Ocean Data & Information System

AOMI Database Workshop
Enhancing Ocean Microplastics Monitoring

Online 8th October 2024

Lotta Fyrberg
IOC/IODE

ODIS

The Ocean Data & Information System (ODIS)

ODIS is a federation of systems that uses common conventions to share and exchange their (meta)data. ODIS is a global initiative supported by the UNESCO/IOC to:

- **Improve access** to marine and coastal data and information;

- Provide an **openly accessible online platform** to **network** stakeholders and **facilitate the exchange** of Ocean data and knowledge;

- Develop and implement principles fully based on **co-design.**

Ocean InfoHub

ODIS

April 2020

ODIS architecture applied to 3 pilot regions

July 2024

ODIS architecture applied globally

ODIS objectives

- Harness the proliferation and diversity of **Ocean data, online data systems and other digital resources;**

- Connect **global and local digital systems and infrastructures** using Web architecture**;**

- **S**upport IOC **member states and institutions;**

- **Raise awareness of global data and information resources** among local users;

- Overcome **challenges of trust through socio-technical innovation** in some regions and communities.

… to shared goals

- **Develop interoperability between existing information systems**, improving the flow of information to end users;

- **Improve discoverability and access to marine and coastal data**, particularly to inform sustainable management and informed policy development;

- **Facilitate equitable access to ocean information and knowledge products**;

- **Promote a closer interaction** across regions and themes to support decision making;

- **Connect independent digital initiatives** to form a diverse, but interoperable and inclusive, **Ocean Data and Information System**.

A partner network

- Composed of **nodes**, through which data providers and partners can communicate, discover and share data, and connect;

- With **infinite potential:** gains richness and efficiency with growing number of nodes.

- Currently link **50 databases from 42 partner organizations**, who openly contribute discoverable content

African Coastal and Marine Atlas catalogue (ACMA)	Canadian Integrated Ocean Observing System (CIOOS)	Latin America and the Caribbean Region (LAC) Geospatial	National Marine Data and Information Service (NMDIS)
IOC Africa Data Portal	European Directory of Marine Environmental Research Projects (EDMERP) SeaDataNet	Latin America and the Caribbean Region (LAC) Institutions	Ocean Biodiversity Information System (OBIS)
AquaDocs		Latin America and the Caribbean Region (LAC) Training	Ocean Best Practices System (OBPS)
Argovis ARGO Collection	European Directory of Marine Organisations (EDMO) SeaDataNet	Latin America and the Caribbean Region (LAC) Vessels	OceanExpert UNESCO/IOC Project Office for IODE
Better Biomolecular Ocean Practices (BeBOP) as part of Ocean Biomolecular Observing Network (OBON)	European Marine Observation and Data Network (EMODnet)	MARine COastal BiOdiversity Long-term Observations (MARCO-BOLO)	Oceanscape Project
	EurOcean Organizations	Marine Institute Data Catalogue (Ireland)	ODIS Catalogue (ODISCat)
Benguela Current Convention (BCC) GeoData Portal	EurOcean Projects	Marine Training EU	Aquatic Sciences and Fisheries Abstracts (OpenASFA)
Belgian Marine Data Centre (BMDC)	EurOcean Vessels	Marine Spatial Atlas for the Western Indian Ocean (MASPAWIO)	Observing System Monitoring Center (OSMC)
British Oceanographic Data Centre (BODC)	Global Biodiversity Information Facility (GBIF)		Pacific Data Hub (PDH)
Caribbean Marine Atlas catalogue	Indian National Centre for Ocean Information Services (INCOIS)	Marine Environmental Data and Information Network (MEDIN)	Pacific Environment Data Portal (PEDP)
CLIVAR and Carbon Hydrographic Data Office (CCHDO)	Latin America and the Caribbean Region (LAC) Documents	Research Coordination Network for Marine Ecological Time Series (METS-RCN)	Rolling Deck to Repository (R2R)
			Research Data Australia (RDA)
			UNEP Data Catalogue
Canary Current Large Marine Ecosystem (CCLME)	Latin America and the Caribbean Region (LAC) Experts	Marine Information Management System (MIMS)	WIO (Western Indian Ocean) Symphony
			World Ocean Database (WOD)
		NCEI Marine Microplastics Catalogue	Leibniz Center for Tropical Marine Research (ZMT)

Global Search portal

A Global Search portal has been developed as a demonstration of ODIS (https://oceaninfohub.org). The portal currently contains over 130,000 content items in seven content categories: (i) Experts (27,000); (ii) Institutions (13,000; (iii) Documents (42,000); (iv) Training (1,500); (v) Vessels (113); (vi) Projects (3,600); and (vii) Datasets (48,000).
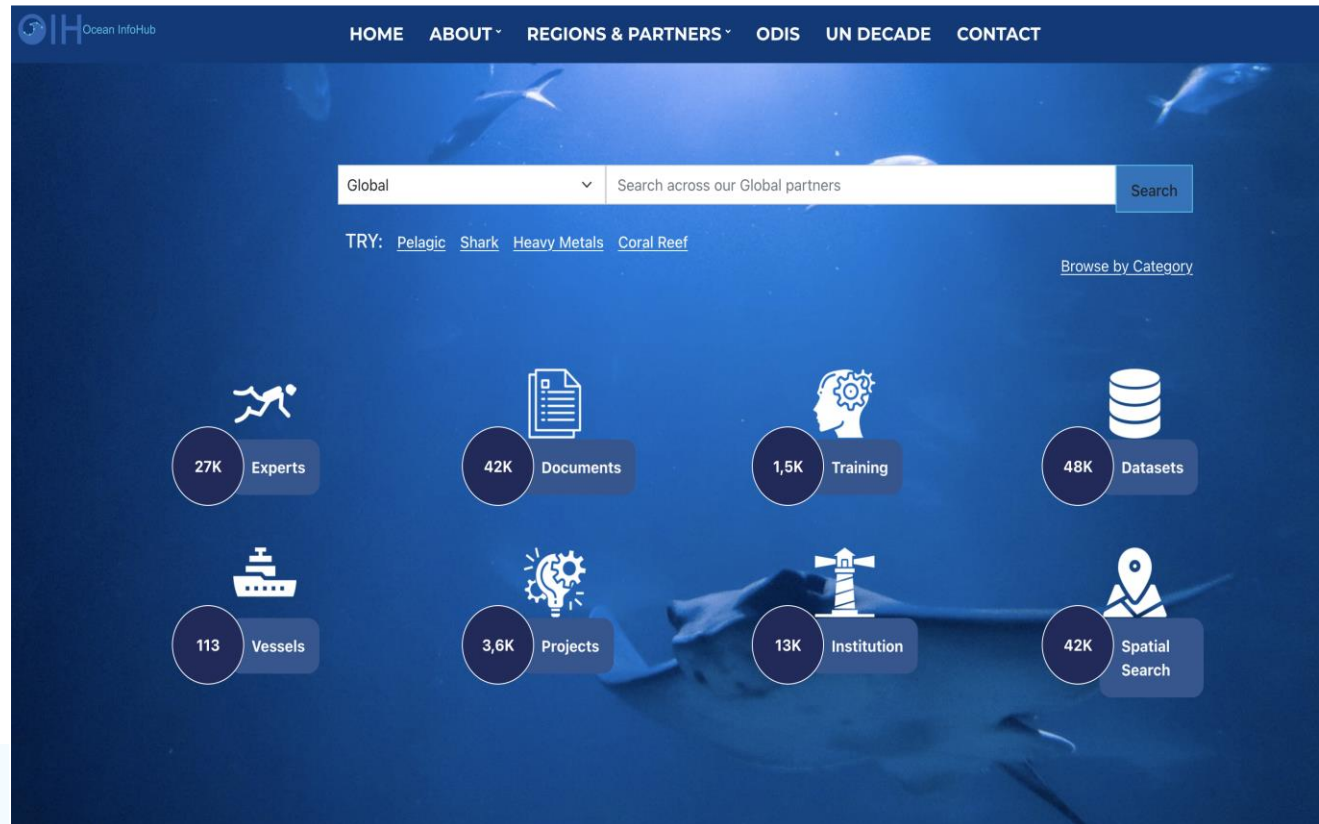
Benefits of linking to ODIS

For data providers

- Share (meta) data only once;

- Retain ownership and control;

- Change visibility of your data as you choose;

- Increase visibility of your data and information to the world.

For data users

- Find data and information more easily from numerous sources;

- Easily see which are trusted sources (IODE accreditation);

- Access the same data set through the portal or resource best suited to you.
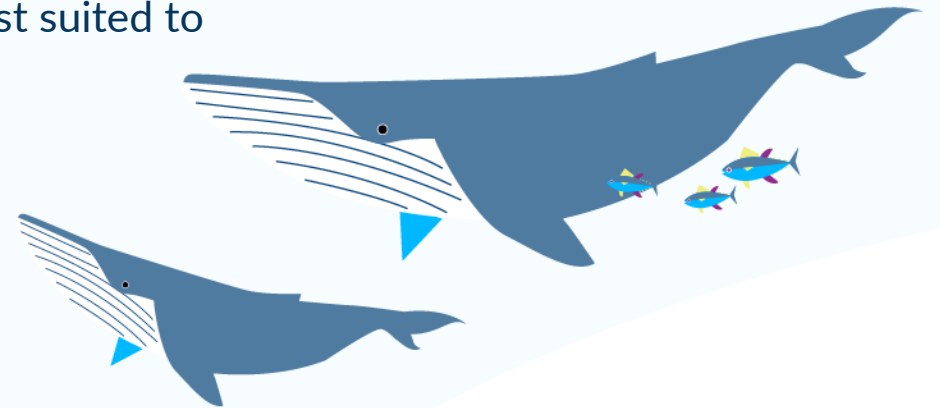
Contributes to international frameworks