Title	Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855
Alternative title(s)	HunterGreater_v4_E_3855
Abstract	This dataset was superseded by the State Vegetation Type Map (https://datasets.seed.nsw.gov.au/dataset/nsw-state-vegetation-type-map) on 24.06.2022. Please note, Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 web service and zipped dataset will be archived and will no longer be available on line after 31st March 2025. The GHM geodatabase builds on a wealth of information and previous mapping from the Hunter region. Existing field data, mapping, classification and remote sensing interpretation were augmented with new survey data to produce the vegetation community classification used in this project. The classification used a series of well documented analyses as well as expert review to achieve its end-point. The GHM geodatabase contains two principal vegetation layers. The GHM Vegetation Type layer and the Canopy Cover (v2) layer (individual tree crowns or clumps of tree crowns). The GHM also contains field plot localities, associated species information and plot-specific photographs. Data specific to each polygon (e.g. crown cover) and to each native vegetation community type (e.g. common name, scientific name) are included. Polygons, the fundamental spatial units, are built from computer-based feature recognition which delineates landscapes patterns. The GHM Vegetation Type map is built by attributing individual polygons with vegetation type from the GHM floristic classification through a multi-stage process. The process includes visual interpretation of SPOT 5 and ADS40 imagery as well as species distribution modelling and expert review. The project included a review of existing mapping and classification and established equivalences between these and the GHM Classification. VIS ID 3855

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: DQS - Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 Function: download
Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 Documentation	Name: Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 Documentation Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download Document Package Function: download
Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855	Name: Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 Protocol: WWW:DOWNLOAD-1.0-http--download Description: Download Shapefile data Package Function: download
Greater Hunter Native	Name: Greater Hunter Native Vegetation Mapping v4.0. VIS ID 3855 Geodatabase Protocol: WWW:DOWNLOAD-1.0-http--download

Vegetation Mapping v4.0. VIS ID 3855 Geodatabase	Description: Download Esri Geodatabase Package Function: download
WMS	Name: WMS Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web Map Service Function: download
REST Service	Name: REST Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: ESRI REST Services directory Function: download

Unique resource identifier

Code	fe4f109f-7b7b-4932-974f-4df1f9112333

Presentation form	Map digital
Edition	Not known
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://datasets.seed.nsw.gov.au/dataset/fe4f109f-7b7b-4932-974f-4df1f9112333
Purpose	To classify and map native vegetation communities across the greater Hunter region, including Hawkesbury Nepean CMA. The classification is intended to be integrated into the NSW Plant Community Type Classification for use in NSW assessment and regulatory tools. Version 4 of the map and classification should be regarded as draft, and may undergo minor changes as it is integrated into the NSW PCT and subsequent tools.
Status	Under development

Spatial representation

Type	vector

Spatial reference system

Code identifying the spatial reference system	4283
Equivalent scale	1:None

Additional information source	Greater Hunter Native Vegetation Mapping v4.0 is a draft dataset undergoing review. The vegetation types represented will not be altered but their distribution may be subject to change.This project was funded by Catchment Action NSW, with additional funding and material contributions from the Office of Environment and Heritage, Hunter Councils Inc, and Hunter Central Rivers Catchment Management Authority. For more information see:Sivertsen, D., Roff, A., Somerville, M., Thonell, J., and Denholm, B. 2011. Hunter Native Vegetation Mapping. Geodatabase Guide (Version 4.0), Office of Environment and Heritage, Department of Premier and Cabinet, Sydney, Australia.
Topic category	

Keyword set

keyword value	VEGETATION
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	149.501157
East bounding longitude	152.805743
North bounding latitude	-33.593445
South bounding latitude	-30.998426

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	2005-01-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Biannually
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
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Responsible party role	pointOfContact

Lineage	Vegetation patterns at the stand scale were delineated using automated feature recognition software. Definiens eCognition was used to define segments with low internal variation (low heterogeneity). Pan-sharpened SPOT5 data (5m) from multiple years formed the basis of the segmentation. The data had been pre-processed to accentuate the range of spectral responses or colours. The spatial resolution is 5m and the minimum mappable unit was set to 400m2. The polygon boundaries have been smoothed and narrow slivers were eliminated. There were two stages in the feature recognition approach. The first stage was optimised to differentiate woody and non-woody vegetation. The second stage was optimised to differentiate vegetation patterns within the extent of woody vegetation. The first stage employed multi-temporal pan-sharpened SPOT - 5 data (5m). Only the red band (610-680nm) from each SPOT image was used to maximise the characteristic stability of woody vegetation over time. Each object was then classified as woody, non-woody and 'other' using the Crown Cover v2 layer and visual interpretation. For stage two the boundaries within the woody vegetation were dissolved and new objects were created within their boundaries using stretched, multi-temporal imagery. The contrast of all bands was increased using an adaptive equalisation stretch to maximise the separability of discrete vegetation patches within mosaics. The vegetation map was created by attributing vegetation polygons with a vegetation type. There are multiple stages involved but the fundamental steps are as follows: Survey sites that meet quality criteria are assigned a GHM type label using PATN analysis. Vegetation map units were defined using a hierarchical modelling approach that included the manual allocation of Keith Formation using visual identification, the use of a species distribution model to calculate the probability of GHM type in each polygon using environmental layers and a set of expert rules is developed to combine the formation classification and the modelled results. The results undergo visual quality assurance, again using manual image interpretation.
Limitations on public access	

Scope	dataset

DQ Completeness Commission

Effective date	2001-01-01
Explanation	As with almost all vegetation modelling exercises, the short-coming of having too few samples per community was an issue in the Hunter. 243 PCT's were identified in the Hunter region, with the number of plots per PCT ranging from 0 to 155; and only 53 PCT's having 30 or more plots. All PCT's with plot data were modelled (236 PCT's); however the results of PCT's with low samples sizes have not been validated. 5297 site records with 2050 taxa were used in the model. 20% of sites were allocated for validation were removed. Consistent with the DECCW Native Vegetation Interim Type Standard (Sivertsen, 2009), the test plots were used to quantify the performance of the final result on the basis of the number of GHM community types mapped in three classes (see Gopal and Woodcock 1994). In preparation for analysis a table of 'Acceptable Mapping Alternatives' was prepared (see Appendix E). The aim of this table was to identify clusters of structurally and floristically similar communities which for validation purposes are considered interchangeable and 'acceptable errors' in mapping. For example Water Gum Riparian rainforests (MU012) and River Oak riparian forests (MU196) occur both as separate entities as well as mosaics along rivers on the Lower North Coast. Similarly, Spotted Gum communities MU82, 83 and 84 are only discernible on the ground by the frequency of certain species of ironbark and the understory composition. In both these cases distinguishing the individual communities reliably, given the available survey data, ground truthing and remote sensing techniques used, may be beyond available capacity and resources and therefore constitute 'acceptable errors' in mapping . Following Gopal & Woodcock (1994), three categories are recognised: 'CORRECT' where either the first vegetation community assigned in the field validation polygon corresponds with the mapped unit. 'ESSENTIALLY CORRECT' where either the first vegetation community falls within the defined cluster of 'Acceptable Mapping Alternatives' and one of those alternative corresponds to the Mapped MU, it is deemed to be incorrect but acceptable. 'INCORRECT' where the first or alternative does not match the Mapped MU. Of the 1022 available independent survey sites (rapid and full floristic) 65.3% were considered to have the 'CORRECT' or 'ESSENTIALLY CORRECT' GHM type. Details of the validation for each map unit are presented in Appendix D of the Geodatabase Guide.

DQ Completeness Omission

Effective date	2001-01-01

DQ Conceptual Consistency

Explanation	Schema rules were influenced by the NSW Interim Vegetataion Type Standard.

DQ Absolute External Positional Accuracy

Explanation	The mapping is based on SPOT 5 data that has been geometrically corrected.The raw digital numbers were pan sharpened (creating a 5m layer). The extent of woody vegetation is based on a classification of SPOT 5 data over three time periods.Geometeric accuracy is commensurate with 1:25,000 scale aerial photographic interpretation.

DQ Non Quantitative Attribute Correctness

Explanation	Of the 1022 available independent survey sites (rapid and full floristic) 65.3% were considered to have the 'CORRECT' or 'ESSENTIALLY CORRECT' GHM type. Details of the validation for each map unit are presented in Appendix D of the Geodatabase Guide.

Responsible party

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
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Responsible party role	pointOfContact

Metadata point of contact

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Metadata date

2024-10-09T02:14:32.058498

Metadata language