COSPPac Ocean Portal
About: ERSST

Introduction
Extended Reconstructed Sea Surface Temperature (ERSST) is a global monthly sea surface temperature analysis developed and maintained by the NOAA Earth System Research Laboratory (USA).

With a resolution of 2° (latitude and longitude) the ERSST analysis is intended to complement the NOAA Optimum Interpolation SST V2 (referred to in this portal as Reynolds SST), which dates from 1981 and has higher resolution of 0.25°. The coarse spatial resolution of ERSST allows for contouring of visualised data, whereas Reynolds SST has too great a spatial variance or 'noise' for contouring due to its higher resolution. In addition the longer period of time spanned by ERSST is more suitable for statistical analyses including trends and deciles.

Link for further information on original data: http://www.ncdc.noaa.gov/ersst/ .

Data Source
All the analyses on this portal have been derived from monthly data contained in NetCDF files. These are, in turn, based on observations of ocean surface temperature from ships, buoys (both drifting and moored) and other platform types.
Link to data: ftp://ftp.ncdc.noaa.gov/pub/data/cmb/ersst/v3b/netcdf/ .

Resolution
2° latitude and longitude.

Coverage
January 1950 to the present. Note: the original data goes back until 1854 but the early period is excluded due to poor observation coverage in the Pacific (see Smith et. al. (2003) for further information).

Update Frequency
Variable.

Description
The following display options are available for the ERSST dataset:

- *Variable*:
  (Note: these are listed under the 'Ocean Temperature' heading)
  a. Mean Temperature
  b. Anomalies (with respect to the 1971-2000 mean)
  c. Deciles (ranking the SST against the period from 1950-present)

- *Plot Type*:
  Surface Map

- *Period*:
  a. Monthly
  b. 3-Monthly (3-month mean)
  c. 6-Monthly (6-month mean)
  d. 12-Monthly (12-month mean)

Disclaimer
The Bureau advises that the information in this service comprises general statements based on scientific research. The Bureau does not warrant, guarantee or make any representations regarding the currency, correctness, accuracy, completeness, reliability, or any other aspect regarding characteristics or use of the information shown on this web portal. The user accepts sole responsibility and risk associated with the use and results of Bureau material in this service, irrespective of the purpose to which such use or results are applied. To the extent permitted by law, the Bureau (including each of its employees) excludes all liability to any person for any consequences, including but not limited to losses, damages, costs, expenses and any other compensation, whether in an action, contract, negligence or tort, arising out of or in connection with the use or performance of Bureau material in this service and any information or material contained in it.

Acknowledgements, Citations and References
Smith, T.M., and R.W. Reynolds, 2003: Extended Reconstruction of Global Sea Surface Temperatures Based on COADS Data (1854-1997). Journal of Climate, 16, 1495-1510. Smith et al. 2003

Smith, T.M., and R.W. Reynolds, 2004: Improved Extended Reconstruction of SST (1854-1997). Journal of Climate, 17, 2466-2477. Smith et al. 2004

Please note the following text reproduced from the NOAA website: "**Please note:** If you acquire NOAA_ERSST_V3 data products from PSD, we ask that you acknowledge us in your use of the data. This may be done by including text such as *NOAA_ERSST_V3 data provided by the NOAA/OAR/ESRL PSD, Boulder, Colorado, USA, from their Web site at http://www.esrl.noaa.gov/psd/* in any documents or publications using these data. We would also appreciate receiving a copy of the

relevant publications. This will help PSD to justify keeping the NOAA_ERSST_V3 data set freely available online in the future. Thank you!"

The information shown in this web portal is covered by the Bureau of Meteorology's Copyright Notice – see http://www.bom.gov.au/other/copyright.shtml?ref=ftr .

Contact
For more information, please email cosppac_comp_unit@bom.gov.au .
Ocean Portal URL: http://www.bom.gov.au/cosppac/comp/ocean-portal/