

Victorian Coastal Digital Elevation Model (VCDEM 2017)

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Title	Victorian Coastal Digital Elevation Model (VCDEM 2017)
Date	2017-07-31
Date type	Creation
Abstract	A gap free Digital Elevation Model (DEM) for the Victorian Coastal region created from the Updated High Resolution 2.5m VCDEM as well as parts of the Shuttle Radar Topography Mission (SRTM) 1 Second DEM, the Australian Bathymetry and Topography grid and a 10m DEM of Port Phillip Bay (PPB) that were provided for this project. This product uses a combination of low resolution data and interpolation techniques to provide a DEM that appears representative of the bathymetry in the Victorian Coastal Region.

Metadata language	eng
Character set	UTF8
Hierarchy level	Dataset

OnLine resource

Linkage	https://vmdp.deakin.edu.au/geonetwork/srv/en/metadata.show?uuid=8d3ccf63-ee85-41cd-917e-933624a50b2e
Protocol	WWW:LINK-1.0-http--metadata-URL
Linkage	https://imos.aodn.org.au/imos123/home?uuid=8d3ccf63-ee85-41cd-917e-933624a50b2e
Protocol	WWW:LINK-1.0-http--link
Linkage	http://geoserver-123.aodn.org.au/geoserver/ncwms
Protocol	IMOS:NCWMS--proto
Linkage	http://geoserver-123.aodn.org.au/geoserver/ows
Protocol	IMOS:AGGREGATION--bodaac
Linkage	https://processes.aodn.org.au/wps
Protocol	OGC:WPS--gogoduck
Linkage	https://s3-ap-southeast-2.amazonaws.com/imos-data/Deakin_University/bathymetry/Victorian-coast_Bathy_10m.tif
Protocol	WWW:LINK-1.0-http--link
Linkage	http://www.fig.net/resources/proceedings/fig_proceedings/fig2010/papers/fs04i/fs04i_quadros_4092.pdf
Protocol	WWW:LINK-1.0-http--link
Linkage	http://iho.int/iho_pubs/standard/S-44_5E.pdf
Protocol	WWW:LINK-1.0-http--link

Point of contact

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Role	Custodian
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Organisation name	Cooperative Research Centre for Spatial Information (CRCSI)
Role	Author
Topic category	Oceans
Topic category	Elevation

Keyword

Keyword	Oceans Bathymetry Water Depth
Keyword	Oceans Bathymetry Seafloor Topography
Keyword	Oceans Ocean Acoustics Acoustic Scattering
Keyword	Oceans Marine Biology Marine Habitat
Keyword	Oceans Coastal Processes Coral Reefs
Keyword	Oceans Coastal Processes Beaches
Keyword	Oceans Coastal Processes Estuaries
Keyword	Oceans Coastal Processes Coastal Elevation
Keyword	Land Surface Topography
Keyword	Biosphere Aquatic Habitat Benthic Habitat
Type	Theme
Keyword	Marine Features (Australia) Port Phillip Bay, VIC
Keyword	Marine Features (Australia) Bass Strait, TAS/VIC
Type	Place
Keyword	Countries Australia
Keyword	States, Territories (Australia) Victoria
Type	Place
Keyword	Field Surveys Underwater Surveys
Keyword	LIDAR
Keyword	Acoustic Equipment/Echo Sounders
Type	equipment
Keyword	Physical Oceanography
Keyword	Digital Elevation Model (DEM)
Type	Theme

Lineage

Statement	<p>The Continuous Seamless 10m DEM is derived from the Updated High Resolution 2.5m VCDEM as well as parts of the SRTM 1 second DEM data and the Australian Bathymetry and Topography grid with all gaps interpolated smoothly to create a comprehensive gap free DEM for the Victorian Coastal Region.</p> <p>Positional Accuracy: The final product is derived from various data sources - from DELWP, Port of Melbourne, Deakin University, CRCSI, Royal Australian Navy, and Geoscience Australia.</p> <p>The 2010 VCDEM product consisted of a 1m Topography DEM and 2.5m Bathymetry product that covered 90% of the Updated High Resolution DEM. The 1m Topography DEM is stated to have a horizontal accuracy of $\pm 35\text{cm}$ and a vertical accuracy of $\pm 10\text{cm}$ @ 68% confidence interval. The 2.5m Bathymetry DEM accuracy meets the International</p>
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Hydrographic Organization (IHO) Order 1 specifications of $\pm 50\text{cm}$ vertical and $\pm 3.17\text{m}$ horizontal accuracy @ 2#.

The multibeam data obtained from Deakin University was acquired using a Kongsberg EM 2040 MBES with a capability of achieving IHO Order of Special for hydrographic standard. The final accuracy of the data acquired exceeded that required for Order 1b of the IHO S-44 standard for hydrographic surveys.

MBES and LiDAR data obtained from Port of Melbourne was acquired using systems designed to meet IHO Order 1 for horizontal and vertical accuracy. Reprojection, aggregation, resampling and slight re-alignment of datasets will have had a negative impact on the final accuracy.

Datums are as follows:

Vertical Datum: AHD71 (EPSG:5711)

Horizontal Datum GDA94 - Projection: VicGrid 94 (EPSG:3111)

Resource constraints

Use limitation	This data is not suitable for navigational purposes.
Classification	Unclassified
File identifier	8d3ccf63-ee85-41cd-917e-933624a50b2e
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Metadata author

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