

Progress Report CF 2018-075

Spatial data management

BCS Remote Sensing and Spatial Analysis

Project Core Team

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Spatial data management

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Context

This core function manages spatial data sets by creating metadata, cleaning data to a corporate standard and saving or migrating data in a secure and accessible corporate data repository - the Spatial Data Library. Many of the data sets in the Spatial Data Library are identified through departmental project requirements. Large data sets include imagery and digital elevation models captured for general use across the department or for specific projects and have multiple uses such as time series analysis, spatial analysis, modelling, and decision making for management, monitoring, planning and policy. Departmental collaborations also produce key data sets that are important but may not be ready to use or need a license arrangement to be utilised by the department. Making fundamental data sets accessible to all staff through corporate GIS software is an effective way of communicating what science is being undertaken and also assists with determining management priorities and actions.

Aims

- Identify and manage fundamental data sets created internally and externally that have value to the department and multiple uses.
- Collate, clean and create metadata for final spatial data sets developed by departmental activities and science collaborations, and migrate this data into Corporate GIS applications and the Spatial Data Library.

Progress

- Application of processes to make spatial data discoverable and accessible as DBCA moves data storage to a cloud environment.
- Copies of LiDAR data sets purchased by other state agencies were obtained and included for corporate use.
- Bathymetry data loggers installed on three Kimberley vessels have started to contribute data to a crowd sourcing bathymetry program run by Geoscience Australia's AusSeabed program.
- A review of data management protocols and administration was undertaken and new protocols implemented.
- Development and training in access and application of scripts to enable access and processing of satellite imagery maintained on the national computing infrastructure.

Management implications

- Terrestrial and marine spatial data of corporate value can be accessed internally using cloud-based platforms, and data that is of value to external stakeholders can be identified, documented and made available on portals such as DataWA.
- Updated state-owned LiDAR and other data reduces duplication and increases the application of spatial modelling of soils, vegetation and habitats for management.
- Bathymetry data from regional patrols can now contribute to AusSeabed that will assist department staff in navigation, management and monitoring operations in Kimberley Marine Parks waters.
- Continued development and migration of user-friendly spatial data sets will support the department's need to improve the discoverability and accessibility of science data for all staff.

Future directions

- Identify terrestrial and marine spatial data sets to be migrated to the corporate data menu.
- Continue to update satellite imagery, LiDAR and digital elevation model catalogues.
- Continue to develop scripts and functions to utilise satellite imagery on national computer infrastructure.

- Collaborate with Geoscience Australia's AusSeabed program to improving coastal bathymetry in the Kimberley.