Title	NSW Marine Estate Towed Video Imagery
Alternative title(s)	NSW Marine still imagery of the seabed for the NSW continental shelf
Abstract	Raw downward facing still imagery of the seabed over the NSW continental shelf acquired using NSW government's (Department of Climate Change Energy Environment and Water) towed video system aboard RV Bombora. Acquisition is ongoing (>2015) predominantly funded by the department under Coastal Reform Climate Change Fund project 'State-wide Science' and/or by various collaborative agencies (DPI; Parks Australia; FRDC) and educational institutions (UoW: UTas). Imagery is captured over areas to 1) ground-truth seabed typologies and validate habitat boundaries derived from multi-beam echosounder (MBES) surveys (www.aodn.org.au or www.ausseabed.gov.au) and/or 2) habitat assessments and monitoring to capture broad distribution of seabed benthic communities. For biodiversity-type assessments, imagery is captured, and transects/sites are selected in a sampling design in accordance with the Australian Field Manuals for Marine Sampling. Imagery captured is generally of benthic habitats in 10-120m of water depth over the NSW inner shelf. Georeferenced (XYZ) and time-stamped (UTC) still imagery is accessible via SEED, the online annotation platform Squidle+ and SeaMap Australia.

Resource locator

Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for NSW Marine Estate Towed Video Imagery Function: download

Unique resource identifier

Code	b91e1ded-8e6e-46d0-b690-eadf5d5b8816

Presentation form	Image digital
Edition	1
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/b91e1ded-8e6e-46d0-b690-eadf5d5b8816
Purpose	baseline for monitoring
Status	Completed
Spatial representation type	video

Spatial reference system

Code identifying the spatial	4283

reference system	
Spatial resolution	1 m
Additional information source	Data were collected on 5-6 separate dates during the time period to acquire imagery once from each for the randomly selected locations identified at the start of the survey.
Topic category	

Keyword set

keyword value	MARINE-Biology MARINE-Coasts MARINE-Reefs PHOTOGRAPHY-AND-IMAGERY-Remote-Sensing
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	152.303467
East bounding longitude	153.709717
North bounding latitude	-32.670304
South bounding latitude	-29.088277
NSW Place Name	Port Stephens Great Lakes

Vertical extent information

Minimum value	-100
Maximum value	2228
Coordinate reference system	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711

Temporal extent

Begin position	2019-10-20
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Unknown
Contact info	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage

Video surveying was undertaken following the recommendations detailed in 'Field Manuals for Marine Sampling to Monitor Australian Waters' (https://www.nespmarine.edu.au/field-manuals-marine-sampling-monitor-australian-waters). Details of the NSW DPIE towed video system and equipment are provided in 'SeaBed NSW: Standard Operating Procedures of multibeam surveying' (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). XYZ positional accuracy of the still imagery is better than XY (3 degrees of slant range [eg. 2.6m radius @ 100m]; 2x ship's speed for XY (horizontal) and/or >2x cable speed for Z (vertical). Filtered coordinates were then used to estimate 'fish' GPS location using the neighbouring average (3s time-step). Where a coordinate estimate was performed using one of these methods, the image's metadata "Flag" column was populated with a "1" or "3" respectively. Interpolated positions were then validated by comparison of image content against bathymetric features at corresponding coordinates, primarily at transitions between high-relief reef and low-relief sediment. Image (JPG) and image metadata records (generated in csv format) were uploaded for access and annotation in Squidle+.

Limitations on public access

Scope: dataset

DQ Conceptual Consistency

Effective date: 2020-05-18

Explanation: As the imagery is acquired using a moving platform some images may capture the same section of seabed. Survey speed of ~1kt (0.51m/s); image capture rate 1 image every 2 seconds; and approximate area of seabed captured in each image. nb: tow-fish roll, pitch and heave values are recorded by the video camera and saved within the video data file.

DQ Absolute External Positional Accuracy

Effective date: 2020-05-18

Explanation: Squidle+ ingestion of data requires a position and an altimetry value or height of the 'tow fish' above the seabed. At the time of acquisition, the the towed video system did not have an altimeter and thus the height of the tow fish was estimated as Tow-Fish Altitude = [Water Depth at Tow-Fish (from MBES survey)] - [Tow-Fish Pressure Sensor Depth] + [P-Sensor to SLR camera (offset =0.52)] nb. P-sensor value is not corrected for tide whereas MBES data is static to AHD. XY position of fish is determined by relative position of USBL transponder (fish) to transceiver (vessel). GPS position is G2 quality (~0.4-0.5 in real-time) and is relative to the vessels Centre of Mass (reference frame 0:0:0) with a 12.4m forward offset (X = -1.5) from transceiver to COM entered in the USBL software (Y = 0). USBL heading offset is checked following each installation (nominally 23 degrees from centreline) and USBL (Tracklink, USA) precision is 3 degrees of slant range value. Original image time-stamping is synched with computer UTC (<1s) but naming convention uses USBL/Video text feed based on POS MV output.

Responsible party

Contact position: Data Broker

Organisation name: NSW Department of Climate Change, Energy, the Environment and Water

Telephone number: 131555

Email address: data.broker@environment.nsw.gov.au

Web address: https://www.nsw.gov.au/departments-and-agencies/dcceew

Responsible party role: pointOfContact

Metadata point of contact

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Responsible party role	pointOfContact

Metadata date

2024-02-26T13:43:53.951309

Metadata language