

---

# New MSPglobal tools & training supporting data-driven MSP

## MSPglobal 2.0 & 3.0 products

---

TEG on Data for MSP workshop  
3 June 2026, Brussels

# Joint initiatives by UNESCO-IOC and European Commission since 2017



## INTERNATIONAL CONFERENCE

2017

2022

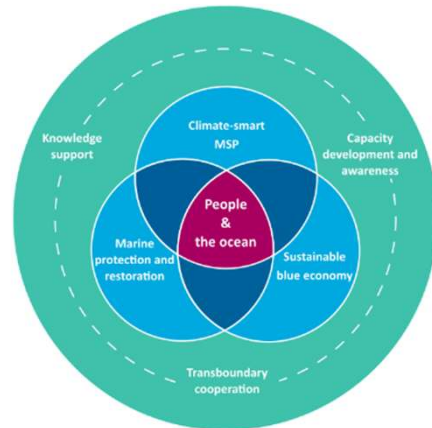


## FRAMEWORK



2017-2022

2022-2027



## PROGRAMME



*Knowledge & Tools +  
Transboundary Pilots*



## COMMUNITY OF PRACTICE



2018

2019

2019

2019

2022

2024



# MSPglobal Activities

At global level

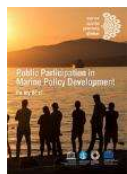
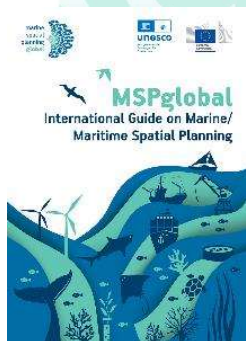
## Develop new knowledge & tools

- Map experts, organisations and initiatives
- Co-develop guidance
- Develop and implement trainings

At regional and  
national level

## Implement pilot projects

- Southeast Pacific
- Western Mediterranean
- Gulf of Guinea / West Africa
- Western Pacific
- + other regions and countries together with other partners (e.g., Government of Sweden, GEF IW projects, GIZ, etc.)



# New MSP data tools – MSPglobal 2.0 & 3.0

## ▪ Data Toolboxes

- How to develop a Spatial Data Infrastructure for MSP
- How to integrate Ocean Observations into MSP
- How to use Cumulative Impact Assessment for MSP

reference

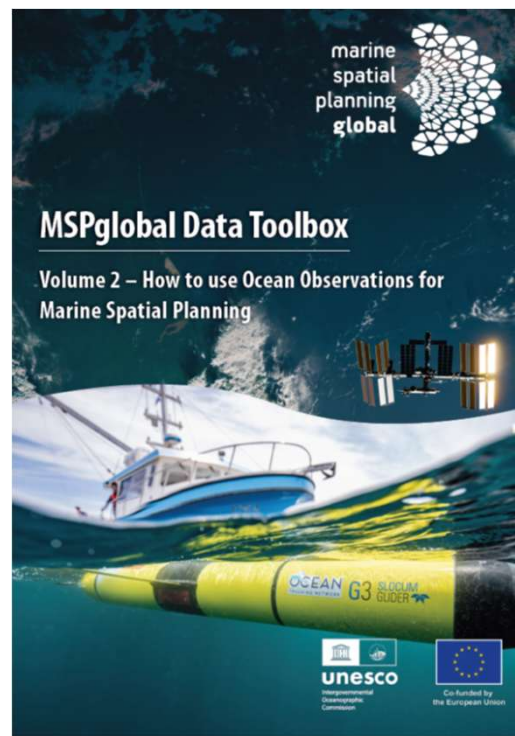
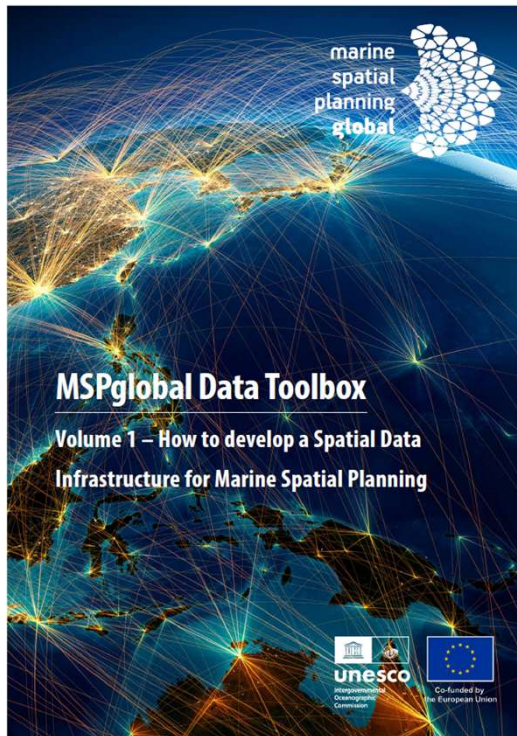
## ▪ Training for MSP practitioners

- Online: OceanTeacher Global Academy  
→ English, French, Spanish
- In - person

practice



# Data Toolboxes



Coming soon

MSPglobal Data Toolbox

Volume 3 – How to use  
Cumulative Impact  
Assessment for MSP

Support MSP practitioners  
with data management, integration & methods

Thanks to all the experts involved !

# Data Toolboxes – Motivation, Process & Scope



- **Motivation:**

- SDI, OO data, CIA methods – key to support analyses about current & future conditions & impacts
  - Support practitioners to use SDI, OO & CIA for MSP

- **Process:**

- 1 - Extensive global expert mapping → invitation to share experiences
  - 2 - Workshops → brainstorming & expert input
  - 3 - Development of Data Toolbox: writing & review

- **Goal for Data Toolboxes:**

- What do MSP practitioners need to keep in mind?



- Easy to follow instructions  
& easy to understand explanations**



- Detailed technical cookbook  
about techniques & data

# Data Toolboxes – Make data accessible



Cross-linking



## Text sections

### Harmonisation of data format and visualisation symbols

Harmonisation of MSP data format and symbology facilitates datasets from multiple sources to be integrated and understood consistently across different systems and stakeholders. Establishing consistent standards for data types, encoding and visual representation supports seamless data exchange and comparison across various jurisdictions and platforms.

**In MSP, two distinct challenges emerge:** harmonising the format and graphical representation of both input and output data across borders. For example, plans from different countries are difficult to compare if they lack consistent structure and symbology.

### Harmonisation of data formats

Achieving harmonised **input data** remains a significant challenge. Input data is often scattered across numerous sources and lacking consistency in format and structure. This inconsistency requires time-consuming harmonisation efforts by MSP practitioners before the data can be effectively utilised within MSP processes. Unfortunately, no universally agreed-upon standard exists yet for input data harmonisation at the international level. This lack of consensus can hinder initiatives aimed at standardising

output data consistently facilitating easier comparison of plans across regions, fostering collaboration and knowledge exchange within the global MSP community.

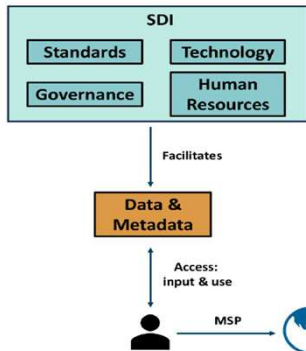
### Harmonisation of symbology

Data representation in an MSP context focuses on accurately and consistently communicating spatial information to support analysis and decision-making among stakeholders. Effective data representation allows stakeholders to visualise, interact with, and better understand the data, making complex datasets more accessible, actionable, and easy to share.

Describing symbology standards for actual data representation involves specifying the visual and structural conventions used to convey information within maps or spatial data. This includes:

- Character Sets: Defining the symbols, letters, or icons used to represent different features, such as specific icons for ports, fishing zones, or protected areas. This promotes consistency and recognizability across different datasets and platforms.
- Semiotics: Establishing the meaning of symbols and colours (e.g., blue for water features, red for restricted areas), so that users intuitively

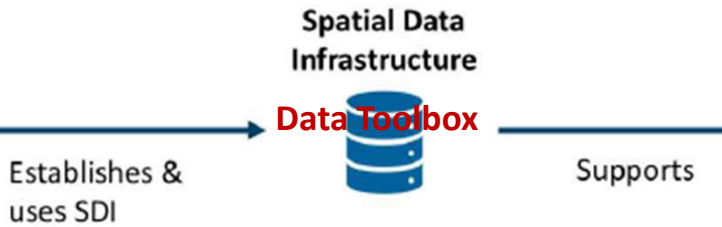
## Illustrations



## Tables & lists

Table 1: Examples of national MSP authorities and committees and respective SDI supporting agencies. (Source: Elaborated by authors with input from country representatives)

Country	MSP authority	SDI supporting agency
France	• Directorate-General for Maritime Affairs, Fisheries and Aquaculture - Marine and Coastal Spaces Department • Maritime Planning Sub-Directorate	• French Hydrographic and Oceanographic Service (DHOM) • Centre for Studies and Expertise on Risk, the Environment, Mobility and Urban Planning (CESEM)
Spain	Ministry for the Ecological Transition and the Demographic Challenge (MITECO) • Office of the Coast and the Sea (DGOEM)	Centro de Estudios de Puertos y Costas (CEPC) as part of Centro de Estudios y Experimentación de Obras Públicas (CEDEX)
Sweden	Swedish Agency for Marine and Water Management (DMU)	Geological Survey of Sweden (SGU)
Kenya	State Department for Blue Economy and Fisheries in collaboration with the State Department for Lands and Physical Planning	Kenya Marine and Fisheries Research Institute (KMFRRI) under the State Department for Blue Economy and Fisheries
Tanzania	Ministry of Fisheries and Aquaculture Resources (MWAR)	IMRSP with the support of an International Marine Spatial Planning National Working Group (MSP-NWIG)
Thailand	• Office of the National Security Council (NSC) • Ministry of Natural Resources and Environment - Department of Marine and Coastal Resources (DMCR)	• Geo-Information and Space Technology Development Agency (GISDA) • Thai Maritime Enforcement Command Center (Tha-MECC)
China	Ministry of Natural Resources (State Oceanic Administration) • National Marine Information Center for data management	• Ministry of Natural Resources (State Oceanic Administration)



Provides... guidance

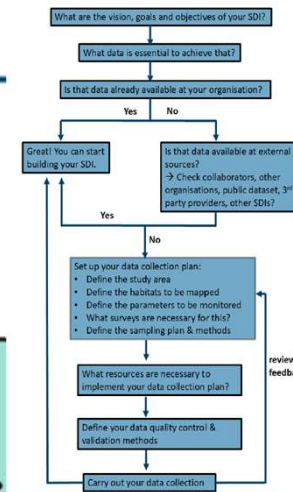


## Box 19: The need for reliable, accessible, and interoperable spatial data for effective MSP in Pacific Island countries

Contributed by Sally Bailey, Kishan Kumar and Hans Wendt

The MSP projects led by The Pacific Community (SPC) support Pacific Island countries to sustainably manage ocean spaces by balancing ecological, social, cultural, and economic priorities. Working with regional and national partners, the projects help governments to develop integrated ocean management (IOM) through participatory planning, spatial data analysis, and capacity development. It focuses on data sharing, governance and enhancing access to spatial data via platforms like the Pacific Data Hub (PDH) and applying decision-support tools (DST). The project ultimately aims to support resilient, inclusive, and science-based ocean governance aligned with national priorities, regional ocean strategies and global commitments.

## MSP initiative Flowcharts



This section provides a guideline on the nine essential tasks required to establish an SDI (Figure 7), which are:

- **Task 1:** Identify the SDI supporting agency and set up working groups
- **Task 2:** Identify stakeholders and right-holders
- **Task 3:** Assess user needs
- **Task 4:** Define vision, goals, objectives
- **Task 5:** Define the SDI framework
- **Task 6:** Identify boundaries for data assessments
- **Task 7:** Identify data and data collection plan
- **Task 8:** Identify SDI connectivity
- **Task 9:** Set up the SDI documentation plan

## Highlight boxes

### Box 17: GEF IW:LEARN5 and the Data and Information Management Task Force (DIM TF)

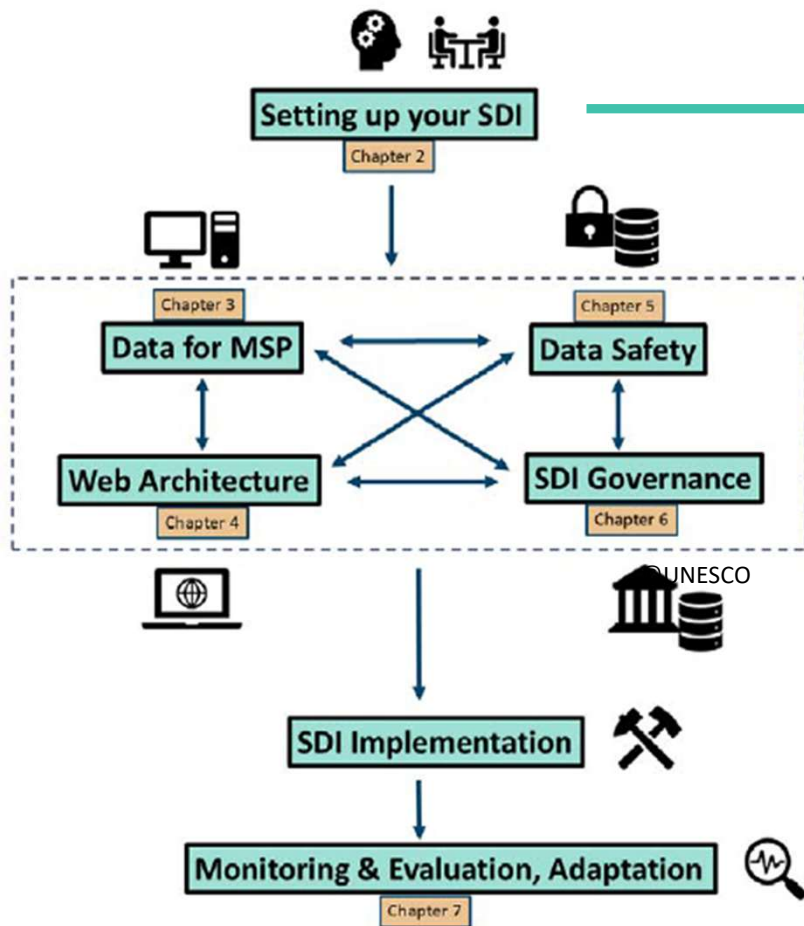
GEF LME:LEARN was a project designed to improve global ecosystem-based governance of Large Marine Ecosystems (LMEs)<sup>54</sup> and their coasts by generating knowledge, building capacity, harnessing public and private partners and supporting south-to-south and north-to-south learning. LME:LEARN recognized data and information to play a crucial role in all phases of the policy cycle in international waters, from decision-making via implementation and monitoring, to analysis and recommendations. Data and information support an understanding and greater awareness of environmental issues, causes, sources and impacts; it functions as an on-going component of the development and assessment of management policies, strategies and interventions; it promotes new legislative and policy initiatives for sustainable resource management and pollution prevention; and it facilitates improved enforcement, decision-making and individual action.

GEF IW:LEARN5 is the current project building on the achievements of LME:LEARN. It is supported by the Global Environment Facility (GEF)<sup>55</sup>, the United

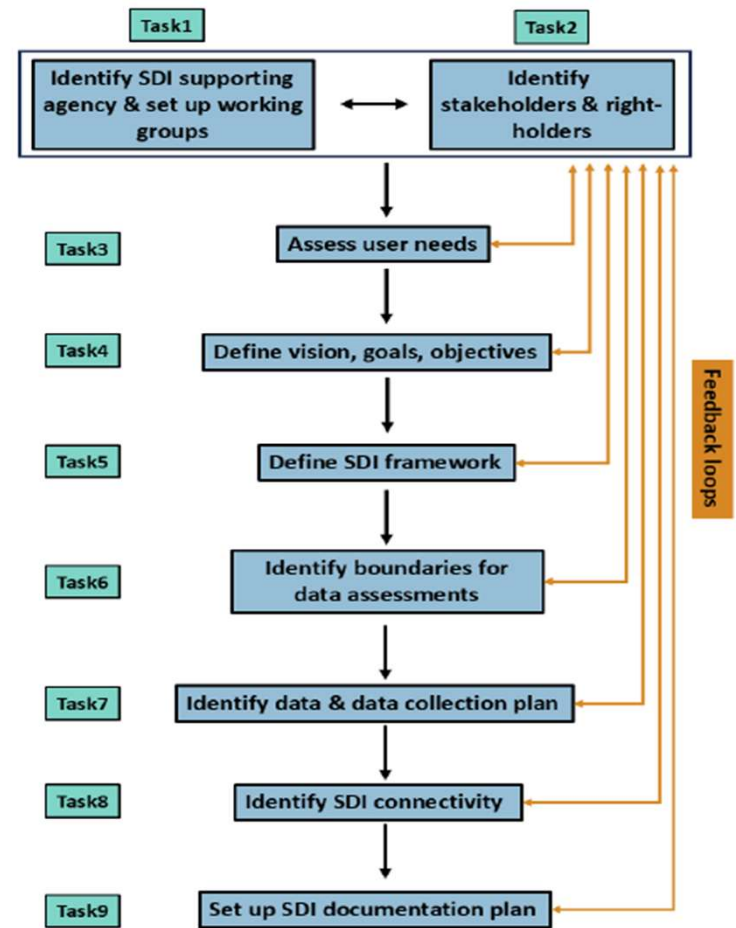
### Box 16: Checklist - is my data FAIR?

- Does the SDI generate and manage **unique identifiers** for both data and metadata? Are its identifiers permanent and dereferenceable?
- Does the SDI rely on **free and open community standards**?
  - a. For enabling communication with standard protocols such as HTTP/HTTPS and standard APIs like OGC Web Services?
  - b. Regarding community standards, such as DCAT for metadata, and standards for data models that improve syntactic and

# Volume 1: SDI for MSP



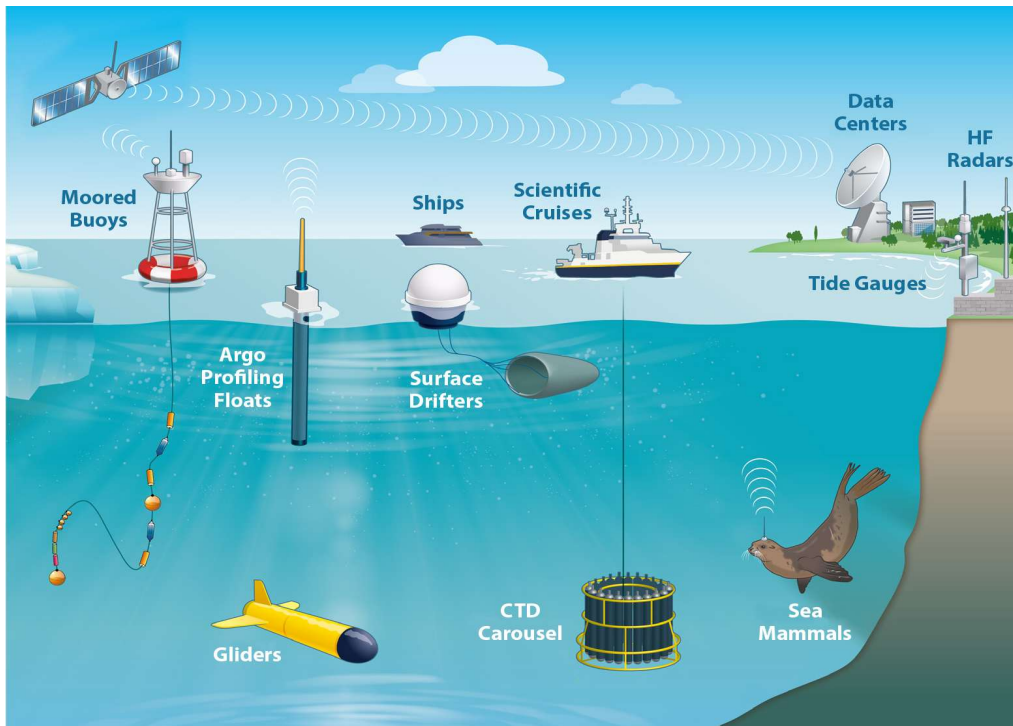
©UNESCO



©UNESCO

# Volume 2: Ocean Observations for MSP

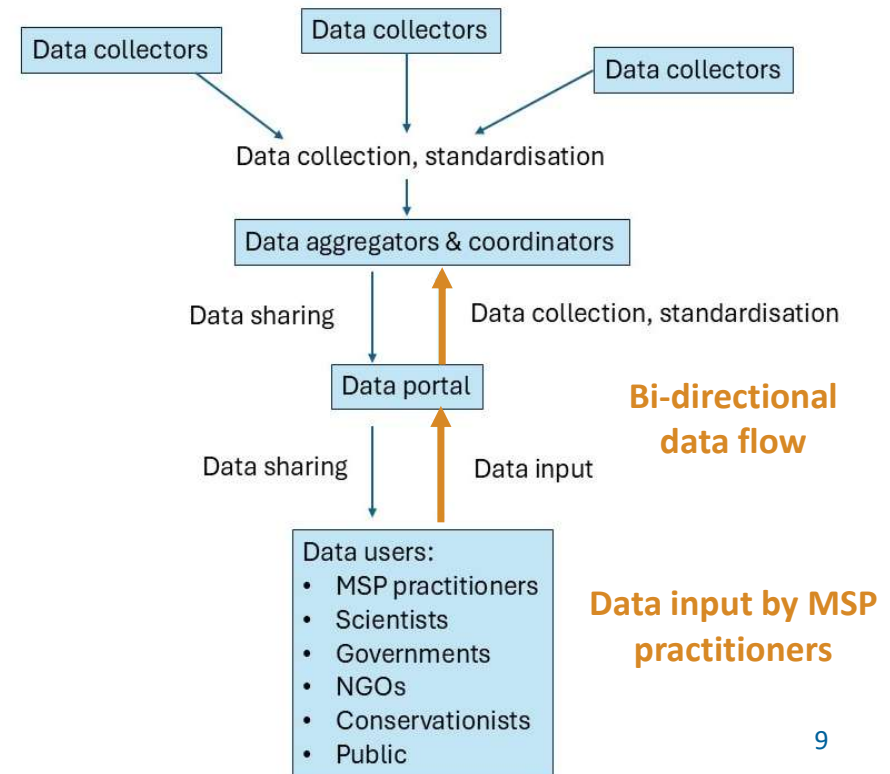
## ➤ Sampling techniques & platforms



Morris et al., 2021

## ➤ Key initiatives:

Data collectors, aggregators & coordinators



# Volume 2: Ocean Observations for MSP



## OO Data:

- Key parameters & Essential Variables
- Data formats & interoperability
- Bi-directional data flow
- Uncertainties, quality metrics, validation

**Physics**

- Sea state\*
- Ocean surface stress\*
- Sea ice\*
- Sea surface height\*
- Sea surface temperature\*
- Subsurface temperature\*
- Surface currents\*
- Subsurface currents\*
- Sea surface salinity\*
- Subsurface salinity\*
- Ocean surface heat flux\*
- Ocean bottom pressure
- Turbulent diapycnal fluxes

**Biogeochemistry**

- Oxygen\*
- Nutrients\*
- Inorganic carbon\*
- Transient tracers\*
- Particulate matter
- Nitrous oxide\*
- Stable carbon isotopes
- Dissolved organic carbon

**Biology & Ecosystems**

- Phytoplankton\* biomass & diversity
- Zooplankton\* biomass & diversity
- Fish abundance & distribution
- Sea turtles abundance & distribution
- Seabirds abundance & distribution
- Marine mammals abundance & distribution
- Hard corals\* cover & composition
- Seagrass\* cover & composition
- Macroalgal canopy\* cover & composition
- Mangroves\* cover & composition
- Invertebrates abundance & distribution
- Microbes biomass & diversity

**Cross-disciplinary**

- Ocean sound
- Ocean colour\*
- Marine debris

\*Also Identified as Essential Climate Variables (ECVs)

● Pilot networks

©GOOS

**OBIS Mapper** mapper.obis.org

Create layer 17,862,873 records

Save

Scientific name

Enter scientific name

Scientific name Taxon ID

No taxa selected.

Datasets

Nodes

Institutes

Areas

Publisher countries

Geometry

No geometry selected.

Time range

2000 - 2000

Depth range

0 - 1000

Extensions

MeasurementOfFact

DNADerivedData

Options

Save the map layer then download to your email

Search by taxa name

Use the polygon tool to draw geometry

Set specific temporal or depth filters

Only include records with measurement or DNA information

Confirmation

Please enter your email address. You will receive an e-mail verification email and you'll be notified. Make sure to check your spam folder. Separate multiple e-mail addresses with a semicolon.

Email address

Select categories to include. Note that including extensions will cause your download to take more time.

ExtendedMeasurementOfFact  DNADerivedData

You are about to download 17,862,873 records, which can take a while. Are you sure? Please go to [Data Access Agreement](#) for a more detailed list of the entire OBIS dataset.

No, thanks Yes, proceed

Toggle points

View data

Edit

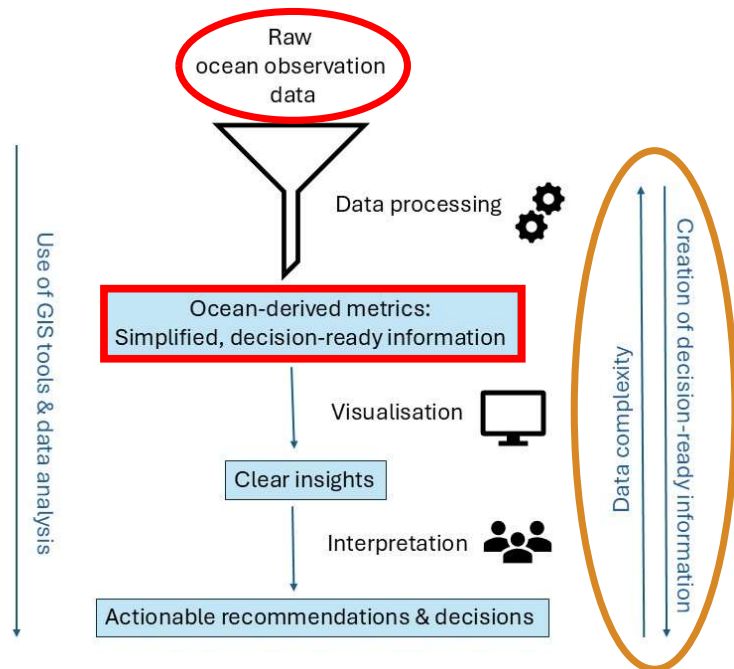
Download

Delete

©Elizabeth Lawrence/OBIS/UNESCO

# Ocean Observations for MSP – What data?

## ➤ What OO data is suitable & helpful for your MSP initiative?



©UNESCO

MSP analytical task	Ocean observation variable or ocean-derived metric
Defining planning areas and time horizons	Sea level trends, shoreline change, administrative boundaries and EEZ
Determining areas of influence around the planning area	Current patterns and circulation models, larval dispersal models, sediment transport and turbidity, connectivity indices (ecological or hydrodynamic connectivity)
Characterizing marine/coastal ecosystems and their ecological states	Chlorophyll-a concentration, sea surface temperature, marine heatwaves, benthic habitat maps, species occurrence data, ocean acidification and oxygen levels
Identifying priority areas for conservation and restoration	Biodiversity indices (e.g., species richness, endemism), habitat extent and condition (e.g., coral bleaching data,

## ➤ Data integration into MSP – practicals

## ➤ Emerging trends in OO

# Volume 3: CIA for MSP – MSPglobal 3.0



1. About this Data Toolbox
2. Foundations & Concepts of CIA for MSP
3. Data requirements & sources for CIA
4. Data preparation & processing
5. Frameworks in CIA
6. Mapping environmental components & sensitivity
7. Mapping human activities & pressures
8. CIA modelling & analysis

Coming soon

MSPglobal Data Toolbox

Volume 3 – How to use  
Cumulative Impact  
Assessment for MSP

# Volume 3: CIA for MSP – MSPglobal 3.0



**9. From CIA outputs to decision support in MSP:  
interpretation, communication & tools for MSP**

**10. Data – driven transboundary cooperation for CIA in MSP**

**11. Data governance, transparency & ethics**

**12. Future outlook for CIA in MSP**

**Ways to move forward**

**Annex - Details**

**Coming soon**

MSPglobal Data Toolbox

Volume 3 – How to use  
Cumulative Impact  
Assessment for MSP

# Training: online & in person

## ▪ Data Toolboxes

- How to develop a Spatial Data Infrastructure for MSP
- How to integrate Ocean Observations into MSP
- How to use Cumulative Impact Assessment for MSP

reference

## ▪ Training for MSP practitioners

- **Online: OceanTeacher Global Academy**  
→ English, French, Spanish
- **In - person**

practice



# Training part 1: online

---



## “Ocean observation & data management for MSP”

- **OceanTeacher Global Academy**
- **English, French, Spanish**
- **4 Modules – self paced – 25 hours estimated**
  
- **Composed of**
  - **Text & graphics & videos**
  - **Case studies**
  - **Expert interviews - videos**
  - **Quizzes: pre – course evaluation | post-lesson reflection | post-module evaluation**
  - **Certificate – 80% quiz passmark**

# Training part 1: online

---

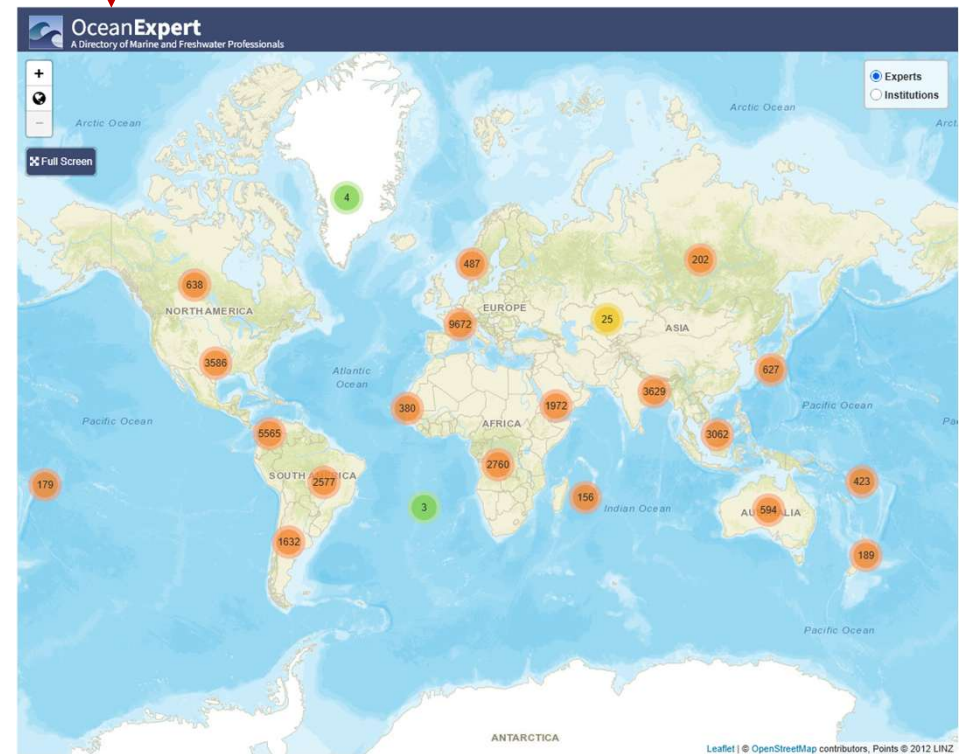


- **Pre – course quiz**
  
- **Module 1: Introduction to data and its importance to MSP**  
**Quiz Module 1**
  
- **Module 2: Spatial Data Infrastructure for MSP**  
**Quiz Module 2**
  
- **Module 3: Ocean Observations for MSP**  
**Quiz Module 3**
  
- **Module 4: Emerging trends in ocean observation for MSP**  
**Quiz Module 4**
  
- **Course Feedback:**  
**Module rating**  
**Overall feedback form**

# Training part 1: online



Log in



## Network of OTGA Regional and Specialized Training Centres

For an overview of the planned course calendar please check the [IOC/OTGA calendar](#)

1

### What is the OceanTeacher Global Academy

The OTGA e-learning platform offers online training on a wide range of topics related to ocean science.



2

### Understand how the OTGA Platform works

This video describes how to register on the OceanTeacher e-Learning Platform and have access to selected courses.



# Training part 1: online



The OceanTeacher Global Academy (OTGA) provides a comprehensive internet-based training platform that supports classroom training, blended training, and online (distance) learning. OTGA aims to build equitable capacity related to ocean research, observations and services in all IOC Member States by delivering training courses on a range of topics addressing the priority areas of the UN Decade of Ocean Science for Sustainable Development and the 2030 Agenda and its SDGs as well as supporting the implementation of the IOC Capacity Development Strategy.

<p><b>Scientific Knowledge and Research</b> Course topics include Research data management, OBIS, HAB</p>	<p><b>Sustainable Use of Marine Resources</b> Course topics include Marine Biodiversity Data Management</p>	<p><b>Marine Spatial Planning</b> Course topics include Marine spatial planning, GIS applications for ICZM.</p>	<p><b>Marine and Coastal Ecosystems</b> Course topics include Marine GIS applications, Coastal mapping &amp; monitoring.</p>
<p><b>Disaster Risk Reduction</b> Course topics include Tsunami awareness, Storm surge forecasting.</p>	<p><b>Implement and Enforce International Sea Law</b> Course topics include Marine Scientific Research under the UNCLOS.</p>	<p><b>Ocean Acidification</b> Course topics include Impacts of ocean acidification.</p>	<p><b>Marine Pollution</b> Course topics include Prevention and reduction of marine pollution.</p>

2025

**From Observation to Action: Empowering communities towards excellence in marine data** (2025 to 28 February)

2021

**Implementing an Operational Ocean Monitoring and Forecasting System (OFS)**

2026

**MSPglobal course on ocean observations and data management for MSP (ENGLISH)**

2026

**MSPglobal Online Training Course (ENGLISH)**

2026

**Observación del océano y gestión de datos para la PEM (ESPAÑOL)**

Hidden from students

2026

**Observation de l'océan et gestion des données pour la PEM (FRANÇAIS)**

Hidden from students

# Training part 1: online



A screenshot of a course dashboard. At the top left are logos for UNESCO and OTG@. The top right shows navigation links for 'Dashboard' and 'My courses', along with search, notification, and user profile icons, and an 'Edit mode' toggle. The main header area has a dark blue background with the text 'Data Management' and 'MSPglobal course on ocean observations and data management for MSP (ENGLISH)'. Below this, it says 'SELF-PACED' and lists course components: '14.5 Marine Spatial Planning | 14.7 Sustainable Use Of Marine Resources | 14a Scientific Knowledge And Research'. At the bottom of the header, it indicates 'Offered in English' and 'Training Center'. A navigation menu at the very bottom includes 'Course', 'Settings', 'Participants', 'Grades', 'Reports', and 'More'.

A screenshot of the 'Introduction to the course' section. It features a title bar with a right-pointing arrow. Below the title is a decorative green and blue wave graphic. A list of items follows, each with an icon and a 'Completion' dropdown menu:

- Start Here (document icon)
- Announcements (speech bubble icon)
- Forum: introduce yourself (speech bubble icon)
- Pre-test (document icon)

Below the list, there is a paragraph of text: 'Please complete this quiz to assess your Prior Knowledge. Note: This pre-test is a non-graded evaluation designed to assess your prior knowledge of the material. Please answer as many questions as you can without worrying about your score—this is simply to help you recognize what you already know. Do your best, and remember there is no need to feel stressed, as this is just a formative assessment.'

# Training part 1: online



unesco OTG@ Dashboard My courses

Search, Notifications, Messages, Profile, Edit mode

- Module 1: Introduction to data and its importance to MSP** →  
Not available unless: The activity [Start Here](#) is marked complete ... Show more  
Activities: 7 Progress: 1 / 7
- Module 2: Spatial Data Infrastructure for MSP** →  
Not available unless: The activity [Start Here](#) is marked complete ... Show more  
Activities: 10 Progress: 1 / 10
- Module 3: Ocean Observations for MSP** →  
Not available unless: The activity [Start Here](#) is marked complete ... Show more  
Activities: 8 Progress: 1 / 8
- Module 4: Emerging trends in ocean observation for MSP** →  
Not available unless: The activity [Start Here](#) is marked complete ... Show more  
Activities: 6 Progress: 1 / 6

# Training part 1: online



unesco OTG@ Ocean Teacher Global Academy

Dashboard My courses

Search, Notifications, Messages, Profile, Edit mode

Not available unless: The activity [Start Here](#) is marked complete ... Show more

Activities: 6 Progress: 1 / 6

**Post-Assessment** [lock icon] [arrow icon]

Not available unless: The activity [Pre-test](#) is marked complete ... Show more

Activities: 1 Progress: 0 / 1

**Resources** [lock icon] [arrow icon]

Not available unless: The activity [Start Here](#) is marked complete ... Show more

Activities: 2 Progress: 1 / 1

**Course Feedback & Certificate** [lock icon] [arrow icon]

Not available unless: The activity [Start Here](#) is marked complete ... Show more

Activities: 2 Progress: 0 / 1

# Training part 1: online



unesco OTG@ Clean Teacher Global Academy Dashboard My courses

Home / OODM-MSP2026en / Module 1: Introduction to data and its importance to MSP

## Module 1: Introduction to data and its importance to MSP

Module 1



Lessons



Not available unless: The activity [Start Here](#) is marked complete ... [Show more](#)

- Module 1: Introduction to data and its importance to MSP [Completion](#)
- M1-Lesson 1. Data and its importance to MSP [Completion](#)
- M1-Lesson 2. Data fundamentals in the MSP context [Completion](#)
- M1-Lesson 3. Spatial data for MSP [Completion](#)
- M1-Lesson 4. Data security and sharing [Completion](#)
- Quiz Module 1 [Completion](#)
- Rate this module [Completion](#)

You can rate this module including module organization, content and learning activities

# Training part 1: online



unesco OTG@ Dashboard My courses English (en) Edit mode

Home / OODM-MSP2026en / Module 1: Introduction to data and its importance to MSP / M1-Lesson 1. Data and its importance to MSP

## M1-Lesson 1. Data and its importance to MSP

Lesson Settings Reports More

Go through the activity to the end

Export as PDF

Edit lesson Edit page contents Grade essays

Lesson is currently being previewed.

### Introduction to Lesson

This introductory lesson explains the **concept of data** in a broad sense and explores its **foundational role in MSP**. Learners will gain a high-level understanding of what ocean data is, the types of information commonly used in MSP, and why data quality and availability matter for informed decision-making.

The lesson **sets the stage** for the rest of the course by highlighting how data underpins zoning decisions, supports the evaluation of trade-offs among ocean uses, and enables the assessment of cumulative environmental and socio-economic impacts. Finally, learners are introduced to **key international and regional organisations and practical tools** that support data use in MSP.

**The lesson will cover the following course learning outcomes:**

- Explain what "data" means in the context of ocean management and MSP.
- Describe the role of data in supporting evidence-based MSP decisions.
- Recognize the importance of understanding data limitations when interpreting MSP analyses and outcomes
- Summarise the role of European initiatives, such as the Technical Expert Group (TEG) on Data for MSP and the MSP Data Framework, in supporting high-quality data for MSP.
- List key organisations and tools that support working with data in the MSP context.

Data for ocean management

You will not see the progress bar because you can edit this lesson

unesco OTG@ More English (en) Edit mode

Home / OODM-MSP2026en / Module 1: Introduction to data and its importance to MSP / M1-Lesson 1. Data and its importance to MSP

## M1-Lesson 1. Data and its importance to MSP

Lesson Settings Reports More

Go through the activity to the end

Export as PDF

Edit lesson Edit page contents Grade essays

Lesson is currently being previewed.

### Watch a video - Importance of quality ocean data & management for MSP

Key initiatives supporting data for MSP

You will not see the progress bar because you can edit this lesson

← Previous activity Next activity →

# Training part 1: online

## Guiding Principles & Good Practices

### Good practices for data

Good practices for data are essential to **ensure that information is accurate, reliable, and usable across different applications**. In the context of MSP, good data practices are especially important because **planners and decision-makers rely on diverse datasets** (such as environmental, socio-economic, and governance-related) to guide spatial decisions, assess trade-offs, and evaluate cumulative impacts. Without robust practices, data can be incomplete, inconsistent, or difficult to interpret, which can undermine the quality of planning outcomes and limit the effectiveness of cross-border or multi-stakeholder collaboration.

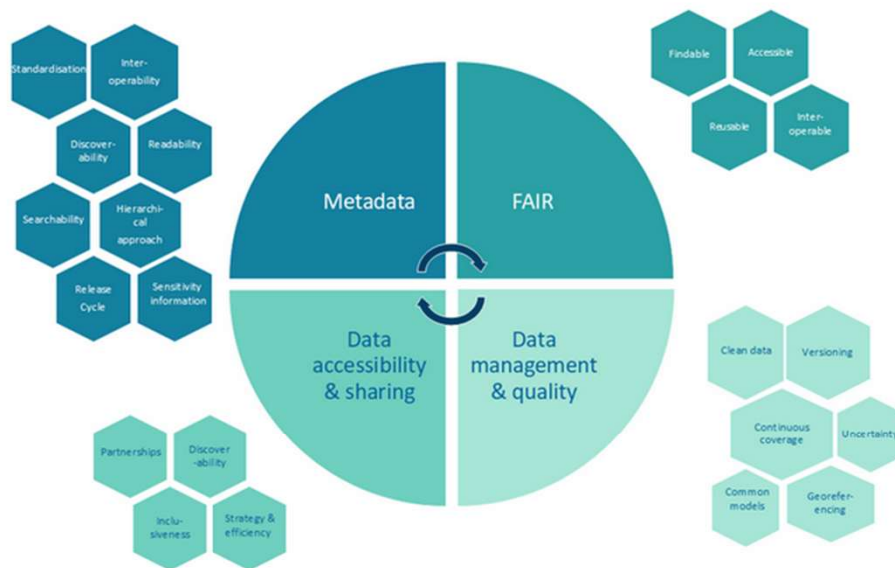


Figure 1: Good practices for data in MSP, with multiple practices contributing to each component. © UNESCO

Implementing good practices involves **careful data management, adherence to standards, and thorough documentation**. This includes maintaining comprehensive **metadata** (see next page) that describe how, when, and by whom data were collected, as well as its quality, limitations, and relevance. **Regular validation, updates, and version tracking** help maintain accuracy and reliability, while **structured categorisation and standardised formats** support interoperability and comparability across datasets (see "Interoperability" further ahead in this Lesson). Ensuring **accessibility, discoverability, and machine-readability** of data enhances usability for planners, stakeholders, and decision-makers, while fostering transparency and informed decision-making.

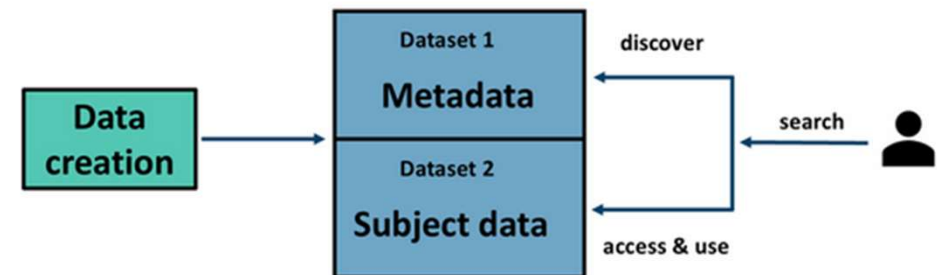


Figure 2: Illustration of the data and metadata components of a dataset. © UNESCO

# Training part 1: online



unesco OTG@ More English (en) Edit mode

Go through the activity to the end

Export as PDF

Edit lesson Edit page contents Grade essays

Lesson is currently being previewed.

### Watch a video

Watch a short movie about the Intergovernmental Oceanographic Commission (IOC) of UNESCO:

A video thumbnail showing the letters 'IOC' in white against a blue background with a play button icon in the center.

Tools supporting data use in MSP

## Videos - engagement

unesco OTG@ More English (en) Edit mode

Home / OODM-MSP2026en / Module 1: Introduction to data and its importance to MSP / M1-Lesson 1. Data and its importance to MSP

### M1-Lesson 1. Data and its importance to MSP

Lesson Settings Reports More

Go through the activity to the end

Export as PDF

Edit lesson Edit page contents Grade essays

Lesson is currently being previewed.

### Watch a video - Importance of quality ocean data & management for MSP

A black rectangular placeholder for a video player with a white play button icon in the center.

Key initiatives supporting data for MSP

# Training part 1: online



and enforcement, and serve as valuable proxies for understanding fishing activity, shipping routes, and human–ocean interactions. By supporting fisheries management and helping detect illegal, unreported, and unregulated (IUU) fishing, AIS and VMS data contribute an **important socio-environmental dimension** to ocean observation.

For more information about ocean observation through satellites, please see the [MSPglobal Data Toolbox "How to use Ocean Observations for MSP", Chapter 2.3](#).

Below video provides additional details about the Copernicus satellite programme.

← Sampling techniques and platforms - in-situ measurements

↓ DEEP DIVE: Watch a video - the Copernicus satellite programme

You will not see the progress bar because you can edit this lesson



← Previous activity

“Deep Dives” – additional information

Next activity →



# Training part 1: online



unesco OTG@ Dashboard My courses English (en) Edit mode

Home / OODM-MSP2026en / Module 1: Introduction to data and its importance to MSP / M1-Lesson 4. Data security and sharing

## M1-Lesson 4. Data security and sharing

Lesson Settings Reports More

Go through the activity to the end

Export as PDF

Edit lesson Edit page contents Grade essays

Lesson is currently being previewed.

### Check Your Understanding

Please take a moment to reflect on the contents of this lesson "Data security and sharing".

Would you be able to complete the following tasks? If not, please revise the relevant parts of the lesson.

- Explain the concepts of data security, privacy, and sensitivity in general and in the context of geospatial data.
- Identify the risks and particularities of geospatial and MSP data regarding privacy, confidentiality and security.
- Describe the principles of traditional data protection, data security, and data privacy, and their roles in data governance.
- Understand the importance of safe data sharing through mechanisms such as data sharing agreements and access control.
- Explain the concept of geospatial data sovereignty and its implications for cross-border MSP initiatives.
- Apply knowledge of access management and sharing protocols to maintain security, privacy, and trust among stakeholders.
- Recognise strategies for balancing accessibility, usability, and protection of sensitive geospatial data in MSP.

End of lesson

You will not see the progress bar because you can edit this lesson

## Reflection & checking of understanding

# Training part 1: online – next steps



The OceanTeacher Global Academy (OTGA) provides a comprehensive internet-based training platform that supports classroom training, blended training, and online (distance) learning. OTGA aims to build equitable capacity related to ocean research, observations and services in all IOC Member States by delivering training courses on a range of topics addressing the priority areas of the UN Decade of Ocean Science for Sustainable Development and the 2030 Agenda and its SDGs as well as supporting the implementation of the IOC Capacity Development Strategy.

<p><b>Scientific Knowledge and Research</b> Course topics include Research data management, OBIS, HAB</p>	<p><b>Sustainable Use of Marine Resources</b> Course topics include Marine Biodiversity Data Management</p>	<p><b>Marine Spatial Planning</b> Course topics include Marine spatial planning, GIS applications for ICZM.</p>	<p><b>Marine and Coastal Ecosystems</b> Course topics include Marine GIS applications, Coastal mapping &amp; monitoring.</p>
<p><b>Disaster Risk Reduction</b> Course topics include Tsunami awareness, Storm surge forecasting.</p>	<p><b>Implement and Enforce International Sea Law</b> Course topics include Marine Scientific Research under the UNCLOS.</p>	<p><b>Ocean Acidification</b> Course topics include Impacts of ocean acidification.</p>	<p><b>Marine Pollution</b> Course topics include Prevention and reduction of marine pollution.</p>

2025  
**From Observation to Action: Empowering communities towards excellence in marine data**  
2025 to 28 February

2021  
**Implementing an Operational Ocean Monitoring and Forecasting System (Oofs)**

2026  
**MSPglobal course on ocean observations and data management for MSP (ENGLISH)**

2026  
**MSPglobal Online Training Course (ENGLISH)**

2026  
**Observación del océano y gestión de datos para la PEM (ESPAÑOL)**  
Hidden from students

2026  
**Observation de l'océan et gestion des données pour la PEM (FRANÇAIS)**  
Hidden from students

# Training part 2: in person

- 2-day in-person course
- Practical complement to the MSPglobal online training programme
- Online course → conceptual foundations and policy context  
In-person training → applied learning: translate theory into practice

## In-person training structure:

- 35% lectures
- 50% hands-on computer exercises
- 15% discussion & reflection



# Training part 2: in person

## Day 1 – MSP data foundations:

- Introduction & overview – Course aims and structure
- **1 - Data foundations – Data types, quality, FAIR/CARE, interoperability**
- **Capstone (Part 1) – Define MSP context and data needs**
- Hands-on 1–2 – Identify datasets, assess gaps, explore metadata & FAIRness
- Hands-on 3 – Map data lifecycle, actors, bottlenecks



# Training part 2: in person

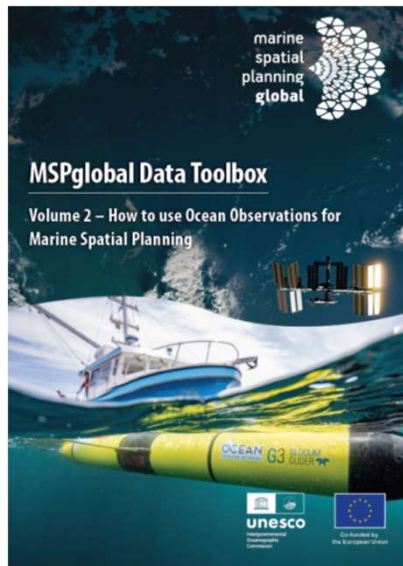
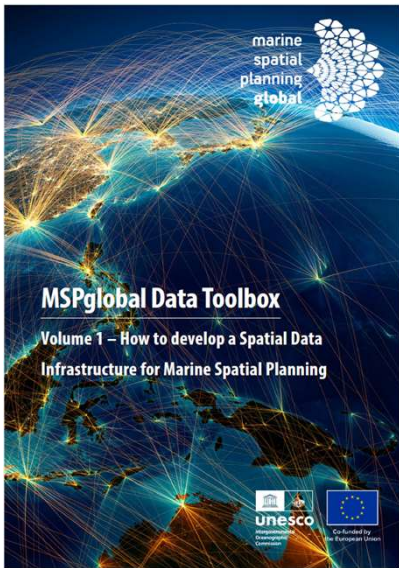
## Day 2 – Data application: SDI & ocean observations & strategy:

- **2 - SDI basics – Concepts, components, role in MSP**
- Hands-on 4 – Assess SDI maturity and gaps
- Hands-on 5 – Design SDI architecture and data flows
- **3 - Ocean observations – Systems and data types**
- Hands-on 6 – Explore ocean datasets
- Hands-on 7 – Link variables to MSP needs
- **Hands-on 8 – Integrate future data developments**
- **Capstone (Part 2) – Finalise MSP data strategy**
- Presentations & discussion – Share results and reflect



Any feedback?

# MSPglobal data tools – TEG contributions



**Coming soon**  
MSPglobal Data Toolbox  
Volume 3 – How to use Cumulative Impact Assessment for MSP

Case studies,  
Highlight boxes

### Acknowledgements

This course was developed by:

- Annette Scheffer [OE profile]
- Niccolò Bassan [OE profile]
- Michele Quesada da Silva [OE profile]

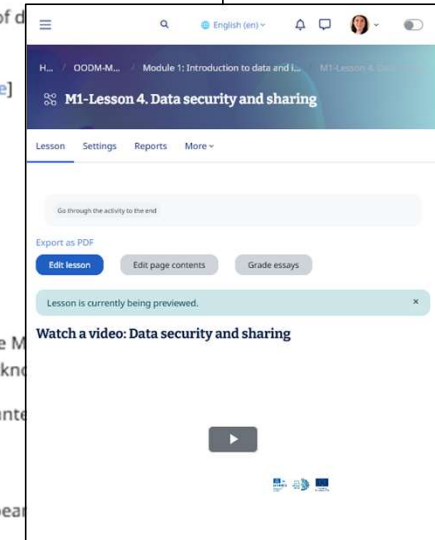
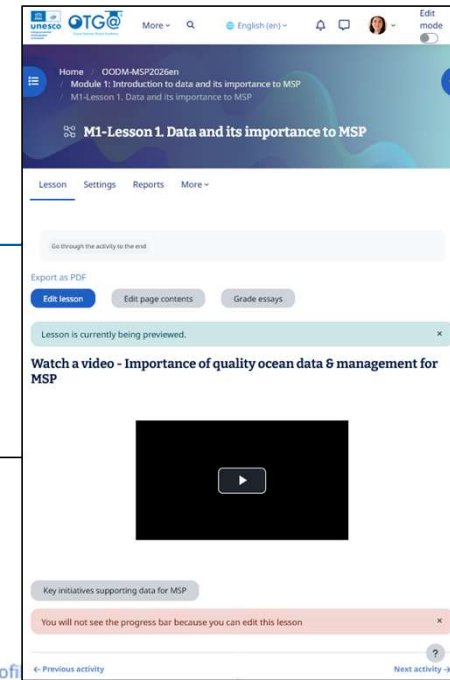
We also acknowledge the contribution of:

- Andrej Abramic [OE profile]
- Carolina García Valencia [OE profile]
- Dawn Wright [OE profile]
- Louis Demargne [OE profile]
- Manuel Frias [OE profile]
- Maeva Tesan [OE profile]
- Nathalie Tonné [OE profile]
- Pascal Derycke [OE profile]
- Stefano Menegon [OE profile]
- Veronica Nieves [OE profile]

This course was developed based on the Marine Observations for MSP. We gratefully acknowledge the support of the European Union.

We thank the external partners who granted us access to the ATG medialab; Clive McMahon.

This course was co-funded by the European Union.



**Thanks to all the experts involved !**

# MSPglobal data tools – what's next?

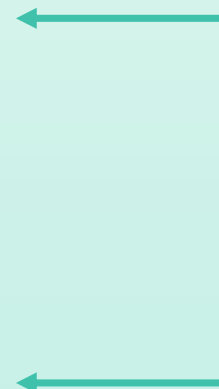
## ▪ Data Toolboxes

- How to develop a Spatial Data Infrastructure for MSP
- How to integrate Ocean Observations into MSP
- How to use Cumulative Impact Assessment for MSP
- **Scenarios**

## ▪ Training for MSP practitioners

- **Online: OceanTeacher Global Academy**  
→ English, **French, Spanish**
- **In – person – regional trainings**

reference



practice



# Thank you!

---



**UNESCO-IOC**

[www.mspglobal2030.org](http://www.mspglobal2030.org)

    @MSPglobal2030

**[a.scheffer@unesco.org](mailto:a.scheffer@unesco.org)**

**[m.quesada-da-silva@unesco.org](mailto:m.quesada-da-silva@unesco.org)**

**[n.bassan@unesco.org](mailto:n.bassan@unesco.org)**



**unesco**

Intergovernmental  
Oceanographic  
Commission



Co-funded by  
the European Union