ISA DeepData - User Manual

Table of Contents

Introduction

Welcome to ISA DeepData - a comprehensive data management system for handling, visualizing, and analyzing deep-sea data. This user manual will guide you through the platform's features and show you how to effectively navigate, search for, and analyze data related to deep seabed exploration.

ISA DeepData has been developed to support the international community with open access to environmental data, geological information, and other resources collected from the deep seabed. The system is tailored to meet the needs of researchers, government officials, contractors, and other interested parties involved in deep-sea research and resource management.

Purpose and Scope

The International Seabed Authority (ISA) has implemented this Data Management System (DMS) to:

- Streamline receipt, storage, and access of seabed exploration data

- Enable efficient searching and retrieval of data through a web-based interface

- Provide standardized tools and procedures for data validation

- Support environmental monitoring and protection of marine ecosystems

- Facilitate transparency in deep seabed activities

Getting Started

Accessing the Platform

The ISA DeepData platform is accessible through a standard web browser at the official URL. No special software installation is required to use the basic features of the platform.

Language Selection

ISA DeepData supports multiple languages. You can change the language by clicking on the language selector in the top-right corner of the navigation bar. Available languages include English, French, Spanish, and others.

User Roles

The platform recognizes different user roles with varying levels of access:

- **Public User**: Can access public data only

- **Contractor**: Can upload data and access their own confidential data

- **LTC Member**: Can access all data, including confidential contractor data

- **Secretariat Data Manager**: Has administrative privileges for data management

Home Page

When you first access ISA DeepData, you'll see the home page featuring an oceanic video background with a welcome message. This serves as your primary portal to the platform, from which you can navigate to all other sections.

Main Navigation

The main navigation menu is accessible at the top of all pages and contains the following primary sections:

About

Contains information about ISA DeepData and its purpose:

- **About DeepData**: General information about the platform, its features, and capabilities

- **Mission**: Information about ISA DeepData's purpose, environmental objectives, and strategic goals

Map

An interactive map view of deep seabed areas and exploration contracts, allowing for spatial exploration of data.

Library

Access to documents, reports, and sample data:

- **Reports**: Documents and reports submitted by contractors

- **Samples**: Database of sample materials collected from the deep seabed

Gallery

A visual repository of photographs and videos from deep-sea explorations.

Documents

Access to technical documentation and user guides for ISA DeepData and related systems.

Map Interface

The Map Interface is a powerful interactive tool that allows you to explore deep seabed areas and exploration contracts visually.

Key Features

Map Navigation

- **Zoom Controls**: Use the mouse wheel to zoom in and out, or use the dedicated zoom buttons in the upper-left corner of the map

- **Pan**: Click and drag to move around the map

- **Reset View**: Click the home icon to return to the default map view

Filter Panel

Located on the left side of the map, this panel allows you to filter data by:

- **Mineral Type**: Filter by Polymetallic Nodules, Polymetallic Sulphides, or Cobalt-rich Ferromanganese Crusts

- **Contract Status**: Filter by Active, Expired, or Extended contracts

- **Location**: Filter by geographic area

- **Sponsoring State**: Filter by country sponsoring the contract

Search Functionality

- **Global Search**: Enter keywords to search for specific areas, contractors, blocks, or stations

- **Results Display**: Search results appear in a dropdown list with click-to-navigate functionality

- **Advanced Search**: Access detailed search options by clicking the advanced search button

Layer Controls

- **Base Maps**: Choose between different background maps (Topographic, Satellite, Ocean, etc.)

- **Data Layers**: Toggle visibility of different data layers such as:

  - Contract Areas

  - Exploration Blocks

  - Sampling Stations

  - Environmental Areas of Particular Environmental Interest (APEIs)

  - Exclusive Economic Zones (EEZs)

Information Display

- **Feature Click**: Click on any marker or area to view detailed information

- **Pop-up Windows**: Information appears in pop-up windows with tabs for different types of data

- **Related Data**: Access links to related reports, samples, and media from within pop-ups

How to Use the Map

1. **Navigate to the Map Page**: Click "Map" in the main menu

2. **Set Your Filters**: Use the filter panel on the left to narrow down information displayed on the map

3. **Explore Areas of Interest**: Zoom in to areas you want to investigate

4. **View Details**: Click on markers or areas to see detailed information

5. **Export Options**: Export map views or data as needed

Advanced Map Features

- **Measurement Tools**: Measure distances and areas on the map

- **Coordinate Display**: View coordinates at the current mouse position

- **Layer Transparency**: Adjust transparency of overlay layers

- **Legend Display**: View map legend showing symbology for all active layers

Note: When experiencing navigation issues on the map page, you may need to click directly on the links in the navigation menu to access other pages, as the map can sometimes capture mouse events intended for navigation.

Library

The Library section provides access to documents, reports, and other structured information.

File Repository

The File Repository contains reports and documents submitted by contractors and related entities.

File Types and Categories

- **Annual Reports**: Yearly reports submitted by contractors

- **Environmental Reports**: Environmental monitoring and assessment documents

- **Technical Reports**: Technical data and analysis documents

- **Maps and Spatial Data**: Geographic and spatial information

- **Regulatory Documents**: Documents related to regulations and compliance

Filtering Capabilities

- **Contractor**: Filter by company or organization

- **Country**: Filter by country of origin

- **Year**: Filter by publication year

- **Theme**: Filter by document type or theme

- **Search**: Full-text search across filenames and descriptions

Sorting and Display Options

- **Sort by Date**: View newest or oldest files first

- **Sort by Name**: Alphabetical sorting of filenames

- **Sort by Type**: Group similar document types together

- **Pagination**: Navigate through multiple pages of results

- **Items Per Page**: Adjust the number of items displayed per page

How to Use the File Repository

1. Navigate to the Library page by clicking on "Library" → "Reports" in the main menu

2. Use the filter panel on the left to narrow down the list of documents

3. Click on a file to view more information

4. Download the file by clicking on the download icon

5. Use the information icon to view additional metadata about each file

Sample Database

The Sample Database contains information about samples collected from the deep seabed.

Sample Types

- **Sediment Samples**: Seabed sediment materials

- **Water Samples**: Water column samples

- **Biological Samples**: Specimens of marine organisms

- **Geological Samples**: Rock and mineral samples

- **Core Samples**: Vertical core samples of seabed materials

Filtering Options

- **Sample Type**: Filter by type of sample material

- **Matrix Type**: Filter by material composition

- **Habitat Type**: Filter by environmental context

- **Analysis**: Filter by analytical methods applied

- **Search**: Free-text search across sample codes and descriptions

Column Customization

You can customize which columns are displayed in the sample table by selecting from the column options in the filter panel:

- **Sample Code**: Unique identifier for the sample

- **Sample Type**: Type of sample material

- **Matrix Type**: Material composition

- **Habitat Type**: Environmental context

- **Analysis**: Analytical methods applied

- **Result**: Analysis results

- **Description**: Sample description

How to Use the Sample Database

1. Navigate to the sample data page by clicking on "Library" → "Samples" in the main menu

2. Use the filter panel on the left to narrow down the sample list

3. Customize column display as needed

4. Sort the table by clicking on column headers

5. Adjust display preferences such as rows per page

Media Gallery

The Gallery page provides access to images and videos from deep-sea expeditions and research activities.

Gallery Features

Media Types

- **Images**: Photographs of seabed environments, organisms, and sampling activities

- **Videos**: Video recordings of deep-sea expeditions and observations

Filtering Capabilities

- **Media Type**: Filter between images and videos

- **Contractor**: Filter by contractor/organization

- **Cruise**: Filter by specific expedition

- **Station**: Filter by sampling station

- **Year**: Filter by year

- **Search**: Free-text search across filenames and descriptions

Gallery View

- **Thumbnail Grid**: View media items in a responsive grid layout

- **Pagination**: Navigate through multiple pages of media items

- **Sorting Options**: Sort by date, name, or relevance

Media Details

Clicking on a media item opens a detailed view with:

- Full-sized image or video player

- Detailed metadata (date, location, equipment specifications)

- Download options

- Related information (station, cruise, contractor)

- Geographic location (when available)

How to Use the Gallery

1. **Navigate to the Gallery**: Click "Gallery" in the main menu

2. **Apply Filters**: Use the filter panel on the left to narrow down the media selection

3. **Browse Content**: Scroll through the thumbnail grid

4. **View Details**: Click on an image or video to open the detailed view

5. **Interact with Media**:

   o Play videos with the built-in player

   o Zoom in on images

   o Download original files

   o View geographic location

   o Navigate to related media

Download Options

- **Individual Download**: Download single media items from the detail view

- **Batch Download**: Generate a CSV file with links to all media matching your current filters by clicking the "Download CSV" button in the filter panel

Document Center

The Document Center provides access to technical documentation and user guides for ISA DeepData and related systems.

Available Document Types

- User Manuals

- Technical Specifications

- Guidance Documents

- Policy Documents

- Scientific Reports

- Educational Materials

Document Organization

Documents are organized by:

- Category (Technical, Policy, Educational)

- Publication Date

- Target Audience (Researchers, Contractors, Public)

How to Access Documents

1. Navigate to the Documents page by clicking "Documents" in the main menu

2. Browse through the list of available documents

3. Click on the document you wish to view

4. Download or open the document directly in your browser

Document Features

- Preview functionality for PDFs

- Download options for offline viewing

- Search within documents

- Related document suggestions

Thematic Information Pages

ISA DeepData contains several informational pages about various topics related to deep seabed management.

Available Thematic Pages

Exploration Contracts

Information about deep-sea exploration contracts including:

- Types of exploration contracts (Polymetallic Nodules, Sulphides, Cobalt-rich Crusts)

- Contract requirements and processes

- Current exploration activities

- Statistics on active contracts

Marine Environmental Protection

Information about environmental protection measures including:

- Conservation approaches

- Environmental monitoring protocols

- Research on marine ecosystems

- Protection of biodiversity

Mining Code

Details about the regulatory framework for deep-sea mining:

- Regulations for exploration

- Draft exploitation regulations

- Environmental guidelines

- Compliance requirements

Strategic Plan

Information about ISA's strategic plan for deep seabed management:

- Strategic objectives

- Implementation approaches

- Regulatory development

- Environmental management

Workshops and Capacity Building

Information about training and capacity-building activities:

- Workshop programs

- Knowledge sharing initiatives

- Training opportunities

- Networking events

Navigating Thematic Pages

You can find these pages under the relevant sections in the main menu or via links on the home page.

Advanced Features

Data Export Options

- **CSV Export**: Export tabular data to CSV format

- **PDF Reports**: Generate PDF reports from selected data

- **Map Exports**: Export map views with selected layers

- **Metadata Export**: Export metadata in standardized formats

API Integration

For technical users, ISA DeepData offers API access to certain datasets:

- RESTful API endpoints for programmatic data access

- Documentation available in the Developer section

- Authentication requirements for accessing non-public data

Custom Filtering

- **Advanced Search**: Combine multiple search criteria

- **Query Building**: Create complex queries using the advanced search interface

- **Filter Saving**: Save frequently used filter combinations

Browser Compatibility

ISA DeepData is optimized for the following browsers:

- Google Chrome (recommended)

- Mozilla Firefox

- Microsoft Edge

- Safari

For the best experience, please ensure your browser is updated to the latest version.

Troubleshooting

Common Issues and Solutions

Navigation Problems

Issue: Unable to navigate away from the map page
Solution: Click directly on navigation links or refresh the page before attempting navigation

Filter Reset

Issue: Filters not resetting properly
Solution: Click the "Reset" button in the filter panel or refresh the page

Media Loading

Issue: Images or videos not loading in the gallery
Solution: Check your internet connection or try a different browser

Search Not Working

Issue: Search functionality not returning expected results
Solution: Try using broader search terms or check for typographical errors

Getting Help

If you encounter any issues not covered in this manual:

1. Check the FAQ section available in the Help menu

2. Contact ISA-support via the Contact form on the website

3. Email direct support at support@isa.org.jm

Browser Recommendations

For optimal performance, we recommend:

- Using an up-to-date version of Google Chrome or Mozilla Firefox

- Enabling JavaScript in your browser settings

- Setting screen resolution to at least 1366x768

- Ensuring a stable internet connection

Thank you for using ISA DeepData! This platform continues to evolve with new features and improvements. We welcome your feedback to help us enhance the user experience.