# **Threatened Ecological Community Nomination Form**

# **2022** Assessment Period

Use this form to nominate an ecological community for listing as threatened (or, for a change in its status) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

## Please read these important notes before you fill in this form:

- Fill in this form as comprehensively as you can. <u>Much of the information is required</u> under Division 7.2, sections 7.03 and 7.05 of the *EPBC Regulations 2000* which are at: <u>www.legislation.gov.au/Series/F2000B00190</u> and includes the statutory criteria for listing threatened ecological communities (Division 7.1, regulation 7.02).
- Nominations which do not meet the regulated requirements (above) are not eligible for consideration. Items required by the Regulations are marked with an asterisk (\*) in this form.
- The listing categories for threatened ecological communities <u>can be found in Section 182 of</u> <u>the EPBC Act</u>. The statutory criteria for listing can be found in Division 7.1 of the *EPBC Regulations 2000*. These are available at: <u>www.legislation.gov.au/Series/F2000B00190</u>
- To be eligible for listing as threatened it <u>must be demonstrated</u> that an ecological community meets <u>at least one</u> of the six criteria for listing. Note that <u>ecological</u> <u>communities listed as vulnerable are not protected</u> as a matter of national environmental significance (MNES) under the EPBC Act (only ecological communities listed as endangered, or critically endangered, are protected as matters of national environmental significance).
- The Department and Threatened Species Scientific Committee (the Committee) has developed Guidelines for Nominating and Assessing Threatened Ecological Communities. They are available at: www.awe.gov.au/environment/biodiversity/threatened/nominations/forms-and-guidelines under

the 'Threatened ecological communities' tab. Please read the Guidelines, in conjunction with this form.

- The Guidelines include important information to help you complete particular sections and answer particular questions. This includes guidance (and indicative thresholds) on how to demonstrate that the statutory criteria for the 'critically endangered', 'endangered' or 'vulnerable' categories have been met.
- Consider the full extent of the ecological community at a national scale, not just its occurrence in specific areas or regions (unless it is biologically or ecologically distinct in a specific area or region). Do not exclude parts of an ecological community simply because the threats and impacts are less, or data is lacking for particular regions.
- A clear and convincing nomination (with supporting data, demonstrating the impacts of its threats and how it meets the listing criteria) is needed to fully understand how the ecological community has been defined and to judge its eligibility against each of the criteria for listing.
- The nomination form is separated into eleven sections; please **complete each section**.
- Use as much space as you need to <u>fully answer</u> each question as best you can; with relevant sources cited and quoted directly, or synthesised appropriately. Where insufficient information is available to answer a question, or part of a question, you must say this in your answer. Do not leave the answer space blank.
- A good example of a nomination is at: <u>www.awe.gov.au/environment/biodiversity/threatened/nominations/forms-and-guidelines</u> under the 'Threatened ecological communities' tab.

# Important notes (continued):

- Ensure you have the most up-to-date information: it is recommended that you contact regional Natural Resource Management organisations and/or state environment departments (and relevant experts) where the ecological community may occur. For details see: http://www.nrm.gov.au/regional/regional-nrm-organisations.
- For all facts and all information you present: you must document your reasoning and provide supporting data. Indicate the reliability of (and any uncertainty in) the information. For example, was it based on: a peer-reviewed research publication; observed data; an inference or extrapolation from the data; 'anecdotal' evidence; or a reasonable premise not yet supported by hard data? You must provide references to source documents (or to personal communications with experts).
- <u>Personal communications</u>: you may cite the opinions of relevant scientific experts (with their approval) in support of your nomination. If you do this, you should also provide: the names of the experts, their qualifications and contact details (in Section 10 of this nomination form).
- **<u>Confidential material</u>**: identify any confidential material and explain its sensitivity.
- <u>**Tables:**</u> you may include tables in or at the end of this form, or as separate electronic documents included as appendixes or attachments. **Refer to each particular table** in the relevant areas of your answers.
- <u>Maps</u>: you must supply and adequately label maps. If you are unable to supply maps electronically, please provide them in hard copy. Also, provide the map data, or reference sources from which data may be obtained.
- <u>Photographs</u>: you should adequately label photographs and <u>only use them as supporting</u> <u>material.</u> The criteria for listing need to be addressed 'in writing'.
- <u>Cross-referencing</u>: you may cross-reference relevant areas of the nomination form where you need to; e.g. to avoid unnecessary duplication (but **answer each question clearly and as thoroughly as you can**).
- The Department recognises the significant investment in time and effort required to complete a nomination for a threatened ecological community; it is suggested that you **contact us in advance to discuss your prospective nomination.** We are happy to provide advice and answer your questions. Please contact:

The Director Ecological Communities Section Department of Agriculture, Water and the Environment GPO Box 858 Canberra ACT 2601 Telephone (02) 6274 2317 Email <u>epbc.nominations@environment.gov.au</u>

**Please answer all the questions**, citing <u>references</u> where applicable (also list all references in Section 10). If insufficient information exists to answer a question, in accordance with the *EPBC Regulations 2000*, you <u>must indicate</u> this instead of leaving the question blank.

Your answers may be provided in this form, with attachments as required; or as a separate document. It must include everything requested in this form, including a signed declaration. Please ensure that all questions are answered, with each response clearly indicating to which question it refers.

Questions required by the Regulations are marked with an asterisk (\*).

# Section 1 - Nominator Details\*

Note: Nominator details are subject to the provision of the *Privacy Act 1988* and will not be divulged to third parties if advice regarding the nomination is sought from such parties.

Your Name*				
Organisation, or				
Company name*				
(if applicable)				
Postal address*				
Email* (if applicable)				
Phone*				
Fax				
I declare that the information in this nomination form and any attachments is true and correct to the best of my knowledge.				
Signature (or insert				
electronic signature)				
Date signed				

Section 2 - Listing Category for which the ecological community is nominated*				
Is the ecological community currently listed under the EPBC Act? (Please check one box)	<ul> <li>Not currently EPBC Act listed</li> <li>Currently EPBC Act listed</li> <li>Part of it is currently EPBC Act listed</li> </ul>			
	If listed/part listed, under what name and in which category is it listed:			
Proposed listing category.*	Critically endangered			
(Please check one box - this should represent the highest category indicated by information provided in Section 9)	Endangered Vulnerable			

### Section 3 - Conservation theme\*

1. Does the nomination meet the annual conservation theme 'Marine and freshwater species' for this assessment period?\* If so, please indicate how.\*

Note that nominations that do not meet the conservation theme are welcome and will be assessed on their relative merits.

Answer Question 1 here. Please use as much space as you need to fully answer the question.

## Section 4 – Name and Description of the ecological community\*

### Name\*

### 2a. What is the proposed name of the ecological community?\*

Consider the dominant species, structure, landscape position and national extent of the ecological community you are nominating. This will help the Committee consider the ecological community's national context and its likely geographic limits.

Answer Question 2a here. Please use as much space as you need to fully answer the question.

#### 2b. Is the ecological community known by any other names?\*

Also give any other names that have been used recently, including where different names apply in different jurisdictions, regions, or major studies.\* Indicate if this information is unavailable.\*

Answer Question 2b here. Please use as much space as you need to fully answer the question.

### **Description\***

3a. Describe the key biological components (main biological features) of the community.\*

For instance, what species (or taxonomic groups) of plants and animals are dominant, characteristic of, or commonly occur in the community; what is the typical vegetation, or other biotic structure (if relevant).

Answer Question **3a** here. Please use as much space as you need to fully answer the question.

### 3b. Describe the key species in the community.\*

What are the key species and why?\* What information is available about each key species?\* Cite relevant sources and indicate if any information is unavailable.\*

Answer Question **3b** here. Please use as much space as you need to fully answer the question.

4. Describe the <u>key</u> interactions and functional processes in the ecological community; i.e. dependencies, ecological processes and interactions between biological and/or non-biological components (where known).\*

Include connectivity elements such as groundwater, ocean currents or key migratory species; explain why they are important. Cite relevant sources and indicate if any of this information is unavailable.\*

Answer Question 4 here. Please use as much space as you need to fully answer the question.

# 5a. Describe the associated non-biological landscape/seascape characteristics, or components of the ecological community.\*

For instance, what is the typical landscape/seascape in which the community occurs? Is it associated with a particular soil type or substrate? What major climatic variables drive the distribution of the ecological community (e.g. rainfall, temperature; maxima, minima, average, or seasonality)? Are there particular altitudes or geographic boundaries (e.g. latitudes, coordinates, continental features); or position in the landscape (e.g. in valleys, on hillsides, or in estuaries)?

Cite relevant sources and indicate if any of this information is unavailable.\*

Answer Question **5a** here. Please use as much space as you need to fully answer the question.

#### **5b. Describe the location and national extent of the ecological community.**

Where does the ecological community occur? If possible, indicate the bioregions or other defined areas in which the ecological community occurs (see the <u>Guidelines</u>).

Describe the full extent of the ecological community at a national scale, not just its occurrence in specific areas or regions. If the ecological community is biologically or ecologically distinct in a specific area, describe the features that limit its national extent to this area, and include information in Question 7 below to distinguish it from similar ecological communities in other areas. Reference the map provided at Question 22 if necessary.

Cite relevant sources and indicate if any of this information is unavailable.

Answer Question **5b** here. Please use as much space as you need to fully answer the question.

6. Does the ecological community show any regional or other variation across its national extent, such as characteristic differences in species composition or structure?

If so, please describe these and explain why the variants should be regarded as the same, or separate ecological communities.

Answer Question 6 here. Please use as much space as you need to fully answer the question.

**7a. What other ecological communities intergrade with** (occur near, and/or may be similar to) **the nominated ecological community?** 

Answer Question 7a here. Please use as much space as you need to fully answer the question.

7b. Describe the characteristic features that <u>distinguish</u> the nominated ecological community (including contra-indicative features) from these intergrading (nearby or similar) communities?\*

These diagnostic features can be biological (e.g. plant and animal taxa; types of vegetation; vegetation structure, e.g. tree canopy cover or shrub cover; or other biotic structure); or they can be associated non-biological landscape characteristics (e.g. soil type; substrate; hydrological position in the landscape, e.g. lowland floodplains; or other habitat feature).

Please limit your answer to those features that are <u>specific</u> to (or are contra-indicative of) the ecological community and can be used to <u>distinguish</u> it from other similar (or nearby) ecological communities. Indicate if any of this information is unavailable.\*

Answer Question 7b here. Please use as much space as you need to fully answer the question.

# 8. Describe any other considerations when identifying the ecological community, including when to conduct surveys.

For example: season; time of day; weather conditions; length of time since certain disturbances (such as grazing fire, or drought); length, intensity and pattern of search effort; and any other recommended survey considerations. Include relevant references.

Answer Question 8 here. Please use as much space as you need to fully answer the question.

### **Condition classes/thresholds**

The Threatened Species Scientific Committee (the Committee) recognises that ecological communities can exist in various condition states (e.g. high, moderate and low quality condition).

National listing focuses legal protection on patches of the ecological community that are most functional, relatively natural and in comparatively good condition. For vegetation communities, condition thresholds assist in distinguishing between patches of different quality. See the examples in the table of condition classes below (and see the <u>Guidelines</u> for further details).

For most ecological communities the Committee also applies a combination of minimum patch size with (at least moderate) condition indicators (such as native plant cover and diversity, landscape connectivity, presence of large trees or evidence of key species recruitment) in order to distinguish areas of the ecological community to be protected as a Matter of National Environmental Significance (MNES) under the EPBC Act.

Examples of condition classes				
Condition class	Explanation	Example indicators		
High quality condition	Likely to persist into the long-term with minimal management and hence should be protected under national environmental law.	Threshold between high and moderate quality condition (as per Q.11); e.g. at least 70% of perennial vegetative cover in each layer present is native <b>AND</b> the entire patch contains at least 20 native understorey species.		
Moderate quality condition	Likely to persist into the long-term future with some management and hence should be protected under national environmental law. A good target for restoration programs.	Threshold between moderate and low quality condition (as per Q.11); e.g. at least 50% of perennial understorey vegetative cover is native <b>AND</b> the entire patch contains at least 12 native understorey species.		
Low quality condition	Not protected as the ecological community under the EPBC Act.			
Note: Although very degraded or modified patches (low quality) are not protected as the ecological community listed under the EPBC Act, it is recognised that patches that <u>do not</u> meet the moderate quality condition thresholds may still retain important natural values and may be protected through state and local laws, or schemes. These patches should not be excluded from recovery and other management actions. Suitable actions may improve these patches to the point where they may be regarded as part of the ecological community and hence fully protected under the EPBC Act.				
9. Should condition classes/thresholds be applied to this ecological community? If not, give reasons.				

Please cite references to any quality/condition assessments that have been applied to, or carried out on the ecological community?

Answer Question 9 here. Please use as much space as you need to fully answer the question.

# 10. If condition classes/thresholds should be applied, what features of the community would best define condition classes/categories and why?

E.g. native species diversity; percentage of native (or weed) cover; mature trees; density of trees, shrubs or grass tussocks; proximity to other native vegetation; or water quality.

Answer Question 10 here. Please use as much space as you need to fully answer the question.

11. If condition classes/thresholds should be applied, what threshold values for the above features of the ecological community should define <u>high</u>, <u>medium</u> and <u>low</u> quality condition classes (or another set of applicable condition states), noting that low quality condition occurrences will be excluded from regulatory protection?

Answer Question 11 here. Please use as much space as you need to fully answer the question.

12. If condition classes/thresholds have been/should be applied, what relative proportion (e.g. percentage area) of the ecological community would be/is classed as being of <u>high</u>, <u>medium</u> and <u>low</u> condition (or other set of applicable condition states)?

Answer Question 12 here. Please use as much space as you need to fully answer the question.

### Section 5 - Existing protection

**13a. If known, what proportion of the current extent** (%, km<sup>2</sup>, ha, and/or other measure of amount) **of the ecological community is protected in reserves set aside primarily for conservation purposes?** 

This may already have been provided by you, within the data for Question 3; if so please indicate how it is recorded within the data; or alternatively provide from records of reserves etc.

Answer Question 13a here. Please use as much space as you need to fully answer the question.

#### 13b. Give details of the protection offered by the reserves.

Include: the name of the reserves and if it is known: the extent of the ecological community protected within each reserve; and whether the reserves are permanent and effective in terms of the protection they offer.

Answer Question 13b here. Please use as much space as you need to fully answer the question.

13c. Which if any, reserves have management plans that cover the ecological community and are they being implemented?\* Indicate if any of this information is unavailable.\*

Answer Question 13c here. Please use as much space as you need to fully answer the question.

# 14. What is the community's current level of protection under Australian state/territory legislation?

Record whether there is an existing state listing for all or part of the nominated ecological community, its listing category (e.g. critically endangered, vulnerable) and its title. If not listed as threatened, is there any other form of protection under state/territory legislation? Consider the effectiveness of state/territory environment approvals and vegetation clearance laws.

Answer Question 14 here. Please use as much space as you need to fully answer the question.

# 15. Do areas of the ecological community overlap with other landscape level matters of national environmental significance (MNES)?

Examples include: Ramsar sites; and national/international Heritage listed areas. How much of the ecological community is protected by these other MNES and how effective is protection that extends to the ecological community?

Answer Question 15 here. Please use as much space as you need to fully answer the question.

### Section 6 – Other Ecological and Cultural Values

16. Does the ecological community provide habitat for any listed threatened or migratory species and/or endemic species?

If so, note each species and whether it is listed on state/territory and/or national lists and the nature of its dependence on the ecological community.

Answer Question 16 here. Please use as much space as you need to fully answer the question.

# 17. Do parts, areas, or key species of the ecological community have particular cultural significance to Indigenous people?

Provide additional information on which Indigenous groups they are significant to, the nature of the significance (and of their interactions with the ecological community). Identify any material that needs to remain confidential and explain its sensitivity.

Answer Question 17 here. Please use as much space as you need to fully answer the question.

# Section 7 – Threats and Threat Abatement\*

### Threats\*

18. Identify threats to the ecological community, indicating whether they:

- occurred in the past
- occur in the present and/or
- are likely to occur in the future.\*

### For each threat identified, describe:

- the specific impacts on this ecological community and how and where they occur
- whether the impacts are actual, potential or suspected (if an impact is potential, explain the likelihood and expected timeframe over which the threat impacts on the ecological community)

• whether the threat impacts the entire ecological or only certain areas (specify known areas) and why

• **any ongoing effects;** e.g. legacy impacts of fragmentation; or impacts of ongoing activities or development projects (again, with ongoing effects, give details, where possible, of the expected timeframe over which the threat impacts on the ecological community).

• how the threats interact; e.g. vegetation clearance also causing hydrology, salinity and/or eutrophication impacts; weeds that may exacerbate fire problems.\*

Additionally:

• which demonstrable threats, if any, could cause the ecological community to be lost in the immediate, near, or medium-term future? Over what timescale could the impacts of these threats cause the ecological community to be lost? See the <u>Guidelines</u> for further details, particularly the section on geographic and temporal variation within ecological communities and the guidance for Criterion 2 [Small geographic distribution coupled with demonstrable threat].

Where possible provide supporting information, including quantitative data. Indicate if any of this information is unavailable.\*

If you plan to identify <u>climate change</u> as a threat to the ecological community, refer to <u>Appendix 2</u> of the <u>Guidelines</u> for information on how this should be addressed.

Also, identify and explain any additional biological characteristics, particular to the ecological community (or to important species within it), which exacerbate threats to the ecological community's survival (e.g. low genetic diversity; susceptibility to disease and/or dieback).

Answer Question 18 here. Please use as much space as you need to fully answer the question.

### **Threat abatement and Recovery\***

# **19.** Identify <u>key</u> management documentation that may assist with recovery of the community.\*

Examples include recovery plans, conservation plans, threat abatement plans, or site specific management plans; including plans for other ecological communities and species that may benefit recovery of the nominated ecological community.\* Management plans for reserves (already mentioned at Question 13c) need not be documented in full again; but please reference your previous answer. Indicate if any of this information is unavailable.\*

Answer Question 19 here. Please use as much space as you need to fully answer the question.

# 20. Give an overview of how threats are being abated (or could be abated) and other recovery actions underway or proposed.\*

Identify who is undertaking these activities and how successful the activities have been to date. Indicate if any of this information is unavailable.\*Provide details of any ongoing monitoring programs.

Answer Question 20 here. Please use as much space as you need to fully answer the question.

**21.** What existing support networks for the ecological community are there to facilitate recovery? E.g. an active Landcare group, Conservation Management Network or state recovery team.

Answer Question 21 here. Please use as much space as you need to fully answer the question.

### Section 8 - Distribution\*

#### 22. Describe the ecological community's current and past national distribution \*.

Attach or provide a map or maps showing its known or estimated current and past distribution.\* Provide the map data if possible; along with reference sources from which the maps and data may be obtained; or explain how the maps were created and the datasets used.

Also, provide an overview of distribution surveys to date and how well they cover the ecological community's national distribution; and where possible, indicate any areas that should be surveyed to allow sufficient understanding of the community's variability. Please see this <u>link</u> for guidelines and template for biological and survey data

Answer Question 22 here. Please use as much space as you need to fully answer the question.

# Section 9 - Justification for this Nomination\*

Answer all questions and provide data that clearly demonstrate how the ecological community meets at least one of the criteria for listing.\* Include evidence demonstrating how it meets the requirements for listing under a particular listing category; for example 'The David et al. (1999) finding of a 95% decline in geographic distribution suggests it should be listed as critically endangered'.\*

The ecological community does not need to be eligible for listing under all six criteria. Criteria may be met at different levels of listing category; e.g. Criterion 1 – critically endangered and Criterion 3 – vulnerable. Advice on how to interpret the listing criteria is provided in the <u>Guidelines</u>.

Data may already have been provided in previous sections or questions. Refer to the data again and explain specifically how the data referred to demonstrate that the ecological community meets (or does not meet) the listing criterion.\* Indicate if any information is unavailable.

### 23. <u>Criterion 1</u>: Decline in geographic distribution.

This criterion refers to a past decline in the geographic distribution of the community.

In your answers, identify whether the quantity represents extent of occurrence, or area of occupancy (as described in the <u>Guidelines</u>); or some other measure of geographic distribution and why.

**23a. What is the estimated change in the distribution of the ecological community since European settlement?** Give a best estimate (and if possible, plausible bounds); e.g. a reduction of 40% (35-60%).

Answer Question 23a here. Please use as much space as you need to fully answer the question.

**23b.** What is the estimated change in the distribution of the ecological community over any stated period up to 50 years ago? Give a best estimate (and if possible, plausible bounds); e.g. a reduction of 40% (35-60%).

Answer Question 23b here. Please use as much space as you need to fully answer the question.

# 23c. Please identify, reference and (where possible) supply, the time series data from which the estimate was derived (or a point of contact/person from whom it can be obtained) and explain the methods of estimation.

Answer Question 23c here. Please use as much space as you need to fully answer the question.

#### 23d. Eligibility under Criterion 1

**Based on your answers to questions 23a-c** (and with reference to the Committee's indicative thresholds for Criterion 1 in their <u>Guidelines</u>), is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which particular category?\*

Answer Question 23d here. Please use as much space as you need to fully answer the question.

# 24. <u>Criterion 2:</u> Does the ecological community have a limited geographic distribution; and is it subject to a threatening process that could cause it to be lost in the immediate, near, or medium-term future?

This criterion enables the listing of ecological communities with a limited geographic distribution and for which a threatening process exists within an understood or predicted time-frame. It recognises that an ecological community with a limited distribution has an inherently higher risk of extinction, if it is subject to one or more threatening process. This criterion is unlikely to be met for an ecological community which has a naturally limited distribution but is not currently subject to any threatening process or is unlikely to be subject to a threatening process in the foreseeable future. See the <u>Guidelines</u> for further details.

The relationship between geographic distribution and the risk of extinction from a threatening process may be different for non-terrestrial (e.g. aquatic/marine) ecological communities; for example the effects of fragmentation and connectivity may be different.

24a. (i) Identify and (where possible) supply, map data (refer to Section 8), published reports, or other information that can be used to estimate the current distribution of the community and patch sizes. If more than one source is available please identify and supply all data sets.

- (ii) What is the nominated ecological community's current extent of occurrence? E.g. in ha/km<sup>2</sup>.
- (iii) What is the current (national) area of occupancy of the community? E.g. in ha/km<sup>2</sup>.

Answer Question **24a** (i-iii) here. Please use as much space as you need to fully answer the question.

24b. <u>Patch size:</u> What is the typical current size for a patch, or discrete occurrence, of the ecological community, if known; e.g. in hectares? Also, provide any analyses of (or data indicating) changes in patch size distribution over time.

With regard to vegetation communities, a patch is a discrete and mostly continuous area of the ecological community<sup>1</sup>. Permanent man-made structures, such as roads and buildings, are typically excluded from a patch. A patch may include small-scale variations and disturbances, such as tracks, paths or breaks (including exposed soil, leaf litter, cryptogams and watercourses/ drainage lines), or localised changes in vegetation that do not significantly alter the overall functionality of the ecological community.

Explain how the typical patch size was calculated and the datasets used (include any relevant information on the likely accuracy of these estimates). Include average<sup>2</sup> patch size and the proportion of patches that are certain sizes (e.g. for many terrestrial vegetation communities patch size classes include: <1 ha, <10 ha, <100 ha, and  $\geq$ 100 ha). An example of a way to summarise patch size data for assessment is shown in the table below.

Summary of patch size distribution for the ecological community					
EPBC Act listing criteria thresholds		Patch size range (ha)	No. of patches	% of patches	Median patch size (ha)
Restricted	Very Restricted	0.1 - 10	2,614	86	1.7
Kestricted -		> 10 - 100	371	12	
		> 100	656	2	
		Total	3,050		

# Other concepts may well apply to determine the size of each discrete occurrence of an aquatic ecological community. If this is the case, please explain.

<sup>1</sup> Note: Different jurisdictions and methodologies may define 'a patch' differently. For example NSW vegetation assessment tools define a 'patch' as an area of native vegetation, of <u>one or more different</u> <u>communities that occur together</u>, separated by a gap of no greater than a set distance (usually 100 m).

<sup>2</sup> Median average size is a preferred measure, as opposed to mean average. In either case, identify which average is being quoted (median or mean); otherwise it will be assumed to be a mean average value.

Answer Question **24b** here. Please use as much space as you need to fully answer the question.

# 24c. Explain how the nature of its distribution makes the ecological community likely to be lost to one or more threatening processes.

Describe how the present distribution, in terms of extent of occurrence, area of occupancy, average patch size, or other limits to the distribution makes the ecological community susceptible to relevant threatening processes (as outlined in Question 18) and therefore how it is at risk of further loss and degradation. Include information on the timeframe over which these processes could cause the ecological community to be lost (see the <u>Guidelines</u> for further details on the relevant timeframes and examples).

Answer Question 24c here. Please use as much space as you need to fully answer the question.

### 24d. Eligibility under Criterion 2

**Based on your answers to questions 24a–c** (and with reference to the Committee's indicative thresholds for Criterion 2 in their <u>Guidelines</u>), is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which category?\*

Answer Question 24d here. Please use as much space as you need to fully answer the question.

25. <u>Criterion 3</u>: For a population of a native species that is likely to play a major functional role in the community, has there been a decline (of at least 20% over the last 10 years or three generations, whichever is longer) to the extent that restoration of the community is not likely to be possible in the immediate, near, or medium-term future?

This criterion refers to native species that are critically important in the processes that sustain or play a major role in the ecological community and whose removal has the potential to precipitate changes in community structure or function, sufficient to undermine the overall community's viability.

25a. Has there been a decline in one or more functionally important species within the ecological community? If so, what are the species and their roles in the community?

Answer Question 25a here. Please use as much space as you need to fully answer the question.

25b. What is the magnitude of decline (%) over the last 10 years, or 3 generation lengths (see the <u>Guidelines</u>); and why?

Answer Question **25b** here. Please use as much space as you need to fully answer the question.

# 25c. Under what conditions, if any, is restoration possible over time frames defined in the guidelines?

The indicative timeframe threshold that is used to determine eligibility under this criterion depends on the level of decline of the functionally important species (see the <u>Guidelines</u> for further details). Provide evidence of this.

Answer Question **25c** here. Please use as much space as you need to fully answer the question.

### 25d. Eligibility under Criterion 3

**Based on your answers to questions 25a - c (and with reference to the Committee's indicative thresholds for Criterion 3 in their <u>Guidelines</u>), is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which particular category?\*** 

Answer Question **25d** here. Please use as much space as you need to fully answer the question.

# 26. <u>Criterion 4</u>: Has the ecological community experienced a substantial, severe, or very severe reduction in community integrity?

This criterion recognises that changes in integrity can be identified by comparison with the natural condition, or benchmark state of the ecological community with respect to the composition and arrangement of its abiotic and biotic elements and the processes that sustain them. Provide a description of any benchmark states where available. Examples include a reduction in integrity:

- through detrimental grazing regimes e.g. the ground layer impacted by livestock grazing; leading to the loss of grazing-sensitive palatable species and bare soil that is readily colonised by weeds; also soil compaction, hydrological changes and increased soil erosion.
- due to change in vegetation structure and loss of key habitat elements e.g. tree removal compromising the structure of vegetation, limiting its value as habitat; and weeds diminishing native plant diversity.
- through fragmentation where most remnants are small and relatively isolated (this typically reduces the probability of recolonisation when species are lost from an area and increases the risk of extinction). If fragmentation is a natural or positive characteristic of this ecological community, please state that this is the case and explain why.
- through decline in faunal components the loss of total area and/or fragmentation and/or
  invasive species reduces the ecological community's capacity to support a relatively natural
  and complete faunal assemblage, removing the ecological services provided by these animals.
  For example, the simplification of the bird assemblage may increase the risk of Eucalyptus
  dieback associated with defoliation by insects; and other services such as pollination and seed
  dispersal may also be compromised.

For further information please refer to the Guidelines.

# 26a. Has there been a substantial, severe, or very severe, reduction in the ecological integrity of the ecological community, across most of its geographic distribution?

If so, is the reduction substantial, severe, or very severe? Describe the degradation of the community or its habitat, or the disruption of important community processes. Identify and justify the indicators of change used; and indicate how much of the ecological community is affected.

Answer Question 26a here. Please use as much space as you need to fully answer the question.

# 26b. If changes in integrity have occurred, <u>over what timeframe</u> is restoration likely, with positive human intervention?

The indicative timeframe threshold that is used to determine eligibility under this criterion depends on the level of decline of the functionally important species (see the <u>Guidelines</u> for further details). Provide evidence of this.

Answer Question **26b** here. Please use as much space as you need to fully answer the question.

#### 26c. Eligibility under Criterion 4

**Based on your answers to questions 26a-b** (and with reference to the Committee's indicative thresholds for Criterion 4 in their <u>Guidelines</u>), is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which particular category?\*

Answer Question **26c** here. Please use as much space as you need to fully answer the question.

# 27. <u>Criterion 5</u>: Is the ecological community subject to substantial and serious continuing detrimental change?

This criterion refers to recent, current or projected future detrimental change, where the causes are either not known or not adequately controlled and so the detrimental change is liable to continue unless remedial measures are taken. Natural fluctuations will not normally count, but an observed change should not be considered to be part of a natural fluctuation unless there is evidence for this.

The 'rate of continuing detrimental change' may be indicated in a number of ways, according to the regulations i.e. by:

- a) a rate of continuing decline in its geographic distribution, or of a population of a native species that is believed to play a major role in the community; or
- b) an intensification, across most of its geographic distribution, in degradation, or disruption of important community processes.

# 27a. Estimate the magnitude of detrimental change over the timeframe specified in the <u>Guidelines</u>.

Answer Question 27a here. Please use as much space as you need to fully answer the question.

27b. Identify the measures and justify the evidence you used to estimate the rate of change in 27a.

For instance, published data on rate of recent vegetation clearance or documented expected rate of future loss; data on loss of native species or spread of an invasive species; or other measures of loss of biotic elements or functional degradation.

Answer Question **27b** here. Please use as much space as you need to fully answer the question.

### 27c. Eligibility under Criterion 5

**Based on your answers to questions 27a- b** (and with reference to the Committee's indicative thresholds for Criterion 5 in their <u>Guidelines</u>) is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which particular category?\*

Answer Question 27c here. Please use as much space as you need to fully answer the question.

#### 28. <u>Criterion 6</u>: Is there a Quantitative analysis estimating the probability of extinction?

This criterion is intended to include any form of analysis that estimates the extinction probability of an ecological community based on known characteristics of important species or other components, habitat requirements, ecological processes, threats and any specified management options.

In presenting the results of quantitative analyses, the assumptions (which must be explicitly stated) and the data used must be documented.

# 28a. Is there a Quantitative analysis estimating the probability of extinction of the ecological community?

Answer Question 28a here. Please use as much space as you need to fully answer the question.

# 28b. If yes, what results are there from a Quantitative analysis that estimates the extinction probability of this ecological community?

Answer Question 28b here. Please use as much space as you need to fully answer the question.

28c. Please cite published or other source of analysis; or if unpublished, fully describe and justify the analysis and its assumptions.

Answer Question 28c here. Please use as much space as you need to fully answer the question.

### 28d. Eligibility under Criterion 6

**Based on your answers to questions 28a-c** (and with reference to the Committee's <u>Guidelines</u> for Criterion 6) is the ecological community eligible for listing under this criterion? If it is eligible, then explain why and in which particular category?\*

Answer Question **28d** here. Please use as much space as you need to fully answer the question.

### **Section 10 – References\***

**29. Please provide a list of references cited in your nomination** (authors names and publication date; paper/article title; publication name/number (i.e. of the journal or book).\* Also provide correct URLs where the documents are available on the Internet; see examples below. Indicate if any of this information is unavailable.\*

Note: The opinion of appropriate scientific experts may be cited (with their approval) in support of a nomination. If this is done the names of the experts, their qualifications and full contact details must also be provided in the reference list below, along with the date of their opinion.\*

Create your reference list here. Examples are provided for formatting reference only, delete them before submitting your form. Please use as much space as you need.

- *Example* Benson D and McDougall L (1998) Ecology of Sydney plant species Part 6: Dicotyledon family Myrtaceae. Cunninghamia 5(4): 808 – 987. <u>https://www.rbgsyd.nsw.gov.au/RoyalBotanicGarden/media/RBG/Science/Cunninghamia/Volume%205%20-%201998/Volume-5(4)-1998-Cun5Ben808-987.pdf</u>
- *Example* Booth CJ, Spande ED, Pattee CT, Miller JD and Bertsch LP (1998). Positive and negative impacts of longwall mine subsidence on a sandstone aquifer. Environmental Geology 34, 223 233.
- *Example* Cessnock CC [City Council] (2015). Biodiversity in the Cessnock Local Government Area. Last viewed: 15/03/2015. http://www.cessnock.nsw.gov.au/environment/biodiversity
- *Example* Hutton AC (2009). Geological Setting of Australasian Coal Deposits. In 'Australasian Coal Mining Practice' (eds) R Kininmonth and & E Baafi. Australasian Institute of Mining and Metallurgy, Carlton Victoria.

**30.** Please provide (electronic/scanned) copies of key documentation/references (or relevant parts thereof) cited in the nomination, if they are not easily accessible via the internet.

List any attached items here (identify the relevant sections). Please use as much space as you need.

# **31.** Identify relevant experts and their contact details, indicating which were consulted during preparation of this nomination.

Provide relevant contacts here. Please use as much space as you need.

#### 32. Please include or attach images of the ecological community if available.

### IMAGE CONSENT STATEMENT

The Department is seeking permission to use the image(s) provided with the nomination. The Department may choose to use the image in a variety of ways including (but not limited to) printed and online content, social media and press releases. The owner of the image will be attributed if the image is used.

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# Thank you for taking the time to prepare this nomination

Section 11 – Completed nomination f	orm checklist				
Section 11 – Completed nomination form checklist					
<ul> <li>Please check all items on this list have been completed and are included with your nomination. Not including items on this list risks non-compliance with the <i>EPBC Regulations</i> 2000 which could mean that your nomination will not be eligible for consideration.</li> <li>I have read and applied the <u>Guidelines for Nominating and Assessing the Eligibility for Listing of Ecological Communities as Threatened according to the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act) and the relevant parts of sections 7.01 and 7.02 of the <u>EPBC Regulations 2000</u> to this nomination.</u></li> </ul>					
I have included: Nominator details including name (& organisation/company), address, email and phone					
<ul> <li>number</li> <li>*Name of the ecological community</li> <li>*Any other names it is known by</li> <li>*Map or maps included; or attached</li> <li>*References cited and a full reference list included</li> <li>*For any unanswered questions, a statement indicating that insufficient information is available.</li> <li>I have included a description of:</li> <li>*Biological components of the ecological community</li> <li>*Non biological components of the ecological community</li> <li>*Key interactions and functional processes</li> <li>*Characteristic features distinguishing it from other ecological communities</li> <li>*Key species (dominant, characteristic, diagnostic, threatened, functionally important etc)</li> <li>*Known or estimated current extent of the ecological community</li> <li>*Past/current/future (and identified as actual/potential) threats, including how they are being/how could they be abated</li> <li>*The category the ecological community should be listed under and why (and the</li> </ul>					
ecological community's eligibility for li					
Where did you find out about nominating items? The Committee would appreciate your feedback regarding how you found out about the nomination process. Your feedback will ensure that future calls for nominations can be advertised as effectively as possible					
<ul> <li>The Department's website</li> <li>The Australian newspaper</li> <li>Web search</li> <li>Word of mouth</li> <li>Social media. If so which one? (provide details below)</li> <li>Journal/society/organisation website or email. If so which one? (provide details below)</li> <li>Other (provide details below)</li> <li>Details:</li> </ul>					
How long did it take you to prepare this nomin	nation (e.g. in person hours):				
	nation (e.g. in person nours).				
How to lodge your nomination. Completed nominations must be lodged by <b>5pm EST</b> , on <b>31 March 2022</b> via email or post.					
1. via email to: <u>epbc.nominations@environment.gov.au</u> # If a basisting based on the second of the	2. via post <sup>#</sup> to: The Director, Ecological Communities Section Department of Agriculture, Water and the Environment GPO Box 858, Canberra ACT 2601				
" If submitting by post, please include an elect memory/USB stick, CD/DVD, or other suitabl	ronic copy of the nomination in Word format on e media.				