**Threatened species nomination form**

Nomination to the Western Australian Minister for Environment to amend the list of threatened species under Part 2 of the WA *Biodiversity Conservation Act 2016*. This form may be used to nominate amendments to the list of extinct species.

***Biodiversity Conservation Act 2016***

The *Biodiversity Conservation Act 2016* (the Act) allows for listing a species as a threatened species.

Anyone may nominate a native species (fauna or flora) for listing as a threatened species, or delisting from threatened, or to change the listing category and/or criteria under the Act.

* Nominations may be submitted at any time to [TSSC@dbca.wa.gov.au](mailto:TSSC@dbca.wa.gov.au)
* All nominations submitted by 30 November each year will be reviewed for consideration at the next available Threatened Species Scientific Committee (TSSC) meeting.

**Threatened species listing categories**

Listing as a threatened species is based on the species risk of extinction in the wild and the categories and criteria in the Act and the ministerial guidelines.

Threatened categories:

* critically endangered
* endangered
* vulnerable.

**Ministerial Guideline (Number 1)**

[Procedure for making and assessing public nominations for listing species or ecological communities as threatened species or threatened ecological communities, and for listing key threatening processes](https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/Listings/MG%20No%201%20Nomination%20procedure%20TS%20TECS%20and%20KTPs.pdf).

**International Union for Conservation of Nature Red List Categories and Criteria**

The International Union for Conservation of Nature (IUCN) Red List categories and criteria are used to assist in assessing species eligibility for listing as a threatened species under the Act.

* The questions in this nomination form address the IUCN criteria.
* Technical information and the intent of information requirements as they relate to an assessment against the IUCN Red List categories and criteria:
  + [IUCN Red List Categories and Criteria](https://www.iucnredlist.org/resources/categories-and-criteria). Version 3.1 (2001) Second Edition (2012).
  + [Guidelines for Using the IUCN Red List Categories and Criteria](https://www.iucnredlist.org/resources/redlistguidelines). Version 14 (August 2019).
  + Summary of the five criteria (A-E) used to evaluate if a species belongs in an IUCN Red List threatened category (critically endangered, endangered of vulnerable) is provided as Appendix A to this nomination form.

**Required information**

Detailed information is required for all sections of the form. The questions in this form specify the scientific information required to address the listing criteria and provide information on the biology, ecology, and threats to the species to enable its conservation status to be adequately assessed.

**Nomination review**

Nominations will be reviewed by the Department of Biodiversity, Conservation and Attractions to check the form has been correctly completed, meets the standards required by the nomination form, includes the required information and is adequate to assess eligibility against the listing criteria in accordance with Ministerial Guideline (Number 1).

* The Act states that the Minister may reject a nomination if it is vexatious, frivolous or not made in good faith; or it has not been made in accordance with any prescribed requirement.
* The department will make reasonable endeavours to assist nominators to ensure the nomination form is acceptable.
* Nominations may be sent to species experts for review and comment prior the TSSC assessment.

**Public consultation**

Nominations accepted for TSSC assessment will be made publicly available for a 6-week consultation period.

* A public consultation period is included in Ministerial Guideline (Number 1). The Act does not require nominations to be made publicly available or for a public consultation period.
* A list of [nominations under consideration](https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/118-nominations) will be available on the department’s website for public consultation, prior to assessment of the nomination by the TSSC.
* All comments received as part of the public consultation will be collated by the department and provided to the TSSC without prejudice for their consideration.

**Nomination assessment**

When deciding to list a species as threatened, the Minister must only have regard to matters relating to the survival of the species and must obtain relevant scientific advice.

* The TSSC has been established as an advisory committee to provide scientific advice to the Minister and operates in accordance with the Act and ministerial guidelines.
* The TSSC will use their scientific expertise to undertake rigorous scientific assessment of nominations to determine eligibility for listing, delisting or status change under the Act categories, using the criteria in the Act, ministerial guidelines and IUCN Red List categories and criteria.
* As part of the nomination assessment, the committee will consider comments and information received through the public consultation process.
* The committee provides advice on nomination assessment to the Minister.

**Outcome notification**

Listing determinations are made by the Minister and are published in the *Government Gazette*.

* All nominators will be advised of the outcome of their nomination, after the *Government Gazette* publication.
* A copy of the *Government Gazette* publication and updated threatened species lists will be published on the department’s ‘[Threatened animals](https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-animals)’ and ‘[Threatened plants](https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants)’ web pages.

**National threatened species list alignment**

WA is a signatory to the Commonwealth's Intergovernmental Memorandum of Understanding – [Agreement on a common assessment method for listing of threatened species and threatened ecological communities](https://www.environment.gov.au/biodiversity/threatened/cam) (CAM) and the establishment of a cross-jurisdictional single operational list of threatened species, including extinct species.

* Any changes to WA’s lists of threatened and extinct species are communicated with the Commonwealth for list alignment under the CAM and to ensure that scientific standards, legal robustness and transparency of listing assessments are maintained.
* Nominations approved by the Minister are provided to the Australian Government Department of Agriculture, Water and the Environment for listing assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

**Privacy notice**

The personal information provided in the nominator details section of this form is provided to the TSSC and its delegates to enable the processing of the nomination. If the required personal information is not provided, the nomination may not be processed. The personal information may be disclosed to species expert reviewers and Government agencies with a relevant statutory responsibility but will not be disclosed to other third parties including through the public consultation process.

**Nomination summary**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Current conservation status | | | | | | | | | | | | | | | | | | | | | | | |
| Scientific name: | | | |  | | | | | | | | | | | | | | | | | | | |
| Common name: | | | |  | | | | | | | | | | | | | | | | | | | |
| Family name: | | | |  | | | | | | | | | Fauna  Flora | | | | | | | | | | |
| Nomination for: | | | | Listing  Change of status  Delisting | | | | | | | | | | | | | | | | | | | |
| 1. *Is the species currently on any conservation list, either in another state or territory, Australia or Internationally?* 2. *Is it present in an Australian jurisdiction, but not listed?* | | | | | | | | | | | | | *Provide details of the occurrence and listing status for each jurisdiction in the following table* | | | | | | | | | | |
| Jurisdiction | | | | List or Act name or source reference | | | | Date listed or assessed  (or N/A) | | | | Listing category i.e. critically endangered  (or none) | | | | | | | | Listing criteria i.e. B1ab(iii)+2ab(iii)  (or none) | | | |
| International | | | | IUCN Red List | | | |  | | | |  | | | | | | | |  | | | |
| National | | | | EPBC Act | | | |  | | | |  | | | | | | | |  | | | |
| WA | | | | BC Act | | | |  | | | |  | | | | | | | |  | | | |
| Priority list | | | |  | | | | 1  2  3  4 | | | | | | | | | | | |
| Other state or territory, or another country, or listing recommendation published | | | |  | | | |  | | | |  | | | | | | | |  | | | |
|  | | | |  | | | |  | | | | | | | |  | | | |
|  | | | |  | | | |  | | | | | | | |  | | | |
| Nominated conservation status: category and criteria | | | | | | | | | | | | | | | | | | | | | | | |
| Threatened: | | | Critically endangered (CR) | | | | | | | | Endangered (EN) | | | | | | | | Vulnerable (VU) | | | | |
| Extinct: | | | Extinct (EX) | | | | | | | | Extinct in the wild (EW) | | | | | | | | | |  | | |
| Specially protected: | | | | | special conservation interest (conservation dependent (CD)) | | | | | | | | | | otherwise in need of special protection (OS) | | | | | | | | |
| Delist: | | |  | | | | *(delisted species will be added to the DBCA Priority Fauna or Flora list, except if delisting was for taxonomic reasons)* | | | | | | | | | | | | | | | | |
| What criteria support the nominated category for listing as threatened species?  *Refer to Appendix A table ‘Summary of the five criteria (A-E)’* | | | | | | | | | | | | | |  | | | | | | | | | |
| Eligibility against the criteria | | | | | | | | | | | | | | | | | | | | | | | |
| *Provide justification for the nominated conservation status; is the species eligible or ineligible for listing against the five criteria. For delisting, provide details for why the species no longer meets the requirements of the current conservation status.* | | | | | | | | | | | | | | | | | | | | | | | |
| A. | Population size reduction  *(evidence of decline)* | | | | | | | |  | | | | | | | | | | | | | | |
| B. | Geographic range  *(EOO and AOO, number of locations and evidence of decline)* | | | | | | | |  | | | | | | | | | | | | | | |
| C. | Small population size and decline  *(population size, distribution and evidence of decline)* | | | | | | | |  | | | | | | | | | | | | | | |
| D. | Very small or restricted population  *(population size)* | | | | | | | |  | | | | | | | | | | | | | | |
| E. | Quantitative analysis  *(statistical probability of extinction)* | | | | | | | |  | | | | | | | | | | | | | | |
| Reasons for change of status | | | | | | | | | | | | | | | | | | | | | | | |
| Genuine change | | | | New knowledge | | | | | | Taxonomic change | | | | | | | Previous mistake | | | | | | Other |
| *Provide details:* | | | | | | | | | | | | | | | | | | | | | | | |
| Summary of assessment information *(provide detailed information in the relevant sections form following)* | | | | | | | | | | | | | | | | | | | | | | | |
| EOO | | km2 | | | | AOO | | | km2 (2x2km grid method) | | | | | | | | | Generation length | | | |  | |
| No. locations | | | |  | | | | Severely fragmented | | | | | | | | Yes  No  Unknown | | | | | | | |
| No. subpopulations | | | |  | | | | No. mature individuals | | | | | | | |  | | | | | | | |
| Percentage global population within WA | | | | | | | | | | | | | | | |  | | | | | | | |
| Percentage global population within Australia | | | | | | | | | | | | | | | |  | | | | | | | |
| Percentage population decline over 10 years or 3 generations | | | | | | | | | | | | | | | |  | | | | | | | |
| Current population trend | | | | | | | | | | | | | | | |  | | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Summary of subpopulation and location information *(provide detailed information in the relevant sections of the nomination form following)* | | | | | | | |
| Subpopulation  *(include coordinates)* | Location  (*IUCN definition*) | Land tenure | Survey information: date of survey and no. mature individuals | Area of subpopulation | Site / habitat condition | Threats  *(note if past, present or future)* | Specific management actions |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Nomination detail**

Section 1: Taxonomy

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.1 Current taxonomy | | | | | | | | | | |
| Species name and Author: | | |  | | | | | | | |
| Subspecies name(s) and Author(s): | | |  | | | | | | | |
| Is the species/subspecies conventionally accepted? | | | | | | | | Yes | | No |
| Is there any controversy about the taxonomy? | | | | | | | | Yes | | No |
| *If not conventionally accepted and/or if there is any controversy; provide details:* | |  | | | | | | | | |
| Has the species/subspecies been formally named? | | | | | | | | Yes | | No |
| Has the species/subspecies been recently described? | | | | | | | | Yes | | No |
| *If the species has not been formally named or described;* is it in the process of being described? Is there an anticipated date for the publication of the description? Has a type specimen been deposited? And if so, provide the registration number and where deposited. | | | | |  | | | | | |
| If there are any closely related taxa provide details and include key distinguishing features: | | | |  | | | | | | |
| 1.2 Taxonomic history | | | | | | | | | | |
| Are there recent synonyms for the species? | | | | | | | | Yes | | No |
| *If Yes; provide details of synonyms:* |  | | | | | | | | | |
| Have there been recent changes in the taxonomy or nomenclature? | | | | | | | | Yes | | No |
| *If Yes; provide details of changes:* |  | | | | | | | | | |
| 1.3 Hybridisation | | | | | | | | | | |
| Is there any known hybridism with other species in the wild? | | | | | | Yes | No | | Unknown | |
| *If Yes;* Where does this occur and how frequently? |  | | | | | | | | | |

Section 2: Species information

|  |  |
| --- | --- |
| 2.1 Morphology / physical description | |
| *Insert photograph(s) of species or provide as an attachment:* | |
| Species description: |  |
| 2.2 Biology *(provide details)* | |
|  | |
| 2.3 Ecology *(provide details)* | |
|  | |

Section 3: Habitat

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3.1 Habitat *(provide details in response to the question below)* | | | | | | | | | |
| Describe the habitat suitable for the species (biological and non-biological). Include descriptions of specific purpose habitat (e.g. foraging, breeding, roosting, seasonal migration, different life stages). | | |  | | | | | | |
| If the species occurs in a variety of habitats, is there a preferred habitat? | | |  | | | | | | |
| Does the species use refugia?  *(include what is it and when is it used)* | | |  | | | | | | |
| Is the habitat restricted in extent or number of locations? | | | | | | Yes | No | Unknown | |
| *If Yes, provide details:* |  | | | | | | | | |
| Is this species reliant on a threatened or priority species or ecological community? | | | | | | Yes | No | Unknown | |
| *If Yes, provide details:* |  | | | | | | | | |
| Are there any other species (sympatric species) that may affect the conservation status of the nominated species? | | | | | | Yes | No | Unknown | |
| *If Yes, provide details:* |  | | | | | | | | |
| What is the area, extent, abundance of habitat? | | | |  | | | | | |
| What is the quality of habitat? | | | |  | | | | | |
| Is there a decline in habitat area, extent or quality? | | | | | | Yes | No | Unknown | |
| If there is a decline, is the decline continuing? | | | | Yes | No | | Unknown | | N/A |
| *Provide details:* |  | | | | | | | | |
| What is the important habitat for the survival of the species? | |  | | | | | | | |

Section 4: Survey

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4.1 Survey methods *(Provide details)* | | | | | | | | | | | | | |
| What survey methods are applicable to the species? | | |  | | | | | | | | | | |
| Are there preferred or recommended survey methods that yield better results for the species? | | |  | | | | | | | | | | |
| Are there special requirements, techniques, expertise or other considerations that are necessary when surveying for this species? | | |  | | | | | | | | | | |
| Are there reasons why the species may not be detected during surveys? | | |  | | | | | | | | | | |
| Can the species be identified in the field? | | | | | | | | | | Yes | | | No |
| *Provide details:* |  | | | | | | | | | | | | |
| Can the species be easily confused within similar species in the field? | | | | | | Yes | | No | | | Unknown | | |
| *Provide details:* |  | | | | | | | | | | | | |
| *List any published survey guidelines, guidance statements, protocols, standard operating procedures or other documents that are relevant to conducting surveys for this species.* | | | | | | | | | | | | | |
| 4.2 Survey effort | | | | | | | | | | | | | |
| Has the species been well surveyed? | | | | | | | | | Yes | | | | No |
| Have targeted surveys been conducted for the species? | | | | | | | | | Yes | | | | No |
| *Provide details of the successful and unsuccessful surveys undertaken for the species:* | |  | | | | | | | | | | | |
| 4.3 Research *(Provide details)* | | | | | | | | | | | | | |
| Has the species been well researched? | | | | Yes | No | | Partially | | | | | Unknown | |
| What research has been or is being conducted? | | | |  | | | | | | | | | |
| What are the knowledge gaps for the species? | | | |  | | | | | | | | | |
| Research recommendations: | |  | | | | | | | | | | | |
| 4.4 Monitoring *(Provide details)* | | | | | | | | | | | | | |
| Is the species being monitored, either directly (targeted) or indirectly (general monitoring)? | | | |  | | | | | | | | | |
| What methods are used for monitoring? | | | |  | | | | | | | | | |
| Monitoring recommendations: | |  | | | | | | | | | | | |

Section 5: Geographic range

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5.1 Distribution | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Insert map(s) of the species distribution, or provide as an attachment:* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current distribution of the species within WA? | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What percentage of the species distribution is within WA? | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current distribution of the species within the other Australian states and territories? | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Does the species occur outside of Australia? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Yes | | | | | | | No |
| *If Yes,* what percentage of the species distribution is within Australia, what is the significance of the occurrence in Australia, and what is the current international trend for the species? | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | |
| 5.2 Migration *(fauna only)* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is the species migratory? | | | | | | | | | | | | | | | | | | | | | | | Yes | | | | | | | | | | | | No | | | | | | | Unknown | | |
| Is the migration within WA or within Australia or international?  (include details of migration routes if known) | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
| 5.3 Extent of Occurrence (EOO) within Australia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current EOO? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| How has this been calculated? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the historical EOO? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current EOO trend? | | | | | | Decreasing | | | | | | | | | | Increasing | | | | | | | | | | | | Stable | | | | | | | | | | | | | Unknown | | | |
| *Provide details on the current trend – quantify if possible* | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If there has been a change in EOO when did this change occur? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Was the change observed, estimated, inferred or projected? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If the EOO is decreasing / declining, is it continuing? | | | | | | | | | | | | | | | | | Yes | | | | | | | | | No | | | | | | | | | Unknown | | | | | | | | | N/A |
| Is the continuing decline observed, estimated, inferred or projected? | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is there extreme fluctuation in EOO? | | | | | | | | | | | | | | | | | | | Yes | | | | | | | | | No | | | | | | | | | | | Unknown | | | | | |
| *If Yes, provide details:* | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.4 Area of Subpopulations within Australia *(if not known, go to section 5.5)* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current area of the known subpopulations or occupied habitat? | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| How has this been calculated? | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the historical area of subpopulations? | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current subpopulation trend? | | | | | | Decreasing | | | | | | | | | | | | | | Increasing | | | | | | | | | | | Stable | | | | | | | | | Unknown | | | | |
| *Provide details on the current trend – quantify if possible* | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If there has been a change in the area of subpopulations when did this change occur? | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Was the change observed, estimated, inferred or projected? Give details. | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If the area of subpopulations is decreasing / declining, is it continuing? | | | | | | | | | | | | | | | | | | | | | Yes | | | | | No | | | | | | | | | Unknown | | | | | | | | | N/A |
| Is the continuing decline observed, estimated, inferred or projected? Give details. | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is there extreme fluctuation in the area of subpopulations? | | | | | | | | | | | | | | | | | | | | | | | Yes | | | | | | | | | | | No | | | | | Unknown | | | | | |
| *If Yes, provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.5 Area of Occupancy (AOO) within Australia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current AOO (estimated using the 2x2km grid method specified in the IUCN guidelines)? | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the historical AOO? | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| What is the current AOO trend? | | | | | | | | Decreasing | | | | | | | | | | | Increasing | | | | | | | | | | Stable | | | | | | | | | | | | Unknown | | | |
| *Provide details on the current trend – quantify if possible* | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If there has been a change in AOO when did this change occur? | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Was the change observed, estimated, inferred or projected? Give details. | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If the AOO is decreasing / declining, is it continuing? | | | | | | | | | | | | | | | | | | Yes | | | | | | | No | | | | | | | | | | Unknown | | | | | | | | | N/A |
| Is the continuing decline observed, estimated, inferred or projected? Give details. | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is there extreme fluctuation in AOO? | | | | | | | | | | | | | | | | | | Yes | | | | | | | | | | | | | | No | | | | | | | | | Unknown | | | |
| *If Yes, provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.6 Number of Locations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **‘Locations’** are defined as a geographically or ecologically distinct area in which a single threatening event can rapidly affect all individuals of the taxon present. The size of the location depends on the area covered by the threatening event and may include part of one or many subpopulations. Where a taxon is affected by more than one threatening event, location should be defined by considering the most serious plausible threat. (IUCN 2001). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| At how many locations does the species occur? | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Location | | Threatening event | | | | | | | | | | | | Area description | | | | | | | | | | | | | Subpopulations within location | | | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | |
|  | |  | | | | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | |
| Has there been a change in the number of locations? | | | | | | | | | | | Decrease | | | | | | | | | | | Increase | | | | | | | | No change | | | | | | | | | | | | | Unknown | |
| If there has been a change, when did this change occur? | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Was the change observed, estimated, inferred or projected? Give details. | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If the number of locations is decreasing / declining, is it continuing? | | | | | | | | | | | | | | | | | Yes | | | | | | | | | No | | | | | | | | | Unknown | | | | | | | | | N/A |
| Is the continuing decline observed, estimated, inferred or projected? Give details. | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is there extreme fluctuation in the number of locations? | | | | | | | | | | | | | | | | | | | | | Yes | | | | | | | | | | | | No | | | | | | | | Unknown | | | |
| *If Yes, provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Does this species occur on any offshore islands? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Yes | | | | | | | | No |
| *If Yes, provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.7 Fragmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is the distribution fragmented? | | | | | | | | | | | | | | | Yes | | | | | | | | | | | | | | | | | | No | | | | | | | | Unknown | | | |
| The phrase ‘severely fragmented’ refers to the situation in which increased extinction risks to the taxon results from the fact that most of its individuals are found in small and relatively isolated subpopulations (in certain circumstances this may be inferred from habitat information). These small subpopulations may go extinct, with a reduced probability of recolonization. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is the distribution severely fragmented? | | | | | | | | | | | | | | | Yes | | | | | | | | | | | | | | | | | | No | | | | | | | | Unknown | | | |
| *If Yes, provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.8 Land tenure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is the species known to occur on lands managed primarily for nature conservation? i.e. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Yes  No | | | | | | |
| *If Yes; provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is the species known to occur on lands that are under threat? i.e. mining tenement, zoned for development | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Yes  No | | | | | | |
| *If Yes; provide details:* |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Provide details of other land tenures where the species occurs as this relates to the species conservation status | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Section 6: Population

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **‘Population’** is used in a specific sense in the Red List Criteria that is different to its common biological usage. Population is here defined as the total number of mature individuals of the taxon. In the case of taxa obligately dependent on other taxa for all or part of their life cycles, biologically appropriate values for the host taxon should be used. (IUCN 2001) | | | | | | | | | | | | | | | | | | |
| **‘Subpopulations’** are defined as geographically or otherwise distinct groups in the population between which there is little demographic or genetic exchange (typically one successful migrant individual or gamete per year or less). | | | | | | | | | | | | | | | | | | |
| 6.1 Subpopulations | | | | | | | | | | | | | | | | | | |
| Subpopulation  *(include coordinates)* | Land tenure | | | | Survey information: Date of survey and No. mature individuals | | | | | Area of subpopulation | | | Site / habitat Condition | | | | | |
|  |  | | | |  | | | | |  | | |  | | | | | |
|  |  | | | |  | | | | |  | | |  | | | | | |
|  |  | | | |  | | | | |  | | |  | | | | | |
| 6.2 Population size (Australian context) *(include how numbers were determined/calculated)* | | | | | | | | | | | | | | | | | | |
| What is the total population size? | | | | | | | | |  | | | | | | | | | |
| What is the number of subpopulations? | | | | | | | | |  | | | | | | | | | |
| What percentage of the population is within WA? | | | | | | | | |  | | | | | | | | | |
| What percentage of the population is within Australia? | | | | | | | | |  | | | | | | | | | |
| 6.3 Population dynamics (Australian context) *(include how numbers were determined/calculated)* | | | | | | | | | | | | | | | | | | |
| What is the number of mature individuals? | | | | | | | | |  | | | | | | | | | |
| What is the number of immature individuals? | | | | | | | | |  | | | | | | | | | |
| What is the number of senescing/past reproductive individuals? | | | | | | | | |  | | | | | | | | | |
| What is the maximum number of mature individuals per subpopulation? | | | | | | | | |  | | | | | | | | | |
| What is the percentage of mature individuals for the species in the largest subpopulation? | | | | | | | | |  | | | | | | | | | |
| What percentage of mature individuals is within WA? | | | | | | | | |  | | | | | | | | | |
| What percentage of global mature individuals is within Australia? | | | | | | | | |  | | | | | | | | | |
| What is the age of sexual maturity? | | | | | | | | |  | | | | | | | | | |
| What is the life expectancy? | | | | | | | | |  | | | | | | | | | |
| What is the generation length? (include how this was calculated) | | | | | | | | |  | | | | | | | | | |
| What is the reproductive capacity? (i.e. litter size or number of seeds) | | | | | | | | |  | | | | | | | | | |
| What is the reproductive success? | | | | | | | | |  | | | | | | | | | |
| 6.4 Population trend | | | | | | | | | | | | | | | | | | |
| What is the current population trend (mature individuals)? | | | | | | Decreasing | | Increasing | | | | Stable | | | | Unknown | | |
| What is the percentage of the population change, and over what time period? | | | | | |  | | | | | | | | | | | | |
| How has this been calculated? | | |  | | | | | | | | | | | | | | | |
| If the trend is decreasing; are the causes of the reduction understood? | | | | | | | | Yes | | | No | | | Unknown | | | | N/A |
| Have the causes of the reduction ceased? | | | | | | | | Yes | | | No | | | Unknown | | | | N/A |
| Are the causes of the reduction reversible? | | | | | | | | Yes | | | No | | | Unknown | | | | N/A |
| Is the reduction continuing (continuing decline)? | | | | | | | | Yes | | | No | | | Unknown | | | | N/A |
| Has the change been observed, estimated, inferred or is it suspected (direct observation, index of abundance appropriate to the species)? Give details | | | | | | |  | | | | | | | | | | | |
| When was the reduction or is it anticipated to occur? | | | | | | | | | | Past | | | Present | | | | Future | |
| What is the period of time for the reduction (in years and generations)? | | | | | |  | | | | | | | | | | | | |
| Are there extreme fluctuations in population size? | | | | | | | | Yes | | | No | | | Unknown | | | | |
| *If Yes, provide details:* | |  | | | | | | | | | | | | | | | | |
| 6.5 Translocations and captive/enclosed subpopulations | | | | | | | | | | | | | | | | | | |
| Have there been translocations (introduction or re-introduction)? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there proposed translocations (introduction or re-introduction)? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there self-sustaining translocated subpopulations? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there translocated subpopulations that are not self-sustaining? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| *If Yes is the response to any of the four questions above, provide summary details:* | | | |  | | | | | | | | | | | | | | |
| Are there captive/enclosed/cultivated subpopulations? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there proposed captive/enclosed/cultivated subpopulations? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there self-sustaining captive/enclosed subpopulations? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| Are there captive/enclosed subpopulations that are not self-sustaining? | | | | | | | | Yes | | | No | | | | Unknown | | | |
| *If Yes is the response to any of the four questions above, provide summary details:* | | | |  | | | | | | | | | | | | | | |
| Other information on translocations and captive/enclosed subpopulations for the species (including failures): | | | |  | | | | | | | | | | | | | | |
| 6.6 Important subpopulations | | | | | | | | | | | | | | | | | | |
| *Identify any subpopulations that are important or necessary for the long-term survival of the species and provide details for why they are considered as such (i.e. key breeding, edge or range, maintenance of genetic diversity):* | | | | | | | | | | | | | | | | | | |

Section 7: Threats

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7.1 Threats *(detail how the species is being impacted, i.e. how severe, the extent, evidence of the impact)* | | | | |
| Threat  *(describe how the threat impacts on the species. Include abiotic and biotic causes, human related e.g. exploitation, and biological characteristics of the species e.g. low genetic diversity)* | Extent  *(give details of impact on whole species or specific subpopulations)* | Impact  *(what is the level of threat to the conservation of the species)* | Evidence | Time period  *(past, present, future)* |
|  |  |  |  |  |
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|  |  |  |  |  |

Section 8: Management

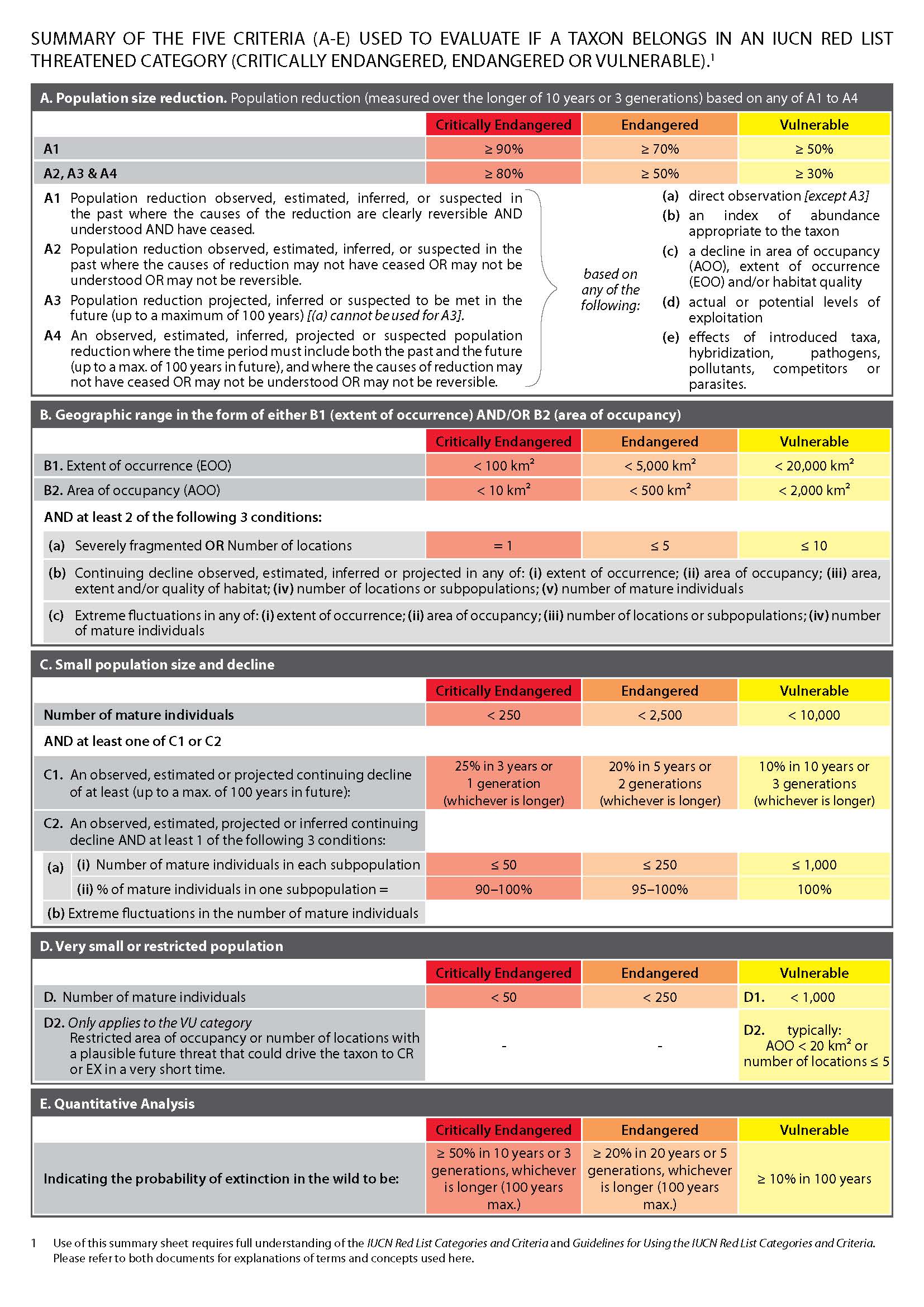
|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8.1 Current management | | | | | | | | | |
| Is the species managed? | | | Yes, directly | | Yes, indirectly | | | | No |
| *If Yes; provide details of current or past management actions:* | |  | | | | | | | |
| Does the species benefit from the management of another species or ecological community? | | | | Yes | | No | | Unknown | |
| *If Yes; provide details:* |  | | | | | | | | |
| 8.2 Recovery planning | | | | | | | | | |
| Is there an approved Recovery Plan (RP) or Interim Recovery Plan (IRP) for the species? | | | | | | | Yes | | No |
| *List all relevant recovery plans or interim recovery plans (including draft, in-preparation, out-of-date, national and other State/Territory plans, and plans for other species or ecological communities that may benefit or be relevant to the nominated species)* | | | | | | | | | |
| *List other documents that may be relevant to the management of the species or the lands on which it occurs (i.e. area management plans, conservation advices, referral guidelines)* | | | | | | | | | |
| 8.3 Management recommendations | | | | | | | | | |
|  | | | | | | | | | |

Section 9: Nominator details

|  |  |
| --- | --- |
| Nominator name(s): |  |
| Contact details: |  |
| Date submitted: |  |
| *If the nomination has been refereed or reviewed by experts, please provide their names and contact details:* | |
|  | |

Section 10: References

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| --- |
| 9.1 References |
|  |

IUCN Red List Criteria Summary Sheet Version 14 (August 2019)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *FORM VERSION OF IUCN RED LIST SUMMARY OF THE FIVE CRITERIA (A-E) to assist with determining criteria*  *Check boxes in one or more of the fields to support your nomination; refer to table above for explanations* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A. Population size reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1 | *and one of the following* | | ≥ 90% | | | | | ≥ 70% | | | | | | | ≥ 50% | | | | | |  | | | | |  | |
| *and any of the following* | | (a) | | | | | (b) | | | | | | | (c) | | | | | | (d) | | | | | (e) | |
| A2 | *and one of the following* | | ≥ 80% | | | | | ≥ 50% | | | | | | | ≥ 30% | | | | | |  | | | | |  | |
| *and any of the following* | | (a) | | | | | (b) | | | | | | | (c) | | | | | | (d) | | | | | (e) | |
| A3 | *and one of the following* | | ≥ 80% | | | | | ≥ 50% | | | | | | | ≥ 30% | | | | | |  | | | | |  | |
| *and any of the following* | | (b) | | | | | (c) | | | | | | | (d) | | | | | | (e) | | | | |  | |
| A4 | *and one of the following* | | ≥ 80% | | | | | ≥ 50% | | | | | | | ≥ 30% | | | | | |  | | | | |  | |
| *and any of the following* | | (a) | | | | | (b) | | | | | | | (c) | | | | | | (d) | | | | | (e) | |
| B. Geographic range in the form of either B1 (extent of occurrence) and/or B2 (area of occupancy) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1 | *and one of the following* | | | < 100 km2 | | | | | | < 5,000 km2 | | | | | | | | | < 20,000 km2 | | | | | | | | |
| *and at least two of the following three conditions [(a), (b), (c)]* | | | (a) | | | *and one of the following* | | | | | | | 1 | | | | ≤ 5 | | | | | | | ≤ 10 | | |
| (b) | | | *and any of the following* | | | | | | | (i) | | (ii) | | | | (iii) | | | | | (iv) | | (v) |
| (c) | | | *and any of the following* | | | | | | | (i) | | (ii) | | | | (iii) | | | | | (iv) | |  |
| B2 | *and one of the following* | | | < 10 km2 | | | | | | < 500 km2 | | | | | | | | | < 2,000 km2 | | | | | | | | |
| *and at least two of the following three conditions [(a), (b), (c)]* | | | (a) | | | *and one of the following* | | | | | | | 1 | | | ≤ 5 | | | | | | | | ≤ 10 | | |
| (b) | | | *and any of the following* | | | | | | | (i) | | (ii) | | | | (iii) | | | | | (iv) | | (v) |
| (c) | | | *and any of the following* | | | | | | | (i) | | (ii) | | | | (iii) | | | | | (iv) | |  |
| C. Small population size and decline | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C1 | *and one of the following* | | | | < 250 | | | | | | < 2,500 | | | | | | | | | | | < 10,000 | | | | | |
| *and one of the following* | | | | 25 % | | | | | | 20 % | | | | | | | | | | | 10 % | | | | | |
| C2 | *and one of the following* | | | | < 250 | | | | | | < 2,500 | | | | | | | | | | | < 10,000 | | | | | |
| *and at least one of the following three conditions [(a)(i), (a)(ii), (b)] plus applicable size and/or percentage* | | | | (a)(i) | | | | ≤ 50 | | | | | | | ≤ 250 | | | | | | | | | < 1,000 | | |
| (a)(ii) | | | | 90 - 100 % | | | | | | | 95 – 100 % | | | | | | | | | 100 % | | |
| (b) | | | |  | | | | | | |  | | | | | | | | |  | | |
| D. Very small or restricted population | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | | *and one of the following* | | | | < 50 | | | | | | | < 250 | | | | | D1 (< 1,000) | | | | | | | | | |
| D2 | | *and one of the following* | | | | < 20 km2 | | | | | | | ≤ 5 | | | | | | | | | | |  | | | |
| E. Quantitative analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | | *and one of the following* | | | | ≥ 50 | | | | | | ≥ 20 % | | | | | | | | | | | ≥ 10 % | | | | |

**The following table is to assist with determining eligibility under criteria B, C & D**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| What is the total number of mature individuals? | | | | | | | | | | | | | | | | | | | |
| Global | < 50 | | < 250 | | | < 1,000 | | | | < 2,500 | | | | < 10,000 | | | | Unknown | |
| National | < 50 | | < 250 | | | < 1,000 | | | | < 2,500 | | | | < 10,000 | | | | Unknown | |
| WA | < 50 | | < 250 | | | < 1,000 | | | | < 2,500 | | | | < 10,000 | | | | Unknown | |
| How has this number been determined or calculated? | | | | | | | | | | | | | | | | | | | |
| Reliability of total number of individuals (*other than for ‘unknown’ above)* | | | | | | | | | | | | | | | | | | | |
| Global | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| National | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| WA | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| If from expert opinion, provide name of expert(s): | | | | | | | | | | | | | | | | | | | |
| How many subpopulations/locations? | | | | | | | | | | | | | | | | | | | |
| Global | 1 | | | ≤ 5 | | | | ≤ 10 | | | | | Unknown | | | | | | |
| National | 1 | | | ≤ 5 | | | | ≤ 10 | | | | | Unknown | | | | | | |
| WA | 1 | | | ≤ 5 | | | | ≤ 10 | | | | | Unknown | | | | | | |
| How has this number been determined or calculated? | | | | | | | | | | | | | | | | | | | |
| Reliability of number of populations/locations (*other than for unknown above)* | | | | | | | | | | | | | | | | | | | |
| Global | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| National | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| WA | Known | | | | Estimated | | | | | | Modelled | | | | | | Expert opinion | | |
| If from expert opinion, provide name of expert(s): | | | | | | | | | | | | | | | | | | | |
| What is the total number and percentage of mature individuals in each subpopulation/location?  *(include all known subpopulations/ locations; add subpop./ location name or reference below and add additional rows as required)* | | | | | | | | | | | | | | | | | | | |
| *Subpop./ location 1* | | | | | | | ≤ 50 | | | | | ≤ 250 | | | ≤ 1,000 | | | | Unknown |
| 90 - 100 % | | | | | 95 – 100 % | | | 100 % | | | | Unknown |
| *Subpop./ location 2* | | | | | | | ≤ 50 | | | | | ≤ 250 | | | ≤ 1,000 | | | | Unknown |
| 90 - 100 % | | | | | 95 – 100 % | | | 100 % | | | | Unknown |
| How has this number been determined or calculated? | | | | | | | | | | | | | | | | | | | |
| Reliability of the total number of mature individuals in each subpopulation/location? (*other than for unknown above)* | | | | | | | | | | | | | | | | | | | |
| Known | | Estimated | | | | | | | Modelled | | | | | | | Expert opinion | | | |
| If from expert opinion, provide name of expert(s): | | | | | | | | | | | | | | | | | | | |