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Red List Status of Cetaceans – March 2022

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Abstract

The Cetacean Specialist Group (CSG) is the official IUCN Red List Authority responsible for assessing global threat levels for cetacean species. Between 2017 and 2022, the CSG undertook a reassessment of 90 of the 92 currently recognized cetacean species, as well as many subspecies and subpopulations. A total of 111 new or updated assessments were published in the last 5 years. Of the 92 cetacean species assessed for the Red List, one in every four (26%, n=24) is assigned to a threatened category (Critically Endangered, Endangered, or Vulnerable). Just over half (53%, n=49) are classified as Least Concern, 11% (n=10) as Near Threatened, and 10% (n=9) as Data Deficient. Revised taxonomy, availability of new information, and amendments to the Red List guidelines make tracking changes in the Red List status of cetaceans complex. Significant changes that have occurred in the last year include 1) completion of the assessment of Rice's whale, a newly recognised species, soon to be listed as Critically Endangered, 2) completion of assessments of the Indus River dolphin and Ganges River dolphin, now recognized as distinct species, both listed as Endangered, and 3) publication of 10 new, or updated, assessments of Mediterranean subpopulations most of which are listed in threatened categories. The CSG is currently designing a new prioritization strategy for identifying subspecies and subpopulations that merit new assessments or updated assessments where they are most likely to promote and facilitate conservation planning and action. While details of strategy are still in development, the basic underlying philosophy is that infra-species units should be selected for assessment based on both demographic independence and their biological and ecological importance to the species. These prioritized units are likely to overlap with IWC priorities, emphasizing the desirability of communication and coordination.

1. Red List Status of Cetaceans

The most recent edition of the IUCN Red List is version 2021-3 which was published in December 2021. The next edition of the Red List is scheduled for publication in July 2022 and will include updated or new assessments of Rice's whale (*Balaenoptera ricei*), Indus River dolphin (*Platanista minor*), and Ganges River dolphin (*Platanista gangetica*). The following summary information includes these three assessments, all at the species level.

Between 2017 and 2022, the Cetacean Specialist Group undertook to reassess all cetacean species, as well as some subspecies and subpopulations. This task is now virtually complete. A total of 111 updated or new cetacean assessments were published in the last 5 years. A total of 92 cetacean species and an additional 10 subspecies and 30 subpopulations have been assessed and will have been published online by July 2022 (Table 1 and Figure 1 below).

One in every four cetacean species assessed for the Red List (26%, n=24) is currently assigned to a threatened category (Critically Endangered [CR], Endangered [EN], or Vulnerable [VU]). Just over half (53%, n=49) are classified as Least Concern [LC], 11% (n=10) as Near Threatened [NT], and 10% (n=9) as Data Deficient [DD].

Table 1 – Categories assigned to cetacean species, subspecies and subpopulations in the IUCN Red List, 2022-1 edition.

Category	Species	Subspecies	Subpopulations	Total
Critically Endangered	5	4	15	24
Endangered	12	2	10	24
Vulnerable	7	4	2	13
Near Threatened	10	0	1	11
Least Concern	49	0	2	51
Data Deficient	9	0	0	9
Total	92	10	30	132

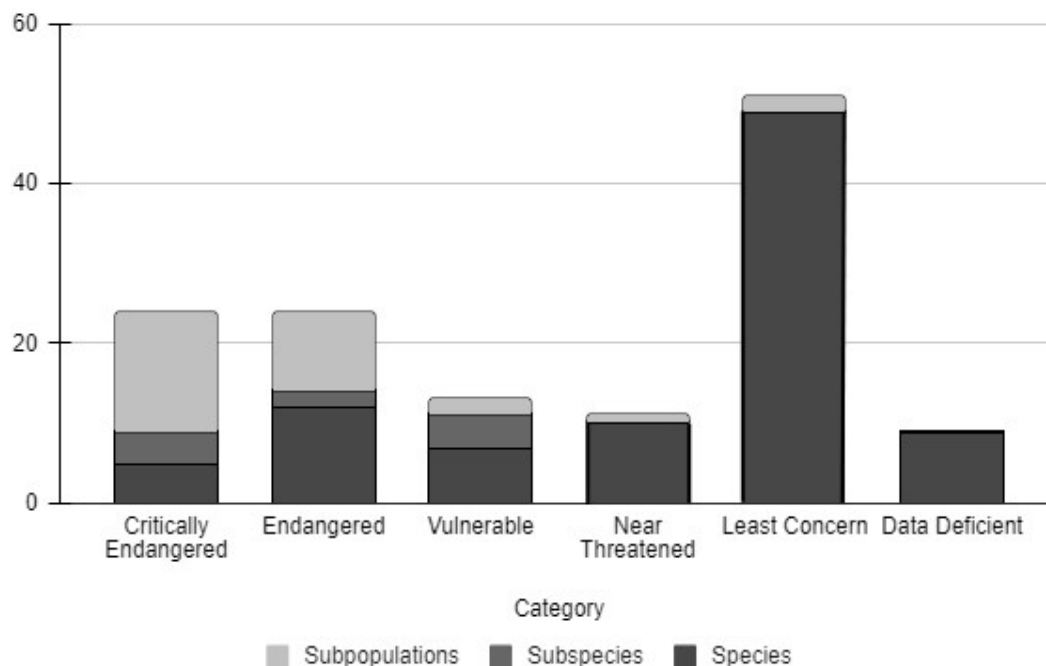


Figure 1 – Number of cetacean species, subspecies and subpopulations assigned to the different threat categories (Red List Edition 2022-1, July 2022)

A 2019 update to the Red List Guidelines (IUCN, 2019) changed the definition of DD such that to remain as DD, a species must plausibly belong in any category from CR to LC. Following this new definition, many poorly known species that had previously been listed as DD were reassigned to other categories. Even with this new definition, however, assessing beaked whales proved exceptionally difficult and a small group of CSG experts (led by Taylor) developed a set of rules meant to ensure consistency in how assessments of the data-poor deep divers were conducted (the rationale is given as Supplementary Material in most beaked whale assessments – see an example for Gervais’ beaked whale [here](#)). Because changes in Red List categorization may be due to changes in how the Categories and Criteria are defined, interpreted or applied or to the availability of improved information (including taxonomic changes, see section below), using the Red List to track actual changes in conservation status over time is often not straightforward.

3.1 Changes to the Red List status of cetaceans since March 2021 IWC update

A summary of the Red List status of cetaceans in March 2021 was provided to the IWC scientific committee meeting in 2021 (SC/68C/O/01). Significant changes that have occurred in the last year include:

- Completion of the assessment of Rice’s whale, a newly recognised species, soon to be listed as Critically Endangered
- Completion of assessments of the Indus River dolphin and Ganges River dolphin, now recognized as distinct species, both listed as Endangered
- Publication of 10 new, or updated, assessments of Mediterranean subpopulations.

Below we provide a list of the cetaceans that are listed as CR and EN. This is a repeat and update to the list that was provided to the IWC in 2021 doc SC/68C/O/01.

3.2 Critically Endangered

Five cetacean species, four subspecies and 15 subpopulations are currently classified as Critically Endangered on the IUCN Red List. The five CR species are:

- Yangtze River dolphin (*Lipotes vexillifer*), which is classified as ‘critically endangered, possibly extinct’ and is regarded by most cetologists as extinct.
- Vaquita (*Phocoena sinus*)
- Atlantic humpback dolphin (*Sousa teuszii*)
- North Atlantic right whale (*Eubalaena glacialis*)
- Rice’s whale (*Balaenoptera ricei*)

The four CR subspecies are:

- Antarctic blue whale (*Balaenoptera musculus intermedia*)
- North Island Hector’s dolphin (*Cephalorhynchus hectori maui*)
- Yangtze finless porpoise (*Neophocoena asiaeorientalis asiaeorientalis*)
- Taiwanese white dolphin (*Sousa chinensis taiwanensis*)

The CR subpopulations include six isolated populations of Irrawaddy dolphins (*Orcaella brevirostris*), two of them in marine waters in the Philippines – Malampaya Sound and Iliolo-Guimaras; and four in fresh or brackish waters – Mekong River, Mahakam River, Songkhla Lake and Ayeyarwady River. Baltic Sea harbour porpoises, Fiordland bottlenose dolphins, Gulf of Ambracia bottlenose dolphins (both, *Tursiops truncatus*), Chile-Peru southern right whales, Northeast Pacific North Pacific right whales, Cook Inlet belugas or white whales, Gulf of Corinth common dolphins,

Strait of Gibraltar killer whales, and Strait of Gibraltar long-finned pilot whales are all also classified as CR subpopulations.

1.2 Endangered

Twelve cetacean species are red-listed as Endangered:

- Sei whale (*Balaenoptera borealis*)¹
- Blue whale (*Balaenoptera musculus*)
- North Pacific right whale (*Eubalaena japonica*)
- Ganges River dolphin (*Platanista gangetica*)
- Indus River dolphin (*Platanista minor*)
- Amazon River dolphin or boto (*Inia geoffrensis*)
- Irrawaddy dolphin (*Orcaella brevirostris*)
- Tucuxi (*Sotalia fluviatilis*)
- Indian Ocean humpback dolphin (*Sousa plumbea*)
- Perrin's beaked whale (*Mesoplodon perrini*)
- Hector's dolphin (*Cephalorhynchus hectori*)
- Narrow-ridged finless porpoise (*Neophocaena asiaeorientalis*)

The two subspecies listed as EN are Black Sea harbour porpoise (*Phocoena phocoena relicta*) and Black Sea bottlenose dolphin (*Tursiops truncatus ponticus*).

Ten cetacean subpopulations are listed as EN – Mediterranean common dolphins, Risso's dolphins, long-finned pilot whales, sperm whales and fin whales; Arabian Sea and Oceania humpback whales; western gray whales; and Okhotsk Sea and East Greenland-Svalbard-Barents Sea bowhead whales.

2. Taxonomic Changes and the Red List

Taxonomic uncertainty can be problematic when trying to assess the true level of risk using the Red List criteria. The CSG uses the Society for Marine Mammalogy's List of Species and Subspecies as the official source for accepted cetacean taxonomy. At least once each year, the Taxonomy Committee evaluates newly published papers that suggest changes to taxonomy and decides, by a majority vote within the Committee, whether the arguments made warrant the proposed change. Often the change involves splitting one species into two or more species, each of them having a smaller range and lower abundance than the lumped single species. For example:

- Rice's whale was recently described as a species (Rosel et al. 2021) and while it was formerly assessed as a CR subpopulation, it is now 'in press' as a CR species.
- The South Asian river dolphin (*Platanista gangetica*) was listed as an EN species, but following the 2021 decision by the Committee on Taxonomy to recognise two separate species (Indus River dolphin, *P. minor*, and Ganges River dolphin, *P. gangetica*), both assessed as EN, this added one more species to the EN total.

¹ The Red List guidelines specify that proposals to down-list a species, which sei whales qualified for in the last assessment, are given a 5-year wait period. The sei whale, assessed in 2018, will automatically move from Endangered to Vulnerable after 5 years in the absence of significant new information.

Several new taxa in South American rivers have been proposed but are not yet accepted by the Committee on Taxonomy. Should these eventually be accepted as species, it will add more threatened species to the list. It is nearly always the case that the overall level of threat to the species is underestimated when there is taxonomic uncertainty because the ‘new’ species have smaller distributions and hence a greater likelihood of being assigned to a threatened category.

3. Prioritization system for assessing subspecies and subpopulations

To date most cetacean Red List assessments are at species level. Only a few subspecies have been assessed. However, most cetacean species have very large distributions with multiple subpopulations that are demographically independent, and hence, could face different levels of threat and would be assigned to different listing categories. The global species distributions often span multiple countries with many stakeholders, which makes conservation planning at the species level difficult if not impossible. Therefore, most effective conservation planning and action for most cetaceans will be at the subpopulation level. Red List assessments have the power to stimulate needed conservation attention and it is therefore beneficial to conduct assessments of a larger number of subspecies and subpopulations than are currently listed. However, as Red List assessments are undertaken on a volunteer basis by a small group of qualified and trained individuals, it is not feasible, or useful for conservation, to assess all subpopulations and subspecies. Therefore, to support the effort of prioritizing subspecies and subpopulations (hereafter referred to collectively as ‘units’²) for which assessments are urgently needed, we are in the process of drafting criteria related to the biological and ecological importance of the units that will allow them to be prioritized for assessment.

The IUCN Red List Guidelines define subpopulations as follows: “*Subpopulations are defined as geographically or otherwise distinct groups in the population [species] between which there is little demographic or genetic exchange (typically one successful migrant individual or gamete per year or less)*”

Generally, units deemed worthy of a Red List assessment should:

- 1) meet the subpopulation definition or be a recognized subspecies
- 2) meet significance conditions that make the unit of biological and ecological importance to the species and
- 3) warrant listing in a threatened category (CR, EN or VU).

The CSG Red List Authority (RLA³) will finalise the prioritization framework, and publish it on the CSG website. The RLA Coordinator (currently Taylor) will solicit petitions for new units to assess. The RLA will then produce a list of sub-population and subspecies to assess after applying the new framework to identify those that should be given priority and meet the above conditions. Assessments will be produced using the usual procedure outlined in Annex A.

² We use the term ‘unit’ to refer to groups of animals where the degree of differentiation and separation from other groups is unknown. Thus, units can include demographically independent populations, evolutionarily significant units and even subspecies and species that have yet to be recognized as such. A demographically independent population is one where internal dynamics (births and deaths) are far more important to persistence than external dynamics (immigration and emigration).

³ The RLA is a group of CSG members who are both species experts and knowledgeable about the IUCN Red List Categories and Criteria who serve as reviewers of draft assessments.

4. Conclusions

The CSG is developing its own guidelines for prioritizing cetacean subspecies and subpopulations that will be assessed for the Red List. Once the prioritization framework is finalized (later this year), we can expect to see more communication and collaboration between the IWC and the CSG in identifying subpopulations that merit assessment as well as in designing and implementing action to improve the conservation status of cetacean species and populations that have been assessed as CR and EN.

5. References

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Annex A - The Process of Producing and Updating Cetacean Red List Assessments

The Cetacean Specialist Group (CSG) is the official IUCN Red List Authority responsible for assessing global threat levels for cetacean species. It works closely with the IUCN Red List Programme to decide which threat-level category to assign to each species, and some subspecies and subpopulations, by evaluating evidence in relation to the Red List [Categories and Criteria](#). The CSG has a Red List Authority committee, organised by a coordinator. Each species-level assessment is drafted by a single author or group of assessors, and the draft is reviewed by the CSG Chair (RRR), Red List Authority Coordinator (BLT) and at least one other expert, to ensure consistency in the level of information and in the way that the criteria are applied. Assessors are listed as authors of the assessment and reviewers are named on the website version. After final review, the assessment is entered into the IUCN online system and then submitted to the IUCN Red List Unit for checking and publication. It normally takes about three months from submission to publication online.

Assessments of threatened cetacean species (i.e. those assessed as Critically Endangered [CR], Endangered [EN] or Vulnerable [VU]) are to be updated at least every ten years. The IUCN SSC focuses on an unbiased evaluation of all species in an effort to provide a metric of the state of biodiversity through time. All the work conducted by the CSG to produce, review and update Red List assessments is done on a voluntary basis. In light of this, typically only selected subspecies and subpopulations are assessed that are known, or likely, to qualify for a threatened category, and for which producing an assessment is expected to make a significant contribution to conservation. Therefore, the general assessment of risk to cetaceans is only valid at the species level because nearly all subspecies and subpopulations are selected because they are known to be threatened.