

AusSeabed Quarterly Highlight Report

2022/23 Q1: July- September 2022

Here we provide an update on key AusSeabed activities progressed this quarter against the 2022/23 work plan with specifics on data publication and usage statistics found in the following section titled: AusSeabed quarterly data report.

Our latest quarterly showcase (October 2022) can be accessed on [AusSeabed YouTube](#). These **quarterly showcases** provide a chance for the AusSeabed operational team to show the community what we have achieved in the last quarter, reflect on these achievements, and share the upcoming quarter goals.

The updated AusSeabed Strategy was released to the community at the AusSeabed webinar on September 21st. Developed by the Steering Committee, the strategy will guide future work plans against three program goals focused on growing our seabed data products, mapping coverage, and awareness of those products and seabed mapping more broadly. The strategy identifies a set of core outcomes that will result from this effort, including:

- Coordinated seabed mapping activities across the AusSeabed community
- Sustained and supported federated platform that is adopted by users
- Improved quality of data acquisition through the adoption of common standards and tools
- Seabed mapping products that support improved decision-making within Australian Governments and the community

1 Products

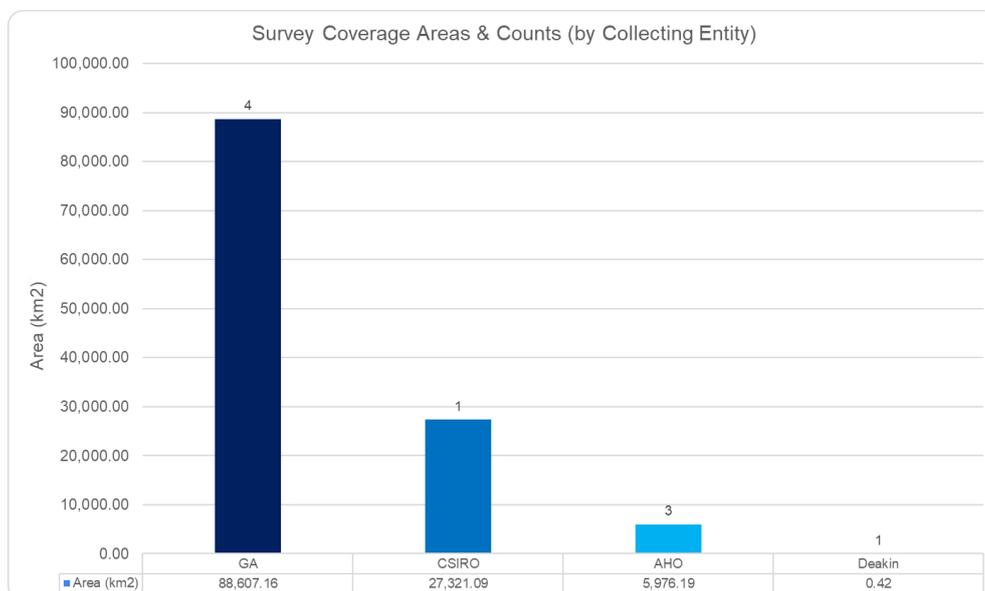
All seabed mapping data and products in the Australian region are guided by F.A.I.R. principles (findable, accessible, interoperable and reusable) and meet the needs of users.

Published data

From July to Sept 2022, we published 9 surveys on the AusSeabed Marine Data Portal, covering a total of 121,905 km² (see table below) This 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.

Datasets with data link	New or revised dataset	Reason for revision
Banks Strait Bass Strait Bathymetry (HIPP) 2021 30m	New	
King Is North Bass Strait Bathymetry (HIPP) 2021 30m	New	
Mavis Reef (East) Bonaparte Archipelago Bathymetry (HIPP) 2020 30m	New	
Northeast Tasmania Bathymetry 2011 2m	New	

Flinders Commonwealth Marine Reserve Bathymetry 2012 2m	New	
Vanderford Glacier Bathymetry 2021-22 5-128m	New	
Beagle Marine Park Bathymetry 2018 1m	Revised	Additional processing done to remove artefacts detected
Mawson Station Bathymetry 10 – 100m (CSIRO)	New	
Refuge Cove Bathymetry 1m 2013	New	



Survey area coverages published by organisation during period 1st July 2022 – 30th Sept 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.

Upcoming Data

Upcoming, and recently published, data can be found on our [publication schedule](#). Amongst other upcoming datasets for Q2 2022/23, AusSeabed will published **the first new bathymetry data derived from 3D seismic surveys** resulting from a partnership between the University of Western Australia and AusSeabed (for further information on the project scope, see [2021 webinar at 1h30](#)).

Sediment samples

Geoscience Australia (GA) has continued with its work on reviewing the Marine Sediments (MARS) database and is working towards publishing national summary datasets based on existing data holdings. New seabed samples continue to arrive, including from HIPP surveys, and we will work to process these in the GA laboratories during the next six months.

2 Coverage

Seabed data coverage in the Australian region provides maximum benefit to users.

AusSeabed have updated our [coverage holdings](#). The holdings index now includes new datasets that have been published over the 2021/22 financial year.

Survey activities scheduled through the **Hydroscheme 2022** can be viewed via a [story map](#) created by the Australian Hydrographic Organisation (AHO). The field work for one of the surveys, Clarence Strait to Dundas Strait (SI 1027) has been completed, with four others underway, Hydrographers Passage, QLD (SI 1029), Furneaux Group LiDAR (SI 1032), Escape Shoals to Lombadina Pt, WA (SI 1025) and Booby Is to D'Arcole Is, WA (SI 1026).

The AHO is working towards publishing the survey program for FY 2023/24 – **HydroScheme 2023** in late October 2022. The AHO considers business cases for activities in upcoming years via stakeholder submission using the [Survey Coordination Tool](#).

3 Awareness

Seabed mapping and AusSeabed is widely understood, valued and used across Australian Governments and the community.

AusSeabed recently held our annual webinars and quarterly showcase. The recordings of these events are available to view on the [AusSeabed YouTube playlist](#). Last quarter, AusSeabed saw a 45% increase in the visits to the Marine Data Portal (see details below in the data report section). This is attributed to the targeted engagement that has taken place this quarter.

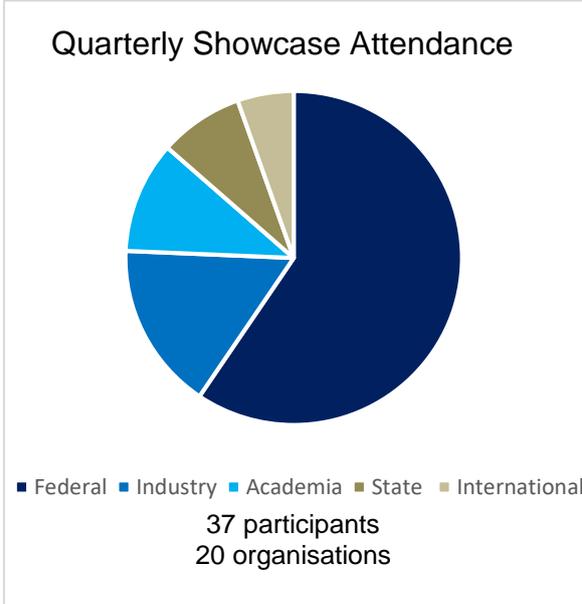
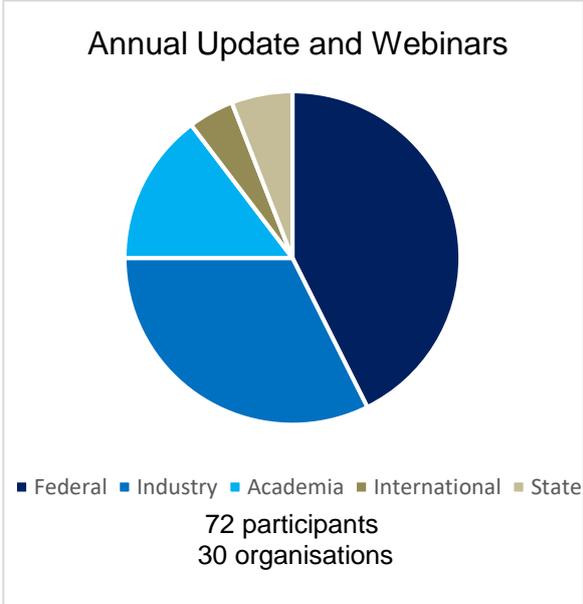
The [annual webinar](#) was well attended and included highlights of the AusSeabed program over 2021/22 and a set of presentations:

- The role of the AusSeabed Early Career Ocean Professional (ECOP) (Mardi McNeil, AusSeabed steering committee ECOP representative)
- Global Data Sharing: where are things headed? (Phillipa Bricher, AHO)
- AusSeabed Data Hub connections (Joshua Sixsmith, GA)
- A two-part seabed geomorphology classification scheme (Rachel Nanson, GA)
- Hydroscheme update (CMDR Nigel Townsend, AHO)
- National Areas of Interest update (Scott Nichol, GA)

The AusSeabed quarterly showcase ([Q1 2022/23](#)) presented in October highlighted:

- The recent AusSeabed webinar and workshop,
- An update on the National Areas of Interest project,
- An overview on acquisition and application of bathymetry data along the Victorian coastline,
- An overview of data published in the last quarter to the AusSeabed Data Portal,
- An introduction to the open-source processing software project and
- An overview of the Australia-US partnership in development.

Other notable engagements included through the Australian Marine Science Conference (AMSA) 2022, the Illuminate Far North Queensland event and the graduation ceremony associated with the first hydrographic surveyor course held in Australia. During AMSA, AusSeabed strong presence included presentations from the AusSeabed community during a dedicated seabed mapping symposium, an end-user workshop, and one-on-one discussions with conference delegates to promote the broader awareness of AusSeabed.



Results from a **survey of the academic sector** were presented to the Steering Committee (SC) in August. The survey aimed to assess the use of our products in research and teaching. We received 22 responses from more than 9 Australian universities and CSIRO. Responses indicated that AusSeabed tools are being used in academic research, but uptake within teaching is minimal due to teaching barriers. The SC discussed the need for more educational material on the Data Portal, targeted teaching on seabed features and tutorials on the applications of AusSeabed data. A working group will be formed to address this issue into the future.

AusSeabed Quarterly Data Report

2022/23 Q1: July – September 2022

1 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.

A zip file option has been added to both the Layer – About tab in the left-hand frame and the File_URL attribute visible when using the Inspection Tool. This provides a zip file of all the Gridded L3 products associated with the survey or compilation, along with a text file containing the eCat metadata link.

2 AusSeabed Data Download Statistics

During the past quarter, there were 2,746 unique page views of the Marine Data Portal (an increase of 45% over the previous quarter), with an average of 9m 06s spent browsing the content, clipping datasets, and exploring tool usage.

AusSeabed also monitors download statistics from additional sources of bathymetry data managed by GA, including the GA Product Catalogue (eCat), the Elevation Information System (ELVIS) and the National Computational Infrastructure (NCI) (Figures 1-6). Each system monitors downloading activity with different tools and with different metrics. Future work will include investigating options for generating consistent metrics.

Marine Data Portal (AusSeabed Portal)

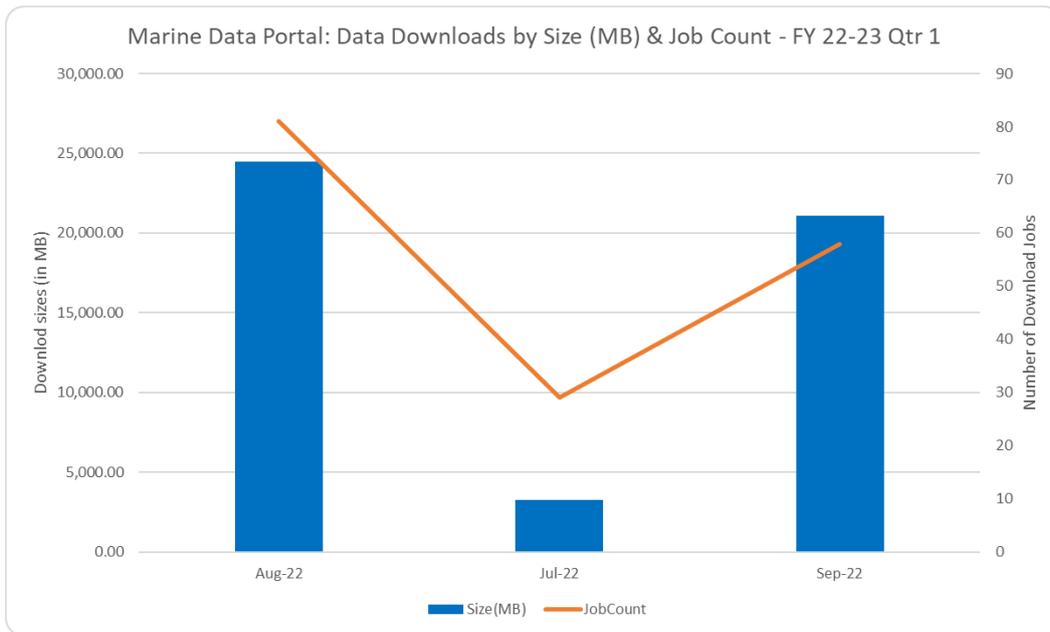


Figure 1 Marine Data Portal downloads using the Select Tool (previously known as the Clip, Zip and Ship Tool)

GA Product Catalogue (eCat)

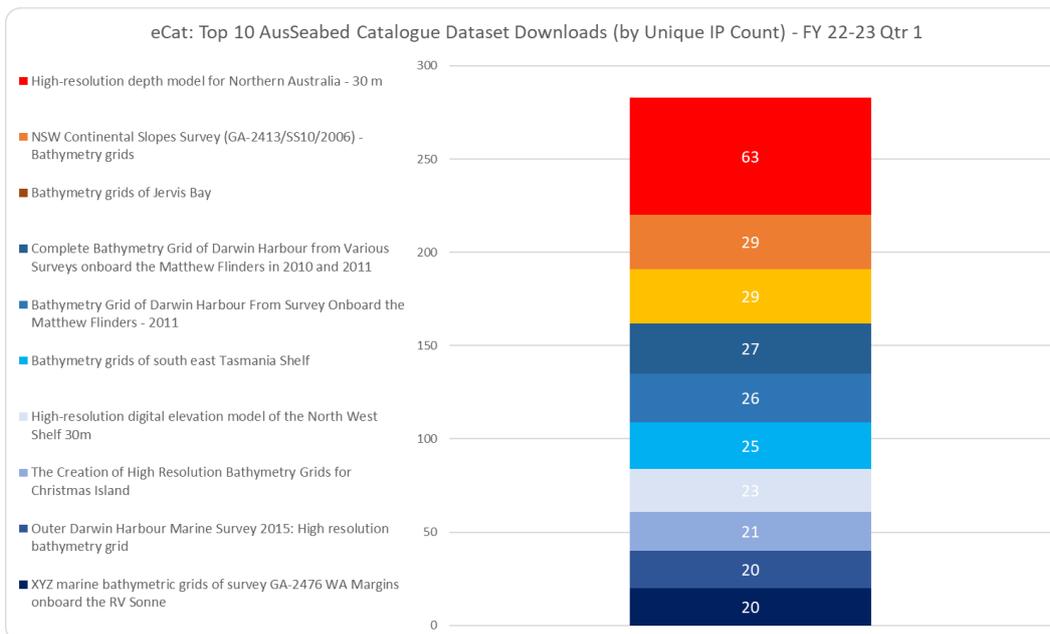


Figure 2 eCat: Top 10 Bathymetric product downloads by unique IP count

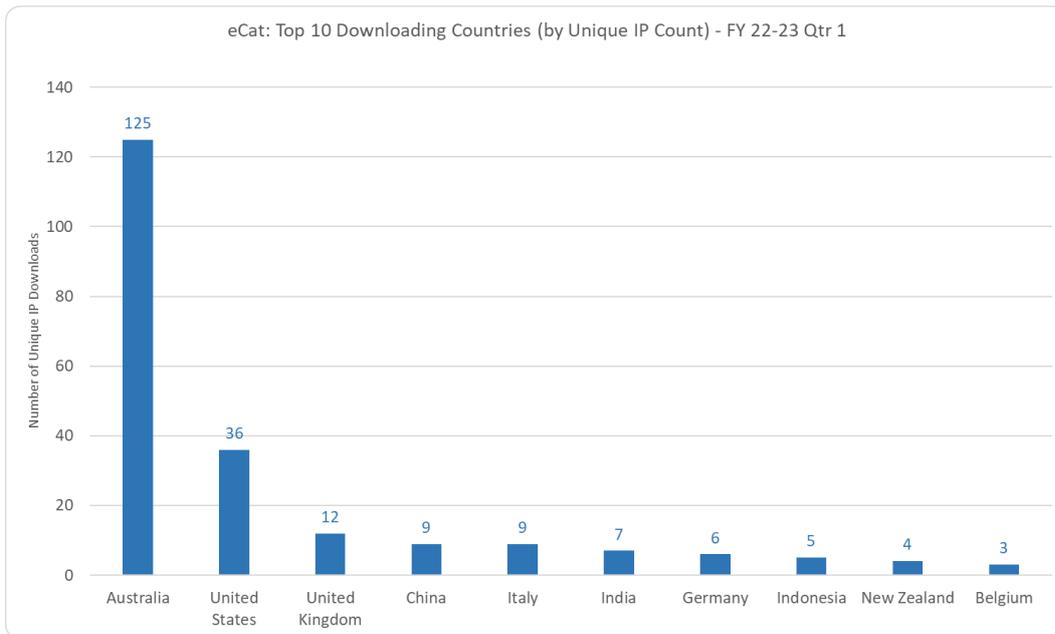


Figure 3 eCat Top 10 downloading countries of bathymetric products (by unique IP count)

Elevation Information System (ELVIS)

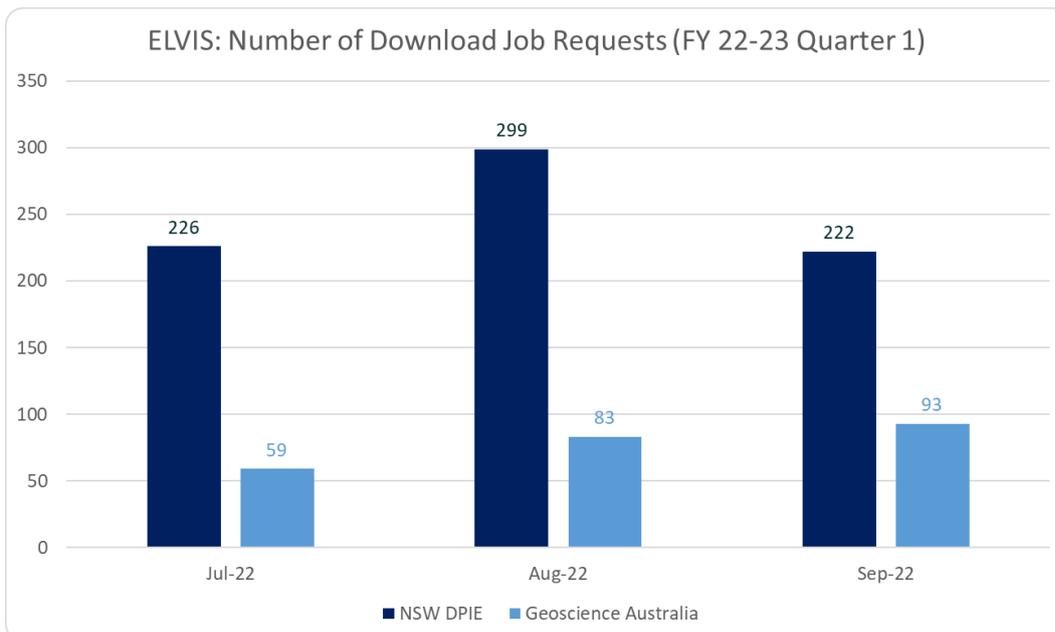


Figure 4 Number of independent job requests for bathymetric data/product downloads from the ELVIS system

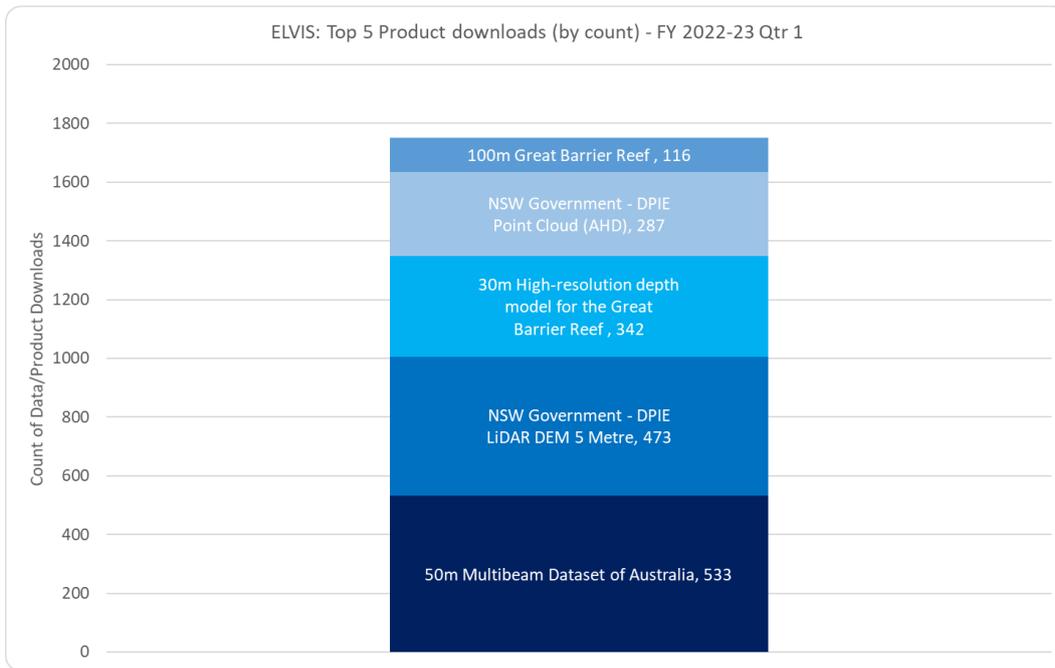


Figure 5 Top 5 bathymetric data/product downloads from the ELVIS system

National Computational Infrastructure (NCI)

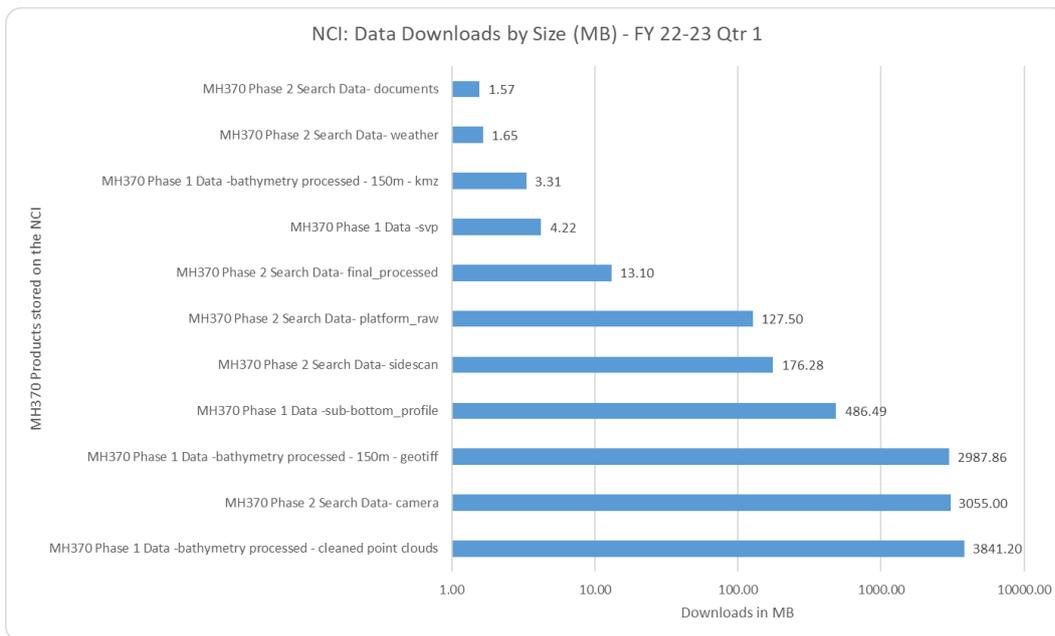


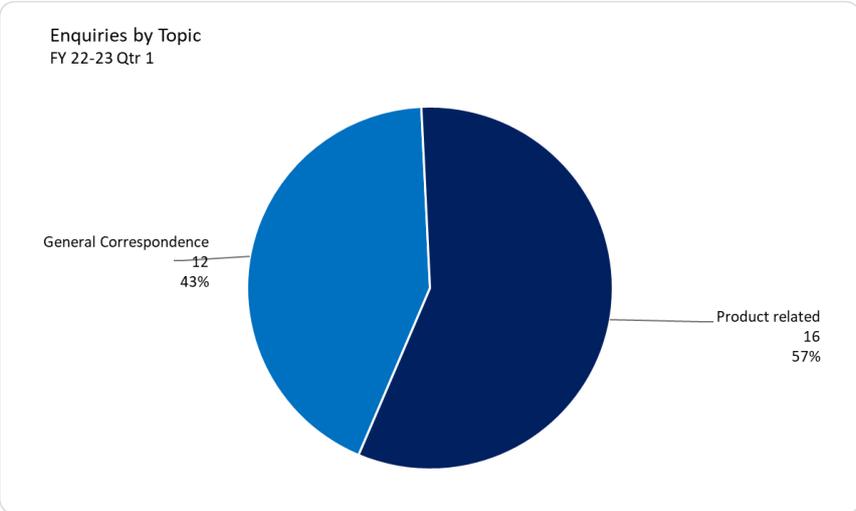
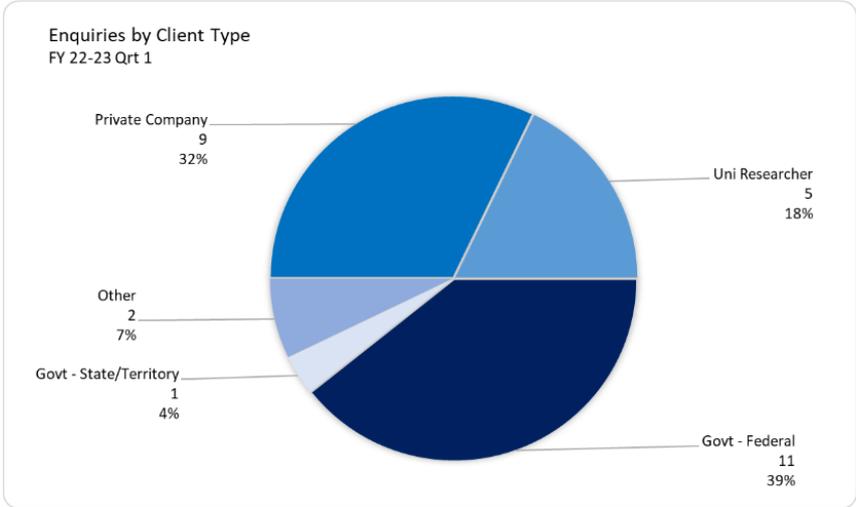
Figure 6 MH370 Products downloaded from the NCI. Note the logarithmic scale to improve the display of the smaller items. There are other products available but were not downloaded during this quarter.

3 Client Requests

AusSeabed received a total of 28 direct enquiries this quarter (Figure 8). 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

	July	August	September	Total
No of enquiries	5	9	14	28



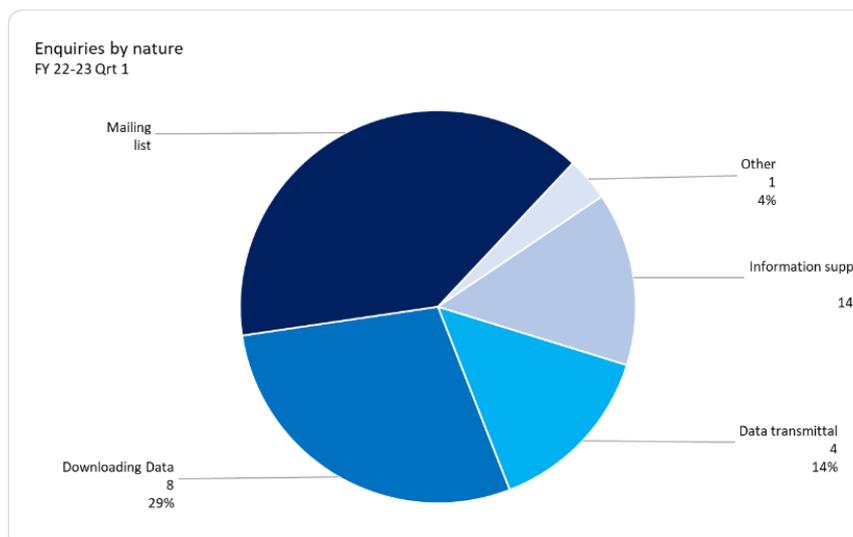


Figure 7 Distribution of client requests received during this quarter by client type, topic and by nature of enquiry.

4 Survey Coordination Tool Uptake

Several client request regarding the Survey Coordination Tool (SCT) were received and followed up during the quarter with 8 new approved registrations (Table 2). Find additional statistics on the SCT usage in Table 3 and website access statistics in Figure 9.

Table 2 SCT statistics on all three functionalities (blue highlight) for the quarter

Quarterly Submissions	Comment	No.
Number of new SCT registered users	A user refers to a single ID tied to an individual email address	8
Active number of SCT users	Number of users that signed into the Survey Coordination Tool at least once over the quarter	29
Total number of registered SCT users	Total user base registered within the Survey Coordination Tool	161
National Area of Interest (NAI)*		
Total number of organisations	An organisation refers to a group of people associated with the same NAI submission. There can be multiple groups from within a single organisation	25
Total registered organisations publishing new NAIs	The number of organisations that have successfully published a new NAI	3
Total registered organisations updating published NAIs	The number of organisations that have modified or created published NAIs	3
Number of new NAIs published	Total number of areas/polygons created and published through the NAI tool.	21
Upcoming Surveys		
Number of New Survey Plan records added	Number of new finalised survey plans created over the quarter	18
Number of New Survey Plan Records Completed	Number of existing survey plans that transitioned to a completed status in this quarter (only available in Q2)	n/a

Submissions from July thru September 2022	Explanation	No.
HIPP request		
Number of new HIPP requests submitted	Users may request survey areas to be considered for collection through AHO HIPP Survey process. This reports the number of HIPP requests submitted	1

*N.B. NAI's can be submitted into the tool, but not published. This nuance is differentiated in this report. Previous quarterly reports did not make this distinction, so reflect higher numbers.

The following website utilisation statistics regarding the SCT are down on the previous quarter (a natural high following the release of the new Area of Interest Tool; Figure 8). Sessions saw a decrease of 18%, users a decrease of 38% and new users a decrease of 39%. However, the 2022/23 Q1 statistics demonstrate an increase over all previous 2020/21 quarters & the first two quarters of 2021/22.

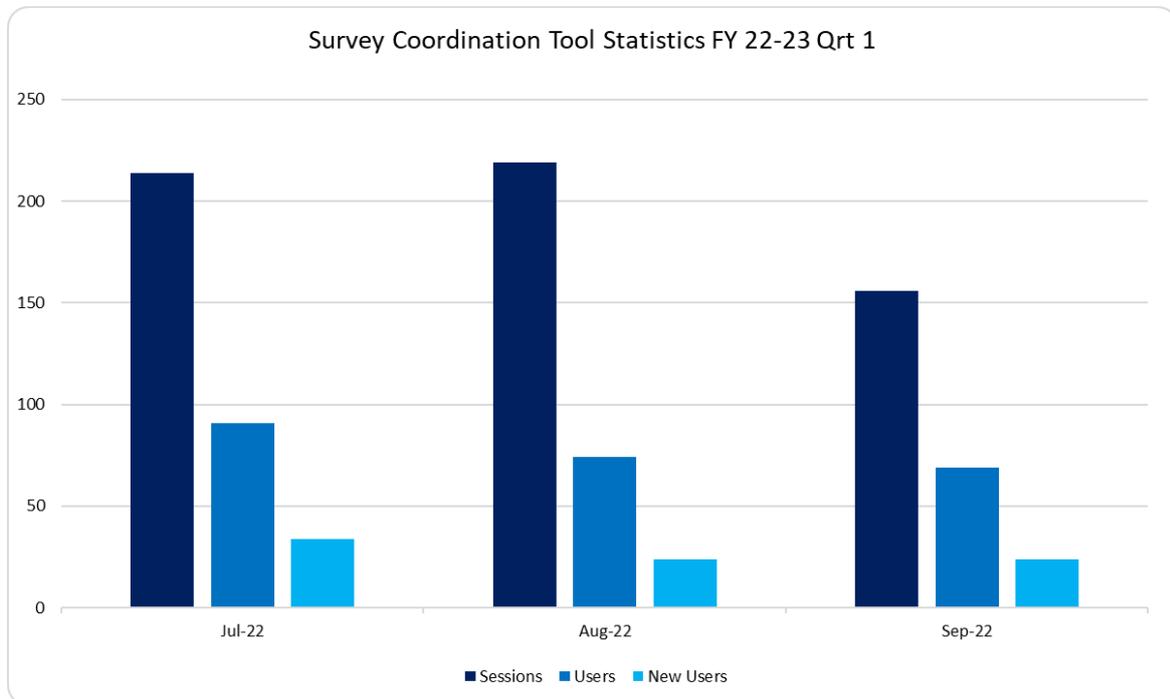


Figure 8 Number of sessions, users, and new users over the quarter for the Survey Coordination Tool from Google Analytics.

5 AusSeabed Website Uptake

Utilisation statistics for the AusSeabed website are slightly down on the last quarter, with an average decrease of 12.5% across all measurements.

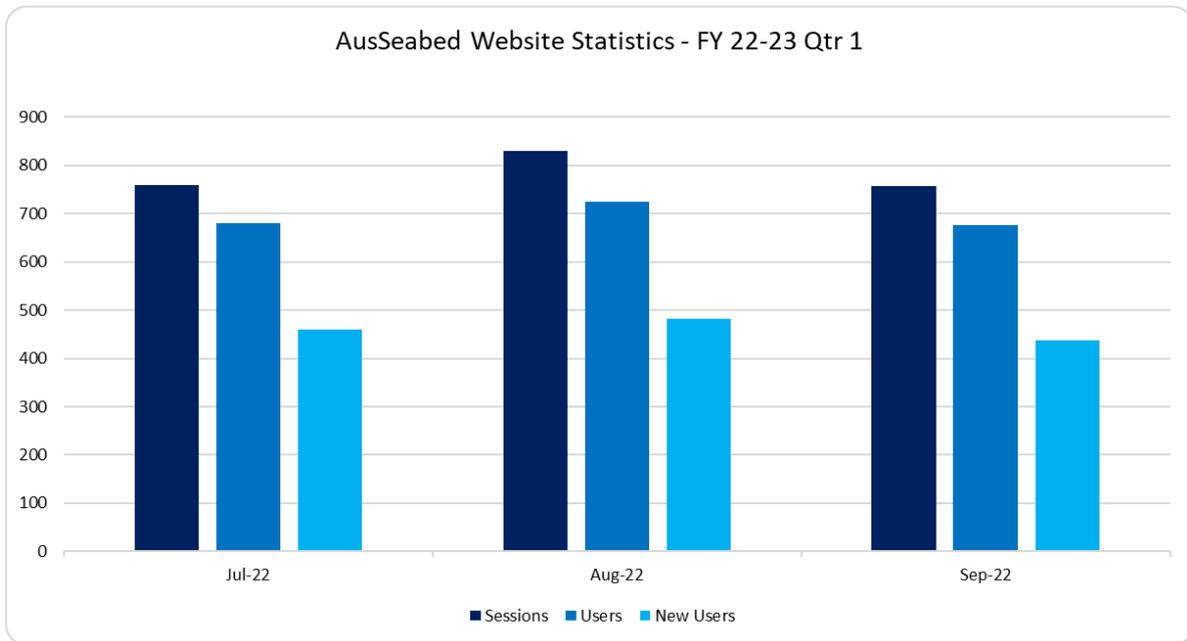


Figure 9 Number of sessions, users, and new users over the quarter for the AusSeabed webpage.

6 AusSeabed Marine Data Portal Uptake

Utilisation statistics for the Marine Data Portal are slightly down on the last quarter, with a decrease in sessions of 12.8%, a decrease in users of 10.5% and a decrease of new users of 7.6%

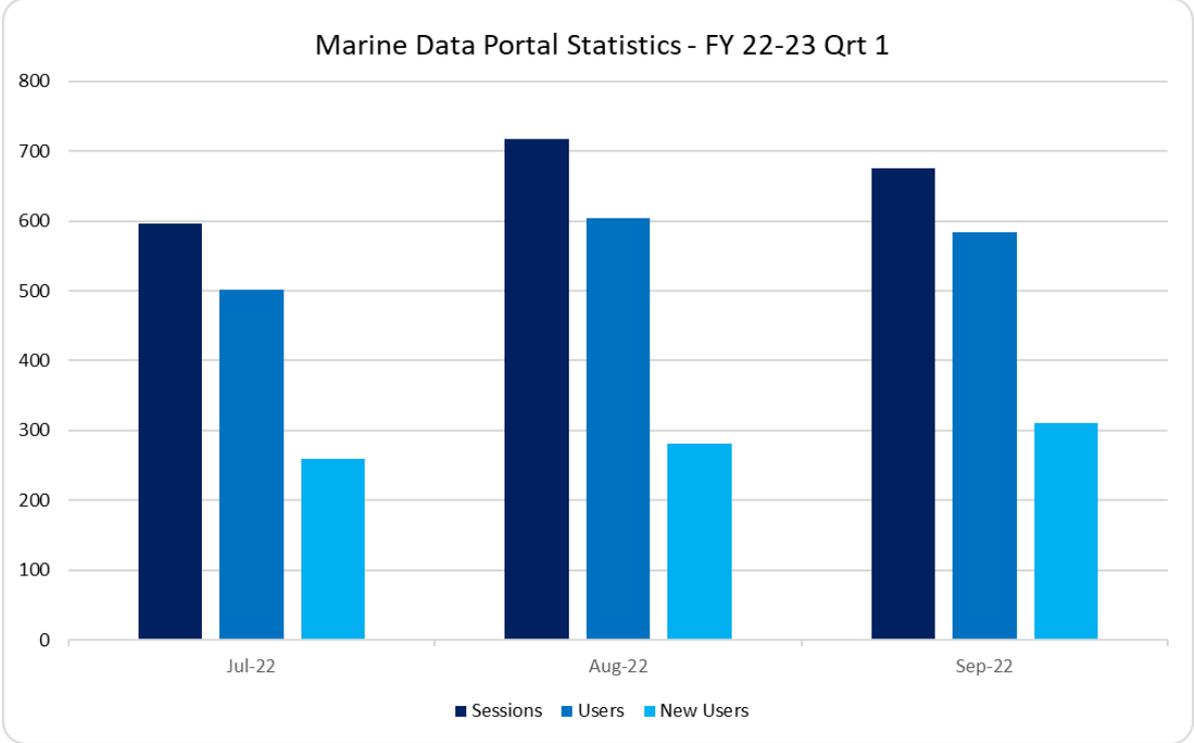


Figure 11 Number of sessions, users, and new users over the quarter for the Marine Data Portal.

Appendix A – Table of Published Products in the FY 22-23 Quarter 1

Product Name	Entity	GA eCat persistent ID	Date Published
Beagle Marine Park Bathymetry 2018 1m	GA	http://pid.geoscience.gov.au/dataset/ga/130301	27-Jul-2022
Refuge Cove Bathymetry 1m 2013	Deakin	http://pid.geoscience.gov.au/dataset/ga/146408	4-Aug-2022
Mavis Reef (East) Bonaparte Archipelago Bathymetry (HIPP) 2020 30m	AHO	http://pid.geoscience.gov.au/dataset/ga/147099	10-Aug-2022
King Is North Bass Strait Bathymetry (HIPP) 2021 30m	AHO	http://pid.geoscience.gov.au/dataset/ga/147098	10-Aug-2022
Banks Strait Bass Strait Bathymetry (HIPP) 2021 30m	AHO	http://pid.geoscience.gov.au/dataset/ga/147082	10-Aug-2022
Mawson Station Bathymetry 10 - 100m (CSIRO) in2021_v01	CSIRO	see CSIRO Marlin Catalogue	20-Sep-2022
Northeast Tasmania Bathymetry 2m 2011	GA	http://pid.geoscience.gov.au/dataset/ga/147036	26-Sep-2022
Flinders Marine Park Bathymetry 2012	GA	http://pid.geoscience.gov.au/dataset/ga/147053	26-Sep-2022
Vanderford Glacier Multibeam Survey	GA	http://pid.geoscience.gov.au/dataset/ga/147241	29-Sep-2022