

Southern Ocean data: what's out there?

What do seabirds, fishing activities, water currents, sea surface temperatures and sea ice all have in common? The Southern Ocean? While that is certainly true, they are just a few examples of datasets held by the Australian Antarctic Data Centre (AADC). The AADC was created in 1995 to help meet the AAD's obligation towards Article III.1.c of the Antarctic Treaty – the free and ready exchange of Antarctic scientific data. The AADC maintains a large repository of publicly available Antarctic data, obtained from all disciplines of scientific research, such as atmospheric physics, glaciology and oceanography. The data are indexed with a metadata system – a catalogue that contains such information as when the data were collected, how, where and by whom.

So is the AADC merely archiving all this data? No. Some of the data, such as fish catches, and fast ice thickness, is fed back into the System for Indicator Monitoring and Reporting (SIMR – see *Australian Antarctic Magazine* 3:16), in order to monitor the state of the Antarctic and Southern Ocean environment. Other Southern Ocean data have been collated by the AADC's data miner,

and examined for potential relationships (see the article 'Long-term study analyses seabird communities' above). The responsibility of a data miner is to trawl through datasets, sometimes wildly different in nature, and analyse them for any linkages or patterns. When you combine the curious and inquisitive nature of a data miner with a large repository of data, such as the AADC has, then suddenly you have quite a powerful research tool at your fingertips.

So when you consider the multidisciplinary nature of the data held by the AADC, and the possibility that said data may have a much broader application than the purpose for which it was originally collected, who knows what else could be lurking beneath the depths of the Southern Ocean? ■

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From sea surface temperatures to diving penguins ...

The following are some examples of datasets that the AADC maintains:

- Sea ice biota of coastal eastern Antarctica
- Marine science underway data
- Prydz Bay current meter data
- Antarctic drifting buoys
- Regional dialects and herd formation aspects of Weddell seal (*Leptonychotes weddellii*) underwater vocalisations