

Seal tagging improves ocean forecasts

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Data from animal-borne sensors, including seal tags, can help scientists produce analyses and forecasts of ocean temperature and salinity, according to a UK led study.

Researchers investigated the impact of including seal temperature and salinity recordings within the global [ocean](#) forecasting model (Forecast Ocean Assimilation Model, FOAM) of the Met Office (the United Kingdom's [national weather service](#)), which is mostly used by the Royal Navy, the Copernicus Marine Environment Monitoring Service, ship-routing companies, and offshore oil and gas operators, who require detailed knowledge of marine conditions to plan their activities. The analysis focused on the Southern Ocean, which surrounds the Antarctic continent in the Southern Hemisphere.

The research indicates that measurements from marine animals significantly improve ocean analyses and forecasts in regions where the animals are sampling. Better forecasts of global ocean conditions may lead to improved weather predictions.

"The tagged seals are unique and valuable because they observe ocean conditions in real-time in regions that are rarely sampled by other networks, including ice-covered areas and the continental shelf around Antarctica. The Met Office, along with other ocean forecasting organisations around the world, is grateful to the NERC Sea Mammal Research Unit for making the data available", said Dr. Fiona Carse, lead author of the *Quarterly Journal of the Royal Meteorological Society* study.

More information: Fiona Carse et al. Impact of assimilating temperature and salinity measurements by animal-borne sensors on FOAM ocean model fields, *Quarterly Journal of the Royal Meteorological Society* (2015). [DOI: 10.1002/qj.2613](https://doi.org/10.1002/qj.2613)

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