AusSeabed Quarterly Highlight Report

2021/22 Q4: April - June 2022

Here we provide an update on key AusSeabed activities progressed this quarter against the 2021/22 Work Plan. Latest Quarterly Showcase (July 2022) can be accessed on AusSeabed YouTube.

1 Demonstrate the value of seabed mapping data for decision making

The Steering Committee and Program Director have continued to progress the **2022/23 Work Plan**, which will be finalised in the next Steering Committee meeting. The **AusSeabed Strategy** and **2025 Roadmap** has also been developed which will be released to the community at the AusSeabed AGM on September 9th.

The **GMRT-AusSeabed prototype** was successfully delivered. This project is the first step towards enabling a gridding on-the-fly capability to enable a quick delivery of bespoke gridded products to serve stakeholders and end users. The design for the prototype platform has been socialised with key committees and stakeholders and progress will be presented at AMSA 2022 conference scheduled for August 7th – 11th, 2022. Integration of the prototype into AusSeabed infrastructure has now been added to the 2022/23 Work Plan.

AusSeabed and The University of Western Australia are working collaboratively to delivery **3D seismic derived bathymetry datasets** under a partnership that is continuing into the 2022/23 Financial Year. The first products were delivered in June, for the North-west shelf and slope (Browse Basin and Bonaparte basin) covering approximately 91,000 km2, and will be published on AusSeabed later in 2022.

2 Nationally coordinate seabed mapping activities and objectives

Targeted stakeholder engagement was conducted to increase use of the **National Areas of Interest** function within the **Survey Coordination Tool** and promote sustained uptake within the community**.** Between April and June 2022 the tool received 24 new registered users (now totalling 155), 46 new submissions and 84 updated or new areas of interests. You can find the new areas of interests on the Data Portal.

Survey activities for **Hydroscheme 2022** have been scheduled and can be viewed using a story map created by the Australian Hydrographic Organisation (AHO). The AHO considers business cases for activities in upcoming years via stakeholder submission using the **Survey Coordination Tool.**

3 Improve the curation and delivery of seabed mapping data

Thirteen datasets were made available on the AusSeabed Data Portal covering a total of 201,233 km2. The total does not reflect the total new area added to the Australian Region of Interest, as surveys overlap spatially, and new versions replace previous areas. The new datasets published over the past quarter include:

1. Wilsons Promontory, West Glennie, Refuge Cover
2. Wilsons Promontory Marine National Park
3. Refuge Cove
4. HMAS Canberra (Victoria)
5. Southern Ocean Tasmania
6. Tasman Sea
7. Brisbane to Sydney Transit
8. Hobart to Sydney Transit
9. Sydney to Hobart Transit
10. Shellharbour Tharawal marine survey
11. East Australian continental margin
12. and 13. East Australian Current Transit (2)

From April to June 2022, a total of 138 marine sediment samples were added to the Geoscience Australia corporate database and will soon be added to the Marine Sediments web service.

Improvements have continued to be made to the **Data Portal** and Geoscience Australia's processing pipeline:

- Dynamic colour ramps can now be saved, copied, edited on browsers

- Bookmarks (Save, create and reload map views and active layers)

- Customisable polygons

- Clip, Zip Ship tool now called Select Tool

- The Desktop Launcher was released and is a pop up that provides important links to map layers, tools and guidelines, maintenance windows and guides on how to download data. In future, will allow users to create profiles and login and bookmark layers, save annotations and dynamic ramps to their profile.

4 Improve the standards and quality related to seabed mapping procedures and data management

The **product specifications** have now been published and are available on the AusSeabed Confluence site. These are broken into 4 specifications:

- S1 Survey Metadata Specification

- L0 Raw MBES Data Specification

- L2 Processed MBES Data Specification

- L3 Gridded MBES Bathymetry Product Specification

These **product specifications** set the minimum requirements and provide suggested data management practices for Data Partners and Data Hubs looking to submit data to the AusSeabed Data Portal.

5 Bringing the seabed to you through engagement

Notable engagements include:

- AusSeabed had a presence at the Locate 2022 national conference held in Canberra in May. The focus of the engagement was to socialise the technology solutions and data findings of the GMRT-AusSeabed prototype project. Chris Yule also presented a winning student presentation on the AusSeabed Program.
- A soft release was performed by the Sea Museum (Australian National Maritime Museum) featuring seabed data displays at the entry to the exhibition.
- Mary Young presented the AusSeabed Program at the World Hydrography Day on June 9th. Nigel Townsend, AusSeabed Chair, also gave a presentation on the AHO's Hydroscheme Industry Partnership Program.
- Nigel also presented on the AusSeabed program at the GEBCO Seabed 2030 South and West regional meeting in June.
- Mark Doubell presented the AusSeabed Program at the SA World Hydrography Day Seminar on June 21st.

AusSeabed Quarterly Data Report

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1 Newly published partner contributions to the AusSeabed Portal

From April to June 2022, we published 13 surveys on the AusSeabed Marine Data Portal, covering a total of 201,233 km^2 (Figure 1). The total area does not reflect the total new area added to the Australian Region of Interest, as surveys overlap spatially and new versions replace previous areas. The differences in coverage reflect shallow water surveys (Deakin, NSW Department of Industries and Environment) compared to deeper water surveys with transit (CSIRO).
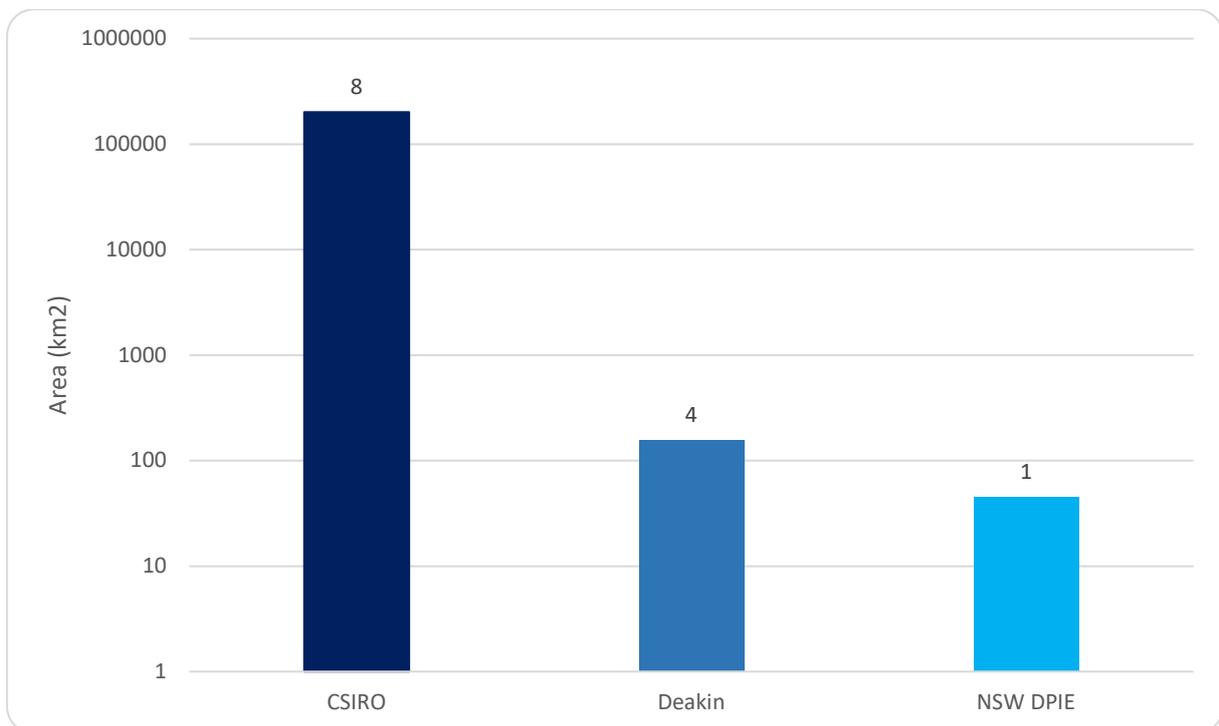

Figure 1 Survey area coverages published by organisation during period 1st April 2022 – 30th June 2022. Note that the area calculations are estimates only (due to potential projection differences) and do not always account for overlaps. The value above each organisation represents the number of surveys published.

2 Marine Sediments contributions

From April to June 2022, a total of 138 samples have been added to the Geoscience Australia corporate database and will soon be added to the Marine Sediments web service.

3 AusSeabed Portal Enhancements

The AusSeabed Portal provides access to publicly available seabed acoustic datasets, as well as a suite of analytical tools to maximise the value of the data.

- Dynamic colour ramps can now be saved, copied, edited on your browser

- Bookmarks (Save, create and reload map views and active layers)

- Clip, Zip Ship tool now called Select Tool

- The Desktop Launcher was released, and is a pop up that provides important links to map layers, tools and guidelines, maintenance windows and guides on how to download data. In future, will allow users to create profiles and login and bookmark layers, save annotations and dynamic ramps to their profile.

4 AusSeabed Data Download Statistics

A total of 1,892 unique page views, with an average of 8m 30s spent browsing the content, clipping datasets, and exploring tool usage within the Marine Data Portal. AusSeabed also monitors usage statistics from other sources of bathymetry data (Figure 2).
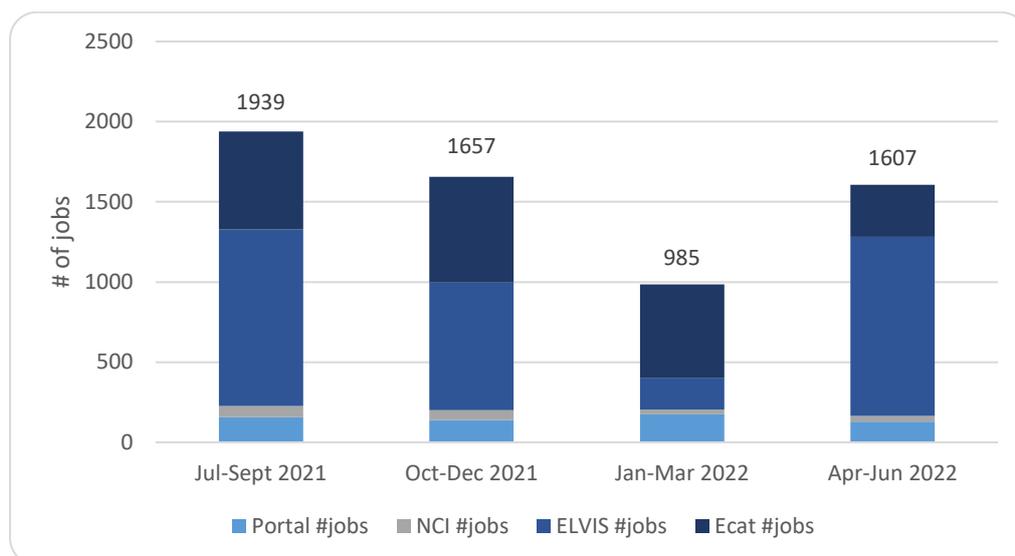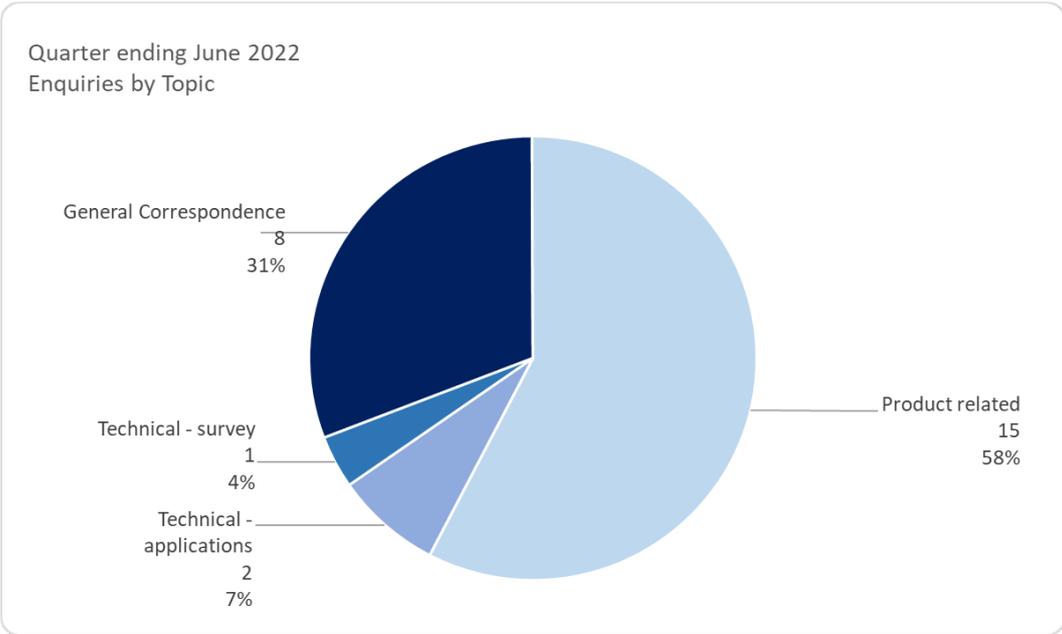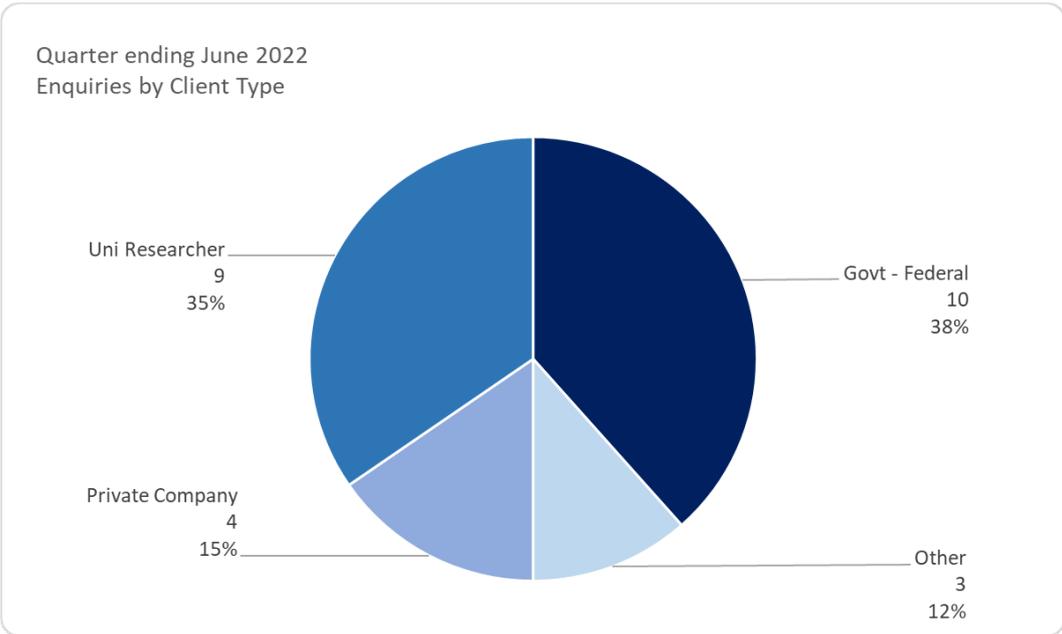

Figure 2 Combined data downloads from the AusSeabed Marine Data Portal, National Computational Infrastructure, ANU, ELVIS and the GA Catalog (eCat). Source data: Elevation Information System (ELVIS), GA Catalog (eCat), NCI and AusSeabed Portal usage statistics. We are reporting on an additional dataset (NSW DPIE LiDAR bathymetry) available in ELVIS that was not accounted for in 2020-21.

5 Client Requests

AusSeabed received a total of 26 direct enquiries this quarter (Figure 3). These focused on downloading data, joining the mailing list, data supply and availability of data. On average, AusSeabed provided same day initial responses to clients and closed the enquiry within 4 days of the request.

Table 1 Total number of enquiries by month during this quarter

	April	May	June	Total
No of enquiries	14	4	8	26

Quarter ending June 2022
Enquiries by Client Type

Uni Researcher
9
35%

Govt - Federal
10
38%

Private Company
4
15%

Other
3
12%

Quarter ending June 2022
Enquiries by Topic

General Correspondence
8
31%

Technical - survey
1
4%

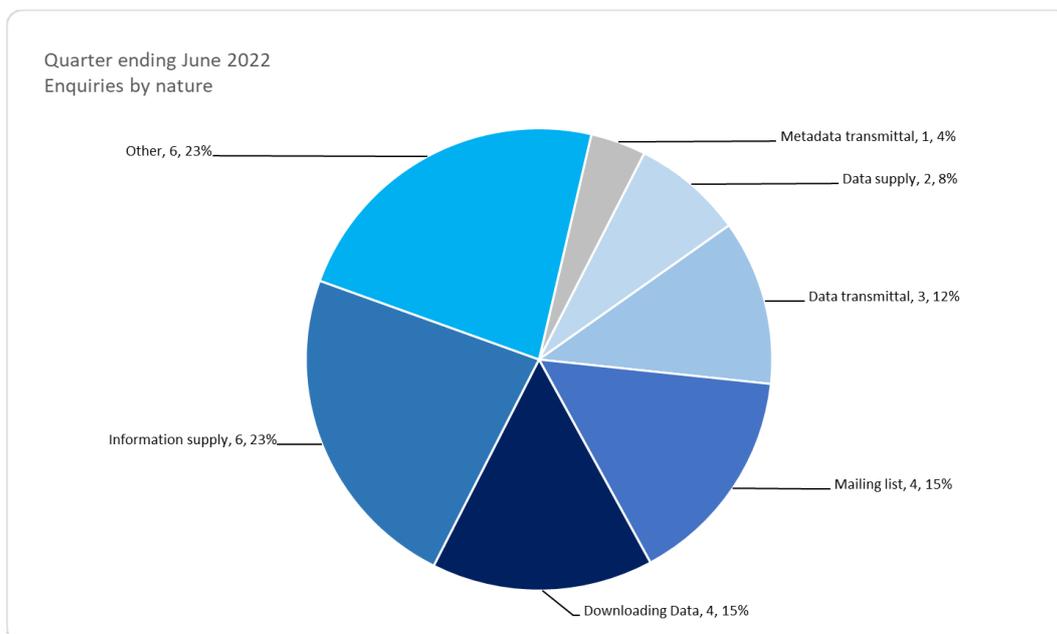Technical - applications
2
7%

Product related
15
58%

Figure 3 Distribution of client requests received during this quarter by client type, topic and by nature of enquiry.

6 Survey Coordination Tool Uptake

For the Survey Coordination Tool, several enquiries were received and followed up during the quarter with 24 new registrants (Figures 4 and 5).

	April	May	June	Total
No. of registrations	17	0	7	24

National Area of Interest Function uptake

Submissions from April to June 2022	Explanation	No.
Number of new registered users	A user refers to a single ID tied to an individual email address	24
Total number of registered users	Total user base registered within the Survey Coordination Tool	155
Total registered groups	A registered group refer to people associated with the same areas of interest. There can be multiple groups from within a single organisation	34

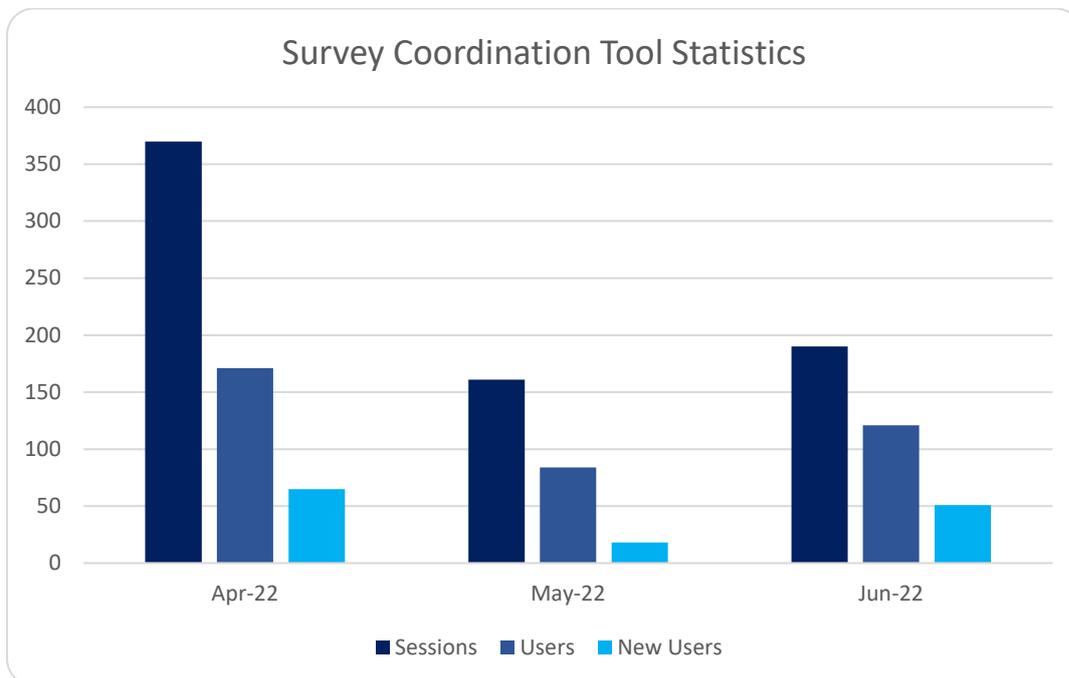| Total registered groups submitting new areas of interest	The number of groups that have made a new Area of Interest submission	15
Total registered groups updating areas of interest	The number of groups that have modified areas of interest (includes new submissions)	17
Number of new records published (from SCT)	Total number of records created and published through the WMS/WFS server. A record is a submission that can contain one or more areas of interest	46
New/Updated AOIs	Total number of Areas of Interest that have been updated or created and published through the Survey Coordination Tool over last quarter	84

Figure 4 Number of sessions, users, and new users over the quarter for the Survey Coordination Tool from Google Analytics.
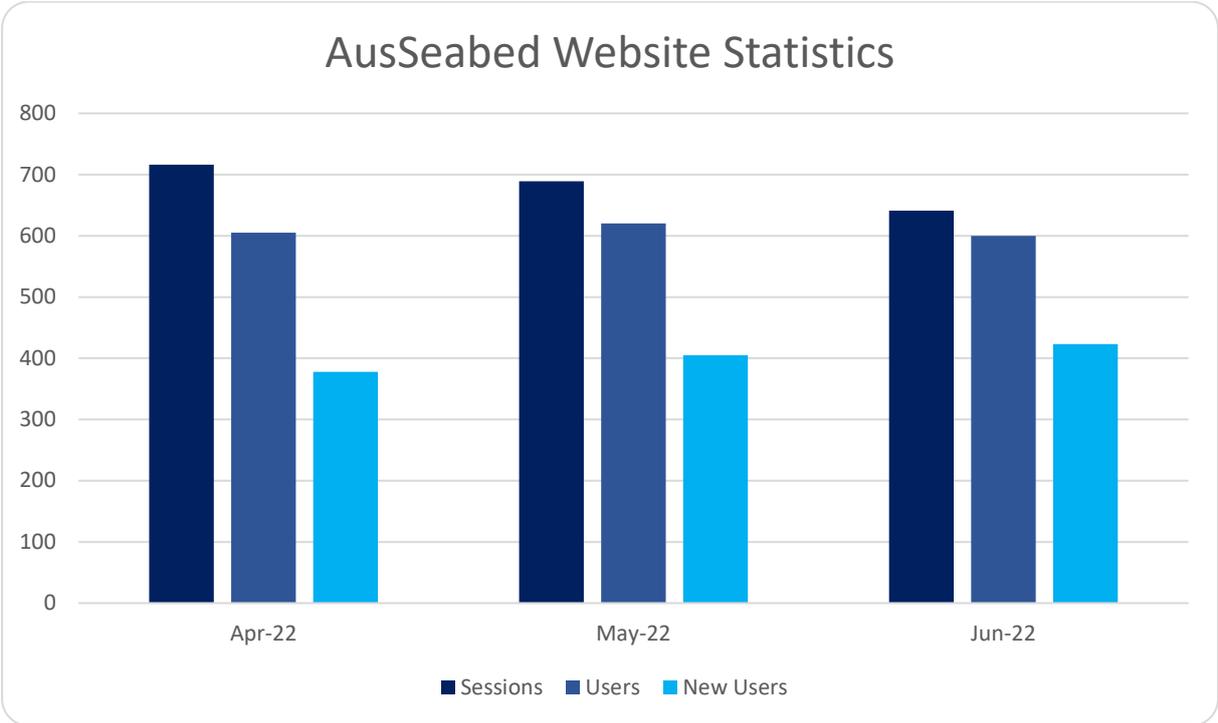
7 AusSeabed Website Uptake

Figure 5 Number of sessions, users, and new users over the quarter for the AusSeabed webpage.

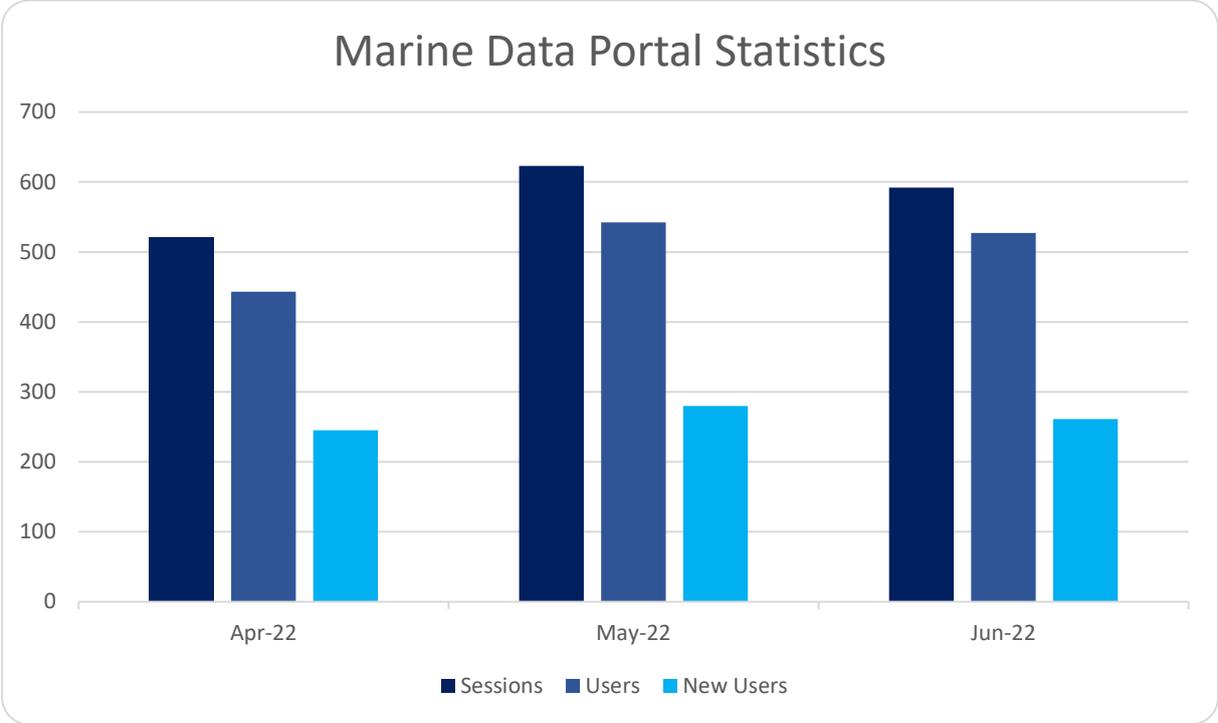# 8 AusSeabed Marine Data Portal Uptake

Figure 6 Number of sessions, users, and new users over the quarter for the Marine Data Portal.