LCDB v3.0 - Land Cover Database version 3

Title

LCDB v3.0 - Land Cover Database version 3

Creator

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Date

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Description

This database (LCDB) is a thematic classification of land cover and land use classes. The current version LCDB v3 contains 33 classes designed to be compatible with earlier LCDB versions. The polygon features contain a code and boundary representing the land cover type at each of three periods; summer 1996/97, summer 2001/02, and summer 2008/09. The data set was designed to be compatible in scale and accuracy with Land Information New Zealand's 1:50,000 topographic database. LCDB is intended to be used in areas such as state of environmental monitoring, forest and shrubland inventory, biodiversity assessment, trend analysis and infrastructure planning. The list of classes used in LCDB v3.0 can be found in the document LCDB2-3CorrelationTable.pdf along with the mapping from the class set used in the previous version (LCDB-2). This document is available as an attachment to this dataset in the LRIS portal (www.lcdb.scinfo.org.nz/), and on the LCDB project site (www.lcdb.scinfo.org.nz).LCDB v3.0 was released in July 2012 and includes non-temporal edits to the summer 1997/97, summer 2001/02 time periods along with the new summer 2008/09 period. A change layer, "LCDB v3.0 change" is available to indicate both non-temporal and temporal changes made between LCDB-2 and LVCDB v3.0, The non-temporal changes include errors in the earlier mappings, step artefact removal, and coastline adjustments. An "authority" attribute is also available in this layer indicating the source of the change for both non-temporal and temporal changes mapped.Funding is from the Ministry for Science and Innovation under contract CO9X1101, which was contributed to by the Ministry for the Environment. The Department of Conservation and individual regional councils and territorial authorities have made significant in kind contributions by checking the draft mapping for their areas of interest.The Chatham Islands, which were available as part of LCDB-2 on a different map projection, have not been re-mapped as part of LCDB v3.0.

Source

LCDB v3.0 is an update on the previous LCDB map, commonly referred to as LCDB-2 (containing representations for summer 1996/97 and summer 2001/02). Version three adds a new time period (summer 2008/09), while at the same time correcting errors noticed for earlier time periods and improving the line-work representations. In particular, step artefacts from satellite pixels have been removed and the coastline made compatible with Land Information New Zealand's 1:50,000 topographic database. For the latest mapping date (summer 2008/09), SPOT 5 satellite imagery was acquired between November 2006 and October 2008. Some cloud affected areas were in filled using Landsat or imagery from earlier dates. Satellite imagery was pan sharpened to 10m spatial resolution with terrain normalisation. Orthorectification was to the New Zealand Map Grid using photogrammetric software. Ground control points, used to position the imagery in the rectification process, were measured from aerial photography. Elevation models, used to correct distortion due to height, have 15m pixels and were generated from 20m contour data. Orthorectification met the target of 95% of the imagery being accurate within 5 metres r.m.s. error. Map updates were guided by an analysis of the new data identifying patches with spectral signatures inconsistent with the LCDB-2 class. Operators then used visual interpretation and manual digitising techniques to re-map in the vicinity of identified inconsistencies. In addition to the new SPOT data, imagery from other dates before and after was viewed simultaneously to help make decisions on the correct class and what is likely happening on the ground. Higher resolution SPOT Maps data from 2008/09 was included in this image set. Ancillary data such as digital topodata, aerial photography and published topomaps were used to assist in the interpretation of the imagery. Regional councils and the Department of Conservation reviewed the draft mapping and provided corrections for errors found in their areas of interest. Line work smoothing (step artefact removal) was done as an automated pre-processing step, while the coastline adjustment was a largely automated post-processing step. The minimum mapping unit for the data is 1 hectare, but polygons from earlier versions greater than 1/10 hectare were retained. The imagery has being classified into 33 thematic classes. An accuracy assessment on LCDB v3.0 mapping is scheduled to be undertaken early in the 2012/13 financial year. Results will be available as attachments to this dataset in the LRIS portal (www.lcdb.scinfo.org.nz/) and on the LCDB project site (www.lcdb.scinfo.org.nz). The data set has been captured and is stored in digital ARC/INFO Coverage and ESRI SHAPEFILE format with an internal database structure storing the attribute data. The data has been built for polygon topology and has been checked for duplication and anomalies within the data. The data set has completeness of coverage for New Zealand mainland, near-shore Islands and the Chatham Islands. The data set has completeness of classification, classification schema is exhaustive down to a 1 ha Minimum Mapping Unit (MMU), refer readme directory for Illustrated Guide to Target Classes for class definitions The data set has completeness of verification, all target classes have utilised ground data to inform supervised and manual image classification and the draft classification has undergone field verification, refer LCDB2 readme directory for description of field checking procedure

Coverage

-47.421639 166.262038 -34.008229 179.501385

Identifier

http://lris.scinfo.org.nz/layer/304/

Type

vector

Subject

environment

Subject

Land cover

Subject

Land use

Subject

Vegetation

Subject

Wetlands

Subject
- Agriculture

Subject
- Forests

Subject
- Satellite imagery

Subject
- Downloadable Data