Publication details

Title:

Catchment Scale Land Use of Australia – Commodities – Update December 2020

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CLUM_Commodities_2020

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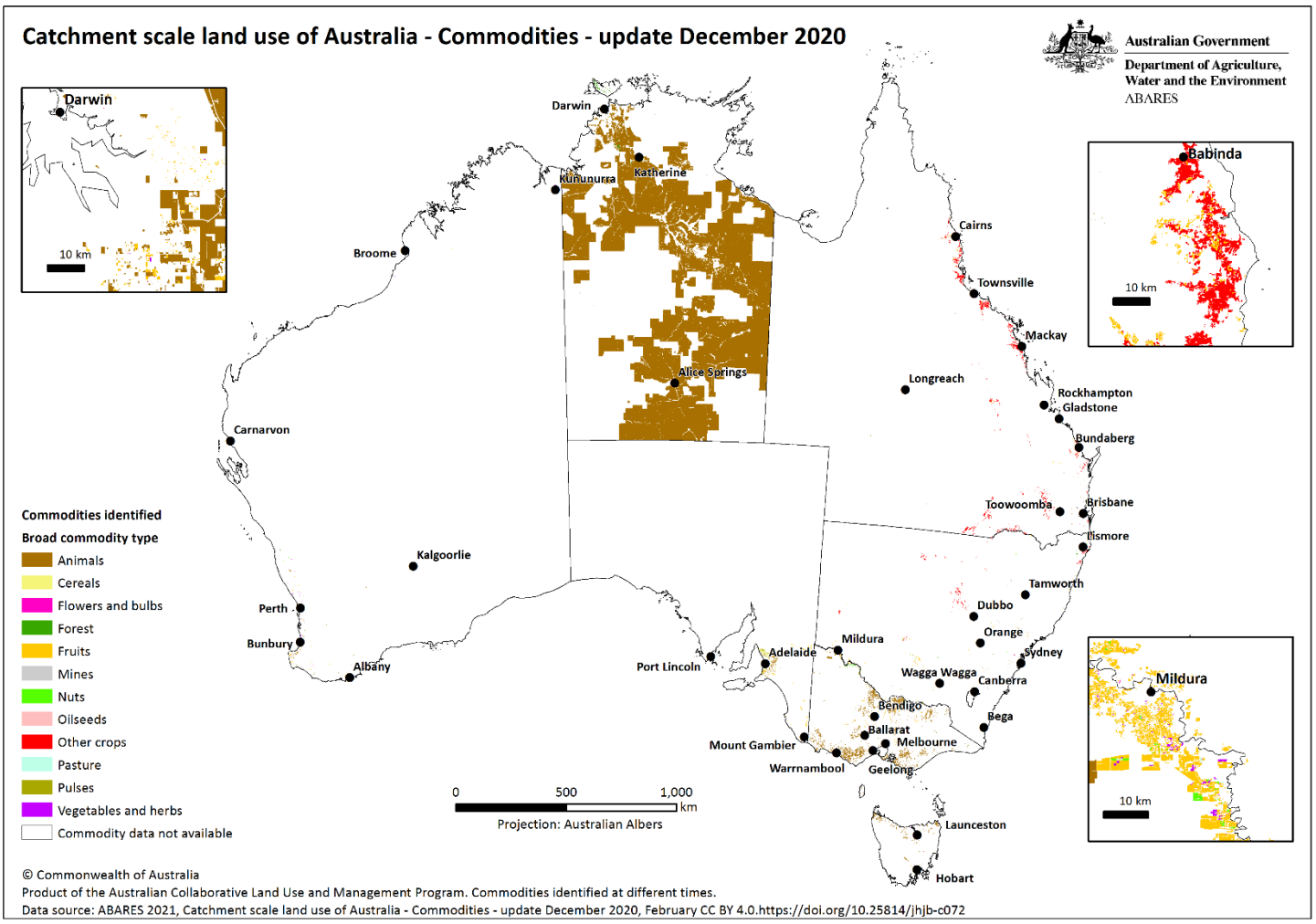
Preview:



Abstract:
The *Catchment Scale Land Use of Australia – Commodities – Update December 2020* dataset shows the location and extent of select agricultural, mining and forest product commodities, where mapped. This dataset replaces the Catchment Scale Land Use of Australia – Commodities – Update December 2018 version 2 released on 26 November 2019. This dataset is the third national compilation of catchment scale commodity data for Australia (CLUMC), current as at December 2020. It has been compiled from vector land use datasets collected as part of state and territory mapping programs through the Australian Collaborative Land Use and Management Program (ACLUMP). The commodities data complements the Catchment Scale Land Use of Australia – Update December 2020 dataset (ABARES 2021).

What's new?
The following areas have updated mapping since the December 2018 version 2: Burnett-Mary and Fitzroy natural resource management (NRM) regions in Queensland (2017 from 2009); Sydney basin in New South Wales (2017 from 2003); the state of Tasmania (2019 from 2015).

More detail has been added in the Darwin-Litchfield and Katherine areas in Northern Territory (2016).

Users should update any references or links to previous CLUMC datasets in their databases.

Descriptive information

Authors:
Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)

Acknowledgements:
This dataset was produced by Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) within the Australian Government Department of Agriculture, Water and the Environment as part of the Australian Collaborative Land Use and Management Program (ACLUMP).

ACLUMP, of which ABARES is a partner, is a consortium of Australian Government, and state and territory government partners that promotes the development of nationally consistent land use, land cover and land management practice information for Australia. This consortium of Australian and state and territory government partners is critical to providing nationally consistent land use mapping at both catchment and national scale, underpinned by common technical standards including an agreed national land use classification. ACLUMP provides a national land use data directory and the maintenance of land use datasets on Australian and state government data repositories. More information on ACLUMP is available at www.abares.gov.au/landuse.

Datasets were provided by: the New South Wales Department of Planning, Industry and Environment; the Northern Territory Department of Environment, Parks and Water Security; the Queensland Department of Environment and Science; the South Australian Department of Environment and Water; the Tasmanian Department of Primary Industries, Parks, Water and Environment; the Victorian Department of Jobs, Precincts and Regions; and the Department of Primary Industries and Regional Development, Western Australia.

Constraints

LEGAL CONSTRAINTS ASSOCIATED WITH THE MATERIAL

Limitation on the use of the material:
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Constraints on using the material:
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Additional information about this material

Purpose for which the material was obtained:
This dataset provides commodity level mapping information for Australia's regions where available as at December 2020. The data vary in date of mapping (2008 to 2019), source date (2002 to 2020), and scale (1:5,000 to 1:250,000).

How to use this data:
Use this data to:
- Provide more detailed commodity information to complement the Catchment Scale Land Use of Australia – Update December 2020

Do not use this data to:
- Derive national statistics. The Land use of Australia data series, ABARES commodity reports and ABS agricultural census could be used for this purpose.
- Calculate commodity change

It is not possible to calculate change statistics between annual CLUM commodity national compilations as; commodity collection is incomplete; not all regions are updated each year; land use mapping methodologies, precision, accuracy and source data (in particular satellite imagery) have improved over the years; and the land use classification has changed over time.

Not all commodities are captured consistently across Australia. Attribution depends on whether the land use mapper was able to capture the commodity accurately. Commodities which are captured consistently include avocados, bananas, cotton, dairy cattle, grapes, mangoes, macadamias, olives, rice, sandalwood, sugar cane, pigs and poultry (primarily chickens).

Progress status of this material:
Completed

Maintenance and Update Frequency:
As needed

KEYWORD(S)

ANZLIC Search Words:
AGRICULTURE
AGRICULTURE Crops
AGRICULTURE Horticulture
AGRICULTURE Irrigation
AGRICULTURE Livestock
FORESTS
FORESTS Agroforestry
FORESTS Natural
FORESTS Plantation
LAND
LAND Topography
LAND Use
VEGETATION

General Keywords:
Australian Collaborative Land Use and Management Program (ACLUMP)
Land use
Mapping

TOPICS

ABARES Topic categories:
Agriculture
Land Use
Environment and Natural Resource Management
Models, Risk, Spatial Data and Datasets
ISO topic categories:
Farming
Environment
Biota

SPATIAL EXTENT(S)

Extent

Description of spatial extent:
Australian Land
Spatial bounding box included in:
North: -11.18 degrees; South: -43.37 degrees; East: 153.599 degrees; West: 113.66 degrees.
Spatial area included in:
Australian Mainland. Australia excluding external territories.

Projection:
EPSG:4283
Coordinate reference details: Well-Known Text:
PROJCS["GDA94 / Geographic",
GEOGCS["GDA94",
DATUM["D_GDA_1994",
SPHEROID["GRS_1980",6378137,298.257222101]],
PRIMEM["Greenwich",0],
UNIT["Degree",0.017453292519943295]],
PROJECTION["GCS_GDA_1994"],

DATA PACKAGE CONTENTS

Table 1: Description of CLUMC data package

File name	File description
CLUM_Commodities_2020.zip	CLUMC vector dataset of commodities as at December 2020. ESRI shapefile and supporting files package, coordinate system GDA94 / Geographic.
CLUMC_ DescriptiveMetadata_December2020.pdf	This document, which describes the GIS data, supporting files and GIS dataset attributes published in this data package.
CLUMC_map_December2020_broadtype.png	Land use map showing the CLUMC dataset, based on broad commodity types. Map produced in landscape format suitable for printing at A4 size.
CLUMC_map_December2020_sourceyear.png	Land use map showing the currency of the CLUMC dataset. Map produced in landscape format suitable for printing at A4 size.

DATA DICTIONARY

Table 2: Attributes of the CLUMC vector dataset (CLUM_Commodities_2020.shp)

Field name	Field description	Code values
FID	Internal feature number that uniquely identifies each polygon	Integer numeric value
Shape	Internal feature geometry ("polygon")	Geometry
Commod_dsc	Commodity description as a string Examples: "bananas", "chickens", "bauxite"	Text, width 50
Broad_type	Broad classification of commodities as a string – Animals, Cereals, Flowers and bulbs, Forest, Fruits, Mines, Nuts, Oilseeds, Other crops, Pasture, Pulses, Vegetables and herbs.	Text, width 50
Source_yr	Year of spatial feature as an integer. Can differ to date field.	Short integer. Range 2002 to 2020
State	State abbreviation as a string	Text, width 5
Area_ha	Area of polygon in hectares	Float numeric value
LU_CODEV8N	Australian Land Use and Management (ALUM) Classification v8 code as a three digit integer. First digit is primary code, second digit is secondary code, and third digit is tertiary code. Examples: 341 (3 'Production from dryland agriculture and plantations', 3.4 'Perennial horticulture', 3.4.1 'Tree fruits') 523 (5 'Intensive uses', 5.2 'Intensive animal production', 5.2.3 'Poultry farms') 581 (5 'Intensive uses'. 5.8 'Mining', 5.8.1 'Mines') LU_CODEV8N is equivalent to VALUE in CLUM raster dataset.	Integer numeric value Range: 100 to 663
Tertiary	ALUM tertiary code and description as a string. Examples: 1.1.1 Strict nature reserves 6.6.3 Estuary/coastal waters – intensive use Tertiary is equivalent to TERTV8 in CLUM raster dataset.	Text, width 50
date	The year for which land use was mapped in the vector catchment scale land use data provided by state and territory agencies. date is equivalent to date in CLUM date and scale of mapping polygon shapefile.	Integer numeric value Range: 2008 to 2019

RESPONSIBILITY FOR THIS MATERIAL

Custodian

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PROCESS USED TO GENERATE THIS MATERIAL

Lineage Statement

Lineage:
ABARES has produced this vector dataset from vector catchment scale land use data provided by state and territory agencies, as follows: Catchment Scale Land Use Mapping for the Australian Capital Territory 2012; 2017 NSW Land Use v1.2; Land Use Mapping Project of the Northern Territory, 2016 - Current; Land use mapping - 1999 to Current – Queensland (June 2019); [South Australia] Land Use (ACLUMP) 2017; Tasmanian Land Use 2019; Victorian Land Use Information System [VLUIS] 2016-17; Catchment Scale Land Use Mapping for Western Australia 2018. Links to land use mapping datasets and metadata are available at the ACLUMP data download page at agriculture.gov.au/abares/aclump/land-use/data-download.

Agricultural commodities are assigned to the Australian Land Use and Management (ALUM) Classification version 8 (ABARES 2016) classes based on; perceived intervention to the landscape, growing conditions and management, the intended use of the commodity, consistency with national and international reporting frameworks and standards, such as National Plantation Inventory, industry guidelines, Australian Bureau of Statistics, harmonised trade codes and ABARES commodity reports, where possible.

Commodities data were produced as part of catchment scale land use mapping and primarily uses fine-scale satellite data and information collected in the field using agreed methods (ABARES 2011, 2015). Field validation was critical for mapping commodities. It is important to note that the location of a commodity may change each year or season, depending on factors such as climate, markets or farming systems.

Jurisdictions captured commodity data (where possible) for those areas most recently mapped in the Catchment scale land use of Australia – Update December 2020 (ABARES 2021) with a focus on horticultural and intensive animal industries. Other commodities which are tertiary classes of the ALUM classification (such as sugar cane, cotton, rice, olives and grapes) have been mapped by jurisdictions for some time and are included in this dataset.

Agricultural commodity level mapping is available for all of the Northern Territory, and is likely to be complete for the following commodities nationally (taking into consideration the source year and date of mapping):

Crops - rice, sugar cane, cotton
Fruit – bananas (except Southern Queensland), avocados, mangoes, olives, grapes
Nuts – macadamias
Livestock – dairy cattle, pigs, poultry, horse studs, aquaculture.

Commodity information is selected from an agreed list of commodity names developed by ACLUMP partners. A commodity may be applied to one or many land use codes. For example the commodity ‘wheat’ is applied to class 3.3.1, ‘Cropping’ or 4.4.1, ‘Irrigated cropping’, while ‘cattle’ may be applied to any land use where cattle are observed including 2.1.0 ‘Grazing native vegetation’, 3.2.0 ‘Grazing modified pastures’, 4.2.0 ‘Grazing irrigated modified pastures’, 5.2.2 ‘Feedlots’ etc.

Commodities data were extracted using the tertiary land use code or the commodity description where appropriate. The State, source year and date of mapping were added to the attribute table and the area of the polygon calculated in hectares. The source year indicates the date of field mapping or most recent validation. Finally the commodities was joined to a lookup table to include a broad classification of commodities.

The commodity description is intended to add information to the catchment scale land use map which is not otherwise recorded in the ALUM Classification. Where there are several suitable commodity descriptions mappers are encouraged to record the most detailed description. For example when cattle breeds are known to be for milk production mappers would apply the commodity description ‘cattle dairy’ rather than just ‘cattle’.

Positional Accuracy:
The scale of the source data varies from 1:5,000 to 1:250,000. See individual land use mapping dataset metadata for specific measures of accuracy.

Attribute Accuracy:
The methods for mapping and classifying commodities adhere to the standards outlined in 'The Australian Land Use and Management Classification Version 8' (ABARES 2016). Datasets mapped to version 7 of the ALUM Classification were converted to version 8 using a look-up table based on Appendix 1 in ABARES (2016).

Logical Consistency:
All input polygon datasets were checked for topological consistency.

Completeness:
Complete for all relevant data provided.

Information about the product description

Parties responsible for description

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Additional Metadata

References

ABARES 2011, Guidelines for land use mapping in Australia: principles, procedures and definitions, A technical handbook supporting the Australian Collaborative Land Use and Management Program, 4th edition, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

ABARES 2015, Addendum to the Guidelines for land use mapping in Australia: principles, procedures and definitions, 4th edition, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

ABARES 2016, The Australian Land Use and Management Classification Version 8, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

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