

Land Use in Western Australia Metadata Information

Abstract

Land uses across Western Australia have been mapped at 1:25 000 in urban areas, 1:100 000 in agricultural areas and 1:250 000 in pastoral zones. For agricultural enterprises land use had been attributed according to the dominant land use per enterprise, the principal economic activity on that enterprise or property. Three zones were used to attribute land use:

- a. zone 4 – Perth Metropolitan Area, south western an forests region
- b. south west agricultural region outside zone 4 and
- c. pastoral and desert region referred to as the extensive land use zone

Zone 4 contains information on production attributed to the cadastral parcel level. In other areas, land use is attributed at the whole of property scale.

The data was prepared as part of the joint land use and vegetation mapping project between Agriculture WA and the National Land and Water Resources Audit.

Access Constraint

Data are available subject to a Western Australia or Commonwealth licence agreement. Agriculture WA (Western Australia) and the National Land and Water Resources Audit (the Commonwealth) have joint copyright.

Use of the data is to be acknowledged in any visual or published materials with a statement including the name and source of the data as “Land use of the Western Australia 1997, Version 5, Agriculture WA and the National Land and Resources Audit”.

Lineage

Agricultural land use information was collected from several different sources. A significant proportion was provided by field officers from Agriculture WA and Community Landcare Offices through written descriptions on printed 1:25,000 cadastral maps. This text was later converted to WASLUC (WA Standard Land Use Code) during data entry with primary, and sometimes secondary, land use assigned. The assigned land use was the field officer’s estimation of the land use providing the primary source of income for each cadastral block. Some attribution is based on interpretation of digital and hardcopy air photos acquired post 1996. Point source land use data from the Water and Rivers Commission was utilised for attributing peri-urban areas around Perth. Other data sources include information provided by personnel from Local Government Authorities, Ministry for Planning and Conservation and Land Management.

Version 1.0 of this data set – completed in October 2000 was updated to Version 2.0 with overlaps and sliver polygons in version 1.0 removed. Water bodies, stock routes and some additional plantations were added and the status of conservation areas was updated. Version 3.0 and 4.0 include miscellaneous parcels omitted in previous version to provide a complete coverage for the state. Version 5.0 includes an attribute describing the LGA in which each polygon occurs. Some polygons omitted in previous versions have also been appended, slivers removed and holes in data filled using most probable land use or visual interpretation of satellite imagery.

Positional accuracy

Accuracy of boundaries varies according to the accuracy of base cadastral data set.

Attribute accuracy

a) Zone 4 – Perth Metropolitan Area, south-western and forests region

Attribution of this area is based on interpretation of digital and hard-copy air photos acquired post 1996. Point source land use data from the Water and Rivers Commission was utilised, after verification with other sources, for attributing the peri-urban areas of Perth. Other data sources include information provided by industry bodies, personnel from Local Government Authorities (LGAs), Ministry for Planning (MfP) and the Department of Conservation and Land Management CALM). The capture scale of these varies between 1:25 000 and 1:100 000.

b) South West Agricultural Region outside Zone 4

Agricultural land use information was collected from several different sources. A significant proportion was provided by field officers from Agriculture WA and Community Landcare Offices through written descriptions on printed 1:25,000 cadastral maps. This text was later converted to WASLUC codes during data entry with primary, and sometimes secondary, land use assigned. The assigned land use was the field officer's estimation of the land use providing the primary source of income for each cadastral block. ABS agricultural statistics for the agricultural census of 1997 were attributed to 10km grids and compared with the land use mapping for this project to check for gross misclassifications. The attributes placed in the land parcels are subjective in areas that the officers have little contact, and as such, the zones with the smallest land parcels have the least accuracy.

c) pastoral and desert region referred to as the Extensive Land use Zone

Pastoral properties were initially identified from lease information held by the Western Australian Department of Land Administration (DOLA). Leases with common management are grouped into properties as part of CPE system after verification by staff at Agriculture WA. The Carnarvon irrigation area at Kununurra was mapped by staff at the South Perth offices from a digital colour mosaic acquired between 1993-1994 and updated from recent aerial photographs.

Conservation reserves in all zones were derived from the CALM Estate data set (TENIS, see Bowen 1996). Other reserves, including Crown reserves and Unallocated Crown Land, were derived from the DOLA Land Tenure and Reserves databases. These have now been attributed with WASLUC Codes. The final dataset was also checked against the Collaborative Australian Protected Areas Database (1999).

An inventory of pastoral leases, which have recently been places under CALM management has been collated at Agriculture Western Australia. These were attributed appropriately and added to the Land use data set.

The attributes include:

Primary_v4 – primary land use description

Secondary_v4 – secondary land use description

Tertiary_v4 – tertiary land use description

Codes_v4 – numeric code matching the ALUMC numbering

t_code_v4 – character code matching the ALUMC numbering

Logical consistency

Completed maps were checked for gross misclassification.

Completeness

Land use is classified across Western Australia based on cadastral land parcels.

Additional metadata

Beeston, G.R., Hopkins, A.J.M and Shepherd, D.P. (eds) (2001), Land-use and Vegetation, Western Australia. Final Project Report DAW27. Agriculture Western Australia, South Perth and the National Land and Water Resources Audit, Canberra.