Title	HEVAE Vegetation Groundwater Dependent Ecosystems Value - Southern Rivers
Alternative title(s)	GDE HEVAE Southern Rivers
Abstract	NSW DoI Water has adopted the Guidelines for Identifying High Ecological Value Aquatic Ecosystems (HEVAE) framework developed by the Australian Commonwealth Government. In the current assessment for NSW, the HEVAE consists of four key criteria which include diversity, distinctiveness, naturalness and vital habitat. Therefore, the HEVAE vegetation GDE value layer is a combination of four individual criterion layers. The final or overall HEVAE score was determined for vegetation PCT polygons which has a high probability of being groundwater dependent. This was calculated by adding together the final scores for each criterion (Naturalness, Diversity, Distinctiveness and Vital Habitat). This score was then standardised by dividing by the maximum combined HEVAE score for a whole catchment's vegetation GDE polygons to provide an even spread of score outcomes between 0 (lowest) and 1 (highest). For ease of data modelling and management, the dataset was divided into the following catchment management areas; Border Rivers-Gwydir, Central Tablelands, Central West, Hawkesbury-Nepean, Hunter-Central Rivers, Lachlan, Lower Murray Darling, Murray, Murrumbidgee, Namoi, Northern Rivers, Southern Rivers, Southern Tablelands, Sydney Metro and Western Division (subdivided further into the IBRA Sub regions).

Resource locator

Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for HEVAE Vegetation Groundwater Dependent Ecosystems Value - Hunter / Central Rivers Function: download
GDE HEVAE - Southern Rivers	Name: GDE HEVAE - Southern Rivers Protocol: WWW:DOWNLOAD-1.0-http--download Description: file geodata base Function: download
GDE HEVAE metadata	Name: GDE HEVAE metadata Protocol: WWW:DOWNLOAD-1.0-http--download Description: PDF file Function: download
CSIRO Publication	Name: CSIRO Publication Protocol: WWW:DOWNLOAD-1.0-http--download Description: A new approach to prioritising groundwater dependent vegetation communities to inform groundwater management in New South Wales, Australia Function: download

Unique resource identifier

Code	a6e2abc7-159b-49c6-b45e-8deedb9b05c3

Presentation form	Map digital

Edition	v1
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/a6e2abc7-159b-49c6-b45e-8deedb9b05c3
Purpose	Environmental management
Status	Completed
Spatial representation	
Type	vector
Geometric Object Type	curve
Spatial reference system	
Code identifying the spatial reference system	4283
Equivalent scale	1:None
Topic category	

Keyword set

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

Geographic location

West bounding longitude	147.849608
East bounding longitude	151.321287
North bounding latitude	-37.661211
South bounding latitude	-34.247228
NSW Place Name	Southern Rivers

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	2018-06-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Unknown
Contact info	
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Responsible party role	pointOfContact

Lineage

The final or overall HEVAE score is determined for each vegetation GDE polygon. This is calculated by adding together the final weighted and standardised scores for each HEVAE criterion (Naturalness, Diversity, Distinctiveness and Vital Habitat). This score is then standardised by dividing by the maximum combined HEVAE score for a whole catchment's river reaches to provide an even spread of score outcomes between 0 (lowest) and 1 (highest). A five class or category system has been adopted to display the four criteria and overall standardised score HEVAE outputs. Each of final five HEVAE classes (and the Criteria) were based on steps of 0.2 as shown in the table below. Table. Details on the five classes used to spatially display overall HEVAE or associated criteria for high probability vegetation GDEs in NSW. Standardised score range HEVAE Class 0.801 – 1.000 Very High Value 0.601 – 0.800 High Value 0.401 – 0.600 Medium Value 0.201 – 0.400 Low Value 0.000 – 0.200 Very Low Value Overall HEVAE outputs, along with contributing criteria are applied to each mapped vegetation polygon and can provide useful tools for assisting at fine scale and broader scale decision making for water sharing planning needs and other natural resource management needs. Areas of highest priority (i.e. very high and high HEVAE value) can be easily identified. The details of the GDE HEVAE methods are in Dabovic et. al. (2019). Process step Data sets used in the GDE HEVAE methods included: • High probability vegetation GDE dataset (DoI Water) • Threatened species profile search for listing under the NSW Threatened species Conservation Act 1995 (TSCA 1995) and Atlas of NSW Wildlife (OEH) • Threatened and protected species – profiles and records viewer, for listing under the NSW Fisheries Management Act 1994 (FMA 1994) (DPI Fisheries); and • Commonwealth Government Protected Matters Search Tool, for listings under the Environment Protection and Biodiversity Conservation Act 1999 (EP&BCA 1999). • Ramsar/DIWA Wetlands dataset (OEH) • National Parks (OEH) • Australian Hydrologic Geospatial catchments (BOM) • Vegetation condition scores (State of the Catchment reports – OEH) • Springs (DoI Water & BOM) Separate spatial models were developed for each of the criteria and overall GDE HEVAE Scores. Distinctiveness Attributes that combine to give total distinctiveness score (DISTINCTIVENESS) are: FAUNA_SCORE - Fauna score for each species calculated by multiplying the conservation score (Table 1), weighting for distribution (recorded = 1, known = 0.5 and predicted = 0.25) and the mobility score (OEH scoring for asset identification) in a GDE Polygon. All species were then added together for a final fauna score. FLORA_SCORE - Flora score for each species calculated by multiplying the conservation score (Table 1), weighting for distribution (recorded = 1, known = 0.5 and predicted = 0.25). CONS_SCORE - vegetation community conservation score (1 to 0.25). FISHEEC_SCORE – predicted weighting of 0.25. Diveristy Attributes that combine to give total diversity score (DIVERSITY_VALUE) are: NEAR_SCORE - distance between each vegetation polygon. PATCH_SIZE_SCORE – area of the GDE vegetation polygons. Naturalness Attributes that combine to give total naturalness score (NATURALNESS) are: EdgeAreaRatio_Score NPestate (yes/no) NPestate_Score - Areas with national parks estate received as weighted score of 1. CDI_score - The catchment disturbance index scores were adopted straight from the RCI (Healey et al. 2012) VegPercScore - percentage of native/non-native vegetation Vital Habitat Attributes that combine to give total vital habitat (VITALHABITAT) are: Wetland (yes/no), Wetland_Score - Areas with wetlands received as weighted score of 1. Spring_Score - Areas with springs received as weighted score of 1. TargetSpecies – significant vegetation species as determined in the Basin Watering Strategy TargetSpecies_Score - Areas with target species received as weighted score of 1. CONDITION_SOC (type of veg condition category) VegConditionScore - The condition categories where adopted from the state of the catchment reports with managed and removed categories receiving a zero weighting. Criteria and overall HEVAE Scores All final scores were standardised before being totalled up (PARAMETER_SUM) and then standardised to give an overall HEVAE score (GDE_HEVAE).

Limitations on public access

Responsible party

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