bs100 grid Metadata

Field	Description
Title	High-resolution depth model for the Bass Strait - 100 m
Metadata Identifier	
Digital Object Identifier	
Topic Category	ELEVATION: height above or below sea level. GEOSCIENTIFIC INFORMATION: earth sciences. OCEANS: features and characteristics of salt water bodies excluding inland waters.
Keywords	bathymetry, marine, continental shelf, elevation, SRTM, DEM, lidar bathymetry
Key Dates	CREATED: V1 – 29 January 2022
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Abstract	This dataset contains bathymetry (depth) products from the compilation of all available source bathymetry data within the Bass Strait into a 100 m-resolution Digital Elevation Model (DEM). The Bass Strait region includes a broad continental shelf about 460 km wide, separating the Tasmania and Victoria mainland by a distance of over 250 km. The Bass Strait is bounded by a continental slope incised with numerous canyons, including the prominent Bass Canyon. This region encompasses numerous shallow islands and rocks, drowned paleo-shorelines, vast dune fields and a rugged coastline. Bathymetry mapping of the seafloor is vital for the protection of the Bass Strait, allowing for the safe navigation of shipping, improved environmental management and

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	resource development. Australian Hydrographic Office-supplied ENC tile spot depths were used to develop the general bathymetry variation across the entire Bass Strait region. Shallow- and deep-water multibeam survey data reveal the complexity of the seafloor for the Bass Strait continental shelf and adjacent slope canyons incising the western and eastern sides of the strait. Airborne LiDAR bathymetry acquired by the Australian Hydrographic Office cover most of the northern Tasmanian nearshore and coast, with some coverage gaps supplemented by Landsat-8 satellite derived bathymetry data. The Geoscience Australia-developed Intertidal Elevation Model DEM improves the source data over Bass Strait's vast intertidal zone. Highly accurate photogrammetry coastline data developed for the Tasmania, Victoria and New South Wales coastlines, and Near Surface Feature data representing shoal features observable in aerial imagery, were used to improve the land/water interface of the numerous island and rock features. All source bathymetry data were extensively edited as 3D point clouds to remove noise, given a consistent WGS84 horizontal datum, and where possible, an approximate MSL vertical datum.
Purpose	This project aimed to develop a new high-resolution digital elevation model (DEM) for the Bass Strait at a grid pixel resolution of 0.001-arc degree (about 100 m). A high-resolution DEM is a critical spatial dataset used to assist policy making, such as informing depth information for wind farm development. In addition, a new grid is required to improve the geomorphic detail about the location and spatial extent of seabed features for the Bass Strait and adjacent continental slopes. The new grid utilised the latest data sourced from ship-based multibeam and singlebeam echo sounder surveys, ENC tile spot depths, airborne LiDAR bathymetry surveys, satellite derived bathymetry data, coastline and near surface feature data.
Data limitations (optional)	AUSTRALIAN HYDROGRAPHIC OFFICE NOTICE: Not to be used for navigation. This bs100 DEM product incorporates source bathymetry data reproduced under licence by permission of the Australian Hydrographic Office © Commonwealth of Australia 2021-2022. GEOSCIENCE AUSTRALIA NOTICE: This bs100 DEM product incorporates data which are © Commonwealth of Australia (Geoscience Australia). The Commonwealth gives no warranty regarding the data's accuracy, completeness, currency or suitability for any particular purpose.

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	CSIRO MARINE NATIONAL FACILITY NOTICE: This bs100 DEM product incorporates source bathymetry data provided by the CSIRO Marine National Facility and made available under a Creative Commons Attribution 4.0 International Licence. We acknowledge the use of the CSIRO Marine National Facility (https://ror.org/01mae9353) in undertaking this research. This bs100 DEM product has been compiled from a wide range of data sources of varying resolution and accuracy. Data are supplied 'as is' without any warranty or guarantee. The data may not be free of error, comprehensive, current or appropriate for your particular purpose. You accept all risk and responsibility for its use.
Preview Image (optional)	
Data lineage (optional)	
Data file description (optional)	FILE: bs100_29jan PROJECTION: Geographic Latitude/Longitude DATUM: WGS84 SCALE: 0.001*0.001 arc-degree (about 100 m) grid cells STORED DATA FORMAT: ESRI raster AVAILABLE DATA FORMATS: floating point geotiff, Fledermaus SD file
Spatial Extent	NORTH LATITUDE: -37.0 SOUTH LATITUDE: -42.0 WEST LONGITUDE: 143.0 EAST LONGITUDE: 150.0 HORIZONTAL DATUM: WGS84 [a]ESRI raster Top -37.0005 ESRI raster Left 142.9995 ESRI raster Right 149.9995 ESRI raster Bottom -42.0005 ESRI raster Columns 7000 ESRI raster Rows 5000 ESRI raster Cell Size X, Y 0.001, 0.001 [a]Cell-registered, showing coordinates for edge of cells
Temporal Extent	
Vertical extent (optional)	MINIMUM HEIGHT: -4720 m MAXIMUM HEIGHT: 1781 m VERTICAL DATUM: approximates mean sea level (MSL)
Maintenance and Update	STATUS: Ongoing

Field	Description
Frequency (optional)	FREQUENCY: As required
Resource Constraints and licensing	COPYRIGHT: The content on this website is released under the Creative Commons Attribution 4.0 International Licence: https://creativecommons.org/licenses/by/4.0/ ATTRIBUTION: "Australian Hydrographic Office, Geoscience Australia, James Cook University"
Processing*	
References	
Credits and funding*	CREDITS: Anne Worden (Australian Hydrographic Office) Nigel Townsend (Australian Hydrographic Office) Mark Alcock (Geoscience Australia) Grant Boyes (Geoscience Australia) Duncan Moore (Geoscience Australia) Kim Picard (Geoscience Australia) Joshua Sixsmith (Geoscience Australia) Michele Spinoccia (Geoscience Australia) Daniel Ierodiaconou (Deakin University) Cisco Navidad (CSIRO) FUNDING: Geoscience Australia
Supplemental information	
Online resources	