Central Slopes NRM Project

NRM/Biodiversity Metadata Component

(Theme 3: Plant and Animal Abundance and Theme 5: Aquatic Ecosystems and River Health)

Central Slopes Endnote Library: Systematic Database Search (Terrestrial Ecology)

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Aim

The aim of the systematic database search is to capture a majority of the terrestrial ecological research undertaken in the Central Slopes region for the purpose of establishing an Endnote[®] library. It is important to keep a record of the systematic process so that it is repeatable and transparent.

Background to systematic review process

Initially, it was decided to use several different scientific databases available through the USQ Library along with Google Scholar to search for relevant material.

The results of these searches are summarised in Table 1. Google Scholar returned a majority of the relevant material. Therefore, it was decided that Google Scholar be searched in the first instance followed by Web of Knowledge (now Web of Science), ScienceDirect and Scopus.

The following methodology should make the process productive and efficient. Currently, it takes 2 to 3 days (between 14-21 hours) per topic to search the databases and capture the references in the Endnote library.



Database	Results	Useful Number	New	% captured			
Tree cover and river search							
JSTOR	499	Not recorded	3	0.60			
Scopus	404	Not recorded	5	1.24			
Web of Knowledge	299	Not recorded	8	2.68			
Academic Science	69	5	2	2.90			
Science Direct	509	21	5	0.98			
Google Scholar	1605	69	30	1.87			
TOTAL	3385	95	53	1.57			
Tree cover and region/catchment search							
JSTOR	49	0	0	0.00			
Scopus	69	1	1	1.45			
Web of Knowledge	14	0	0	0.00			
Academic Science	88	2	2	2.27			
Science Direct	117	7	2	1.70			
Google Scholar	755	34	6	0.79			
TOTAL	1092	44	11	1.01			

Table 1. Summary of initial database searches

Process

1. Develop search terms

Use Boolean operators (such as AND; OR etc.) to develop search terms. Quotation marks or brackets should be used when searching for an exact phrase.

Example: ("tree cover" OR "woody vegetation cover" OR "native plant cover" OR "foliage projective cover" OR "remnant vegetation cover") AND murray-darling

Include alternative words when searching a topic (see Appendix 1) and restrict the search to the study area by searching for the topic and major rivers and the topic and region/catchment (see Appendix 2).

For further information on how to write search terms see the search tips for each database located in the folder <u>Help-database search</u>.



2. Develop search database

It is necessary to record the results of the searches as evidence of the process used. Develop a database in Excel 2010 which includes the following detail: search terms; database searched; date searched; number returned; useful number; new & captured; first author of paper (Figure 1).





3. Develop an Endnote library

To help keep track of searches develop broad topic headings (e.g. weed search, pest search etc.) and group references under these headings into databases searched (e.g. Google Scholar) (see Figure 2).



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My Library	• 0	Author	Year	Title	
All References (270)	0	Allcock, Kimberly	2002	Effects of phosphorus on growth and competitive interactions of native and introduced species fou	
✓ Imported References (1)	0	Apan, Armando;	2011	Evaluation of photo imaging methods for vegetation condition assessment	
Unfiled (11)	00	Apan, Armando;	2008	Predictive mapping of blackberry in the Condamine Catchment using logistic regression and spatia	
Trash (20)	0	Armston, J. D.; De	2009	Prediction and validation of foliage projective cover from Landsat-5 TM and Landsat-7 ETM+ imag	
	0	Armston, J. D.; Sc	2007	Analysis of multi-date MISR measurements for forest and woodland communities, Queensland, Au	
My Groups	0	Armstrong, TR;	1993	HONEY LOCUST (GLEDITSIA TRIACANT HOS) AND ITS CONTROL	
□·· Weed search	00	Arroyo, Lara A.; J	2010	Integration of LiDAR and QuickBird imagery for mapping riparian biophysical parameters and land	
GOOGLE SCHOLAR (127)	0	Arthington, Ange	1996	The effects of agricultural land use and cotton production on tributaries of the Darling River, Austra	
SCIENCE DIRECT (1)	ା <i>ଏ</i>	Ecological Associ	2010	Condition Reporting of Basin Plan Regions and Indicator Key Environmental Assets	
SCOPUS (12)	00	Austin, MP; Caws	2000	Predicted vegetation cover in the Central Lachlan Region	
WEB OF SCIENCE (5)	0	Badgery, Warwic	2005	Competition for nitrogen between Australian native grasses and the introduced weed Nassella trich	
	0	Badgery, W.B.; Ke	2008	Studies of competition between Nassella trichotoma (Nees) Hack. ex Arechav. (serrated tussock) an	
Condition search	0	Baker, A. C.; Hose	2006	Vegetation responses to Pinus radiata (D. Don) invasion: A multivariate analysis using principal resp	
GOOGLE SCHOLAR (37)	0	Barbour, R. C.; Cr	2008	The risk of pollen-mediated gene flow from exotic Corymbia plantations into native Corymbia pop	
SCIENCE DIRECT (4)	00	Barry, Steven Ian;	2008	Modelling Lippia spread down flooding river systems	
SCOPUS (3)	0	Bass, DA	1990	A comparative study of the invasiveness of two alien fleshy-fruiting woody plants on the Northern	
Tree cover search	0	Bass, David A.	1990	Dispersal of an introduced shrub (Crataegus monogyna) by the Brush-tailed Possum (Trichosurus v	
	0	Bastin, Gary; Broc	2007	Developing a research agenda for the distribution and rate of spread of buffel grass (Cenchrus ciliar	
	0	Bean, J. M.; Whall	2001	Native grasslands on non-arable slopes of the Garrawillie Creek sub-catchment, Western Liverpool	
	00	Benson, John	1991	The effect of 200 years of European settlement on the vegetation and flora of New South Wales	
	о	Benson, JS; Ashb	2000	Vegetation of the Guyra 1: 100 000 map sheet New England Bioregion, New South Wales	
	0 0	Benson, JS; Dick,	1996	Semi-evergreen vine thicket vegetation at Derra Derra Ridge, Bingara, New South Wales	
SCOPUS (8)	00	Benson, John S; R	2010	New South Wales Vegetation classification and Assessment: Part 3 Plant communities of the NSW E	
WEB OF SCIENCE (8)	04	Bhandari, S.; Phin	2012	Preparing Landsat Image Time Series (LITS) for Monitoring Changes in Vegetation Phenology in Qu	
- Find Full Text	00	Biggs, Andrew J	2009	Implementation of an adaptive salinity risk framework in the Condamine catchment, Queensland N	
	0	Booth, CA; King,	1996	Establishment of Woody Weeds in Western New South Wales. 1. Seedling Emergence and Phenolog	
	° .	Brierley, G.; Fryirs,	2002	Application of the River Styles framework as a basis for river management in New South Wales, Aus	
	0 4	Buckley, Yvonne M	2008	Not all disturbances are equal: synthesising the effects of plant demography, natural disturbance ar	

Figure 2. Endnote X6 database

4. Search databases

Choose the most relevant electronic databases to search your topic. It is recommended that Google Scholar be used in the first instance, followed by 3 other electronic databases. This could be Web of Science, Scopus and Science Direct.

Search conditions

Google Scholar: limit the search between the years 1990 to 2014; exclude citations. Web of Science: search 'Topic'; limit to relevant research areas and country Science Direct: search 'All Fields'; limit to journal/book title and topic Scopus: search 'All Fields'; limit to Subject Area and Country

Determine if the research is relevant to the project by first examining the title, then the abstract. If the study has been undertaken in the Central Slopes area then it should be included in the database.



Keep a record of the number of new references that are being captured along with the number of references previously captured. At the end of your search this number will be entered in the 'Useful Number' column of the Excel spreadsheet.

5. Capture reference in endnote

Keep a record of whether the research is available or not in the research notes (i.e. available, can't access). If the URL (a link direct to the source) can not be provided ensure that you attach a copy of the research to the reference in the endnote database.

6. Record search outcome

Enter search details in the database established at step 2.



Appendix 1. Topics and search terms

Tree cover:

"tree cover" OR "woody vegetation cover" OR "native plant cover" OR "foliage projective cover" OR "remnant vegetation cover" OR "riparian vegetation cover" OR "riparian cover"

Vegetation condition:

"vegetation condition" OR "stand condition" OR "tree health" OR "canopy health" OR dieback

Weeds:

weed OR "exotic plant" OR "non-native plant" OR "introduced plant" OR "alien plant" OR "invasive plant"

Pests:

pest OR "exotic animal" OR "non-native animal" OR "introduced animal" OR feral

Native species:

"native flora" OR "native fauna" OR "native plant" OR "native animal" OR "native species" NOT "aquatic species" NOT fish

Community level terms:

"vegetation community" OR "community composition" OR "species richness" OR "species diversity" OR "species evenness"

Ecosystem function services:

"ecosystem health" OR "ecosystem condition" OR "ecosystem function" OR "ecosystem service" OR "ecosystem stability" OR "nutrient cycling" OR "primary productivity"



Appendix 2. Study area search terms

Rivers in the study area

Central Slopes	Central West CMA	Border Rivers-Gwydir CMA
Murray-Darling River	Castlereagh River	Moonie River
QMDC	Talbragar River	Weir River
Balonne River	Cudgegong River	Macintyre Brook
Maranoa River	Macquarie River	Barwon River
Culgoa River	Bogan River	Severn River
Nebine Creek		Dumaresq River
Birrie River	Namoi CMA	Macintyre River
Bokhara River	Barwon River	Gwydir River
Darling River	Namoi River	Mehi River
Bogan River	Manilla River	Gil Gil Creek
Narran River	Peel River	
Barwon River	Macdonald River	CA
Paroo River	Mooki River	Condamine River
Warrego River		

Regions/catchment in the study area

Regions	Bioregions	
Northern Tablelands	Darling Riverine Plains Bioregion	
New England Tablelands	Brigalow Belt South Bioregion	
North West(ern) Slopes	Nandewar Bioregion	
	New England Tableland Bioregion	
South West Queensland		
Southern Downs	Ranges	
Darling Downs	Moonbi Range	
	Liverpool Range	
Border Rivers	Warrumbungle Range	
Liverpool Plains	Great Dividing Range	
Central Slopes	New England Range	

