Title	Fauna Corridors for Nandewar
Abstract	The Nandewar corridors have been identified at a regional scale with the aim of retaining and restoring part of the natural connectivity required for vertebrate fauna conservation in the region (Andren 2004). They link the key habitats of the region via both regional corridors and potential subregional corridors and also connect with the north-east NSW corridors.
Resource locator	
Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for Fauna Corridors for Nandewar Function: download
NENSW KeyHabitats ClimateChangeCorridors	Name: NENSW KeyHabitats ClimateChangeCorridors Protocol: WWW:DOWNLOAD-1.0-http--download Function: download
NSW WESTERN REGIONAL ASSESSMENTS – NANDEWAR	Name: NSW WESTERN REGIONAL ASSESSMENTS – NANDEWAR Protocol: WWW:DOWNLOAD-1.0-http--download Description: This report summarises the outcomes of projects undertaken for the Resource and Conservation Assessment Council (RACAC)1 as part of the regional assessments of western New South Wales. These projects were undertaken within the Nandewar Bioregion. Function: download
Unique resource identifier	
Code	6473c7a7-04e7-4750-906e-18ab43ef7939
Presentation form	Map digital
Edition	Version1
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/6473c7a7-04e7-4750-906e-18ab43ef7939
Purpose	Wildlife conservation assessment
Status	Completed
Spatial representation	
Type	vector
Geometric Object Type	surface
Geometric Object Count	1

Spatial reference system	
Code identifying the spatial reference system	4283
Spatial resolution	25 m
Additional information source	Nandewar key habitats; North-east NSW corridors
Topic category	

Keyword set

keyword value	FAUNA
	FAUNA-Vertebrates
	ECOLOGY
	ECOLOGY-Habitat

Originating controlled vocabulary

Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	149.909511
East bounding longitude	151.860542
North bounding latitude	-31.902904
South bounding latitude	-28.634167

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	2004-01-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Not planned

Contact info

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Lineage

The Nandewar regional corridors were based on those developed for the North-West Slopes Interim Corridors by DEC in 2002. The GIS tool CORRIDORS (developed by DEC) was used in 2002 to map potential linkage pathways. The CORRIDORS analysis operates under the

assumption that fauna species are most likely to inhabit and move through habitats they perceive to be more favourable (Scotts & Drielsma 2003). These preferred habitats are presumed to exact a lower cost for their use than less preferred, marginal, or non-habitats. Areas of unsuitable native vegetation, and areas that had been cleared of native vegetation and developed for human uses such as agriculture and urban expansion, were considered non-habitats.; ; 2) Three mapped layers were used in the CORRIDORS analysis for the North-West Slopes Interim Corridors: land tenure, interim key habitats and vegetation extent (the woody - non-woody vegetation mapping derived from landsat). The initial regional corridors produced were then substantially refined during a three-day expert workshop.; The regional corridors developed in the North-West Slopes Interim Corridors were further refined in the Nandewar WRA project.; ; 3) In the north-east New South Wales corridors project (see Scotts & Drielsma 2003), the residential and dispersal requirements of assemblage reference species (those considered most extinction-prone) were used to determine the most appropriate spatial dimensions of corridors. These dimensions were considered likely to be effective for most other species. Minimum benchmark corridor widths were set at least twice the average home ranges of assemblage reference species. The rationale was that the species should be able to live within the corridor and that more than one home-range diameter would be required to allow movement and habitation by more than one territorial individual or pair. A minimum width of regional corridors was set at 500 metres.; ; 4) Most of the regional corridors on the western New England tablelands from the north-east New South Wales project (Scotts & Drielsma 2003) were one kilometre in width. This width was extended throughout Nandewar and mapped as the recommended width for regional corridors, although 500 metres is retained as the recommended absolute minimum. These relatively wide regional corridors are important for many species of conservation significance, including many declining woodland birds. Many of these declining birds are sedentary and have relatively large territories. Wide regional corridors are required to facilitate occupation by these species and provide enough interior habitat to mitigate the impact of aggressive species that tend to occupy edges and disturbed areas.; ; 5) Sub-regional corridors serve more as routes for dispersal and movement for species, rather than significant habitats in themselves (Scotts & Drielsma 2003). Sub-regional corridors in Nandewar were mapped to a relatively fine scale where it is recognised that in practice, local factors would influence corridor location (such as tenure, alternative landuses and local planning). Therefore, the Nandewar sub-regional corridors are considered "potential" only - as recommendations for increasing connectivity.; ; As alternative landscape linkages, more dispersal routes than residential habitats, sub-regional corridors in north-east New South Wales (Scotts & Drielsma 2003) were at least as wide as one home-range diameter for assemblage reference species. In Nandewar, the Threatened (TSC Act) squirrel glider was used as an assemblage reference species.; ; A corridor must provide functional connectivity for the species concerned, reflected in the ability of a species to inhabit or move through a corridor (Scotts & Drielsma 2003). The squirrel glider is widespread in remnants of all sizes in Nandewar, including linear corridors. Its preferred habitat occurs on the more fertile soils that are the most heavily cleared - the squirrel glider is therefore likely to benefit greatly from increased connectivity within these regions. Additionally, the squirrel glider is known to only rarely travel across the ground and is therefore highly restricted by treeless gaps. A 75-metre gap is in general a physical limit to regular movement. The squirrel glider is therefore highly susceptible to gaps in connectivity when compared with more mobile species (such as birds and bats) or species that will cross open ground.; ; Species acting as vectors for ecological processes (such as propagule dispersers, predators) require special consideration (Scotts & Drielsma 2003). The squirrel glider plays the ecological roles of pollinator and insectivore (in which role it may be significant, like the sugar glider, in the control of tree dieback).; ; An estimate for the home range size of the squirrel glider in temperate woodland is 1.4 - 2.8 hectares. This estimate is from a fertile region, so the upper limit (2.8 hectares) was used to account for less fertile squirrel glider habitat in Nandewar corridors. This equates to a home range diameter of 189 metres. This figure was rounded up to provide a width of potential subregional corridors in Nandewar of 200 metres.; ; The expert panel for the North-West Slopes Interim Corridors had identified important riparian corridors along major rivers (including the Dumeresq, Gwydir, Horton, Isis, Macintyre, Manilla, Mole, Namoi, Peel and Severn rivers). These were also included as potential sub-regional corridors for Nandewar as they traverse productive landscapes and are well established as important for the protection and reconstruction of fauna habitat.; ; The detailed mapping of potential sub-regional corridors in Nandewar used Landsat imagery and was driven by practical considerations, such as the location of existing vegetation (from vegetation mapping), topography, land tenure and field knowledge of fauna habitats. ; ; 6) Corridors were reviewed by experts familiar with the fauna and habitats of the region. Landsat imagery was used extensively.; ; Reference:; Scotts, D. & Drielsma, M.J. 2003. Developing landscape frameworks for regional conservation planning: and approach integrating fauna spatial distributions and ecological principles. Pacific Conservation Biology 8(4): 235-254.; ; Positional accuracy:; ; In applying and interpreting the Nandewar corridors, it must be remembered that they have been developed at the regional scale, to inform regional planning. The maps should be interpreted in terms of recommendations for restoring part of the natural connectivity, not as an accurate map at a local scale.; ; Positional accuracy is difficult to assess. Where vegetation mapping and Landsat imagery has informed corridor placement, they are accurate to the limits of mapping from 1:25,000 aerial photos and Landsat images. It should also be noted that the process of development of corridors has necessarily included qualitative judgements relating to interpretations and these have been made based on ecological expertise.; ; Attribute accuracy:; ; The extent to which the predicted corridors support important fauna assemblages or species of conservation

significance for which they have been designed will vary between species, assemblages and areas. From experience in the region, it is considered highly likely that the vegetated corridors will support many fauna species. However, considerable additional survey work would be needed for a more rigorous accuracy assessment to be made.; ; Logical consistency:; ; The data layer has been checked (and modified where necessary) against contextual background layers such a Landsat images and vegetation maps.; ; Completeness:; ; The dataset is complete for the study area.

Limitations on public access

Scope dataset

DQ Non Quantitative Attribute Correctness

Effective date 2004-01-01

Explanation The extent to which the predicted corridors support important fauna assemblages or species of conservation significance for which they have been designed will vary between species, assemblages and areas. From experience in the region, it is considered highly likely that the vegetated corridors will support many fauna species. However, considerable additional survey work would be needed for a more rigorous accuracy assessment to be made.

Responsible party

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