



Weaving traditional ecological knowledge into conservation assessments

A guide for project officers

Department of Climate Change,
Energy, the Environment and Water



Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Tradition: Custodians of the lands we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

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Introduction

In New South Wales, one purpose of *Biodiversity Conservation Act 2016* is to assess the extinction risk of species and ecological communities, and identify key threatening processes, through an independent and rigorous scientific process. The NSW Threatened Species Scientific Committee (the committee) undertakes conservation assessments of species and ecological communities and determines if they are eligible to be listed as threatened in accordance with the criteria specified under the Act and the Biodiversity Conservation Regulation 2017. These criteria have been adopted from the IUCN Red List criteria to be consistent with a global framework for assessment of level of threat and extinction risk.

Since 2017, the committee has published conservation assessments for species and ecological communities assessed as being threatened. These assessments include information on a species' taxonomy, distribution and abundance, ecology, threats, and an assessment against the globally recognised IUCN Red List criteria. This is done in accordance with the Australian Government's *Intergovernmental memorandum of understanding: agreement on a common assessment method for listing of threatened species and threatened ecological communities* (DoE 2015; referred to as the common assessment method), which the NSW Government signed in 2016. The primary aim of the common assessment method is to reduce duplication of effort and inconsistency in the assessment processes used in different jurisdictions by establishing a consistent method for the assessment and listing of nationally threatened species across Australia.

In New South Wales, conservation assessments undertaken in accordance with the common assessment method are made available on the committee's website alongside the final determination. Project officers from the Department of Climate Change, Energy, the Environment and Water (the department) prepare conservation assessments and provide them to the committee for their review and decision.

Guideline objectives

The NSW Threatened Species Scientific Committee and the department jointly initiated the development of these guidelines to recognise that traditional ecological knowledge (TEK; see Box 1) is an important component of information on species and ecological communities that needs to be incorporated into conservation assessments. At a broader level, the guidelines also seek to provide clear procedures for how to appropriately incorporate TEK into conservation assessments, which may be of benefit to other jurisdictions in Australia.

One of the purposes of the Biodiversity Conservation Act (s 1.3) is 'to improve, share and use knowledge, including local and traditional Aboriginal ecological knowledge, about biodiversity conservation'. While TEK and some Aboriginal land management and cultural practices may currently have some links to listing threatened species, clearly identifying and articulating them in the listing will acknowledge Aboriginal relationships

and allow further research on their potential to support a healthy, productive and resilient environment. Recognising Aboriginal people's Country, culture, and physical and spiritual connections to the lands and waters will contribute to healthy Country, healthy culture and healthy people; and will celebrate the world's oldest living culture. Biodiversity has been linked with the cultural diversity of Indigenous peoples (Toledo 2001), leading to ensuring that Aboriginal views and practices are incorporated in listings.

These guidelines also develop a way to appropriately reference and cite traditional knowledge, as a way of maintaining the cultural integrity of the knowledge and providing due recognition to the knowledge holder. Aboriginal traditional knowledge is validated and passed on to different parts of the Aboriginal community to keep the information alive. The knowledge is referred back to the knowledge holders who gave the knowledge, in a process akin to the Western approach of peer review. Referencing and citing knowledge aims to maintain the source of knowledge and the linkages of how new knowledge is pieced together, thereby respecting the past and the future. The new proposed referencing style is presented in Appendix A.

The primary objective of this document is to provide a guideline for project officers working within the department to find culturally appropriate ways of incorporating TEK and Aboriginal values into conservation assessments. It outlines how to gather, incorporate, and cite TEK in conservation assessments.

These guidelines are provided so authors of conservation assessments can:

- have a clear understanding of how to grow professional and community relationships with Aboriginal people and groups for ongoing collaboration on conservation assessments
- know what is expected to be incorporated as a minimum in assessments
- identify and incorporate Aboriginal cultural values, including TEK, for species and ecological communities into assessments
- allow for inclusion of a broad spectrum of knowledge when considering impacts on species and communities as part of the assessment process
- provide initial insights into TEK and Aboriginal cultural options for conservation management to inform government land management and conservation decision-making
- provide potential to catalyse long and fruitful relationships and learnings for both parties (government and knowledge holders)
- facilitate opportunities for the (re)vitalisation and maintenance of Aboriginal knowledge and practice
- provide ongoing resourcing opportunities for conservation of tangible and intangible values (conservation of storylines, language and places of cultural significance).

These guidelines have been prepared as a collaboration between the department and the NSW Threatened Species Scientific Committee.

This guide is not an instrument for project officers to use instead of engaging with traditional knowledge holders from the Aboriginal community. The guidelines are designed to promote a consistent approach to identifying and including Aboriginal cultural values, through TEK, into conservation assessments.

Box 1: Understanding traditional ecological knowledge.

Traditional ecological knowledge, or TEK, involves many fundamental things about Aboriginal people's philosophy, about their place within and part of nature and Country. TEK is always evolving, so project officers need to be aware that 'weaving in' TEK is not as simple as adding a few lines to a nomination, but rather it involves engaging in a different knowledge 'system'. TEK will approach the ideas of science and management in different ways. These approaches are to be embraced because they provide deeper meaning and context to what is shared as TEK by Aboriginal people.

TEK is used to capture a vast array of ways that Aboriginal people express knowledge, rights, obligations and practices that are needed to maintain their connection to Country. TEK is not a standalone database of knowledge, but a process that maintains and (re)vitalises that knowledge and the world through the processes of Aboriginal cultural practices.

Aboriginal cultural practice is another way TEK may be expressed in Western science to provide a better understanding of how it operates in the realm of threatened species assessments.

Aboriginal knowledge or TEK cannot be fully understood outside the cultural and social framework within which it resides.

TEK is not like Western knowledge. It is much more emergent in nature (Hooper 2020); TEK is relational knowledge. Aboriginal people see through feeling, not as an emotional response but as a prototypical relationship.

Aboriginal people can contribute to conservation assessments through more than just knowledge extraction and integration in a plan. We continue to seek ways for Aboriginal people to maintain cultural practice and enable and support Aboriginal people to deploy their cultural understandings.

The collection and extraction of Aboriginal knowledges of species serves little purpose if it is removed from the cultural context. There are growing linkages between Aboriginal land management approaches and species sustainability which goes beyond the knowledge of species (Hill et al. 2013). With this growing recognition of the potential relationship between species loss and Aboriginal land practices it is important to identify these potential links.

Legislative framework and requirements

NSW Threatened Species Scientific Committee

The NSW Threatened Species Scientific Committee is established under the Biodiversity Conservation Act. It is an independent committee of scientists appointed by the Minister for the Environment.

Biodiversity Conservation Act 2016

The overarching purpose of the Biodiversity Conservation Act is to ‘maintain a healthy, productive and resilient environment for the greatest wellbeing of the community, now and into the future, consistent with the principles of ecologically sustainable development’.

As well as assessing and listing species at risk of extinction, another purpose of the Act (section 1.3) is:

- to improve, share and use knowledge, including local and traditional Aboriginal ecological knowledge, about biodiversity conservation.

Aboriginal culture and its contribution to biodiversity conservation

The NSW Biodiversity Conservation Act has specific provisions that relate to Aboriginal people, but some of the more general objectives of the Act also apply to Aboriginal people and their communities. Aboriginal land management and cultural practices also have the same overarching objective of the Act, that is, to ‘maintain a healthy, productive and resilient environment for the greatest wellbeing of the community, now and into the future’. However, there are differences in the way Aboriginal people understand how to achieve this objective and differences in perceptions of the role of things like ‘biodiversity’ in this process.

Indigenous Cultural and Intellectual Property (ICIP)

The rights Aboriginal people have to their Indigenous Cultural and Intellectual Property (ICIP) are enshrined within international law instruments. The *United Nations declaration on the rights of Indigenous peoples* (UN 2007), to which Australia is a signatory, sets out the rights Indigenous peoples of the world require for their survival, dignity and wellbeing.

In New South Wales, department staff will inevitably engage with ICIP through engagement with Aboriginal people and communities. Engagement with ICIP will be encountered when:

- engaging the services of Aboriginal people, including as consultants, performers, guest speakers or for Welcome to Country
- incorporating personal stories, perspectives, experiences, priorities, culture of Aboriginal people
- collaborating with Aboriginal people and communities on department co-design projects, such as written reports, incorporating their cultural knowledge, beliefs and cultures

- collecting data, facts or information about Aboriginal people, knowledge, culture or Country
- using language in department projects, such as naming places, species names (noting a species can have multiple language names across different countries), sites, rooms or other locations.

The department's *Indigenous cultural intellectual property protocol* (Janke 2023) provides further information.

Principles for collaborative work with Aboriginal people and their communities

Aboriginal people generally are open to sharing their knowledge and perspectives to ensure that they can maintain their obligations to care for Country. This is not intended to just be a handover of knowledge, but as a foundation for Aboriginal people to actively engage in applying and (re)vitalising that knowledge in maintaining and (re)vitalising Aboriginal cultural practice. There are also principles relating to how Aboriginal knowledge is to be treated to ensure that it is not a knowledge extraction process, but a facilitation process where there is space for Aboriginal people to maintain and (re)vitalise Aboriginal cultural practice.

The collection and extraction of Aboriginal knowledge of species serves little purpose if it is removed from the cultural context. There are growing linkages between Aboriginal land management approaches and species sustainability which go beyond the knowledge of a species (Hill *et al* 2013). With this growing recognition of the potential relationship between species loss and Aboriginal land practices, it is important to identify these potential links.

Protecting Indigenous cultural and intellectual property

Protecting and respecting Indigenous Cultural and Intellectual Property (ICIP) is essential, including cultural knowledge of plants and animals, lands and waterways. We can begin to understand this through the 10 principles within the department's *Indigenous cultural intellectual property protocol* (Janke 2023). Some of these principals have been expanded here with respect to threatened species knowledge and conservation assessments.

1. **Respect** – Aboriginal people have the right to own and control their cultural heritage. Aboriginal cultural heritage encompasses knowledge, heritage and cultural practices that includes the right to maintain and (re)vitalise their cultural practice. One way that we can respect Aboriginal people's contributions is by suspending our scientific mind and trying to understand Aboriginal people's contribution from their ways of seeing and understanding the world. We need to respect that these contributions are more than just data, but a living cultural understanding that requires action by Aboriginal people to maintain that cultural understanding.
2. **Self-determination** – Aboriginal people have the right to self-determination in their cultural heritage. Aboriginal people should be encouraged and empowered in decision-making processes about projects that affect their cultural heritage connections with the world. This means respecting the cultural decision-making process at the heart of that self-determination.
3. **Prior informed consent and consultation** – Prior informed consent for use of Aboriginal knowledge should be sought from Aboriginal people. This involves

ongoing negotiation and informing custodians about the implications of consent. Consultation with the owners of the traditional cultural expression should take place.

4. **Interpretation** – Aboriginal people are responsible for maintaining their culture and the interpretation of their cultural heritage and knowledge. This extends to how knowledge might be used in the context of conservation assessments. Ensuring that knowledge is not separated from Aboriginal cultural practices allows full interpretation by Aboriginal people.
5. **Integrity** – Maintaining the integrity of cultural heritage information or knowledge is important to Aboriginal people. As described above, it is impossible to separate a database of knowledge out from TEK because it loses its cultural integrity.
6. **Secret/Sacred and privacy** – Aboriginal people have the right to keep secret their sacred and ritual knowledge (and practices) in accordance with their customary laws. Privacy and confidentiality concerning aspects of Aboriginal people's personal and cultural affairs should be respected. Provision should be made to allow these to be expressed.
7. **Attribution** – It is respectful to acknowledge Aboriginal people as custodians of Aboriginal cultural knowledge by giving them attribution the same as we would in Western science. This allows recognition that there is respect being shown to the standing of knowledge provided by Aboriginal people.
8. **Sharing benefits** – Aboriginal people have the right to share in the benefits from the use of their culture, especially if it is being commercially applied. The economic benefits from use of their cultural heritage should also flow back to the source communities.
9. **Maintaining culture** – In maintaining Aboriginal cultures, it is important to consider how a proposed use might affect future use in the way that knowledge is passed on to those that are culturally entitled.
10. **Recognition and protection** – Australian policy and law should be used to recognise and protect ICIP rights. Using copyright laws, for example, but also new laws and policies should protect these rights. These issues can be covered in contracts, protocols, and policies for better recognition.

Understanding the importance of kinship

Kinship operates according to traditional lore which identifies a skin-group of people, grouping people according to moieties (social or ritual groups that Aboriginal people are divided) and language groups. For Aboriginal people, kinship is a system that determines not only how people relate to one another, but also how they relate to their Country and surroundings, with the aim of creating a cohesive and harmonious community. Kinship determines not only responsibilities towards others, but also how one relates to others through marriage, ceremony, funeral roles and behaviour patterns. This includes knowledges of how to manage Country, not as a discrete entity or individual but as a connected relationship. Kinship creates a set of rules so that everyone knows who and how they need to behave towards each other and gives them

the roles and responsibility of managing and caring for Country. Part of the obligations include caring for the lands and waters.

For Aboriginal people kinship and family are especially important, and understanding kinship is important when engaging with Aboriginal people. Aboriginal people have family and kinship responsibilities that are not typical of non-Aboriginal families.

Procedures for gathering and using TEK

This section details the procedures for the department's project officers to follow to ensure that TEK is incorporated into conservation assessments in a culturally sensitive and appropriate manner.

Seek input from the Cultural Science Team

The department's Cultural Science Team (in the Conservation and Restoration Branch of the Science, Economics and Insights Division) can offer expert advice to project officers undertaking conservation assessments. The Cultural Science Team provide a research service, both in terms of providing expert advice and resourcing core research on the cultural aspects of threatened species management, among other roles. This is something that is evolving, and identifying the key research needs of threatened species and cultural values is currently being identified and will be dynamic as it grows.

Step-by-step procedures

Below are a series of dynamic and evolving steps that will guide project officers on their journey to beginning to incorporate TEK into conservation assessments. This section of the report is designed specifically for departmental project officers. A number of the links are only accessible by staff (and these are indicated as such). Appendices also provide detailed information, resources and website links to help project officers:

- Appendix A – Referencing and citing Aboriginal knowledge
- Appendix B – Useful references, resources and websites (including links to websites and resources mentioned in the steps below)
- Appendix C – Standard text for conservation assessments
- Appendix D – Cultural and community significance text for Commonwealth common assessment method conservation advices.

Step 1: Undertake training and use available guidance

Project officers are encouraged to complete the department's Winanga-li: Aboriginal Cultural Capability Framework (staff access only) training prior to beginning threatened species conservation assessments. Officers are also encouraged to familiarise themselves with the department's ICIP protocol. Training on the protocol will be available in the future (for more information visit ICIP SharePoint [staff access only]).

Use the department's Our place on Country: Aboriginal outcomes strategy 2020–23 (DPIE 2020) as a guide for understanding the department's vision and how we will embed cultural knowledge into the department's business.

Learn the 4Rs for Aboriginal research and how to apply them. The 4Rs are respect, relevance, reciprocity and responsibility (Thorne 2019):

- **Respect** First Nations cultural integrity.
- Provide research that is **relevant** to First Nations perspectives and experience.

- Foster **reciprocal** relationships.
- Demonstrate **responsibility** through participation.

Step 2: Use previous examples

- Familiarise yourself with previous examples of how TEK has been included in conservation assessment from:
 - Commonwealth conservation advices
 - *Syzygium paniculatum* conservation advice (see Appendix C)
 - examples in the Common Assessment Method project Traditional Ecological Knowledge folder (staff access only).
- Use the standard text provided in Appendix C.
- Find out procedures for gathering information that have been used in the past.
- Familiarise yourself with some of the useful references and resources which can be used in desktop research (see Appendix B).

Step 3: Develop a stakeholder list and undertake desktop research

Develop a stakeholder list

Create a stakeholder list for engagement and consultation to improve, share and use knowledge about biodiversity conservation, including TEK and local and traditional Aboriginal ecological knowledge.

Stakeholders include:

- Local Aboriginal land councils (LALC)
 - Use the NSW Aboriginal Land Councils' [Land Councils webpage](#) to check if there is a LALC in the species' area(s) of distribution.
 - If no LALC, check if there are Aboriginal organisations in that location by doing a Google search: 'Aboriginal organisations <location>'. This should provide you with details of Aboriginal organisations, Elders groups etc.
- Joint management committees and Aboriginal owners and Traditional Custodians involved in joint management of parks
 - Search the list of [Aboriginal joint management agreements](#). This should provide information on jointly managed areas and national parks in the location of the species/community.
 - Joint management committees are registered Aboriginal owners for the areas being managed.
 - Contact the Aboriginal Heritage and Partnerships Team (aboriginalheritageandpartnerships@environment.nsw.gov.au) for contacts for joint managed parks, and their joint management officers (JMOs) and the boards/committees. Or contact the relevant NPWS Area(s) and associated manager directly in each Branch for their contacts.
- Traditional Owner groups
 - Ring the LALC office and ask about Traditional Owner groups.

Also:

- Check the native title website, where you will be able to do a geographical search for native title applications and determinations. This will provide details of registered Aboriginal corporations associated with native title.
- Check Office of the Registrar of Indigenous Corporations website, where you will be able to do a geographical search for Aboriginal corporations.
- Check spatial layers on P drive, for example, LALC boundaries (staff access only).
- Contact the relevant *Saving our Species* (SoS) project coordinator and ask if they can help identify who to talk to.
- Consider putting in a notice in the *Koori Mail* and putting details on the departments (staff access only) Viva Posts — Aboriginal People and Culture, Aboriginal Support Network for broader audience through staff and their contacts.

Desktop research

- Find out if there are any Aboriginal names for the species across its range.
- Find out what the Aboriginal language group(s) are for the species' known distribution (see resources in Appendix B).
- NPWS plans of management for jointly managed areas could provide details on species that are priorities or whether there is known cultural information.
- Find out if any area(s) in the species' distribution are official dual-named locations (see Appendix B).
- Think through the implications of a listing on Aboriginal cultural practice and your approach to engagement.

Step 4: Engaging with Aboriginal communities

Government staff need skills in communicating effectively with Aboriginal communities. The following sections provide information on important principles that need to be considered when engaging with Aboriginal communities. Following these principles, more specific aspects and approaches for contacting and engaging with Aboriginal communities are provided.

Contacting Aboriginal communities

There are many options for contacting Aboriginal communities. Use the stakeholder list developed in Step 3 to guide who you may be able to contact. Depending on the scale of the project, options may include:

- direct approaches to LALCs
- speaking to local councils and asking for an Aboriginal community contact list.

Other options for broader contacts include searching social media or advertising in newspapers such as the *Koori Mail*.

Allowing time for Aboriginal community's governance processes

Ensure that time is set aside to manage engagement with Aboriginal communities. It is important to allow time for the proper governance processes within Aboriginal communities to run, and for Aboriginal communities to consult with relevant members.

It must be remembered that Aboriginal communities are heavily engaged by government and that there may be other issues such as sorry business (funerals) or community events such as NAIDOC or the Football Knockout that may take priority.

Managing Aboriginal community expectations

It is important to understand that contact with Aboriginal people is going to take extra time and effort in a conservation assessment. It is important to be clear with Aboriginal communities the context and extent of influence they may have. Building false or unrealistic expectations in a community can have very negative impacts, so being clear on what is happening, the timeframe in which it will happen, and the possible range of outcomes is very important.

Building relationships

It is important to note that in many communities there is a high suspicion of government officials because of inappropriate protocol procedures and a decidedly Western approach to timeframes when attempting problem resolution. Increasing acceptance by Aboriginal communities is not won easily, nor should it be taken for granted. It depends wholly on the establishment of an atmosphere of trust early, based on consultation and a detailed explanation of information for any proposal/project.

Department staff need to become aware of the protocols that enable them to establish relationships with Aboriginal communities in a mutually acceptable and culturally appropriate manner, thereby increasing the likelihood of a productive outcome for both sides.

Understanding differences between Aboriginal communities

Department staff need to recognise that there are differences between Aboriginal people based on region, and the degree of affinity with traditional culture, language and local customs.

Aboriginal community engagement

A set of basic principles that can help to govern the consultation process between government staff members and Aboriginal communities are as follows:

- Meet with as wide a membership of the community as possible (depending on the focus).
- Always provide responses or initial feedback to any contact.
- Be aware of the cultural and traditional ceremonial practices of communities so as not to consult at inappropriate times (funerals/deaths/sorry business, annual ceremonies, etc.).
- Be prepared to be patient – traditional Aboriginal time is different to non-Aboriginal time.

Also:

- Use the 4Rs of Aboriginal research — Respect, Relevance, Reciprocity, Responsibility.
- Refer to the department's Aboriginal events and engagement strategy (staff access only).
- Review and consider the department's ICIP protocol when making contact.
- Talk to Aboriginal people in the department, such as the Cultural Science Team, about your work and the connections they may have to community.
- Think about how to make people comfortable and how you value their knowledge.
- Be clear you may not have spoken to everyone; every situation is its own. See standard text in Appendix C.

Step 5: Writing and referencing TEK

- There are 2 ways to include TEK into conservation assessments:
 - including information into a specific 'Cultural significance' section in the assessment (see Appendix C).
 - weaving TEK throughout the assessment where appropriate (see Appendix C).
- See examples of other conservation assessment reports in the Common Assessment Method project Traditional Ecological Knowledge folder (staff access only).
- Ensure you appropriately reference and cite any TEK you include in the assessment:
 - See Appendix A for referencing and citation style guide.
- Consider ICIP protocols on the impact of inclusion of knowledge in conservation assessments.
- Include a picture or photograph of the species.

References

DoE (Department of Environment, Cth) (2015) '[Intergovernmental memorandum of understanding: agreement on a common assessment method for listing of threatened species and threatened ecological communities](#)', signed by the NSW Government on 28 October 2015.

DPIE (Department of Planning, Industry and Environment, NSW) (2020) [Our place on Country: Aboriginal outcomes strategy 2020–23 \[PDF 7.7MB\]](#), DPIE, Parramatta.

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Hooper S (2020) *Aboriginal burning in south-eastern Australia: lessons from brush turkey*, Master of Philosophy, University of New England.

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Thorne R (2019) [Teaching through the four Rs of Indigenous education](#), Leaning Bird webpage.

Toledo VM (2001) 'Indigenous peoples and biodiversity', in S Levin et al. (eds) *Encyclopedia of biodiversity*, volume 3, Academic Press, pp.451–463, doi: 10.1016/B978-0-12-384719-5.00299-9

UN (United Nations) (2007) '[United Nations declaration on the rights of Indigenous peoples](#)', UN, adopted by the General Assembly on Thursday, 13 September 2007.

More information

- [Common assessment method](#), Commonwealth Department of Climate Change, Energy, the Environment and Water webpage
- [Biodiversity Conservation Act 2016](#)
- [IUCN Red List](#)

Appendix A: Referencing and citing Aboriginal knowledge

Over time, Indigenous peoples around the world have preserved distinctive understanding, rooted in cultural experience, that guide relations among human, non-human and other-than-human beings in specific ecosystems (Bruchac 2014). A current definition of traditional knowledge is:

knowledge, know how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.

WIPO (2015)

Aboriginal peoples in Australia have established distinct systems of knowledge for their Country, and innovation and practices relating to the uses and management of biological diversity on Country and environments.

Both traditional and contemporary Indigenous knowledge systems are adaptive to ever-changing landscapes and environments which is why Aboriginal and Torres Strait Islander peoples are the oldest continuous culture. This knowledge contains crucial information that can explain and contextualise scientific approaches (Matsui 2015).

Traditional knowledge is validated through the above-mentioned processes and is passed onto different parts of the Aboriginal community to keep the information alive. The knowledge is referred back to the knowledge holders who gave the knowledge for validation and integrity of the content. This process is akin to the Western approach of peer review, which aims to maintain the source of knowledge, the linkages of how new knowledge is pieced together, thereby respecting the past and the future.

A method for referencing verbal knowledge provided by Aboriginal knowledge holders for the assessment of threatened fungi, plants, animals and ecosystems is provided below. It was developed for use by the department and the NSW Threatened Species Scientific Committee.

The referencing style proposed aims to maintain the cultural integrity of the knowledge. The approach to referencing oral Aboriginal knowledge (that is, knowledge that is not published) will include the following: name of the knowledge holder/sharer; the date; family association; the Country/language it represents; and any professional titles (either or both indigenous and Western where appropriate). The format will be:

- Knowledge holder name (Date) *Family association*, Country the knowledge is from or Language, professional titles.

Examples:

Kerry Avery (July 2022) *Gumbayngirr-Djirringanj*, Djirringanj Country, Far South Coast, Community Member and Senior Cultural Scientist – Cultural Science Team – Department of Planning and Environment.

Graham Moore (June 2022) *Gurrungutti-Munji-Djirringanj*, Djirringanj Country, Far South Coast, Yuin Elder and Senior Cultural Scientist – Cultural Science Team – Department of Planning and Environment.

The format for the short citation in the text of the document will be:

- (Knowledge holder name, month and year))

Example:

- (Kerry Avery July 2022)
- (Graham Moore July 2022)

Written (i.e. published) TEK is cited using the same approach as for Western science.

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Matsui K (2015) 'Problems of defining and validating traditional knowledge: a historical approach', *The International Indigenous Policy Journal*, 6(2). Retrieved from: <http://ir.lib.uwo.ca/iipj/vol6/iss2/2>, doi: 10.18584/iipj.2015.6.2.2

WIPO (World Intellectual Property Organisation) (2023) *Traditional knowledge*, WIPO website.

Appendix B: Useful references, resources and websites

Useful references

ANBG (Australian National Botanic Gardens) (2004) *Aboriginal plant use in south-eastern Australia* [PDF 1MB], ANBG Education Services, Canberra.

ANBG (2000) *Aboriginal plant use and technology* [PDF 376KB], ANBG Education Services, Canberra.

ANBG (2011) *Aboriginal plant use trail – Aboriginal plant use*, introduction by Beth Gott, ANBG webpage.

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Resources and websites

Departmental resources (staff access only)

- Indigenous Cultural and Intellectual Property SharePoint
- Aboriginal cultural capability SharePoint
- Winanga-li: Aboriginal Cultural Capability Framework training
- Common Assessment Method project Traditional Ecological Knowledge folder

Aboriginal language group(s)

- AIATSIS Aboriginal languages map (September 2022)
- Our Languages.org.au
- Aboriginal Languages Act 2017
- TindaleTribalBoundariesAust GIS layer is located at:
P:\Corporate\Themes\Cultural\Aboriginal\Aboriginal.gdb (staff only access)

Aboriginal dual-named locations

- Use official Geographic Names Board of NSW dual-named locations
 - Use the Place names search to search for locations in the species' distribution
 - Follow the Board's Aboriginal Dual Naming standards. These are in line with the department's Aboriginal dual names policy (staff access only) and represent the first right of discovery. Both names must be used together, separated by a forward slash with a space either side. Both parts of the name should be in the same font, font type, font size and colour. For example, 'The species is known from Whibayganba / Nobbys Head in Newcastle.'

Indigenous seasonal calendars

- [Indigenous Weather Knowledge](#) – use the drop-down menu to select the relevant Aboriginal seasonal calendar – Australian Bureau of Meteorology
- [CSIRO Indigenous seasonal calendars](#)

Local Aboriginal land councils, Traditional Owner groups and corporations

- [NSW Local Aboriginal Land Councils](#) – this page has links to interactive and downloadable maps and links to individual LALC Boards
- Traditional Owner Groups – through LALCs
- Aboriginal Elders Groups – through LALCs
- [Office of the Registrar of Indigenous Corporations](#) website

NPWS joint management agreements

- [NPWS plans of management under an Aboriginal joint management model](#). See Aboriginal joint management agreements for details.
- [NPWS Aboriginal joint management of parks](#) webpage
- NPWS Aboriginal Heritage and Partnerships Team mailbox at: aboriginalheritageandpartnerships@environment.nsw.gov.au
- NPWS Aboriginal Ranger teams

Native title holders

- [Ntscorp](#)

Local Land Services regions

- [Local Land Services regions](#) for information on Aboriginal Ranger teams and Aboriginal Community Support Officers

Other Aboriginal partnerships

- [Bush Heritage Australia Aboriginal partnerships](#)

Registers

- [Heritage NSW's Aboriginal Heritage Information Management System \(AHIMS\) web services](#)
- [Australian Heritage Database](#)
- [State Heritage Inventory and Register](#)
- Local government area local environmental plans – see the [NSW legislation – In force – Environmental Planning Instruments](#)
- Among other sources, the [Atlas of Living Australia](#) provides overviews of species distributions.

Appendix C: Standard text for conservation assessments

There are 2 approaches to including TEK in conservation assessments:

1. including information into a 'Cultural significance' section of the assessment
2. weaving TEK throughout the assessment where appropriate (e.g. in other sections as shown below).

Cultural significance

The below is standard text to be included in all conservation assessment regardless of how much information has been gathered for inclusion within the assessment.

This assessment is not intended to be comprehensive of the traditional ecological knowledge that exists for [[Genus species](#)], or to speak for Aboriginal people. Aboriginal people have a long history of biocultural knowledge, which comes from observing and being on Country, and evolves as it is tested, validated and passed through generations (Woodward et al. 2020). Aboriginal peoples have cared for Country for tens of thousands of years (Bowler et al. 2003; Clarkson et al. 2017). There is traditional ecological knowledge for all plants, animals and fungi connected within the kinship system (Woodward et al. 2020). Traditional ecological knowledge referenced in this assessment belongs to the relevant knowledge custodian and has been referenced in line with the principals of the NSW *Indigenous Cultural and Intellectual Property protocol* (ICIP) (Janke and Company 2023).

[\[Include the following reference in the references section\]](#)

Janke (Terri Janke and Company – Lawyers and Consultants) (2023) *Indigenous Cultural and Intellectual Property protocol* [PDF 3.1MB], Department of Planning and Environment NSW, Parramatta.

Description and taxonomy

Provide Aboriginal name(s) for the species or genus where available and cite source. See [Our Languages webpage](#).

Previous examples

Syzygium paniculatum

Lilly pillies, in general, have many names across all the traditional language areas where the species is distributed. Some language names for lilly pillies include Ngawan in Yugambah-Bundjalung language of south-east QLD (Muurrbay Aboriginal Language and Culture Cooperative 2022); Burangirrbang in Gathang language from north of Newcastle to around Port Macquarie (Lissarrague, 2010); Galungara in Dhurga language from the Nowra/Jervis Bay area and south to Narooma (Donovan and Boyenga, 2022); Midjuburi in Dharug and Gadigal languages from around Sydney (Troy, J 1992);

Dudagur – Dundagoor in Darkinyung language from the Central Coast (Jones 2008; Duncan 2023); Guntu – Goontoo in Awaba language around Lake Macquarie (Duncan 2023).

The Barrier Range dragon (*Ctenophorus mirrityana*)

Mirrityana is the Paakantyi language word for ‘out in the sunlight’, referring to the species’ habit of basking on rocks during the day (DPIE 2020).

Distribution and abundance

The minimal requirement in all conservation assessments will be to refer to the Aboriginal language group where the species is distributed in the ‘Species distribution’ section of the conservation assessment report. This is important because:

Languages are the living cultural heritage of Indigenous people, belonging to communities, clans, and families and passed down between generations. Culture is also embedded within language, sharing with it cultural knowledge, and knowledge relating to Country’s sites, lands, waterways. Language is the ICIP of local Aboriginal communities, and their sovereignty over and priorities for language must be respected.

(Janke 2023)

TEK can be incorporated into the distribution and abundance section by:

- identifying the Aboriginal language group for the lands that the species occurs on (see [AIATSIS Aboriginal Languages Map](#))
- considering if the distribution and abundance has been influenced by Aboriginal people along songlines, traditional pathways and kinships.

Previous example

Syzygium paniculatum

The current distribution of *S. paniculatum* along the coastal strip of New South Wales coincides with areas of high historical Aboriginal occupation by Saltwater peoples (peoples whose traditional Country included the seaboard) (Fuller, 2020, Sharp, 2002). Comprehensive surveys of all known subpopulations of *S. paniculatum*, and several unrecorded populations, as part of the SoS program (DPE 2022), anecdotally observed the occurrence of remnant populations in areas of Aboriginal importance (i.e., documented Aboriginal places and places connected to Dreaming stories) or in areas with evidence of Aboriginal inhabitancy (i.e. presence of shell deposits, modified trees, inhabited rock shelters, and burial sites) (Foster & Mulcahy pers. comm 2023).

Ecology

TEK such as use, propagation and dispersal, fire management and seasonality (e.g. flowering, fruiting times from calendars – see Appendix B) can be woven through this section. Take care not to extrapolate if references are location specific.

Previous example

Hibbertia superans

While the maturation of the bush is a natural landscape process, with larger shrubs often outcompeting smaller ground covering plants as plants age, long-term absence of fire in the Sydney Basin bushland is likely a relatively recent phenomenon because of fragmentation and isolation of remnants from increasing urbanisation. Traditional Owners used fire to manage the landscape of the Sydney Basin for thousands of years and are likely responsible for an elevated fire frequency in this landscape (Black et al. 2007; Mooney et al. 2007). The historic peak fire frequency was about 8 episodes per century (Mooney et al. 2007). No apparent change in fire history occurred during the transition between Aboriginal custodianship and the European occupation of Australia until the latter part of the 20th century, when the fire frequency and intensity/severity dramatically increased in some areas as a result of anthropogenic climate change in combination with changing land use (Constantine 2022), and in other areas has declined as a result of fragmentation.

Conservation and recovery actions

Work with Traditional Owners to gather any traditional knowledge associated with the species ensuring the practices to record, store and share this knowledge are mutually supported.

Previous example

Asterolasia beckersii

Asterolasia beckersii occurs on Kamilaroi/Gamilaraay land. There is little published information on how Kamilaroi/Gamilaraay people related to Country in this region and what that may mean for the cultural significance of *A. beckersii*. The aromatic oils of some Rutaceae may have been used for medicinal purposes (Sadgrove and Jones 2014) though it is unknown how widespread this was in the family or if it included *Asterolasia* species.

Appendix D: Cultural and community significance text for Commonwealth common assessment method conservation advices

The Commonwealth Threatened Species Scientific Committee has agreed standard text on the cultural and community significance of species, where no direct engagement with Traditional Owners can occur, for inclusion in Commonwealth conservation advice. The text and guidance are provided below for the information of jurisdiction committees and agencies.

While not an information requirement of the common assessment method (CAM; DoE 2015), jurisdictions are welcome to include these words (as appropriate) when acknowledging Traditional Owners and the cultural and community significance of species in state-led CAM assessments.

Commonwealth standard text

The cultural, customary and spiritual significance of species and the ecological communities they form are diverse and varied for Indigenous Australians and their stewardship of Country. This section describes some examples of this significance but is not intended to be comprehensive or applicable to, or speak for, Indigenous Australians. Such knowledge may be held by Indigenous Australians who are the custodians of this knowledge and have the rights to decide how this knowledge is shared and used.

The [species name] is known from [X] occurrences on the lands of the [local Indigenous People] of the [XX Nation].

Or

[Species name] occurs on [local Indigenous People] land. There is little published information on how [local Indigenous People] people related to Country in this region and what that may mean for the cultural significance of [species name].

Or [where a particular community/clan group cannot be identified, it is appropriate and respectful to acknowledge Traditional Owners by referring to the Native Title representative body in the region]

[Species name] is known from two occurrences where the rights of Traditional Owners are managed by the [XX Land and Sea Council]. ([XX Land and Sea Council] is the commonwealth appointed representative body).

And

This statement of significance is not intended to be comprehensive, applicable to, or speak for, all Indigenous Australians. It is acknowledged that Indigenous Australians, who are the custodians of this knowledge, have the right to decide how it is shared and used.

[Include a statement on cultural significance of this species as priority conservation and recovery action]

Ascertaining the cultural significance of this species is a priority in the Conservation and Recovery Actions.

Example

Latham's snipe – *Gallinago hardwickii* (Cth DCCEEW 2024)

Latham's snipe is known to spend the non-breeding season on the lands of numerous Traditional Owner groups (Hansen et al. 2021). Despite this, the customary and spiritual significance of the species is not known. Further consultation with the Traditional Owners of these lands will benefit the conservation of the species by providing awareness of traditional knowledge and management practices on Country.

References

DoE (Department of Environment, Cth) (2015) 'Intergovernmental memorandum of understanding: agreement on a common assessment method for listing of threatened species and threatened ecological communities', signed by the NSW Government on 28 October 2015.

Cth DCCEEW (Commonwealth Department of Climate Change, Energy, the Environment and Water) (2024) 'Conservation advice for *Gallinago hardwickii* (Latham's snipe)', Species Profile and Threats Database, Cth DCCEEW, Canberra.