



Ocean and Coastal Information in Support of Marine Resources and Biodiversity in the Macaronesia and Sao Tome and Principe region

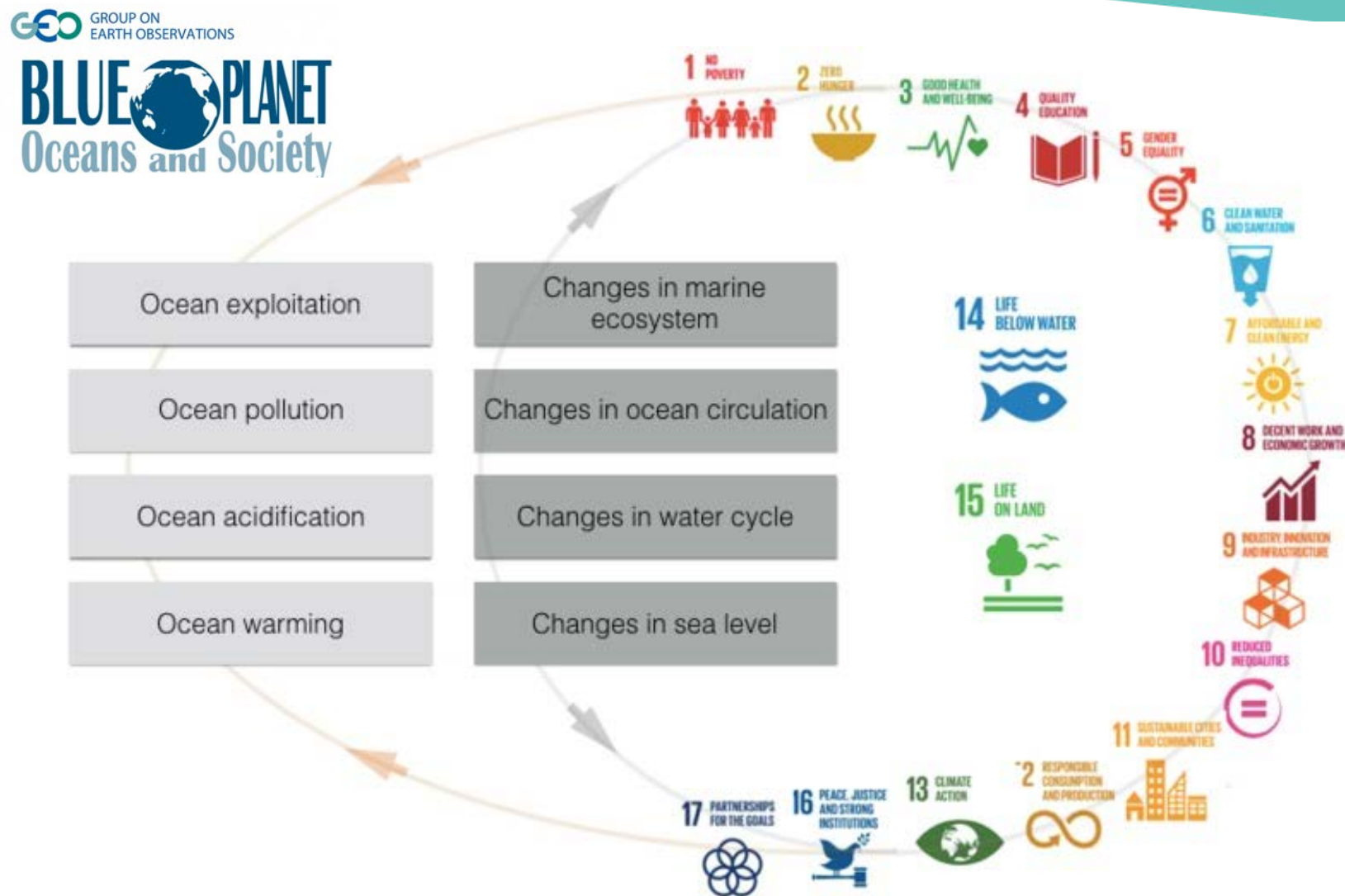
Jose Luiz Moutinho

Atlantic from Space Workshop, Southampton, January 23-25, 2019



Implementing and Monitoring the Sustainable Development Goals in the Caribbean: The Role of the Ocean Workshop

- Held in Saint Vincent and the Grenadines on January 17-19, 2018
- Identifying and articulating knowledge needs for the implementation and monitoring of the sustainable development goals in Caribbean Small Island States and matching those needs to knowledge, tools, and data.



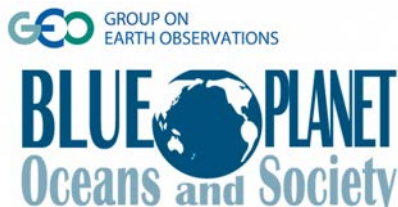
Macaronesia + Sao Tome and Principe

Casa da Roda, Praia da Vitoria, Ilha Terceira, Azores





Workshop on Ocean and Coastal Information Macaronesia + Sao Tome and Principe

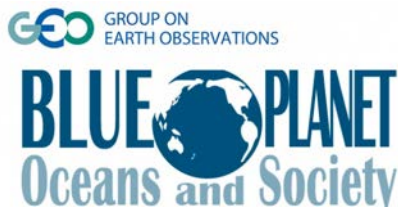


- Inform local and regional stakeholders
- Support local and regional decision makers on the use on ocean and coastal information for:
 - Fisheries
 - Aquaculture
 - Biodiversity
 - Marine Spatial Planning
- Identify potential marine resources and biodiversity initiatives for the AIR Centre and relevant partners to pursue in the region;
- Map capacities needed in the region, identify gaps and promote capacity and institution building initiatives in the region.



Workshop on Ocean and Coastal Information

Workshop organization



AIR Centre, GEO Blue Planet Initiative, Future Earth Coasts, GEO MBON, ESA, UNOOSA, Ocean Science Center Mindelo (OSCM), Cape Verde National Institute of Fisheries Development (INDP), Regional Government of Azores, Azores Regional Foundation for Science and Technology (FRCT), Oceanic Platform of the Canary Islands (PLOCAN), Ministry of Maritime Economy of Cape Verde, Ministry of Education of Cape Verde, and Ministry of Education, Culture and Science of Sao Tome and Principe.

Workshop on Ocean and Coastal Information

Preliminary meetings

- Faial, Azores, October 28, 2018
 - Whale watching
- Las Palmas de Gran Canaria, Canary Islands, November 15, 2018
 - Maritime Cluster
 - Marinas



Preliminary meeting at Faial, Azores, October 29, 2018

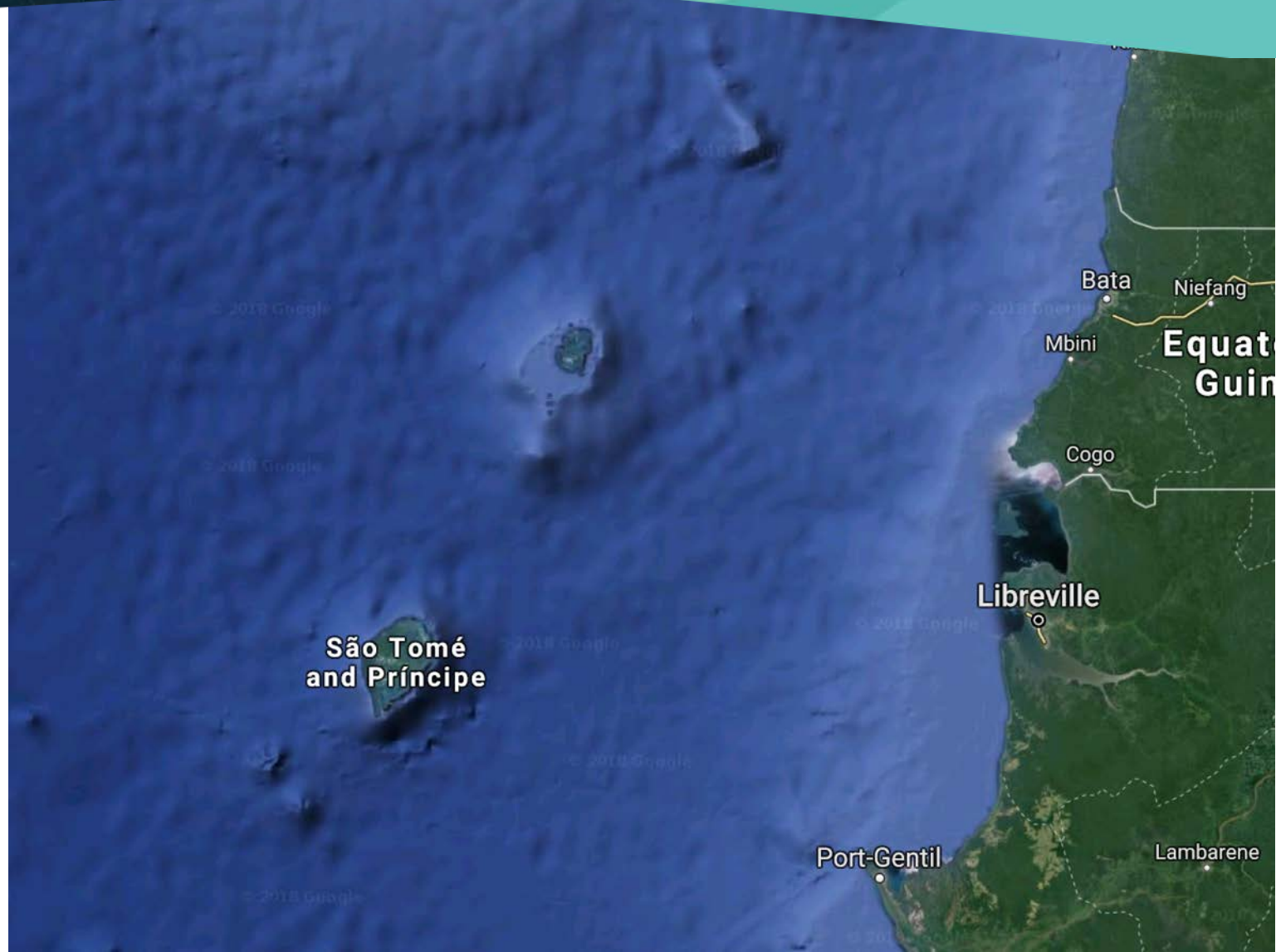


Preliminary meetings at Las Palmas de Gran Canaria, November 15, 2018

Workshop on Ocean and Coastal Information

Preliminary meetings

- Sao Tome, Sao Tome and Principe, January 30, 2019
 - Energy
 - Agriculture
 - Geology, Geophysics
 - Mineral resources



Workshop on Ocean and Coastal Information Methodology

The User Story Conversation Canvas

[Lucho Salazar \(@luchosalazarc\)](#)

2. User Story As a <User Type> I Want <Do Something> For <Purpose>	1. Personas Personas Users or End Consumers Stakeholders Sponsors	4. Context <ul style="list-style-type: none"> Source Need User Sceneries Business Domain Business Rules [Source Epic] Scope Hypothesis Dependencies Constraints 	
3. Acceptance Criteria <input type="checkbox"/> Acceptance Criteria 1 <input type="checkbox"/> Acceptance Criteria 2 <input type="checkbox"/> Acceptance Criteria 3 . . <input type="checkbox"/> Acceptance Criteria N	Development Team Others (Legal, externals, etc.) Support Team	5. Definition of Ready What must be fulfilled so that the Story can be built?	6. Definition of Done Conditions of Done specific to the Story
7. Expect Results Expected Solution What do you want to accomplish with the Story? (Example, comply with regulation) Value to earn	8. Metrics <ul style="list-style-type: none"> Points Effort Sprint Number Earned Value (ROI) Quality Progress Number of Users 	9. Feedback Level or Grade of People Satisfaction Level of user happiness Generated Impact	

Preliminary meeting in Faial

Examples of user stories

As an administrator (Directorate for Fishing), I would like to know where the **biodiversity hotspots** are, in order to support the management of fishing activities

As [several attendants], we would like to be able to **identify illegal seafood (limpet) collection on rocks**, because populations are at risk when young animals are collected due to later unavailability of rocks

Preliminary meeting in Faial

Examples of user stories

As [several attendants as beach users], we are interested in the possibility of **identifying and predicting jellyfish incidences / concentrations** nearby bathing locations

As an administrator, I want to understand the coastal dynamics, in order to identify the **consequences of sand extraction** at different sites

Preliminary meeting in Faial

Examples of user stories

As [several researchers], we are concerned about the negative **impact that coastal constructions (streets, harbours, etc) have on biodiversity** like e.g. Dusky grouper (needs tidal pools) or Fucus Seaweed (does not attach on smooth substrates like concrete). A time series of tens of years of over the same area could be an interesting tools to document such effects

As an administrator, I want to have **full vessel information**, in order to support the offshore MPA management (including monitor illegal activities and improve security / problem response)

Preliminary meeting in Faial

Examples of user stories

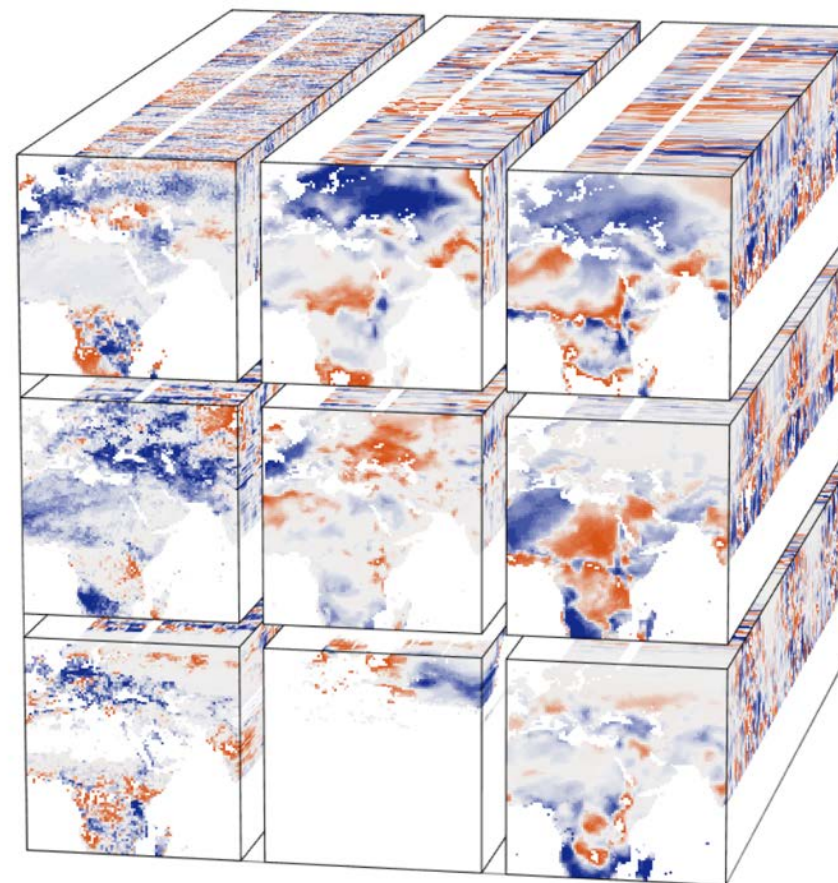
I want to see the **distribution of biodiversity in the water column of 0 to 20m of depth** (ideally); to enable identification of biodiversity changes, support coastal resource and risk management, harmful algal bloom detection, ocean litter monitoring, etc

As an administrator, I want to have **full vessel information**, in order to support the offshore MPA management (including monitor illegal activities and improve security / problem response)

Preliminary meeting in Faial

Conclusions: Data Cube

- Very cloudy in general
- Very steep coastline/bathymetry;
- Absence of platform/ continental shelf;
- Dark/black rock (difficulty to differentiate on image data)
- Oligotrophic and transparent waters
- Small tidal range,
- Strong superposition of species and substrate categories;
- Resolution of land/sea images



Preliminary meeting in Las Palmas

Green marinas

- Water quality of sailing regattas areas
- Security, namely smuggling
- Green Marinas: monitoring of pollution and waste management in marinas



Source: <http://medberths.com/wp-content/uploads/2012/12/las-palmas-marina01.jpg>

Preliminary meeting in Las Palmas Maritime Cluster

- EU Southern border logistic clearing house
- Automation for efficient management of operations
- Maritime Security, namely illegal immigration and smuggling
- Cargo transfer between ships at sea



Final Workshop

Mindelo, Cape Verde, March 11-12





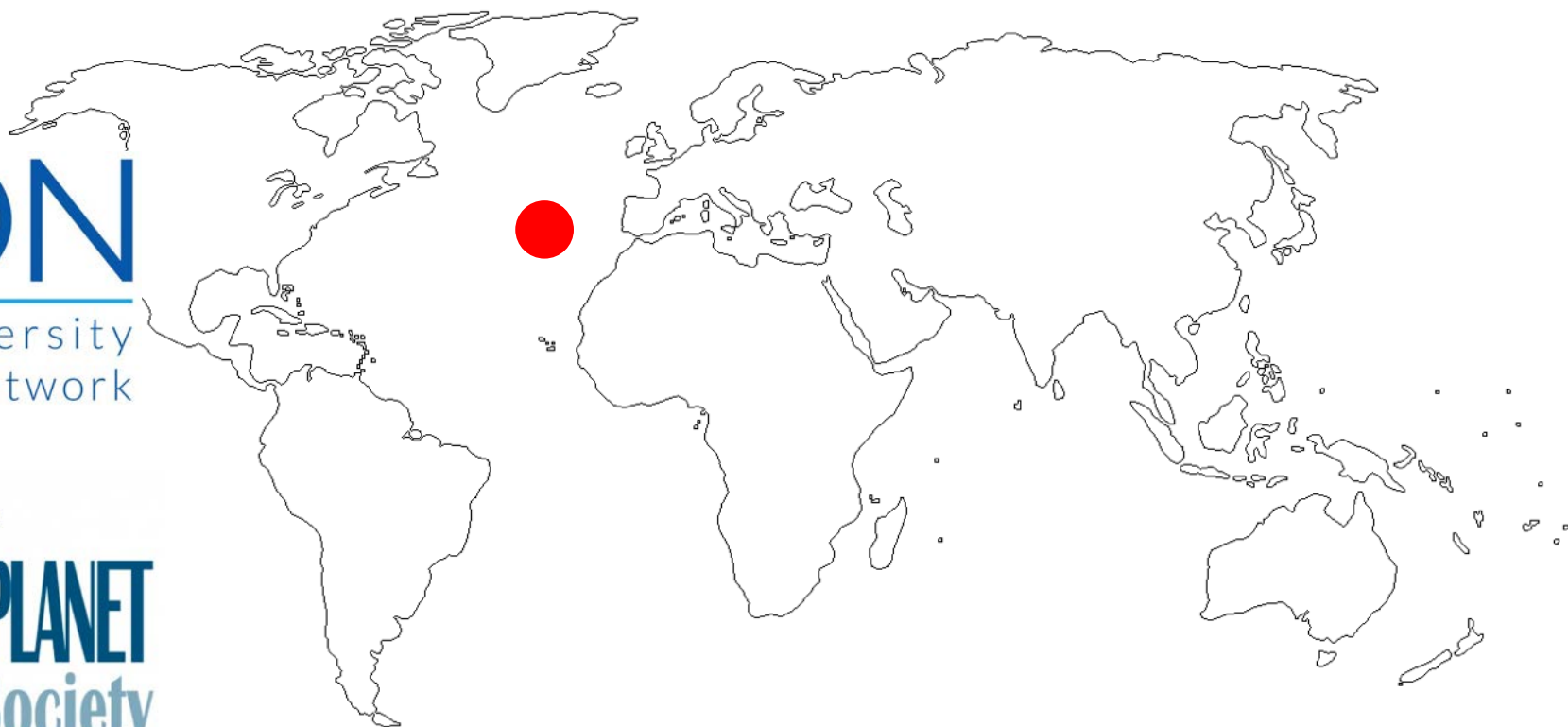
GEO MBON Secretariat

Geo Blue Planet Biodiversity Thematic / Regional Nodes (?)

MBON
Marine Biodiversity
Observation Network

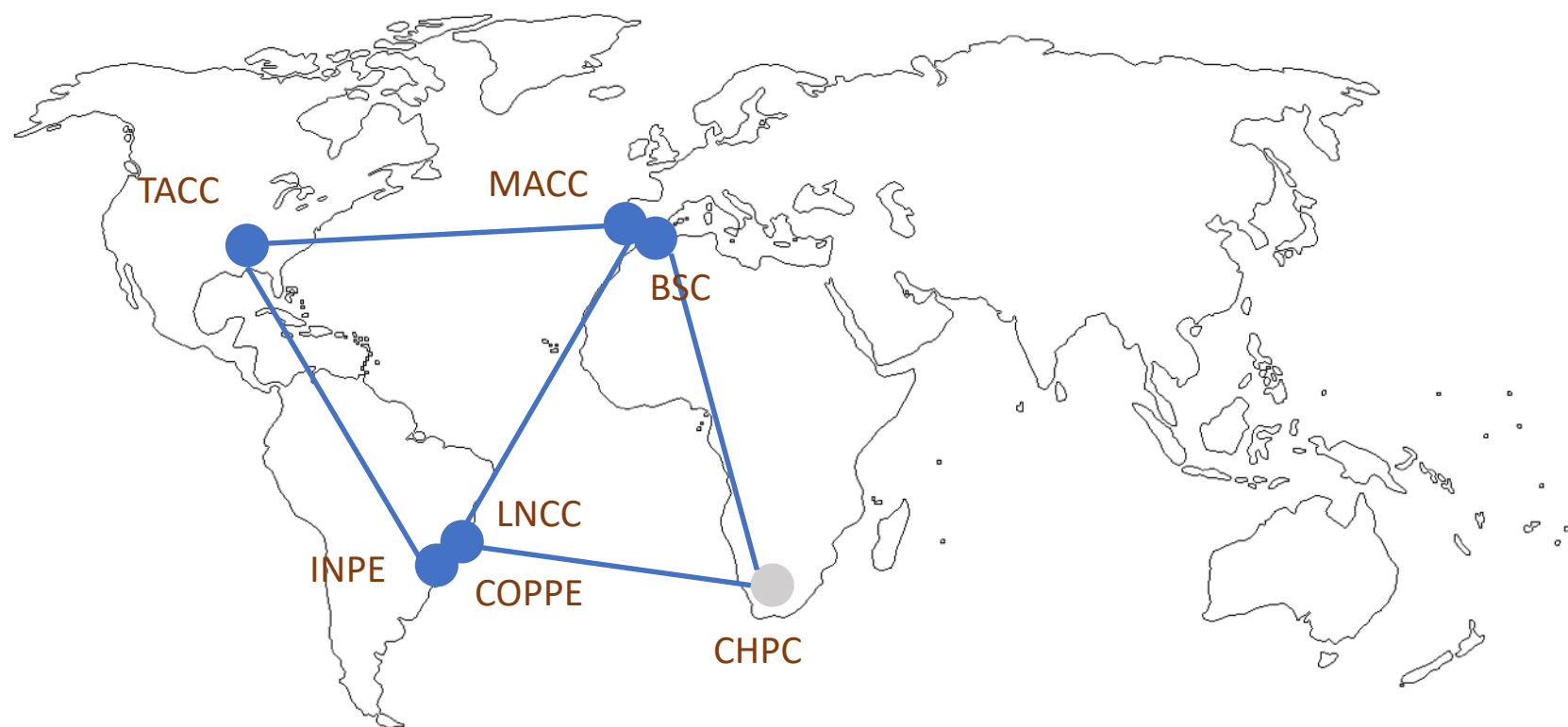
GEO GROUP ON
EARTH OBSERVATIONS

BLUE PLANET
Oceans and Society



AIR_DataNET

Global Data processing



AtlanticGEOSS

Ocean- and coastal-based data



- Curate data for Ocean and Coasts
- Serve as a test bed and a tool for the coordination for EO All-Atlantic initiatives
- Gather user needs taking into account local / national capacities
- Develop ocean-or coastal-related products for decision makers and end user



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