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Bridging the Gap: Simplifying Metadata Flows with an EOVS Application

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What makes (meta)data FAIR?

 **F**indable

 **A**ccessible

 **I**nteroperable

 **R**eusable

- Descriptive metadata with stable links (e.g. DOI)
- Clear instructions on how to access
 - Not just “available upon request”
- Easily combined with other datasets & machine readable
- Metadata enables replication
 - Data is contextualized

Metadata

BioEco Monitoring Metadata: GOOS BioEco Portal

Interactive map to show:

- **Who** is collecting data on BioEco Essential Ocean Variables?
- **Where** is sampling being done?
- **Descriptive metadata** about the monitoring efforts

bioeco.goosocean.org



*Redevelopment underway to use
Linked Data*



unesco

Intergovernmental
Oceanographic
Commission



IODE
International
Oceanographic
Data and Information
Exchange

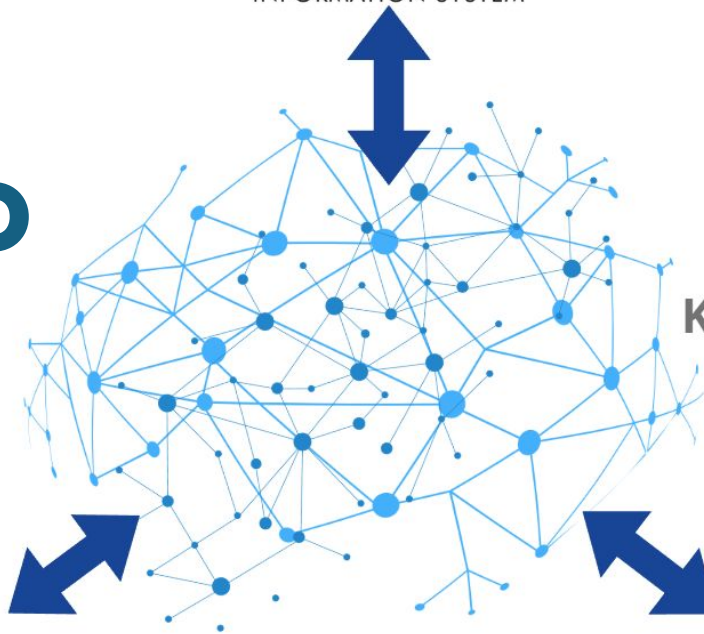


OBIS
OCEAN BIODIVERSITY
INFORMATION SYSTEM

IOC of UNESCO Digital Ecosystem



BioEco Portal



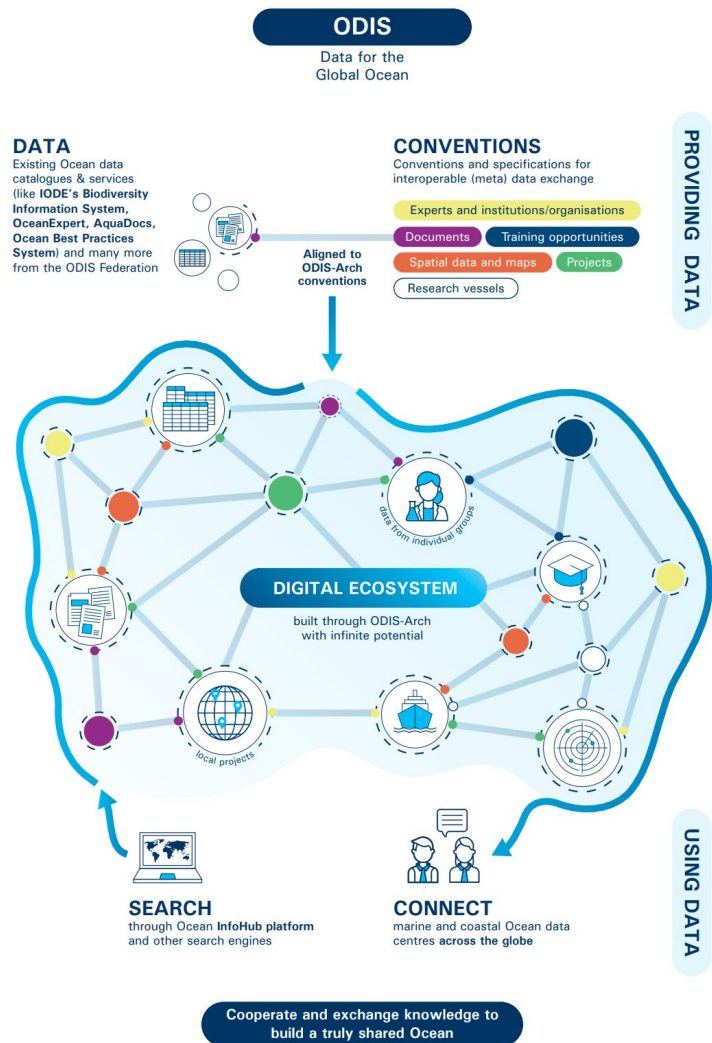
Knowledge
graph



Ocean InfoHub

ODIS odis.org Ocean Data and Information System

- Laying infrastructure
- Provides **metadata schemas** using schema.org vocabulary in **JSON-LD format**
 - **Co-developed** by community
- Makes resources more discoverable using linked **web architecture**



JSON-LD

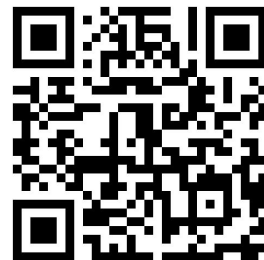
Not friendly to
non-technical
users

```
{
  "@type": "Project",
  "legalName": "Example Monitoring Organization",
  "name": "Example",
  "url": "https://exampleurl.org/",
  "description": "This is an example entry",
  "identifier": {
    "@type": "PropertyValue",
    "description": "DOI",
    "propertyID": "https://registry.identifiers.org/registry/doi",
    "url": "123",
    "value": "123"
  },
  "parentOrganization": {
    "legalName": "",
    "url": ""
  },
  "publishingPrinciples": [
    {
      "@type": "CreativeWork",
      "name": "CC-BY: Creative Commons Attribution 4.0",
      "url": "https://creativecommons.org/licenses/by/4.0/"
    }
  ],
  "foundingDate": "2025-07-14",
  "dissolutionDate": "2025-07-23",
  "areaServed": [
    {
      "@type": "Place",
      "name": "Quebec",
      "identifier": "http://marineregions.org/mrgid/9057",
      "geo": {
        "@type": "GeoShape",
        "description": "Bounding box polygon with lat long (Y X) coordinate order.",
        "geosparql:asWKT": {
          "@type": "http://www.opengis.net/ont/geosparql#wktLiteral",
          "@value": "<http://www.opengis.net/def/crs/OGC/1.3/CRS84> POLYGON((-77.403"
        }
      }
    }
  ]
}
```



EOV Metadata App

eovmetadata.obis.org



user action



login

automatic

EOV Metadata App

eovmetadata.obis.org



user action



login



fill in
metadata form

automatic

- Simple **Form-based** interface

EOV Metadata App

eovmetadata.obis.org



user action



login



fill in
metadata form



JSON-LD

automatic

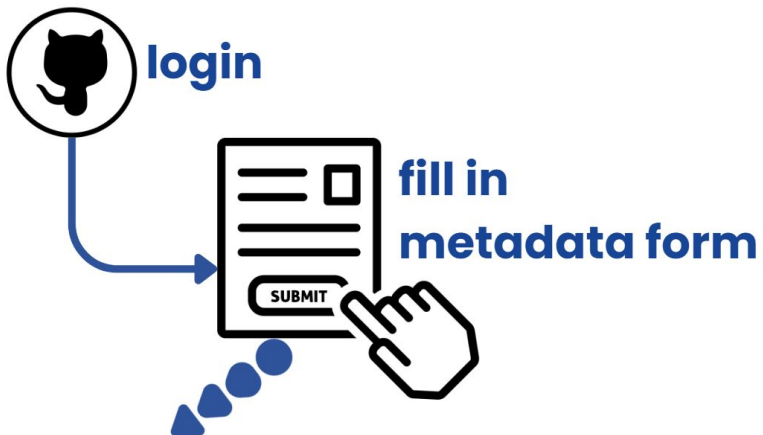
- Simple **Form-based** interface
- **Generates metadata files** in JSON-LD
- **Connects with OBIS and**

EOV Metadata App

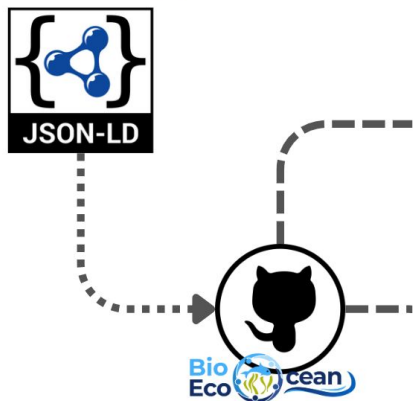
eovmetadata.obis.org



user action



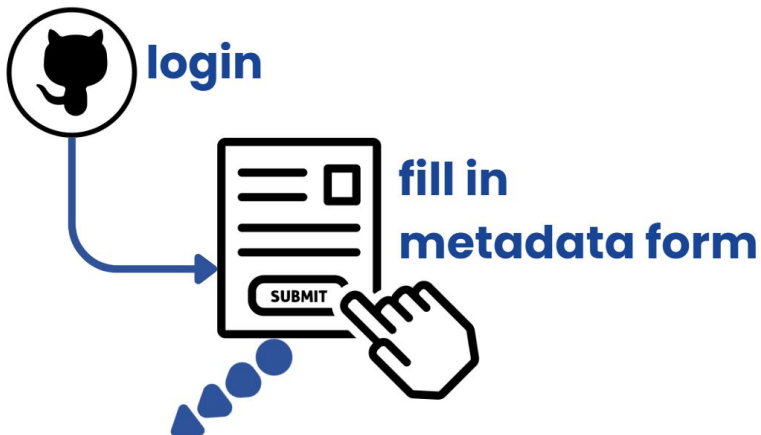
automatic



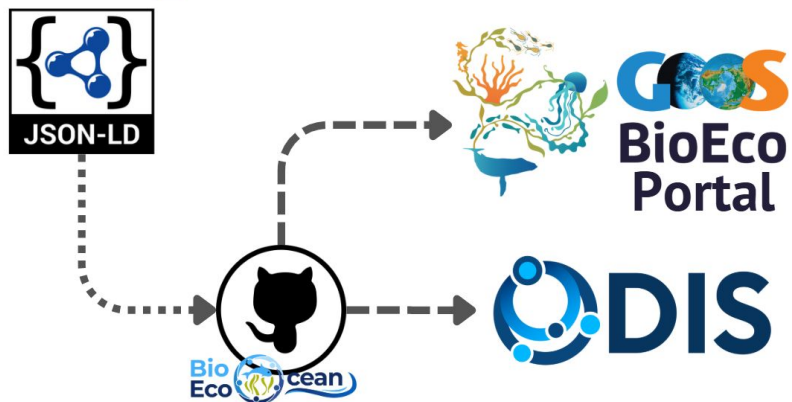
- Simple **Form-based** interface
- **Generates metadata files** in JSON-LD
- **Connects with OBIS and**



user action



automatic



- Simple **Form-based** interface
- **Generates metadata files** in JSON-LD
- **Connects** with ODIS and BioEco Portal
- Aligned with **EOV Specification Sheets**



EOV Data Management Tools Home Metadata Data tools About

Submit BioEco Metadata

Fill the form below, ensuring required fields are populated, and then submit. Examples are provided in placeholders. Forms can also be saved as drafts and updated for submission later using the "Update entry" button on the previous page. The "Print JSON" button will display the current form data in JSON-LD format.

[Back](#)

General Information

Data producers may include monitoring programs, projects, institutions, etc.

Data Producer
Name:
Previously entered: N/A

Data Producer
Acronym:
Previously entered: N/A

URL:
Previously entered: N/A

Data producer ID:
Previously entered: N/A

Identifier Type:
Previously entered: N/A

If your desired type is not listed, please contact us to have it added. To generate a DOI for your entry, click the button and fill the form below, then copy the generated DOI into the field above. Some fields may have been prepopulated for you using information in the form. Please confirm data is correct before creating your DOI. Contact helpdesk@obis.org to correct or update information.

[To Bottom](#)

Metadata form includes:

- Data producer **identifiers**
 - DOI creation
- Keywords from interoperable **vocabulary servers**
- **Geographic names & IDs** from Marine Regions
- **EOV keywords**



EOV Data Management Tools

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Coming soon: data standardization tools

These upcoming developments will allow you to upload an EOV dataset and convert it to Darwin Core, making it easier to submit data to OBIS! We will provide user-friendly data template spreadsheets with which you can align your data to, to use this tool.

For more information about the general data management practices for EOVs, please see: obis.github.io/eov-data-management.

Essential Ocean Variables (EOVs)



BioEco EOVs



Fish



Hard Coral



Invertebrates



[Macroalgae](#)



Mangroves



Marine Mammals



Microbes



Phytoplankton



Sea Turtles



Seabirds



Seagrass



Zooplankton

Sampling Approach



Upcoming
● **Data**
standardization
tools for BioEco
EOV data



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Partners



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