



Example petition to assess a cetacean subpopulation/subspecies

Bold text would be in the template used by petitioners. Footnotes were removed to make the example document more concise, but would be on actual petitions developed from the template. A relatively 'data rich' example is given followed by a 'data poor' example. Point values would be assigned by RLA evaluators based on the petition.

Example 1 (data rich)

Subspecies or subpopulation name: North Pacific Imaginary Whale Northeast Pacific Subpopulation

Taxon to which it belongs: *Eubalaena imaginaria*

Justification as a demographically independent population (aka subpopulation): Imaginary Whales in the eastern North Pacific are considered to be separate from those in the west on the basis of distinct catch and recovery histories (Keeshond et al. 2001, IWC 2001). There are no photographic matches between eastern and western North Pacific areas. Genetic data show significant frequency differences with only a single mtDNA haplotype found in the eastern North Pacific and multiple haplotypes in the western North Pacific.

Evidence for significance conditions (1 point each for a maximum of 2 points):

- 1) persists in an ecological setting that is unusual or unique to the taxon

There are only two plausible subpopulations in this species in the eastern and western North Pacific. The ecology of these areas differs sufficiently to make adaptation by whales keyed in to using these areas plausible.

- 2) loss of the unit would result in a significant gap in the range of the species

Historical records indicate the eastern North Pacific was a major portion of the species' range and thus loss would significantly reduce the species' ability to persist.

- 3) genetic characteristics are inferred to enhance the evolutionary resilience of the species

Unknown. Frequency differences in mtDNA are not sufficient to determine whether the unit meets this condition and no nuclear analyses have been done.

- 4) other factors important to the resilience of the species

Because few whales remain, wintering grounds are not known for certain, but historical whaling with undiscovered calving areas suggests that at least this subpopulation winters offshore. Offshore wintering grounds are not known for other similar whale species and may allow this subpopulation to be more resilient to human threats, like ship strikes, that are serious threats for other similar whales.



Preliminary threat category with justification:

CR criterion D

Although there is no estimate of abundance for Imaginary Whales for the entire eastern North Pacific, Spaniel et al. (2011) estimated that there were only about 30 individuals in the eastern Bering Sea. This, and the paucity of sightings throughout the region generally, make it very probable that the number of mature individuals is below 50 mature individuals which qualifies the subpopulation for IUCN Red List category Critically Endangered. In addition, there is concern about the paucity of sightings of calves.

Narrative concerning importance of the assessment to spur conservation:

Although these individuals are legally protected under legislation in Canada and the USA, few resources have been expended to recover the subpopulation. An assessment may benefit the subpopulation by raising the conservation profile of this subpopulation to a broader international level. The subpopulation also spends at least some portion of the year in international waters and having an IUCN CR status maintains the need for management to the International Whaling Commission.



Example 2 (data poor)

Subspecies or subpopulation name: Imaginary Puffmeister's Porpoise Peruvian Subpopulation

Taxon to which it belongs: *Phocoena puffia*

Justification as a demographically independent population (aka subpopulation): Puffmeister's Porpoise along the Peruvian coast have a distributional hiatus of unsuitable habitat that separates them from the species further to the south. Dachshund et al. (2004) note that Peruvian Puffmeister's Porpoise are more different genetically from porpoises to the south than Puffmeister's Porpoise differ between the Atlantic and Pacific Oceans.

Evidence for significance conditions (1 point each for a maximum of 2 points):

- 1) persists in an ecological setting that is unusual or unique to the taxon

Puffmeister's Porpoise are found in cold upwelled coastal waters from Peru to Argentina. Within that range, warm too warm for the species are found in Chile such that the subpopulation in the productive Humbolt current off Peru are isolated in a habitat known to be a sufficiently unique habitat that many endemic species and subspecies are found there. It is plausible that this habitat could result in Puffmeister's Porpoise in this area being a different subspecies, but data are too deficient to make a good taxonomic argument at this time.

- 2) loss of the unit would result in a significant gap in the range of the species

The distribution of Puffmeister's Porpoise off Peru represents a large portion of the species' range globally.

- 3) genetic characteristics are inferred to enhance the evolutionary resilience of the species

Unknown. Although there has been the published work noted above, the sample size and distribution are insufficient to make a good argument here.

- 4) other factors important to the resilience of the species

Unknown

Preliminary threat category with justification:

VU criterion A2d

Puffmeister's Porpoise are uncommon and only found in very coastal waters with high levels of gillnet fishing throughout their range. Poodle et al. (1997) reported Puffmeister's Porpoise had the highest level of bycatch of any cetacean in the region. The estimated generation length of 14 years (Taylor et al. 2004) means that 3 generation in the past is from 1980 to 2022.

Gillnetting predates 1980 and has increased since the Poodle et al. study. A 1%/year decline



would result in a 34% decline in 3 generations, which is greater than the 30% decline threshold for VU. Given the high reported level of bycatch and the relatively low growth rate of porpoises, a 1%/year decline is plausible and suspected. The causes of the reduction (bycatch) have not ceased.

Narrative concerning importance of the assessment to spur conservation:

Although these individuals are legally protected from direct hunting, fisheries using gillnets are found throughout the subpopulation's range. Enforcement is poor and there is no domestic legislation to regulate bycatch. An IUCN assessment that recognizes this subpopulation in a threatened category would be useful to motivate conservation actions, including working with fishermen to adopt practices to reduce bycatch and obtaining support to obtain data on abundance and distribution that can help to develop management strategies.