



Australian Government

Department of Climate Change, Energy,
the Environment and Water

Live animal imports of exotic species/specimens

Terms of Reference: Freshwater Fish

Application to amend the List of Specimens taken to be Suitable for Live Import (Live Import List)

The purpose of the Terms of Reference is to provide the information required to assess the potential impact that a species may have on the Australian environment. The application enables the Minister for the Environment and Water to make a decision on the species proposed for import, based on a thorough assessment of the potential risks to the environment.

Environment as defined in the EPBC Act includes:

- a) ecosystems and their constituent parts, including people and communities; and
- b) natural and physical resources; and
- c) the qualities and characteristics of locations, places and areas; and
- d) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b) or (c).

Incomplete Information

All Terms of Reference must be addressed in the draft report for it to be processed. Additional information not included in the Terms of Reference may be included if the applicant chooses.

Additional Information

The draft report is published on the department's website for 40 business days and stakeholders are invited to provide comments. At the same time, the Minister contacts the relevant Commonwealth, state and territory ministers advising them of the publication of the report and inviting their comments. The Minister may also consult with other organisations or individuals before making a decision to amend the list.

At the end of the consultation period the department collates all comments received from stakeholders, and the Commonwealth, state and territory ministers, and forwards them to the applicant. The applicant must incorporate all relevant comments in the final report.

The Minister will make a decision about the proposed amendment based upon the final report and the outcomes of the consultation. If the Minister does not approve an amendment to add the species to the Live Import List, the import of the proposed species will remain prohibited. Where this occurs, the applicant will be advised in writing of the decision.

The following are a few points to assist you with preparing and presenting the report:

- The report should be researched and presented in a clear and professional manner.
- It is important that claims in the report are based upon scientifically sound information with references cited.
- Where it is not possible to obtain information from published literature, information published through more informal media, such as the internet, can be included in the report. Information obtained from these sources must be cited. For example, the web site address should be cited after the relevant information.

1. Taxonomy

Provide information on the taxonomy of the species including family, genus, species and subspecies, as well as any synonyms.

2. Identification

Discuss the identification of the individuals in this species, including if the sexes of the species are readily distinguishable, and if the species is difficult to distinguish from other species. Provide representative photographs of female and male specimens at all life stages. Ensure you have appropriate copyright permission as the report will be published on the department's website.

3. Conservation Status

Provide information on the status of the species under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the IUCN. For example, is the species listed on CITES Appendix I, II or III, and if so, are there any specific restrictions on the movement of this species? Is the species included in the IUCN Red List of Threatened Species? Include information on the conservation value of the species.

4. Purpose and source of import

Provide a summary of the types of activities that the specimen may be used for if imported into Australia (e.g., research, education, exhibition, conservation breeding, household pet or travelling exhibition, or for commercial purposes) and from where the animals will be obtained. Please include information on the rationale for this species, the numbers you want to import and standards for importation.

5. Legislative controls

Provide information on all other Commonwealth, state and territory legislative controls on the species, including the species' current quarantine status, or pest or noxious status, or whether it is prohibited or controlled by permit or licence in any state or territory.

6. Is the species highly domesticated or captive bred for commercial, angling or ornamental purposes?

7. Has the species established one or more self-sustaining populations beyond its native range?

Provide information on the locations this species has been introduced and/or established populations outside its range, and if so, where those populations are.

8. Are any subspecies or varieties referenced on FishBase (<https://www.fishbase.se/search.php>)?

9. What is the country of origin and the natural distribution of this species?

Please provide a map where available.

10. Are there areas in Australia that are climatically similar to the species' native range?

Using Climatch, and/or by comparing with the Köppen–Geiger zones to make a 'best estimate', are there areas in Australia that have an appropriate climate to enable the establishment of self-sustaining populations?

11. In the species' introduced range, are there impacts to:

- wild stocks of angling or commercial species
- aquacultural, aquarium or ornamental species
- rivers, lakes, threatened species or ecological communities?

If any boxes are ticked, please provide additional information.

12. Are other members of the genus known to be invasive?

13. Does the species have any harmful characteristics (poisonous/venomous/spines/aggression), or pose any risks to human health?

14. Is the species known to be aggressive towards other species? Does the species out-compete native species?

*For example, scale or fin nipping such as known for *Pseudorasbora parva**

15. Is the species parasitic of other species?

For example, blood-sucking such as by some lampreys

16. Is the species unpalatable to, or lacking, natural predators?

17. What native species would the species likely feed upon? Are natural predators of these native prey species also present?

18. Does the species host, and/or is it a vector, for one or more recognised non-native infectious diseases/parasites (see [Australia's National List of Reportable Diseases of Aquatic Animals](#))?

19. What is the species' common and maximum body size?

20. Does the species have a wide salinity tolerance at any stage of its life cycle?

21. Is the species (at any life stage) able to withstand being out of water for extended periods (e.g. minimum of one or more hours)?

22. Is the species tolerant of a range of water velocity conditions?

23. Does feeding or other behaviours of the species reduce habitat quality for native species?

For example, benthic foraging or burrow construction that leads to an increase in suspended solids, reducing water clarity?

24. What is the diet and feeding behaviour of the species?

25. Does the species exhibit parental care?

For example, is it a mouth-brooder, does it bear live young, does it nest guard?

26. Does the species hybridise under natural conditions? Is the species likely to hybridize with native species in Australia?

27. Is the species hermaphroditic, or it is capable of parthenogenesis?

28. Is the species dependent on the presence of another species or specific habitat features to complete its life cycle?

For example, fast-flowing water, particular species of plant or types of substrata

29. What is the fecundity of the species (number of eggs per spawn), and does it produce offspring multiple times in a lifecycle, or have an extended spawning season?

30. What is the time from hatching to full maturity?

31. Are life stages likely to be dispersed unintentionally?

For example, bait buckets, live eggs on anglers' gear, accidental release during aquarium maintenance as a food fish or an angling amenity, for ornament or unusual appearance, for cultural reasons, as a contaminant of other commercially sold fish.

32. Is it likely to be deliberately released from aquariums due to growth rate, social behaviour etc?

33. Are eggs or larvae dispersed by water current, or can they move between water bodies via connections?

For example, climbing vertical surfaces, through pipes

34. Are juveniles or adults of the species known to migrate (spawning, smolting, feeding)?

35. Are eggs of the species known to be dispersed by other animals?

For example, accidentally by water fowl when they move from water body to water body?

36. What are the species environmental tolerances, including water quality, oxygen, pH and temperature extremes?

37. Does the species tolerate or benefit from environmental disturbance?

For example, floods, spates, desiccation, including both short- and long-term human impacts.

38. Are there effective natural enemies of the species present in Australia?

39. Are there similar niche species present in Australia that it would compete with for food and resources? If 'yes', what types of resources could be used: food; water; space; rest or shelter sites; nest sites; other. Include species names, in particular for threatened species.

40. What would be the probable prey/food sources in Australia? Include species names, in particular for threatened species.

41. Is there the potential for any habitat or ecological community changes resulting from establishment?

For example, prey for native predators, habitat alterations, facilitation of the survival of other species, changes to community dynamics

42. In the event of establishment, are there any potential social or cultural impacts?

Social or cultural effects may arise as a result of impacts to commercial or recreational values, life support/human health, cultural significance, biodiversity, aesthetics or beneficial uses. When considering social and cultural impacts, effects to human and animal health, indigenous cultural values, quality of life, should be

considered, e.g., distress caused by dead/dying fish as a result of disease spread, or at treated infestation sites; reduced access to water bodies due to eradication measures.

43. Are there any potential economic impacts?

For example, impacts to trade, livestock or crops, aquaculture. Economic impacts may include loss of earnings due to reduced productivity, costs of mitigation, remediation and eradication, research costs, reduced earnings, impacts to export markets, banning of sale of commercially popular species etc.

44. What control/eradication programs could be applied in Australia if the species was released or escaped?

45. What conditions or restrictions could be applied to the import of the species to reduce any potential negative environmental impacts?

e.g., single sex imports, size restrictions etc. If the outcome of the assessment is that the specimen can be imported subjected to conditions, limiting imports to eligible non-commercial purposes only, excluding household pets, it will be placed on Part 2 of the Live Import List (i.e., the species of animals and plants suitable for live import with an import permit issued under the Environment Protection and Biodiversity Conservation Act.).