OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

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>50 million records

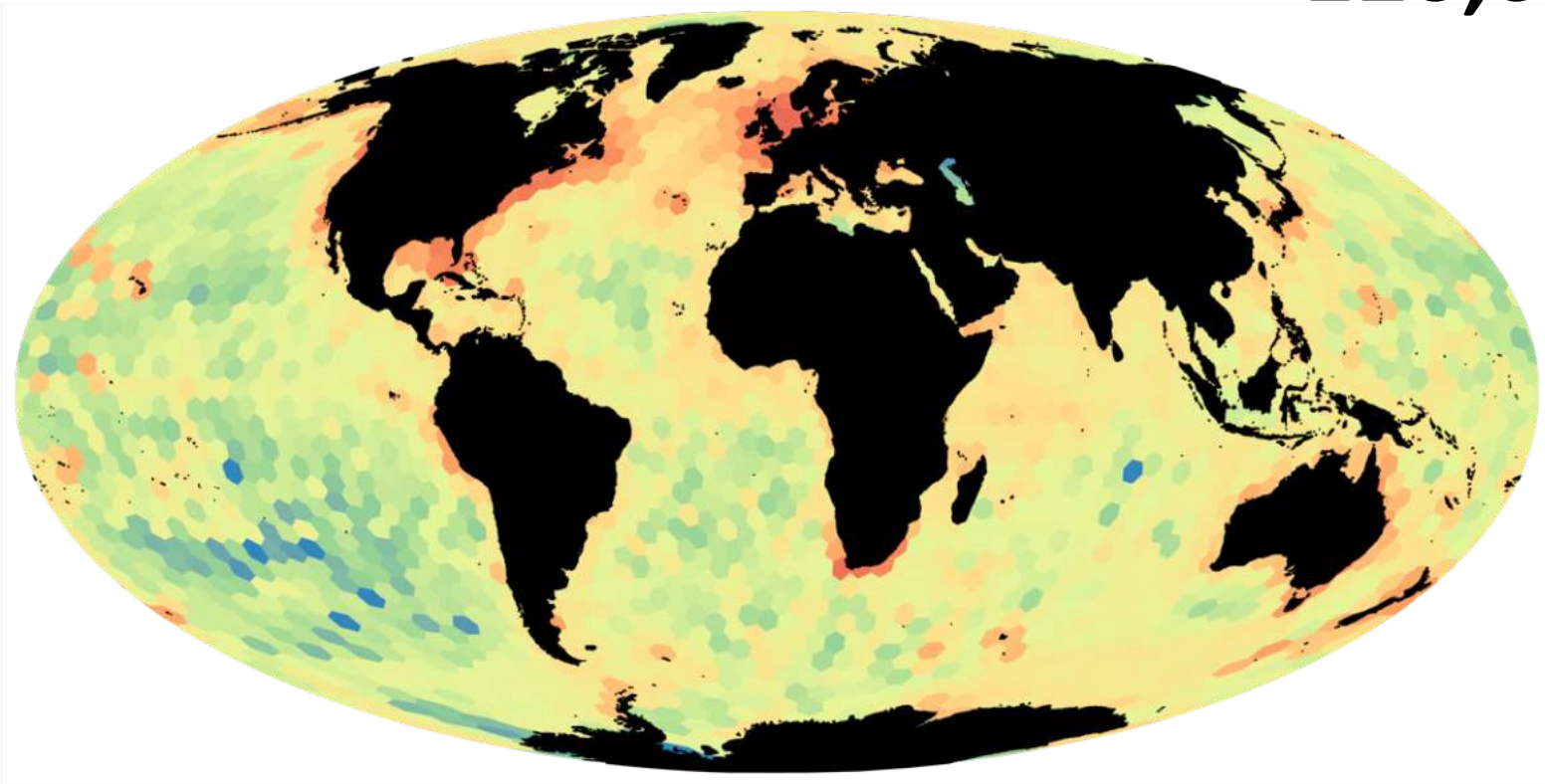
+8600 records daily in 2017

120,000 marine species

>2500 datasets

>600 institutions

30 OBIS nodes



*"To build and maintain a global alliance that **collaborates with scientific communities** to facilitate free and **open access** to, and application of, biodiversity and biogeographic data and information on marine life."*

iOBIS

Arctic OBIS

DeepSeaOBIS

OBIS Canada

Oceans Past

OBIS HAB

OTN

FishBase

OBIS USA

OBIS China

MicrOBIS

EurOBIS

Black Sea OBIS

KOBIS

OBIS Colombia

OBIS SEAMAP

MedOBIS

PEGO-OBIS

OBIS Japan

Caribbean OBIS

CPPS OBIS

OBIS Senegal

IndOBIS

SEA OBIS

WSAOBIS

ESPOBIS

AfrOBIS

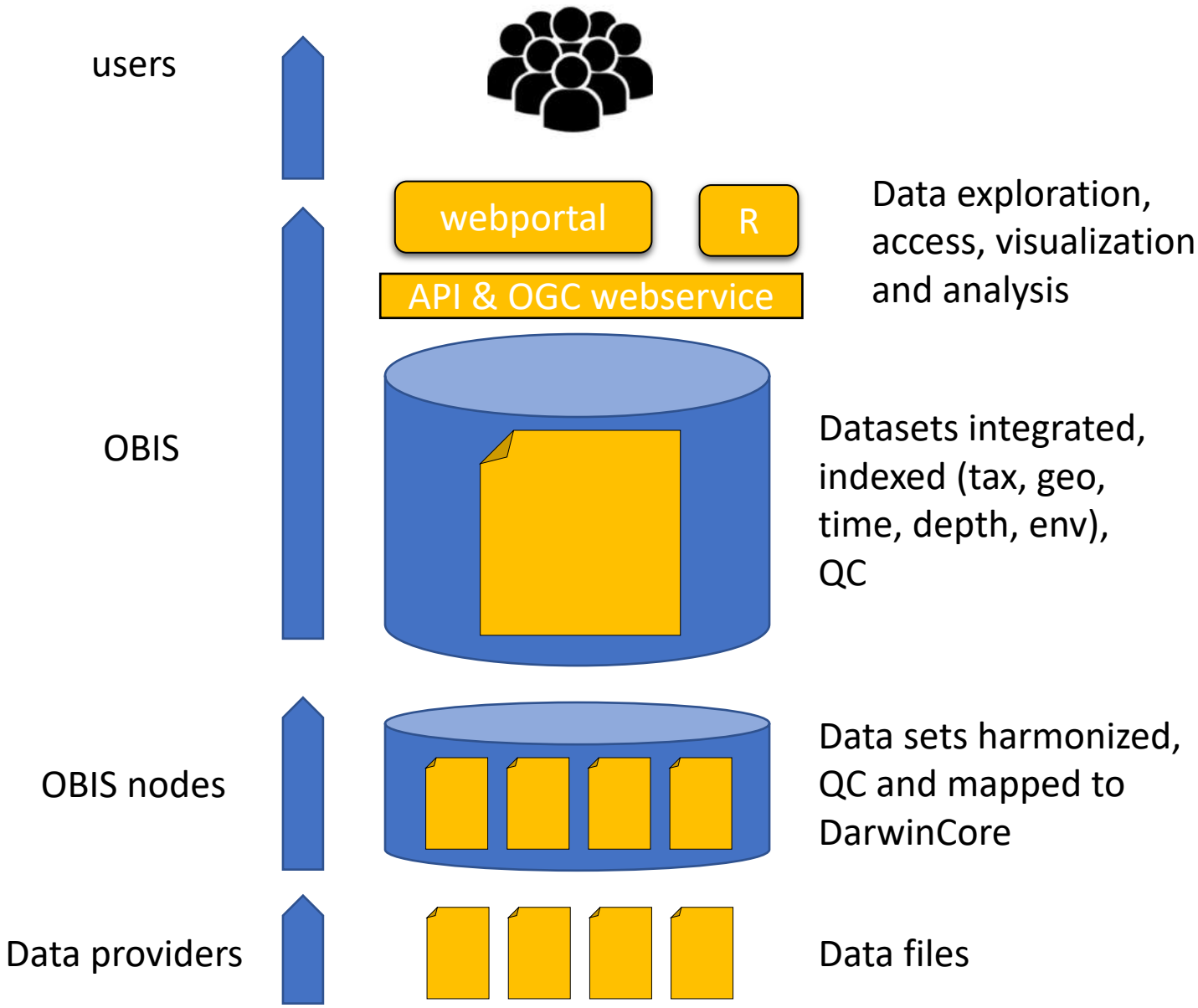
OBIS Australia

South Western Pacific OBIS

ArOBIS

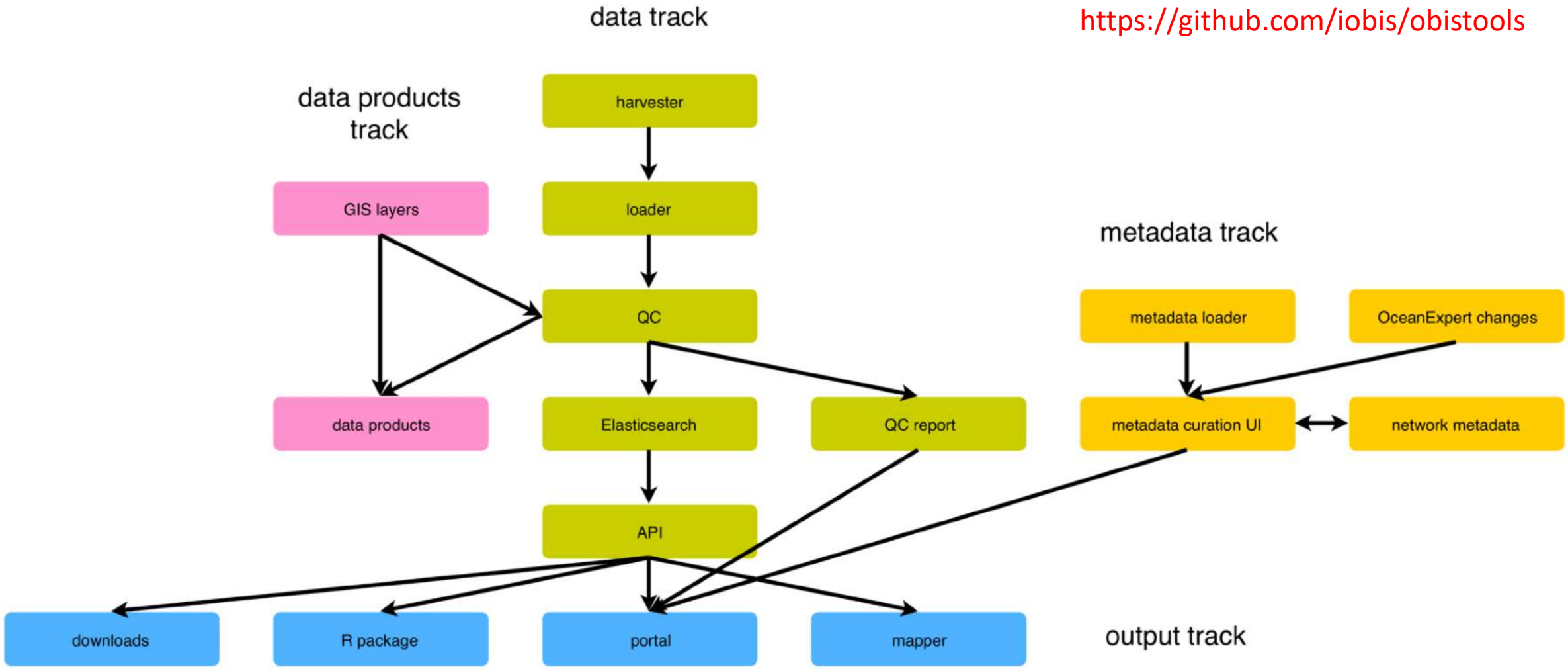
AntOBIS

OBIS architecture



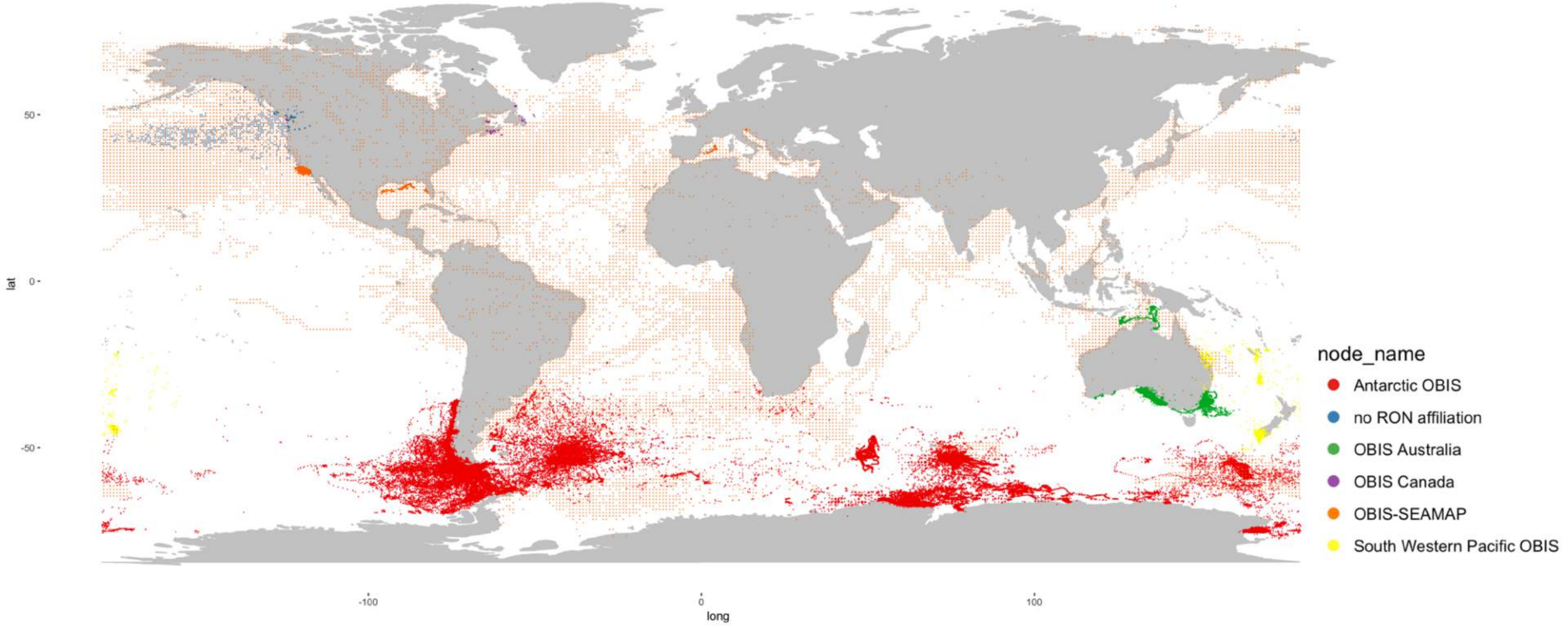
Towards OBIS2.0

https://github.com/iobis/api-docs
https://github.com/iobis/robis
https://github.com/iobis/obistools

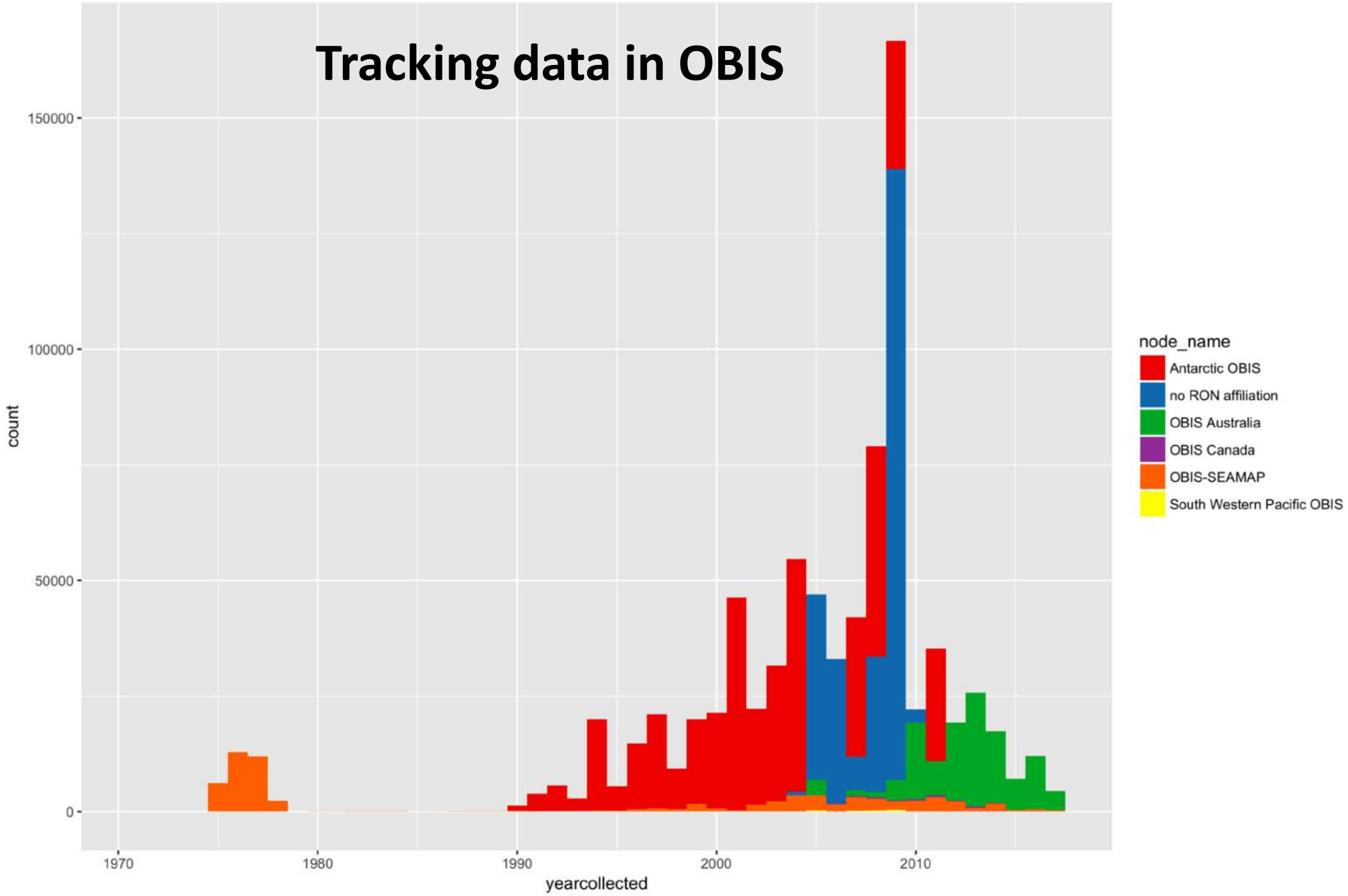


Tracking data in OBIS

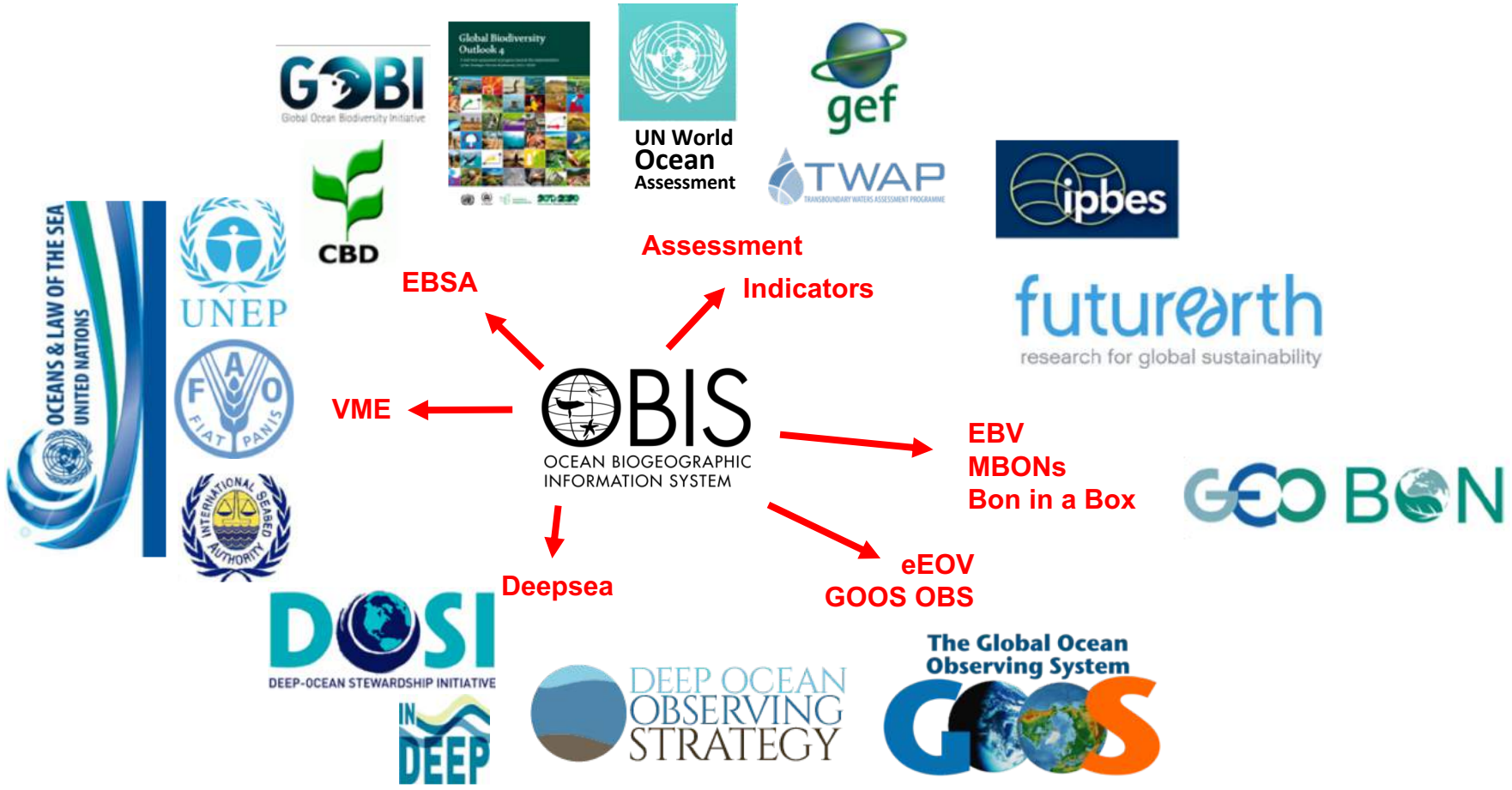
832,700 records
282 datasets



Tracking data in OBIS



Supporting International Processes



OBIS
OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

The Global Ocean Observing System
GOOS

MBON
Marine Biodiversity Observation Network

15 December 2016: New agreement to coordinate a global marine biodiversity observing system

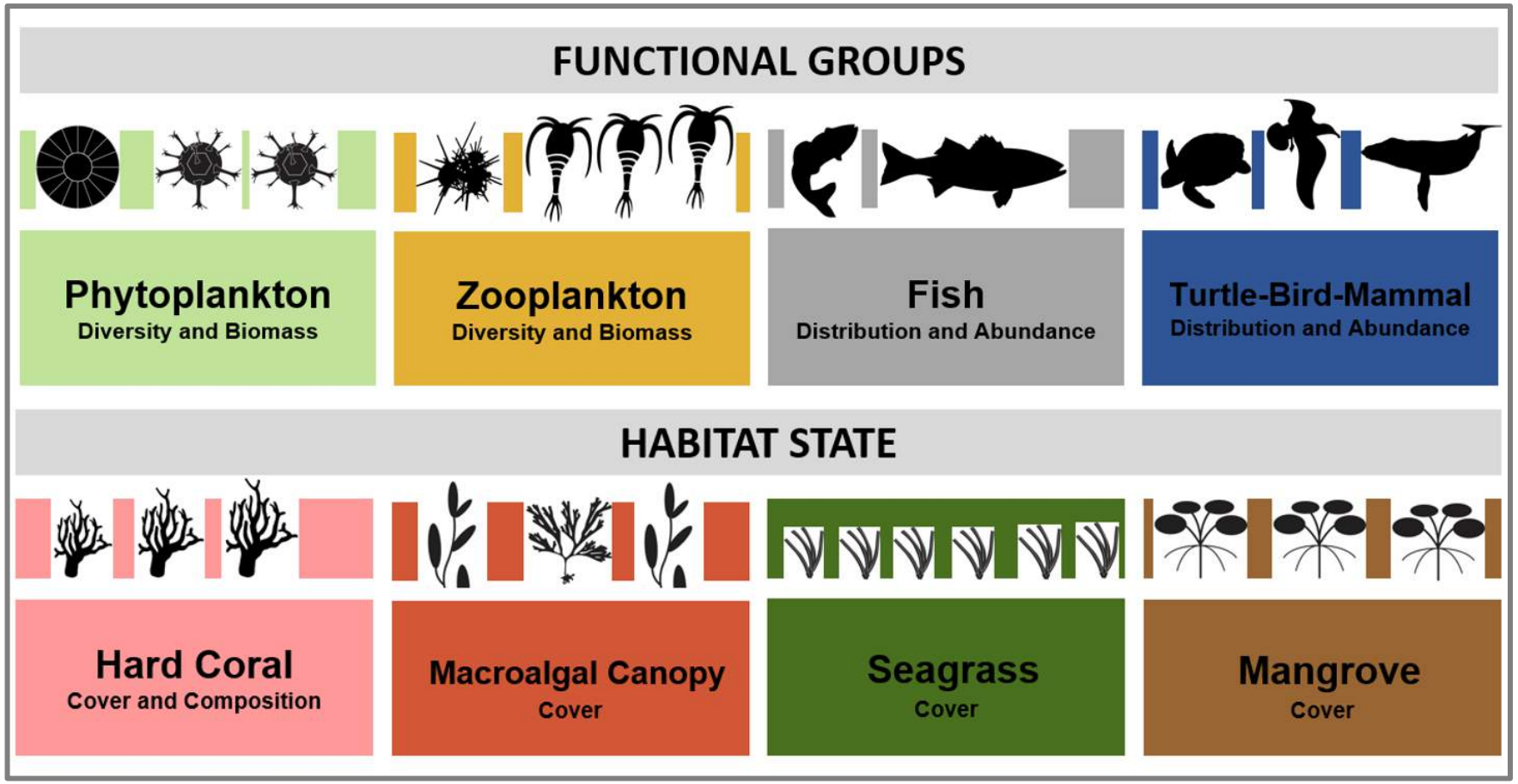
This collaboration between GOOS BioEco, OBIS and GEOBON MBON will build a unified and globally consistent observing system that will: strengthen the three initiatives; make use of the best available resources; share expertise; and ensure compatibility between outputs and advice from the three initiatives.

Agree on the key and central role of OBIS in fostering wider data sharing, data curation and aggregation in order to streamline the feeding of integrated and quality controlled datasets into models and forecasts.

Biology and Ecosystems Panel

Essential Ocean Variables

https://onlinelibrary.wiley.com/doi/10.1111/gcb.14108

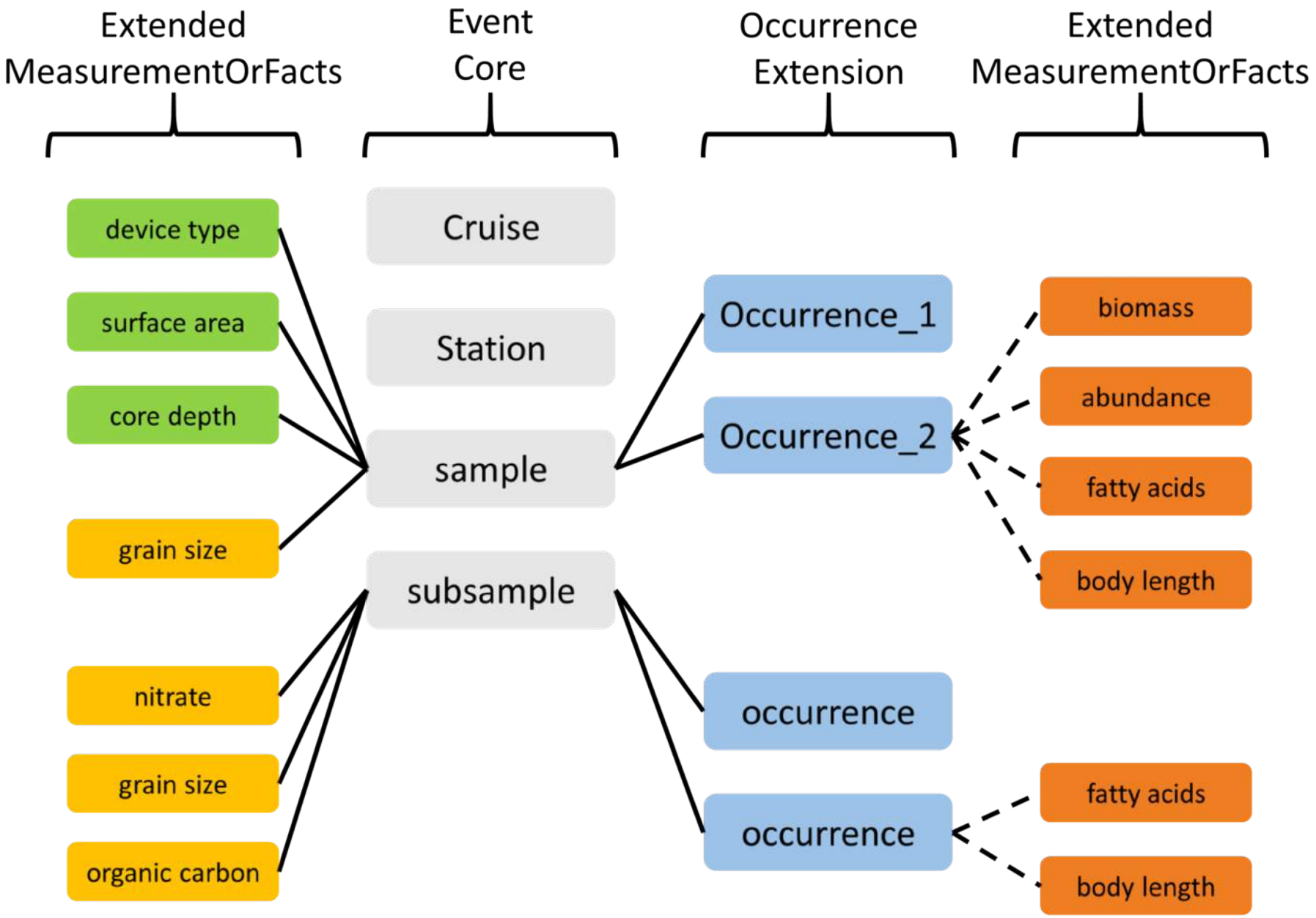


Second OBIS Executive Committee Meeting

"Recommended that OBIS should be focussing on supporting the GOOS EOVs"

OBIS-ENV-DATA

http://iobis.org/manual/dataformat/



Phenomena

1. **Production** (including oceanic, shallow water and coastal primary production and the quality and extent of marine habitats)

2. **Change**: Community Shifts (including regime shifts and persistent changes in species composition, trophic structure, species range and phenology).

3. **Impact** (of changes): population loss, Mass Mortalities and Bleaching (including those due to disease, heat stress, acidification, deoxygenation, pollution, etc.),

4. **Resilience and Recovery** (recruitment, restoration)

Basically, the line of thought for the BioEco phenomena would be: what do we have (the baseline), what and how it is changing, what will be the consequences of these changes, and can the ecosystem recover?

Derived products

- Indicators on
  - diversity, abundance, biomass by taxon and location (population status)
  - body size/size spectra, recruitment and size class distribution
  - foodweb (proportion per trophic level)
  - primary and secondary productivity rates
  - carbon sequestration rates
  - incidence rates (bloom, mass mortalities…)
- Maps of habitat cover, health condition, fragmentation
- Species home range, movement patterns, migration pathways
- Biodiversity hotspots, vulnerability spots

DMP label			
	Discoverable	1	D
	Accessible	2	A
	Standard encoding using	3	Usability
	Well documented metadata	4	
	Traceable	5	
	Quality documented	6	
	Preserved	7	Preservation
	Periodically verified	8	
	Reviewed and refreshed	9	Curation
	Tagged with permanent ID	10	

GEOSS Data Management Principles

Adoption of the GEOSS Data Management Principles:
10 GEO Data Labels
Development of EBV Metadata Standards

GEO BON

EBV Data Product Assessment Process

Assessment of EBV Data Products fit-for-purpose, according to their usability for appropriate management and policy applications.

- level of maturity/readiness of EBV products according to spatial extent, coverage and resolution; temporal extent, coverage and periodicity;
- and reporting measurements of uncertainty and the likelihood of detecting change.

These flags should eventually facilitate data discoverability and usability.

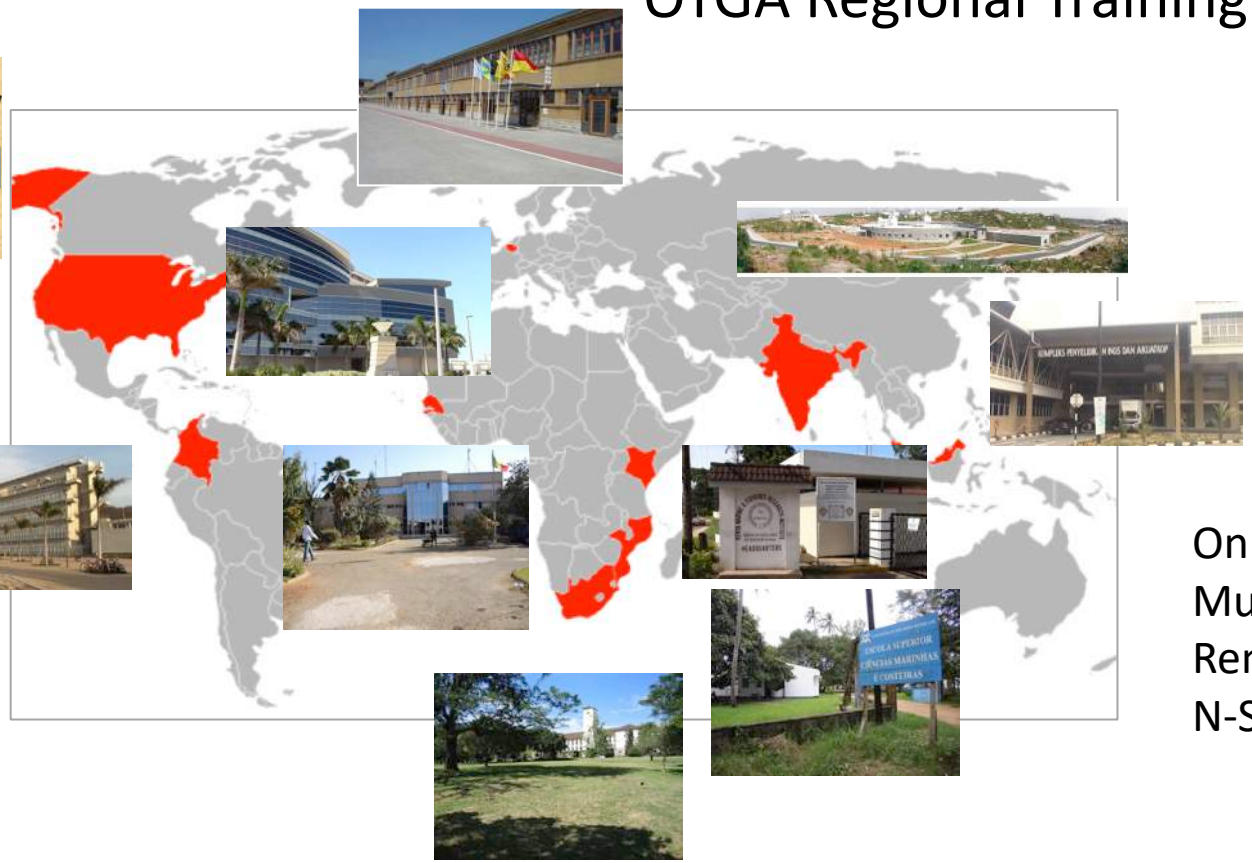
United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

UN focal point for establishment of regional training and research centers and a TMT clearing-house mechanism

UNCLOS Article 276

OTGA Regional Training Centres



OceanTeacher Global Academy

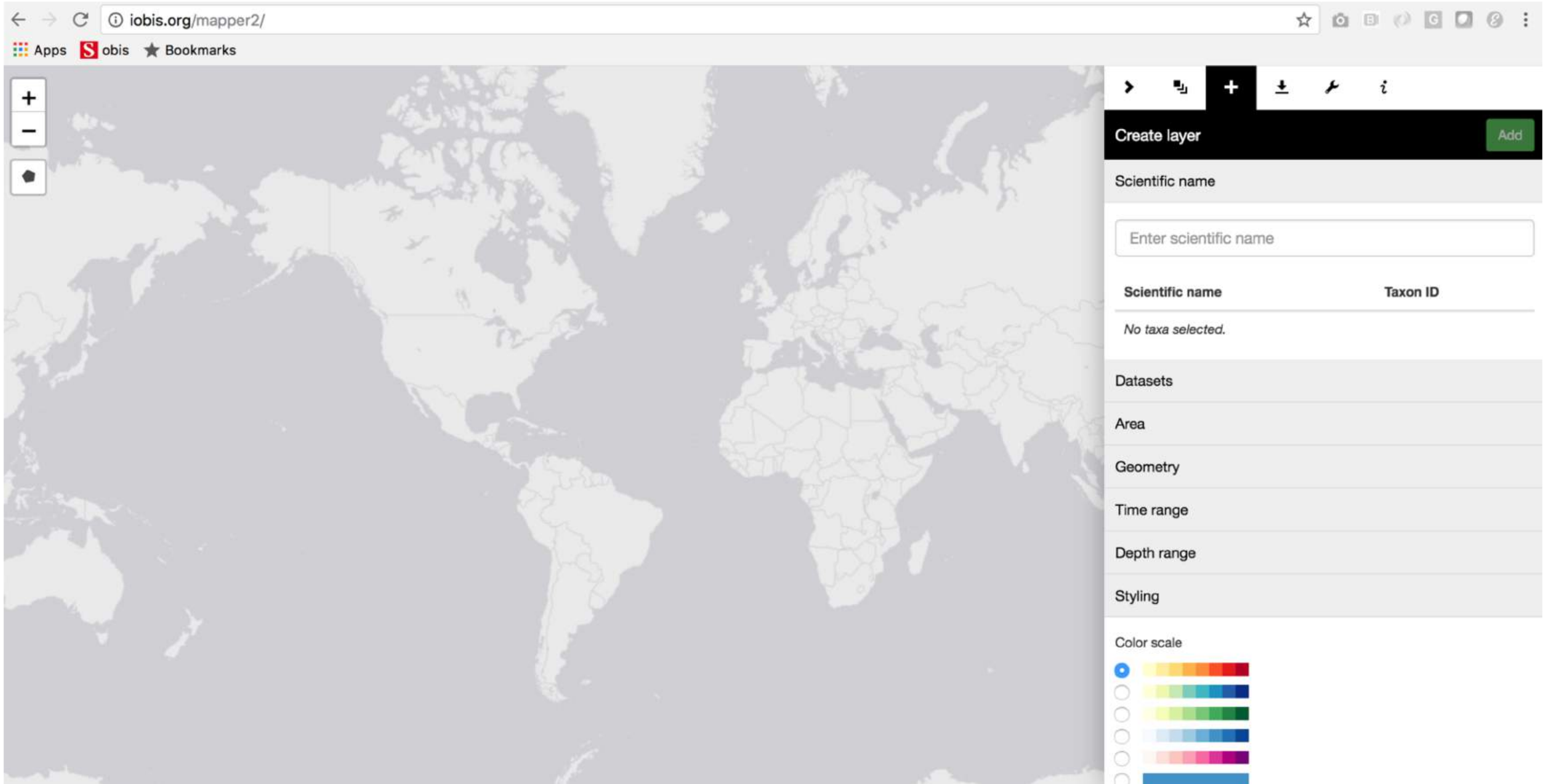
moodle

Flanders State of the Art

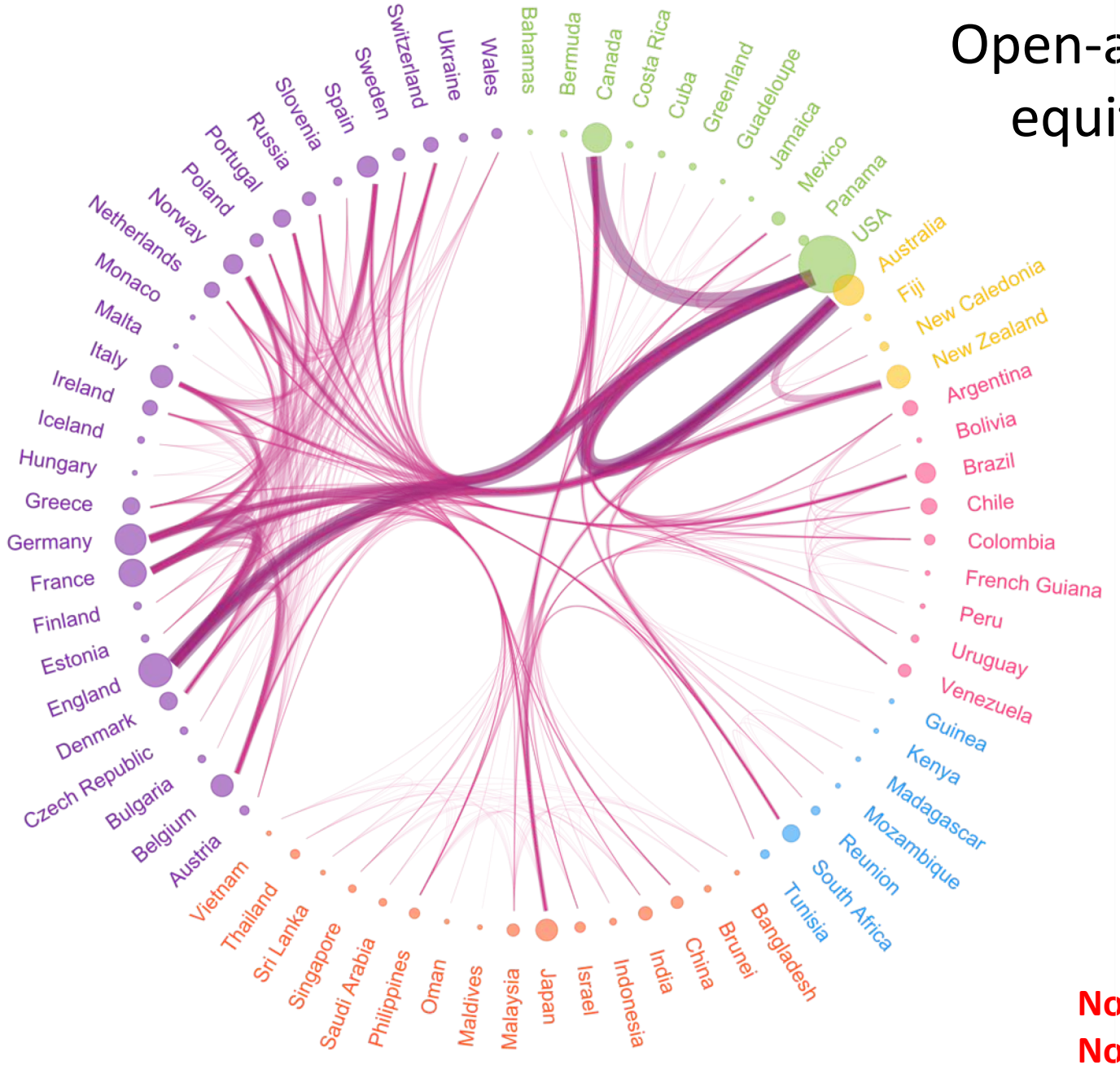
Online and on-site training
Multiple languages
Remote participation
N-S, S-S and S-N training

In 2017: 151 people involved in 7 OBIS training courses

New OBIS mapper (in development)



Open-access to research data supports equitable access and benefit sharing and enhances international collaboration



2700 scientists from 73 countries collaborated on >1000 papers citing OBIS (based on Web of Science, in collaboration with VLIZ)

Note: strong differences in regional cooperation
Note: grey literature is not included in this study

What can OBIS do for you?

Acknowledgments

Over 1000 scientists
30 OBIS Nodes

WoRMS
World Register of Marine Species

For taxonomic QC and providing their list of phytoplankton species, which helped in filtering OBIS for this presentation

United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

All sponsors during the Census of Marine Life

See http://iobis.org/about/

Flanders
State of the Art

European Commission

EMODnet
European Marine Observation and Data Network

LES GRANDS EXPLORATEURS