



Department for Continental Shelf,  
Maritime Zones Administration &  
Exploration

# Ocean Observatory E-platform

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17<sup>th</sup> SAIHC Conference


04/02/2021

# Organization

## Presentation

- ❖ Ocean Observatory E-platform
  - Governance
  - Technology
  - People
- ❖ Way Forward



A scenic landscape featuring a body of water in the foreground with a small boat. The background consists of rolling green hills and a prominent mountain peak under a blue sky with scattered white clouds. A semi-transparent black horizontal band is overlaid across the middle of the image, containing the word "Governance" in white text. A solid red vertical bar is positioned on the far left edge of the image.

# Governance

## The Department - Sectors

- ❖ Maritime Sovereignty & Territorial Integrity
- ❖ Seabed Exploration for Hydrocarbon & Minerals
- ❖ Maritime Zones Administration



## The Department - Sectors

- ❖ Maritime Sovereignty & Territorial Integrity
- ❖ Seabed Exploration for Hydrocarbon & Minerals
- ❖ **Maritime Zones Administration**

## Underwater Cultural Heritage

- Identification and mapping of underwater cultural heritage.

## Maritime Scientific Research

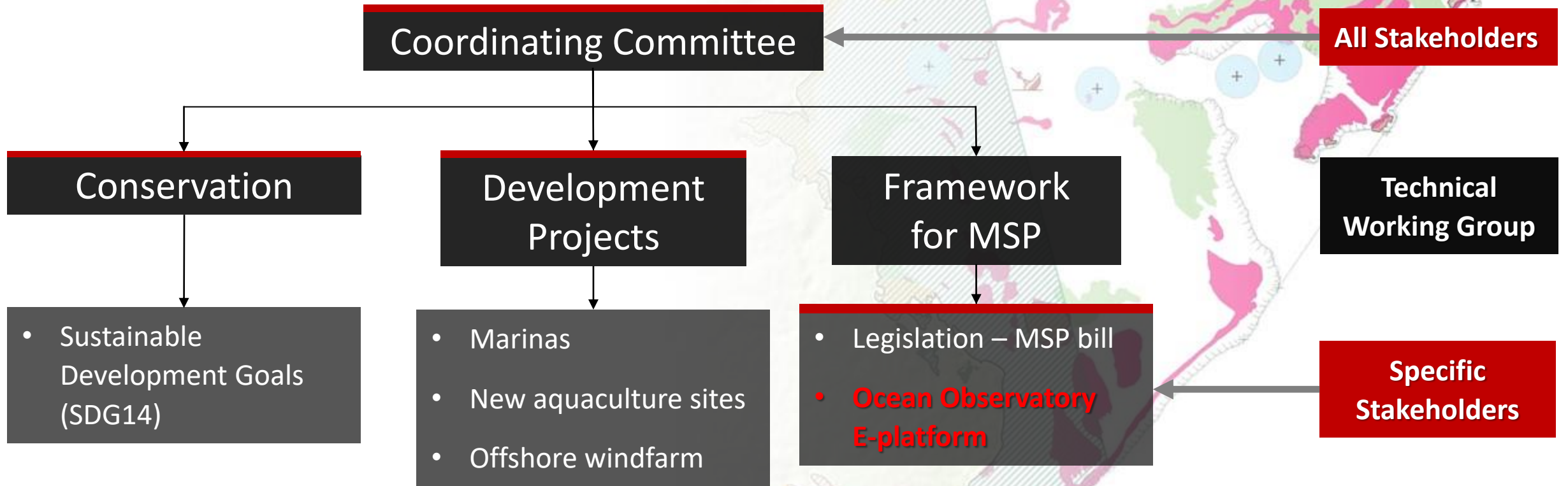
- Authorisation to conduct marine scientific research in the maritime zones of Mauritius under the Maritime Zones (Conduct of Marine Scientific Research) Regulations 2017.

## Marine Spatial Planning

- Mandated by Government to elaborate the marine spatial plan for the Republic of Mauritius in view of the increasing demand for marine space in the EEZ for various purposes, particularly, fisheries and aquaculture, tourism and leisure.



# Governance - MSP



# Importance of Data in the MSP Process

## Marine Spatial Planning

MSP is a process that brings together multiple users of the ocean to make informed and coordinated decisions on human activities to achieve environmental, social and economic objectives.

## Are there any Environmental Impacts?

- Are there any Marine Protected Areas?
- Are there any Environmentally Sensitive Areas?
- National Parks/ Reserves/Ramsar Sites

## Are there any Social Impacts?

- Are there any conflicts with existing ocean uses?
  - fishing? Dive sites? Tourism activities?
  - Cultural sites? E.g Ship wrecks
  - Boat Passage

## Are there any Economic Impacts?

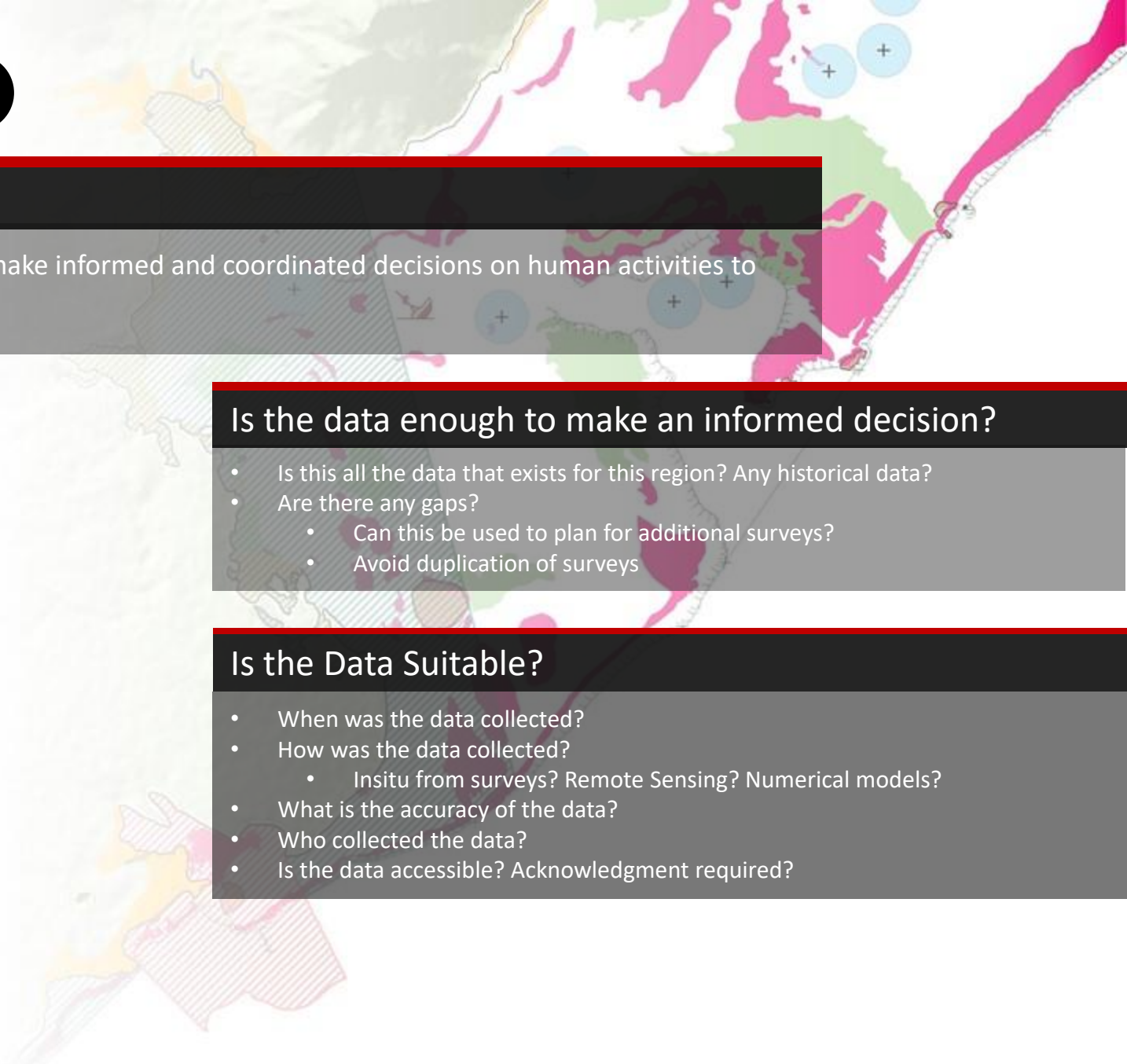
- Viability of a Project
  - Is it too far from the shore?
  - Is it at the required depth? Bathymetry required
  - What are the physical conditions required?
    - Hydrodynamic? Wave? Temperature? Wind?

## Is the data enough to make an informed decision?

- Is this all the data that exists for this region? Any historical data?
- Are there any gaps?
  - Can this be used to plan for additional surveys?
  - Avoid duplication of surveys

## Is the Data Suitable?

- When was the data collected?
- How was the data collected?
  - In situ from surveys? Remote Sensing? Numerical models?
- What is the accuracy of the data?
- Who collected the data?
- Is the data accessible? Acknowledgment required?



# Technology

## Republic of Mauritius - Ocean Observatory E-platform

### Need for a data system

- ❖ Collect
- ❖ Organize
- ❖ Store
- ❖ Share



# GeoNode

### GeoNode

- Marine Spatial Data Infrastructure (MSDI)
  - Browse and search for geospatial data and web services
  - Upload, manage, and share geospatial data
  - Create and share interactive maps
  - Collaborate and interact with other users





# GEONODE

## E-platform

Support: IORA & UNDP

Expertise: CSIRO, Australia

## Maintenance in 2020

Upgrade from GeoNode 2.8 to Geonode 3.0

## Access

Accessible on GINS (Government INtranet System)

<http://mauritiusoceanobservatory.govmu.org/>

The screenshot shows the Ocean Observatory E-platform interface. At the top, there is a navigation bar with the Ocean Observatory logo, a search bar, and an administrator dropdown. The main header reads "Republic of Mauritius - Ocean Observatory E-platform" and "Department for Continental Shelf, Maritime Zones Administration and Exploration". Below this, a welcome message states: "A platform for GIS data to support Marine Spatial Planning initiative for the Republic of Mauritius, including ocean exploration and sustainable development. Welcome to the Ocean Observatory E-platform. Please read these Terms of Use carefully as they contain important information about your rights and obligations when using the Ocean Observatory E-platform as well as when contributing data that could be distributed on the E-platform." A "Get Started" button is prominently displayed. The central area features a grid of icons representing various data categories: Maritime Boundaries, Ocean Uses, Physical Oceanography, Marine Biochemical, Marine Geology and Geophysical, Satellite Oceanography, and Marine Resources. Below this grid is a dark navigation bar with icons for "Explore Layers", "Explore Maps", "Create Map", and "Upload Data". The "Featured Datasets" section displays eight map thumbnails with titles such as "Relative Ecological...", "MSR - DR. FRIDTJOF...", "Nautical Charts", "Tourism Authority Re...", "Marine Protected Are...", "Maritime Zones of Th...", "ESA 2009 - Environme...", and "ESA 2009 - Environme...". The footer includes "Developers | About | Powered by GeoNode version 3.0.0" and a language dropdown set to "English".

# GEONODE – Terms of Use

## Terms of Use

- Gives the rights and obligations when using the Ocean Observatory E-platform.
- How personal data is handled.

## Registration as Data Controller

- Section 14 of the Data Protection Act 2017 (DPA) makes it a mandatory requirement for controllers to register with the Data Protection Office.

### Terms of Use

Please read these Terms of Use carefully as they contain important information about your rights and obligations when using the Ocean Observatory E-platform as well as when contributing data that could be distributed on the E-platform.

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#### 1. Introduction

1.1 The Department for Continental Shelf, Maritime Zones Administration & Exploration (hereafter "CSMZAE") operates under the aegis of the Prime Minister's Office – Rodrigues, Outer Islands and Territorial Integrity Division. Its mission is primarily to ensure the effective management of the maritime zones of the Republic of Mauritius and to delineate and establish its maritime zones in accordance with international laws and conventions.

1.2 CSMZAE has been mandated to elaborate the Marine Spatial Plan for the Exclusive Economic Zone (EEZ) of the Republic of Mauritius in view of the increasing demand for marine space in the EEZ for various purposes, particularly, fisheries and aquaculture, tourism and leisure.

#### 2. Purpose

2.1 The Ocean Observatory E-platform (hereafter "E-platform") may be accessed at <http://mauritiusoceanobservatory.govmu.org>. The objective of the E-platform is to centralise data pertaining to the maritime zones of the Republic of Mauritius in order to facilitate data discovery and data sharing between researchers, partners and users involved in management, policy and planning. Each dataset in the E-platform can be shared publicly or restricted to allow access to only specific users. The E-platform also allows for creation of metadata, dataset overlays and map visualizations.



## Certificate of Registration as Controller

REGISTRATION NO. C 535

THIS IS TO CERTIFY THAT

DEPARTMENT FOR CONTINENTAL SHELF, MARITIME ZONES ADMINISTRATION & EXPLORATION

AS BEEN REGISTERED WITH THE DATA PROTECTION OFFICE

From 01 August 2020 to 31 July 2023

GIVEN UNDER MY HAND AND SEAL OF OFFICE IN MAURITIUS

16 October 2020

ON THIS DAY OF



D. MADHUB (MRS)  
DATA PROTECTION COMMISSIONER  
DATA PROTECTION OFFICE





# Technology

# GEONODE Functionalities - Users

To understand what users can do on the E-platform, you need to understand the different types of users and GeoNode functionalities.

## Unregistered users (anonymous)

An unregistered user is someone who is just visiting the site and is not logged in.

- Browse and search public data, maps and documents.
- View public data, maps and documents.
- View metadata of public data, maps and documents.
- Download data that has been released for download.

The screenshot shows the Ocean Observatory E-platform interface. At the top, there is a navigation bar with the Ocean Observatory logo, a search bar, and an administrator dropdown. The main header includes the title "Republic of Mauritius - Ocean Observatory E-platform" and the department name "Department for Continental Shelf, Maritime Zones Administration and Exploration". Below this is a welcome message and a "Get Started" button. The main content area features a grid of icons representing various data categories: Maritime Boundaries, Ocean Uses, Physical Oceanography, Marine Biochemical, Marine Geology and Geophysical, Satellite Oceanography, and Marine Resources. A secondary navigation bar contains icons for "Explore Layers", "Explore Maps", "Create Map", and "Upload Data". The "Featured Datasets" section displays a grid of eight map thumbnails with titles such as "RELATIVE ECOLOGICAL ...", "MSR - 'DR. FRIDTJOF ...", "NAUTICAL CHARTS", "TOURISM AUTHORITY RE...", "MARINE PROTECTED ARE...", "MARITIME ZONES OF TH...", "ESA 2009 - ENVIRONME...", and "ESA 2009 - ENVIRONME...". The footer includes a language dropdown set to "English" and a note "Powered by GeoNode version 3.0.0".



# GEONODE - Users

## Registered users (Superuser)

- System Administrator (CISD)
- Data Administrator (CSMZAE Staff)

## Registered users (Active users)

- Users with a registered account may have additional permissions or restrictions. An administrator/data owner assigns the permissions regarding actions a user can perform.

## Groups

- Registered users can belong to a group or groups and permissions can be assigned based on a group. All users in the group will inherit these permissions.

The screenshot displays the 'Ocean Observatory' website interface. At the top, there is a navigation bar with 'Data', 'Maps', and 'About' menus, a search bar, and an 'Administrator' dropdown. The main content area is titled 'Explore Groups' and features a 'Create a New Group' button. A search bar is present with a 'SEARCH' dropdown and a 'GROUP CATEGORIES' dropdown. The page shows a total of 18 groups. The first group listed is 'Mauritius Hydrographic Service' with 2 members and 1 manager, accompanied by its logo. Below it are four groups with placeholder images: 'Ministry of Tourism' (3 members, 1 manager), 'Beach Authority' (3 members, 1 manager), 'Fisheries Division' (3 members, 1 manager), and 'Prime Minister's Office' (3 members, 1 manager). The footer contains links for 'Developers' and 'About', a version number 'Powered by GeoNode version 3.0.0', and a language dropdown set to 'English'.

# GEONODE – Data Types

## 3 Main Data Types

- Layers
- Services
- Documents

The screenshot shows the Ocean Observatory E-platform website. The header includes the Ocean Observatory logo, navigation menus for Data, Maps, and About, a search bar, and a user profile for Ravi Runghen. The main content area features the title "Republic of Mauritius Ocean Observatory E-platform" and "Department for Continental Shelf, Maritime Zones Administration and Exploration". A description states: "A platform for GIS data to support Marine Spatial Planning initiative for the Republic of Mauritius, including ocean exploration and sustainable development." Below this is a "Get Started" button and a welcome message: "Welcome to the Ocean Observatory E-platform. Please read these Terms of Use carefully as they contain important information about your rights and obligations when using the Ocean Observatory E-platform as well as when contributing data that could be distributed on the E-platform." The footer displays seven categories with icons: Maritime Boundaries (scales), Ocean Uses (anchor), Physical Oceanography (water drop), Marine Biochemical (flask), Marine Geology and Geophysical (globe), Satellite Oceanography (Wi-Fi symbol), and Marine Resources (three dots).

# GEONODE – Layers

## 3 Main Data Types

- **Layers**
- Services
- Documents

## Layers

- Vector (ESRI Shape files – Points, lines, Polygons)
- Raster (GeoTIFF)

The screenshot displays the Ocean Observatory GeoNode interface. At the top, there is a navigation bar with the Ocean Observatory logo, menu items for Data, Maps, and About, a search bar, and a user profile for Ravi Runghen. Below the navigation bar, the main content area shows a list of 34 layers found. On the left side, there is a sidebar with a 'Selected Layers' section, a 'Create a Map' button, and a 'Filters' section. The filters include TEXT, KEYWORDS, THESAURUS: INSPIRE, TYPE (with sub-items for Raster Layer (1), Vector Layers (25), and Remote Layers (8)), CATEGORIES, RESPONSIBLES, DATE, REGIONS, and EXTENT. The main list of layers includes:

- MARITIME BOUNDARIES**: Joint Management Area (JMA). Description: In March 2011, the United Nations Commission on the Limits of the Continental Shelf agreed to the Joint Submission made by Mauritius and Seychelles over an Extended Continental Shelf area beyond their respective EEZ. The JMA is established in respect of the Joint Zone described in Article 2 of the T... Metadata: Administrator, 16 Oct 2020, 143 views, Create a Map.
- SATELLITE OCEANOGRAPHY DATA**: Chlorophyll a (chlor\_a). Status: PENDING APPROVAL. Description: Test case - The near-surface concentration of chlorophyll-a (chlor\_a) in mg m-3 for January 2005. Metadata: Ravi Runghen, 16 Oct 2020, 0 views, Create a Map.
- MARINE RESOURCES**: English Bay Marine Reserve - Rodrigues. Description: The layer shows the description of boundaries of English Bay Marine Reserve (Marine Protected Area) in Rodrigues. As prescribed in the Rodrigues Regional Assembly (Fisheries and Marine Resources - Marine Reserves) Regulations 2007 (Rodrigues GN No. 2 of 2007), no person shall carry out any fishing a... Metadata: Administrator, 16 Oct 2020, 50 views, Create a Map.
- MARINE RESOURCES**: Grand Bassin Marine Reserve- Rodrigues Regional Assembly. Description: The layer shows the description of boundaries of Grand Bassin Marine Reserve (Marine Protected Area) in Rodrigues. As prescribed in the Rodrigues Regional Assembly (Fisheries and Marine Resources- Marine Reserves) Regulations 2007 (Rodrigues GN No. 2 of 2007), no person shall carry out any fishing a... Metadata: Administrator, 16 Oct 2020, 24 views, Create a Map.

At the bottom of the interface, there is a footer with links for Developers and About, a note 'Powered by GeoNode version 3.0.0', and a language dropdown menu set to English.

# Remote Services

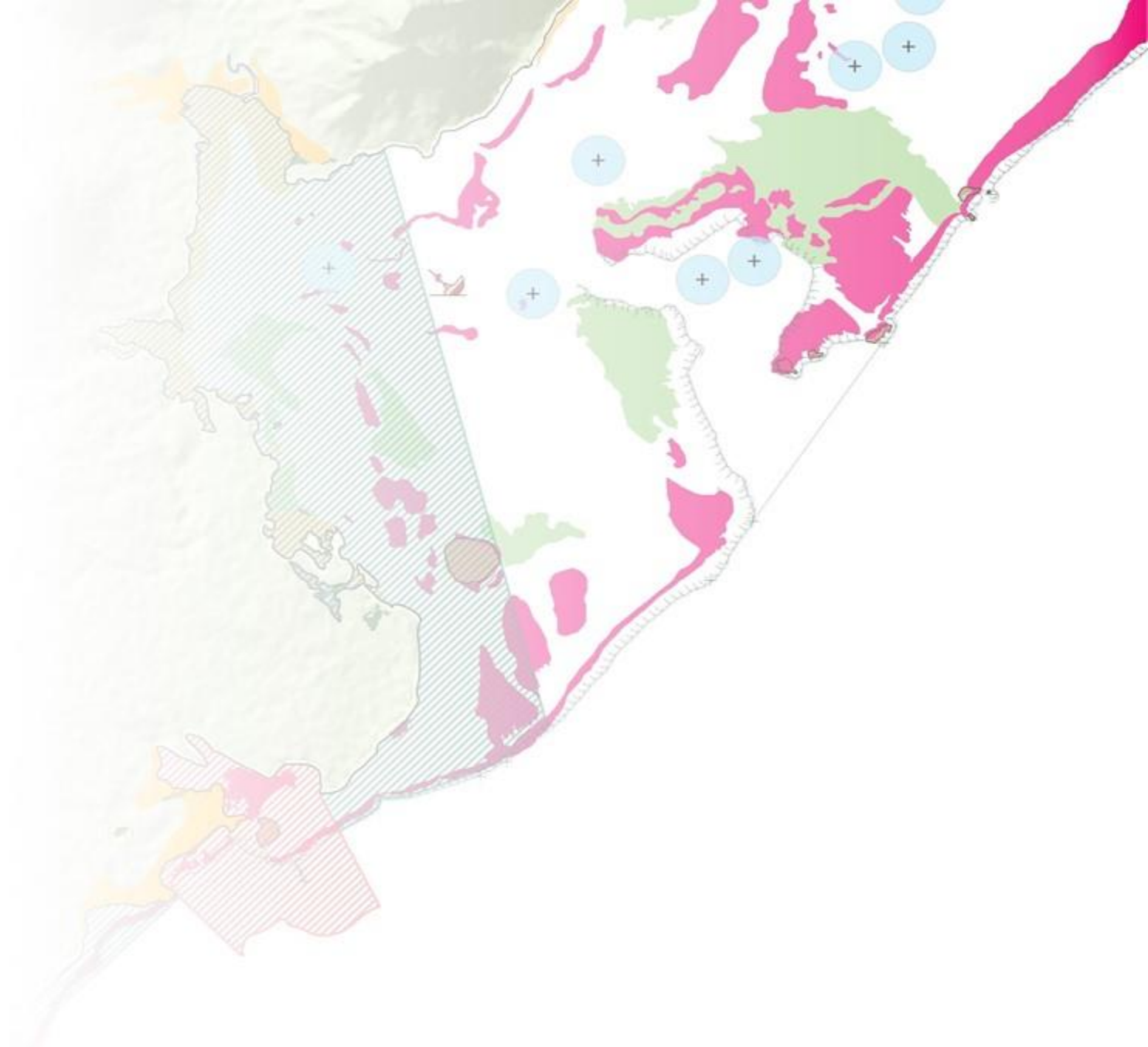
WFS (Web Feature Service) and WMS (Web Map Service) are Open Geospatial Consortium (OGC) Open Web Services standards for accessing geographic data over a network.

## Web Mapping Service (WMS)

- Delivers data as map images and does not allow you access to the individual features of a dataset.

## Web Feature Service (WFS)

- Provides direct access to the dataset which allows for the reading, writing, and editing of the data's features.





# GEONODE – Map creation

## Maps

- creation
- Visualization
- Save
- Share

The screenshot displays the Ocean Observatory Geonode interface. At the top, there is a navigation bar with the Ocean Observatory logo, menu options (Data, Maps, About), a search bar, and a user profile for Administrator. The main map area shows a topographic map of Belle Mare, Mauritius, with several layers overlaid: a large red area representing a prohibited zone for motorised crafts, a green area for a navigation channel and mooring zones, and numerous blue circular markers indicating embarkation points. A left sidebar contains a 'Filter layers' section and a list of layers, each with a '100%' zoom indicator. A right sidebar titled 'Catalog' lists the following layers:

- Embarkation Points of Pleasure Craft for Commercial Purposes**: The layer shows embarkation points of pleasure crafts for commercial purposes around Mauritius. The Tourism Authority (Designation and Regulation of Embarkation Points of Pleasure Craft for Commercial Purposes) Regulations 2017 (GN No. 251 of 2017) defines an embarkation point as a place specified in the second column of the Schedule and having the...
- Snorkelling Zone and Speed Limit Zones for Pleasure Craft in Belle Mare**: The layer shows the snorkelling and speed limit zones in Belle Mare. As prescribed in the Tourism Authority (Snorkelling Zone and Speed Limit Zones for Pleasure Craft) (Belle Mare) Regulations 2016 (GN No. 18 of 2016), no person shall operate a pleasure craft in the snorkelling zone at Trou Corne and pleasure crafts should not exceed a speed of 10 knots in the...
- Prohibited Zone for Motorised Crafts in Mon Choisy**: The layer shows prohibited zone for motorised crafts in Mon Choisy. As prescribed in the Tourism Authority (Prohibition of Activity) (Mon Choisy) Regulations 2016 (GN No. 148 of 2016), no person shall operate a motorised craft in the prohibited zone for motorised craft. For more information, please refer to the Tourism Authority (Prohibited Zone...
- Navigation Channel and Mooring Zones in Grande Rivière Noire**: The layer shows the navigation channel and two mooring zones in Grande Rivière Noire. As prescribed in the Tourism Authority (Prohibition of Activity) (Navigation Channel and Mooring Zones) (Grande Rivière Noire) Regulations 2012 (GN No. 212 of 2012), no person is allowed, in the Navigation Channel: (a) to moor a pleasure craft or fishing boat; and (b) to carry out any activity. A person may moor a pleasure craft or fishing boat in Mooring Zone 1 but mooring in...

At the bottom of the map, there is a scale bar and a page indicator showing 'Results 1-4 of 11'.



# GEONODE – Data types

## 3 Main Data Types

- Layers
- Services
- **Documents**

## Upload – Documents

- PDF
- Microsoft word, excel, PowerPoint
- JPEG
- Rar
- Links to websites

The screenshot displays the Ocean Observatory GeoNode interface. At the top, there is a navigation bar with the Ocean Observatory logo, menu items for Data, Maps, and About, a search bar, and a user profile for Ravi Runghen. The main content area shows a search for 28 documents. On the left, there are filter options: TEXT (selected), KEYWORDS, THESAURUS: INSPIRE, DOCUMENT TYPE (with sub-options for Document: 1, Images: 2, Presentations: 12), CATEGORIES, RESPONSIBLES, DATE, REGIONS, and EXTENT. The search results list several documents:

- LEGISLATION**: OCEAN USES. **Tourism Authority (Speed Limit and Prohibited Activity Zone for Pleasure Craft) (Trou d'Eau Douce) Regulations 2008 (GN No. 39 of 2008)**. Description: These Regulations prohibit the operation of pleasure crafts in a clearly demarcated zone between Ilot Mangementie and Ile aux Cerfs. A speed limit zone is also prescribed, within which pleasure crafts shall not exceed 10 knots. Metadata: Administrator, 4 Oct 2020, 1 view.
- LEGISLATION**: OCEAN USES. **Tourism Authority (Prohibited Zone for Motorised Crafts) (Pereybere) Regulations 2016 (GN No. 206 of 2016)**. Description: These Regulations demarcate areas of the sea in Pereybere wherein motorised crafts are not allowed to operate. Metadata: Administrator, 4 Oct 2020, 0 views.
- MARITIME BOUNDARIES**: **Maritime\_Zones\_EEZ\_relief.jpg**. No abstract provided. Metadata: Administrator, 25 Sep 2020, 2 views.
- CONVENTION**: MARITIME BOUNDARIES. **United Nations Convention on the Law of the Sea of 10 December 1982**. No abstract provided. Metadata: Hemanaden Runghen, 8 Sep 2020, 109 views.
- MARITIME BOUNDARIES**: **Maritime\_Zones\_EEZ.jpg**. No abstract provided.

At the bottom, there is a footer with links for Developers, About, and Powered by GeoNode version 3.0.0, along with a language dropdown menu set to English.

# GEONODE – Data types

## 3 Main Data Types

- Layers
- Services
- **Documents**

**Ocean Observatory** Data Maps About Search Administrator

### Navigation Channel and Mooring Zones in Grande Rivière Noire

Download Layer  
Metadata Detail  
Editing Tools  
View Layer  
Download Metadata

**Legend**  
TA\_GRN\_NavChnl\_MoorZon\_2012  
Mooring Zone 1  
Mooring Zone 2  
Navigational Channel

**Maps using this layer**  
List of maps using this layer:  
[Tourism Authority Regulatory boundaries](#)

**Create a map using this layer**  
Click the button below to generate a new map based on this layer.  
Create a Map

**Add the layer to an existing map**  
Relative Ecological Richness Map of Sou...  
Click the button below to add the layer to the selected map.  
Add to Map

**Documents related to this layer**  
List of documents related to this layer:  
[Tourism Authority \(Prohibition of Activity\) \(Navigation Channel and Mooring Zones\) \(Grande Rivière Noire\) Regulations 2012 \(GN No. 212 of 2012\)](#)

**Styles**  
The following styles are associated with this layer. Choose a style to view it in the preview map.  
 (default style) TA\_GRN\_NavChnl\_MoorZon\_2012

Info Attributes Favorite

**Title** Navigation Channel and Mooring Zones in Grande Rivière Noire  
**License** Not Specified  
**Abstract** The layer shows the navigation channel and two mooring zones in Grande Rivière Noire. As prescribed in the Tourism Authority (Prohibition of Activity)(Navigation Channel and Mooring Zones) (Grande Rivière Noire) Regulations 2012 (GN No. 212 of 2012), no person is allowed, in the Navigation Channel:  
(a) to moor a pleasure craft or fishing boat; and  
(b) to carry out any activity.  
  
A person may moor a pleasure craft or fishing boat in Mooring Zone 1 but mooring in Mooring Zone 2 is only permitted when the prevailing wind force is at least 24 knots.  
  
For more information, please refer to the Tourism Authority (Prohibition of Activity) (Navigation Channel and Mooring Zones) (Grande Rivière Noire) Regulations 2012 (GN No. 212 of 2012)

**Publication Date** Oct. 8, 2020, 4:12 p.m.  
**Type** Vector Data  
**Keywords** Mooring Zones , Navigation Channel , TA , Area management/restriction/regulation zones and reporting units  
**Category** Ocean Uses  
**Regions** Global , Mauritius  
**Responsible** admin

**More info** -  
[Layer WMS GetCapabilities document](#)

Developers | About | Powered by GeoNode version 3.0.0 English

# GEONODE - Metadata

## Definition

- Metadata is “Data about Data”
- When someone else goes to use your layer, map or document in the future, the metadata provides context and understanding of what the layer, map or document is for and where the data came from.

## Description

- Title
- Keywords
- Date type
- Category
- Regions
- Data quality statement
- Purpose
- Maintenance frequency
- Point of Contact
- Owner
- Metadata Author

## Metadata – ISO19115 - ISO19139 XML

Ocean Observatory Data Maps About Search Administrator

### Metadata for Joint Management Area (JMA)

Completeness: 83% (Check Schema mandatory fields)

Edit Preview Settings

Mandatory Mandatory Optional

- 1 Basic Metadata
- 2 Location and Licenses
- 3 Optional Metadata
- 4 Dataset Attributes

Thumbnail: Edit

Title: Joint Management Area (JMA)

Abstract: In March 2011, the United Nations Commission on the Limits of the Continental Shelf agreed to the Joint Submission made by Mauritius and Seychelles over an Extended Continental Shelf area beyond their respective EEZ. The JMA is established in respect of the Joint Zone described in Article 2 of

Free-text Keywords: JMA, Maritime zones, ECS

Keywords from Thesaurus: Area management/restriction/regulation zones and reporting, Sea regions

List of keywords from Thesaurus

Date type: Publication Date: 2020-10-16 11:2

Category: Maritime boundaries

Group: CSMZAE

Return to Layer Update Next >>

## Set Permissions

- Who can view it?
- Who can download it?
- Who can change metadata for it?
- Who can edit data for this layer?
- Who can edit styles for this layer?
- Who can manage it? (update, delete, change permissions, publish/unpublish it)

## • Permissions

Set permissions for this resource

Who can view it?

Anyone

The following users:

The following groups:

Tourism-Authority  CSMZAE

DoE  Fisheries-Division

Ministry-of-Housing-and-Lands

Beach-Authority

Prime-Ministers-Office

Administrator-CSMZAE

Ministry-of-Tourism  CISD

National-Coast-Guard

Who can download it?

Anyone

The following users:

The following groups:

CSMZAE

Who can change metadata for it?

The following users:

The following groups:

Administrator-CSMZAE

Who can edit data for this layer?

Who can edit styles for this layer?

Who can manage it? (update, delete, change permissions, publish/unpublish it)

Cancel Apply Changes

## Download Layer

Images Data

Do you want to filter it?

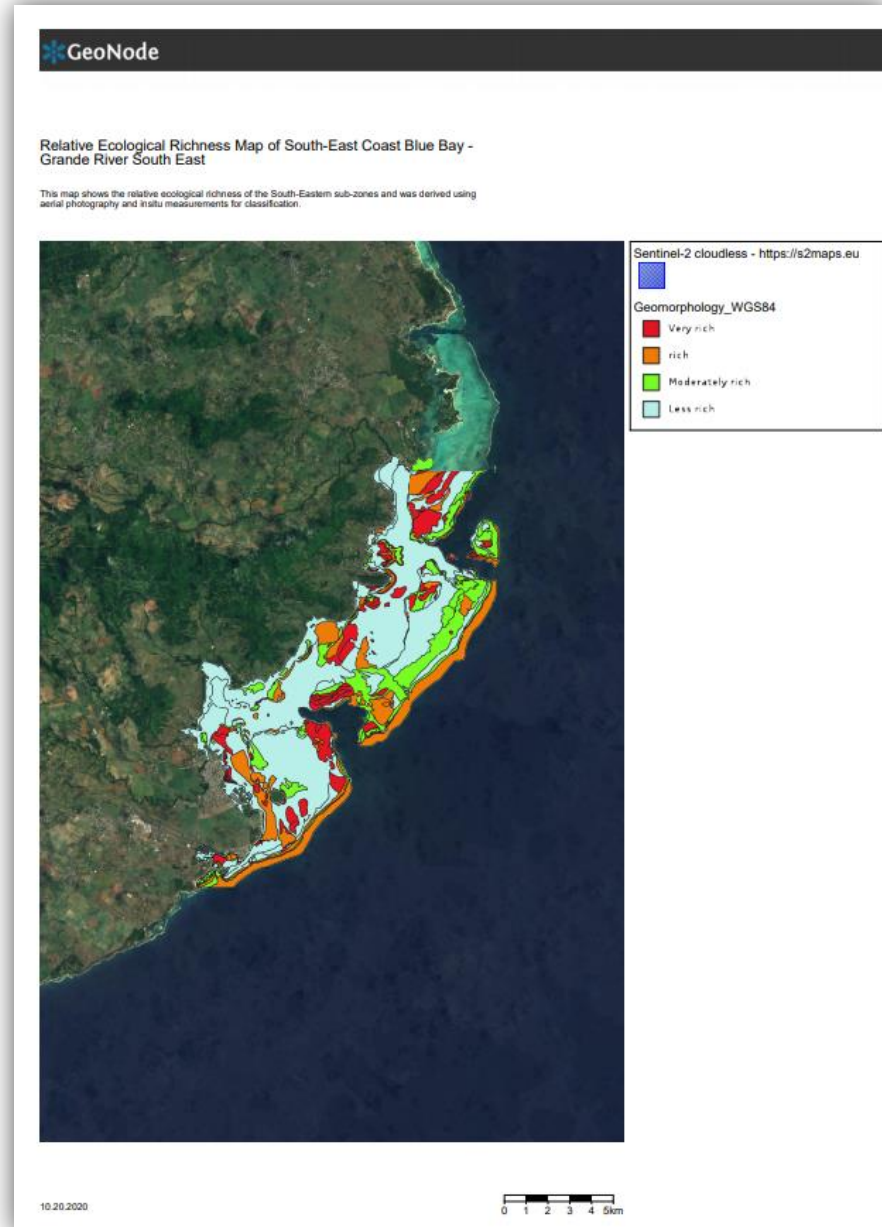
## Pick your download format:

[Zipped Shapefile](#)  
[GML 2.0](#)  
[GML 3.1.1](#)  
[CSV](#)  
[Excel](#)  
[GeoJSON](#)

Close

## Functionalities

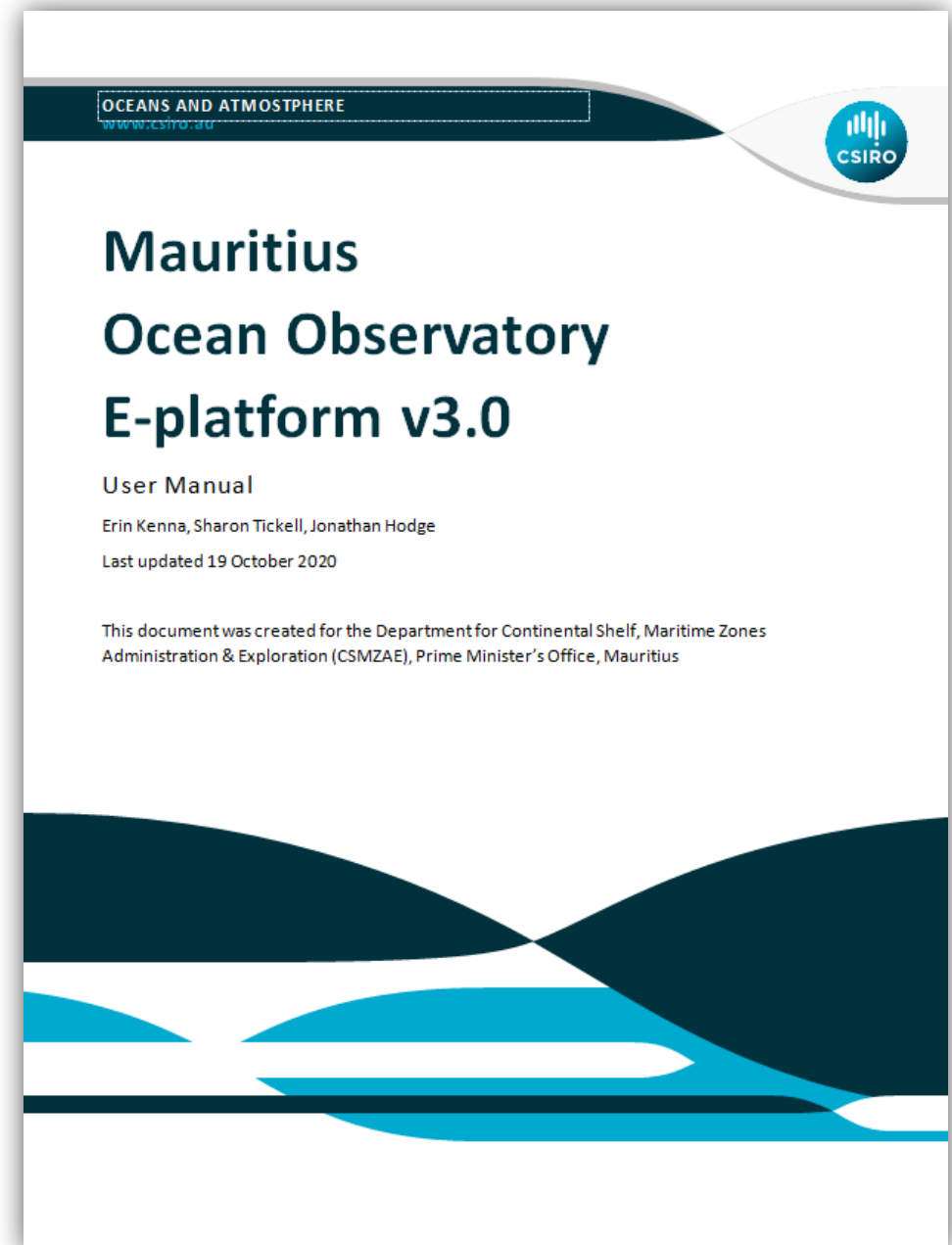
- Calculate distance , area, bearing
- Print



# GEONODE – User Manual

## User Manual - updating

- Explore layers/maps/documents
- Search layers/maps/documents
- Download layers/metadata/documents
- Create/Download Map
- Upload/Edit/Manage layers
- Share layers/maps /documents





# Data Layers & Documents



# Data categories



MARITIME BOUNDARIES



OCEAN USES



PHYSICAL OCEANOGRAPHY



MARINE BIOCHEMICAL



MARINE GEOLOGY AND  
GEOPHYSICAL



SATELLITE OCEANOGRAPHY



MARINE RESOURCES

# Data sources

## Maritime Boundaries

- Basepoints & baselines – MHL
- Maritime Zones – Territorial Sea/EEZ – CSMZAE
- Areas To Be Avoided – Shipping/MHS/CSMZAE

## Ocean Uses

- Swimming /Speed Limit / Snorkelling / Prohibition Zones / Navigation Channel - TA
- Port Limit – MPA
- Fish Farming Zones – Fisheries Division

## Physical Oceanography

- Tide Stations – MMS / University of Hawaii
- Wave buoys – CSMZAE, MMS
- CTD Stations – MHS , MSR
- ADCP - MSR

## Marine Biochemical

- Fluorescence - MSR

## Marine Geology & Geophysical

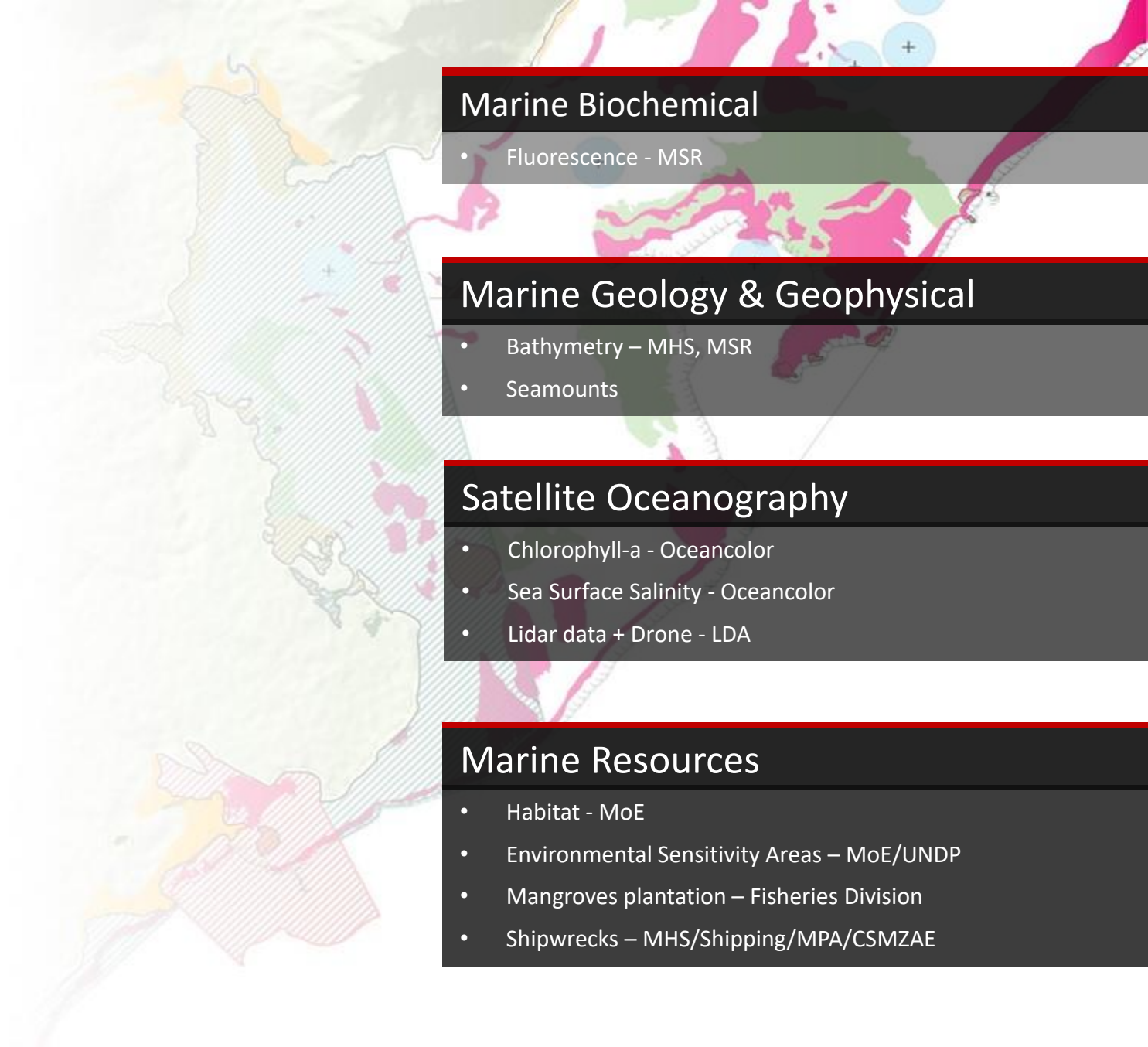
- Bathymetry – MHS, MSR
- Seamounts

## Satellite Oceanography

- Chlorophyll-a - Oceancolor
- Sea Surface Salinity - Oceancolor
- Lidar data + Drone - LDA

## Marine Resources

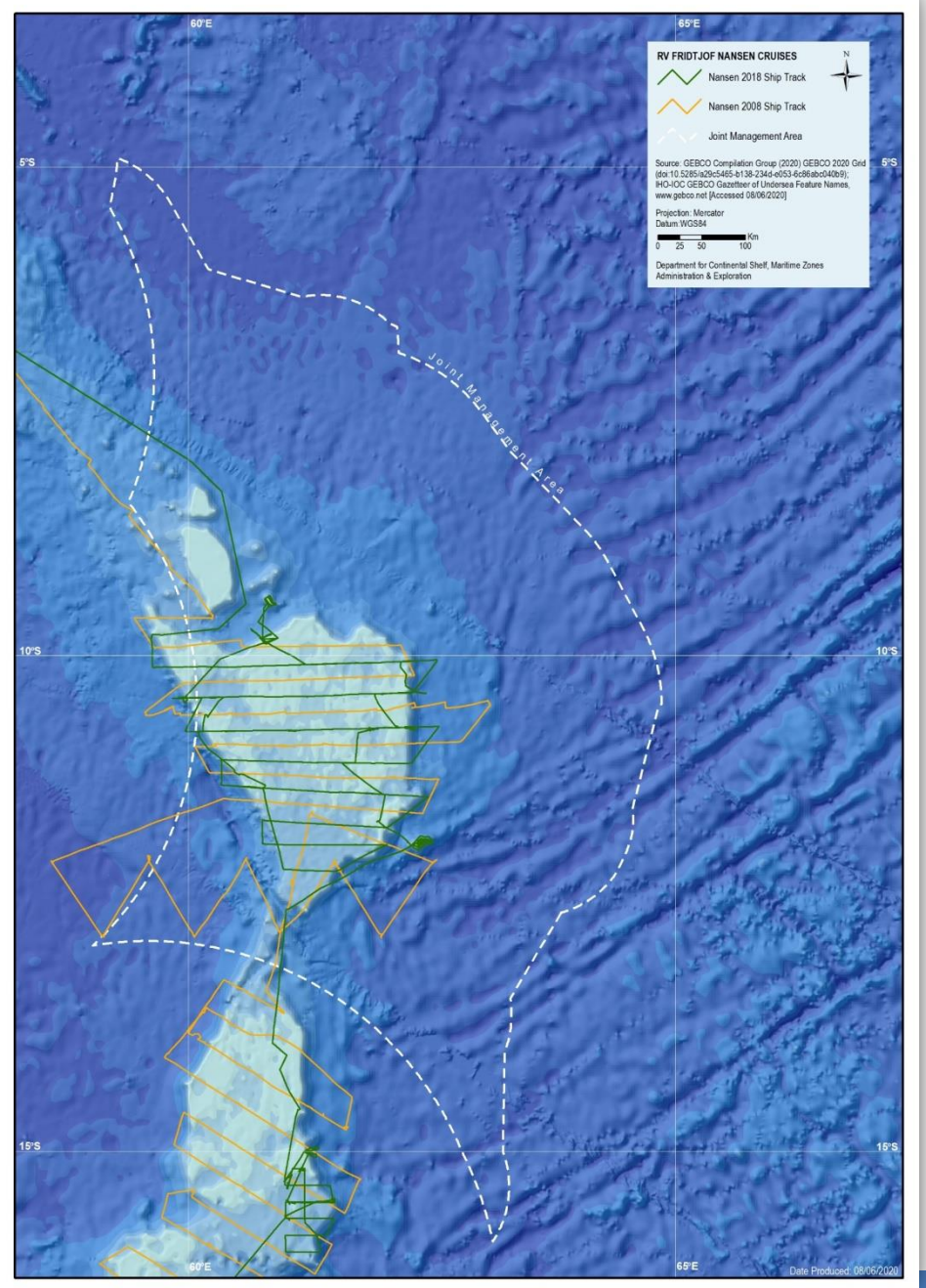
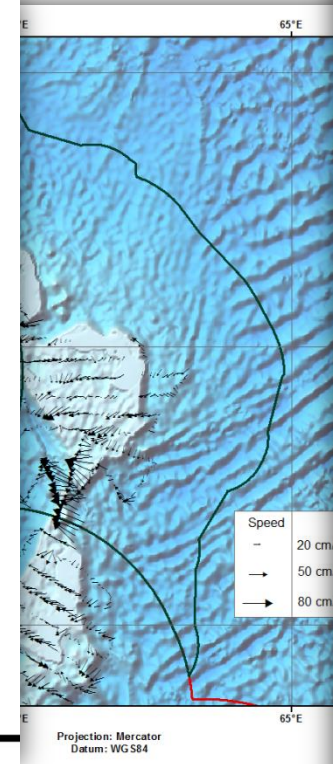
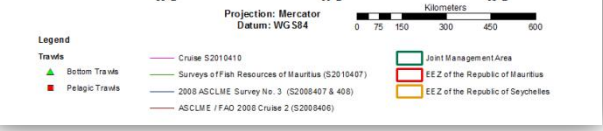
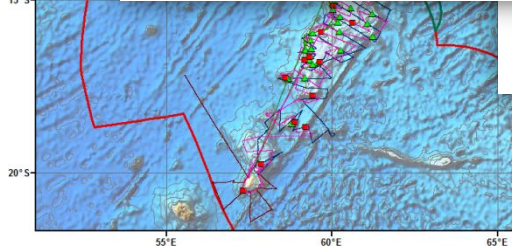
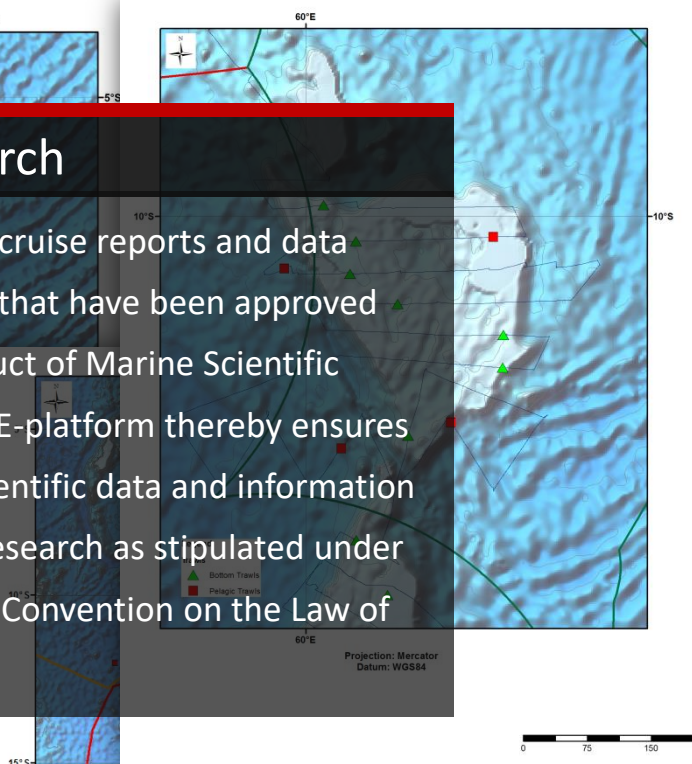
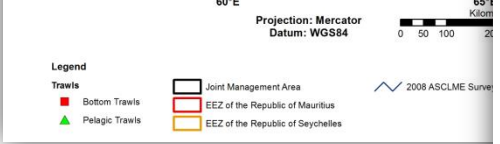
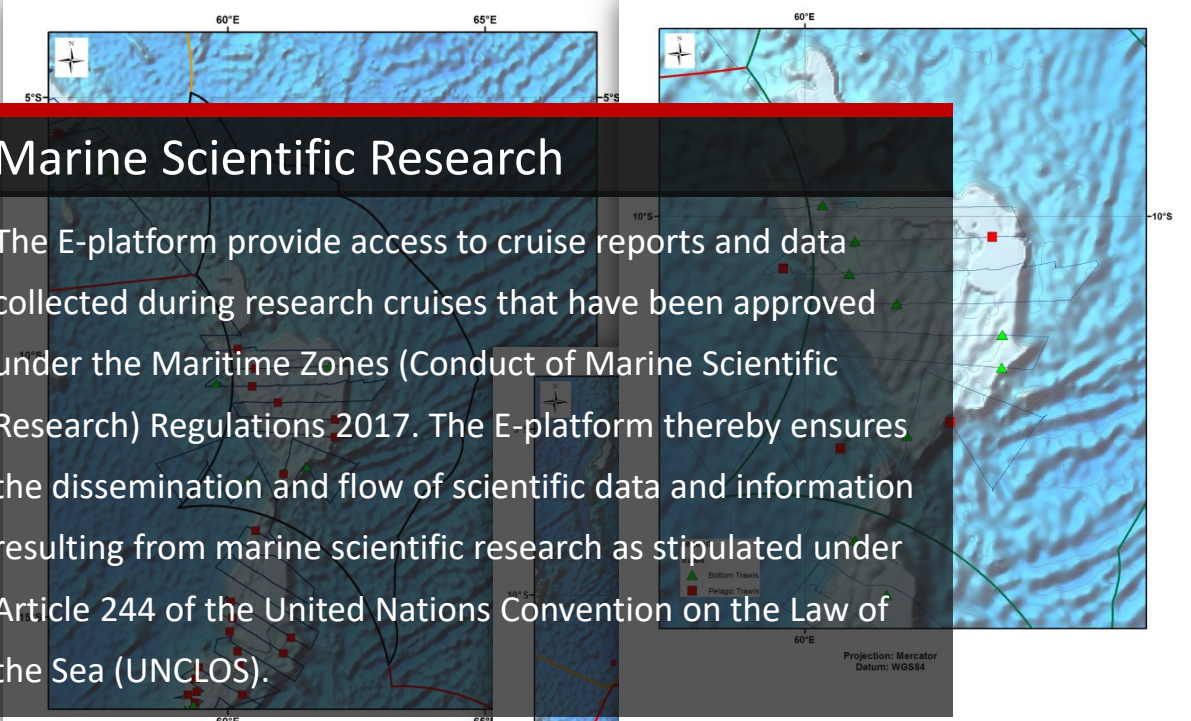
- Habitat - MoE
- Environmental Sensitivity Areas – MoE/UNDP
- Mangroves plantation – Fisheries Division
- Shipwrecks – MHS/Shipping/MPA/CSMZAE



# Data sources

## Marine Scientific Research

The E-platform provide access to cruise reports and data collected during research cruises that have been approved under the Maritime Zones (Conduct of Marine Scientific Research) Regulations 2017. The E-platform thereby ensures the dissemination and flow of scientific data and information resulting from marine scientific research as stipulated under Article 244 of the United Nations Convention on the Law of the Sea (UNCLOS).



# Marine Geology and Geophysical

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**Bathymetry - Canon Pass (Poste de Flacq)**

**Download Layer**

**Metadata Detail**

**View Layer**

**Download Metadata**

**Legend**  
CANON PASS Footprint  
■ Bathymetry - Canon Pass

**Maps using this layer**  
This layer is not currently used in any maps.

**Create a map using this layer**  
Click the button below to generate a new map based on this layer.  
**Create a Map**

**Add the layer to an existing map**  
MSP 13/11/2020  
Click the button below to add the layer to the selected map.  
**Add to Map**

**Documents related to this layer**  
List of documents related to this layer:  
[Bathymetric survey report: Hydrographic Survey of Passes- Mainland Mauritius - Phase V](#)

**Styles**  
The following styles are associated with this layer.  
Choose a style to view it in the preview map.  
● (default style) CANON PASS Footprint

**About**

**Title** Bathymetry - Canon Pass (Poste de Flacq)  
**License** Not Specified  
**Abstract** The polygon shows the footprint of bathymetry survey coverage of Canon Pass (Poste de Flacq) in Mauritius. The survey (Phase V) was conducted by the Mauritius Hydrographic Service (MHS) in 2019 as per Order-1b, in accordance with SP-44 (5th edition) at 1:5,000 scale.  
For more information, see the accompanying report -HI/HU/06/2014-15-Phase V Canon Pass (Poste de Flacq).  
For access to the data, please contact the Mauritius Hydrographic Service under the Ministry of Housing and Land Use Planning.

**Publication Date** Jan. 25, 2021, midnight  
**Type** Vector Data  
**Keywords** Bathymetry, MHL, MHS, single-beam, Elevation  
**Category** Marine Geology and Geophysical Data  
**Regions** Mauritius  
**Responsible** admin

**Layer WMS GetCapabilities document**

Developers | Terms of Use | About | Powered by GeoNode version 3.0.0

**Metadata : Bathymetry - Canon Pass (Poste de Flacq)**

**Identification**

**Title** Bathymetry - Canon Pass (Poste de Flacq)  
**Abstract** The polygon shows the footprint of bathymetry survey coverage of Canon Pass (Poste de Flacq) in Mauritius. The survey (Phase V) was conducted by the Mauritius Hydrographic Service (MHS) in 2019 as per Order-1b, in accordance with SP-44 (5th edition) at 1:5,000 scale.  
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**Publication Date** Jan. 25, 2021, midnight  
**Type** Vector Data  
**Keywords** Bathymetry MHL MHS single-beam  
**Category** Marine Geology and Geophysical Data  
**Regions** Mauritius  
**Approved** Yes  
**Published** Yes  
**Featured** No  
**DOI** None

**Responsible**

**Name** Administrator (admin)  
**email** oceanobservatory@govmu.org  
**Position** System and data administrator  
**Organization** CSMZAE  
**Location** MUS  
**Voice** None  
**Fax** None  
**Keywords** administrator CSMZAE

**Extent** ---  
**System** EPSG:4326  
**Projection** 57.740786523124700  
**Projection x1** 57.76962932892900  
**Projection y0** -20.166305338985100  
**Projection y1** -20.146206047537700

**Frequency** Frequency Of Maintenance For The Data Is Not Known  
**Restrictions** This layer cannot be used without explicit approval from the Department for Continental Shelf, Maritime Zones Administration & Exploration. Please contact mza.administration@govmu.org. Credits should mention: Data obtained from the Mauritius Ocean Observatory E-platform [date accessed], Department for Continental Shelf, Maritime Zones Administration & Exploration.  
**Purpose** Based on requirements projected by stakeholders, the mouth of Canon Pass was surveyed till a depth of 16m. The aim of the survey was to delineate the pass.

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**HI/HU/06/2014-15-PHASE V  
CANON PASS (POSTE DE FLACQ)**

**MAURITIUS HYDROGRAPHIC SERVICE  
MINISTRY OF HOUSING & LAND USE PLANNING**

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Flic-en-Flac (resolution 3.8cm)

## Drone Data

- Aerial Imagery
- Digital Surface Model



Source: DAY Marine & Services Ltd

# Data Sources – Department of Environment

## Environmental Sensitivity Index - 2012

Shoreline ESI

**PLANNED**

## JICA Project - 2015

THE PROJECT FOR CAPACITY DEVELOPMENT ON COASTAL PROTECTION AND REHABILITATION IN THE REPUBLIC OF MAURITIUS

## ICZM Project - 2008

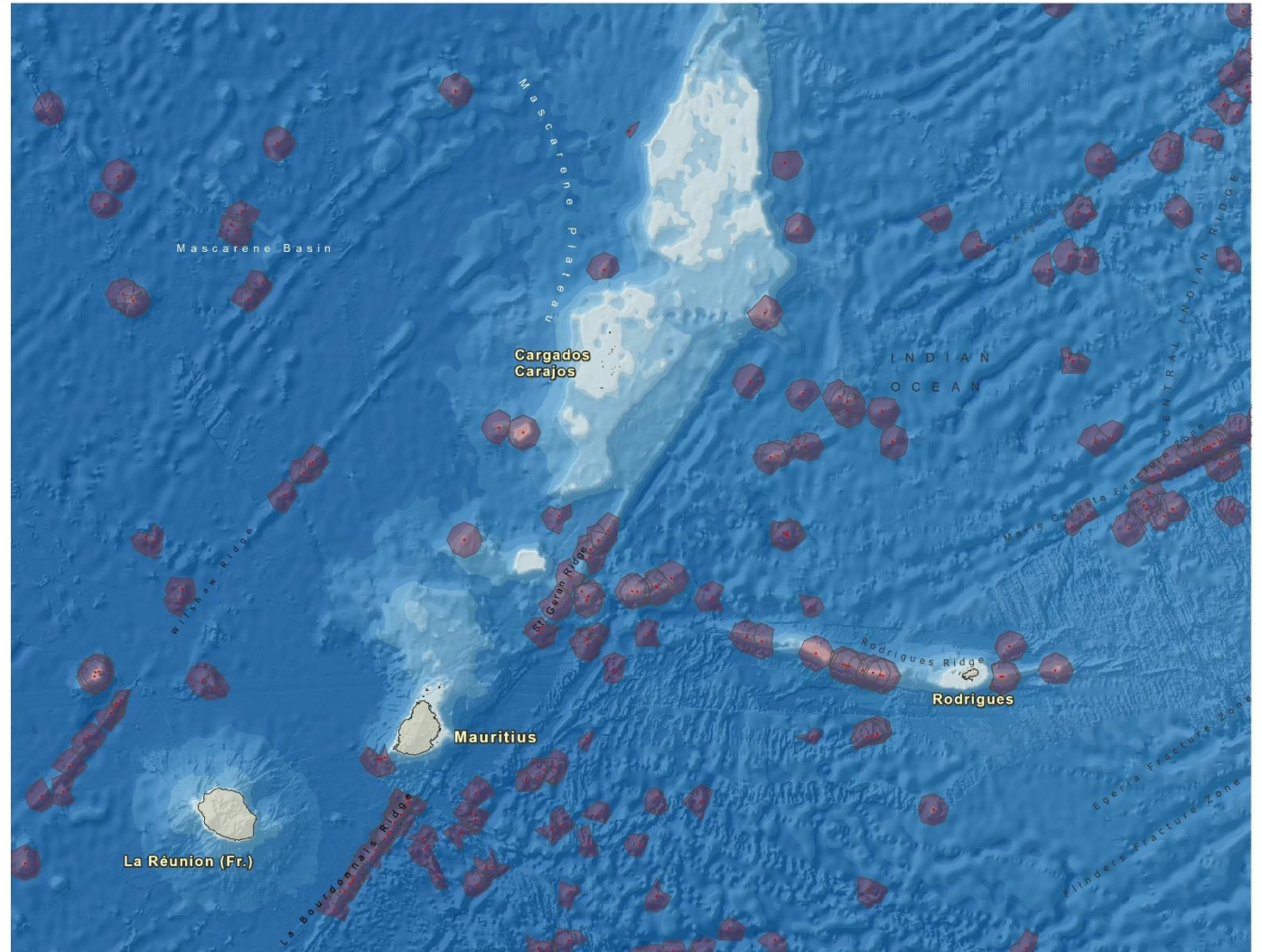
- Pressure Zones
- Macro Algae coverage
- Mangrove
- Marine Resource Inventory
- Fish Landing Sites
- Hotels
- Marine Protected Area
- Pas Geometrique
- FADS
- Water quality Sites
- Mangrove replanting sites
- Coral Reef Monitoring sites

- Pas Géométriques
- Pressure Zones
- Fish Landing Sites
- Fisheries Posts
- Marine Parks
- Nature Reserves
- Police Station
- Medical Facilities
- Birds
- Rain Gauges
- Public beaches
- Aerial Imagery (1967, 1991, 2008, 2012)
- Shoreline (1967, 1991, 2008, 2012)



# Data Sources – Global Database

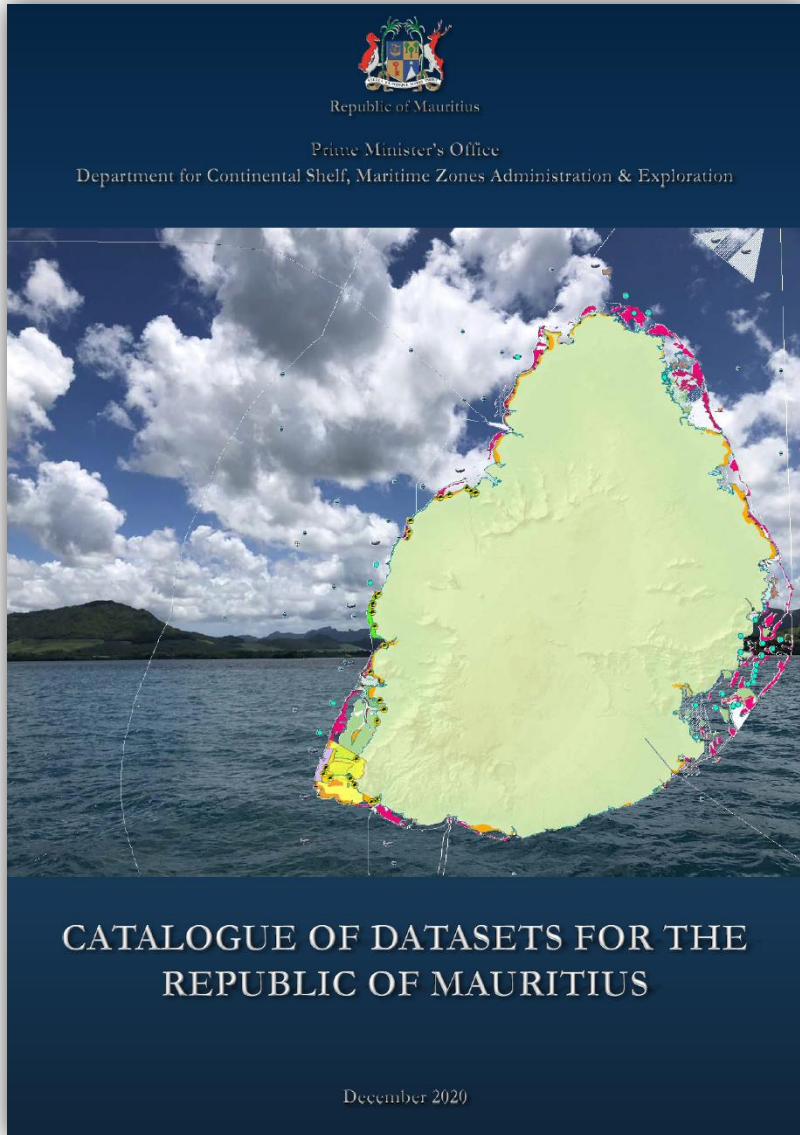
Online Databases	Description
OceanColor	Chla SST
Copernicus Marine Environment Monitoring Service	Temperature Salinity Sea surface height Current velocity Mixed layer thickness Wind Plankton Oxygen Nutrients Carbon Primary production Reflectance Turbidity Sea surface wave
ESA's Sentinel Online website	Multispectral SAR
United Nations Environment Programme	Seamount/Knolls Coral reef Whale Observations
GEBCO	Bathymetry
GSHHG	Shoreline
A Global Self-consistent, Hierarchical, High-resolution Geography Database	
NCEI Trackline/multibeam	Bathymetry



## Seamounts

Yesson, C., Clark, M. R., Taylor, M. L., & Rogers, A. D. (2011). The global distribution of seamounts based on 30 arc seconds bathymetry data. *Deep Sea Research Part I: Oceanographic Research Papers*, 58(4), 442–453. doi:10.1016/j.dsr.2011.02.004.

# Catalogue of Datasets for the Republic of Mauritius



## Catalogue - Format

- Resource abstract:
- Resource language:
- Keyword values:
- Variables available:
- Geographic location:
- Spatial resolution:
- Temporal extent:
- Temporal resolution:
- Depth range/resolution:
- Conditions for access & use:
- Limitations on public access:
- Responsible organization:
- Data via:
- Data format:
- References
- Additional information:



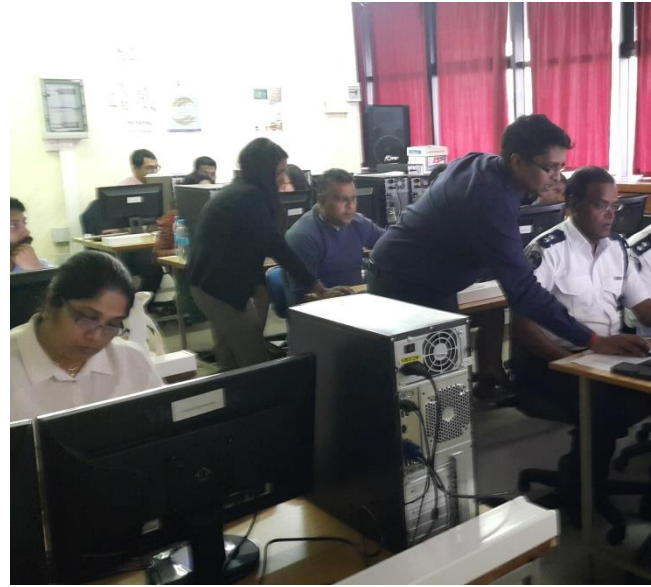


People

## Training for Administrators

- Deployment of the GeoNode software;
- Use of the GeoNode's Django Administration Panel.
- Configuration and customisation of the GeoNode installation;
- Management of the server, including basic troubleshooting and maintenance;
- Management of user accounts, including creation of user profiles;

# Capacity Building



## USERS

- 32 registered users

## End-User Training

- Albion Fisheries Research Centre
- Ministry of Tourism
- Tourism Authority
- Department of Environment (ICZM)
- Department of Environment (EIA)
- Department of Environment (Climate Change)
- Department of Environment (Policy)
- National Coast Guard
- Beach Authority
- Mauritius Meteorological Services
- CSMZAE

## Way Forward

- Provide public access to the E-platform
- Ingest historical data & Metadata
  - Different formats & projections
- Sharing
  - data submitted (Assigning permission)
  - big data (e.g lidar, high resolution imagery, bathymetry, ROV)



A scenic landscape featuring a body of water in the foreground with a small boat. The boat is light blue with a red and yellow stripe along the gunwale. A person is visible in the boat, and the boat is moving across the water, leaving a wake. In the background, there are dark, forested mountains under a bright blue sky with scattered white clouds. A semi-transparent black horizontal band is overlaid across the middle of the image, containing the text "Thank you".

Thank you