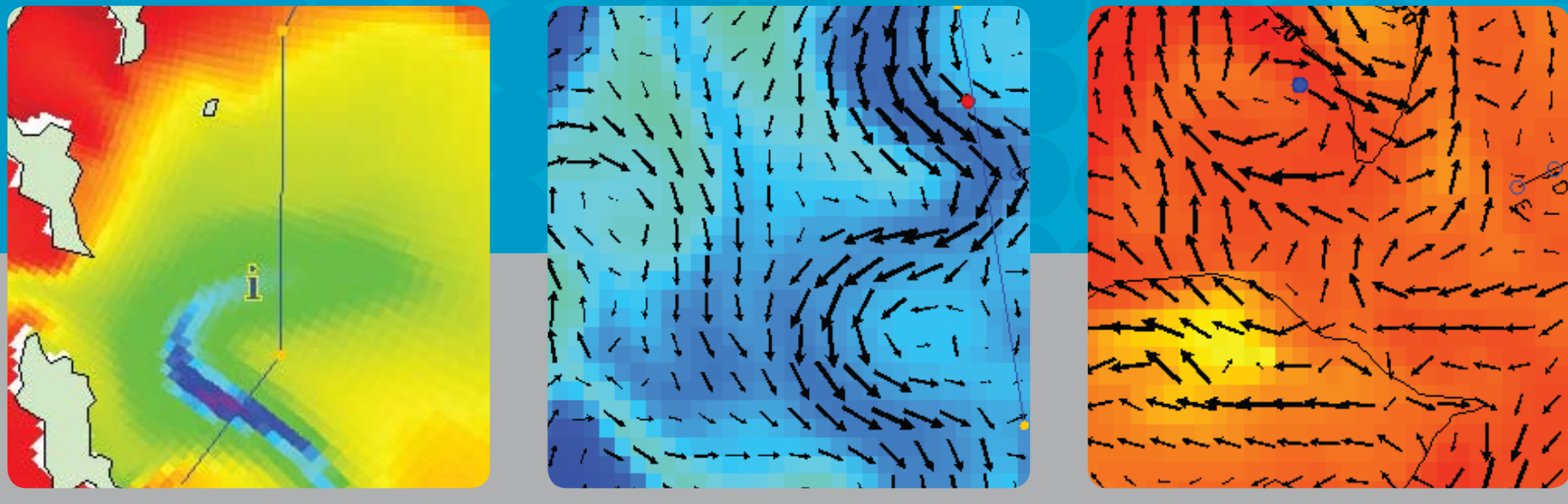


Data Interrogation and Visualisation at CSIRO Marine and Atmospheric Research



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Introducing the Data Interrogation and Visualisation Environment (DIVE)

DIVE is a data visualisation and data access tool developed for, but not limited to, geographically localised, temporally and spatially varying data. It specifically targets the visualisation of multidisciplinary data and multidimensional data. DIVE runs on Windows, Linux and Mac OSX computers.

DIVE data sources

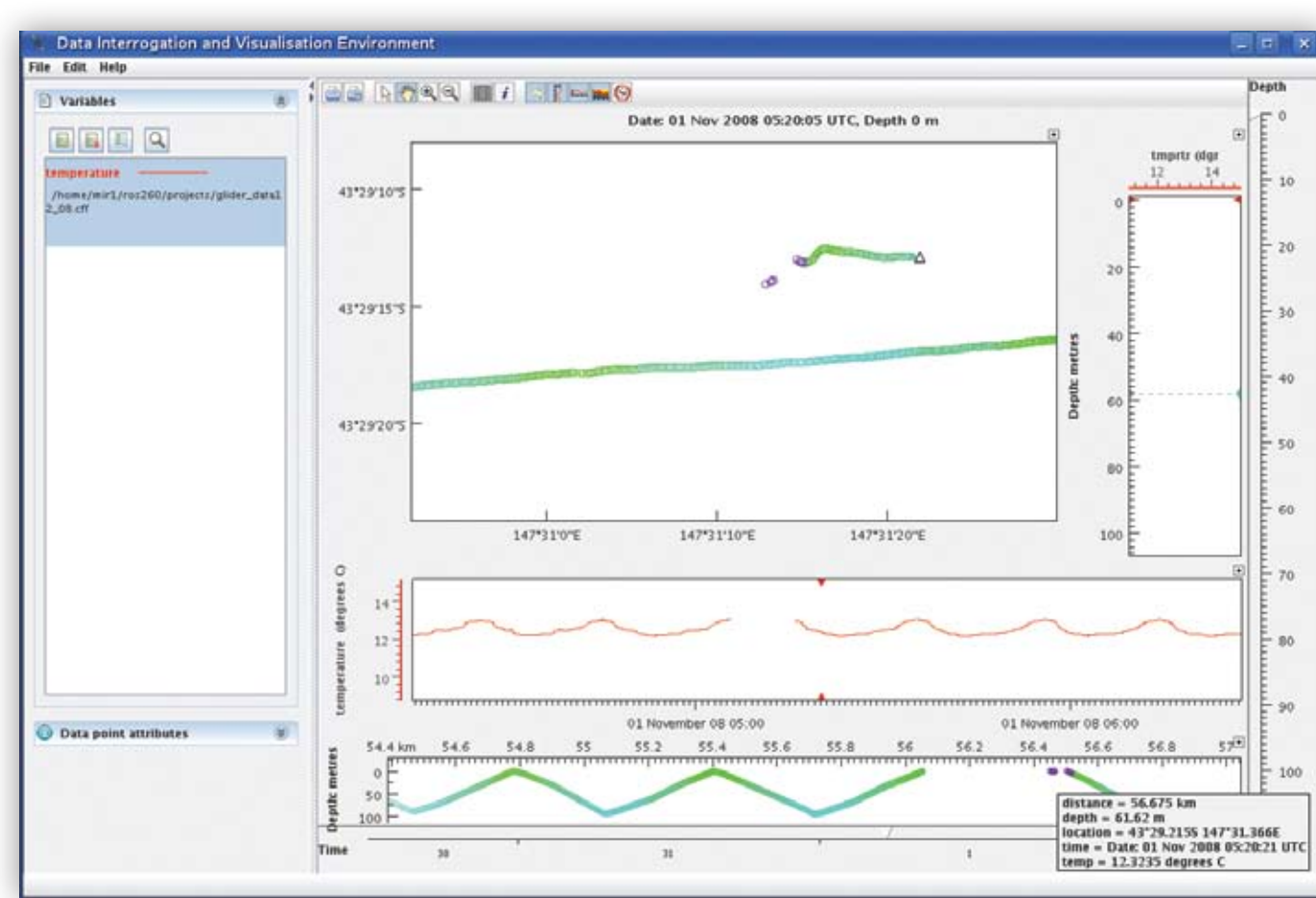
DIVE reads and displays:

Model-generated data

- hydrodynamic and biogeochemical models
- time-varying 2D or 3D

Observational data

- vessels (underway, profiles, glider) • moorings
- satellites/aircraft and • biological data from dive sites

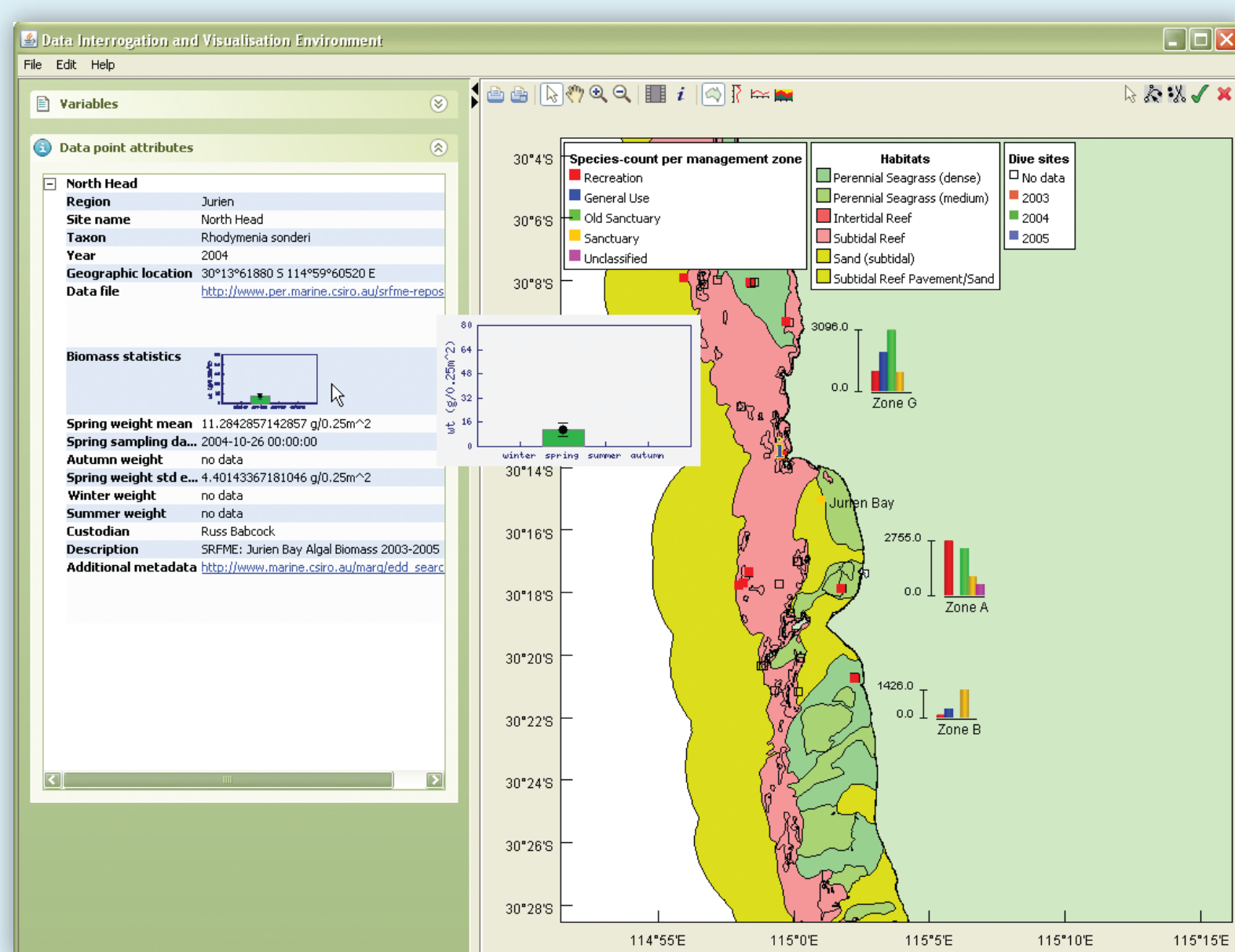


- in various formats, including netCDF, HDF, ESRI shape files, CMAR shapefiles, with an ongoing effort to add new formats to the list

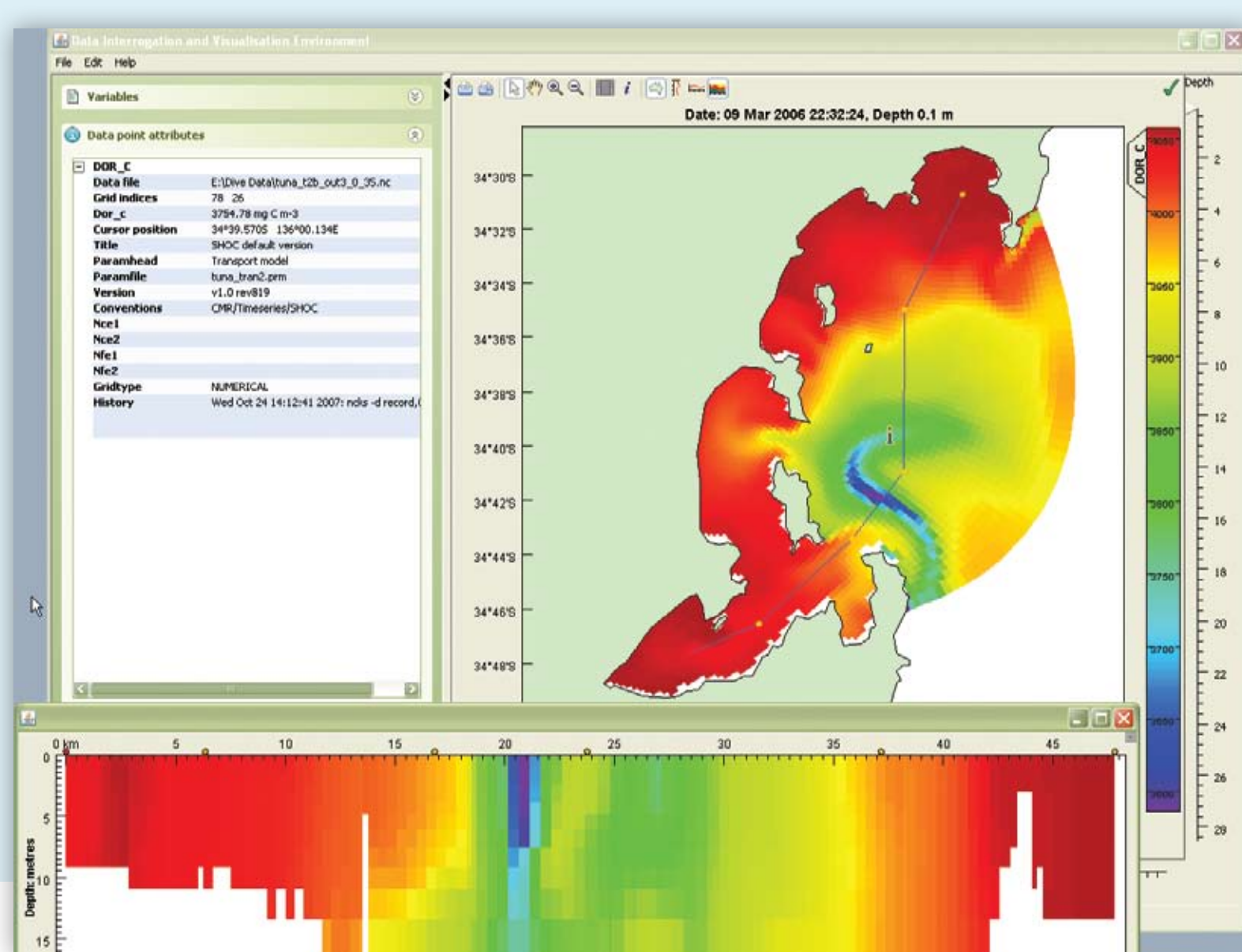
Data sources

DIVE also reads other data sources such as:

- GIS map layers: • habitat maps • bathymetry



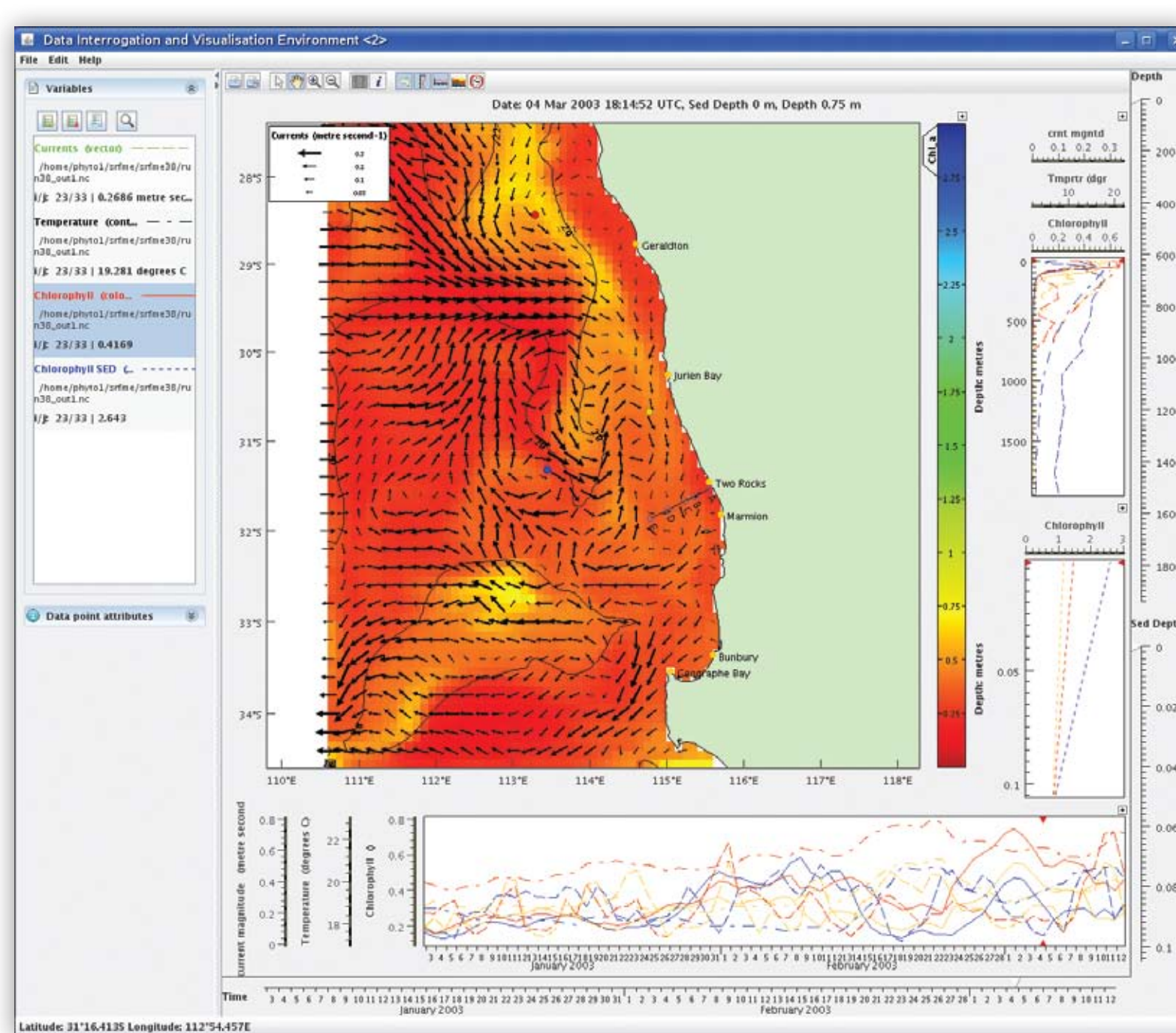
- Remote sensed imagery:
 - SST • SeaWiFS (i.e. chlorophyll)
- Various model specific formats:
 - Sigma/S level based models (i.e. ROMS, RAMS)
 - Z-level based models (i.e. MOM, SHOC)
 - Curvilinear, rotated and rectangular grids



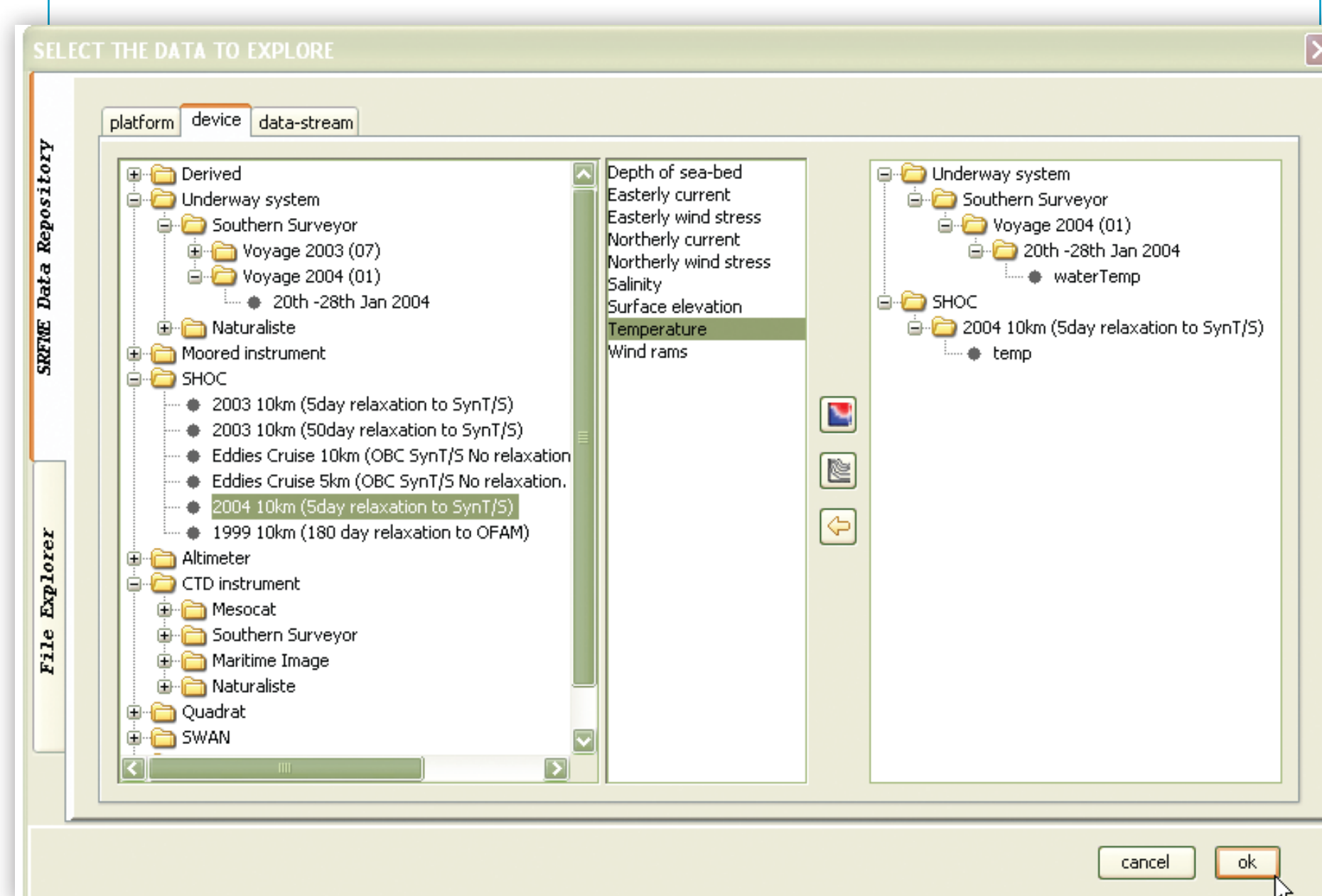
Dive features

DIVE can:

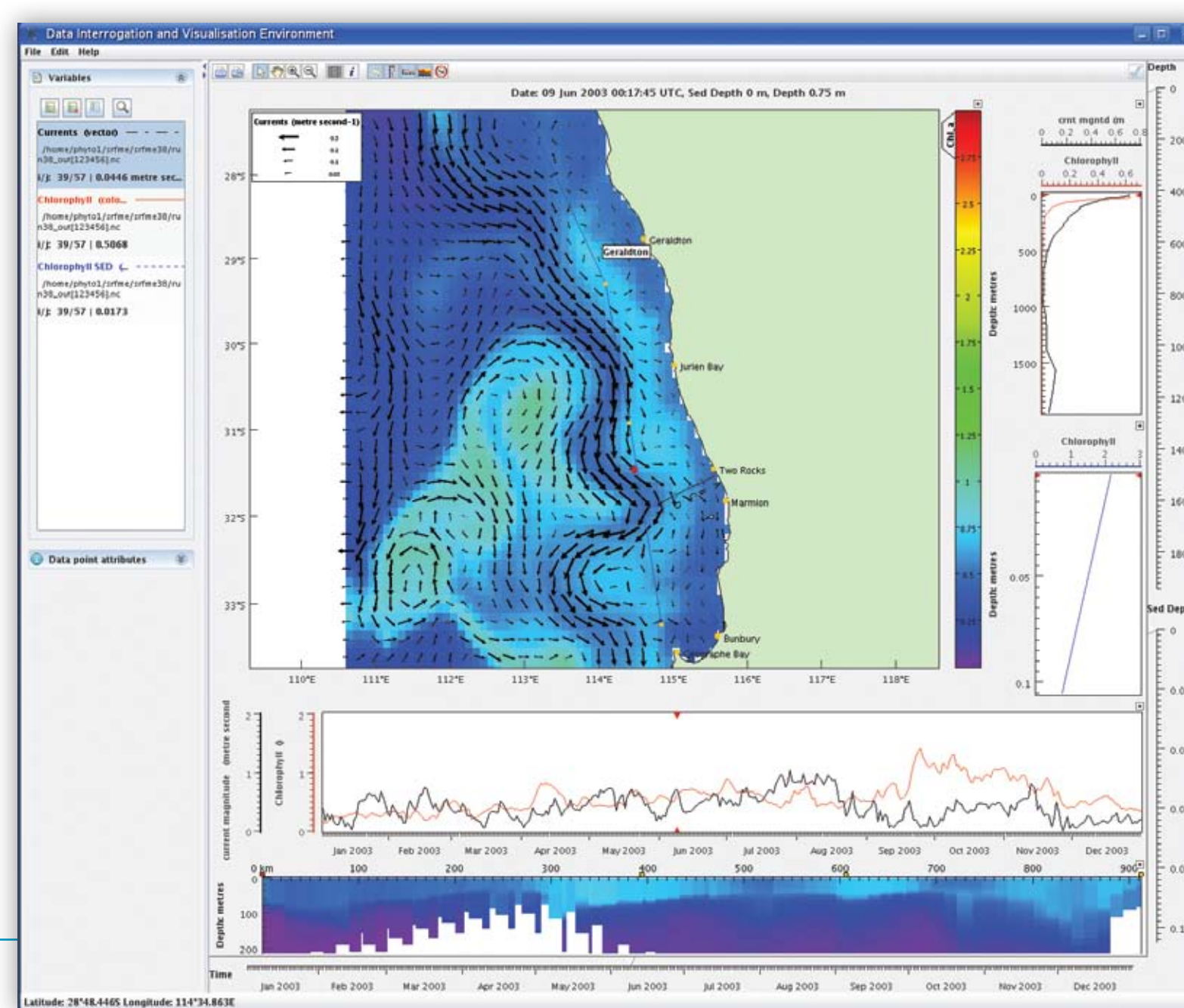
- Overlay selected datasets and simultaneously view them over space and time.



- Explore and visualise data files locally available.
- Provide metadata and custodian information from data repositories (where made available).



- Select multiple locations to present profiles and time series.
- Separate different vertical levels, i.e. pelagic and sediment
- Create vertical sections from user-definable transects



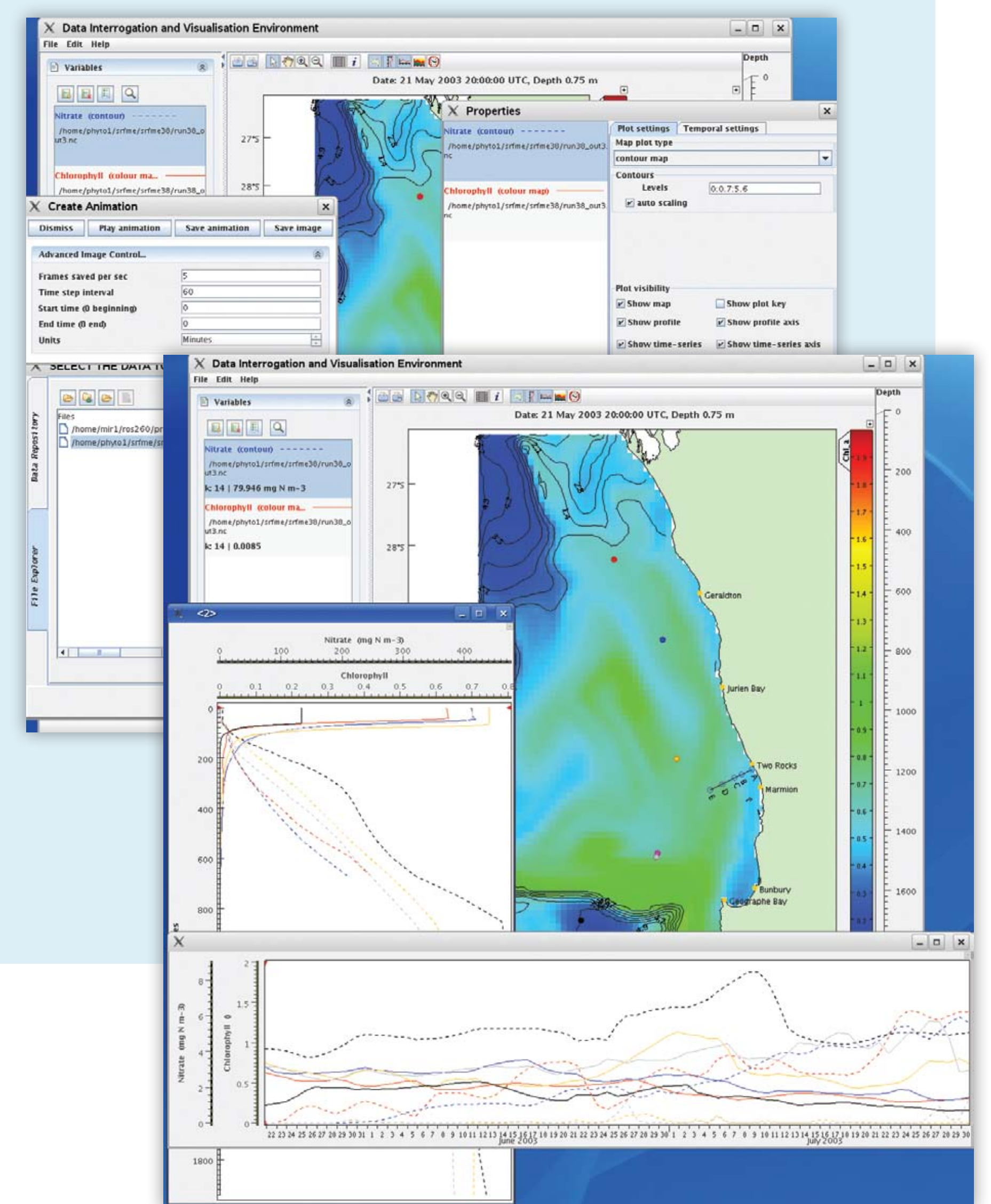
DIVE exports animations and subsets of selected data

The visualisation of datafiles defined by the user can be exported as:

- Movies (animated gif, AVI, Adobe FLASH)
- Still images (png, jpg)

Selected data can be sub-sampled and exported into a common data source.

Intuitive dialogs to control the presentation of data.



The future of DIVE

Upcoming features in DIVE include:

- Improved integration with GIS
 - Reading of geo-spatial data provided by web services
 - Real-time export of presented data-layers as geo-spatial web service
- Improved reading and display of sporadic biological and ecological field data
 - Querying of various data sources
 - Aggregation of biological data
 - Statistical aggregation of biological data
- Sub-sampling of data (ongoing)
- Adding of a vertical atmospheric domain
- Basic mathematical operations on gridded data
- 3D visualisations and animations



Further information

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