



## Threatened Species Nomination 2022

### For amending the list of threatened species under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*

The purpose of this form is to provide a nomination to the Threatened Species Scientific Committee (the Committee) for assessment of a species/subspecies which is not currently included in the list of threatened species for listing or for reassessment of a species/subspecies which is currently listed for transfer into another threat category within the list.

If you are nominating a species for removal from the list please complete the nomination form to delist a species at the following link: <https://www.awe.gov.au/sites/default/files/documents/nomination-form-delisting.pdf>

Please note that nominations will be considered by the Committee and the Minister for the Environment for inclusion in the Finalised Priority Assessment List for the assessment period commencing 1 October 2022. Not all nominations will be prioritised for assessment.

The Committee recognises providing the information required to undertake an assessment of the eligibility for listing of a nominated species is demanding. Nominators are encouraged to seek expert advice where appropriate to assist them to complete the nomination form.

#### Important notes for completing this form

- **Please complete the form as comprehensively as possible by providing a response in each box with an orange border.** It is important for nominations to provide the Committee with the most comprehensive information available on which to assess a species' eligibility for listing against the EPBC Act criteria.
- **Certain information in this form is required to be provided by the *EPBC Regulations 2000* (<https://www.legislation.gov.au/Details/F2016C00914>). Nominations that do not provide the information required by the regulations cannot be provided to the Committee for consideration. All of the required information is covered by the questions in this nomination form. If information to answer any of the questions is not available please state this in your response as this is sufficient to meet the requirements of the regulations.**
- Reference all information sources, both in the text and in a reference list at the end of the form. This includes providing details and potential copyright details of any images provided with submission.
- The opinion of appropriate scientific experts may be cited as personal communication with their approval. Please provide the name of the experts, their qualifications and contact details (including employment in a government agency if relevant) in the reference list at the end of the form.
- If the species is considered to be affected by climate change please refer to the guidance for assessing climate change as a threat to native species at Part G of the Committee's *Guidelines for assessing the conservation status of native species*.
- Identify any confidential material and explain the sensitivity. The information in the nomination (except for any information specifically identified by you as confidential) will be made available to the public and experts for comment. Your details as nominator will not be released and will remain confidential.
- The Commonwealth, state and territory governments have agreed to collaborate on national threatened species assessments using a common assessment method. Your nomination, including your details as nominator, may be provided to state and territory government agencies and scientific committees as part of this collaboration.
- Figures, tables, data and maps can be included at the end of the form or provided as separate electronic files or hardcopy documents (referenced as appendices or attachments in your nomination).
- Cross-reference relevant areas of the nomination form where needed.

## Further information on specific questions

### NAME OF NOMINATED SPECIES/SUBSPECIES

You may nominate a native species or subspecies for listing under the EPBC Act. If the taxon you wish to nominate is not a species or subspecies (e.g. a family, race, variation or hybrid) please email [epbc.nominations@environment.gov.au](mailto:epbc.nominations@environment.gov.au) for further guidance.

For the purposes of this form, subspecies are hereafter referred to as 'species'.

You can search the current list of threatened species in the department's Species Profile and Threats Database, here: [www.environment.gov.au/cgi-bin/sprat/public/sprat.pl](http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl)

The full list of fauna and flora that are listed as threatened under the EPBC Act, is available here:

[www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=fauna](http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=fauna)

[www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora](http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora)

You can find a list of species assessed as ineligible for listing here:

[www.awe.gov.au/environment/biodiversity/threatened/unsuccesful-species.html](http://www.awe.gov.au/environment/biodiversity/threatened/unsuccesful-species.html)

### TAXONOMY

- What are the currently accepted scientific and common name(s) for the species (including Indigenous names, where known)? Note any other scientific names that have been used recently. Note the species' authority and the taxonomic group to which the species belongs (Family name is sufficient for plants; both Order and Family name are required for invertebrates).
- Is the species known to hybridise with other species? Describe any cross-breeding with other species in the wild, indicating how frequently and where this occurs.

### DISTRIBUTION

- If the species occurs only within the Australian jurisdiction:
  - Describe the species' current distribution within Australia (including external territories if relevant).
  - Provide a map, if available, indicating latitude, longitude, map datum and location names.
- If the species also occurs outside of the Australian jurisdiction:
  - Include information on the species' geographic distribution within and outside Australia.
  - What percentage of the global population occurs in Australia, and what is its significance?
  - Is the Australian population distinct, geographically isolated, or does part or all of the population migrate into/out of Australia's jurisdiction?
  - Explain the relationship between the Australian population and the global population.
  - Do global threats affect the Australian population?
- Give locations of other populations, e.g. captive/propagated populations, populations recently re-introduced to the wild and sites for proposed population re-introductions. Note if these sites have been identified in recovery plans. Provide latitude, longitude, map datum and location name, where available, in an attached table. The point records/spatial data should be provided as a CSV or MS Excel format file as indicated in the [Data/Metadata template](#). Please see this [link for guidelines on supplying biological and survey data](#). Figures, tables, data and maps can be included at the end of the form or provided as separate electronic files or hardcopy documents (referenced as appendices or attachments in your nomination).
  - For fauna species only – give details of the species' home ranges/territories. Describe any relevant daily and seasonal pattern of movement for the species, or other irregular patterns of movement, including relevant arrival/departure dates if migratory.
- Does the species occur within an EPBC Act listed ecological community? You will find a list of EPBC Act listed ecological communities here: [www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl](http://www.environment.gov.au/cgi-bin/sprat/public/publiclookupcommunities.pl)

### BIOLOGY/ECOLOGY

- **Life Cycle:** Provide detail on the age at sexual maturity, average life expectancy, natural mortality rates, and generation length
  - "*Generation length*" is defined as the average age of parents of the current cohort (i.e. newborn individuals in the population). Generation length therefore reflects the turnover rate of breeding individuals in a population. Generation length is greater than the age at first breeding and less than the age of the oldest breeding individual, except in species that breed only once. Where generation length varies under threat, the more natural, i.e. pre-disturbance, generation length should be used. It is often calculated as  $(\text{longevity} + \text{age at maturity})/2$ . Provide details of the methods used to calculate the generation length.

- **Reproduction:** Provide detail on the reproductive requirements of this species.
  - **Flora:** When does the species flower and set fruit? What conditions are needed for this? What is the pollinating and seed dispersal mechanisms? If the species is capable of vegetative reproduction, include a description of how this occurs, the conditions needed and when. Does the species require a disturbance regime (e.g. fire, cleared ground) in order to reproduce?
  - **Fauna:** provide an overview of the species' breeding system and breeding success, including: when it breeds; what conditions are needed for breeding; whether there are any breeding behaviours that may make it vulnerable to a threatening process?
- **Habitat**
  - Provide information on aspect, topography, substrate, climate, forest type, associated species, sympatric species and anything else that is relevant to the species' habitat.
  - Explain how habitats are used (e.g. breeding, feeding, roosting, dispersing, basking, etc.)
  - Does the species use refuge habitat (e.g. in times of fire, drought or flood)? Describe this habitat.
- **For fauna:**
  - **Feeding:** Summarise the species' feeding behaviours, diet, and the timing/seasonality associated with these. Include any behaviour that may make the species vulnerable to a threatening process.
  - **Movement:** provide information on daily and seasonal movement patterns.

## THREATS

For each threat, describe:

- whether the threats are actual or potential
- how and where it impacts on this species
- what its effect has been so far (indicate whether it is known or suspected; present supporting information/research; does it only affect certain populations)
- what is its expected effect in the future (is there supporting research/information; is the threat only suspected; does it only affect certain populations)
- what is the relative importance or magnitude of the threat to the species

If subject to natural catastrophic events, i.e. events with a low predictability that are likely to severely affect the species, identify the type of event, explain its likely impact and indicate the likelihood of it occurring (e.g. a drought/cyclone in the area every 100 years).

Identify and explain any additional biological characteristics particular to the species that are threatening to its survival (e.g. low genetic diversity).

**Climate change as a threat:** If climate change is an important threat to the nominated species, provide referenced information on exactly how climate change might significantly increase the nominated species' vulnerability to extinction. For guidance refer to the Guidelines for assessing climate change as a threat to native species.

## THREAT ABATEMENT

- Describe how threats are or could be abated.
- Identify who is undertaking these activities and how successful the activities have been to date.
- Describe any mitigation measures or approaches that have been developed specifically for the species at identified locations. Identify who is undertaking these activities and how successful the activities have been to date.
- For species nominated as Extinct in the Wild, provide details of the locations in which the species occurs in captivity and the level of human intervention required to sustain the species.

## CURRENT LISTING CATEGORY

Please select the EPBC Act listing category in which the species is listed. You can search for the current status of threatened species in the department's Species Profile and Threats Database, here: [www.environment.gov.au/cgi-bin/sprat/public/sprat.pl](http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl) For more information about these categories, see the Committee's *Guidelines for assessing the conservation status of native species*.

## REASONS FOR THE NOMINATION TO TRANSFER TO ANOTHER CATEGORY

Please specify the reason for the nomination to transfer to another category.

- **Genuine.** The change in category is the result of a genuine status change that has taken place since the previous assessment. For example, the change is due to an increase in the rate of decline, a decrease in population or range size or habitat, or declines in these for the first time (owing to increasing/new threats).
- **Knowledge.** The change in category is the result of new knowledge, e.g. owing to new or newly synthesized information about the status of the taxon (e.g. better estimates for population size, range size or rate of decline).
- **Taxonomy.** The change in category is due to a taxonomic change adopted during the period since the previous assessment. Such changes include:
  - *newly split* (the taxon is newly elevated to species level)
  - *newly described* (the taxon is newly described as a species)

- *newly lumped* (the taxon is recognized following lumping of two previously recognized taxa)
- *no longer valid/recognised* (either the taxon is no longer valid e.g. because it is now considered to be a hybrid or variant, form or subspecies of another species, or the previously recognized taxon differs from a currently recognized one as a result of a split or lump).
- *Mistake*. The previous category was applied in error.
- *Other*. The change in category is the result of other reasons not easily covered by the above, and/or requires further explanation. Examples include change in assessor's attitude to risk and uncertainty.

## INITIAL LISTING

Information on the reasons for the initial listing may be available in the original listing for the species. You can search for the listing and conservation advice for threatened species in the department's Species Profile and Threats Database, here: [www.environment.gov.au/cgi-bin/sprat/public/sprat.pl](http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl)

If there is insufficient information to provide details as to the reasons for the original listing please state this.

## ELIGIBILITY AGAINST THE CRITERIA

For a species to be eligible for listing as a threatened species it must be assessed as meeting at least one of the five criteria for listing. For a species already listed as threatened under the EPBC Act to be eligible for listing in a higher or lower category of threat it must be assessed as meeting the indicative threshold for at least one of the five criteria. For example, for a species listed as Endangered to be found eligible for listing as Critically Endangered, it must meet the Critically Endangered thresholds for at least one of the criteria.

The species does not have to be found eligible for all criteria, however an **answer to all questions** must be provided. If data/information are unavailable for a particular criterion a statement to this effect is required.

If you hold unpublished data that supports assessment of a criterion you must provide them with the nomination.

The Committee refers to the 'Guidelines for Using the IUCN Red List Categories and Criteria'

[https://nc.iucnredlist.org/redlist/content/attachment\\_files/RedListGuidelines.pdf](https://nc.iucnredlist.org/redlist/content/attachment_files/RedListGuidelines.pdf) for interpreting the criteria. Please refer to the guidelines for explanations of how to address answers to the criteria.

## CONSERVATION DEPENDENT CONSIDERATIONS

### CONSERVATION PROGRAM

A species that has a specific conservation program, the cessation of which would result in the species becoming Vulnerable, Endangered or Critically Endangered, may be eligible for listing as conservation dependent.

Please provide information such as:

Details of the program, its publication and/or availability for viewing

- Who implements the program?
- What is the length of the program, date of termination, or is it perpetual?
- Is it a single program or a combination of programs and/or actions, and if so, provide details.
- Does the program manage the entire range of the species, or part?
- If part, to what extent does this prevent the entire species from being eligible for listing as Vulnerable, Endangered or Critically Endangered?
- What is the estimated probability of decline to Vulnerable, Endangered or Critically Endangered for the species if the program ceases.
- Does the program address all known threats to the species that would otherwise cause the species to become Vulnerable, Endangered or Critically Endangered?

Note: If eligible as conservation dependent based on a specific conservation program (Section 179 (6)(a)), the species cannot also be found to be eligible as Vulnerable, Endangered or Critically Endangered.

## FISH MANAGEMENT PLANS

- Provide details of the management plan, its publication and/or availability for viewing.
- Who implements the management plan?
- What is the length of operation of the management plan, date of termination, or is it perpetual?
- Is it a single management plan or a combination of plans, and if so, provide details.
- Does the management plan manage the entire range of the species, or part?
- Provide details of the management actions that stop the species' decline, and support its recovery so that its chances of long term survival in nature are maximised? Note that only legislated actions (in force under law) can be considered in this criterion.
- What is the projected recovery under the plan (population numbers, percentage of virgin biomass) and in what timeframe?

- Is there an estimation of likelihood of recovery under the plan within the timeframe provided (e.g., % chance of recovery to the identified level)?

Note: according to the EPBC Act a 'fish' includes all species of bony fish, sharks, rays, crustaceans, molluscs and other marine organisms, but does not include marine mammals or marine reptiles.

If a fish is found eligible as conservation dependent based on a management plan (Section 179 (6)(b)), the species is not necessarily ineligible as Vulnerable, Endangered or Critically Endangered.

### **MANAGEMENT PLAN LEGISLATIVE BASIS**

- Is the plan in its entirety legislated?
  - If yes, provide details of the legislation.
  - if no, are specific actions within it legislated? Note, only these actions can be considered in meeting this criterion. Provide specific details of the legislated actions and explain to what extent the plan is not in force under law. To what extent do these management actions provide for the entire species?

### **DECLARATION**

In signing this nomination form, you agree to grant the Commonwealth of Australia (as represented by the Department of Agriculture, Water and the Environment) a perpetual, non-exclusive, worldwide, royalty-free licence to use, reproduce, publish, communicate and distribute information described in the nomination form (i.e. information you have provided that is not referenced to other sources), but excluding any information specifically requested by you to remain confidential, in the Department's websites and publications and to promote those web sites and publications in any medium.

As nominator your details are automatically subject to the provisions of the *Privacy Act 1988* and will not be divulged to third parties. The Commonwealth, state and territory governments have agreed to collaborate on national threatened species assessments using a common assessment method. Your nomination, including your details as nominator, may be provided to state and territory government agencies and scientific committees as part of this collaboration.

If you subsequently agree to be cited as the author of specific, cited information, you will be acknowledged in all publications and websites in which that information appears, in a manner consistent with the *Style Manual for Authors, Editors and Printers* (latest edition).

# Threatened Species Nomination 2022

## Details of the nominated species or subspecies

### NAME OF SPECIES (OR SUBSPECIES)

Scientific name:

Common name(s):

### TAXONOMY

Provide any relevant detail on the species' taxonomy (e.g. authors of taxon or naming authority, year and reference; synonyms; Family and Order).

### CONVENTIONALLY ACCEPTED

Is the species' taxonomy conventionally accepted?

- ☐ Yes  
☐ No

If the species is not conventionally accepted please provide the following information required by the *EPBC Regulations 2000*:

- a taxonomic description of the species in a form suitable for publication in conventional scientific literature;
- OR
- evidence that a scientific institution has a specimen of the species, and a written statement signed by a person who is a taxonomist and has relevant expertise (has worked with, or is a published author on, the class of species nominated), that the species is considered to be a new species.

### DESCRIPTION

Provide a description of the species including where relevant, distinguishing features, size and social structure  
How distinct is this species in its appearance from other species? How likely is it to be misidentified?

### DISTRIBUTION

Provide a succinct overview of the species' known or estimated current and past distribution, including international/national distribution. Provide a map to aid in the rigour and reliability of spatial data. The provision of a map and related data will help facilitate the decision making by the Department. The point records/spatial data should be provided as a CSV or MS Excel format file as indicated in the [Data/Metadata template](#). Please see this [link](#) for guidelines on supplying biological and survey data.

Is the species protected within the reserve system (e.g. national parks, Indigenous Protected Areas, or other conservation estates, private land covenants, etc.)? If so, which populations? Which reserves are actively managed for this species? Give details. Figures, tables, data and maps can be included at the end of the form or provided as separate electronic files or hardcopy documents (referenced as appendices or attachments in your nomination).

### BIOLOGY/ECOLOGY

Provide a summary of biological and ecological information.

Include information required by the *EPBC Regulations 2000* on:

- life cycle including age at sexual maturity, life expectancy, natural mortality rates
- specific biological characteristics
- habitat requirements for the species
- for fauna: feeding behaviour and food preference and daily seasonal movement patterns
- for flora: pollination and seed dispersal patterns

## Threats

### IDENTIFICATION OF KNOWN THREATS AND IMPACT OF THE THREATS

Identify in the tables below any known threats to the species, under the provided headings indicate if the threat is **past, current or future** and whether the threats are **actual or potential**.

Past threats	Impact of threat

Current threats	Impact of threat

Actual future threats	Impact of threat

Potential future threats	Impact of threat

### THREAT ABATEMENT

Give an overview of recovery and threat abatement/mitigation actions that are underway and/or proposed.

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## Listing category

### CURRENT LISTING CATEGORY

What category is the species currently listed in under the EPBC Act? (If you are nominating the species for removal from the list, please complete the [nomination form for removal from the list](#)).

<input type="checkbox"/> Not Listed	<input type="checkbox"/> Extinct	<input type="checkbox"/> Extinct in the wild	<input type="checkbox"/> Critically Endangered
	<input type="checkbox"/> Endangered	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Conservation dependent

### NOMINATED LISTING CATEGORY

Note: after answering the questions below relating to the eligibility again the criteria sufficient evidence should be available to determine the category for listing. Refer to the indicative threshold criteria in the guidelines.

<input type="checkbox"/> Extinct	<input type="checkbox"/> Extinct in the wild	<input type="checkbox"/> Critically Endangered
<input type="checkbox"/> Endangered	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Conservation dependent

## Transferring a species to another category in the list

Note: If the nomination is to transfer a species between categories in the threatened species list, please complete this section. If the nomination is for a new listing please skip this section and proceed to the Eligibility section below. If the nomination is to remove a species from the list, please use the [nomination form for removal from the list](#).

### REASON FOR THE NOMINATION TO TRANSFER TO ANOTHER CATEGORY

Please mark the boxes that apply by double clicking them with your mouse.

What is the reason for the nomination:

☐ Genuine change of status
 ☐ New Knowledge
 ☐ Mistake
 ☐ Other  
 Taxonomic change – ☐ 'split'
 ☐ newly described
 ☐ 'lumped'
 ☐ no longer valid

### INITIAL LISTING

Describe the reasons for the species' initial listing and if available the criteria under which it was formerly considered eligible.

### CHANGES IN SITUATION

With regard to the listing criteria, how have circumstances changed since the species was listed that now makes it eligible for listing in another category?

## Eligibility against the criteria

### CRITERION 1

#### Population size reduction (reduction in total numbers)

Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4

	Critically Endangered Very severe reduction	Endangered Severe reduction	Vulnerable Substantial reduction
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3, A4	≥ 80%	≥ 50%	≥ 30%
A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased. A2 Population reduction observed, estimated, inferred or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible. A3 Population reduction, projected or suspected to be met in the future (up to a maximum of 100 years) [(a) <i>cannot be used for A3</i> ] A4 An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.	based on any of the following (a) direct observation [except A3] (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites		

Please identify whether the species meets A1, A2, A3 or A4. Include an explanation, supported by data and information, on how the species meets the criterion (A1 – A4). If available include information required by the *EPBC Regulations 2000* on:

- whether the population trend is increasing, decreasing or static
- estimated generation length and method used to estimate the generation length

**You must provide a response.** If there is no evidence to demonstrate a population size reduction this **must be** stated



## CRITERION 2:

Geographic distribution is precarious for either extent of occurrence AND/OR area of occupancy			
	Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1. Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (number of mature individuals)			

Please refer to the '[Guidelines for Using the IUCN Red List Categories and Criteria](#)' for assistance with interpreting the criterion particularly in relation to calculating area of occupancy and extent of occurrence and understanding the definition and use of location.

Please identify whether the species meets B1 or B2. Include an explanation, supported by data and information, on how the species meets at least 2 of (a) (b) or (c).

Please note that locations must be defined by a threat. A location is a geographically or ecological distinct area in which a single threatening event can rapidly affect all individuals of the species present.

If available include information required by the *EPBC Regulations 2000* on:

- Whether there are smaller populations of the species within the total population and, if so, the degree of geographic separation between the smaller populations within the total population
- Any biological, geographic, human induced or other barriers enforcing separation

**You must provide a response.** If there is no evidence to demonstrate that the geographic distribution is precarious for either extent of occurrence AND/OR area of occupancy this **must be** stated.

## CRITERION 3

Small population size and decline			
	Critically Endangered Very low	Endangered Low	Vulnerable Limited
Estimated number of mature individuals	< 250	< 2,500	< 10,000
AND either (C1) or (C2) is true			
C1 An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future	Very high rate 25% in 3 years or 1 generation (whichever is longer)	High rate 20% in 5 years or 2 generation (whichever is longer)	Substantial rate 10% in 10 years or 3 generations (whichever is longer)
C2 An observed, estimated, projected or inferred continuing decline AND its geographic distribution is precarious for its survival based on at least 1 of the following 3 conditions:			
(a) (i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
(a) (ii) % of mature individuals in one subpopulation =	90 – 100%	95 – 100%	100%
(b) Extreme fluctuations in the number of mature individuals			

Please identify the estimated total number of mature individuals and either an answer to C1 or C2. Include an explanation, supported by data and information, on how the species meets the criteria. **Note:** If the estimated total number of mature

individuals is unknown but presumed to be likely to be >10 000 you are not required to provide evidence in support of C1 or C2 just state that the number is likely to be >10 000.

**You must provide a response.** If there is no evidence to demonstrate small population size and decline this **must be** stated.

#### CRITERION 4:

Criterion 4. Number of mature individuals			
	Critically Endangered Extremely low	Endangered Very Low	Vulnerable Low (Medium-term future) <sup>1</sup>
Number of mature individuals	< 50	< 250	< 1,000
D2 <sup>1</sup> Only applies to the Vulnerable category Restricted area of occupancy or number of locations with a plausible future threat that could drive the species to critically endangered or Extinct in a very short time	-	-	D2. Typically: area of occupancy < 20 km <sup>2</sup> or number of locations ≤ 5

<sup>1</sup> The IUCN Red List Criterion D allows for species to be listed as Vulnerable under Criterion D2. The corresponding Criterion 4 in the EPBC Regulations does not currently include the provision for listing a species under D2. As such, a species cannot currently be listed under the EPBC Act under Criterion D2 only. However, assessments may include information relevant to D2. This information will not be considered by the Committee in making its recommendation of the species' eligibility for listing under the EPBC Act, but may assist other jurisdictions to adopt the assessment outcome under the [common assessment method](#).

Please identify the estimated total number of mature individuals and evidence on how the figure was derived.

**You must provide a response.** If there is no evidence to demonstrate very small population size and decline this **must be** stated.

#### CRITERION 5

Quantitative Analysis			
	Critically Endangered Immediate future	Endangered Near future	Vulnerable Medium-term future
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations, whichever is longer (100 years max.)	≥ 20% in 20 years or 5 generations, whichever is longer (100 years max.)	≥ 10% in 100 years

Please identify the probability of extinction and evidence as to have the analysis was undertaken.

**You must provide a response.** If there has been no quantitative analysis undertaken **must be** stated.

#### SUMMARY OF CRITERIA UNDER WHICH THE SPECIES IS ELIGIBLE FOR LISTING

Please mark the criteria and sub-criteria that apply.

<input type="checkbox"/> Criterion 1	<input type="checkbox"/> A1 (specify at least one of the following) <input type="checkbox"/> a) <input type="checkbox"/> b) <input type="checkbox"/> c) <input type="checkbox"/> d) <input type="checkbox"/> e); AND/OR <input type="checkbox"/> A2 (specify at least one of the following) <input type="checkbox"/> a) <input type="checkbox"/> b) <input type="checkbox"/> c) <input type="checkbox"/> d) <input type="checkbox"/> e); AND/OR <input type="checkbox"/> A3 (specify at least one of the following) <input type="checkbox"/> b) <input type="checkbox"/> c) <input type="checkbox"/> d) <input type="checkbox"/> e); AND/OR <input type="checkbox"/> A4 (specify at least one of the following) <input type="checkbox"/> a) <input type="checkbox"/> b) <input type="checkbox"/> c) <input type="checkbox"/> d) <input type="checkbox"/> e)
<input type="checkbox"/> Criterion 2	<input type="checkbox"/> B1 (specify at least two of the following) <input type="checkbox"/> a) <input type="checkbox"/> b) <input type="checkbox"/> c); AND/OR <input type="checkbox"/> B2 (specify at least two of the following) <input type="checkbox"/> a) <input type="checkbox"/> b) <input type="checkbox"/> c)
<input type="checkbox"/> Criterion 3	<input type="checkbox"/> estimated number of mature individuals AND either C1 or C2 either a or b

- ☐ C1 **OR** 2 of C2 a(i), a(ii) or b  
☐ C2 ☐ a (i) ☐ a (ii)  
☐ C2 ☐ b)

☐ Criterion 4

☐ Criterion 5

For conservation dependent  
nominations only:

- ☐ Criterion 1  
☐ Criterion 2

## Conservation Dependent Considerations

**Only complete** this section if nominating for consideration under the conservation dependent category, or if nominating a fish (or harvested marine species) with a management plan answer either the first or second question below, **whichever is more appropriate**.

Please note that the currently only fish species that have been listed under this criterion. However it can be applied to other species.

### CONSERVATION PROGRAM (if species is a fish or harvested marine species, answer the question below instead)

- Give details of the conservation program for which this species is a focus.
- Provide details of how the species would become Vulnerable, Endangered or Critically Endangered should the program cease.

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### FISH MANAGEMENT PLANS

- Give details of the plan of management that focuses on the fish.
- Provide details of how the plan provides for management actions necessary to stop the decline of and support the recovery of the species, so that its chances of long term survival in nature are maximised.
- Explain the effect on the fish if the plan of management ceased

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### MANAGEMENT PLAN'S LEGISLATIVE BASIS

Is the plan of management (or some component/s of it) in force under Commonwealth or State/Territory law? If so, provide details.

## Other Considerations

### INDIGENOUS CULTURAL SIGNIFICANCE

Is the species known to have cultural significance for Indigenous groups within Australia? If so, to which groups? Provide information on the nature of this significance if publicly available.

### CONSERVATION THEME

The Conservation theme for the 2022 assessment period is '**Marine and freshwater species**'. Note that nominations which do not relate to the theme will still be considered.

### FURTHER STUDIES

Identify relevant studies or management documentation that might relate to the species (e.g. research projects, national park management plans, recovery plans, conservation plans, threat abatement plans, etc.).

### ADDITIONAL COMMENTS/INFORMATION

Please include any additional comments or information on the species such as survey or monitoring information, maps that would assist with the consideration of the nomination.

### IMAGES OF THE SPECIES

Please include or attach images of the species 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.

If you own the copyright to the image(s) please select the appropriate box to state your preference. For images sourced from others, include the copyright owner's details. If the source of the image is unknown, please indicate this as well.

- ☐ I own the copyright and give permission for the Department to use the image(s)
- ☐ I own the copyright and do not give permission for the Department to use the image(s)
- ☐ I do not own the copyright. Permission should be sought from: \_\_\_\_\_

### Reviewers and References

#### REVIEWER(S)

Has this nomination been peer-reviewed? Have relevant experts been consulted on this nomination? If so, please include their names, current professional positions and contact details.

#### REFERENCE LIST

Please list key references/documentation you have referred to in your nomination.

### Nominator's Details

Note: Your details are subject to the provisions of the *Privacy Act 1988* and will not be divulged to third parties, except for state and territory governments and scientific committees which have agreed to collaborate with the Commonwealth on national threatened species assessments using a common assessment method.

If there are multiple nominators please include details below for all nominators.

**TITLE** (e.g. Mr/Mrs/Dr/Professor/etc.)

**FULL NAME**

**ORGANISATION OR COMPANY NAME (IF APPLICABLE)**

**CONTACT DETAILS**

Email:

Phone:

Postal address:

## DECLARATION

I declare that, to the best of my knowledge, the information in this nomination and its attachments is true and correct.

Signed:

*\* If submitting by email, please attach an electronic signature*

Date:

## Where did you find out about nominating species?

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 appropriately.

Please tick

- ☐ Department website      ☐ Web search      ☐ *The Australian* newspaper      ☐ word of mouth
- ☐ Journal/society/organisation web site or email? If so which one .....
- ☐ Social media? If so which .....
- ☐ Other .....

## Lodging your nomination

Completed nominations may be lodged either:

1. by email in Microsoft Word format to: [epbc.nominations@environment.gov.au](mailto:epbc.nominations@environment.gov.au), or

2. by mail to:      The Director  
                         Species Listing, Information and Policy Section  
                         Department of Agriculture, Water and the Environment  
                         GPO Box 858  
                         CANBERRA ACT 2601

**\* If submitting by mail, you must include an electronic copy on a memory stick.**

**NOMINATIONS CLOSE AT 5PM ON 31 MARCH 2022.**