

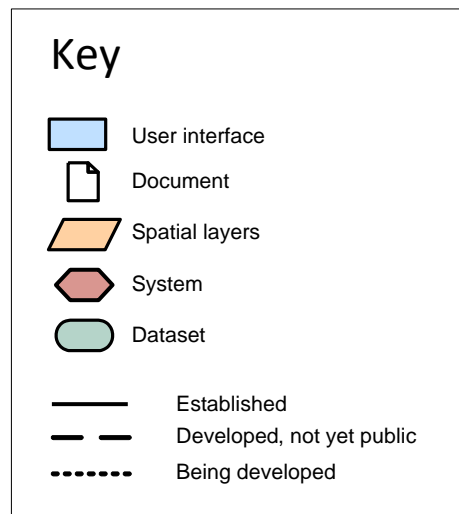
New Zealand Biodiversity Data Landscape Diagram

This first version of the Biodiversity Data Landscape Diagram was developed for the TFBIS committee to assist in understanding progress on the TFBIS Strategy, and to help identify gaps. Input was received from a small number of staff at Landcare Research, NIWA and DOC, and from participants at the March 2010 Dataversity national workshop.

The key shown to the right demonstrates the meaning of the different shapes and lines in the diagram.

The diagram includes data/information and systems relating to terrestrial and freshwater biodiversity. Some biosecurity related items are shown. Marine items have not been included. In general, tools, information and user interfaces have only been shown when they are publicly accessible, or are intended to be soon.

A distinction is drawn between 'available' and 'accessible'. Availability relates to data/information being open to the public, partially private, or completely private. Access relates to whether data can be gotten through a web portal or service, given on request, or uncurated/undigitised raw data requiring a lot of work to provide in a useful way. TFBIS can have influence over access, but can have little over availability.



Categories

The following is a definition of the 'levels' or categories in the diagram, explained from the bottom of the diagram upwards:

Primary Data – data on species observations/collections and other attributes, and site based data, collected at source, and unaltered apart from appropriate data quality and curation measures.

Aggregated Primary Data – primary data from different sources, generally of a similar type, brought together to facilitate comparison and/or access.

Middleware/Infrastructure – computer systems built to improve the management of, integration of, or access to primary data.

Web services – computer to computer communication services to allow one system to share data or functionality with another (e.g. BNZ's BRAD system consuming organism names from NZOR).

Models & Data Transformation Tools – algorithms and supporting software that encapsulate scientific knowledge. These can be used to generate synthesised information from primary data. For example Landcare Research is building a possum distribution model for AHB that will take detailed possum survey, control, monitoring and habitat data as input, and predict possum densities given particular control strategies.

Synthesised Information – information created from primary data using human interpretation, models, or classification techniques. Synthesised information can be in the form of written publications, guides, classifications, and geospatial layers.

Interpretive Tools – tools that can be used interactively by a person to help make decisions (e.g. what is this organism? How should I control this pest? How will this organism spread under these circumstances?). Interpretive tools will often use primary data or user entered data as input, and use models/data transformation tools to process those inputs.

User Interfaces – ways for users to interact with information including desktop applications, web portals, and mobile applications for:

- Data capture – user interfaces to allow people to enter data into systems
- Access – web portals that allow people to browse, navigate and search data/information
- Discovery – catalogues containing metadata about information/data/systems that allow people to find them

Next Steps

This diagram is not yet complete. There are likely to be some items missing. There may also be better ways of categorising or representing some items. If you have any suggestions for new items, or regards the diagram as a whole, please send them to julian.carver@seradigm.co.nz.

References

A number of information sources were used to compile this diagram. These include:

- TFBIS Projects – the full list of the 214 projects TFBIS has funded to date
<http://biodiversity.govt.nz/land/nzbs/tfbis/tfbis/resources/previously-funded-tfbis-projects.xls>
- Biodiversity References (BIOREF) – the list of biodiversity guides, systems and information/data on the Biodiversity web site
<http://www.biodiversity.govt.nz/resources/index.html>
- Dataversity Systems Guide – the list of biodiversity systems and tools compiled
<http://www.dataversity.org.nz/guide/systems/>