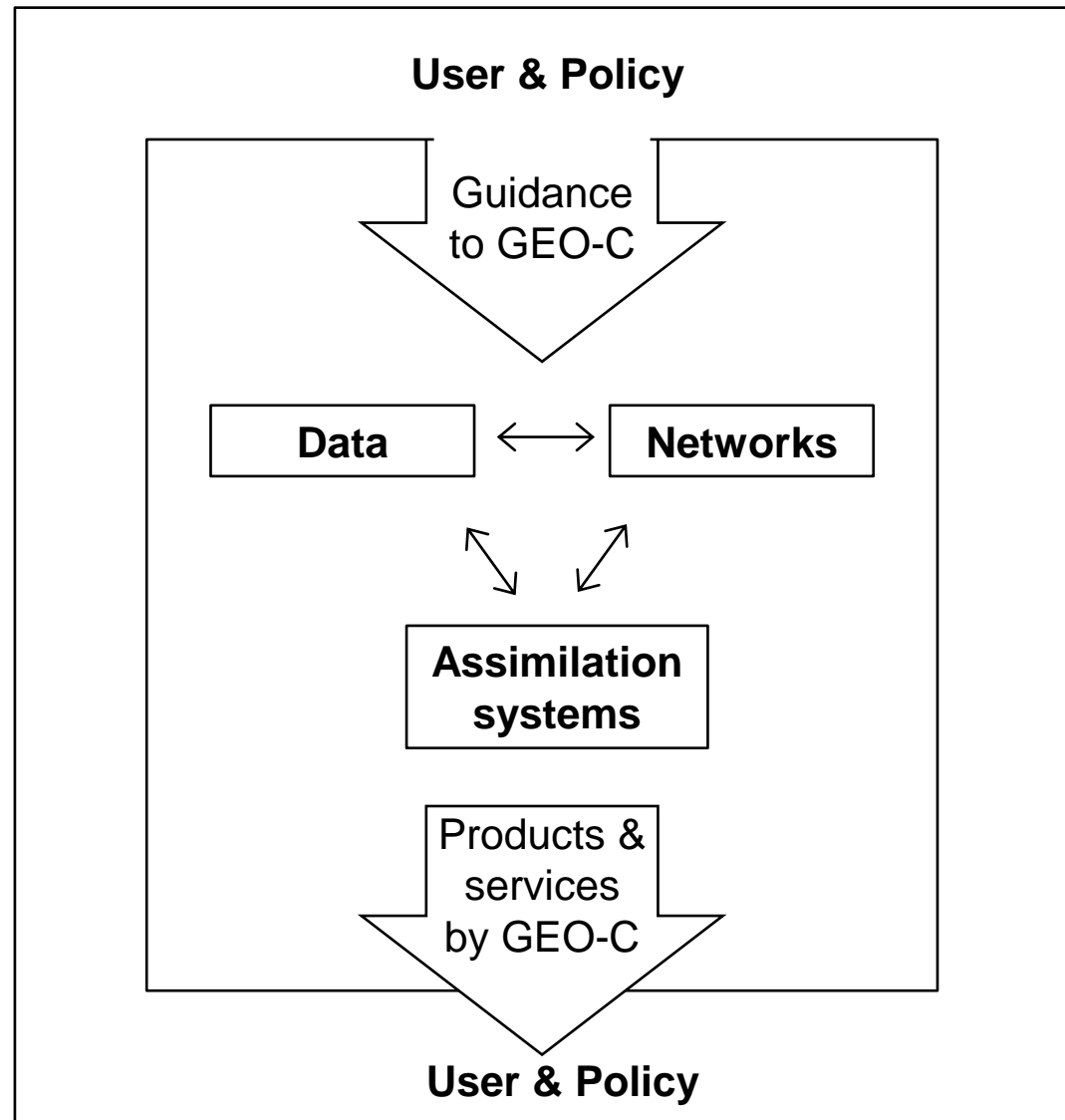
A common platform

- establish a common platform to plan joint strategies and implement joint activities

GEO-C: Tasks

GEO-C Tasks

- Task 1: User needs and policy interface
- Task 2: Data access and availability
- Task 3: Optimization of observational networks
- Task 4: Carbon and GHG budget calculations



GEO-C: from Observations to Decisions

Communication



SBSTA



Framework Convention on Climate Change

Observations

Services

Knowledge

Decisions



Data sharing



management (incl. metadata)



Improve data harmonization
Improve inter-operability
Improve data accessibility

Data Citation

From data to knowledge

Model-Data



Sustainability

Capacity building

GEO-C and the Asia-Pacific Region

GEO-C and the AP Region

- AP region plays an important role in the global C-cycle and GHG emissions and sinks
- There are many AP research institutions (agencies, organizations, etc.) that play a key role in C & GHG observations and analysis

Expectations from WG3 discussion

- Status of C & GHG related observations and infrastructures (in the AP region) including data availability and accessibility
- Gaps and weakness (in the AP region)
- Specific policy context (in the AP region)?
- Increase the AP contribution to GEO-C
- Recent progresses and way forward
- Benefits to be part of GEO-C



APN funding opportunities *(contribution also to GEO-C?)*



ASIA-PACIFIC NETWORK FOR
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Calls for Proposals

2017 Calls for Proposals under the CRRP and CAPaBLE Programmes

8 September 2017

APN News, Calls for Proposals, Featured Story

The APN invites proposals under the Collaborative Regional Research Programme (CRRP) and the capacity development programme (CAPaBLE) for funding from September 2018. A limited amount of financial support is available for regional research activities that fall within its areas of interest. High Priority Topics for ... [Read more...](#)

E-libUpdates

[Building Capacity for Reducing Loss and Damage Resulting from Slow and Rapid Onset Climatic Extremes through Risk Reduction and Proactive Adaptation within the Broader Context of Sustainable Development](#)

[Improving skills for promoting sustainable watershed management practices in South Asia](#)

[Runoff Scenario and Water Based Adaptation Strategies in South Asia](#)

GEOSS APS10 – Hanoi, 18-20 September 2017



APN funding opportunities *(contribution also to GEO-C?)*

High Priority Topics for Funding

APN invites trans- and interdisciplinary research and capacity development proposals focusing on the following topics for South Asia, Southeast Asia and Temperate East Asia as indicated below:

South Asia

- Policy-relevant research on implementation of Nationally Determined Contributions (NDCs)
- Extreme events related to monsoon and climate change

Southeast Asia

- Disaster risk reduction and resilience to climate change
- Community resilience to climate change impacts in vulnerable areas
- Energy, ecosystems in a changing climate, low carbon society
- Water, agricultural productivity, nutrient management

Temperate East Asia

- Climate change impacts on global supply chain
- Climate change and human security (water-food-energy nexus)
- Water treatment technology transfer in the context of Paris Agreement
- Extreme events related to monsoon and climate change

GEO-C: recent and next meetings

- GEO-C Kick-off Meeting, Rome, Italy, 6-7 July 2017
- GEO-C Side Event at ICDC10, Interlaken, Switzerland, 24 August 2017
- **GEO-C Side Event at GEO XIV Plenary, Washington DC, US, 24 October 2017**

GEO-C Next Steps (short term)

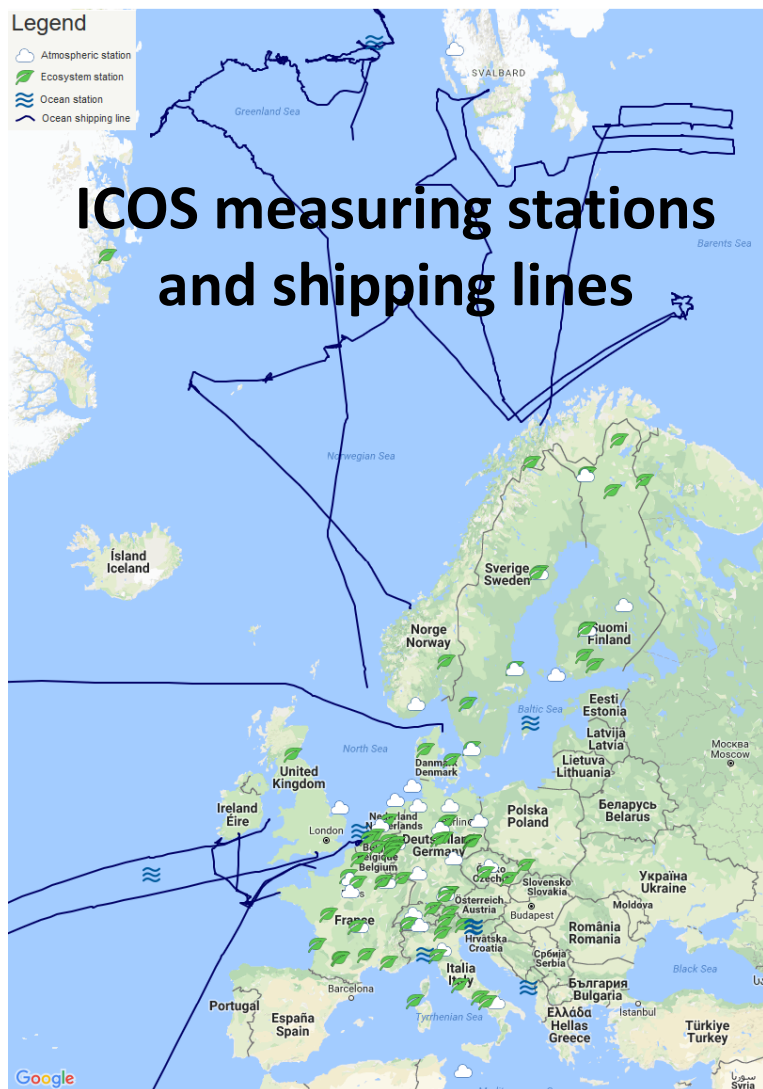
- Nominate the advisory committee members
- Write a white paper to set the GEO-C position in the global C-GHG observations landscape
- Fix working groups to concrete start activities and showcases

ICOS - Integrated Carbon Observation System

ICOS-RI is a European research infrastructure which provides harmonized and high precision scientific data on carbon cycle and GHGs budget and perturbations. ICOS data is openly available at the Carbon Portal, a one-stop shop for all ICOS data products.

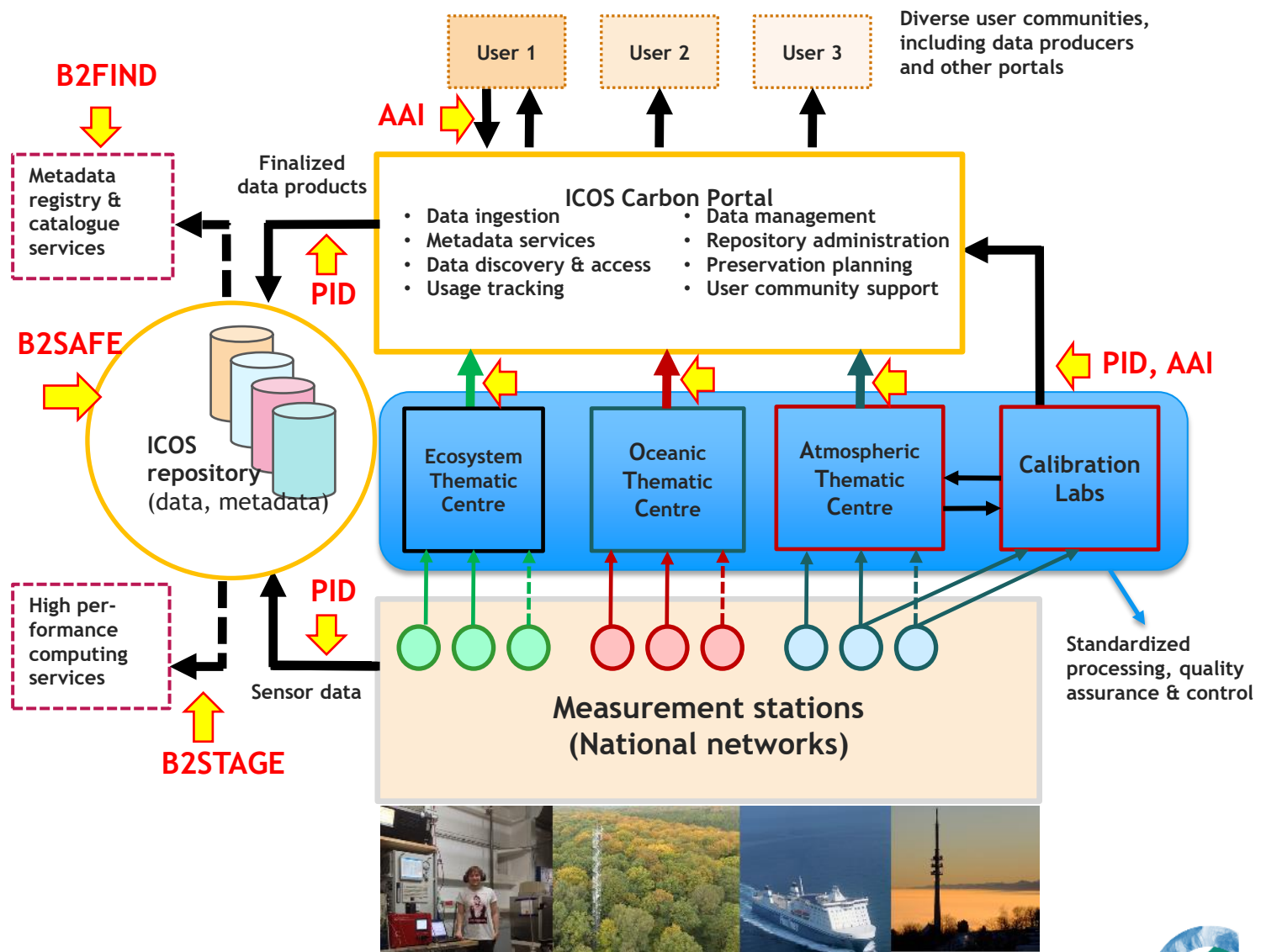


ICOS - Integrated Carbon Observation System



More than 100 GHGs measuring stations, cross cutting the atmosphere, ocean and land domains, to quantify and understand the GHG balance of Europe and neighboring regions.

ICOS - Integrated Carbon Observation System





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antonio.bombelli@cmcc.it

Thanks - Cảm Ơn



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