



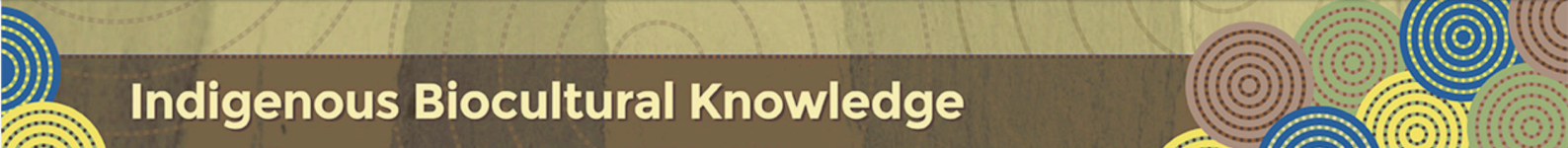
“Securing values and beliefs of Australian First Nation’s peoples is crucial for the functioning of knowing and being of place, people and spirit – recognised within, and part of, extremely complex, dynamic, natural and cultural landscapes.”

Tropical Indigenous Ethnobotany Centre

This website aims to draw attention to the wealth of projects, research and management plans where Indigenous Biocultural Knowledge has been used and Aboriginal people have added great value to our understanding of Australian ecology and land management practices.

Many Aboriginal people and their non-Indigenous colleagues have and are working on a range of projects to manage and understand Country using Indigenous Biocultural knowledge and western science. This website offers an indicative map of where these projects have been documented and provides examples of current leading practice, review material, related resources and case studies of “living” knowledge and projects that have not been documented.





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How was this material produced?

This website has been developed as a product of the Indigenous Biocultural Knowledge Working Group (http://aceas.org.au/index.php?option=com_content&view=article&id=103&Itemid=105) sponsored by the Australian Centre for Ecological Analysis and Synthesis (ACEAS). ACEAS funding was provided for two week-long meetings and associated work time, where 15 people could be supported to collate and synthesise existing Indigenous Biocultural Knowledge material.

Expressions of interest for this exercise were sought and given by many people across Australia. Dates for the working group meetings were set to try and meet the availability of as many people as possible and the participants were made up of people that could attend during that time and those with a diverse range of experience.

The first meeting was held on North Stradbroke Island where the aims of the group were agreed on. We decided to produce a map of publically available documented Indigenous Biocultural Knowledge material that was place-based. These references were geocoded with latitude and longitudes. There is more information about this process in the discussion paper.

To complement the documented material, Case Studies of living knowledge and projects were also identified to highlight the wealth of such knowledge and that Indigenous Biocultural Knowledge is a strong part of living Aboriginal cultures, livelihoods and aspirations.

All participants adhered to the ACEAS code of ethical practice, and completed informed consent forms for provision of knowledge and photos.

Who were the team members?

Workshop 1 attendees, Minjerribah



Left to right: Petina Pert (CSIRO), Tina Bain (Department of Prime Minister and Cabinet), Beth Gott (Monash University), Gerry Turpin (Mbarbaram/Tropical Indigenous Ethnobotany Centre), Joanne Packer (Macquarie University), Bruce Doran (Australian National University), Emmanuel Namarnyilk (Warddeken Land Management), Emilie Ens (ANU now Macquarie University) and Jitendra Gaikwad (Macquarie University, now iDiv, Germany).

Workshop 2 attendees, Cairns



Back/ standing L to R: Bruce White (Bana-Yaralji Bulka), Philip Clarke (consultant), Cheryl Douras (Bar-Barrum Aboriginal Corporation), Steve Wason (Watsonville Aboriginal Corporation), John Locke (Biocultural Consulting), Marita Budden (Jirrbal-Dyirbal/Tropical Indigenous Ethnobotany Centre), Joe Stelmann (SA Department of Environment, Water & Natural Resources), Lillian Clubb (Mallanburra-Dulabed-Yidinjii).

Front/sitting: Gerry Turpin (Mbarbaram/Tropical Indigenous Ethnobotany Centre), Peter Wallace (Bana-Yaralji Bulka), Sonia Leonard (University of Melbourne), Marilyn Wallace (Bana-Yaralji Bulka), Petina Pert (CSIRO), Emilie Ens (Australian National University, now Macquarie University), Tamahina Cox (National Parks, SA), Joanne Packer (Macquarie University), Justine Graham (SA Department of Environment, Water & Natural Resources), Rosemary Lester (Alinytjara Wilurana NRM /APY Lands & First Peoples International Links).

Participants (in alphabetical order)

Tina Bain	Department of Prime Minister and Cabinet
Marita Budden	Tropical Indigenous Ethnobotany Centre
Philip Clarke	Consultant
Lillian Clubb	Mallanburra-Dulabed-Yidinjii
Tamahina Cox	National Parks, South Australia
Bruce Doran	Australian National University
Emilie Ens	Macquarie University
Jitendra Gaikwad	iDiv, Germany
Beth Gott	Monash University
Justine Graham	Department of Environment, Water & Natural Resources, South Australia
Sonia Leonard	University of Melbourne
Rosemary Lester	APY Lands & First Peoples International Links
John Locke	Biocultural Consulting P/L
Emmanuel Namarnyilk	Warddeken Land Management
Joanne Packer	Macquarie University
Petina Pert	CSIRO
Jo Stelmann	Department of Environment, Water & Natural Resources, South Australia
Gerry Turpin	Tropical Indigenous Ethnobotany Centre, Queensland
Marilyn Wallace and Peter Wallace	Bana-Yaralji Bulka
Steve Wason	Watsonville Aboriginal Corporation

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The values and beliefs of First Nations peoples knowing and being: people, place and spirit recognised within and as part of the natural environment.

Security of values and beliefs of Australian First Nations people is crucial for the functioning of the knowing and being of place, people and spirit recognised within, and part of, an extremely complex dynamic and varied natural environment.

The web-map delivers a spatial visualization of a geo-referenced list of publications based on the theme of Australian Indigenous Biocultural Knowledge (AIBK). The aim of the map is to provide an indication of the diverse and geographical representation of AIBK material, contextualise the information into a 'map narrative', a term used to describe a map that is extremely focused and exists to tell the story of the data in the clearest way possible. Utilizing this concept of the 'map narrative', the underlying message that this knowledge cannot be ignored in Australian ecological debates, decision making and management becomes delineated.

The spatio-temporal mapping of publications will allow the user to easily identify important AIBK literature and its context in time and space. It will also incorporate a number of other layers to gain insight into relationships between AIBK and other environmental and social variables. The reference list will contain important attribute data for pop-up display such as publication author and date which can found using a search tool. They will also be sorted into various categories allowing for effective filtering.

[The Australian Centre for Ecological Analysis and Synthesis \(ACEAS\)](#) has supported the delivery of the web site and web-map with the intention that after initial start-up the site be handed over to the community.

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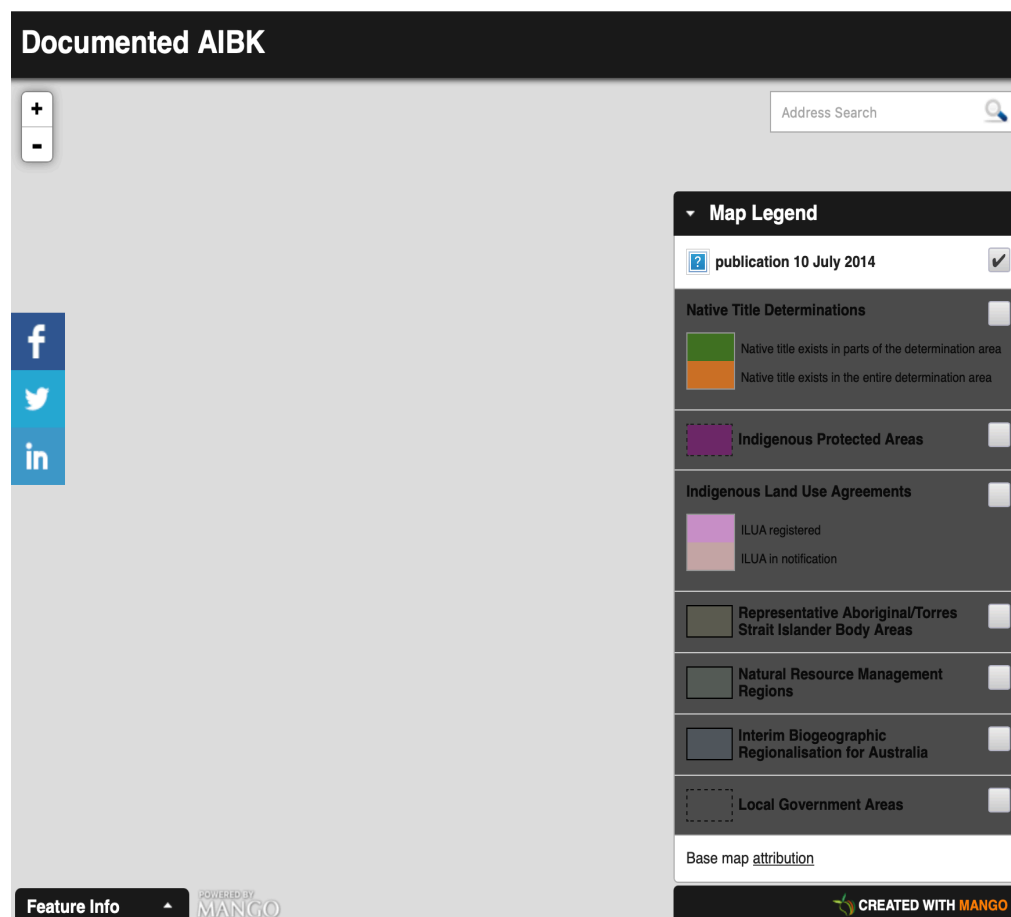
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Map

This map illustrates where place-based, localised documentation of Indigenous biocultural knowledge has occurred.

Please refer to the toolkit for references highlighting: (1) methods of IBK documentation and use; (2) larger scale reviews of IBK (e.g. at regional and state levels); and (3) related resources (e.g. legal and health issues).

(please be patient as the map may take a little time to load)



CASE STUDIES



[Waru – Fire Management Planning in the Alinytjara Wilurara Region](#)



[Alinytjara Wilurara NRM Board](#)



[Warru Recovery – Anangu Pitjantjatjara Yankunytjatjara Land Management Warru Recovery Project](#)



[Recording Indigenous knowledge of bush tucker and medicine on the Arnhem Plateau](#)



[Ngadimunku babangu junjuy-junjuy Bana Yarralji Traditional Knowledge Projects in Northern Wet Tropics WHA](#)



[Recording knowledge of wetlands and feral animals](#)



[Tropical Indigenous Ethnobotany Centre](#)



[Top End Women Rangers Talking](#)



[Traditional Plant Use of the Dulabed family](#)



[Indigenous Bioresources Research Group](#)



[Miriwoong Seasonal Calendar](#)

Waru – Fire Management Planning in the Alinytjara Wilurara

Natural Resources Alinytjara Wilurara has developed a draft Fire Management Strategy, in response to the threat from altered and inappropriate fire regimes in the region. A lack of knowledge regarding fire history, traditional burning and species response triggered the plan, which takes the first steps in compiling existing information to support future fire management in the region.

This strategy promotes a ngapartji-ngapartji approach and supports the integration and continuity of traditional knowledge into fire management in the region. However, it is not the intention of the strategy to replace or direct cultural fire management activities undertaken by Anangu (traditional and cultural people of this land) on Anangu lands.

[Waru alinytjarawilurara-firemanagement-strategy.pdf](#)



Jeannie Robin and Family Burning Country, Walalkara IPA. Photo J.Robin.

Anangu Pitjantjatjara Yankunytjatjara Land Management Warru Recovery Project

Warru once lived all over the rocky hills of central and western Australia, however due to predation and changes in fire regimes, their numbers have dramatically declined. One small colony is located in the east of the APY Lands in the Musgrave Ranges near Pukatja community and another colony is located in the west in the Tomkinson Ranges near Pipalyatjara and Kalka communities.

Since the first biological survey of warru on the APY Lands in 1985, Anangu have shared their knowledge of this species with scientists. Ongoing biological surveys on the APY Lands involving Anangu revealed a rapid decline in warru populations and since 1999, Anangu rangers employed by APY Land Management have worked alongside scientists to reverse the tragic fate of warru on the APY Lands. At present APY Land Management has 2 project officers, 12 permanent and several casual rangers employed under the Warru Recovery Project.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1442-8903.2011.00620.x/full>



Warru Rangers assembled outside the Donald's Well Pintji (predator-proof enclosure), Anangu Pitjantjatjara Yankunytjatjara Lands. Photo M. Ward

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Ngadimunku babanga junjuy-junjuy Bana Yarralji Traditional Knowledge Projects in Northern Wet Tropics WHA

Bana Yarralji rangers commencing combined traditional and best practice land management burning on country.

Bana Yarralji has an applied traditional ecological knowledge program, as part of the Commonwealth Working on Country Program, which has local traditional owners working as rangers from a ranger base on country ensuring traditional knowledge is combined with best practice land management .. including using knowledge of bush tucker for revegetation, and using local ecological knowledge for fire management.

<http://www.essolutions.com.au/Nyungkal/Features/Feature.aspx>



Bana Yarralji rangers commencing combined traditional and best practice land management burning on country.

Tropical Indigenous Ethnobotany Centre

Informing and supporting Australian First People's rights and interests in protecting, conserving and managing their biocultural resources. Inclusion of Australian First People's cultural and intellectual property as a core component in all related scientific processes. Developing certainty for future generations to collaborate with key stakeholders in the assessment and design of related social, economic, environmental and cultural opportunities.

http://www.ath.org.au/JCU_077417.html



Tropical Indigenous Botany Centre field trip

Traditional Plant Use of the Dulabed family

The name Dulabed comes from one of the traditional stories involving the boomerang son. Traditional Knowledge has been recorded from Nungabana (George Davis) and has been published in books and a website. This knowledge is now being used by the Dulabed descendants to establish traditional plant use gardens.

<http://users.qld.chariot.net.au/~rigel/people.html>



Qandong fruit Photo R. Lester

Miriwoong Seasonal Calendar

This case study draws on ethnographic and participatory research of the Mirima Dawang Woorlab-gerring Language and Culture Center in conjunction with BOM and WA Parks and Wildlife, working with the Miriwoong people from the Keep River region of the Northern Territory between May 2009 and August 2013. The project aimed to develop a climate change adaptation tool based on Traditional Ecological Knowledge of weather and observed environmental change. Weather narratives were used to define Miriwoong understanding of climatic seasons. The description of monsoonal rain development is associated with nyinggiyi-mageny (wet season) and was further classified to occur in the sub-season of jaloorr-mageny (raining time). The process of clarifying aspects of weather, and how they are linked to seasons and impacts on Country, allowed BOM climatologists to explain predicted impacts of climate change in the East Kimberley through reference to Miriwoong weather narratives. This in turn allowed Miriwoong Traditional Owners to conceptualize vulnerability to climate change predictions on TEK and cultural processes.

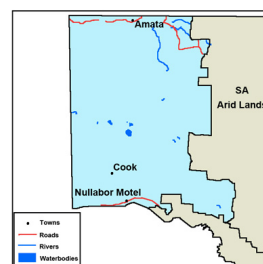


Miriwoong calendar

Alinytjara Wilurara NRM Board

The AW NRM Board is the only regional NRM Board in Australia in which all voting members are Aboriginal. Board members have an interest in NRM, as well as an affiliation with the land and its people. The unique nature of the Region requires a balance between 'traditional' authority and 'government' authority. To be successful, the Board needs to partner with elders, traditional owners and land holding authorities to ensure modern NRM practices are married with traditional 'care of country'-all the while ensuring good governance in relation to the Board and its programs. The Board's priority objectives, in turn, need to be achievable, accountable, and practical for the Region.

<http://www.awnrm.sa.gov.au/>



AW NRM Region Map

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Recording Indigenous knowledge of bush tucker and medicine on the Arnhem Plateau

Filming photosA partnership between ANU staff and nawarddeken (Stone country people) of the Warddeken IPA was established in 2008 to record Indigenous knowledge of bush tucker and medicine. On Country trips with old and young people have taken place to facilitate intergenerational transfer of knowledge and use technologies to record and edit information into usable forms. Community members were active participants, telling stories, directing, recording, editing and publishing information for community and broader use.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1442-8903.2011.00627.x/abstract>

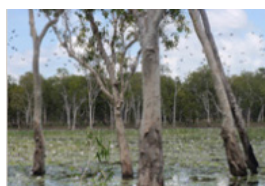


Filming photos

Recording knowledge of wetlands and feral animals

The Yugul Mangi Rangers have been working with ANU researchers to record the ecological and cultural values of freshwater wetlands on their Country using western science and Indigenous knowledge. They fenced off three culturally significant billabongs to protect them from feral buffalo, pigs and horses and to show the community the impacts of feral animals.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1442-8903.2011.00627.x/abstract>http://anu.edu/caepr/country/doc/Yugul_Mangi_fencing.pdf



Yugul Mangi billabong

Top End Women Rangers Talking

Indigenous Women talkingIn 2011-2012 women rangers from five ranger groups came together to produce a booklet about their work and the good things, challenges and how they could make their jobs better.

<http://caepr.anu.edu.au/others/Report-1347254188.php>



Indigenous Bioresources Research Group

Based out of Macquarie University, this group works with Indigenous communities to document the use of customary medicines and investigate the biomedical potential of these. In collaboration with the associated Indigenous Science Education Program, resources are produced to encourage the engagement of the youth in the local Indigenous culture as well as support students in their formal science education and encourage them to consider further education.

Work with the Yaegl community of northern NSW has produced a handbook of local bush medicines which has helped to guide a series of excursions on-country, where students learn directly from stories shared by elders. The integration of some of this knowledge into the school science curriculum has been supported by assisting to place aspects of these teachings into a western scientific framework.

J Ethnopharmacol. 2012 Jan 6;139(1):244-55. doi: 10.1016/j.jep.2011.11.008. Epub 2011 Nov 11.



Bush medicine book

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Aboriginal Australians

refers to Aboriginal people whose ancestors were Indigenous to the Australian continent before British colonisation of the continent in 1788

Biota

a collective term that refers to all life forms (living things) in a region

Biodiversity (Biological diversity)

the range of life forms in an area — terrestrial diversity relates to the variety of life forms on the land whereas marine biodiversity relates to the sea; life forms include plants, animals, microbes and fungi

Biocultural Diversity

linked diversity of interacting biological and cultural values of a region

Conservation

looking after; protection of current condition of something (e.g. plant conservation or biological conservation)

Conservation biology

the scientific study of the Earth's biodiversity with the aim of protecting species, their habitats and ecosystems from excessive decline

Country

Aboriginal term for the holistic view of the environment including land, sea, water, air, species, spirits and people

Ethnobotany

the scientific study of the relationships between people and plants

Ethnomedicine

a subfield of ethnobotany that deals with the study of traditional medicines, especially where knowledge and practices have been orally transmitted

Ethnobiology

the scientific study of the way plants and animals are treated or used by different human cultures

Fauna

animals

Flora

plants

Indigenous Languages

languages spoken by Aboriginal people — over 250 languages were spoken in Australia prior to European settlement

Kinship

familial connections between Country (people, spirits, land, sea, sky, water, other species etc.)

Lore

(oral lore or traditional lore) relates to cultural lore and traditions

Native title

a common law doctrine declaring the rights of Indigenous peoples' to customary land and sea ownership

Natural Environment

the physical (e.g. rocks and soil) and biological (e.g. plants and animals) things and connections making up Country

Sacred sites

areas or places of special cultural significance to Aboriginal Australians; most are related to the Dreaming

Sites of significance

place (including its physical and biological parts) that is of significance to Aboriginal tradition

Songlines

also called Dreaming Tracks that are paths across the land or sometimes the sky which mark the route followed by localised creator beings or spirits during The Dreaming — the paths of the songlines are recorded in traditional songs, stories, dance and paintings

The Dreaming

spiritual beliefs of Aboriginal Australians which relate to the creation of Country, humans and spirits

Traditional

a tradition is a belief or behaviour passed down within a group or society with symbolic meaning or special significance with origins in the past

Traditional Ecological Knowledge (TEK)

term referring to Aboriginal, Indigenous or other forms of traditional knowledge regarding local and environmental resources. It is a cumulative body of knowledge, practise, and belief evolving by adaptive processes and handed down through generations by cultural transmission. It concerns the relationship between all living things, including human with one another and with the environment.

Traditional Lore

is connected to 'The Dreaming' and provides rules on how to interact with the land, kinship and community. Aboriginal children learn the lore from childhood, by observing customs, ceremonies and song lines.

Traditional Owners

people who have cultural and historic custodial ownership of certain land; someone who belongs to place

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[Download Australian Indigenous Biocultural Knowledge paper](#)

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REVIEW PAPERS

Introduction

The information presented on this page has been collated to act as a reference point for researchers and aboriginal communities to understand more about biocultural knowledge. There is a wealth of published literature and reports that review and compare the collection of bio-cultural knowledge across Australia. The list below is by no means a complete list of all publications but it does present some of the key discussion both historic and contemporary that have helped Aboriginal biocultural knowledge be recognised as an important resource in managing the Australian Landscape.

Review Papers IndigenousBioculturalKnowledge^{reviewpapers.pdf}

METHODOLOGY

Introduction

Over recent decades there has been much discussion about the cultural protocols associated with the collection of biocultural knowledge and how this knowledge should be used. The published literature listed below has been collated to serve as a toolkit of current leading practices being implemented by researchers in collaboration with Aboriginal individuals and institutions. It is important for researchers to understand the concepts of informed consent and the Intellectual property of Aboriginal peoples knowledge. If you would like more information on the articles below please contact the authors of these publications.

Methodology IndigenousBioculturalKnowledge^{methodpapers.pdf}

RELATED PAPERS

Related Papers IndigenousBioculturalKnowledge^{relatedpapers.pdf}

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Links to other useful websites

Indigenous Protected Areas

<https://web.archive.org/web/20180829224821/http://www.environment.gov.au/indigenous/ipa/>

Working on Country

<https://web.archive.org/web/20180829224821/http://www.environment.gov.au/indigenous/workingoncountry/>

Native Title Vision

<https://web.archive.org/web/20180829224821/http://www.ntv.nntt.gov.au/ntv.asp>

Closing the Gap

<https://web.archive.org/web/20180829224821/http://www.fahcsia.gov.au/our-responsibilities/indigenous-australians/programs-services/closing-the-gap>

AIATSIS

<https://web.archive.org/web/20180829224821/http://www.aiatsis.gov.au/>

Australian Tropical Herbarium

https://web.archive.org/web/20180829224821/http://www.ath.org.au/JCU_077417.html

Land Care Vic – forming Indigenous landcare groups

<https://web.archive.org/web/20180829224821/http://www.landcarevic.net.au/resources/for-groups/notes>

Joint land management NSW

<https://web.archive.org/web/20180829224821/http://www.environment.nsw.gov.au/jointmanagement/>

Northern Australian Indigenous Land and Sea Management Alliance (NAILSMA)

<https://web.archive.org/web/20180829224821/http://www.nailsma.org.au/>

State and Local Land Councils

<https://web.archive.org/web/20180829224821/http://australia.gov.au/people/indigenous-peoples/land-councils>

Indigenous Land Corporation (ILC)

<https://web.archive.org/web/20180829224821/http://www.ilc.gov.au/>

UN Declaration of the Rights of Indigenous People

<https://web.archive.org/web/20180829224821/http://www.unesco.org/new/en/indigenous-peoples/related-info/undrip/>

Convention on Biodiversity (CBD)

<https://web.archive.org/web/20180829224821/http://www.cbd.int/>

CBD Aichi Targets

<https://web.archive.org/web/20180829224821/http://www.cbd.int/sp/targets/>

Millennium Ecosystem Assessment

<https://web.archive.org/web/20180829224821/http://www.millenniumassessment.org/en/index.html>

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