Title	Native Vegetation Management Benefits - SERIES 2

Abstract

New features

Series 2 is a new approach to NVMB mapping. Series 2 is a fully complementary set of NVMB layers with consistent units, such that for any pixel the set of benefit values nest into a single maximum level of potential benefit value for that pixel - the Maximum Biodiversity Benefit (based on its capacity to support depleted species, and its position in the landscape). The schema describing the nesting of the set of layers is provided in the attached resource: NVMB Series2 chart. Two 'delta' (change) layers are included to represent what improvements can be achieved through improve (15 years) and restoration actions. A 'manage and improve' layer provides combined benefits of managing existing vegetation and allowing improvements to accrue (over a nominal 15-year period).

All layers are derived from a single set of inputs. Variations are due to which variant of the ecological condition layer that is applied (current state, partially of fully restored)

The probabilistic method used for accumulating values draws on the 'equitable' approach (Drielsma and Love 2021) which applies 'diminishing returns' to connectivity, rather than the previous 'any additional unit of connectivity always provides equally more benefit'.

This series also incorporates the following advances:

- use of continuous values in GDM/environmental space (i.e. no loss of information by deriving a community classification)
- incorporation of GLCM connectivity links approach (Drielsma et al. 2022) for ecological connectivity component
- incorporation of generic REMP approach (Drielsma and Love 2021) for spatial context component

Relation to previous versions of NVMB mapping

Previous versions of NVMB mapping is provided in 4 separate SEED records:

- Manage benefits
- Improve benefits
- Restore benefits and
- Landscape benfits

The landscape value benefits are now integrated into Manage, Improve and Restoration benefits. A new layer of Maximum Biodiversity Benefit is added. It equates to the benefit of a fully restored pixel (as opposed to the restore benefit, which is the added benefit of restoring a partially degraded pixel).

End users will notice significant differences between the layers from previous versions and series 2 layers. Stage 2 puts greater emphasis on ecological connectivity, and cross-scale connectivity is more fully integrated. For example, cleared areas of highly diminished communities such as box-woodlands in the wheat-sheep belt, are only given high restore benefit in areas where they are functionally connected to quantities of extant vegetation.

Series 2 is as yet unpublished. Because of the improvements outlined above, series 2 is expected to replace previous versions over time. End users are encouraged to use Series 2 products, or to continue using the previous (NVMB v2x), as appropriate.

Versioning

Due to the series 2 layers forming an integrated set, and because of the step change from previous version, series 2 set will re-set with a v1.0 version.

More information

For more detail see NSW Native Vegetation Management Benefits Analyses Technical report (2012), this technical report (2020), and this scientific paper on

the method (2014). Climate-informed versions of the manage benefits and restore benefits can be found here.

Additional references

Drielsma MJ, Love J, Thapa R, Taylor S, & Williams KJ 2022, General Landscape Connectivity Model (GLCM): a new way to map whole of landscape biodiversity functional connectivity for operational planning and reporting. Ecological Modelling, Vol.465, pp.109858, doi: https://doi.org/10.1016/j.ecolmodel.2021.109858.

Drielsma M, & Love J 2021, An equitable method for evaluating habitat amount and potential occupancy. Ecological Modelling, Vol.440, pp.109388, doi: https://doi.org/10.1016/j.ecolmodel.2020.109388.

Resource locator

NVMB Series 2 chart	Name: NVMB Series 2 chart
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	Shows the relationships between the series 2 spatial layers
	Function: download
Maximum Biodiversity Benefits	Name: Maximum Biodiversity Benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The maximum benefit to NSW biodiversity from each pixel if it were fully restored, allowing for the status of vegetation that can be supported there.
	Function: download
Manage benefits	Name: Manage benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The benefit to NSW biodiversity from each pixel in its current, baseline state - the benefit of maintaining it in its current state by mitigating threats
	Function: download
Manage & Improve benefits	Name: Manage & Improve benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The benefit to NSW biodiversity from each pixel in its current, baseline state, plus additional benefits that can be achieved in 15 years of managed improvement - the benefit of maintaining it in its current state by mitigating threats and allowing restoration to occur.
	Function: download

Restore benefits	Name: Restore benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The additional benefit to NSW biodiversity of fully restoring each pixel from its current, baseline state
	Function: download
Delta improve benefits	Name: Delta improve benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The additional benefit to NSW biodiversity from improving condition of each pixel from its current, baseline state, over 15 years
	Function: download
Delta restore benefits	Name: Delta restore benefits
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	The additional benefit to NSW biodiversity from each pixel from fully restoring it from its current, baseline state
	Function: download
Data Quality Statement	Name: Data Quality Statement
	Protocol: WWW:DOWNLOAD-1.0-http--download
	Description:
	Data quality statement for Native Vegetation Vegetation Benefits - SERIES 2
	Function: download

Unique resource identifier

Code	df121e5b-549c-479a-b4dd-8f2101083ac2

Presentation form	Map digital

Edition	1.0

Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016

Dataset URI	https://iar.environment.nsw.gov.au/dataset/df121e5b-549c-479a-b4dd-8f2101083ac2

Purpose	Planning and prioritisation of conservation, restoration and improvement of native vegetation to maximise NSW biodiversity
Status	Under development
Spatial representation type	grid

Spatial reference system

Code identifying the spatial reference system	4283

Spatial resolution	90 m

Topic category	environment

Keyword set

keyword value	HERITAGE-Natural
	ECOLOGY-Landscape
	LAND-Use
	VEGETATION-Floristic

Originating controlled vocabulary

Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

NSW Place Name	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	2017-10-12
End position	N/A

Dataset reference date	
Resource maintenance	
Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
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Web address	**http://www.planning.nsw.gov.au/**
Responsible party role	pointOfContact

Lineage	Input layers comprise: * Ecological condition * Ecological connectivity and also see scientific paper * A generalised dissimilarity model of SE Australia developed for the BIAP project The method used to combine these layers is in prep.

Constraint set

Use constraints	This data is provided under a Creative Commons Attribution 4.0 licence http://creativecommons.org/licenses/by/4.0 Attribute 'Department of Planning and Environment ' in publications using this data.
Limitations on public access	

Responsible party

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Metadata point of contact

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Metadata date

2023-06-23T05:16:13.047334

Metadata language