Evolution of ISA Data Management Strategy

Deep Dive into Seabed Geospatial Data Management

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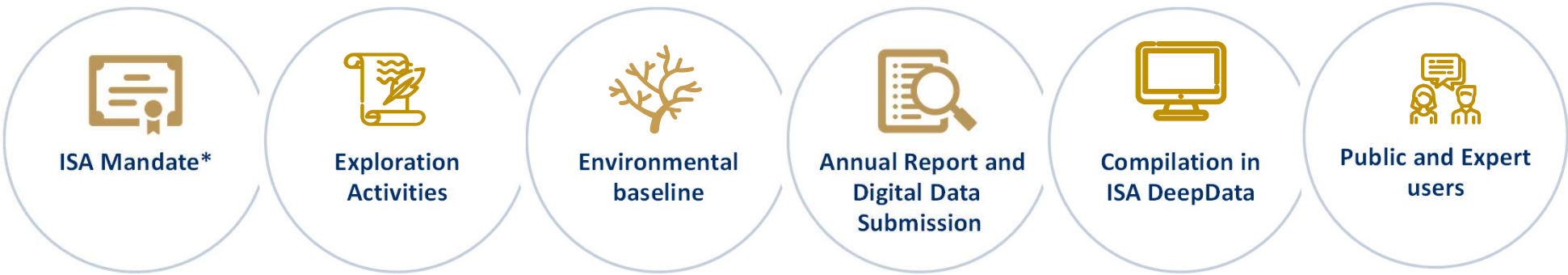
Outline

1. Introduction of ISA
2. Data Management Strategy
3. GIS Integration
4. Data Sharing Initiatives

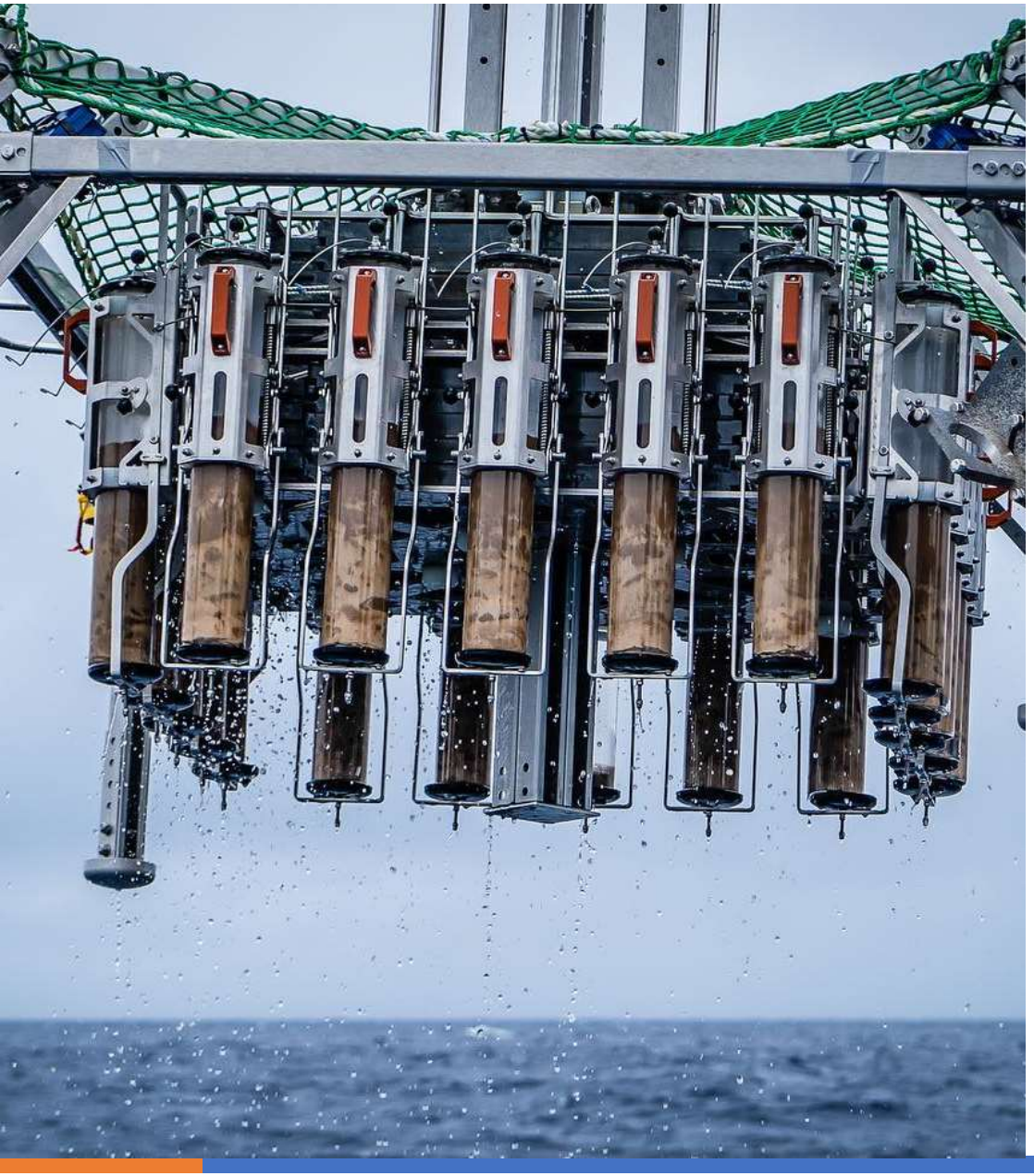
Introduction of ISA


ISA Mandate*
Exploration Activities
Environmental baseline
Annual Report and Digital Data Submission
Compilation in ISA DeepData
Public and Expert users

Introduction of ISA

- ISA administers the mineral resources
- Control and organize current & future exploration activities
- Under Article 143, Par 2 of UNCLOS, ISA required to promote and encourage MSR
- ISA SD 4.3 – Share data in an open and transparent manner
- ISA SD 4.4 – Promote access to non-confidential information & data

Data Management Strategy



Data Management Strategy

- The LTC requested a Data Management Strategy for the Authority in 2015

Key Findings

- Data segments were disjointed
- Data gathering tools lacked standardization
- Data was not FIAR
- Possible data lose due to outdated technology

Data Management Strategy Tasks

DeepData

New database developed to replace outdated CDR database

Reporting template standardization

The standardization of how data should be reported and incorporation of metadata as being required

FAIR

Adoption of the FAIR data principles in the Authority's data management.

Public data shared online

Web interface developed to collect data from providers and make non-confidential data publicly available

Migration of historic data

Data lifecycle management was introduced to the Authority to ensure data assets are efficiently stored.

Collaboration

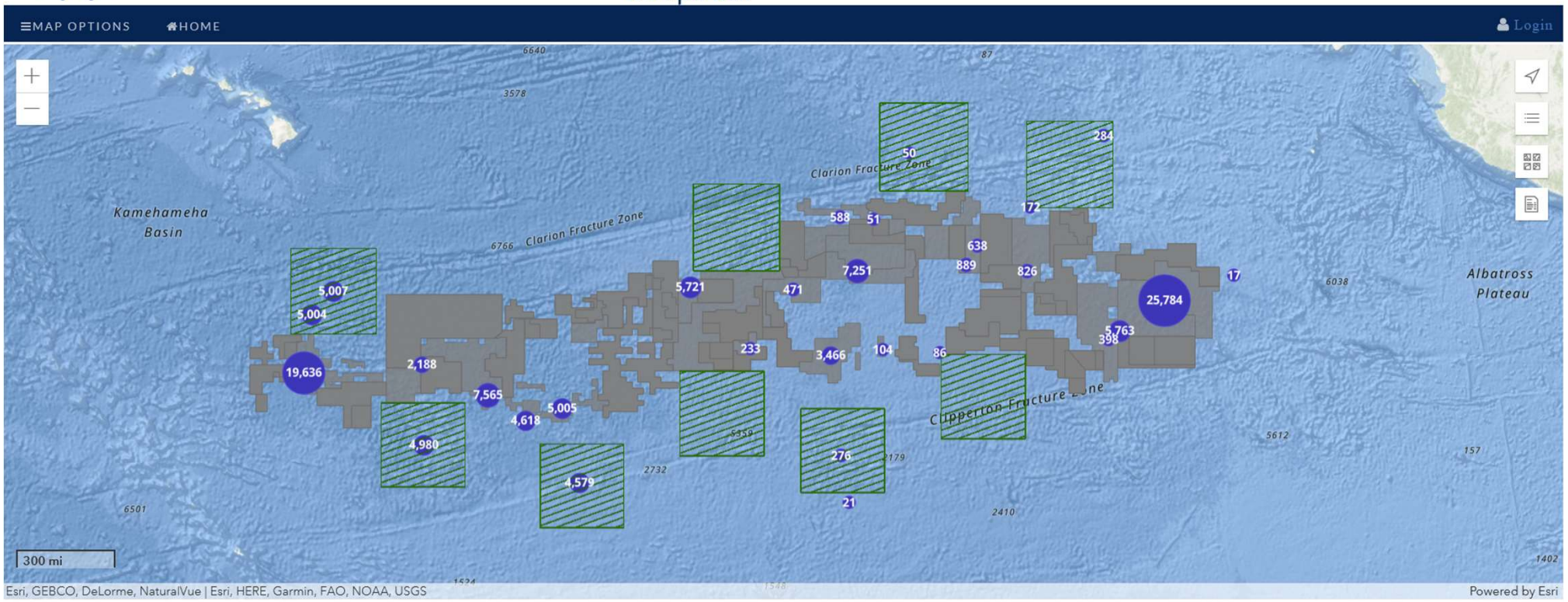
Identify relevant databases that will improve data quality and useability.

Data Management Strategy

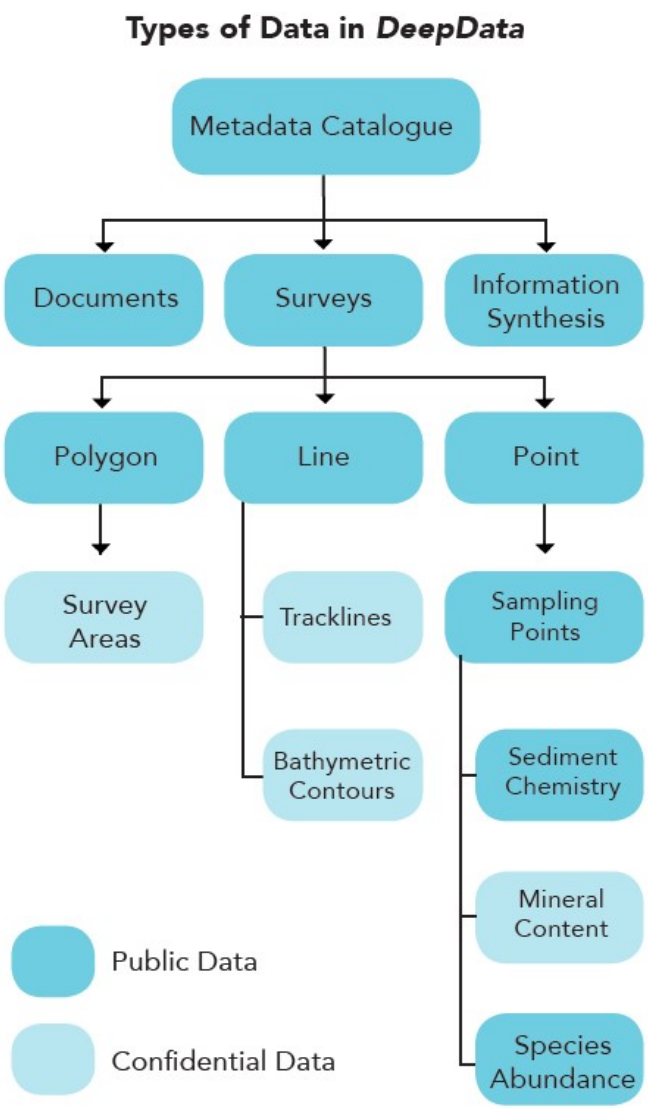
What is DeepData

International Seabed Authority

DeepData



https://data.isa.org.jm/isa/map



What DeepData Contains

Data is separated based on confidentiality status

Structured vs Unstructured data

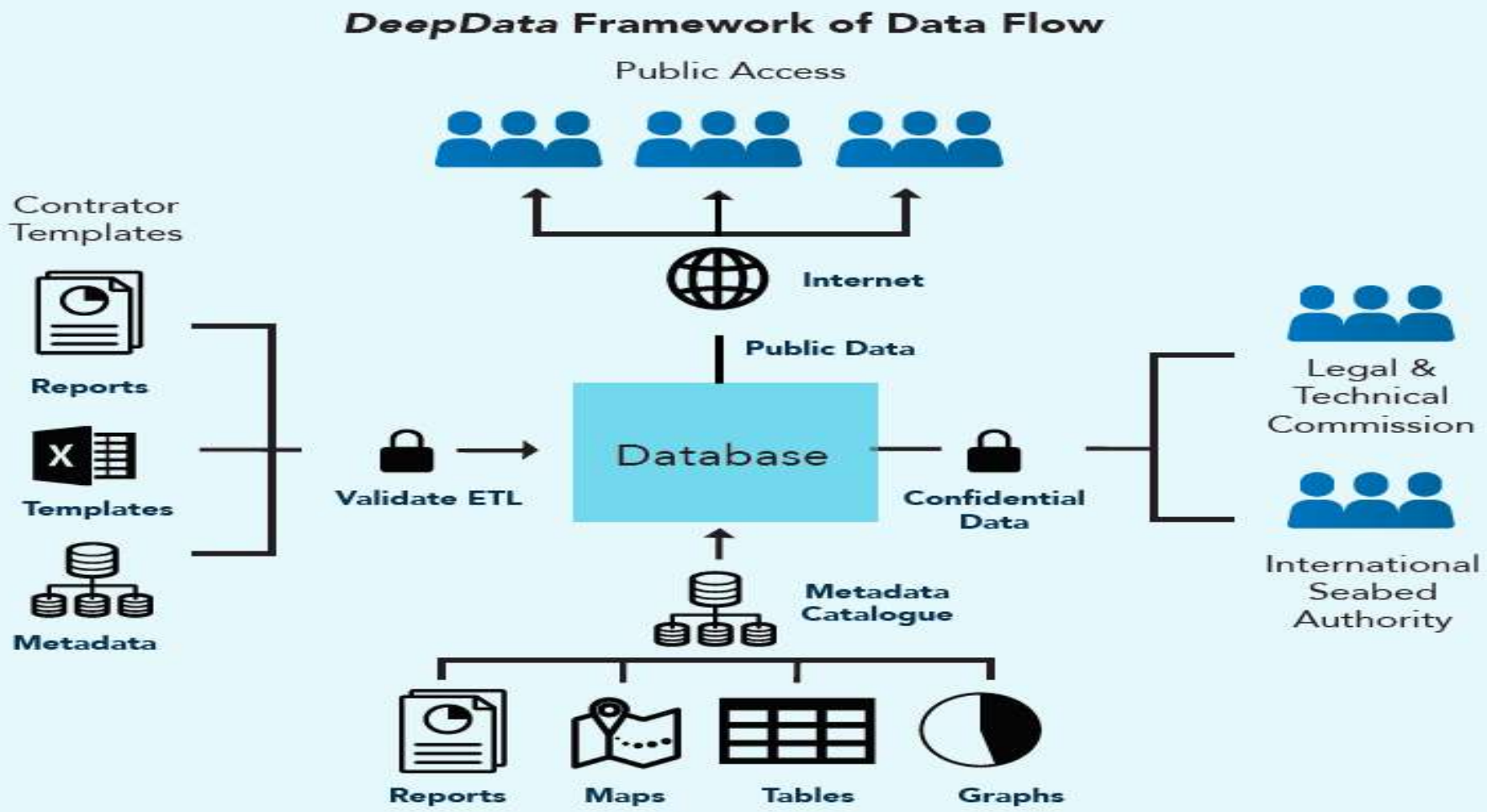
Data on mineral resource assessment (Geological data)*

Environmental baseline data

- Biological parameters
- Physical parameters
- Geochemical parameters

GIS functionality for visualization

DeepData Process Flow

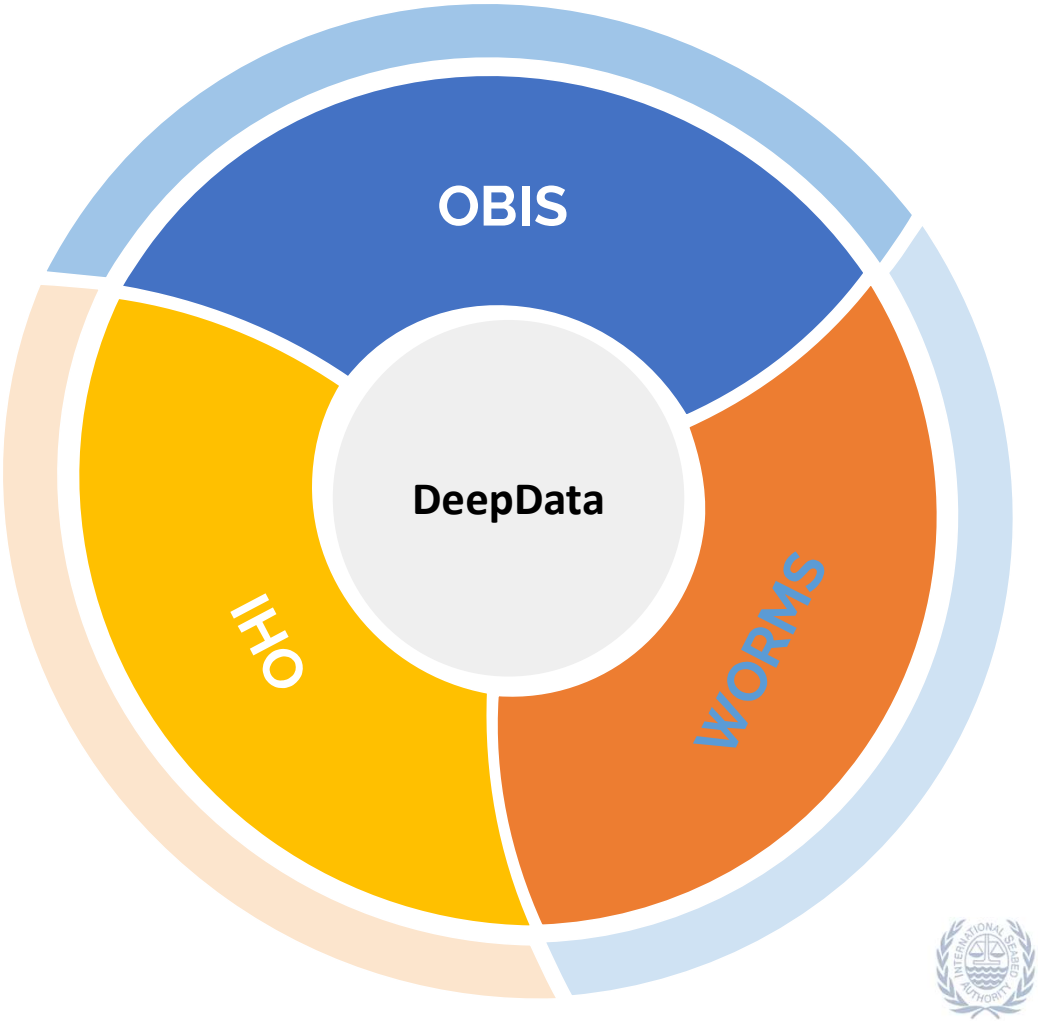


GIS In the Data Management Strategy

- Development of a GIS Data Policy
  - Standardized datum
  - Standardized projection
- Requesting that data providers follow ISO 19115, ISO 19139:Geographic Information Metadata standards
- Customized basemap to remove territorial boundaries and names
- Enabling the latest ESRI data visualization features in DeepData

Data Sharing Initiatives

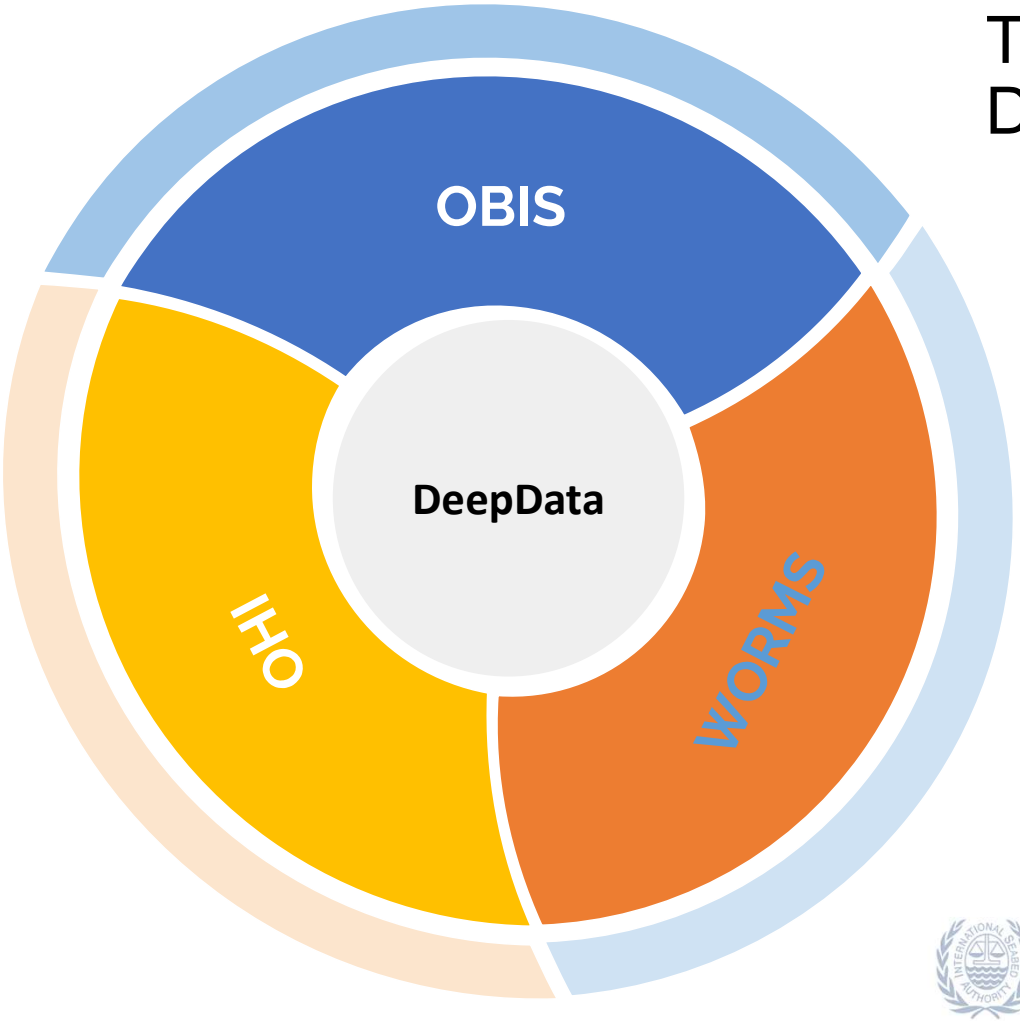
Data Sharing Initiatives



Data Sharing Initiatives

Strategic partnership to advance deep-sea taxonomic standardization

Developing taxonomic tools to standardize data exchange



Training for ISA Data providers

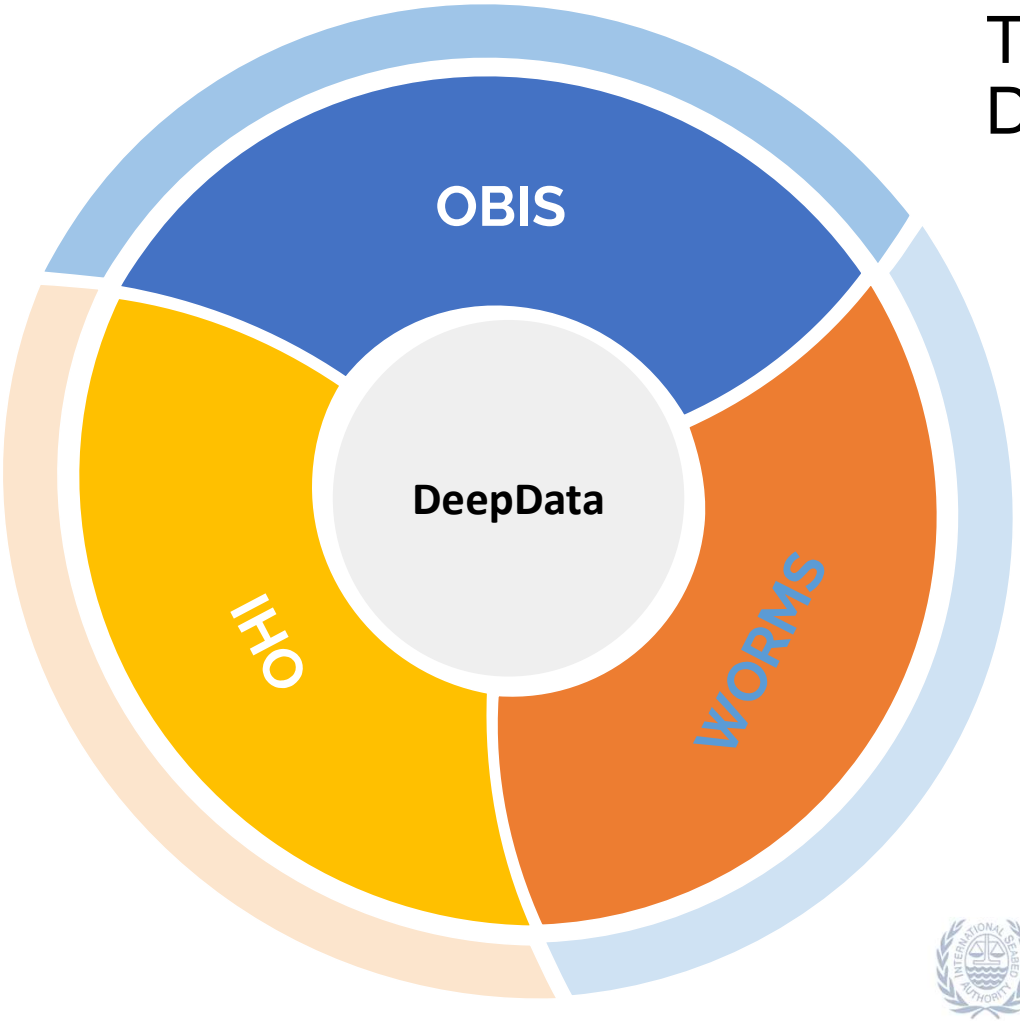
Advances policy making and increase public knowledge

Data Sharing Initiatives

On 8 Jun, 2021

ISA joined IODE network as a node for OBIS of IOC-UNESCO

Developing taxonomic tools to standardize data exchange



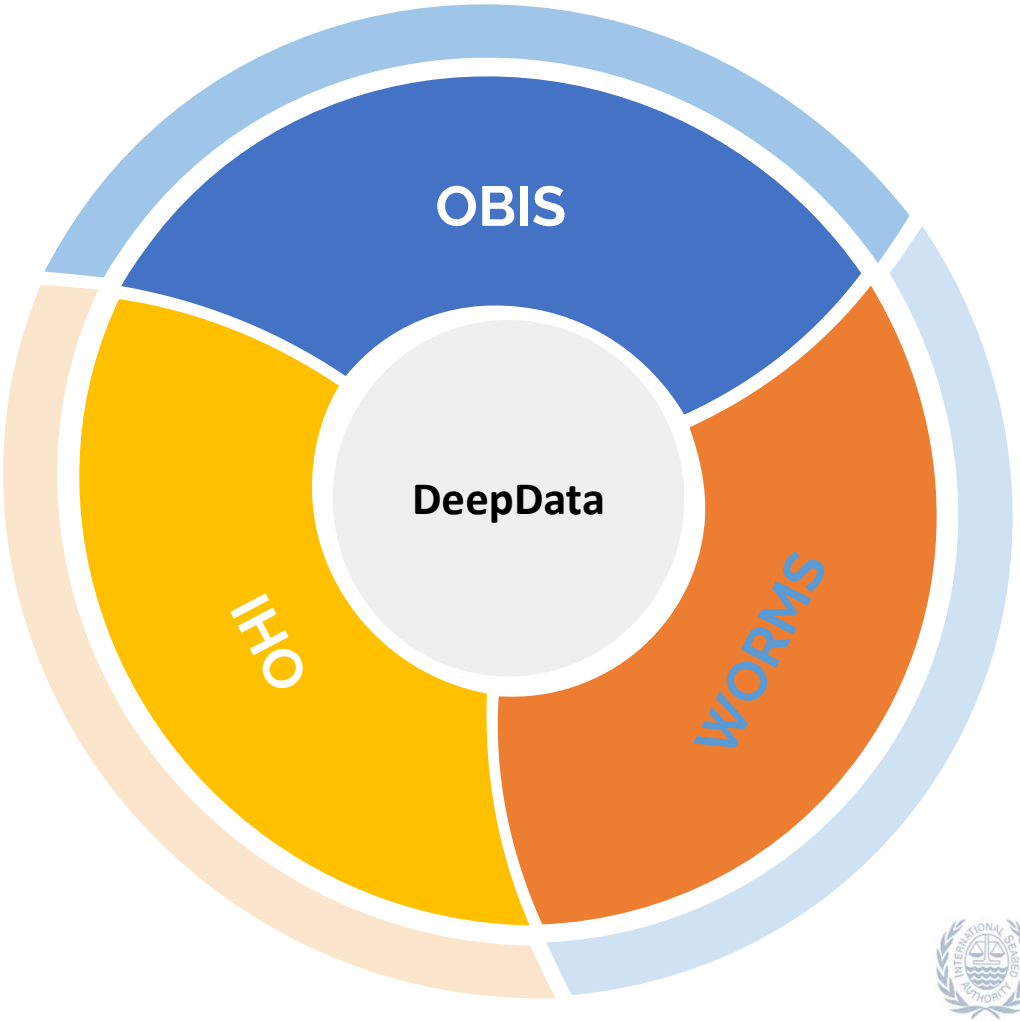
Training for ISA Data providers

Increases public access to georeferenced records of deep-sea species

Data Sharing Initiatives

ISA and IHO developed a partnership agreement for bathymetric data

ISA obtains permission from 8 contractors to share bathymetric data



Based on ISA regulations bathymetric data is classified as confidential

ISA and IHO will host a joint side event at world ocean conference to launch Area 2030

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