2014 Datapack to support the Multi-Criteria Analysis Shell for Spatial Decision Support (MCAS-S)

The 2014 MCAS-S datapack is a convenient package of nationally consistent Australian spatial layers at one-kilometre resolution ready for use in MCAS-S. The Datapack is comprises of three types of data: Primary (raster), Mask (raster) and Overlay (vector) data.

The downloadable zip file (1.4BG) contains a sample MCAS-S project alongside a data folder.
- Save the entire folder in a location with read/write access.
- Open the MCAS-S project to access the data. Note that the structure of this data folder (Primary, Mask, Overlay, and Classified) must be maintained, and data, especially ESRI grids, should not be moved without the use of a GIS program.
- Users should also read the software user guide.

The map layers cover a broad scope of interests including:

- biophysical (vegetation, soil, terrain, water, climate);
- understanding of the relationships between the decision-making process and the available spatial data;
- social (household, community and population characteristics); and
- economic (land use, agricultural commodity, income, land value, rate of return).

Australian national map layers have been prepared for use in MCAS-S by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) from data provided by ABARES, the Australian Bureau of Statistics (ABS), Geoscience Australia (GA), Australian National University (ANU), Bureau of Meteorology (BOM), CSIRO Land and Water, the Department of Sustainability, Environment, Water, Population and Communities (Environmental Resources Information Network), the National Centre for Social Applications of Geographic Information Systems and the Invasive Animals Cooperative Research Centre.

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Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Agriculture							
Beef businesses	beef_bus	Beef cattle - number of businesses (Number per Statistical Area 2)	ABS	number	2010-11	SA2	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Beef DSE numbers	beef_dse	Number of beef cattle (in thousand dry sheep equivalents) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse	2010-11	SA2	2013/11
Beef DSE density	beef_dse_dens	Density of beef cattle (dry sheep equivalent) per ha for each SA2 (or SA4) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse / ha	2010-11	SA2	2013/12
Beef numbers	beef_no	Number of beef cattle (thousands)	ABS	number	2010-11	SA2	2014
Crop businesses	bus_crop	Number of crop businesses based 2010-11 agricultural census	ABS	number	2010-11	SA2	2014
Horticultural businesses	bus_hort	Number of horticultural businesses based 2010-11 agricultural census	ABS	number	2010-11	SA2	2014
Livestock businesses	bus_livestock	Number of livestock businesses based 2010-11 agricultural census	ABS	number	2010-11	SA2	2014
Area of cropping	crops_abs	Area of crop production based 2010-11 agricultural census	ABS	ha	2010-11	SA2	2014
Dairy businesses	dairy_bus	Dairy cattle - number of businesses (Number per Statistical Area 2)	ABS	number	2010-11	SA2	2014
Dairy numbers	dairy_dse	Number of dairy cattle (in thousand dry sheep equivalents) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse	2010-11	SA2	2013/11
Dairy density	dairy_dse_dens	Density of dairy cattle (dry sheep equivalent per hectare) for each SA2 (or SA4) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse / ha	2010-11	SA2	2013/12
Dairy numbers	dairy_no	Number of dairy cattle (thousands)	ABS	number	2010-11	SA2	2014
Intensive animal husbandry	dist_520	Distance to intensive animal husbandry (km)	ABARES	km	1997-2012	50m	2014/03
Dairy sheds	dist_521	Distance to dairy sheds (km)	ABARES	km	1997-2012	50m	2014/03
Cattle feedlots	dist_522	Distance to cattle feedlots (km)	ABARES	km	1997-2012	50m	2014/03
Sheep feedlots	dist_523	Distance to sheep feedlots (km)	ABARES	km	1997-2012	50m	2014/03
Poultry farms	dist_524	Distance to poultry farms (km)	ABARES	km	1997-2012	50m	2014/03
Piggeries	dist_525	Distance to piggeries (km)	ABARES	km	1997-2012	50m	2014/03

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Aquaculture	dist_526	Distance to aquaculture (km)	ABARES	km	1997-2012	50m	2014/03
Horse studs	dist_527	Distance to horse studs (km)	ABARES	km	1997-2012	50m	2014/03
Stockyards/saleyards	dist_528	Distance to sale and stockyards (km)	ABARES	km	1997-2012	50m	2014/03
Abbattoirs	dist_535	Distance to abattoirs (km)	ABARES	km	1997-2012	50m	2014/03
Area of grazing	grazing_abs	Area of grazing based 2010-11 agricultural census	ABS	ha	2010-11	SA2	2014
Value of cropping	gvap_crops	Value of crop production based 2010-11 agricultural census	ABS	$ million	2010-11	SA2	2014
Value of grazing	gvap_grazing	Value of livestock production based 2010-11 agricultural census	ABS	$ million	2010-11	SA2	2014
Value of horticulture	gvap_hort	Value of horticultural production based 2010-11 agricultural census	ABS	$ million	2010-11	SA2	2014
Value of irrigated agriculture	gviap	Total value of irrigated agricultural production	ABS	$ million	2010-11	SA2	2014
Horse businesses - other	horse_o_bus	Other horses - number of businesses (number)	ABS	number	2010-11	SA2	2014
Horse number - other	horse_o_no	Other horses (number)	ABS	number	2010-11	SA2	2014
Horse businesses - stud	horse_s_bus	Horse studs - number of businesses (number)	ABS	number	2010-11	SA2	2014
Horse number - stud	horse_s_no	Stud horses (number)	ABS	number	2010-11	SA2	2014
Area of horticulture	hort_abs	Area of horticultural production based 2010-11 agricultural census	ABS	ha	2010-11	SA2	2014
Pig businesses	pig_bus	Pigs - number of businesses (number)	ABS	number	2010-11	SA2	2014
Pig numbers	pig_no	Pigs (number)	ABS	number	2010-11	SA2	2014
Poultry businesses	poultry_bus	Poultry - number of businesses (number)	ABS	number	2010-11	SA2	2014
Poultry numbers	poultry_no	Number of poultry (thousands)	ABS	number	2010-11	SA2	2014
Area of SA2	sa2	Area of SA2 based on 2010-11 boundaries	ABS	ha	2010-11	SA2	2013/11
Sheep businesses	sheep_bus	Sheep - number of businesses (number)	ABS	number	2010-11	SA2	2014
Sheep numbers	sheep_dse	Number of sheep (in thousand dry sheep equivalents) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse	2010-11	SA2	2013/11

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Sheep density	sheep_dse_dens	Density of beef cattle (dry sheep equivalent per hectare) for each SA2 (or SA4) based on the Australian Bureau of Statistics 2010-11 agricultural census	ABARES	dse / ha	2010-11	SA2	2013/12
Sheep numbers	sheep_no	Number of sheep (thousands)	ABS	number	2010-11	SA2	2014
Climate							
Agroclimatic zones	agroclim	Agroclimatic zones interpolated to IBRA regions	ANU	class	2005	1:500,000	2009
Erosivity	erosivity	The erosivity of the rainfall defined as the annual sum of individual storm erosion index values	CSIRO	MJ mm/ha hr yr	2001	250m	2009
Seasonal evaporation	evap_spr, evap_sum, evap_aut, evap_win	Mean seasonal evaporation- Spring (Sep-Nov), Summer (Dec-Feb), Autumn (Mar-May) and Winter (Jun-Aug)	BOM	mm	1961-1990	25km	2014
Seasonal maximum temperature	maxt_spr, maxt_sum, maxt_aut, maxt_win	Mean maximum temperature for each season - Spring (Sep-Nov), Summer (Dec-Feb), Autumn (Mar-May) and Winter (Jun-Aug)	BOM	degrees Centigrade	1961-1990	2500m	2014
Seasonal minimum temperature	mint_spr, mint_sum, mint_aut, mint_win	Mean minimum temperature (°C) for seasons - Spring (Sep-Nov), Summer (Dec-Feb), Autumn (Mar-May) and Winter (Jun-Aug)	BOM	degrees Centigrade	1961-1990	2500m	2014
Annual rainfall	rain_ann	Distribution and quantity of mean annual rainfall (mm).	BOM	mm	1961-1990	2500m	2014
Seasonal rainfall	rain_spr, rain_sum, rain_aut, rain_win	Average amount of rain (in millimetres) falling in seasons - Spring (Sep-Nov), Summer (Dec-Feb), Autumn (Mar-May) and Winter (Jun-Aug)	BOM	mm	1961-1990	2500m	2014
Rainfall	Rainfall	Time series of monthly rainfall	BOM	mm	2000-2013	5000m	2014
Seasonal rainfall reliability	rel_spr, rel_sum, rel_aut, rel_win	Rainfall Reliability is the probability of receiving at least 50% of mean seasonal rainfall	BRS	%	1900-2008		2009
Seasonal sunshine hours	sun_spr, sun_sum,	Average number of sunshine hours for seasons - Spring (Sep-Nov), Summer (Dec-Feb), Autumn (Mar-May) and Winter (Jun-Aug)	BOM	hours	2010	25,000m	2011

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
	sun_aut, sun_win						
Temperature maximum	temp_max	Time series - monthly mean maximum temperature	BOM	°C	2000-2013	0.05	2014
Temperature minimum	temp_min	Time series - monthly mean minimum temperature	BOM	°C	2000-2013	0.05	2014
Frost days	frost	Average number of potential frost days (less than 2°C) per year	BOM	number	1976-2005	0.05	2014/10
Economic							
Farm cash income	fci_06	Farm cash income for the broadacre industries in 2014 dollars	ABARES	$/ha	2000-2006	1000m	2014
Farm cash income	fci_11	Farm cash income for the broadacre industries in 2014 dollars	ABARES	$/ha	2007-2011	1000m	2014
Farm cash income	fci_13	Farm cash income for the broadacre industries in 2014 dollars	ABARES	$/ha	2007-2011	1000m	2014
Land values	lv_06	Farm land value is farmers' estimate of their property's market value at 30 June, in 2014 dollars.	ABARES	$/ha	2000-2006	1000m	2014
Land values	lv_11	Farm land value is farmers' estimate of their property's market value at 30 June, in 2014 dollars.	ABARES	$/ha	2007-2011	1000m	2014
Land values	lv_13	Farm land value is farmers' estimate of their property's market value at 30 June, in 2014 dollars.	ABARES	$/ha	2007-2011	1000m	2014
Off farm income	ofi_06	Off farm income is the income earned by the interviewed farm operator from non-agricultural activities, in 2014 dollars.	ABARES	$/ha	2000-2006	1000m	2014
Off farm income	ofi_11	Off farm income is the income earned by the interviewed farm operator from non-agricultural activities, in 2014 dollars.	ABARES	$/ha	2007-2011	1000m	2014
Off farm income	ofi_13	Off farm income is the income earned by the interviewed farm operator from non-agricultural activities, in 2014 dollars.	ABARES	$/ha	2007-2011	1000m	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Rate of return	ror_06	Rate of return is a farm's financial profit (excluding capital appreciation) in the financial year as a percentage of its opening capital, in 2014 dollars.	ABARES	%	2000-2006	1000m	2014
Rate of return	ror_11	Rate of return is a farm's financial profit (excluding capital appreciation) in the financial year as a percentage of its opening capital, in 2014 dollars.	ABARES	%	2007-2011	1000m	2014
Rate of return	ror_13	Rate of return is a farm's financial profit (excluding capital appreciation) in the financial year as a percentage of its opening capital, in 2014 dollars.	ABARES	%	2007-2011	1000m	2014
Environment							
Protected areas	capad	CAPAD, Collaborative Australia Protected Database	Environment	IUCN code	2012	1:10,000	2014
Important wetlands	diwa	Directory of important wetland areas	Environment	code	2008	1:500,000	2012
Important bird areas	iba	Important bird areas	Birds Australia	code	2008	1:500,000	2012
Migratory species	migratory_sp	The number of migratory species occurring in grid cell. Based on a presence rank of "known" or "likely".	Environment	frequency	2010	5000m	2011
RAMSAR Sites	ramsar	Wetlands designated under the Ramsar Convention	Environment	code	2008	1:250,000	2009
Threatened communities	threatnd_com	Provides a count for the number of threatened communities occurring in a grid cell. Based on a presence rank of "known" or "likely".	Environment	frequency	2011	5000m	2011
Threatened species	threatnd_sp	Provides a count for the number of threatened species occurring in a grid cell. Based on a presence rank of "known" or "likely".	Environment	frequency	2011	5000m	2011
World heritage areas	wha	Australian properties on the World Heritage List	Environment	code	2013	1:100,000	2014
Fire							
Fire frequency	ffreq	Number of times a cell has been burned, based on analysis of MODIS 45A1 data	ABARES	number	2000-12	500m	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Planned fires	planned	Frequency of planned fires - analysis based on fire occurring during the rainfall or cold season	ABARES	number	2000-12	500m	2014
Time since last burn	tslb_12	Year of the last burn, based on MODIS45A1 data	ABARES	year	2000-12	500m	2014
Unplanned fires	unplanned	Frequency of unplanned fires - analysis based on fire occurring outside of the rainfall or cold season	ABARES	number	2000-12	500m	2014
Geology							
Lithology	litho	Major lithological types based 1:2.5 million geology map.	GA	class	2012	1:2,500,000	2012
Groundcover							
median bare soil	bs_median	Median bare soil, based on CSIRO fractional cover v2.2	ABARES	%	2000-2014	500m	2014
median green cover	pv_median	Median green cover, based on CSIRO fractional cover v2.2	ABARES	%	2000-2014	500m	2014
median non-green cover	npv_median	Median non-green cover, , based on CSIRO fractional cover v2.2	ABARES	%	2000-2014	500m	2014
Infrastructure							
Distance to airports	dist_airports	Straight-line distance to airports	ABARES	km	2014	1000m	2014
Distance to cities	dist_cities	Distance to cities, population greater than 10,000 people (km)	ABARES	km	2011	1:250000	2014
Distance to the coast	dist_coast	Distance to the coast	ABARES	km	2013	1:100,000	2014
Distance to grain ports	dist_gports	Distance to grain ports	Ports Australia	kms	2013	kms	2014
Distance to mills	dist_mills	Straight-line distance to wood processing mills	ABARES	km	2014	1000m	2014
Distance to places	dist_place	Straight-line distance to places, using Geoscience Australia Topo250k vector data	ABARES	km	2006	1:250000	2011
Distance to ports	dist_ports	Straight-line distance to ports	ABARES	km	2014	1000m	2014
Distance to major roads	dist_rd_maj	Straight-line distance to major roads, using Geoscience Australia Topo250k vector data	ABARES	km	2006	1000m	2009

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Distance to minor roads	dist_rd_min	Straight-line distance to minor roads, using Geoscience Australia Topo250k vector data	ABARES	km	2006	1000m	2009
Distance to towns	dist_towns	Straight-line distance to towns where population is greater than 250 and less than 10 000 people	ABS	km	2006	1000m	2014
Land							
Aspect	aspect	Horizontal direction in which a slope faces. Expressed in degrees clockwise from north	ABARES	degrees	2008	250m	2009
Elevation	elevation	Elevation (metres) derived from 9 second digital elevation model (DEM).	GA	metres	2008	250m	2009
Indigenous forest estate	ind_est	State of the Forest 2013 indigenous estate	ABARES	class	2013	100m	2014
Landform	mr_vbf	Valley bottom flatness (version 2)	CSIRO	class	2003	2500m	2011
Slope	slope	Percentage slope derived from 9 second digital elevation model (DEM).	GA	%	2008	250m	2009
Slope length	slope_length	Length in metres.	CSIRO	metres	2001	20-250m	2009
Tenure	tenure	SOFR 2013 tenure based on CadLite tenure and NSW tenure.	ABARES	class	2013	100m	2014
Land cover							
Dynamic land cover	dlcm	Dynamic land cover map v1	GA/ABARES	class	2008	250m	2010
Land use							
Land use - actual current	clum	ACLUMP land use as at March 2014 (categorical data)	ABARES	class	2014	50m	2014/03
Crop/pasture	crop_past	Analysis of crops and pastures based on NLUM data 1993-2011	ABARES	class	1992-2011	1000m	2014
Land use modelled 1992-93	nlum_93	ACLUMP land use (categorical data)	ABARES	class	1993	1000m	2011

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Land use modelled 1993-94	nlum_94	ACLUMP land use (categorical data)	ABARES	class	1994	1000m	2011
Land use modelled 1996-97	nlum_97	ACLUMP land use (categorical data)	ABARES	class	1997	1000m	2011
Land use modelled 1998-99	nlum_99	ACLUMP land use (categorical data)	ABARES	class	1999	1000m	2011
Land use modelled 2000-01	nlum_01	ACLUMP land use (categorical data)	ABARES	class	2001	1000m	2011
Land use modelled 2005-06	nlum_06	ACLUMP land use (categorical data)	ABARES	class	2006	1000m	2011
Land use modelled 2010-11	nlum_11	Interim ACLUMP land use (categorical data)	ABARES	class	2011	1000m	2014
Land management practices							
Investment priorities - acidity	cfoc_acid	Investment priorities for Caring for our Country - soil acidity	CSIRO	class	2009	1000m	2011
Investment priorities - soil carbon	cfoc_soilc	Investment priorities for Caring for our Country - soil carbon	CSIRO	class	2009	1000m	2011
Investment priorities - wind erosion	cfoc_wind	Investment priorities for Caring for our Country - wind erosion	ABARES	class	2009	1000m	2011
Pests							
Banteng	Banteng	Pest animal distribution - Occurrence of Banteng cattle	IACRC APARP	class	2011	1/8 degree	2014
Brown Hare	BrownHare	Pest animal distribution - Occurrence of brown hare	IACRC APARP	class	2012	1/8 degree	2014
Buffalo	Buffalo	Pest animal distribution - Occurrence of water buffalo	IACRC APARP	class	2013	1/8 degree	2014
Camel	Camel	Pest animal distribution - Occurrence of feral camel	IACRC APARP	class	2011	1/8 degree	2014
Cane toad	CaneToad	Pest animal distribution - Occurrence of cane toad	IACRC APARP	class	2011	1/8 degree	2014
Cat	Cat	Pest animal distribution - Occurrence of feral cat	IACRC APARP	class	2011	1/8 degree	2014
Deer Chital	DeerChital	Pest animal distribution - Occurrence of Chital deer	IACRC APARP	class	2011	1/8 degree	2014
Deer Fallow	DeerFallow	Pest animal distribution - Occurrence of Fallow deer	IACRC APARP	class	2011	1/8 degree	2014
Deer Hog	DeerHog	Pest animal distribution - Occurrence of Hog deer	IACRC APARP	class	2011	1/8 degree	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Deer Red	DeerRed	Pest animal distribution - Occurrence of Red deer	IACRC APARP	class	2011	1/8 degree	2014
Deer Rusa	DeerRusa	Pest animal distribution - Occurrence of Rusa deer	IACRC APARP	class	2011	1/8 degree	2014
Deer Sambar	DeerSambar	Pest animal distribution - Occurrence of Sambar deer	IACRC APARP	class	2011	1/8 degree	2014
Dog	Dog	Pest animal distribution - Occurrence of wild dog	IACRC APARP	class	2011	1/8 degree	2014
Donkey	Donkey	Pest animal distribution - Occurrence of feral donkey	IACRC APARP	class	2011	1/8 degree	2014
Ferret / polecat	Ferret	Pest animal distribution - Occurrence of ferret / polecat	IACRC APARP	class	2011	1/8 degree	2014
Fox	Fox	Pest animal distribution - Occurrence of Fox	IACRC APARP	class	2011	1/8 degree	2014
Feral goat	Goat	Pest animal distribution - Occurrence of Feral goat	IACRC APARP	class	2011	1/8 degree	2014
Horse	horse	Pest animal distribution - Occurrence of feral horse	IACRC APARP	class	2011	1/8 degree	2014
Livestock	Livestock	Pest animal distribution - Occurrence of Feral livestock	IACRC APARP	class	2012	1/8 degree	2014
Indian myna	Myna	Pest bird distribution - Occurrence of Indian Myna bird	IACRC APARP	class	2011	1/8 degree	2014
Feral pig	pig	Pest animal distribution - Occurrence of feral pig	IACRC APARP	class	2011	1/8 degree	2014
Rabbit	Rabbit	Pest animal distribution - Occurrence of Rabbit	IACRC APARP	class	2011	1/8 degree	2014
Squirrel	Squirrel	Pest animal distribution - Occurrence of Indian Palm Squirrel	IACRC APARP	class	2012	1/8 degree	2014
Starling	Starling	Pest bird distribution - Occurrence of Common Starling	IACRC APARP	class	2011	1/8 degree	2014
Turtle	Turtle	Pest animal distribution - Occurrence of Red Eared Slider Turtle	IACRC APARP	class	2011	1/8 degree	2014
Social							
Remoteness area	ra	The Remoteness area is based on the physical road distance to the nearest Urban Centre (class)	ABS	class	2011	SA1	2014
SEIFA index - advantage and disadvantage	seifa_ad	Index of Relative Socio-economic Advantage and Disadvantage: a continuum of advantage (high values) to disadvantage (low values) which is derived from Census variables related to both advantage and disadvantage, like household with low income and people with a tertiary education.	ABS	decile	2011	SA1	2014
SEIFA index of disadvantage	seifa_dis	Index of Relative Socio-economic Disadvantage: is derived from Census variables related to disadvantage, such as low income, low educational attainment, unemployment, and dwellings without motor vehicles.	ABS	decile	2011	SA1	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
SEIFA index of economic resources	seifa_ec	Index of Economic Resources: focuses on Census variables like the income, housing expenditure and assets of households.	ABS	decile	2011	SA1	
SEIFA index of education and occupation	seifa_edu	Index of Education and Occupation: includes Census variables relating to the educational and occupational characteristics of communities, like the proportion of people with a higher qualification or those employed in a skilled occupation.	ABS	decile	2011	SA1	
Age	median_age	Age at which half the population is older and half the population younger, based on the 2010-11 population census.	ABS	years	2011	SLA	
Education – vocational training	edu_voc	Proportion of persons aged 15 years and older with certificate or diploma, based on the 2010-11 population census.	ABS	%	2011	SA1	
Education – degrees	edu_deg	Proportion of persons aged 15 years and older with post-graduate degrees, graduate diploma, graduate certification or bachelor degree, based on the 2005-06 population census.	ABS	%	2011	SA1	
Employment	emp_livestock	Persons employed in livestock industries based on the 2010-11 population census (place of usual residence)	ABS	SA1	2011	SA1	
Employment	emp_ag	Number of agricultural employees - place of usual residence	ABS		2011	SA1	
Employment	emp_crop	Number of agricultural (cropping industry) employees - place of usual residence	ABS	SA1	2011	SA1	
Employment	emp_for	Number of forestry employees - place of usual residence	ABS	SA1	2011	SA1	
Employment	emp_hort	Number of agricultural (horticulture industry) employees - place of usual residence	ABS	SA1	2011	SA1	
High income	inc_high	Proportion of households receiving total weekly income of $2000 or more, based on the 2010-11 population census.	ABS	%	2011	SA1	
Home ownership	home_owner	Proportion of occupied private dwellings; privately owned or being purchased.	ABS	%	2011	SA1	

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Internet	internet	Proportion of households with access to the internet, based on the 2010-11 population census.	ABS	%	2011	SA1	
Low income	inc_low	Proportion of households receiving total weekly income of $800 or less, based on the 2010-11 population census.	ABS	%	2011	SA1	
Older work force	older_wa	Population aged 40-64 as proportion of total population, based on the 2010-11 population census.	ABS	%	2011	SA1	
Population change	popch	Percentage population growth, based on the 2010-11 population census.	ABS	%	2011	SA2	
Population density	popdens	Number of people per square kilometre, based on the 2010-11 population census.	ABS	people/km2	2011	SA1	
Prime age group	prime_wa	Population aged 25-39 as proportion of total population, based on the 2010-11 population census.	ABS	%	2011	SA1	
Unemployment rate	unemp	Proportion of the labour force not employed and actively looking for work, based on the 2010-11 population census.	ABS	%	2006	SA1	
Soil							
bulk density	bd	National soil grids - Bulk density 0-30 cm	ASRIS	g/cm3	2013	250m	2014
clay content	clay	National soil grids - Clay content 0-30 cm	ASRIS	%	2013	250m	2014
plant available water content	pawc	National soil grids - Plant available water capacity 0-1m	ASRIS	mm/m3	2013	250m	2014
ph	ph	National soil grids - pH 0-30cm	ASRIS	ph units	2013	1000m	2014
Erodibility	erodibility	Vulnerability of soil A-horizon to erosion in k factor units.	CSIRO	k factor	2001		2009
Soil type (Australian soil classification)	soil_asc	Australian soil classification	CSIRO	class	2013	250m	2014
Soil limiting factors	soil_manage	Soil physical and chemical limitations	ABARES	class	2010	250m	2011
Soil type (Northcote)	soil_type	Northcote soil classification	CSIRO	class	2001	250m	2011
Acid sulphate soils	acid_sulphate	Acid sulphate soils	CSIRO	class	2011	1000m	2013
Vegetation							

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Forest types	forest	State of the Forest 2013 forest types	ABARES	class	2013	100m	2014
Net primary productivity	npp	Mean Annual Net Primary Production (t/ha/annum) data from MOD17A3 data	NTSG	tonnes/ha/yr	2012	1000m	2014
Native vegetation extent	native_ext	Native vegetation extent	ABARES	class	2004	100m	2011
Native vegetation types	native_veg	Pre-European settlement major vegetation groups. (categorical data) v4.1	ERIN	class	2012	100m	2009
Present vegetation types	present_veg	Current major vegetation groups. (categorical data) v4.1	ERIN	class	2012	100m	2014
Vegetation condition	vast	Vegetation assets, states and transitions data. (categorical data)	ABARES	class	2008	1000m	2012
Integrated vegetation	int_veg09	Integrated land use and NVIS data	ABARES	class	2009	100m	2009
Water							
Distance to dams	dist_dams	Distance from dams, reservoirs and irrigation	ABARES	km	2014	1000m	2014
Distance to lakes	dist_plakes, dist_nplakes	Distance from perennial lakes	ABARES	km	2014	1000m	2014
Distance to rivers	dist_privers, dist_nrivers	Distance from perennial and non-perennial rivers	ABARES	km	2014	1000m	2014
Distance to fresh wetlands	dist_fwflats	Distance from freshwater wetlands	ABARES	km	2014	1000m	2014
Distance to salt wetlands	dist_swflats	Distance from saline wetlands	ABARES	km	2014	1000m	2014
groundwater use	water_gw	Water use on Australian farms 2010-11 - amount of water reported as groundwater	ABS	ml	2010-11	SA2	2014
irrigation channel use	water_irr_ch	Water use on Australian farms 2010-11 - amount of water reported as irrigation channels	ABS	ml	2010-11	SA2	2014
irrigation dams	water_irr_dams	Water use on Australian farms 2010-11 - amount of water reported as irrigation dams	ABS	ml	2010-11	SA2	2014
mains water	water_mains	Water use on Australian farms 2010-11 - amount of water reported as mains water	ABS	ml	2010-11	SA2	2014

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
other water sources	water_other	Water use on Australian farms 2010-11 - amount of water reported as other water	ABS	ml	2010-11	SA2	2014
recycled water	water_recycle	Water use on Australian farms 2010-11 - amount of water reported as recycled	ABS	ml	2010-11	SA2	2014
surface water use	water_sw	Water use on Australian farms 2010-11 - amount of water reported as surface water	ABS	ml	2010-11	SA2	2014
total water use	water_tot	Water use on Australian farms 2010-11 - total amount of water reported	ABS	ml	2010-11	SA2	2014
Soil moisture	lsm	Upper layer soil moisture	AWAP	fraction / %	2012-14	5000m	
Soil moisture	usm	Lower layer soil moisture	AWAP	fraction / %	2012-14	5000m	
Weeds							
Prickly Acacia	Acanil11	Weeds of National Significance - occurrence of Acacia nilotica spp indica	NLWRA	class	2011	50,000m	2011
Alligator Weed	Altphi11	Weeds of National Significance - occurrence of Alternanthera philoxeroides	NLWRA	class	2011	50,000m	2011
Pond Apple	Anngla11	Weeds of National Significance - occurrence of Annona glabra	NLWRA	class	2011	50,000m	2011
Bridal creeper	Aspasp11	Weeds of National Significance - occurrence of Asparagus asparagoides	NLWRA	class	2011	50,000m	2011
Cabomba	Cabcar11	Weeds of National Significance - occurrence of Cabomba caroliniana	NLWRA	class	2011	50,000m	2011
Bitou Bush Boneseed	Chrmon11	Weeds of National Significance - occurrence of Chrysanthemoides monilifera	NLWRA	class	2011	50,000m	2011
Boneseed Nsw	Chrmni11	Weeds of National Significance - occurrence of Chrysanthemoides monilifera subspecies monilifera	NLWRA	class	2011	50,000m	2011
Bitou Bush	Chrrot11	Weeds of National Significance - occurrence of Chrysanthemoides monilifera subspecies rotunda	NLWRA	class	2011	50,000m	2011
Rubber Vine	Crygra11	Weeds of National Significance - occurrence of Cryptostegia grandiflora	NLWRA	class	2011	50,000m	2011
Hymenachne	Hymamp11	Weeds of National Significance - occurrence of Hymenachne amplexicaulis	NLWRA	class	2011	50,000m	2011
Lantana	Lancam11	Weeds of National Significance - occurrence of Lantana camara	NLWRA	class	2011	50,000m	2011
Mimosa	Mimpig11	Weeds of National Significance - occurrence of Mimosa pigra	NLWRA	class	2011	50,000m	2011

Primary Layer	Name	Description	Source	Units	Currency	Original scale or resolution	Latest update (yyyy/mm)
Chilean needle grass	Nasnee11	Weeds of National Significance - occurrence of Nassella neesiana	NLWRA	class	2011	50,000m	2011
Serrated Tussock	Nastri11	Weeds of National Significance - occurrence of Nassella trichotoma	NLWRA	class	2011	50,000m	2011
Parkinsonia	Paracu11	Weeds of National Significance - occurrence of Parkinsonia aculeata	NLWRA	class	2011	50,000m	2011
Parthenium Weed	Parhys11	Weeds of National Significance - occurrence of Parthenium hysterophorus	NLWRA	class	2011	50,000m	2011
Mesquite	Prospp11	Weeds of National Significance - occurrence of Prosopis spp	NLWRA	class	2011	50,000m	2011
Blackberry	Rubfru11	Weeds of National Significance - occurrence of Rubus fruticosus agg	NLWRA	class	2011	50,000m	2011
Salvinia Molesta	Salmol11	Weeds of National Significance - occurrence of Salvinia molesta	NLWRA	class	2011	50,000m	2011
Willows	Salspp11	Weeds of National Significance - occurrence of Salix spp except Weeping Willows, Pussy Willow and Sterile Pussy Willow	NLWRA	class	2011	50,000m	2011
Athel Pine	Tamaph11	Weeds of National Significance - occurrence of Tamarix aphylla	NLWRA	class	2011	50,000m	2011
Gorse	Uleeur11	Weeds of National Significance - occurrence of Ulex europaeus	NLWRA	class	2011	50,000m	2011

Overlay Layer	Name	Description	Source	Units	Currency
AAGIS survey regions	aagis	AAGIS survey regions – broad-acre cropping, pastoral and high rainfall zones	ABARES	region	2011
agro ecological regions	agroclim	Climate zones based on rainfall and temperature.	Hutch	region	2005
Capital cities	capitals	Location of Australian Capital cities	GA	point	2006
Catchments	catchments	Australian river basins.	GA	region	1997
Cities	cities	Location of cities with population greater than 100 000 people	ABS	point	2011
Coast	coastline	Coastline of Australia.	GA	feature	2001
IBRA Regions	ibra	Interim Biogeographic Regions of Australia version 7. (Categorical data)	Departmnet of Environment	region	2012
Local government area	lga	Local government areas	ABS	region	2011
NRM Regions	nrm2010	Natural Resource Management regional boundaries, version dated 2010. (Categorical data)	ERIN	region	2010
NRM Regions	nrm2014	Natural Resource Management regional boundaries, version dated 2014. (Categorical data)	ERIN	region	2014
Physiographic regions	physio	Physiographic regions	CSIRO	region	2011
Roads	roads	Major roads, based on GEODATA 1:250000.	GA	feature	2006
States	state	Australian states and territories boundaries. (Categorical data)	GA	region	2004
Towns	towns	Location of towns where population is greater than 250 and less than 100 000 people	ABS	point	2011
SA2	SA2	Statistical Areas 2 (ABS geography)	ABS	region	2011
rivers	rivers	Drainage network, based on GEODATA 1:250000.	GA	feature	2006
Sla	Sla	The Statistical Local Area (SLA) was an Australian Standard Geographical Classification (ASGC) defined area for 2011	ABS	region	2011

Mask Layer	Name	Description	Source	Units	Currency
Agroclimatic zones	agroclim	Agroclimatic zones interpolated to IBRA regions	ANU	class	2005
Catchments	catchment	Australian river basins, based on GEODATA 250k.	GA	region	1997
IBRA Regions	ibra	Interim Biogeographic Regionalisation for Australia (IBRA) boundaries, version 7	ERIN	region	2008
Land use	landuse	Catchment scale ACLUMP land use classified into 18 classes, as at 2014	ABARES	class	2014
Natural Resource Management	nrm	NRM regional boundaries	ERIN	region	2014
Physiographic regions	physio	Physiographic regions of Australia	ASRIS	class	2011
States	state	Australian states and territories boundaries.	GA	region	1993
sub-IBRA	sub-IBRA	Interim Biogeographic Regionalisation for Australia (IBRA) boundaries, version 7	ERIN	region	2008
Tenure	tenure	SOFR 2013 tenure based on CadLite tenure and NSW tenure.	ABARES	class	2013