Title

Identification of corridors of river recovery for NSW Hunter catchments

Abstract

By connecting corridors of river recovery, resilience can be built into river systems to mitigate against future floods and droughts driven by anthropogenic disturbance or climate extremes. This database can be used to systematically analyse where corridors of geomorphic river recovery could be created via conservation or rehabilitation. Analysis is undertaken in ArcGIS using the recovery potential layer of the Open Access NSW River Styles database that is available from DPIE (www.dpie.nsw.gov.au). The River Styles database was accessed in January 2021. The database and associated workflow identifies reach and loci connections based on different combinations of recovery potential classes. Reach connections are defined as an upstream to downstream section of river that is connected end-to-end, and loci connections are defined as isolated sections of river from which recovery can be seeded and extended into adjacent reaches. This map for all freshwater stream length of the NSW Hunter catchments, shows the spatial distribution of thirteen connections based on combinations and sequences of conservation, strategic and high recovery potential targets. Other connections of interest to river practitioners can be identified and >80 different user-defined scenarios run using a workflow available at protocols.io.

Attribution to: Macquarie University, D Agnew and K Fryirs (2022) Corridors of river recovery database and workflow. Data accessed from The Sharing and Enabling Environmental Data Portal.

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This work is published in two Open Access papers:

- Agnew D, Fryirs K (2022) Identifying corridors of river recovery in coastal NSW Australia, for use in river management decision support and prioritisation systems. PLoS ONE 17(6): e0270285. https://doi.org/10.1371/journal.pone.0270285
- Agnew D, Graves BP, Fryirs K (2022) A GIS workflow for the identification of corridors of geomorphic river recovery across landscapes. PLoS ONE 17(12): e0278831. https://doi.org/10.1371/journal.pone.0278831

The workflow is available at: https://www.protocols.io/view/a-gis-workflow-for-the-identification-of-corridors-n2bvj8625gk5/v1

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

DQS - Identification of corridors of river recovery for NSW Hunter catchments

Name: DQS - Identification of corridors of river recovery for NSW Hunter catchments

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

Description:

Data Quality Statement for the Identification of corridors of river recovery for NSW Hunter catchments

Function: download

Data Download for the Hunter region

Name: Data Download for the Hunter region

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

Description:

ZIP file contains a shapefile and .lyr file

Function: download

REST service

Name: REST service

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

	Description: REST service for Hunter region Function: download
Unique resource identifier	
Code	50a283c9-2402-48f5-938d-574a2dce3cd3
Presentation form	
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/50a283c9-2402-48f5-938d-574a2dce3cd3
Purpose	This database provides practitioners with a user-friendly distillation of where river conservation and rehabilitation activities could be focussed when working with river recovery in practice. Combined with local on-ground knowledge or other data layers, this information forms an important input to evidence-based prioritisation and decision making in river management.
Status	Completed
Spatial representation	
Type	vector
Spatial reference system	
Code identifying the spatial reference system	4283
Topic category	

Keyword set	
keyword value	WATER-Rivers
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	149.66
East bounding longitude	151.92
North bounding latitude	-33.14
South bounding latitude	-31.6
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	
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	Not planned
Contact info	
Contact position	Data Broker
Organisation name	Macquarie University
Email address	kirstie.fryirs@mq.edu.au
Responsible party role	pointOfContact
Limitations on public access	

Responsible party

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Metadata point of contact

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Metadata date

2023-04-28T06:38:20.803010

Metadata language