

Name of dataset or data source:

NESP Biodiversity Hub Hunter Marine Park Multi Beam Echo Sounder Surveys

Custodian of the dataset or data source:

ED Science (EES)

Description:

Gridded multi-beam echosounder (MBES) bathymetry data for Hunter Marine Park acquired using NSW Department of Planning Industry and Environment MBES system aboard RV Bombora for the National Environmental Science Program (NESP Biodiversity Hub). Fieldwork was funded, both cash and in-kind, by NSW DPIE and NESP in Year 1 (2015) and 4 (2018) of the D3 Project. Initial surveys (2015) were exploratory as long-lines across the inner Special Purpose Zone (trawl) over the continental shelf with later surveys (2018) focused on 100% coverage over areas previously identified as containing the Key Ecological Feature 'Continental Shelf Reef'. Reports by Davies et al (2016) 'Mapping Shelf Rocky Reef Habitats in the Hunter Commonwealth Marine Reserve', National Environmental Science Program Biodiversity Hub D3 Project – Evaluating and monitoring the status of marine biodiversity assets on the continental shelf; and Williams et al (2020) 'Mapping and characterising reef habitat and fish assemblages of the Hunter Marine Park', Project D3- Preparing for and implementing monitoring of CMR's and the status of marine biodiversity assets on the continental shelf, Milestone Report December 2020; detail these MBES surveys as well as towed underwater video and BRUVs, to characterise seabed habitats, fish and sessile invertebrate assemblages of the Hunter Marine Park. Reports are available at <https://www.nespmarine.edu.au/publications>. Survey sites for focused mapping in 2018-19 were 1) 3-6 NM east and south-east of Seal Rocks - Sugarloaf Point, 2) Outer Gibber - a feature in 20-60m of water north-east of Broughton Islands and ~3-4 NM from shore and 3) 3-7 NM east to north-east of Broughton Island. MBES data were obtained using either a Geoswath 125 KHZ swath bathymetry system (2015) or a R2Sonic 2022 (2018) with Applanix Wavemaster POSMV with either Single-Base or Precise-Point-Positioning modules in POSView for improved vessel Smoothed Best Estimate of Trajectory. Data were cube modelled in Fledermaus/Qimera software to IHO 1B standard and cleaned-soundings exported before gridding by bin-weighted averaging at 5 m relative to Australian Height Datum and in grid coordinates as UTM WGS84 Zone56. Details on processing are provided at <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Research/Our-science-and-research/seabed-nsw-standard-operating-procedures-multibeam-surveying-190101.pdf>. Data packages including bathymetry and backscatter in multiple formats are provided on the Australian Oceanographic Data Network (<https://portal.aodn.net.au>); Gridded data in geotif format are also provided on AusSeabed <https://portal.ga.gov.au/persona/marine>. Data are not to be used for navigation purposes.

Data quality rating:

- ★ Institutional Environment - 5
- ★ Accuracy - 5
- ★ Coherence - 5
- ★ Interpretability - 4
- ★ Accessibility - 4

INSTITUTIONAL ENVIRONMENT**Excellent**

- ✓ Does the information have the potential to enhance services or service delivery?
- ✓ The data aligns with the Data Quality Framework, including:
 - Legislation
 - Policies
 - Information Asset Governance
 - Standards
 - Data Management Plans
- ✓ The following governance roles and responsibilities for this asset are clearly assigned:
 - Information Asset Owner
 - Information Asset Custodian
 - Information Steward
- ✓ Data collection is authorised by law, regulation or agreement
- ✓ The Custodial agency has no commercial interest or conflict of interest in the data

ACCURACY**Excellent**

- ✓ Data has been subject to a data assurance process (for example: Checking for errors at each stage of data collection and processing, or verifying data entry and making corrections if necessary.)
- ✓ Data is revised and the revision is published if errors are identified
- ✓ There are no known gaps in the data or if there are gaps (for example: non-responses, missing records, data not collected), they have been identified in caveats attached to the dataset.
- ✓ No changes have been made or other factors identified (for example: weighting, rounding, de-identification of data, changes or flaws in data collection or verification methods) that could affect the validity of the data; or any changes/factors have been identified in caveats attached to the asset.
- ✓ The data collection met the objectives of the primary user. The data correctly represents what it was designed to measure, monitor or report.

COHERENCE**Excellent**

- ✓ Standard definitions, common concepts, classifications and data recording practices have been used.
- ✓ Elements within the data can be meaningfully compared.
- ✓ This data is generally consistent with similar or related data sources from the same discipline
- ✓ The data can be analysed over time (for example, there have not been any significant changes in the way items are defined, classified or counted over time).
- ✓ The data does not form part of a collection or, if it is the latest in a series of data releases, there have not been any changes in methodology or external impacts since the last data release.

INTERPRETABILITY**Very Good**

- ✓ Information is available about the primary data sources and methods of data collection (e.g. instruments, forms, instructions).
- ✓ Information is available to help users evaluate the accuracy of the data and any level of error

- ✓ Information is available to explain concepts, help users correctly interpret the data and understand how it can be used
- ✓ Information is available to explain ambiguous or technical terms used in the data

✗ A data dictionary is available to explain the meaning of data elements, their origin, format and relationships

i Find out more about the data dictionary from the Custodian (contact details below).

i Find out more about the primary data sources and methods of data collection from the Custodian (contact details below).

i Find out more about concepts used in this dataset and how to understand or interpret the data from the Custodian (contact details below).

i Find out more about ambiguous or technical terms used in the data from the Custodian (contact details below).

ACCESSIBILITY

Very Good



- ✓ Data is available online with an open licence
- ✓ Data is available in machine-processable, structured form (e.g. CSV format instead of an image scan of a table)
- ✓ Data is available in a non-proprietary format (e.g. CSV, XML)
- ✓ Data is linked to other data, to provide context (e.g. employee ID is linked to employee name or species name is linked to genus)

✗ Data is described using open standards (e.g. RDF, SPARQL) and persistent identifiers (URIs or DOIs)

DATA DISCLAIMER

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For more information about this dataset or data source, contact:

Department of Planning, Industry and Environment

Data Broker email:

data.broker@environment.nsw.gov.au

Understanding the Data Quality Statement

The data quality statement aims to help you understand how a particular dataset could be used and whether it can be compared with other, similar datasets. It provides a description of the characteristics of the data to help you decide whether the data will be fit for your specific purpose.

The Data Quality statement is prepared by the data custodian (provider of the dataset), using a questionnaire that has been developed in accordance with the NSW Government Standard for Data Quality Reporting.

About the quality rating:

The reporting questionnaire asks five questions for each of these data quality dimensions:

- Institutional Environment
- Accuracy
- Coherence
- Interpretability
- Accessibility

For each question: “yes” = 1 point; “no” = 0 points

The number of points determines the Quality Level for each dimension (high, medium, low).

Only dimensions with four or five points receive a star.

Points	Quality Level	Star / No Star
0	Poor	No Star
1	Poor	No Star
2	Fair	No Star
3	Good	No Star
4	Very Good	Star
5	Excellent	Star

Evaluating data quality

Quality relates to the data's “fitness for purpose”. Users can make different assessments about the data quality of the same data, depending on their “purpose” or the way they plan to use the data.

The following questions may help you evaluate data quality for your requirements. This list is not exhaustive. Generate your own questions to assess data quality according to your specific needs and environment.

- What was the primary purpose or aim for collecting the data?
- How well does the coverage (and exclusions) match your needs?
- How useful are these data at small levels of geography?
- Does the population presented by the data match your needs?
- To what extent does the method of data collection seem appropriate for the information being gathered?
- Have standard classifications (eg industry or occupation classifications) been used in the collection of the data? If not, why? Does this affect the ability to compare or bring together data from different sources?
- Have rates and percentages been calculated consistently throughout the data?
- Is there a time difference between your reference period, and the reference period of the data?
- What is the gap of time between the reference period (when the data were collected) and the release date of the data?
- Will there be subsequent surveys or data collection exercises for this topic?
- Are there likely to be updates or revisions to the data after official release?