

COSPPac Ocean Portal

About: BRAN

Introduction

The Bluelink Re-ANalysis (BRAN) 2.1 is a high-resolution ocean reanalysis for a fourteen-year period from 1993-2006. This product was developed by Bluelink, which is a partnership between the Bureau of Meteorology, CSIRO and the Royal Australian Navy to deliver ocean forecasts for the Australian region. The ocean reanalysis was constructed by combining observational data with a high-resolution ocean model to establish an eddy-resolving best estimate of the ocean state.

Data Source

The analyses presented here are derived from the BRAN2.1 daily data sourced from the Centre for Australian Weather and Climate Research (CAWCR), which is a partnership between the Australian Bureau of Meteorology and the CSIRO. For more information on BRAN, refer to: <http://www.cmar.csiro.au/staff/oke/BRAN.htm>. To generate the ocean reanalysis, observations of the ocean temperature, salinity and sea-level were assimilated from satellites and in-situ ocean monitoring instruments such as ARGO profiling floats, tide gauges, XBTs and the TOGA TAO moored array.

Resolution

BRAN2.1 has a horizontal resolution of $0.1^\circ \times 0.1^\circ$ over the area bounded by longitudes 90°E and 180°E and latitudes 16°N and 75°S . Across the Indian Ocean and South Pacific Ocean the resolution is $0.9^\circ \times 0.1^\circ$, while in the North Atlantic Ocean the resolution is $2.0^\circ \times 2.0^\circ$. There are 47 vertical levels, with a 10 metre resolution down to 200 metres depth.

Coverage

1993 to 2006 (fourteen complete years).

Update Frequency

Data for later years may become available, but there are no firm plans on when this may happen.

Description

The following display options are available for the BRAN dataset:

- **Variable:**
 - a. Mean Temperature
 - b. Salinity
 - c. Temp & Currents
 - d. Sea Level & Currents
- **Plot Type:**
 - a. Surface Map
 - b. Sub-surface Cross-section (for temperature & salinity)
- **Period:**

- a. Monthly (1-month mean)
- b. 3-Monthly (3-month mean)
- c. 6-Monthly (6-month mean)
- d. 12-Monthly (12-month mean)

Limitations

Caution is advised when interpreting data for coastal regions. Tides, tidal currents and storm surges are all important processes in coastal regions but they are not currently represented in BRAN2.1. In addition, caution is advised when interpreting data in regions with low grid resolution such as the eastern Pacific Ocean as the resolution is too coarse to resolve eddies and other small scale ocean processes.

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Acknowledgements, Citations and References

Schiller, A., Oke, P. R., Brassington, G. B., Entel, M., Fiedler, R., Griffin, D. A. and Mansbridge, V. J. (2008). Eddy resolving ocean circulation in the Asian-Australian region inferred from an ocean reanalysis effort, *Progress in Oceanography*, 76(3), 334-365.

Oke, P. R., Brassington, G., Griffin, D. A. and Schiller, A. (2008). The Bluelink ocean data assimilation system (BODAS), *Ocean Modelling*, 21, 46-70.

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In addition, you should also acknowledge our Bluelink partners, the Australian Navy and the CSIRO (Wealth from Oceans, National Research Flagships).

Contact

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