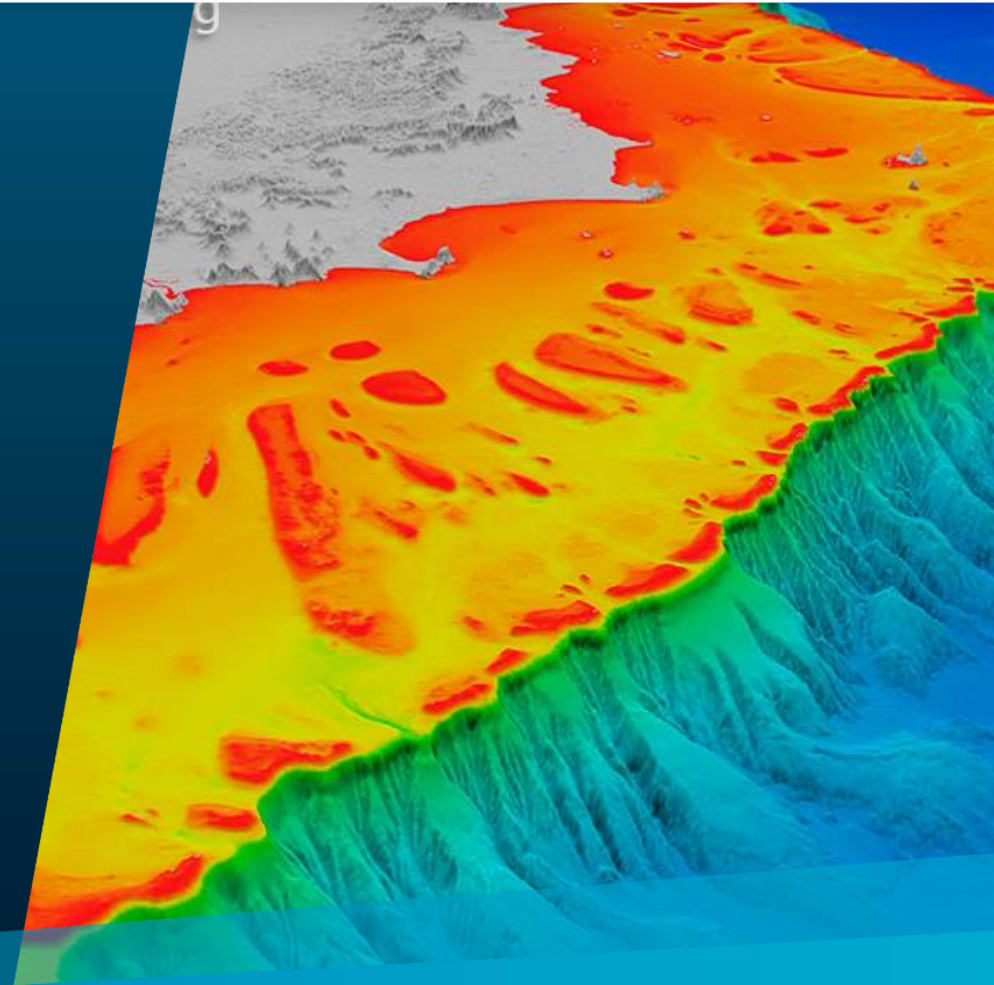


AusSeabed Marine Data Portal

<https://portal.ga.gov.au/persona/marine>


Maggie Tran | 25th June 2020



Background

- AusSeabed Marine Data Portal
 - Allow users to explore and download bathymetry data
- <https://Marine.ga.gov.au> decommissioned (GA-centric)
 - Unsupported AWS architecture, failing functionality
- Move to a new Portal (AusSeabed-centric)
 - AWS maintained, active development, leveraging off other GA programs
 - More collaboration
 - Different types of datasets available

Outline

- Portal Composition
 - Exploring the data
 - Tools available
 - Accessing the datasets
 - Limitations
 - Future
- 

Disclaimer

AusSeabed Marine Data Portal

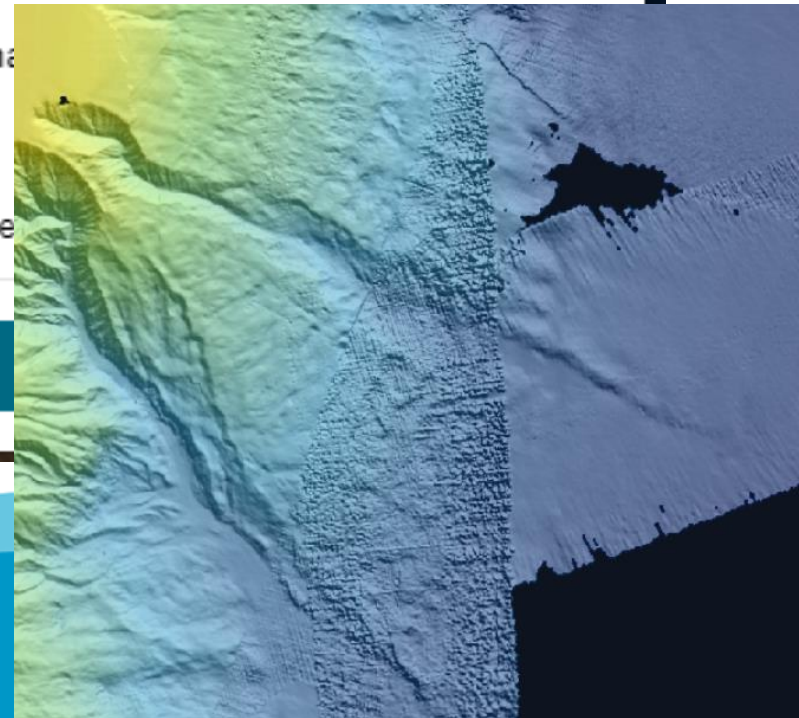
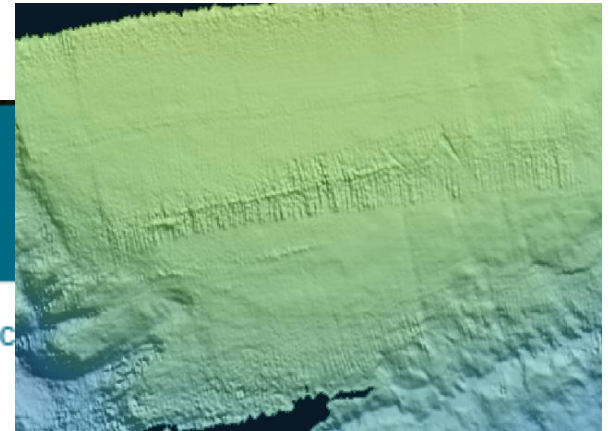
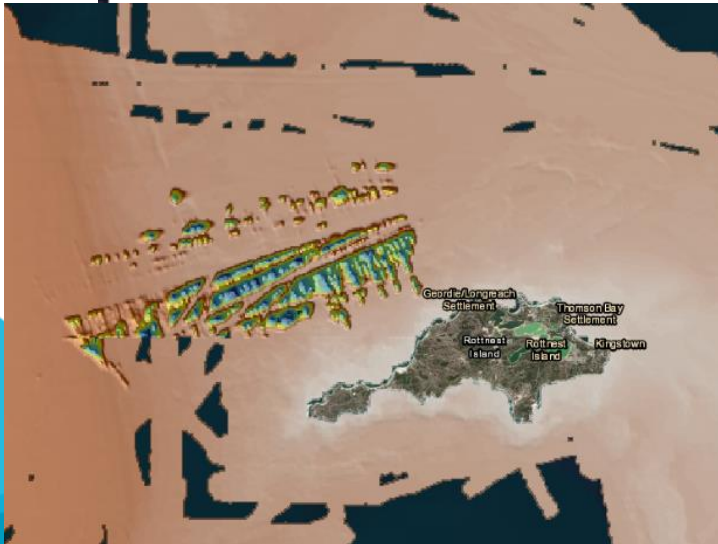
All bathymetry datasets within the portal are licensed under a [Creative Commons Attribution 4.0 International license](#).

Additionally:

1. The data sets are not suitable for use in marine navigation or in the creation of navigational products or any other purpose involving safety at sea.
2. Much of this data is published 'as supplied', and may include artefacts or unprocessed portions that do not accurately represent the seafloor environment.

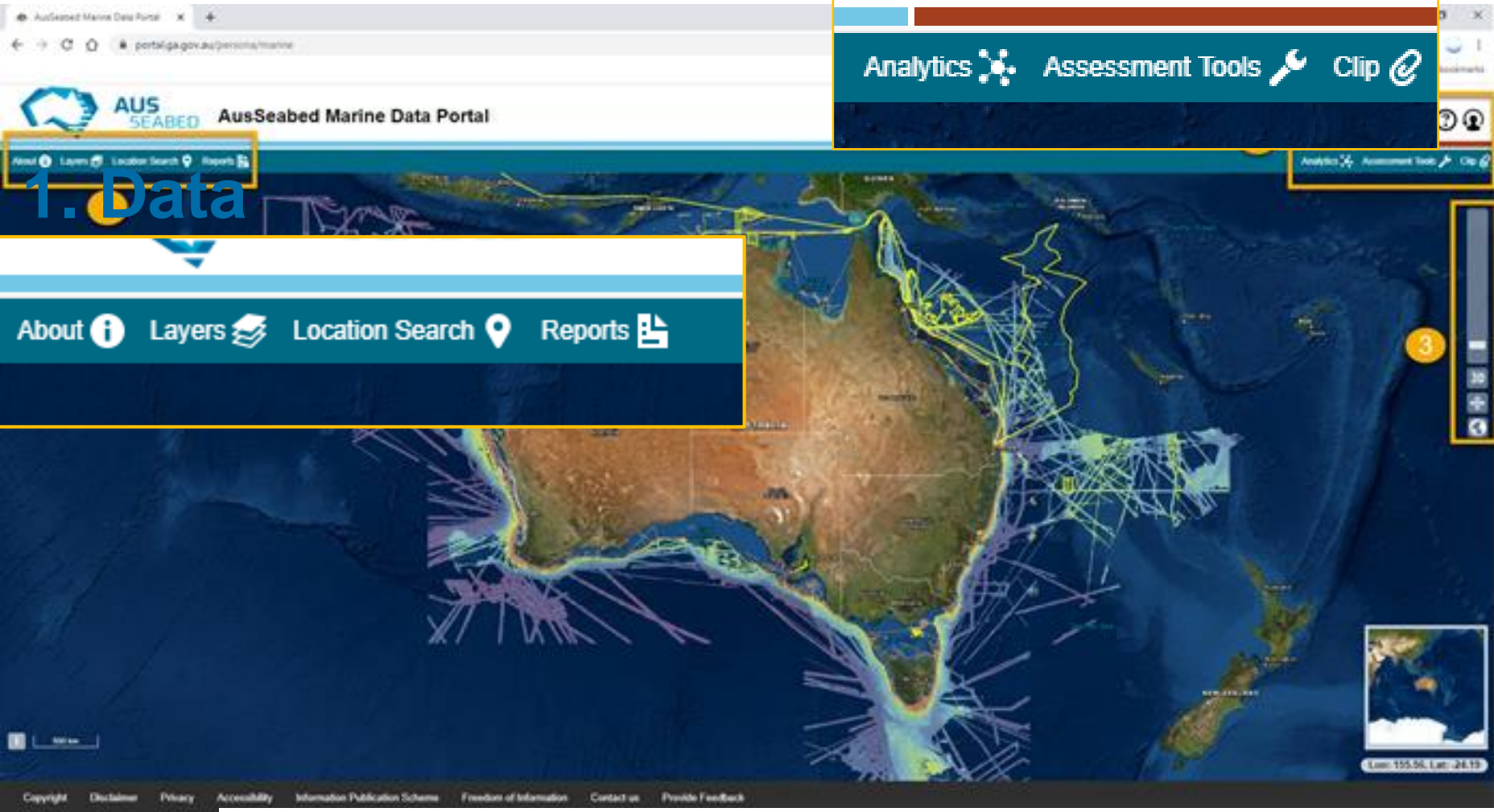
I acknowledge and agree to the terms and conditions stated above

Close



Portal Composition

2. Tools



1. Data

3. Navigation

Exploration of data



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AusSeabed Marine Data Portal

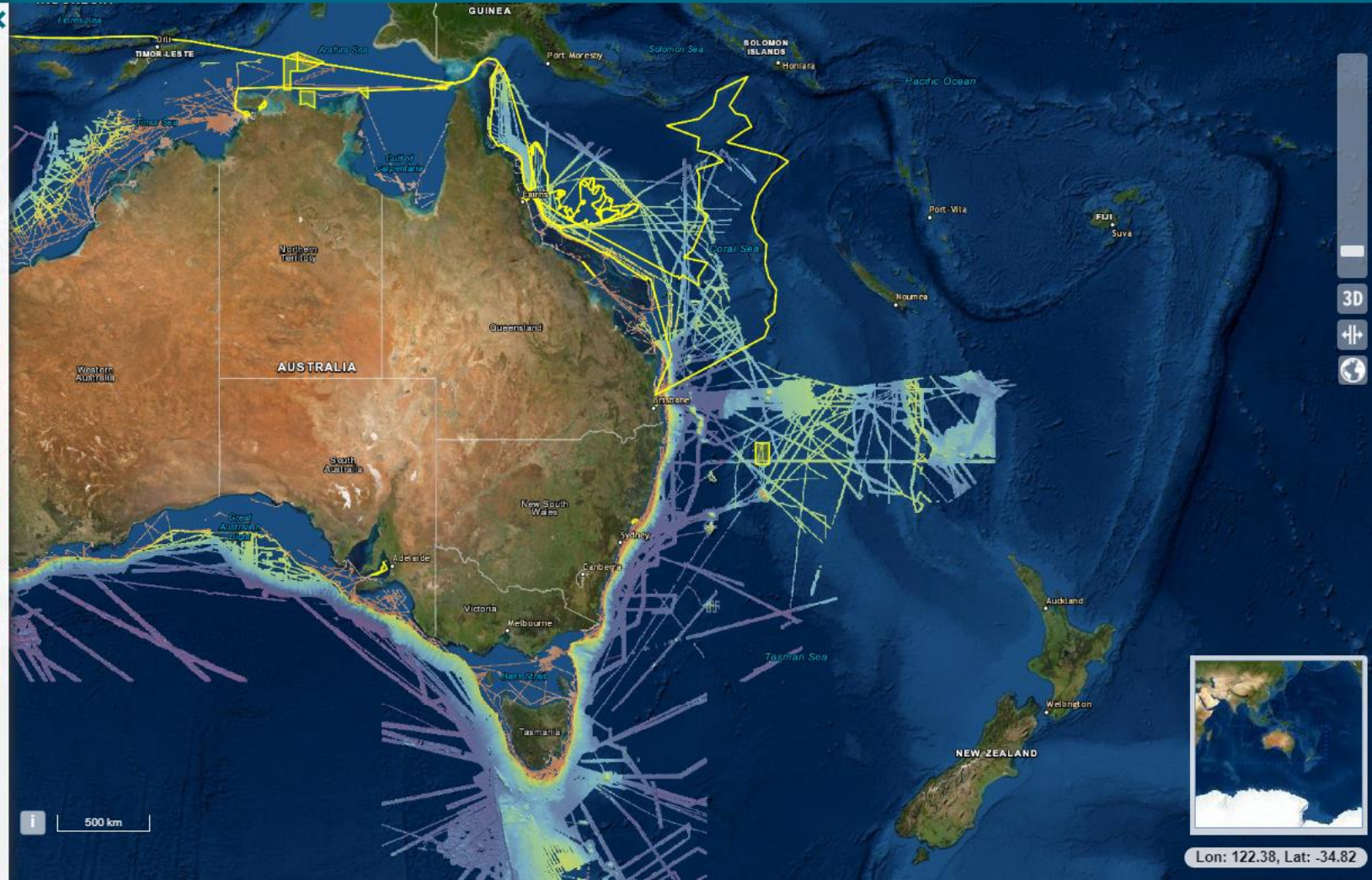


About **Layers** Location Search Reports

Analytics Assessment Tools Clip

Layers

- Base Layers
- All Layers
-
- AusSeabed Coordination
- Elevation and Depth
- Framework
- Geomorphology
- Geophysics
- Geophysical Archive Data Delivery System (GADDS)
- Sedimentology
- Tidal
- Water
- 3D Layers
- Custom Layers

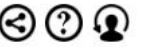


Adding and removing layers



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AusSeabed Marine Data Portal



About Layers Location Search Reports Analytics Assessment Tools Clip

1

Layers

Base Layers

All Layers

Search ...

AusSeabed Coordination

2 Elevation and Depth

3 Bathymetry - Compilations

Bremer Denmark Sub Basins Bathymetry 2019 20m

About Legend Filter Fit Extent Remove

Opacity 100%

This is a recent compilation of all the processed multibeam bathymetric data that Geoscience Australia holds in its database for the Bremer and Denmark Sub-Basins. The location of the sub-basin lies in deep water off the southwest margin of WA between Broke and Esperance in Southern Western Australia. This dataset is published with the permission of the CEO, Geoscience Australia. *Not to be used for navigational purposes.*

<http://pid.geoscience.gov.au/dataset/ga/132281>

Copy WMS link to clipboard

Bremer Denmark Sub Basins Bathymetry 2019 50m

Bremer Denmark Sub Basins Bathymetry 2019 100m

Bremer Marine Park Bathymetry 2018 20m

50 km

Lon: 118.28, Lat: -33.64

Adding and removing layers



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AusSeabed Marine Data Portal



About Layers Location Search Reports

Analytics Assessment Tools Clip

Layers

Base Layers >

All Layers v

Search ...

AusSeabed Coordination

AusSeabed Bathymetry Holdings (by survey)

About | Legend | Filter

AusSeabed Bathymetry Holdings (compilations)

National priorities

Upcoming Surveys (beta)

Elevation and Depth

Framework

Geomorphology

Geophysics

Geophysical Archive Data Delivery System (GADDS)

Sedimentology

Tidal

Water

3D Layers

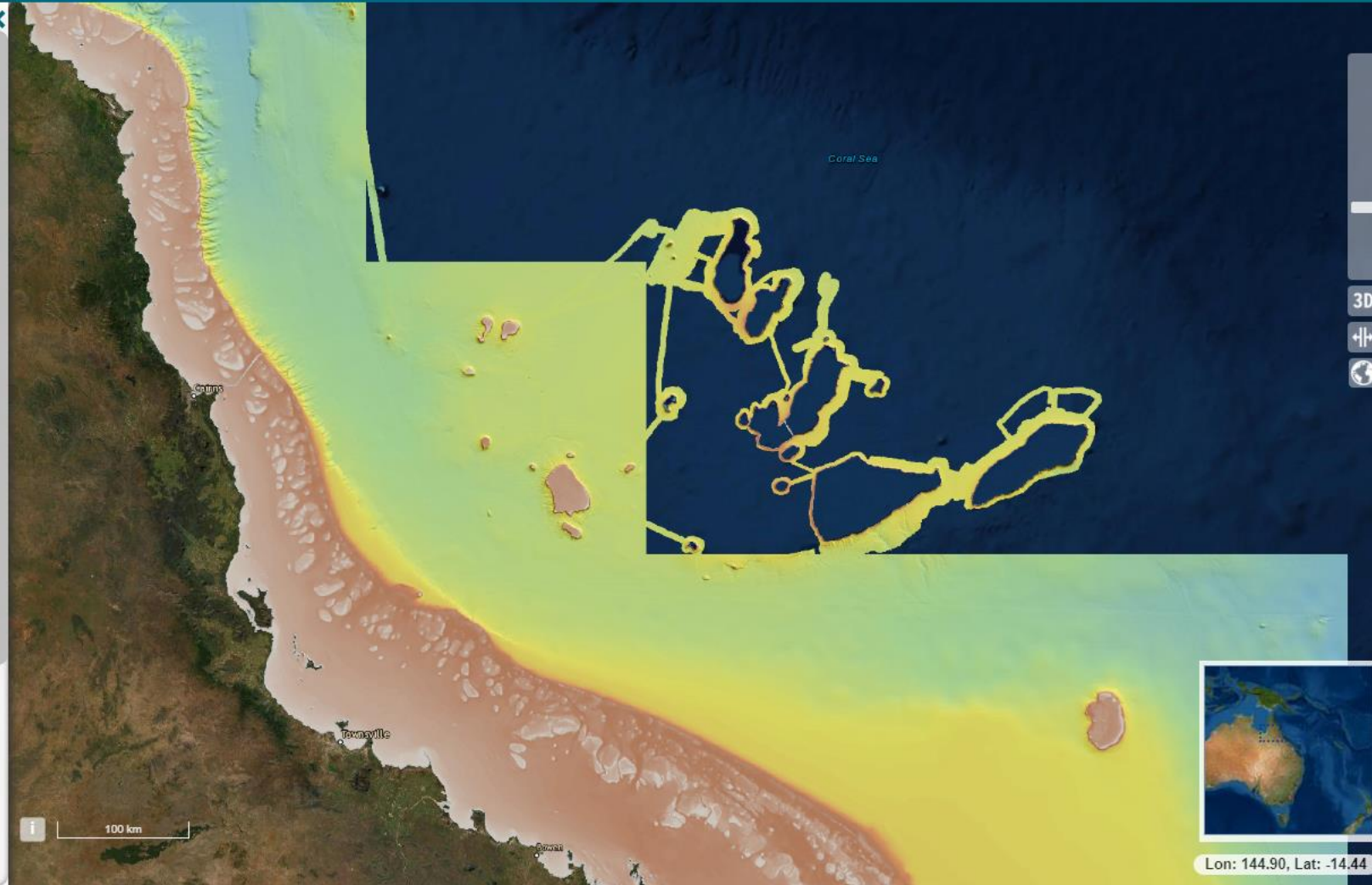
Custom Layers

Filter

- Active Layers
- All Layers
- Remove Active Layers

Theme

- AFGN
- Agribusiness
- Commodities
- DEA
- DNRME
- EFTF
- Education
- Energy
- Energy Investor
- GADDS
- GSNSW
- GSSA
- GSV
- GSWA
- Groundwater
- Hazard Management



Reordering layers



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AusSeabed Marine Data Portal



About Layers Location Search Reports

Analytics Assessment Tools Clip

Layers

Base Layers

All Layers

ausseabed Search

Visioning the Coral Sea Bathymetry 2020 64m

AusSeabed Bathymetry Holdings (by survey)

About Legend Filter Fit Extent Remove

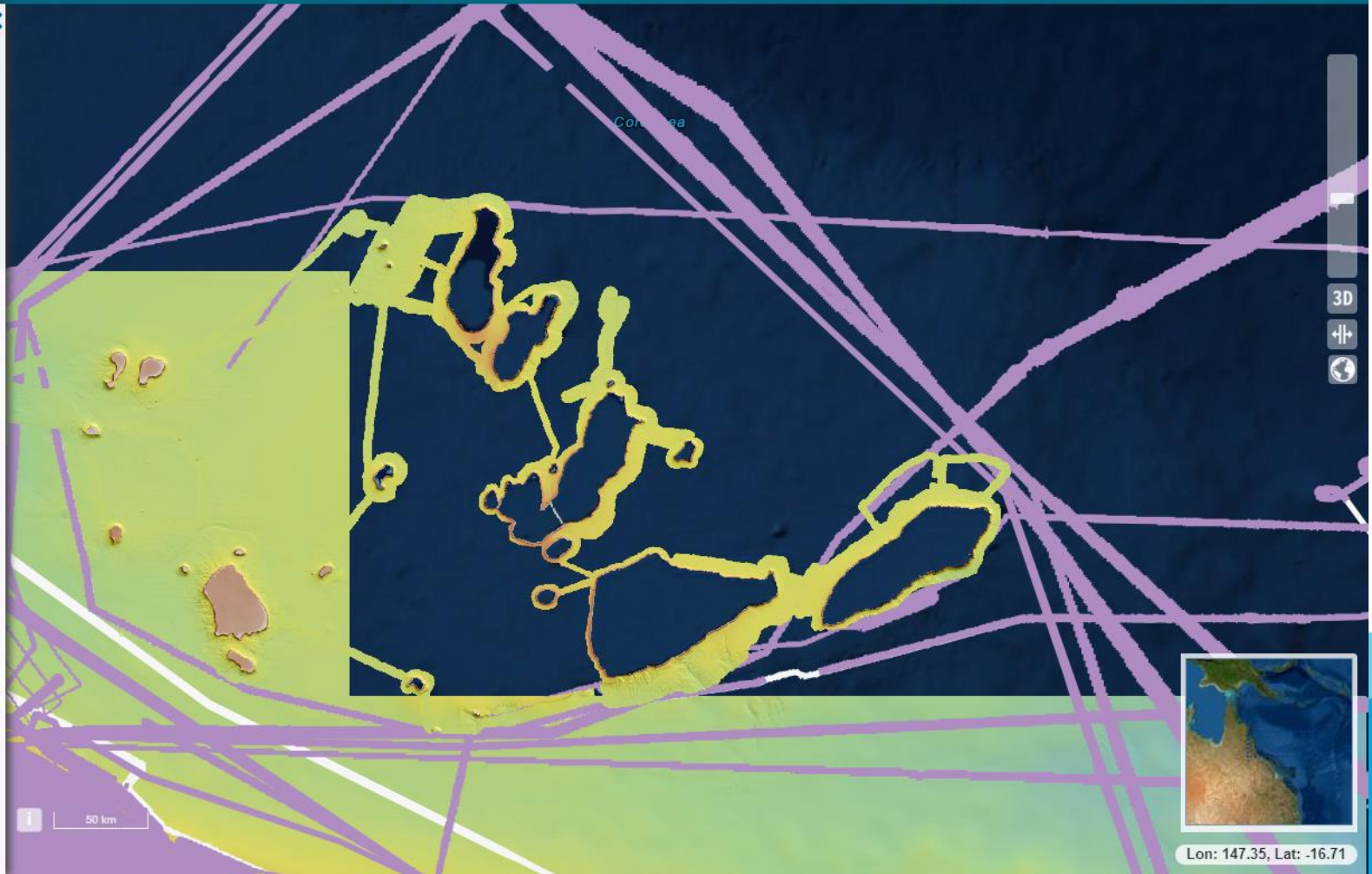
Opacity 100%

Style Bathymetry by Access

Great Barrier Reef Bathymetry 2018 30m

3D Layers

Custom Layers



Adding your own datasets

- Local data: KML, geotiff, netCDF, ESRI
- Web Services: Esri Arcmap, WMS, WMTS, KML, csv

The screenshot displays the AusSeabed Marine Data Portal. The top navigation bar includes the AUS SEABED logo and the text 'AusSeabed Marine Data Portal'. The main interface is divided into a sidebar on the left and a map area on the right. The sidebar contains a '3D Layers' section with a dropdown menu for 'Custom Layers'. Below this, there are buttons for 'Add Local Data' and 'Add Web Data', both highlighted with yellow borders. Under 'Add Web Data', there is a link to a list of WMS web services produced by Geoscience Australia. Below the sidebar, there is a search bar for 'Data file or web service URL' and a list of loaded layers, including 'DOT_Bunbury_5m_Image_20151704.img' which is currently selected and has an opacity slider set to 100%. The map area shows a satellite view of the Perth region with bathymetry data overlaid in various colors (blue, green, yellow, orange, red). The map includes labels for various locations such as Currambine, Mullaloo, Ellenbrook, Scarborough, Perth, and many others. The bottom right corner of the map shows the coordinates 'Lon: 115.24, Lat: -31.83'.

Functionality



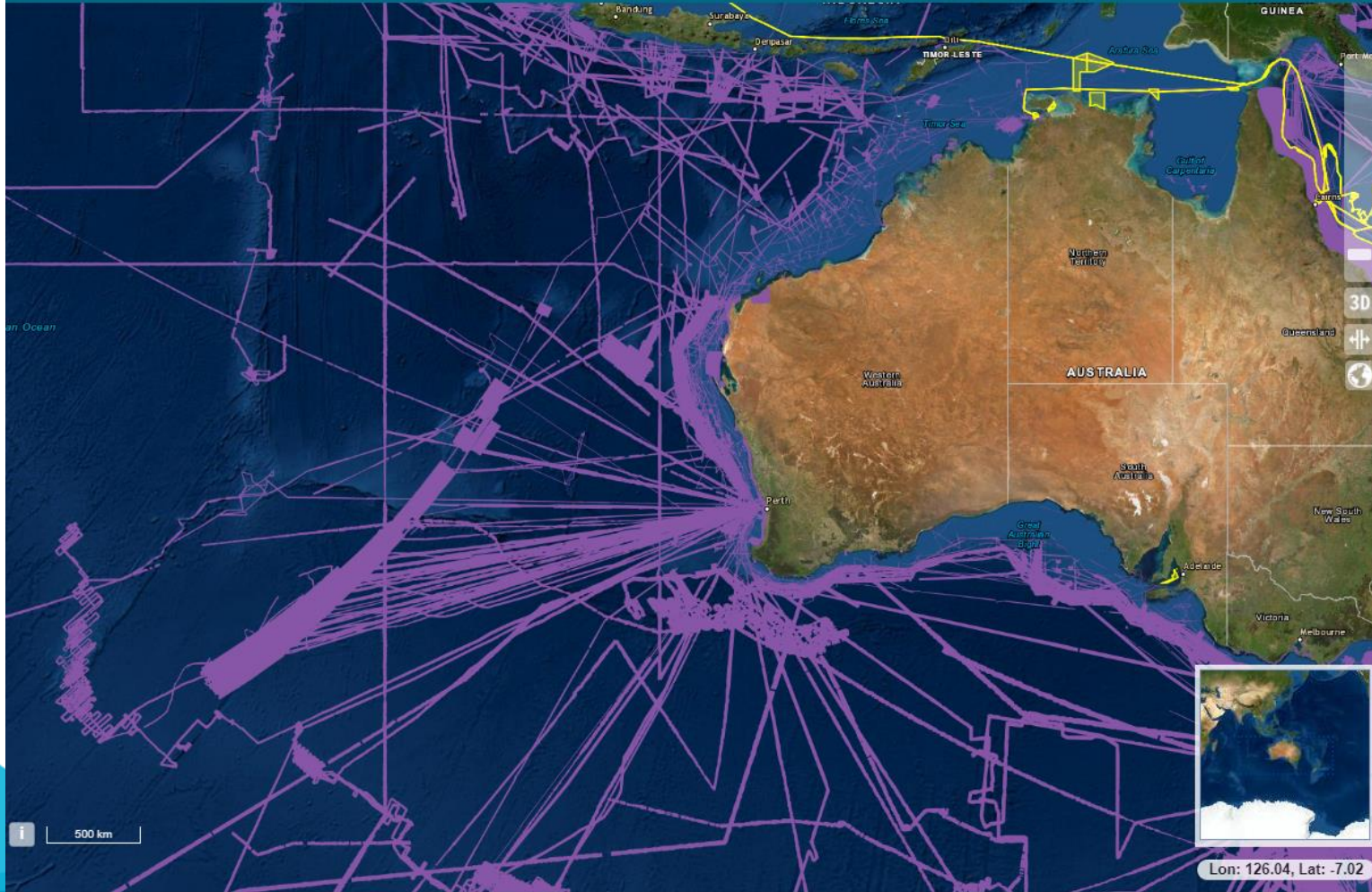
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AusSeabed Marine Data Portal



About Layers Location Search Reports

Analytics Assessment Tools Clip



Analytics

Search Analytics Tools

Inspection Tool

The Inspection Tool is an interactive tool to view feature information and pixel values of active layers.

Marine Sediments

An interactive data analytical tool for querying, downloading and plotting marine sediment data.

Measurement Tool

The Measurement Tool measures the distance between two or more points or the area of a polygon on the map.

MH370 Database Search

An interactive analytical tool for spatially querying and downloading the full collection of MH370 Phase 2 data stored on the NCI.

Petroleum Source Rock

An interactive data analytical tool for querying, downloading and plotting organic geochemistry and petroleum source rock data.

Data access

AUS SEABED AusSeabed Marine Data Portal

Layers: Cocos Island Bathymetry 2010 50m, Cocos Island Bathymetry 2010 100m, Cocos Island Bathymetry 2010 250m, Geopraphe Marine Park Bathymetry 2018 5m, Gifford Marine Park Bathymetry 2018 30m, Gippsland Basin Bathymetry 2015 1m, Great Barrier Reef Bathymetry 2018 30m

About | Legend | Filter | Fit | Extent | Add to Map

This dataset contains bathymetry (depth) products from the compilation of all available source bathymetry data within the Great Barrier Reef into a 30 m-resolution Digital Elevation Model (DEM). The Great Barrier Reef (GBR) is the largest coral reef ecosystem on Earth and stretches over 2500 km along the north-eastern Australia margin. Bathymetry mapping of this extensive reef system is vital for the protection of the GBR allowing for the safe navigation of shipping and improved environmental management. Over the past ten years, deep-water multibeam surveys have revealed the highly complex shelf-edge drowned reefs and continental slope canyons. Airborne LiDAR bathymetry acquired by the Australian Hydrographic Service cover most of the GBR reefs, with coverage gaps supplemented by satellite derived bathymetry. The Geoscience Australia-developed Intertidal Elevation Model DEM improves the source data gap along Australia's vast intertidal zone. All source bathymetry data were extensively edited as point clouds to remove noise, given a consistent WGS84 horizontal datum, and where possible, an approximate MLL vertical datum.

<http://pid.geoscience.gov.au/dataset/ga/115066>

Copy WMS link to clipboard

Format: (Mandatory) Please select

Projection: * Please select

Resampling method: * None

Email: *

Submit Job

Notify Criteria

Website

Portal

ECat

Clip & Ship specific areas
(not all surveys viewable now)

About section of survey layer URL ecats link
(not all surveys viewable now)

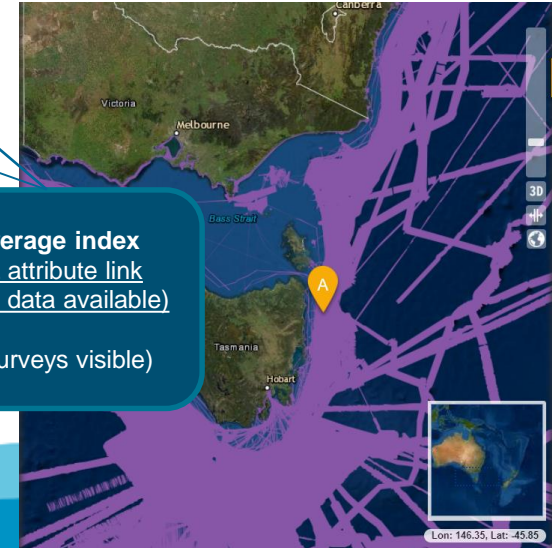
Coverage index URL attribute link (where data available)
(All surveys visible)

DATA AND PUBLICATIONS STORE

Search: []

Sort by: Relevance

- 5m LiDAR Multibeam Bathymetry 2013
- 5m Multibeam Dataset of Australia 2018
- 5m Multibeam Dataset of Australia 2015
- 5m Multibeam Dataset of Australia 2012
- Multibeam Shaltes 2014



Inspection Tool

Click on the map to query a point, you may click again to select a different point

AusSeabed Bathymetry Holdings (by survey)

General	Attributes
OBJECTID	444
GAID	4437
BATHY_TYPE	Multibeam
NAME	TTIDE Leg 2 (RR1502)
COLL_ORG_C	RR1502
SHIP	R/V Roger Revelle
PRIN_INVES	Dr. Robert Pinnel (rpinnel@ucsd.edu)
COLL_INST	SIO
START_DATE	2015-02-06T00:00:00Z
END_DATE	2015-02-26T00:00:00Z
START_PORT	Hobart
END_PORT	Hobart
AREA_KM2	2309.28624068976
SYSTEM	Simrad EM122 (12 kHz)
CTY_OWNER	USA
ACCESS_URL	http://www.rvdata.us/catalog/RR1502
SHAPE_LENGTH	2400271.81909738
SHAPE_AREA	2309286240.68976
OBJECTID	445
GAID	4438
BATHY_TYPE	Multibeam
NAME	TTIDE Leg 3 (RR1503)
COLL_ORG_C	RR1503

Download Data

- Clip Zip and Ship datasets

The screenshot displays the AusSeabed Marine Data Portal. The main map shows bathymetry data for the Gulf of Carpentaria and surrounding areas, with a yellow boundary highlighting a specific region. The right-hand panel is titled 'Clip, Zip and Ship' and shows 3 results. The first result is selected.

AUS SEABED AusSeabed Marine Data Portal

Navigation: About | Layers | Location Search | Reports | Analytics | Assessment Tools | **Clip**

Clip, Zip and Ship

3 results (Page 1 of 1)

Theme	Name	Layer
<input checked="" type="checkbox"/>	Elevation and Depth Great Barrier Reef Bathymetry 2018 30m	
<input type="checkbox"/>	Elevation and Depth Multibeam Dataset of Australia 2018 50m	
<input type="checkbox"/>	Elevation and Depth AUSTRAL Multibeam Bathymetry of Australia 2015 5m	

Navigation: First | Previous | 1 | Next | Last

Format: (Mandatory *)
Please select

Projection: *
Please select

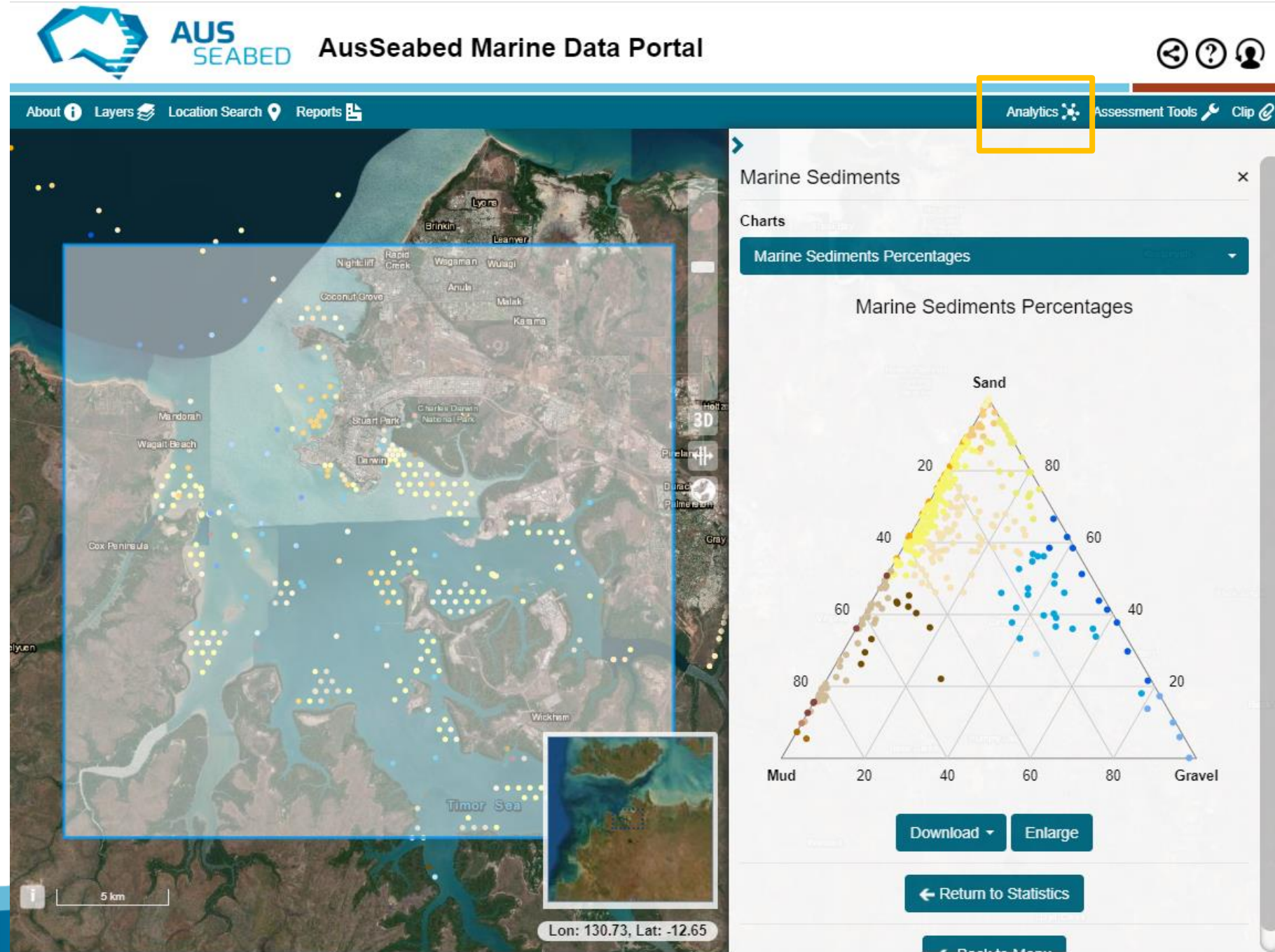
Resampling method: *
near

Email: *

Copyright | Disclaimer | Privacy | Accessibility | Information Publication Scheme | Freedom of Information | Contact us | Provide Feedback

Functionality

- Marine Sediments tool
- Histograms
- Pie charts
- Scatter plots



Functionality

- Database search
- Spatial search
- Download URLs to NCI

The screenshot displays the AusSeabed Marine Data Portal. The top navigation bar includes the AUS SEABED logo, the title 'AusSeabed Marine Data Portal', and utility icons for home, help, and user profile. Below the navigation bar, there are links for 'About', 'Layers', 'Location Search', and 'Reports'. A yellow box highlights the 'Analytics' and 'Assessment Tools' links in the top right corner. The main content area is split into two panels. The left panel shows a bathymetric map of the seafloor with a blue rectangular selection box. The right panel is titled 'AusSeabed MH370 Database Query and Download' and contains a note about Phase 2 data, search results for 89 items, and a table of file details. At the bottom of the right panel, there is a pagination control and a 'Download' button.

AUS SEABED AusSeabed Marine Data Portal

Analytics Assessment Tools Clip

AusSeabed MH370 Database Query and Download

Note: Current functionality of this tool is with MH370 Phase 2 data only.

Search Results

89 results (Page 1 of 9)

File Size	Name
1.06 MB	1402_15A_MBES_EM2040_20150612_090113_WGS84_UTM...
1.58 MB	0179_15A_MBES_EM2040_20150913_120011_WGS84_UTM...
1.58 MB	1323_16A_MBES_EM2040_20150608_000000_WGS84_UTM...
1.7 MB	0117_16A_MBES_EM2040_20150830_120002_WGS84_UTM...
1.78 MB	0029_15A_MBES_EM2040_20150821_100138_WGS84_UTM...
1.78 MB	1322_16A_MBES_EM2040_20150607_231400_WGS84_UTM...
10.54 MB	GP1500_1_20151019_01_BS_Mosaic_1m_UTM45s
192.1 MB	AUV_Mission023_GP1500_5_BS_Mosaic_1m_UTM45s.gdb
2.38 MB	06649_M148_011_MBES_EM2040_20161205_061549_Eq_Hu...
2.46 MB	2226_15A_MBES_EM2040_20151018_225953_WGS84_UTM...

First Previous 1 2 3 4 5 6 7 8 9 Next Last

Total Data Size: 16.22 GB

Download

Lon: 91.31, Lat: -36.70

Functionality – Splitter tool

Two (or more) active layers

The screenshot displays the AusSeabed Marine Data Portal interface. The top navigation bar includes the AUS SEABED logo, the title "AusSeabed Marine Data Portal", and utility icons for home, help, and user profile. Below the navigation bar, there are links for "About", "Layers", "Location Search", and "Reports". The main content area is split into a left sidebar and a right map view. The sidebar contains a "Layers" panel with two active layers: "Multibeam Dataset of Australia 2018 50m" and "Cane Range Canyon Bathymetry 2020 64m". Each layer has an "Active Left" button highlighted with a yellow box. The "Active Right" button for the second layer is also highlighted with a yellow box. The map view shows a 3D bathymetry visualization of the Cane Range Canyon area, with a vertical splitter tool in the center. A yellow arrow points to the splitter tool icon in the top right corner of the map view. The bottom of the interface features a footer with various links: "Copyright", "Disclaimer", "Privacy", "Accessibility", "Information Publication Scheme", "Freedom of Information", "Contact us", and "Provide Feedback".

Functionality – 3D tool

The screenshot displays the AusSeabed Marine Data Portal interface. At the top left is the AUS SEABED logo, and to its right is the text "AusSeabed Marine Data Portal". The top navigation bar includes links for "About", "Layers", "Location Search", and "Reports". On the right side of the top bar are icons for "Analytics", "Assessment Tools", and "Clip".

The main content area is split into two panels. The left panel, titled "Layers", contains a list of data layers. A yellow box highlights the "3D Layers" option. The right panel shows a 3D bathymetric map of a coastal area with a color gradient from blue (deep) to yellow (shallow). A yellow box highlights the "2D" button in the map's control panel, with a yellow arrow pointing to it from the left.

At the bottom of the page, there is a footer with links for "Copyright", "Disclaimer", "Privacy", "Accessibility", "Information Publication Scheme", "Freedom of Information", "Contact us", and "Provide Feedback".



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AusSeabed Marine Data Portal



About Layers Location Search Reports

Analytics Assessment Tools Clip

Layers

All Layers

Search ...

AusSeabed Coordination

Elevation and Depth

Framework

Geomorphology

Geophysics

Geophysical Archive Data Delivery System (GADDs)

Sedimentology

Tidal

Water

3D Layers

Custom 3D Layers

2D

Functionality – 3D tool



Australian Government
Geoscience Australia

Geoscience Australia Portal



About Layers Location Search Reports

Analytics Assessment Tools Clip

- SH50
- SI46
- SI47
- SI48
- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-263_1689_20140920_161503_Fugro_Equator_GA4421
- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-263_1690_20140920_181503_Fugro_Equator_GA4421
- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-263_1691_20140920_201504_Fugro_Equator_GA4421

About | Legend | Fit Extent | Remove

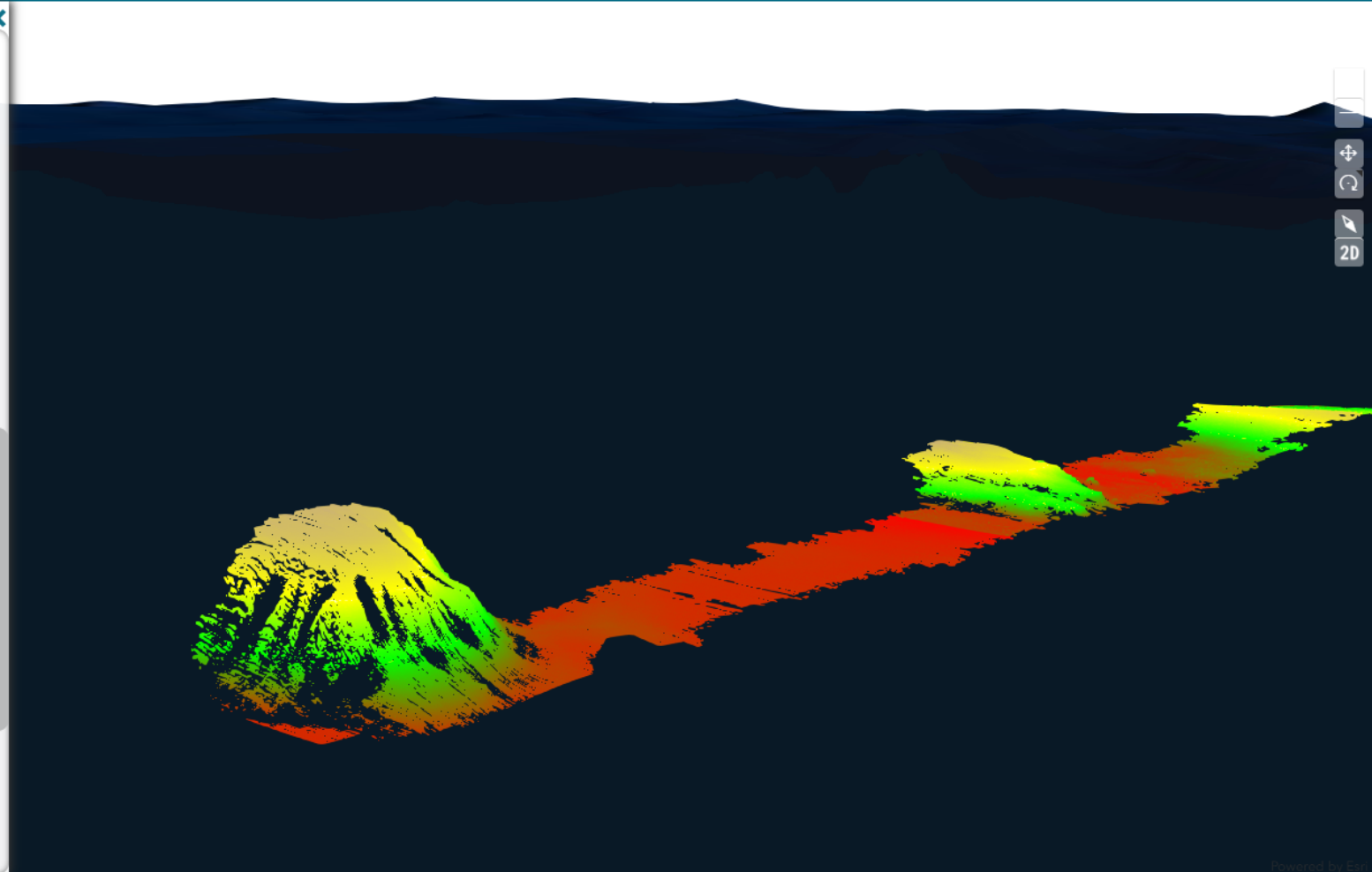
Opacity: 100%

Style: Africa

Min/Max: 5033.515 to 5563.515

Logarithmic Reverse


- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-263_1692_20140920_221504_Fugro_Equator_GA4421
- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-264_1693_20140921_001456_Fugro_Equator_GA4421
- GA-4421_MH370Search_Equator_MV_Fugro_Equator_2014-
- SI49



2D

Navigation icons: Home, Refresh, Back, Forward, Search, and a 2D/3D toggle switch.

Limitations

- Some polygon layers a bit slow to load
 - Identify tool only works for data in the Portal
 - 3D tool under development
 - Downloading bathymetry datasets via clip and ship
 - Customisable colour ramps/styles
 - Selecting an area and showing all available datasets (future)
- 

Future

- Merging of the Elevation portal (ELVIS) and AODN
- User Manual



ELVIS - Elevation and Depth - Foundation Spatial Data



Future

www.ausseabed.gov.au
Whole-of-Service Microsite

The main website features a top navigation bar with 'AusSeabed' and 'Home' links. Below is a 'Services' section with icons for 'Data Access', 'Data Management', 'Data Analysis', and 'Data Visualization'. A 'Watch the AusSeabed Story' video player is prominent. The footer includes 'Contact Us' and 'Partners' information.

User Persona Microsite

AusSeabed for GIS Specialists
Integrate essential data into your GIS platform. Access high-resolution data to produce high-quality maps for your internal capabilities.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

User Persona Microsite

AusSeabed for Survey Managers
Register and Publish your survey information. Access critical data to produce high-quality maps for your internal capabilities.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

User Persona Microsite

AusSeabed for Marine Team Managers
Use AusSeabed for your marine team with access to the latest high-resolution coastal data as well as the latest data from the Spring tides.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

User Persona Microsite

AusSeabed for Marine Scientists
Improve the quality of your marine team with access to the latest high-resolution coastal data as well as the latest data from the Spring tides.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

User Persona Microsite

AusSeabed for Marine Project Managers
Use AusSeabed to enhance your project planning and data management. Access critical data to produce high-quality maps for your internal capabilities.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

User Persona Microsite

AusSeabed for Marine Data Leaders
Make meaningful contributions to the data collection and visualization of marine data. Access critical data to produce high-quality maps for your internal capabilities.

Key features include: 'Get an Overview', 'Download Data', and 'Contact Us Support'. The layout is clean with a dark blue header and a light blue background.

AusSeabed Portal: co-designed with end-users



*** Quick demo of commonly used tools**

Further information

Web: www.ausseabed.gov.au

Email: ausseabed@ga.gov.au

Downloading Polygon data

AusSeabed Coordination

National priorities

[About](#) | [Legend](#) | **Filter (off)** | [Fit Extent](#) | [Add to Map](#)

This dataset comprises an amalgamation of State, Territory and Commonwealth priorities in terms of Seabed mapping as of February 2017. Data that were identified as important for: safe navigation, environmental baseline assessment, resource competition and baseline data, and urgently required to support policy and government decisions were given priority. Agencies then ranked their priority areas 1 – very high/high (red), 2 – moderate (blue), and 3 – low (green), based on the need for the data and the impact of the data. These priority sets were compiled by Geoscience Australia and submitted to the Australian Hydrographic Office (AHO) for consideration as supplementary material for their "Hydroscheme" acquisition plan. <http://pid.geoscience.gov.au/dataset/ga/123104>

[Copy WMS link to clipboard](#) **Download** ▾

- CSV
- JSON
- KML
- Shapefile

Upcoming Surveys (beta)

Elevation and Depth

Framework