

Catchment Scale Land Use of Australia – Commodities – Update December 2018 version 2

Description of contents of the data package

This document describes the GIS data, supporting files and GIS dataset attributes published in the data package for *Catchment Scale Land Use of Australia – Commodities – Update December 2018 version 2*. This data package is referred to as CLUMCv2 in this document. Land use and commodities are classified according to the *Australian Land Use and Management (ALUM) Classification version 8*. All spatial data were produced using ESRI ArcGIS Pro 2.2. This data package complements the *Catchment Scale Land Use of Australia – Update December 2018* data package.

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, sandalwood, sugar cane, pigs and poultry (primarily chickens).

Table 1 describes the principal file components of the data package. Table 2 is a data dictionary for the attributes of the CLUMCv2 vector dataset. Table 3 is a summary of the commodities in the CLUMCv2 dataset. Major changes between the CLUMC dataset released in December 2018 and the CLUMCv2 dataset are:

- Removal of cattle meat features where it is not clear whether feedlots are cattle or sheep feedlots.
- Removal of broad aquaculture class and consistency applied to aquaculture commodities so that marron and yabbies are now classed as crustaceans and abalone as molluscs.
- An increase in the number of polygons in the Australian Capital Territory and Western Australia. Polygons for each commodity in these jurisdictions were combined as multi-part features rather than single part features leading an underestimation of the number of polygons at both the state and national levels.
- Inclusion of extra animal, grapes and olives features based on ALUM and Valuer General codes for South Australia, New South Wales, the Northern Territory and Victoria.
- Inclusion of alkaloid poppies in Tasmania based on ALUM codes.
- Inclusion of missing sugar features in New South Wales based on ALUM codes.
- Inclusion of missing vegetables and herbs features for Western Australia.
- Corrections where commodities have been assigned the wrong broad type (e.g. pistachios assigned to nuts) or commodity names were incorrect (e.g. pecan nuts to pecans).
- Removal of slithers and overlapping polygons.

Table 1: Brief description of the contents of this data package.

File name	File description
CLUM_Commodities_2018_v2.shp	CLUMCv2 vector dataset of commodities as at December 2018. ESRI shapefile, coordinate system GDA94 / Geographic.
DescriptiveMetadata_CLUMC_December2018version2.pdf	Descriptive metadata for the <i>Catchment Scale Land Use of Australia – Commodities – Update December 2018 version 2</i> dataset.
DatasetDescription_CLUMC_December2018version2.pdf	This document, which describes the GIS data, supporting files and GIS dataset attributes published in this data package.
CLUMC_map_December2018_v2_Broad_Type.pdf	Land use map showing the CLUMCv2 dataset, based on broad commodity types. Map produced in landscape format, at A0 size (1189 millimetres by 841 millimetres), and suitable for printing at A3 size (420 millimetres by 297 millimetres).
CLUMC_map_December2018_v2_Currency.pdf	Land use map showing the currency of the CLUMCv2 dataset. Map produced in landscape format, at A0 size (1189 millimetres by 841 millimetres), and suitable for printing at A3 size (420 millimetres by 297 millimetres).

Table 2: Data dictionary for the attributes of the CLUMCv2 vector dataset

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 mapping as an integer. Source_yr is equivalent to date in CLUM supporting polygon shapefile	Short integer
State	State abbreviation as a string	Text, width 5
Area_ha	Area of polygon in hectares	Float numeric value
LU_CODEV8N	ALUM 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_V8 is equivalent to TERTIARY_V8 in CLUM raster dataset	Text, width 50

Note: all ALUM codes refer to the Australian Land Use and Management Classification, version 8.

Table 3: Summary of CLUMCv2 data by broad type and commodity

Broad type	Commodity	Number of polygons	Area of polygons (ha)
Animals		61,191	58,361,348.38
	algae	1	634.96
	alpacas	88	727.47
	bees	25	648.76
	buffalo	2	79.30
	camels	1	4.40
	cattle	5,818	56,706,965.63
	cattle dairy	29,240	895,986.36
	cattle meat	12,047	377,534.73
	cattle stud	17	182.83
	chickens	1,389	8,536.76
	chickens eggs	91	1,266.38
	chickens meat	537	13,268.93
	crocodiles	10	110.12
	crustaceans	259	1,270.53
	deer	13	136.24

Broad type	Commodity	Number of polygons	Area of polygons (ha)
	ducks	1	3.91
	emus	2	4.71
	finfish	17	167.73
	geese	1	0.39
	goats	22	171.82
	goats dairy	2	9.55
	horses	3,119	51,205.67
	molluscs	57	2,815.56
	ostriches	3	47.77
	pigs	1,218	22,085.06
	sheep	7,061	273,762.81
	sheep dairy	3	18.05
	sheep meat	80	952.36
	sheep stud	5	89.89
	sheep wool	57	2,621.08
	spirulina	1	11.08
	turkeys	4	27.56
Cereals		1,545	66,603.21
	barley	383	18,305.72
	maize	97	1,084.15
	oats	390	9,744.43
	rice	12	3,247.51
	rye cereal	18	311.65
	sorghum	3	37.14
	triticale	12	143.52
	wheat	630	33,729.09
Flowers and bulbs		675	7,219.75
	australian native flowers	1	1.36
	bulbs	2	0.43
	cycads	13	27.31
	flowers and bulbs	254	895.97
	flowers and foliage	16	10.69
	lavender	3	6.83
	orchids	2	6.13
	palms	25	26.31
	pongamia pinnata	1	0.13
	roses	14	60.71
	sunflower	1	0.12
	tropical flowers	3	1.50
	tulips	3	77.03
	turf	337	6,105.23
Forest		630	20,920.66

Broad type	Commodity	Number of polygons	Area of polygons (ha)
	bamboo	3	2.17
	blue gum	5	45.45
	christmas trees	12	118.31
	eucalyptus oil	19	902.59
	jojoba	7	224.65
	lemon myrtle	11	26.27
	mahogany	4	17.29
	oil mallee	57	3,021.69
	sandalwood	312	9,651.01
	sawlogs	5	411.68
	tea tree	195	6,499.55
Fruits		58,392	334,488.78
	apples	2,218	3,685.18
	apricots	649	565.86
	avocados	797	4,579.61
	babacos	1	0.26
	bananas	1,518	17,098.67
	belimbings	1	0.51
	blackberries	1	2.02
	blueberries	381	2,289.90
	caimitos	6	20.29
	carambolas	1	1.12
	cherries	319	1,669.27
	cupuacus	1	0.48
	custard apples	19	41.71
	dates	28	37.11
	davidson plums	1	1.93
	dragon fruit	19	12.66
	durians	1	20.64
	figs	32	45.29
	finger limes	5	5.03
	grapefruit	46	86.93
	grapes	15,201	180,153.50
	grapes dried	3,275	3,425.22
	grapes table	6,982	8,475.27
	grapes wine	11,170	52,968.56
	guavas	5	20.64
	hogg plums	3	1.18
	jackfruit	37	48.93
	jujubes	1	1.11
	kiwifruit	22	114.38
	lemons	103	339.41

Broad type	Commodity	Number of polygons	Area of polygons (ha)
	limes	38	62.69
	longans	1	0.20
	lychees	2	1.56
	mandarins	530	841.63
	mangoes	2,850	15,330.48
	melons	108	2,013.92
	moringa	2	0.91
	mulberries	1	1.50
	nashi pears	55	115.60
	nectarines	795	882.57
	olives	2,712	27,814.58
	oranges	2,189	3,232.67
	passionfruit	61	126.52
	pawpaws	34	16.07
	peaches	1,584	2,087.55
	pears	3,390	3,422.17
	persimmons	61	75.02
	pineapples	15	218.60
	plumcots	5	4.65
	plums	769	883.03
	pluots	33	44.52
	pomegranate	37	193.17
	quinces	7	16.14
	rambutans	34	40.13
	raspberries	3	0.80
	sapodillas	1	0.14
	stone fruit	64	320.47
	strawberries	135	475.09
	tahitian limes	1	2.63
	tamarillo	8	38.77
	watermelons	23	510.93
	wax apples	1	1.38
Mines		126	17,646.40
	bauxite	40	4,721.63
	copper	1	50.28
	diamonds	1	983.55
	gas	1	17.93
	gold	6	3,010.87
	ilmenite	1	20.74
	iron ore	4	3,077.89
	manganese	69	4,388.09
	uranium	1	1,319.53

Broad type	Commodity	Number of polygons	Area of polygons (ha)
	zinc	1	12.84
	zircon	1	43.05
Nuts		4,965	47,744.55
	almonds	2,903	26,207.35
	chestnuts	7	64.31
	hazelnuts	10	2,425.37
	macadamias	1,615	14,190.09
	pecans	229	1,652.80
	pistachios	113	704.71
	walnuts	87	2,489.38
	water chestnuts	1	10.55
Oilseeds		107	3,504.20
	canola	72	2,291.87
	chia	32	1,212.02
	jojoba	1	0.08
	oil palms	1	0.12
	safflower	1	0.10
Other crops		5,350	929,646.00
	alkaloid poppies	45	1,305.83
	cocoa	1	0.13
	coffee	91	270.84
	cotton	1,288	339,762.49
	hops	3	53.16
	pyrethrum	153	1,623.14
	sugar cane	3,763	586,594.40
	tea	6	36.00
Pasture		439	2,512.88
	alto panicum and mekong grass	1	28.04
	cavalcade	1	31.32
	legumes	8	36.32
	lucerne	423	2,281.44
	pangola	2	20.63
	panicum	2	3.35
	rhodes grass	1	85.42
	sorghum	1	26.37
Pulses		271	16,855.58
	chickpeas	20	635.21
	field beans	25	917.45
	field peas	35	1,438.10
	lentils	151	12,879.23
	lupins	21	604.95
	vetches	19	380.65

Broad type	Commodity	Number of polygons	Area of polygons (ha)
Vegetables and herbs		4,208	26,101.62
	artichokes	1	1.07
	asparagus	179	442.76
	beans	117	2,432.62
	bitter melons	1	5.62
	broccoli	2	6.44
	cabbages	4	9.26
	capsicums	9	10.66
	carrots	266	3,517.99
	cauliflowers	9	51.83
	chicory	7	53.36
	chillies	19	18.00
	chinese cabbages	1	2.18
	cucumbers	26	26.75
	cucurbits	306	656.52
	curcuma	3	0.05
	eggplants	6	16.07
	garlic	1	0.74
	herbs	2	3.14
	leeks	5	6.08
	lemongrass	2	1.24
	lettuces	6	22.81
	mushrooms	9	35.34
	okra	66	93.10
	onions	6	111.19
	parsnips	3	8.16
	peas	77	3,174.24
	potatoes	266	2,990.39
	pumpkins	12	110.16
	rhubarb	2	3.96
	spring onions	2	4.71
	sweet corn	2	2.33
	sweet potatoes	3	4.41
	taro	1	1.32
	tomatoes	309	816.33
	truffles	14	162.70
	vegetable seeds	1	3.07
	vegetables	703	1,315.68
	vegetables and herbs	1,751	9,957.26
	zucchini	9	22.08
Grand Total		137,899	59,834,592.03

Note: This data should not be used as national statistics for the commodities listed.