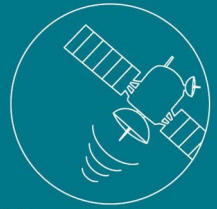


NERC EARTH OBSERVATION DATA ACQUISITION AND ANALYSIS SERVICE (NEODAAS)



Supporting the UK science community with remote sensing data processing

The Natural Environment Research Council (NERC) Earth Observation Data Acquisition and Analysis Service (NEODAAS) is a dual node facility with NEODAAS-Dundee undertaking direct reception of satellite data and NEODAAS-Plymouth providing data processing and analysis services to end users.

The service received a 20/20 score in its 2008 review and is currently developing terrestrial, freshwater and polar products to add to its existing marine and atmospheric science user communities.

Service priorities:

- Developing processing systems to make remote sensing data available in both near-real time and from archived time series in support of high quality science;
- Developing new products and services, including processing of data from new satellite sensors;
- Guiding research cruises and hence maximising the science that can be done at sea. NEODAAS-Plymouth provides support for typically 400 cruise days a year which, since 2004, totals a cruise value exceeding £25 million;
- Providing satellite data to test or validate numerical models such as for the National Centre for Ocean Forecasting;
- Supporting users in over 50 university departments, NERC and government institutes, across all NERC research areas and with Earth Observation (EO) expertise ranging from specialists to novices.

Role in society

Contributing towards science across all of NERC strategic priority areas including, notably, Climate System, Biodiversity, Earth System Science and Sustainable Use of Natural Resources;

Contributing to science publications across a wide range of disciplines, with over 300 peer reviewed papers supported since 2001 (including Nature and Science), 400 further non-peer reviewed articles and around 250 supported research projects;

Support to over 30 completed PhD theses;

Advisory and strategic roles, including membership of committees for EO Data Acquisition;

Outreach activities showing NEODAAS illustrations in the media, publications and reports by weather services. Data access facilities are available for HEIs, colleges, schools, individual support discussion forums, training and education;

Undertaking outreach to the general public with approximately 23 million page hits and 4 million image downloads in 2010-2011.

Delivering on a global scale



NEODAAS is a contribution to NERC'S National Capability.



International impact is shown through requests from overseas scientists who receive support on a commercial basis, or through bilateral agreements, or are provided with limited free access to support research and training. Users outside the UK include, *inter alia*, AWI (Germany), IOLR (Israel), NIOZ (Netherlands), UBP (France) and ULB (Belgium).

PML is involved in major international projects such as leading the ESA flagship Ocean Colour Climate Change Initiative and EC Framework 7 Europe Africa Marine EO network, and involvement in ESA CoastColour, EC Framework 7 AQUAMAR, NETMAR, MyOcean, DevCoCast. Results from these projects feed back through NEODAAS for wider exploitation.

Data access & management

- Data are automatically made available at near-real time via the website (www.neodaas.ac.uk) and can be made available via ftp;
- A copy of the data received at Dundee are stored off-site at NEODC. NEODAAS and NEODC collaborate to ensure complementarity of activities;
- The systems run 24 hours a day and the most recently processed data are available in near-real time (2 hours from reception and 7 hours for global data). Data from the AVHRR, SeaWiFS, MODIS and MERIS archives are re-processed on request;
- All the near-real time processed data are automatically made available via the website (www.neodaas.ac.uk) and the NEODAAS data portal provides various data visualisation tools. Data can be provided via e-mail in support of marine research cruises and via ftp for observatories. Such applications include the monitoring of volcanic activity and water quality. Terms and conditions for data use are specified on the NEODAAS website;
- NEODAAS can process small or large datasets for specific studies. The service can implement specific algorithms or investigate new sources of data and extract data from time series based on multiple points, transects, or spatial areas.

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