

**Intergovernmental Oceanographic Commission**  
*Reports of Meetings of Experts and Equivalent Bodies*

**OBIS Executive Committee (EC-OBIS)**

**Fifth Session**

Oostende

7-9 November 2023

**UNESCO**

**IOC/IODE-OBIS-EC-V**  
**Oostende, 7-9 November 2023**  
**English only**



From left to right: Silas Principe, Martha Vides, Lisa Benedetti, Saara Suominen, Katherine Tattersall, Leen Vandepitte, Pieter Provoost, Elizabeth Lawrence, Ruben Perez Perez, John Nicholls, Ward Appeltans.

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## **Executive Summary**

The OBIS Executive Committee convened in Ostend from 7-9 November 2023 to evaluate the progress of the OBIS 2023 work plan and to formulate the work plan and budget for the upcoming years, taking into account a significantly increased base funding allocated to core IODE program components, such as OBIS.

During the meeting, the committee addressed various action items, including the development of a draft communication and outreach plan, and the establishment of a new OBIS data policy and guidelines aligned with and implementing the recently adopted IOC data policy.

Additionally, a comprehensive review of the OBIS management structure was initiated to align it with the new IODE Rules and Procedures. A proposal outlining a revised structure and updated Terms of References has been drafted. This proposal will be presented at the forthcoming OBIS steering group meeting scheduled for 25-29 March 2024 in South Korea.

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# 1. Opening and adoption of agenda

Martha Vides and Katherine Tattersall, SG-OBIS co-chairs, opened the meeting and welcomed all participants (list of participants in annex 2). Apologies were received from Y-Ming Gan, Abby Benson, Stephen Formel.

Ward Appeltans, OBIS programme manager, introduced the participants to the agenda, and highlighted the following objectives of the meeting:

- Assess the status of the OBIS 2023 work plan
- Restructure of OBIS governance and operations to be in line with the new IODE rules and procedures
- Respond to the request to develop data, metadata and product guidelines in line with the new IOC data policy
- Draft a new OBIS Communication plan
- Draft a new OBIS work plan for the next two years, taking into account new strategic directions
- Prepare for the next SG-OBIS meeting.

## 2. Status of Work Plan 2023

### 2.1 OBIS Executive Committee

Katherine Tattersall reported that she and Martha Vides both attended the IODE Management Group (IODE MG) meetings which covered the plan to restructure IODE into programme components, activities and projects. The IODE Management Group (IODE MG) approved the new structure and changed OBIS from an IODE project to an IODE programme component together with the OceanTeacher Global Academy (OTGA) and the Ocean Data Information System (ODIS). The next IODE MG meeting, 5-7 February 2024 in Ostend, will discuss and adopt the proposed work plan and budgets, based on the new budget allocations to IODE following the decision of the UNESCO General Conference. OBIS has been given until the end of November 2023 to submit a revised work plan and budget.

Martha Vides mentioned that IODE Programme Components will also need to support/manage other programme activities and projects that are assigned to the programme components, which, if they are not funded, can mean an extra burden to OBIS.

Katherine Tattersall reported that she also represented OBIS at the recent GBIF Governing Board meeting in Australia.

With regards to the UN Ocean Decade conference Barcelona (April 2024), Ward Appeltans reported that OBIS, jointly with the Decade Coordination Office for data sharing, submitted a proposal for a booth. The outcome of that is expected by 30 November 2023.

*Copy of 2023 work plan related to the OBIS executive committee (the header applies to all subsequent tables).*

Action item	Responsible	Due date	Budget (*)
(*) including in-kind contribution and source			
OBIS Executive Committee			
Quarterly online meetings	OBIS co-chairs, with support from Sec	14 June 2023; 14 Sep 2023; 14 Dec 2023; 14 March 2024	0
Represent and report on OBIS at IODE management group and IODE committee meetings	OBIS co-chairs	Dec 23/Jan24	0
Report on activities to SG-OBIS	OBIS co-chairs	at least one month prior to the SG meeting	0

**The EC-OBIS recommended organizing a GBIF-OBIS meeting back-to-back with the IODE MG meeting in February 2024.**

## 2.2 OBIS Secretariat

Ward Appeltans reported that the preparations for the next SG-OBIS meeting have started. The meeting will be hosted by our Korean OBIS node at the National Marine Biodiversity Institute of Korea (MABIK) and will take place on 25-29 March 2024. The development of the programme was supposed to be discussed this week, but unfortunately we did not have enough time.

Regarding establishing a better connection between OBIS nodes and the Marine Biodiversity Observation Network (MBON) and the Global Ocean Observing System (GOOS). This task has not yet started, but GOOS is currently hiring a new secretariat staff member who will “develop and coordinate activities with *National Focal Points*; initiate technical advice and provide assistance to support collaborative work and recommend programme and project approaches to strengthen engagement”. Once this person is in office, we could set up a meeting with GOOS and MBON.

The cooperation agreement with LifeWatch ERIC has been signed by IOC and the OBIS training course has been developed and launched.

The preparations for an in-person meeting with GBIF will start soon after this EC meeting.

With regards to technical developments, Pieter Provoost, OBIS Data Manager, reported that as part of MPA Europe, we have developed a framework for generating species distribution models for thousands of species. Currently, this framework is undergoing testing and optimization. It will subsequently be employed to create distribution maps, which will play a role in our quality control procedures. The OBIS secretariat is also working on a data products catalogue and has set up a CKAN instance to host OBIS data products, but other solutions are still being considered by the Intersessional Working Group (IWG) on data products, and the secretariat is actively engaged in determining the optimal structure for this platform.

As part of the PacMAN and eDNA expeditions project, the PacMAN bioinformatic pipeline has been further tested and developed. Taxonomic annotation methods were tested with different mock datasets available online, and the decision was made to change the method in a new version of the pipeline. Test data from both projects has been analysed using the pipeline. As part of the PacMAN decision support system, R packages have been developed to generate species distribution maps and thermal envelopes based on OBIS, GBIF, and WoRMS; and to perform invasivity risk assessment for sets of species and geographic areas. Furthermore, a decision support system is in development showing information on PacMAN sampling campaigns, invasive species priority lists, risk assessments, and recent detections of potentially invasive species.

As part of the eDNA Expeditions project, scripts have been written to generate species lists for all marine World Heritage sites. The eDNA sample tracking website has been updated to show these species lists in combination with results from eDNA sampling.

*Copy of 2023 work plan related to the OBIS secretariat.*

OBIS Secretariat			
Organize next SG-OBIS meeting	OBIS manager, with support from SG-OBIS co-chairs		14,000 USD
Regularly report and provide information or guidance on how OBIS nodes at local level can be more engaged and contribute to GOOS and MBON	OBIS manager		0
Establish cooperation agreement with LifeWatch ERIC, and organize online OBIS training course	OBIS manager		0
Plan and organize an in-person meeting with GBIF early 2024 to develop an action plan for adoption at the next SG-OBIS meeting	OBIS manager		TBD

Implement dataset keyword search and filtering	OBIS data manager	30/4/2024	DTO-BioFlow
Integration of and filtering on key WoRMS traits	OBIS data manager	30/4/2024	MPA Europe
Develop a bioinformatic pipeline for quality control and taxonomic annotation of sequence data	OBIS secretariat	31/12/2023	PacMAN, eDNA Expeditions, AtlantECO, and MARCO-BOLO
Reference implementation of quality control using WoRMS distributions and species distribution models	OBIS secretariat	30/4/2024	PacMAN, eDNA Expeditions, and MPA Europe
Set up online catalog for data products	OBIS data manager	31/7/2023	MPA Europe
Report on activities to SG-OBIS	OBIS secretariat	at least one month prior to the SG meeting	0

**The EC-OBIS recommended sharing the list of GOOS National Focal Points and matching those with OBIS nodes and IODE national focal points.**

## 2.3 OBIS Nodes

Mr Ward Appeltans reported that at the IOC Assembly in June 2023 several Member States did request more stable funding for OBIS operations and staffing. This is reflected in the report<sup>1</sup> of the 32nd IOC Assembly:

*“The Assembly called for an increased regular programme allocation for IODE as well as additional staff to ensure the long-term sustainability of OBIS. This additional regular programme position for the OBIS data manager will enable sustained technical support to the global network of national, regional and thematic OBIS nodes, to allow the expansion of OBIS with biological and ecosystem essential ocean variables of GOOS and to support the implementation of international agreements, such as the Kunming-Montreal global biodiversity framework under the CBD and the recent agreement on Biodiversity Beyond National Jurisdiction (BBNJ) under UNCLOS”.*

Regarding inactive OBIS nodes, the following status has been reported:

- OBIS Indonesia: since the restructuring of LIPI into BRIN, this node is no longer active and there is no conclusion on how to reactivate the OBIS node activities in BRIN.
- SEAOBIS: the host institute ACB has a second locally hosted IPT instance which has already been serving marine datasets to GBIF. OBIS will now also harvest those datasets. So SEAOBIS is considered active again.
- FishOBIS: They are still in the midst of updating the FishNet 2 infrastructure. However, in the meantime a new FishNet2 IPT server has been installed and the new data is available from there. So FishOBIS is active again.

<sup>1</sup> <https://oceanexpert.org/document/32840>



The number of people that “watch” the 3 recommended GitHub repositories is very low (number of people between brackets):

- <https://github.com/iobis/obis-network-datasets> (8)
- <https://github.com/iobis/obis-issues> (14)
- <https://github.com/iobis/manual> (5)

John Nicholls and Georgia Sarafidou drafted a text on our OBIS recommendations for historical data and shared it with the OBIS secretariat for publication on the OBIS website.

*Copy of 2023 work plan related to the OBIS nodes.*

OBIS nodes			
All OBIS nodes to contact their IOC national delegations (see list at <a href="https://oceanexpert.org/document/17716">https://oceanexpert.org/document/17716</a> ) as soon as possible to ask them to make a case during the upcoming IOC Assembly to request more stable funding for OBIS operations and staffing and create a regular programme position for the OBIS data manager	OBIS node managers	Before 20 June 2023	0
Inactive OBIS nodes submit an action plan to become an active data publishing node again, within 3 months after the adoption of the report.	SEAOBIS, OBIS Indonesia and Fish OBIS	26 August 2023	0
Contact the WoRMS data management team at <a href="mailto:info@marinespecies.org">info@marinespecies.org</a> in case no matching name in WoRMS can be found, ideally before publishing the dataset to OBIS	All OBIS nodes		0
Create GitHub accounts, and follow these OBIS GitHub repositories:  <a href="https://github.com/iobis/obis-network-datasets">https://github.com/iobis/obis-network-datasets</a> <a href="https://github.com/iobis/obis-issues">https://github.com/iobis/obis-issues</a> <a href="https://github.com/iobis/manual">https://github.com/iobis/manual</a>	All OBIS nodes		0
Write a news article on the outcomes of the OBIS Historical Data Project Team (HDPT) in which OBIS can also invite the archeological community to publish historical data to OBIS	OPI-OBIS/MedOBIS		0
Inform and report on OBIS training activities	All OBIS nodes + Sec		0
Report on activities to SG-OBIS	OBIS node managers	at least one month prior to the SG meeting	0

The EC-OBIS recommended that the SG-OBIS needs to develop clear goals and responsibilities for OBIS nodes and seek to reconfirm their commitment every 3-5 years. The default would be to continue, but at least there is an option to opt out or to manage node transfer, e.g. to another host organization.

The EC-OBIS felt that there is a need to organize training in using GitHub (consider it as one of the mandatory OBIS tools). This can be online through a simple YouTube video as well as some in-person training (e.g., during the next SG meeting). This would give OBIS node managers a GitHub certificate, similar to the OBIS training course certificate.

## 2.4 OBIS Taxonomic Task Team

Leen Vandepitte reported on the progress made by the Team over the last year. In the Summer of 2022, 2 interns worked on the annotation process for taxon names in OBIS that did not match to a name in WoRMS. For the first time, the annotation was done through an online tool, developed by the VLIZ IT-division. Over the last months, the online tool and the annotation categories have been fine-tuned, including the development of some extra automated matching processes. These additional matching processes should improve the general overall annotation progress, although manual checking and annotations will still be needed.

By the next SG-OBIS meeting, the online tool will be fully ready for external use. This implies that the taxonomy task team can extend its membership, including any SG member that wants to take part in the annotation process. It is planned to have a live demo at the next SG meeting (2024, Korea) on the usage and functionalities.

In the future, WoRMS will make it possible to document temporary names that correspond to specific guidelines. The guidelines are under development, aimed to be submitted to peer review by the end of 2023.

*Copy of 2023 work plan related to the OBIS Taxonomic Task Team.*

OBIS Taxonomic Task Team			
Review non-matching names	EurOBIS/WoRMS All OBIS nodes	Continuous	In-kind EurOBIS/WoRMS
Report on activities to SG-OBIS	OBIS TaxTT chair	at least one month prior to the SG meeting	0===

The EC-OBIS recommended to organize a live demonstration of the new annotation tool at the next SG-OBIS meeting, so additional people can help clean-up non-matching names. This will allow external collaboration within the Tax TT.

The EC-OBIS raised the point that Bacteria/protists represent a gap in WoRMS which is a limitation for taxonomic assignments from DNA data. The Tax TT responded that this is a known issue and conversations are ongoing with UniEUK to fill this gap. However, no time frame can be put on this progress, as it depends on a voluntary collaboration.

The EC-OBIS recommended mapping WoRMS LSIDSs with BIN IDs from BOLD and learned that this is in progress.

## 2.5 OBIS Capacity Development Task Team

Elizabeth Lawrence, OBIS training officer, reported that the OTGA/OBIS Training course was launched on 2 October 2023 and so far has a total of 139 participants enrolled (including volunteers who provided feedback on earlier course development), with about 25 active participants completing assignments.

The OTGA/OBIS Spanish online self-paced training course will be launched by mid November 2023, in collaboration with OBIS Colombia, ESP-OBIS, ArOBIS, and Caribbean OBIS.

She provided a description of the new CD schema (figure below), which emphasizes more collaboration between OBIS nodes and the CDTT to improve data mobilization. This inter-node collaboration could include joint training events, and establishment of node mentoring for new OBIS nodes. The CDTT (or an appointed OBIS Communication officer) could help facilitate communication between nodes.

### New Capacity Development schema :



To implement this new working approach it is recommended to:

- 1) Define regional teams : more than one node that decides to work together, organizing their regional meetings.
- 2) CDTT coordinate quarterly meetings: discussion on the results of regional working meetings
- 3) The quarterly meetings should give feedback to the CDTT in order to evaluate the master action plan implementation.

The CDTT is working on a proposed a data mobilization plan that will:

- Identify gaps in OBIS records or define data priorities (e.g. BBNJ, deep sea, eDNA derived data);
- Design a framework that includes a project leader/coordinator, data managers/providers (up to 5 people), training (CDTT, online/in person), with results that focus on the number of datasets mobilized to OBIS or the number of people trained.

This data mobilization activity could be supported by funds if available (e.g., up to 20,000 USD/project for one year), where OBIS community members could submit proposals that are selected by the OBIS Secretariat/CDTT based on the targeted data gap and expected results.

*Copy of 2023 work plan related to the OBIS CD Task Team.*

OBIS Capacity Development Task Team			
Implement the new CD strategy and propose an implementation plan following the suggestion of the IWG-OBIS-Structure.	OBIS EC	After the work of the IWG-OBIS-Structure	0
OTGA/OBIS Training course (Spanish). Self-paced online	OBIS Colombia	November 2023	in-kind
OTGA/OBIS online self-paced training course (English) Laksana	OBIS Secretariat	Sep-Dec 2023	20,000 USD from LifeWatch
Report on activities to SG-OBIS	OBIS CDTT chair	at least one month prior to the SG meeting	0

**The EC-OBIS recommended raising extra-budgetary funding to help organize data mobilization events. Collaboration with GBIF could be sought and OBIS nodes could get regional responsibility (buddy-system).**

## 2.6 OBIS Vocab Infrastructure Project Team

Elizabeth Lawrence, OBIS training officer, reported on the progress of the VIPT, noting that the P01 Decision Tree is almost completed, where the main branch for measurementTypeID guidelines were completed. There are also four supplementary training videos in development that demonstrate how to use the tree with examples for different types of measurements (e.g. biological, chemical, physical). Elizabeth also shared the team’s plan in progress to merge the Q01 collection with the P01 collection in order to streamline and simplify vocabulary guidelines, which is documented in the P01 GitHub repository<sup>1</sup>.

*Copy of 2023 work plan related to the OBIS Vocab Infrastructure Project Team.*

OBIS Vocab Infrastructure Project Team			
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Develop and finalize training documentation regarding vocabulary selection	TBD	Continuous	
Elect a chair or co-chairs	TBD		
Report on activities to SG-OBIS	OBIS VIPT chair	at least one month prior to the SG meeting	0

**The EC-OBIS recommended organizing a controlled vocabulary training workshop, perhaps during the next SG-OBIS meeting.**

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<sup>1</sup> <https://github.com/nvs-vocabs/P01/issues/227>

## 2.7 OBIS Data Quality Project Team

Ruben Perez reported that the QC project team has concluded and aligned all OBIS quality checks<sup>2</sup> with the core tests and assertions<sup>3</sup> developed by the TDWG Biodiversity Data Quality Tests and Assertions task group<sup>4</sup> (BDQ TG2). The mapping is summarized on a wiki<sup>5</sup> as part of our QCPT GitHub repository<sup>6</sup>.

Ruben Perez also provided a presentation of this work at the TDWG conference in October 2023 in Hobart (Australia). The title was "Promoting High-Quality Data in OBIS: Insights from the OBIS Data Quality Assessment and Enhancement Project Team" which was published in Biodiversity Information Science and Standards<sup>7</sup>.

The team reported that the engagement from its membership reduced as the project progressed, due to other engagements. This meant that a lot of the work fell on the co-chairs and a few other people, which is not sustainable for the continuation of the team. In addition, several team members attended the meetings to learn. The project team circulated a survey to gain insights from its members. How to ensure ongoing engagement in OBIS working groups should be considered before establishing future task teams.

*Copy of 2023 work plan related to the OBIS Data Quality Project Team*

OBIS Data Quality Project Team
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<sup>2</sup> <https://github.com/iobis/obis-qc/>

<sup>3</sup> <https://github.com/tdwg/bdq/projects/2>

<sup>4</sup> <https://github.com/tdwg/bdq/tree/master/tg2>

<sup>5</sup> <https://github.com/iobis/quality-taskteam/wiki/Mapping-of-checks-in-obis%E2%80%90to-TDWG-BDQ-core-tests-and-assertions>

<sup>6</sup> <https://github.com/iobis/quality-taskteam/>

<sup>7</sup> <https://doi.org/10.3897/biss.7.112018>

Align obis-qc with TDWG core tests and assertions and GBIF pipelines	All team members	Dec 2023	0
Report on activities to SG-OBIS	OBIS DQPT chair	at least one month prior to the SG meeting	0

The EC-OBIS recommended to align quality checks among the different OBIS tools (OBIS-QC, obistools R package and BioCheck tool), for which there is an issue in GitHub: <https://github.com/qbif/portal16/issues/1837>.

The EC-OBIS recognised the huge contribution from the co-chairs Yi-Ming Gan and Ruben Perez in successfully chairing the project team, and thanked them.

## 2.8 OBIS Grand Unified Data Model Project Team

Stephen Formel, in lieu of Abby Benson, reported that the OBIS Grand Unified Data Model Project Team (GUMPT) addressed most of the tasks identified at the beginning of the project. However, not all tasks are completed, in part because the new data model (previously known as the Grand Unified Model) continues to develop and change. The project team met a total of eight times from June 2022 until October 2023, and identified ten model use cases as relevant to OBIS. The most completely explored were “camera traps”, and “environmental and community measurements.” The team also identified and explored a new use case, "absences". Further details of all project tasks were included in a report distributed to the SG-OBIS via email and a report will be presented at the next SG meeting.

### *Copy of 2023 work plan related to the OBIS Grand Unified Data Model Project Team*

OBIS Grand Unified Data Model Project Team			
Apply the data model to the selected datasets.	All team members	July 2023	0
Document issues, suggestions, and feasibility for each use case.	All team members	July 2023	0
Explore the feasibility of using frictionless data packages instead of Darwin Core Archives.	All team members	July 2023	0
Assess impact to OBIS data system including amount of work necessary, funding required, sources for funding if required, and recommendation on adoption.	All team members	September 2023	0
Report our findings to TDWG, GBIF Global Nodes and the GBIF data model project team.	OBIS GUMPT chair and team members	October 2023	0
Report on activities to SG-OBIS	OBIS GUMPT chair	at least one month prior to the	0

		SG meeting	
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**The EC-OBIS recommended that a future team make a fuller assessment, once the publishing models are complete. A corresponding element of the data model, Frictionless Data Packages, also deserve further consideration to explore potential benefits and limitations for OBIS.**

## 2.9 IWG OBIS Data Policy

Ward Appeltans reported that the IWG OBIS Data Policy has not been established yet, but drafting the new guidelines commenced during the current EC meeting and the SG-OBIS will be asked to provide input and feedback, so we can present a full proposal for adoption at the SG meeting.

*Copy of 2023 work plan related to the IWG OBIS Data Policy*

IWG OBIS Data Policy			
Develop detailed data and metadata sharing guidelines that can be added as annex to the new IOC data policy.	All members	Before next SG meeting	Combine with IWG-OBIS-Structure meeting
Report on activities to SG-OBIS	IWG chair	at least one month prior to the SG meeting	0

## 2.10 IWG OBIS Management Structure

Ward Appeltans reported that the IWG OBIS Management Structure has not been established, but drafting the proposal will commence this week and the EC will share the proposal with the SG for feedback.

*Copy of 2023 work plan related to the IWG OBIS Management Structure*

IWG OBIS Management Structure			
Propose a new OBIS management structure and working methods to be in line with the new rules and procedures for IODE programme components	All members	Before December 2023	0
Reconsider the tasks of the OBIS Strategic Advisory Task Team (SATT) in the new OBIS	All members		0

management structure			
Online meetings	OBIS Sec	Before Nov 2023	0
In-person meeting	OBIS Sec	November 2023	11,000
Report on activities to SG-OBIS	IWG chair	at least one month prior to the SG meeting	0

## 2.11 IWG OBIS Communication and Outreach Plan

John Nicholls reported that the IWG has not been established yet, but work on drafting the OBIS outreach and communication plan will commence this week during the EC-OBIS meeting.

*Copy of 2023 work plan related to the IWG OBIS Communication and Outreach Plan*

IWG OBIS Communication and Outreach plan			
Develop OBIS outreach and communication plan in collaboration with communication experts (from OBIS nodes)	All members	After the IWG-OBIS-Structure	0
Report on activities to SG-OBIS	IWG chair	at least one month prior to the SG meeting	0

## 2.12 IWG OBIS DNA Derived occurrence data

Saara Suominen reported that the IWG has not been established yet. However, the OBIS guidelines for genetic data have been internally discussed and added to the genetic data guidelines document published by GBIF. The addition of genetic data guidelines have also been updated in the OBIS manual and a genetic data module was added to the new OBIS training course on OTGA.

*Copy of 2023 work plan related to the IWG OBIS DNA Derived occurrence data*

IWG OBIS DNA derived occurrence data			
Discuss and agree on changes and developments to the OBIS genetic data guidelines	All members	Continuous	0
Plan for a genetic data training package together with capacity development team	All members	TBD	0



Review genetic data formatting, and develop tools (e.g. in the robis package).	All members	TBD	0
Plan for activities based on the needs of the OBIS nodes with regards to genetic data	All members	TBD	0
Report on activities to SG-OBIS	IWG chair	at least one month prior to the SG meeting	0

**The EC-OBIS recommended to consider organizing DNA data laundry events.**

## 2.13 IWG OBIS Products

Silas Principe reported that the IWG OBIS Products was established and held its first meeting on 17 October 2023. Members have commenced discussions on the optimal format for the data products platform, with suggestions that OBIS could implement a structure enabling the generation and visualization of products on the cloud (e.g. JupyterHub).

Moving forward, the group is currently exploring the feasibility of implementing a JupyterHub or similar infrastructure. The IWG will also create a channel for nodes to share any data products they may have previously produced and to identify recurring data product requests directed towards OBIS nodes. This information will help the IWG to identify the next steps and to define the technical requirements of the platform.

More information on the work of the IWG OBIS Products can be found in their GitHub repository: <https://github.com/iobis/iwg-products>.

### *Copy of 2023 work plan related to the IWG OBIS Products*

IWG OBIS Products			
Identify products needs (local, regional, etc) that could drive a plan for future products implementation	All members	Started, to be complemented with nodes feedback	0
Reviewing existing OBIS information products (by contacting nodes)	All members	Consultation will start on the second week of November	0
Contact ecological synthesis centres/groups to receive suggestions/advice of possible products that could be derived from OBIS	All members	TBD	0

Discuss a potential framework for adding community-generated products [or discuss if this would be a relevant approach]	All members	TBD	0
Report on activities to SG-OBIS	IWG chair	at least one month prior to the SG meeting	0

### 3. OBIS Strategic Plan

Mr Ward Appeltans reported on several important events that had an impact on the future of OBIS.

(i) The IODE Committee approved the designation of IODE activities as Programme Components, Programme Activities and Projects, and decided to designate OBIS, and ODIS, and OTGA as Programme Components.

(ii) The IODE Committee approved the “Rules of Procedure for IODE Programme Components, Programme Activities or Projects (MG91<sup>8</sup>)” and instructed all projects to adopt these in their management structure by the next meeting of the IODE Management Group (February 2024). The ad hoc IODE Management Group revised these Rules and Procedures (Annex 3 of this report) and established a drafting group to revise Manual & Guides 81 which describes the procedure to establish new projects, which should be approved by the IODE MG in February 2024.

(iii) The return of the USA to UNESCO, and the UNESCO Executive Board decision to allocate extra financial resources to IOC as well as the IOC Assembly resolution to prioritise IODE, GOOS, CD and regional activities in the allocation of the additional budget. This means that we will have a much better base funding for our OBIS activities. The IOC Assembly also requested the IOC secretary to create a regular programme position for the OBIS data manager, which has been taken up in the proposed staffing (for approval at the UNESCO General Conference, Nov 2023). Meanwhile, this has been approved.

In 2014, the SG-OBIS adopted the strategic plan for OBIS (OBIS business plan) which included the OBIS' vision and mission, objectives, needs assessments, contributions to IOC functions, resource requirements and organizational structure. It is now time to revise this plan taking into account the recent developments.

Ward Appeltans listed the elements in the IODE new rules and procedures that are important for OBIS. See below.

<sup>8</sup> <https://oceanexpert.org/document/32232>

New Rules & Procedures	Impact on OBIS
<p>The terms of reference of a Programme Component, Programme Activity or Project and its Steering Group can only be modified by the parent body and/or IOC Governing body (in the case of IODE this is usually the Assembly).</p>	<p>An updated ToR of OBIS and the SG-OBIS will need to be approved by the IODE Committee.</p>
<p>Steering Groups will elect their own (Co-)Chair(s). A Programme Component, Programme Activity or Project can have one Chair or more than one Co-Chairs.</p>	<p>No impact. OBIS already has two co-chairs.</p>
<p>In IODE Programme Component, Programme Activity or Project Steering Groups decisions are made by consensus. Voting will only be organized if no consensus can be reached.</p>	<p>No impact.</p>
<p>For Projects in which IODE is not the “owner” and such projects already established their own management structure of which IODE is a member, there is no need to establish an IODE Steering Group. The designated IODE representative in the project management structure will regularly report to the parent IODE Programme Component or IODE Programme Activity.</p>	<p>This is important for the many projects in which OBIS is involved. These projects are reported on during the SG-OBIS meetings.</p>
<p>Regular meetings of the Steering Group should be held (at least) once a year. The Co-Chairs can decide, in consultation with the members, to have more than one meeting a year if needed.</p>	<p>No impact. OBIS has annual SG meetings and has organized ad-hoc interim meetings as necessary.</p>
<p>Regular meetings should preferably be organized as in-person meetings but can, if insufficient funds are available (either from IOC/IODE) or through self-funding, can be held online or hybrid.</p>	<p>No impact.</p>

<p>Regular meetings are meetings during which decisions (on work plan implementation, re-allocation of approved budget, elections of Co-Chairs, invitation of new members) can be made (if a quorum of members is present. A quorum is defined as 50% of the membership +1) and for which official reports are published in the IOC Series “Reports of Meetings of Experts and Equivalent Bodies). Ad hoc or informal meetings may be organized at any time. They can be held in-person, hybrid or online. They can also publish reports but these will not have an official character and should be considered as information documents.</p>	<p>No impact.</p>
<p>Members of the Steering Group should be selected based on the expertise they can contribute to realizing the objectives of the Steering Group and objectives of the Project. Membership selection should also take into account both geographic and gender balance.</p>	<p>Conflict. SG-OBIS members are node managers (and alternates) and as such membership does not take into account geographic and gender balance.</p>
<p>The Steering Group can decide to contact individual experts based on their relevant expertise or can publish a call (through direct mailing, web site or other communication methods) to seek new members. The membership will, in addition, include members of the IODE Secretariat as well as, as necessary, other members of the IOC Secretariat.</p>	<p>SG-OBIS could consider inviting external experts.</p>
<p>There are no formal limitations to the number of members of a Project Steering Group, but it is recommended to keep the maximum size to a manageable number (e.g., 20).</p>	<p>Conflict. OBIS currently has 33 OBIS nodes, so in addition to the secretariat has become a large group (almost 70 members).</p>
<p>There are no formal limitations to the duration of membership of IODE Programme Component, Programme Activity or Project Steering Groups. However, members who no longer have the time to participate actively are invited to step down to give room to new members.</p>	<p>Conflict. SG-OBIS members are node managers and for an OBIS node to be active, the node manager has to attend the SG-OBIS meetings. If they step down from the SG it means their OBIS node becomes inactive according to the current criteria on the health status of OBIS nodes.</p>

Support for participation of SG members (and/or (Co-)Chair(s) in in-person meetings of the Group may be provided, depending on availability of funds.	Conflict. The amount of SG members that require support is so high and the budget is never sufficient so it has been difficult to make a selection of who should receive support and who should not (developed vs developing country or active vs inactive members).
(Co-)Chair(s) are elected from the membership of the Steering Group. In exceptional cases one or more Co-Chairs can be invited from outside the Group if they can bring in exceptional expertise or experience or if no other candidates have come forward. In such cases the Steering Group will need to invite them as members first after which he/she/they can be elected (Co-)Chair(s).	No impact
There are no formal requirements in terms of expertise, educational background, experience, other qualifications to guide the election of (Co-)Chair(s). In practice (Co-)Chair(s) are usually elected based on their level of activity in the work of the Steering Group over a period of time, the respect they have gained from the membership of the Group and their professional expertise related to the subject of the Programme Component, Programme Activity or Project. Proficiency in the working language of the group is essential.	No impact
Experience in mobilizing resources is an additional element but not a requirement (all members of the SG are encouraged to assist with resource mobilization).	No impact
In the election of (Co-)Chair(s) geographic and gender balance should be respected.	No impact
Elections of (Co-)Chair(s) can only be held during regular meetings of the Steering Group during which a quorum of the membership is present.	No impact
(Co-)Chair(s) are elected for one inter-sessional period of the Steering Group (regular meeting), with the possibility of re-election for an additional term. In exceptional circumstances Co-Chairs (or one of them)	Conflict. One term of an OBIS co-chair currently consists of 2 inter-sessional periods to be extended with one extra term (so minimum 2 and maximum 4 years).

<p>can be re-elected for a third term. If more than one regular meeting is organized within a calendar year then the term of office will be one year. Exceptions (e.g. further extensions) are possible by a decision of the IODE Committee.</p>	
<p>If, for a large Programme Component, Programme Activity or Project, two Co-Chairs are not considered sufficient, then alternative arrangements may be considered. Such arrangements should be proposed for approval to the IODE Committee.</p>	<p>No impact</p>
<p>(Co-)Chair(s) should inform the Programme Component, Programme Activity or Project Manager and IODE Secretariat of their desire to step down at least 6 months before the expiry of their term of office or next regular meeting of the Steering Group, whichever comes first. This will allow the Programme Component, Programme Activity or Project Manager and IODE Secretariat to start the election procedure for the new (Co-)Chair(s). If one Co-Chair decides to step down and the other(s) decides to remain then only one new Co-Chair needs to be elected. The other Co-Chair(s) can remain in office.</p>	<p>No impact. However, the notice period is quite long and OBIS did not have this before.</p>
<p>When (Co-)Chair(s) step down after one or two terms, they will become Past (Co-)Chair(s) and will be invited to provide guidance to the incoming (Co-) Chair(s) during the first term of the new (Co-) Chairs. This will be a voluntary service to the new (Co-)Chair(s) and the outgoing (Co-)Chairs may decline.</p>	<p>No impact. However, OBIS never dealt with past co-chairs. The terms of the co-chairs should be staggered to ensure continuity.</p>
<p>When (Co-)Chair(s) step down after one or two terms they may remain members of the Steering Group. They should inform the Programme Component, Programme Activity or Project Manager and IODE Secretariat at the time they inform of their decision to step down.</p>	<p>No impact.</p>
<p>Programme Component, Programme Activity or Project without external funding will recruit a volunteer Programme Component, Programme Activity or Project Manager.</p>	<p>Not applicable for OBIS, but has an impact on projects or activities.</p>

<p>Larger funded projects can recruit Programme Component, Programme Activity or Project Managers as UNESCO/IOC consultants or project appointments (the latter when the Programme Component, Programme Activity or Project is funded from extra-budgetary resources). Programme Component, Programme Activity or Project Managers work under the administrative supervision of a UNESCO/IOC staff member. Project Managers are usually recruited for the full duration of the Programme Component, Programme Activity or Project. For long-term Programme Component, Programme Activity or Project continued contractual arrangements will continue as long as funds are available or until the consultant/staff resigns.</p>	<p>No impact.</p>
<p>No task teams or project teams.</p>	<p>Conflict: OBIS has many long-standing Task Teams and short-term project teams. At the last SG meeting we ended a few task teams and created new intersessional working groups.</p> <p>The Rules and Procedures do not mention specific rules for IWGs, but mentions work packages:</p> <p><i>To monitor the development of the adopted work plan, identify any problems and propose remedial action in close consultation with the IODE Secretariat and Steering Group members/work package leads</i></p> <p>Work packages are not mentioned anywhere else in the document.</p> <p>Should OBIS set up Work Packages (to replace long-standing task teams) in addition to short-term IWGs?</p>

<p>New Rules and Procedures</p>	<p>Currently in OBIS</p>
<p>Terms of reference of a IODE Programme Component, Programme Activity or Project Steering Group</p>	<p>Terms of Reference of the SG-OBIS:</p> <ul style="list-style-type: none"> <li>• Advise the IODE Committee on the vision</li> </ul>

<p>The main roles of an IODE Programme Component, Programme Activity or Project Steering Group are to:</p> <p>(i) Propose the vision, strategy, work plan and timetable for the Programme Component, Programme Activity or Project;</p> <p>(ii) Advise on technical aspects of the Programme Component, Programme Activity or Project;</p> <p>(iii) Monitor the development of the adopted work plan, identify any problems and propose remedial action;</p> <p>(iv) Invite additional experts as members of the Group, as needed by the Programme Component, Programme Activity or Project;</p> <p>(v) Report to the IODE Management Group (every year) and IODE Committee (every two years).</p>	<p>and mission for OBIS;</p> <ul style="list-style-type: none"> <li>• Advise the IODE Committee on the strategy for OBIS sustainability and further development;</li> <li>• Define and monitor the OBIS business plan;</li> <li>• Assist the IOC Project Office for OBIS and IODE Committee with seeking funding for the sustained development of OBIS;</li> <li>• Prepare, for submission to the IODE Committee, the work plan for the OBIS community on expanding the dataset and the toolset, on developing new information system products, and on addressing the issues on gaps, that will be implemented and monitored by the IOC Project Office for IODE/OBIS;</li> <li>• Review progress of and guide the implementation of the work plan, taking into account emerging issues;</li> <li>• Identify any technical or scientific issues as relevant to the implementation of the work plan and recommend these, as required, for action to the GE-OBIS through the IODE Committee;</li> <li>• Agree on the sharing of responsibilities between members of the OBIS community;</li> <li>• Manage, and recommend modalities, regarding the OBIS node membership.</li> </ul> <p>In addition to the Steering Group for OBIS an informal Executive Committee was established consisting of members of the Project Office, the Steering Group CoChairs and Chairs of the various intersessional groups. The group was established to support the project office and assist with management of the Project on behalf of the Steering Group. Typical tasks include, addressing issues that arise intersessionally, working with the Project Office to draft documents, monitoring projects and otherwise ensure that the work of the Steering Group progresses.</p>
<p>Terms of reference of the IODE Programme Component, Programme Activity or Project Steering Group (Co-)Chair(s)</p> <p>The role of (Co-)Chair(s) is:</p>	<p>Terms of Reference of OBIS (Co-)Chairs:</p> <ul style="list-style-type: none"> <li>• The (Co-)Chairs of SG-OBIS provide specific, regular input and guidance to the OBIS Secretariat on the management,</li> </ul>



1. To (Co-)Chair sessions of the IODE Programme Component, Programme Activity or Project Steering Group;
2. To monitor the development of the adopted work plan, identify any problems and propose remedial action, in close consultation with the IODE Secretariat and SG members/Work Package leads;
3. To call for meetings of the IODE Programme Component, Programme Activity or Project Steering Group, in close consultation with the Project Manager and/or IODE Secretariat;
4. To assist the Programme Component, Programme Activity or Project Manager and/or IODE Secretariat with the preparation of project reports;
5. To represent the Programme Component, Programme Activity or Project and its Steering Group at meetings and other events;
6. To promote the Programme Component, Programme Activity or Project at meetings and other events;

Notes:

- If they so desire, (Co-)Chair(s) can focus (in addition to the tasks outlined above) on particular elements of the Programme Component, Programme Activity or Project work plan if they have specific expertise in those elements.
- In order to maximize efficiency and coordination it is recommended that Programme Component, Programme Activity or Project Managers, IODE Secretariat and Programme Component, Programme Activity or Project (Co-)Chair(s) communicate regularly.

When participating in external events, (Co-)Chair(s) will not represent their institution or country but always represent the Steering Group.

The (Co-)Chair(s) are not involved in the day-to-day implementation of the Programme Component, Programme Activity or Project which is the remit of the Programme Component, Programme Activity or Project Manager (unless none has been recruited).

science and technology direction for OBIS within the context of the overall global biodiversity science community and should be knowledgeable representatives of that community.

- (Co-)Chairs should expect to dedicate a minimum of 160 hours per year to their duties, including monthly video conferences, one or more representations at IODE management team and Committee meetings, major international conferences or special events on behalf of OBIS, and leadership duties in preparation and execution of annual SG-OBIS meetings.

- (Co-)Chairs positions are not funded by the IODE OBIS Project, and SG-OBIS members seeking nomination are encouraged to obtain full support from their home institutions to cover time and expenses of the role as part of core duties. Travel support may be provided by the IODE OBIS Project when available.

Practical Considerations:

- (Co-)Chairs shall serve a term of 2-years, marked by the 2 annual SG-OBIS meetings following their election. Terms may be renewed up to one time by consensus of the SG-OBIS.
- (Co-)Chairs shall be nominated and elected during the course of each annual SG-OBIS meeting with terms of the 2 co-chair positions staggered as to provide continuity.
- Nominations for (Co-)Chairs shall be accepted from members of the SG-OBIS in good standing as either nomination on behalf of another or self-nominations.

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To assist us with reviewing and aligning our management structure to the new Rules and Procedures, the OBIS EC launched a survey to collect input from the OBIS steering group. 21 OBIS nodes responded to the survey. The results are available here<sup>9</sup>, and a summary is provided in annex 1 to this report.

## Proposed OBIS Structure

The EC-OBIS meeting spent a considerable amount of time in reviewing the survey results, analyzing the new IODE rules and procedures, which was followed by brainstorming sessions on a new OBIS management structure. The EC-OBIS membership also started drafting revised Terms of References for the OBIS steering group, co-chairs and OBIS nodes. This is a work in progress and a working document will be presented at the SG-OBIS meeting for approval.

## 4. OBIS Communication Plan

An outreach and communication strategy for OBIS is essential for effectively sharing information, engaging with stakeholders, and promoting the programme's goals and achievements. The SG-OBIS tasked an intersessional working group to develop a new OBIS Outreach and Communication Plan. During the EC-OBIS meeting, we started creating a draft which will be further developed with feedback from the SG.

The (draft) OBIS communication plan has the following components, designated with high, medium, or low priorities. Priorities may change over time as tasks are developed and completed.

**Clear Objectives and Goals (high):** Define the specific objectives and goals of OBIS's outreach and communication efforts. What do we want to achieve, and how will we measure success?

**Target Audience Identification (medium):** Identify our target audiences, including scientists, policymakers, students, the general public, or specific demographics. Tailor our messages and methods to each group.

- Marine scientists, academics and researchers
- Policymakers, inter-governmental and government agencies
- Educators (e.g. universities and schools) and students
- NGOs and conservation organisations

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<sup>9</sup> <https://docs.google.com/forms/d/1r7QsSII9fgDVNHf18lfqfpXmToPhdrdhB965oKe-U9Y/viewanalytics>

- General public interested in marine science
- Donors
- Private sector
- OBIS Community (internal)

**Key Messages (high):** Develop clear and concise key messages that highlight the importance and impact of OBIS. These messages should be easy to understand and resonate with our target audiences.

- OBIS is a vital resource for accessing marine biodiversity data.
- Join a global community and publish your marine biodiversity data with OBIS.
- OBIS Marine biodiversity information contributes to better understanding and conservation of the ocean.
- OBIS is the world leader in marine biodiversity information sharing.
- OBIS is a close-knit community of practice composed of supportive marine experts. For example:
  - Scientists (biologists, geographers, geneticists, chemists, physicists, etc.)
  - Data experts
  - Oceanographers
  - Taxonomists
  - Maritime Historians
- UNESCO-OBIS informs and supports marine policy making.
  - For example: marine spatial planning, environmental impact assessment
- OBIS offers so much more than just occurrence data
  - DNA, measurements, event records, historical and archaeological records

**Communication Channels (medium):** Determine the most effective communication channels for reaching our target audiences.

- Website: Maintain a user-friendly website as a central hub for OBIS information, data access, and updates.
- Social Media: Active presence on platforms like Twitter, Facebook, YouTube, and LinkedIn to share news, data, and engage with the community.
- Newsletters: Regularly distribute newsletters to subscribers with updates and featured datasets.
- Media Releases: press releases, media coverage, etc.
- Scientific Journals: Publish articles and papers highlighting OBIS contributions.
- Conferences: Host and participate in relevant events to showcase OBIS's work.
- Workshops: Host and participate in relevant workshops
- Online Webinars: Organise webinars for scientists and educators.
- Public Outreach via personal interactions: Participate in science festivals and public events to engage with a broader audience
- Outreach with digital resources: produce, use, and distribute OBIS digital resources
- Educational Institutions: produce materials to showcase OBIS to be used by educators

**Content Creation (medium):** Create a content plan that includes articles, videos, infographics, and other materials to effectively convey your program's findings, research, and achievements.

- Develop a shared workspace for co-creating communication material such as articles, videos, infographics, and data highlights.
- Showcase real-world applications (products?) or use cases of OBIS data.
- Collaborate with scientists to create compelling case studies.
- Produce educational resources for students and educators.
- Develop branding guidelines

**Website and Online Presence (high):** Maintain an informative and user-friendly website that serves as a hub for all program-related information. Ensure the website is regularly updated and optimised for search engines.

- Keep the OBIS website structure and content up-to-date.
- Ensure easy access to data, news, and educational resources, etc.
- Ensure messages are easily understood by target audiences
- Optimise website for search engine visibility.
- Maintain statistics updates, e.g., number of records, species, datasets, nodes, etc.
- Regularly monitor analytic information, i.e., website traffic.
- Ensure outreach and branding materials are easily accessible

**Social Media Engagement (medium):** Establish and maintain a presence on social media platforms. Use social media to share updates, engage with your community, and foster discussions about your program.

- Share regular updates, datasets, and marine science facts.
- Use visuals, videos, and infographics to make content engaging.
- Respond to comments and engage in conversations.
- Encourage the use of keywords where useful: obis, ocean biodiversity, ocean decade, training, etc.
- Use the following hashtag: #OBIS and tag OBIS in posts (@OBISnetwork)
- Leverage international ocean related events for social media outreach: World Ocean Day (WOD), World Environment Day (WED), World Mangrove Day, etc
  - Ensure all acronyms used are clearly defined.

**Media Relations (low):** Develop relationships with science journalists and media outlets to help disseminate programme news and research findings from the OBIS community. Prepare press releases and media kits for major announcements.

- Maintain contacts with journalists and media outlets with a marine focus.
- Prepare press releases for relevant OBIS data releases or OBIS research findings.

- Create templates that can be used by OBIS community members engaging with the media/press.

**Events and Workshops (medium):** Host or participate in events, workshops, and webinars to share knowledge, and foster collaborations.

- Organise in-person and online workshops for researchers on data submission and usage.
- Participate in international marine science conferences and expos.
- Host webinars and online workshops.

**Partnerships and Collaborations (low):** Collaborate with other organisations, institutions, or science programs that share similar goals.

- Collaborate with marine research organisations and institutions.
- Collaborate with communications officers of community institutions
- Partner with government agencies, NGOs and research institutes for data sharing and conservation initiatives.

**Internal Communication (high):**

- Develop a plan to keep OBIS nodes and partners regularly connected and in communication with each other
- Develop a way for OBIS nodes and partners to report on activities and make those visible via OBIS.
- Facilitate joint meetings that encourage knowledge sharing and development of joint, regional events (e.g. data and product coordination meetings, hackathons, training events)

**Evaluation and Feedback (medium):** Establish metrics and key performance indicators to assess the effectiveness of outreach and communication efforts.

- Regularly assess website analytics and social media metrics.
- Collect and collate feedback from users and stakeholders to improve data access and user experience.

**Risk Mitigation Plan (low):** Develop a plan for addressing potential crises, such as controversial findings or negative public perceptions.

- Develop a plan for addressing any data-related, public facing, or sensitive material controversies or issues transparently and professionally.

**Budget and Resource Allocation (high):**

- Allocate available resources, including budget, staff, and time, for effective outreach and communication.

**Training and Capacity Building (low):** Ensure that the team and network members are well-equipped with the necessary skills and knowledge for effective communication and outreach activities.

- Train OBIS staff and node managers in effective science communication and outreach techniques by established Communication Officers within the OBIS community.

**Regular Updates and Maintenance (low):**

- Keep communication strategy dynamic and adaptable. Regularly review and update approach based on feedback and changing circumstances.

**Ethics and Responsible Communication (high):**

- Ensure public communication from OBIS is scientifically accurate and ethical
- Avoid sensationalism and communicate scientific uncertainty when necessary.
- Maintain ethical and transparent communication guidelines, especially in data handling and sharing.
- Ensure data disclaimers are visible where applicable

**The EC-OBIS discussed the draft communication plan and is pleased to present this at the next SG-OBIS meeting.**

## 5. OBIS Data policy

Mr Ward Appeltans reported that the IOC Assembly adopted a new IOC Data Policy and Terms of Use (IOC Decision A-32/4.4, 2023) and requested that IOC programmes, projects as well as other communities of practice should develop and/or apply, where applicable, detailed metadata, data and products sharing guidelines that are consistent with this new policy.

The OBIS guidelines on the sharing and use of data in OBIS was agreed at SG-OBIS-IV (Feb 2015) and adopted at IODE-XXIII (March 2015) and was based on the principles of the previous IOC data exchange policy.

The SG-OBIS-11 (May 2023) decided to set up an IWG Data Policy to fulfil this task before the next SG meeting and suggested combining this task with the IWG OBIS-Structure.

The EC-OBIS started developing a first draft and will continue on to work on a draft and consultation process with the SG, in order to present a working document at the next SG meeting.

## 6.SG-OBIS-12

Unfortunately we did not have enough time to cover this agenda item, and will take this on through online correspondence.

## 7.OBIS work plan 2024-2025

As a follow-up to the revised IOC budget for the biennium 2024-2025, the restructuring of IODE at IODE-27 and the IODE QMF, all former IODE projects were requested to submit a revised work plan and budget for 2024, by 30 November 2023. The EC-OBIS proposed the following work plan and budget and organized two information sessions for OBIS nodes to get their input and endorsement. We received positive feedback and the following has been submitted to the IODE MG.

Does a Steering Group exist?: YES

Membership of the Steering Group: <https://oceanexpert.org/group/230>

Steering Group Leads (Co)-Chair(s):

- Martha Patricia Vides C. martha.vides@invemar.org.co
- Katherine Tattersall, katherine.tattersall@csiro.au

Is there a "Project" Manager (IODE staff or Consultant): YES (IODE staff)

Name and email: Ward Appeltans, w.appeltans@unesco.org

Note: We would like to hire a part-time OBIS community engagement officer who will support the project manager with the various OBIS Coordination Group activities and establishment of partnerships. This position could possibly be combined with a new IODE Communication Officer position.

Objectives of the Programme Component:

- Provide world's largest scientific knowledge base on the diversity, distribution and abundance of all marine organisms in an integrated and standardized format (as a contribution to Aichi biodiversity target 19)

- Facilitate the integration of biogeographic information with physical and chemical environmental data, to facilitate climate change studies
- Contribute to a concerted global approach to marine biodiversity and ecosystem monitoring, through guidelines on standards and best practices, including globally agreed Essential Ocean Variables, observing plans, and indicators in collaboration with other IOC programs
- Support the assessment of the state of marine biological diversity to better inform policy makers, and respond to the needs of regional and global processes such as the UN World Ocean Assessment (WOA) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)
- Provide data, information and tools to support the identification of biologically important marine and coastal habitats for the development of marine spatial plans and other area-based management plans (e.g. for the identification of Ecologically or Biologically Significant marine Areas (EBSAs) under the Convention on Biological Diversity.
- Increase the institutional and professional capacity in marine biodiversity and ecosystem data collection, management, analysis and reporting tools, as part of IOC's Ocean Teacher Global Academy (OTGA)
- Provide information and guidance on the use of biodiversity data for education and research and provide state of the art services to society including decision makers
- Provide a global platform for international collaboration between national and regional marine biodiversity and ecosystem monitoring programmes, enhancing Member States and global contributions to inter alia, the Global Ocean Observing System (GOOS) and the Global Earth Observing System of Systems (GEOSS)

Vision statement of the Programme Component (what is the long-term target state to which the programme component is developing):

VISION: To be the most comprehensive gateway to the world's ocean biodiversity and biogeographic data and information required to address pressing coastal and world ocean concerns.

MISSION: 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.

Work plan and budget for 2024 detailing all planned actions with milestones and required funding. If known, included timing of the action (e.g. a meeting).

Activity		2024	2025	2026	2027
Meetings (travel & subsistence)	SG-OBIS meeting 25-29 March 2024, South Korea, in person	15000			
	SG-OBIS meeting ?March? 2025, Colombia, back-to-back with IODE Committee meeting, in person		15000		



	SG-OBIS meeting 2026, TBD			15000	
	SG-OBIS meeting 2027, TBD				15000
	OBIS conference, bi-annually, in person, back-to-back with another major conference (e.g., IODC-3, WCMB 2026 in Ostend)		40000	40000	
	EC-OBIS meetings, quarterly, online	0	0	0	0
	OBIS Data Coordination Group meetings, monthly, online	0	0	0	0
	OBIS Product Coordination Group meetings, monthly, online	0	0	0	0
	OBIS Nodes Coordination Group meetings, quarterly, online	0	0	0	0
	OBIS coordination group workshops (data & products), time and place TBD, in person	20000	20000	20000	20000
	IODE MG meetings (e.g. 5-7 February 2024, Ostend, Belgium, in person), in-kind co-chairs	0	0	0	0
	GBIF/OBIS meetings (e.g. 8-9 February 2024, Ostend, Belgium in person)	0	0	0	0
Staffing	Part-time consultant, community engagement officer, to assist the various OBIS Coordination Groups and partnerships	30000	30000	30000	30000
	Other OBIS staff (currently 6) covered by RP and XB projects	0	0	0	0
Technical infrastructure	OBIS website and portal developments. Covered by additional RP position	0	0	0	0
	Cloud, software and hardware	15000	20000	25000	30000
Capacity Development	OBIS training courses in collaboration with OTGA. Covered by XB funding (NORAD, FUST)	0	0	0	0
Communication and Outreach	OBIS branding material development and distribution	5000	5000	5000	5000
		<b>85000</b>	<b>130000</b>	<b>135000</b>	<b>100000</b>

Have any extra-budgetary funds been identified and will they be available to co-fund the 2024 actions (explain):

- In-kind contributions from OBIS nodes network are estimated to be around 1 million USD annually + about 50 FTE in staffing.
- The OBIS Secretariat is involved in several extra-budgetary projects (table below) and raised almost 5 million US\$ in recent years.

Project	Source	Budget (US\$)	Duration
PacMAN	Flanders	856,620	13/03/2020 to 30/06/2024
eDNA exp.	Flanders	890,649	08/12/2021 to 30/06/2024
MARCO-BOLO	EU	733,735	01/12/2022 to 30/11/2026
MPA Europe	EU	612,909	01/01/2023 to 30/04/2026
eDNAquaPlan	EU	192,808	01/09/2023 to 31/08/2026
DTO-BioFlow	EU	421,819	01/09/2023 to 28/02/2027
BioEcoOcean	EU	901,750	01/02/2024 to 31/01/2028
AtlantECO	EU	55,000	01/09/2020 to 31/08/2024
OBIS training	LifeWatch	21,000	01/09/2023 to 31/01/2024
OBIS training	Norway	66,000	01/01/2023 to 31/12/2023
EMODNET	VLIZ	100,000	2018-2023
		<b>4,852,290</b>	

These extra-budgetary projects are essential in reinforcing OBIS’s role as a global leader in marine biodiversity data management by increasing capacity through training and tutorials, development of resources such as tools and manuals and by providing enhanced data flow, data access and standardization to support the creation of relevant marine information products.

An example is the development of models that use OBIS data to support the identification of priority areas to protect, including predictions for future climate change scenarios. A strong focus in several projects is the establishment of data workflows and streamlining protocols for biodiversity monitoring using environmental DNA. These projects allowed OBIS to develop the capacity and be one of the world leading data systems for this type of data.

However, the UNESCO regular program funding remains crucial for OBIS as it serves as the backbone for system development, technical maintenance, and global community engagement. It facilitates the solicitation of input and promotes the transfer and adoption of practices and know-how within the global community.

What plans/perspectives do you have to mobilize funding in 2024:

A concept note for funding from NORAD was submitted, called *OBIS “Propagules program” – training a new generation of OBIS users*. The requested budget is 100,000 USD.

We expect to submit at least one proposal to the next phase of FUST/Flanders. Currently no additional EU project proposals are in the pipeline.

Provisional work plan and budget for 2025-2027 detailing proposed actions with timing, milestones and required funding (this will be a first draft):

See workplan and budget table above.

Have any extra-budgetary funds been identified and will they be available to co-fund the 2025-2027 actions (explain):

Several of the extra-budgetary projects that involve OBIS continue into 2025-2027.

What plans/perspectives do you have to mobilize funding in 2025-2027:

No concrete plans yet, but we hope to have another FUST/Flanders funded project that will extend into 2025-2027.

# Annex 1. Survey results

## Results regarding ToR of OBIS nodes

There was no consensus on the following items:

- Contribute to the development of open-source tools in OBIS
  - disagreed: Caribbean OBIS
  - Strongly disagreed: OBIS Colombia.
- Provide indicators on up-time, responsiveness, and data processed by nodes and present a report to SG-OBIS
  - Disagreed: OBIS Colombia, EurOBIS
- Engage in stakeholder groups:
  - Disagreed: OBIS Colombia
- OBIS node health status check:
  - Leave the process as is (15)
  - Let the OBIS node decide (2, PEGO-OBIS, Arctic OBIS)
  - Keep process but change the conditions (4: OBIS-SEAMAP, OBIS Colombia, OPI-OBIS, EurOBIS)

QUESTION: Do you have OBIS node related tasks that were not listed, but should be added to the Terms of Reference?

- Outreach and awareness - advertising OBIS to prospective users and providers.
- Liaison with national GBIF nodes
- In general I suggest that Nodes could report to OBIS secretariat, Working groups or Task Teams about specific activities or news related to events, products, issues, meetings, initiatives that the node is doing. This could build bridges among nodes to strengthen efforts for the same purpose.
- Engaging with relevant UN-decade projects such as Challenger in deep-sea node case and other international (or national) projects and initiative endorsed by the UN decade
- Participation in project and task teams responsibilities.
- Not that I can think of immediately. Some nodes do pick up extra tasks (e.g. in the different working groups) and these should also be fully recognized and clearly visible in outreach and communication. Ideally, nodes have opportunities to (regularly) consult with all their providers, to ensure a higher quality data flow. This could be done through

node-based (regional) training, but might not be possible due to lack of funding. All training should take place at the source of the data, thus with the data providers, recognizing that this is a flexible pool of people. OBIS needs to work from a bottom-up approach: no providers means no nodes, which also means no OBIS. In the ToR, a section could be added where nodes are motivated - under the support of OBIS - to collaborate with relevant GBIF nodes.

QUESTION: Within IODE, OBIS nodes are either NODCs or Associate Data Units (ADUs). Is this a good model (explain)?

- Not sure... I think that a greater degree of clarity is needed for understanding the differences, and many may be a bit confused about the roles.
- Yes, because this is a reason to ask from colleagues to give us access to their data and also provides us support as we belong to a community with common ideas and training
- The IODE status (in our case ADU) has no day-to-day impact on our activities as an OBIS node.
- Confusing
- Yes I prefer NODCs due to its official commitments to share reliable occ/env data
- It generally is an acceptable model. There is a degree of confusion for non NODCs about where and how to participate that may be mostly my own trouble, but the community provides a strong peer group to build quality processes and services around.
- Yes, it's a good model. NODCs can house a diverse range of marine data, for example physical, chemical, biodiversity data. For an OBIS node to be an NODC, it may become responsible for publishing a broader range of data types (not always the case). An ADU designation allows for marine biodiversity domain specialization.
- Yes, the current model allows OBIS nodes to build strategic relations regionally which then feed into the IODE community.
- NODCs and ADUs for OBIS nodes provide a good model. Various advantages for each nodes e.g. capacity building and technical support
- If OBIS is an IODE project/program I think it should follow the IODE organization structure so that it can cover data management needs, for example. At the moment I can't see restrictions that could hold Nodes to evolve while being an NODC or ADU; maybe some financial strategies could be limited, like for example applying for some specific type of funds? I'm not sure.
- Yes
- Cannot tell
- I think so, I am not sure what other models are available or could be replaced? Can this be discussed in the next OBIS meeting in Korea?
- There is no real interaction between the node and other ADUs/NODCs in the country. There are no clear partnership mechanisms.
- Yes, it is for those that cannot be fully fledged to become ADU's
- Yes. The NODCs are a logical principal unit for a country and extend a strong history of NODCs leading ocean science in various countries. Bureaucracy and independent

development can limit the ability of an NODC to interact with all efforts, institutions, and data. The ADUs provide flexibility to fill gaps and extend needs that are unable to be met through an NODC.

- I think so

QUESTION: Do you want to continue running an OBIS node, or do you think it would be better to become solely a data publisher without the extra responsibilities?

- As a "sub-node" I am directly supported by the parent node, but I imagine it would be difficult to take on complete responsibility for running an IPT and associated tasks. Data quality checking and formatting are already a serious undertaking in my free time.
- Continue running an OBIS node
- Continue. Being an OBIS Node brings additional authority and legitimacy to our role and remit.
- We will run OBIS-SEAMAP for many years to come.
- Become an OBIS NODE
- I am very proud to be an OBIS node, and having been a publisher under OBIS Canada before, see greater benefit in being a full node.
- We are very happy to continue being an OBIS node, with associated responsibilities
- AfrOBIS would like to continue running as an OBIS node in accordance with all the TORs of OBIS
- Prefer running an OBIS nodes
- I would like to continue running an OBIS node but with exclusive personnel in charge of data publishing.
- We would like to continue as an Indian OBIS node.
- Yes
- I would like to continue to be the OBIS node
- Yes, our intention is to remain an OBIS node; in our country structure it is necessary, however, the scales of responsibilities (Tier) must be considered according to the capabilities in the new structure.
- Yes, I would like to continue as a node because it's also important for the region.
- Keeping things as they are
- Continuation as an OBIS node, but recognising that a node might have responsibilities that deviate from the general OBIS terms of reference, depending on the funding resources for each node.
- A very interesting question, what does becoming solely a data publisher imply?
- We strongly desire to continue running an OBIS node.
- For the case of Indonesia, there is no specific institutional support for an OBIS node. What I meant by "support" here is allocation of resources for running an OBIS node. Therefore, it is difficult for me to continue running OBIS node personally
- This is a complicated organizational question that can not be answered in a survey like this

QUESTION: What are your main challenges in running the OBIS node?

- Finding time, keeping abreast of necessary and valuable updates and developments, ensuring data providers are kept aware and interested.
- Personnel
- Not specific to OBIS, but retention of technical staff is challenging. Having sufficient ring-fenced capacity to participate in OBIS activities and groups when it is essentially an unfunded activity.
- We still share only the Darwin Core. It will be an extremely huge, difficult task to make OBIS-SEAMAP data available in ENV-DATA (MeasurementOrFacts extension). We know there are marine mammal, seabird, sea turtle data in OBIS / GBIF that OBIS-SEAMAP does not have. We haven't figured out how to deal with this gap.
- Publishing national database which need correspondence authority
- Being a thematic node and interfacing with national nodes who want to publish the data I work with on their own side and in their own ways. It's so far something that I can overcome with collaborations, recommendations and charm, as I'm not even certain of the idea that thematic data should necessarily move away from national nodes all of the time.
- 1. Disparity in publishing formats of marine biodiversity data in Australia (before transforming at OBIS-AU) 2. Identification of potential duplication of datasets, both when we receive data for publication and when data is published by other data aggregators (e.g. GBIF) 3. Finding time alongside our other work to contribute to working groups (e.g. would have liked to join data quality and vocab working groups, but can't allocate the time required) 4. Socialising OBIS as the go-to place for publishing marine biodiversity data (need to engage in this conversation further)
- War
- The sharing of biodiversity datasets across the region is still problematic but we are working with stakeholders to mobilise these activities
- Consistent updates on marine biodiversity data mobilization
- Lack of personnel for doing all the tasks. The lack of exclusive dedication to some time consuming tasks like data formatting, quality control and publishing. An OBIS node should be made up of more than one person or representative with different roles within the Node responsibilities. Unfortunately the OBIS tasks might not always be a priority for our team because sometimes working on someone else's dataset to make it suitable for publishing in OBIS ends up being an additional task and not part of the day-to-day tasks. No additional incomes are coming with that extra task for contributing data for OBIS. So, data providers should be trained to publish their data on their own and Nodes just provide outreach and capacity building support.
- The most significant challenge we face is convincing data providers to share their data and actively engaging them in collaborative efforts.
- Time
- lack of staff and available funding to hire more people to get involved and support me to run this task.

- "Competition with GBIF membership/ documentation in OBIS; compliance only. Policy challenges to publish in GBIF and not in OBIS. Disadvantage in terms of resources, capabilities, personnel, training, among others".
- The team identified to work in the node have been shifting continuously to other assignments. The team would need training.
- Capacity to train providers to receive good quality data, as well as keeping everyone motivated on this, in link with the recognition that OBIS is there to support the nodes. The support from OBIS to the nodes sometimes seems missing. It would possibly help if the secretariat sends out short updates more regularly. This can be simple, short email messages, and does not need to be a newsletter.
- Being an active member of the project and task teams, which are beneficial for my work but take up more time than able to invest.
- Finding resources and funding for staffing.
- No institutional support
- As the Arctic Node, the majority of data of the Arctic states comes from other sources, primarily national nodes. While CAFF provides an important service when data publishers can't publish elsewhere this means that we differ quite a bit from other nodes.

QUESTION: List any issues which you encounter as an OBIS node that require support from the OBIS network (other OBIS nodes, OBIS working groups and/or the secretariat).

- I want a lot of money to pay me for my work. But seriously, there are some concerns about the personal costs involved as support is limited.
- tools and training material
- Improved, consistent documentation. (This has got much better in recent months though)
- NA
- I think public awareness on a national level both for managers, politicians and local people is important to convince national authority in publishing data. I recommend the IOC allocate a separate budget for a national OBIS training course, in my opinion with 10000 Euro annually we can organise up to 8 national and regional training courses.
- Harmonizing my data to the general shape of the main OBIS corpus, technical advice and support, partnerships to deliver training, a sense of how to better serve the whole.
- Support from working groups - e.g. data quality, vocabularies
- Data management training in the region
- Not an issue but continuous regular technical support and updates
- Outreach and Capacity building resources (a more informative and up to date website)
- Data type expert
- Fix dropped record: e. g. Caribbean Node has ~ 4000 dropped records. No time or personnel to fix this. We might know how to fix it but we don't have the Human Resources to dedicate exclusively to this.
- Surveys creation to follow up on needs
- Search for funds for data mobilization and training.



- Addressing technical issues related to data management, database infrastructure, and software development can be complex. Collaboration with other OBIS nodes and working groups can provide valuable technical expertise and solutions.
- none
- I have always got the support by the OBIS secretary when needed, no issues so far.
- Automatization, strengthening nodes on basis tasks
- Training, data collation workshop support
- Stressing to all nodes that quality control is key in keeping a high quality and credibility of the OBIS network. Particular attention to taxonomic quality control. Too often, we're still seeing names unmatched that are either exactly in WoRMS, or where a match could easily be established. Bottom line: we do not seem to see progress on OBIS nodes taking full responsibility on this topic (some exceptions do apply).
- Creation of prepublication QC tools to ensure quality of data and that it aligns to the community standard
- Technical support and education. There are no acute needs, but I routinely depend on the network for these two elements of our work.

QUESTION: Is your OBIS node part of funded (local) projects? If yes, please list them and mention the role you have in the project.

- No
- DASSH - UK Archive for Marine Species and Habitats Data, MARCO-BOLO, DTOBioFlow
- No
- For a limited time it was, and I was project manager granted by Iran Oceanography, INIOAS,
- We have a few proposals that will depend on the output from our OBIS node to feed external data consumers and we benefit from this affiliation and the data system we are part of when describing what we can deliver.
- CSIRO National Collections and Marine Infrastructure Information and Data Centre (host organisation and staff salaries) - data manager, software and data engineer, team leader
- No
- Yes, biodiversity data mobilization in ASEAN e.g. marine and aquatic data
- Our OBIS node is part of ongoing research projects of CMLRE under Marine Living Resources(MLR) Monitoring programme with a long term vision. Here is one of the projects we are involved in for the period 2022-2026. Project names: (1) Biodiversity and Ecology (BE): Rapid biodiversity assessment employing eDNA metabarcoding and genomics approaches, Mapping of biodiversity hotspots and species assemblage patterns in Andaman and Nicobar region and Lakshadweep Islands, Augmenting data to OBIS.
- NA
- No

- Associated with the institution and several projects from various sources. Associated researcher . Liaison and technical support
- Not funded by projects
- EurOBIS is the backbone for the EMODnet Biology project. All data gathered within EMODnet biology are being made available within the EurOBIS database, from which data flow to OBIS and GBIF.
- no
- Not that I'm aware of, however as a new node manager I'm still grasping all the parts of what we do.
- I have tried to develop a project to support OBIS, but no success.
- We do not have specific funding for our activities as an OBIS note

QUESTION: If you answered keep the process (health status check), but change the conditions, please provide suggestions here:

- My only concern here is that certain nodes are understandably in very difficult situations, and the SG should allow a clear level of discretion (e.g. Black Sea node). The process works well as far as I can see.
- OBIS-SEAMAP is a thematic node and does not fully understand how a national node is maintained (who was chosen as a manager and why? How widely is the national node recognized in their science community?) but I think most of the node managers have their own businesses and can hardly find time to work on their nodes. So, OBIS should provide more help. For example, for #3 & 4 (and maybe #5), if they don't have an IPT, OBIS should provide it. I believe OBIS has the capacity to do that now. The most important role of the node managers is to find contributors nation-wide and request them to share their data. OBIS could promote / encourage it more (e.g. provide more appealing "advertisement", streamlined data sharing / collecting / organizing apps etc). And for some contributors, it could be a low priority to share their data. Even if the node managers reached out to them, it would take a long time to get their data (e.g. they have to finish their job and publish a journal article, first).
- In that sense, #6 could change to "The OBIS node has not provided a new list of data contributors for the last 2 years".
- As for #2, I guess the SG meetings should continue to be held online. I believe more people can attend online (as I do).
- I'm doubting between option 2 & 3. Might need some more thought and group discussion?
- "remove point 3
- add "(without any explanation)" to all the points

## Regarding the ToR of the SG-OBIS

No consensus was reached on the following tasks:

- Define and monitor the OBIS business plan
  - Disagree: OBIS Colombia, Arctic OBIS, HAB OBIS
- Assist the IOC Project Office for IODE/OBIS and IODE Committee with seeking funding for the sustained development of OBIS
  - Disagree: HAB OBIS, EurOBIS
- Prepare, for submission to the IODE Committee, the work plan for the OBIS community on expanding the dataset and the toolset, on developing new information system products, and on addressing the issues on gaps, that will be implemented and monitored by the IOC Project Office for IODE/OBIS
  - Strongly disagree: HAB OBIS
- Review progress of and guide the implementation of the work plan, taking into account emerging issues
  - Strongly disagree: HAB OBIS
- Identify any technical or scientific issues as relevant to the implementation of the work plan and recommend these, as required, for action to a task team or intersessional working group through the IODE Committee
  - Disagree: OBIS Colombia
  - Strongly disagree: HAB OBIS
- Agree on the sharing of responsibilities between members of the OBIS community
  - Disagree: OBIS Colombia
- Manage, and recommend criteria, regarding the OBIS Node membership;
  - Disagree: OBIS Colombia, OBIS HAB
- The Steering Group will designate its own Chair, define rules and responsibilities of Nodes, and develop objective criteria for evaluation of membership. IODE Co-Chairs will be invited to attend the meetings.
  - Strongly disagree: Caribbean OBIS

QUESTION: Are there any SG-OBIS tasks missing and/or please explain if you disagree on any of the above items. Clarify if you want to change anything with regards to the ToR of the OBIS steering group.

- SG should introduce any codicils to any rules where exceptional circumstances may arise (eg. Node is unresponsive due to factors outside their control). Such exceptions should be closely monitored and expire if necessary.
- no
- [OBISSEAP]I rated 4 for "seeking funding for the sustained development of OBIS" because it is unclear what "the sustained development of OBIS" means. Yes, it's important to advance OBIS itself but also OBIS should dedicate more financial help to OBIS nodes. Again, I don't know how national node managers work (is it fully paid or almost like a volunteer work) but there should be an opportunity to fund national nodes to collect more data, QA/QC the collected data, travel etc.
- I recommend the OBIS NODES prepare an annual reports on their national capacity building activities
- No
- Maintain transparency, open communication, and collaboration within the group to reach a consensus and make any necessary adjustments to the tasks and ToR
- [CAROBIS] "I don't completely agree with ""expanding the toolset, or developing new information system products..."" this needs to be assigned to a more specific working group or personnel within the OBIS team and not as a broad responsibility for the OBIS SG. Maybe be assigned to the OBIS secretariat with the respective personnel.
- [CAROBIS] Regarding the outreach and capacity building strategy, I would like to propose a more regional focused framework, by building training support among nodes. Building CD networking among nodes from the same region (e. g. Caribbean and Latin-American Nodes). This can result in better support for data providers, end-users and for the node itself. To implement this new working approach it is recommended to:
  - 1) Define regional teams : more than one node that decides to work together, organizing their regional meetings.
  - 2) Coordinate quarterly meetings: discussion on the results of regional working meetings
  - 3) The quarterly meetings should give feedback to evaluate a master action plan implementation.
- [CAROBIS] Working together toward what we want to accomplish? Common purposes for all the Nodes:
  - Building data-providers connections
  - Data mobilization, e g. projects, libraries.
  - Support within each node: training and adding new data managers, e. g. interns, students, professors.
  - Best quality of the data as possible
  - All these are led by the Capacity Building team or CD working group for OBIS, with a specific budget for this purpose. A data mobilization work plan for a specific region could include all these with a budget to hire personnel for covering all the tasks."
- NA
- The system is complex and may challenge some members in asking a lot as all pro-bono work. Separate clearly what does need outside input and what is secretariat tasks.

- None

## Review the vision, mission and objectives of OBIS

There was consensus on the vision and mission

However, no consensus on the objectives

- O1: Provide world's largest scientific knowledge base on the diversity, distribution and abundance of all marine organisms in an integrated and standardized format (as a contribution to Aichi biodiversity target 19)
  - Disagree: Caribbean OBIS
- O7: Provide information and guidance on the use of biodiversity data for education and research and provide state of the art services to society including decision makers
  - Disagree: OBIS Colombia
- O8: Provide a global platform for international collaboration between national and regional marine biodiversity and ecosystem monitoring programmes, enhancing Member States and global contributions to inter alia, the Global Ocean Observing System (GOOS) and the Global Earth Observing System of Systems (GEOSS)
  - Disagree: OBIS Colombia

QUESTION: If you do not agree with the vision or mission, please explain and make a suggestion.

- Mission - the reference to "scientific communities" is overly specific and could exclude some stakeholders. Remove the word "scientific" or replace with "key communities" or "stakeholders"
- Some of the items on this page sound too ambitious. If you want to deeply dive into the scientific realm, you will have to hire world-renowned researchers. I think providing reliable data platforms & tools and doing public outreach are more important than building a knowledge base (a collection of data itself is not knowledge base), which researchers who use OBIS data should do.
- Both the vision and mission: why does it have both biodiversity and biogeographic in it?
- To be the most comprehensive gateway to the world's ocean biodiversity and biogeographic data and information required to address pressing coastal and world ocean concerns." I don't think we should commit to delivering some kind of data interpretation or products (I would delete "...information required to address pressing coastal and world ocean concerns."). OBIS should be just good data quality and use cases but not give OBIS the tasks of developing products.

- I would rather say: To be the most comprehensive gateway to the world's ocean biodiversity and (bio)geographic data and information required to address world ocean concerns from shallow to deep sea.

QUESTION: If you do not agree on the objectives or think the list is incomplete, please explain and make suggestions.

- Aim to include disciplines beyond pure sciences (humanities, social sciences, etc) but without compromising the integrity of data.
- Objective 3. Products such as the data cubes from GBIF would be required to answer these questions in the marine space if OBIS is going to be the go-to place for marine biodiversity data (don't want to spend time going through hoops) - perhaps a contribution to the Products IWG. Objective 4. OBIS is the endorsed org. to deal with BNJs. Objective 8. Yes we should, but we don't understand how this information flows to GOOS and GEOSS, or how they use OBIS as a platform.
- [CAROBIS] I think some Objectives are very ambitious, like for example "Provide world's largest scientific knowledge base on the diversity, distribution and abundance of all marine organisms in an integrated and standardized format (as a contribution to Aichi biodiversity target 19)". At the moment we should stay very focused in providing high quality data and guidance on how to use the data, while providing training on marine biological data standards, formats and best practices (in the data management context).
- NA
- good but very comprehensive objectives. Maybe it is worthwhile to focus on core tasks and the specific niche for OBIS rather than attempting to do everything and be everywhere?
- [Colombia] The objectives are ideal, but there is a lack of technical and financial capacity to achieve them.
- [OBIS Japan] "O1: TARGET 21 in Kunming-Montreal Global Biodiversity Framework is also a match for the objective. TARGET 21 Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, 14 in accordance with national legislation.
- [OBIS Japan] O8: Contributions to BBNJ CHM becomes more important for OBIS.

QUESTION: If OBIS should focus on 3 things in the next 5 years, what should that be?

- Growth, mutual collaboration, expansion into new areas.
- Free, FAIR and open access marine data

- A sustainable core team, support to the nodes, clarity over 'publish once, harvest many times'.
- Continuing to encourage world researchers to share their data and advertise that OBIS is the way to go (other than sharing through their own web site or other repositories) and help OBIS nodes expedite the data collection workflow.
- 1-National capacity building through the OBIS NODES, 2- adding a new taxon search method to OBIS databases based on marine organisms life forms (e.x. benthic, pelagic, nekton and plankton groups). This will help other stakeholders interested to model climate change effects on marine biodiversity groups. However the second one is a big task.
- 1. Improved data quality 2. Strengthening the Steering Group and increasing intersessional engagement 3. Proving and adopting core GBIF/GUM data models and bringing them into OBIS publishing frameworks
- capacity development, funding and recruitment of more staff
- 1. Actively engage with various stakeholders to ensure that marine biodiversity data aligns with their needs and priorities
- 1) Get more funding for OBIS operational tasks
- 2) Outreach and Capacity Building on Marine Biological Data Management, using OBIS for data preservation and sharing for underserved countries (promote awareness and interest in standards)
- 3) Data quality enhancement
- Capacity building, Promoting data access, use, and outreach efforts and real time networking with other global databases.
- 1- being more visible in IPBES activities and serve the reports with marine data and services, 2- training the trainee using in person or online workshops (I really feel that I have to get updated with all these amazing progress during the last few years), 3- writing a joint Horizon proposal to raise fund to support the OBIS secretary and the nodes
- Move from basic to applied data collection to support global initiatives; strengthen to facilitate documentation and use of data by providers; strengthen web platform (search) and query of basic and applied data. Strengthen the capacity of some nodes to manage their data in an effective way. Support the generation of global indicators (temporal and spatial) from the system structure.
- There is still a lack of sharing or full acceptance of data sharing from the African continent. I am happy that recently a platform was set up to enable people to submit their own data. This should be campaigned for more, maybe the methods translated to French, Portuguese, and Arabic, I think with links that OBIS has. OBIS should focus on species from deep sea research and cruises working on benthic cruises, OBIS should continue showcasing the work done so far as this encourages the official and individual data management enthusiasts.
- Indicators in O3
- Stronger alliances with sister initiatives, eg GBIF. Even stronger quality of the data that we offer. Make sure that we still put quality over quantity, although quantity seems to be part of the problem we are dealing with in terms of visibility and 'competition' with GBIF.
- Capacity building

- Data system interoperability with the community standards and systems (TDWG, GBIF)
- Development of pipelines to integrate all kinds of data easily and create a data portal with more filters"
- Increasing capacity to serve data and capacity to develop the tools and Ux of data service
- Improve data quality
- Coordination with GBIF to continue to improve interoperation of the two initiatives.
- Provide more efforts to increase the involvement of underrepresented regions (regarding the regional distribution of data stored in OBIS)

## Annex 2. Participants list of the Fifth OBIS Executive Committee Meeting

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