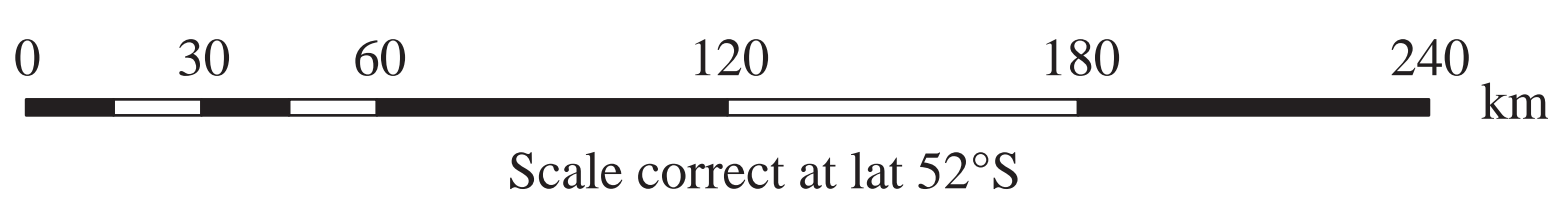
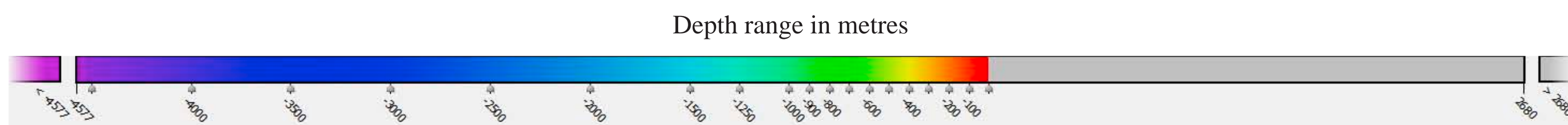


# Kerguelen Plateau & SW Indian Ocean



Projection: Mercator.  
 Horizontal datum: WGS84.  
 Vertical datum: Mean Sea Level.  
 Scale: 1 : 1 300 000 at lat 52°S.  
 Not to be used for navigation.



The kerg\_dem DEM was generated from bathymetry data, and SAR and SRTM land data at a grid pixel resolution of 0.001-arc degree (~100 m). Hillshading is from the NW at 51° above the horizon.

### The problem

Heard Island and McDonald Islands (HIMI) are situated on the Kerguelen Plateau within the south-west Indian Ocean, and are surrounded by an Australian Exclusive Economic Zone (EEZ) extending 200 nautical miles from their coasts. Australian vessels fish in the EEZ, under regulations developed by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and administered by the Australian Antarctic Division (AAD) and the Australian Fisheries Management Authority (AFMA). Marine scientists have a need to revise the Kerguelen Plateau digital elevation model (DEM) in order to better define the seabed geomorphology and depth contours, so as to help with the management of the Marine Reserves and Conservation Zones around HIMI.

### The solution

This project has developed a new high-resolution DEM for the Kerguelen Plateau and surrounding south-west Indian Ocean at a grid pixel resolution of 0.001-arc degree (~100 m). The geographic coverage ranges from latitude 48° to 56° South, longitude 68° to 80° East. Including the island topography, the new grid represents an area of about 736 000 km<sup>2</sup>. The project utilised the latest bathymetry data sourced from ship-based multi-beam and singlebeam echo sounder surveys from commercial fishing and research voyages, and land elevation satellite remotely sensed data. The new grid is called kerg\_dem and is a significant improvement on current bathymetry grids.

### The resources

For access to the kerg\_dem DEM in a range of formats for public download, visit:  
[https://www.ga.gov.au/products/servlet/controller?event=GEOCAT\\_DETAILS&catno=71552](https://www.ga.gov.au/products/servlet/controller?event=GEOCAT_DETAILS&catno=71552)  
<http://www.deepreef.org/bathymetry/98-kergdem-bathy.html>

### The reference

Beaman, R.J. and O'Brien, P.E., 2011. Kerguelen Plateau Bathymetric Grid, November 2010. Record 2011/22. Geoscience Australia, Canberra, Australia, pp. 18.

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