



Western Australian Marine Science Institution (WAMSI) Chairman Dr Peter Rogers (left) and WA Satellite Technology and Applications Consortium (WASTIC) Chairman Professor Merv Lynch at the data management forum.

Storing and sharing vast scientific information

Marine research data should be integrated, free, open, timely and able to be easily retrieved to enable innovation and new science discoveries.

Most data is now electronic and comes in every shape, size and computer program you can name.

Gone are the days when research consisted of paper reports and plant and animal samples. Today there's a collection of satellite, airborne, acoustic, video, mapping and other data arriving in hundreds of technological formats.

So how do you store all this public information and make it available?

It's one of WAMSI's priorities to find a solution.

So much so that WAMSI, along with the hub of advanced computing in Western Australia, iVEC and the Western Australian Satellite Technology and Applications Consortium (WASTAC), hosted a Perth forum for researchers and data managers to discuss the latest developments in marine data management and how to make available these vast volumes of scientific information.

Do we put them in one 'bin' for everyone to get? Do we label where to go to get different pieces? Do we list it under the type of research, the plants or animals, or location? Do we spread information on the same topic in different places and give people electronic directions on where to go to get all the parts?

It's a growing problem as more and more information is created and archived.

But in general, archived information is not available to others – and that's where the data managers come in.

Luke Edwards, WAMSI and iVEC's marine information officer, organised the forum – titled *One year on... marine data management in Western Australia*.

His program covered:

- the latest national and international data management developments;
- how to store, integrate and search for data collected by satellite, aircraft (hyper-spectral), underwater video, conventional ocean sampling, ocean gliders, scientific papers and reports;
- technology to make data available to a wide audience, such as Google Earth;
- issues that limit data availability such as commercial confidentiality and the associated costs;
- local examples of data management initiatives occurring at universities, state government and private companies in WA and;
- information needed for computer models to predict the future effects of today's activities on marine areas.

Chairman of iVEC, the Hon. Mal Bryce, said moving raw data at great speed across distances and between researchers was vital.

"The globe is the space across which we send and receive vast quantities of data. Then we have to analyse that data to ensure we come up with useful tools and products," he said.

The forum attracted 110 scientists, information managers, State and Commonwealth senior staff, researchers, IT managers and senior people from private industry.

North West Marine Research Inventory launch

An inventory of marine research in the North West has been set up to register past, current and future research between Kalbarri and the Northern Territory.

Launched at the data management forum, the inventory –funded by the Commonwealth Department of Environment, Water, Heritage and the Arts, the State departments of Fisheries, Industry and Resources, and Environment and Conservation, INPEX, Chevron, CSIRO and WAMSI – lists up to 700 datasets captured on-line by 79 organisations.

Information about the datasets (called metadata) is in an international standard and is now available to be searched on-line.

Metadata from WAMSI research and other marine research projects such as the world's largest airborne survey of a coral reef complex, the Ningaloo Marine Park, funded by BHP Billiton and managed by the Australian Institute of Marine Science, will be added to the inventory soon.

Below: Delegates at the data management forum. Numbers were well up on predictions.

