Title NSW Koala Likelihood Map v2.0 (August 2019)

Alternative title(s)

KLM v2.0

Abstract

The Koala Likelihood Map (KLM) predicts the likelihood of finding a koala relative to other arboreal mammals across a 10-km grid covering NSW. It is built using existing arboreal mammal records from the past 20 years (currently 1999 to 2019) and represents the likelihood of koalas as the proportion of all records within a grid cell that are koalas. The records of other arboreal mammals provide a measure of survey effort independent of koalas and allow identification of areas where other arboreal mammals have been recorded, but not koalas. The map also includes a measure of the confidence in the koala likelihood estimate. This enables deficiencies in the data to be highlighted, and recommendations to be made for areas requiring further survey. The KLM is a useful tool that can be used to inform a range of koala conservation and management issues, however it is not static and should be updated regularly as new data become available.

The KLM was first developed in 2014 for use in private native forestry regulation, on behalf of the NSW Environment Protection Authority. An updated and refined version of the map (NSW Koala Baseline Likelihood Map 2016) was produced in 2016 and has been used to inform provisions for koala protection under the Coastal Integrated Forestry Operations Approvals and is planned to inform the future review of the Private Native Forestry Code of Practice.

This latest version of the KLM (v2.0 August 2019) includes new data from BioNet and Spot Assessment Technique (SAT) survey databases, as well as SAT data from a targeted state-wide field survey program.

The KLM v2.0 (August 2019) is delivered under the NSW Koala Strategy's Koala Habitat Information Base. This comprises several layers of spatial information, including: Koala Habitat Suitability Model (KHSM) – the probability of finding koala habitat at any location; Koala Tree Suitability Index (KTSI) – the probability of finding a tree species that koalas are known to use for food or shelter; Koala Likelihood Map (KLM) including a confidence layer – predicts the likelihood of finding a koala at a location; Areas of Regional Koala Significance (ARKS) – identifies key koala populations and management areas with potential for long-term viability as well as priority threats to key koala populations; Native vegetation of NSW – this is a high-resolution map of native tree cover and water bodies; and all koala sightings recorded in NSW Bionet.

All Koala Habitat Information Base (KHIB) datasets are available for download below under 'Dataset Relationship'.

Resource locator

Show on SEED Web Map Name: Show on SEED Web Map

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Display dataset on SEED's map

Function: download

Data Quality Statement Name: Data Quality Statement

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Data quality statement for NSW Koala Likelihood Map v2.0 (August 2019)

Function: download

<u>Download</u> <u>Package</u> Name: Download Package

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Shapefile Data (NSW Koala Likelihood Map v2.0 (August 2019))

Function: download

NSW Koala Name: NSW Koala Baseline Likelihood Map 2016

<u>Baseline</u> Likelihood Map

2016

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Description:

Link to 2016 version of the NSW Koala Likelihood Map

Function: download

ArcGIS REST Services

Name: ArcGIS REST Services Directory - NSW Koala Likelihood Map v2.0 (August 2019)

<u>Directory -</u>

Protocol: WWW:DOWNLOAD-1.0-http--download

NSW Koala Likelihood Map

v2.0 (August

2019)

ArcGIS REST Services Directory - provides a variety of interfaces for web browsers, GIS users and developers, to view maps.

Function: download

WMS - NSW Koala

Name: WMS - NSW Koala Likelihood Map v2.0 (August 2019)

Likelihood Map v2.0 (August 2019)

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

Web Map Service (WMS) is a standard protocol for serving georeferenced map images over the internet that are generated by a map server using data from a GIS Database (NSW Government - Spatial Web Services Register June 2015). WMS allows a user to spatially visualise the dataset, but not query its features. This service is aimed at advanced geographical information users, and will require access to geographical information system (GIS) software such as QGIS and ArcGIS/ArcMap.

Function: download

Unique resource identifier

Code 1cd5808c-e4df-4a61-8cc1-09b8f0d76344

Presentation form

Map digital

Edition 2.0 (August 2019)

Dataset

language

English

Metadata standard

Name

ISO 19115

Edition

2016

Dataset URI

https://datasets.seed.nsw.gov.au/dataset/1cd5808c-e4df-4a61-8cc1-09b8f0d76344

Purpose

To aid with the conservation and management of koalas

Status

Required

Spatial representation

Type

vector

Spatial reference system

Code

identifying the

spatial reference 4283

system

Spatial resolution	10 km
Additional information source	Predavec, M., Lunney, D., Shannon, I., Scotts, D., Turbill, J., and Faulkner, B. (2015). Mapping the likelihood of koalas across New South Wales for use in Private Native Forestry: developing a simple, species distribution model that deals with opportunistic data. Australian Mammalogy 37, 182–193.
Topic categor	ту

Keyword set			
keyword value	ECOLOGY		
	FAUNA-Native		
Originating controlled vocabulary			
Title	ANZLIC Search Words		
Reference date	2008-05-16		
Geographic location			
West bounding longitude	140.99928		
East bounding longitude	153.63883		
North bounding latitude	-37.50508		
South bounding latitude	-28.15702		
NSW Place Name	State of NSW		
Vertical extent information			
Minimum value	-100		
Maximum value	2228		
Coordinate reference system			
Authority code	urn:ogc:def:cs:EPSG::		
Code identifying the coordinate reference system	5711		
Temporal extent			
Begin position	1999-01-01		
End position	N/A		
Dataset reference date			
Resource maintenance			
Maintenance and update frequency	Unknown		
Contact info			
Contact position	Data Broker		
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water		
Telephone number	131555		
Email address	data.broker@environment.nsw.gov.au		
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew		
Responsible party role	pointOfContact		

Lineage

The map is built using existing koala records and records of 8 species of other arboreal mammals from approximately the past 20 years (currently January 1999 to August 2019). Records were obtained from NSW BioNet and other independent sources, e.g. Spot Assessment Technique (SAT) survey databases. SAT data resulting from a state-wide field survey program designed to update the map were also included (this data will be made available in BioNet in late 2019). Where SAT datasets were included, the koala absence data (i.e. indicating the survey sites where koalas weren't found) were used in place of other arboreal mammal records as the measure of survey effort. A filtering process was implemented to reduce some of the inherent biases in the BioNet data. These data form the basis of the estimates of the likelihood of finding a koala across NSW and the confidence in the estimates.

Limitations on public access

Scope

dataset

DQ Completeness Commission

Effective date

2019-08-12

Explanation

The assessment covers all of NSW. The map includes areas that include no records of koalas or of other arboreal mammals. These grid cells are identified in the map layer (p = 999, Confidence = No Data). The lack of data in these grid cells is noted and incorporated into the final mapping.

DQ Completeness Omission

Effective date

2019-08-12

Explanation

The assessment covers all of NSW. The map includes areas that include no records of koalas or of other arboreal mammals. These grid cells are identified in the map layer (p = 999, Confidence = No Data). The lack of data in these grid cells is noted and incorporated into the final mapping.

DQ Conceptual Consistency

Effective

date

2019-08-12

Explanation

The estimate of the likelihood of koalas for each grid cell should be viewed relative to each other and not as absolute numbers.

DQ Absolute External Positional Accuracy

Effective

date

2019-08-12

Explanation

Records in NSW BioNet include a spatial accuracy field. Only records with a spatial accuracy less than or equal to 10 kilometre (the size of the spatial grid used in the statewide assessment) were used in the preparation of the map.

DQ Non Quantitative Attribute Correctness

Effective

date

2019-08-12

Explanation

The map includes a relative measure of the accuracy of the koala likelihood estimates based on a 95% confidence interval.

Responsible party

Contact position Data Broker

Organisation name NSW Department of Climate Change, Energy, the Environment and Water

Telephone number 131555

Email address <u>data.broker@environment.nsw.gov.au</u>

Web address https://www.nsw.gov.au/departments-and-agencies/dcceew

Responsible party role pointOfContact

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Responsible party role pointOfContact

Metadata date 2024-02-26T13:39:55.532388

Metadata language