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Non-detriment finding for stony corals (order Scleractinia)

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Competing interests: The authors declare no competing interests in relation to this non-detriment finding (NDF).

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Scientific name: For scientific names of the taxa under consideration, see Table 1.

Common names: NA

Norwegian name: NA

Type of permit: CITES Appendix II export; Norwegian CITES Regulation Annex 1, list B

Country of export: Norway (NO)

Country of import: Sweden (SE)

Purpose and source: The proposal concerns the export from Norway to Sweden of live, asexually propagated stony corals (Order Scleractinia; 18 taxa; CITES Appendix II; source code R used by applicant) for zoological purposes (purpose-of-transaction code Z).

For Appendix II species (Norwegian CITES Regulation Annex 1, list A), it is required to establish that export will not be detrimental to the survival of that species, in compliance with CITES Article IV. In the Norwegian CITES regulation (Lovdata, 2018), the criteria for export from Norway are described in Chapter 2, Section 5, and it is required to establish that the export does not have a harmful effect on the conservation status of the species.

VKM has adopted the definition of detriment, cf. Conf. 16.7 (Rev. CoP17) suggested by the U.S Fish and Wildlife Service Division of Scientific Authority:

1. Harvest that is not sustainable.
2. Harvest that harms the status of the species in the wild.
3. Removal from the wild that results in habitat loss or destruction, or that interferes with recovery efforts for a species.

Conclusion: *Positive*

VKM concludes that the proposed export of live, asexually propagated stony coral specimens (Order Scleractinia) will be non-detrimental to the survival of the species and will not adversely affect their conservation status, in accordance with Article IV of the Convention and Chapter 2, Section 5 of the Norwegian CITES Regulation.

The conclusion is based on the following factors:

- The specimens of stony corals under consideration originate from controlled asexual reproduction in a closed, captive environment. Although the original breeding stocks were sourced from the wild, this occurred hundreds of generations ago, and the specimens under consideration have had no contact with wild conspecifics.
- Given the asexual reproduction process described by the applicant, all specimens under consideration qualify as late-generation (hundreds of generations) asexually produced corals bred in captivity. This consideration applies regardless of the applicant having labelled the specimens with source code R (Ranched) in the CITES export application.

Relevant definitions from Annex 1 to CoP20 Doc. 66.2 (further amended by Australia and adopted at CoP20, see CoP20 Com. I. Rec. 5 (Rev. 1) and E-CoP20-Plen-Rec-02):

Asexually produced coral born in captivity – is considered a first-generation coral if a frag taken from a parent conceived in or taken from the wild and subsequently grown out in a controlled environment with a minimum of 50% new growth after being cut.

Asexually produced coral bred in captivity – is considered a second-generation coral if a fragment is taken from an asexually produced coral born in captivity and subsequently grown out in a controlled environment with a minimum of 50% new growth after being cut. Subsequent generations from this point are considered third- generation and so forth.

1. Biological information

Distribution

The distribution of stony corals (order Scleractinia) spans large parts of the tropical Indian Ocean, Red Sea, western/central Pacific Ocean, Caribbean Sea and western Atlantic. The richest diversity of stony corals is in the Indo-Pacific, including the Coral Triangle (Indonesia, Philippines, Papua New Guinea, Solomon Islands, Timor-Leste, and Malaysia; Veron et al., 2015). All the species being considered for this NDF originate from the Indo-Pacific region.

Life history

Stony corals are often called “reef-building corals” and comprise marine invertebrates that build calcium-carbonate skeletons. They live in a symbiotic relationship with photosynthetic algae (zooxanthellae), which provide much of their nutrition; this symbiosis allows corals to thrive in relatively nutrient-poor tropical waters and grow into extensive reef structures that form the backbone of coral-reef ecosystems (Muscatine & Porter, 1977; Allemand et al., 2011).

Role in the ecosystem

Coral reefs support a disproportionately large share of marine biodiversity. Although reefs occupy only a tiny fraction of the seafloor, they are estimated to harbor around one-quarter of all marine species at some point in their life cycles (Komyakova et al., 2013). The complex three-dimensional structure formed by the calcium-carbonate skeletons of stony corals provides shelter, hiding places, feeding grounds, breeding sites, and nursery areas for countless fish, invertebrates, and other marine organisms — including many commercially important species (Moberg & Folke, 1999).

2. Population trend

See Table 1 for information on population trends for the taxa under consideration as presented in the IUCN Red List of Threatened Species.

Table 1. Information on CITES listing status, IUCN Red List status, and population trend for the taxa under consideration.

Scientific name	CITES Appendix	IUCN Red List status	Population trend	Year assessed	Reference	Link to assessment(s)
<i>Bernardopora (Goniopora) stutchburyi</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing	2023	Crabbe et al., 2024a	https://www.iucnredlist.org/species/133615/165975396
<i>Goniopora sp.</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing/Unknown	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=122228&searchType=species
<i>Duncanopsammia axifuga</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing	2023	Johnson et al., 2024a	https://www.iucnredlist.org/species/133114/165728077
<i>Echinopora spp.</i>	II [ORDER listing Scleractinia spp.]	VU (<i>E. lamellosa</i>)/LC (remaining <i>E. spp.</i>)	Decreasing	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=105790&searchType=species
<i>Fimbriaphyllia (Euphyllia) paraancora</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing	2023	Luzon et al., 2024	https://www.iucnredlist.org/species/133289/165814415
<i>Euphyllia paraglabrescens</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing	2023	Núñez Lendo et al., 2024a	https://www.iucnredlist.org/species/133228/165783157
<i>Favia sp.</i>	II [ORDER listing Scleractinia spp.]	LC	Unknown	Two species assessed	NA	https://www.iucnredlist.org/search?taxonomies=121054&searchType=species
<i>Favites pentagona</i>	II [ORDER listing Scleractinia spp.]	LC	Decreasing	2023	Huang et al., 2024	https://www.iucnredlist.org/species/133209/165772891

<i>Cyphastrea</i> sp.	II [ORDER listing Scleractinia spp.]	LC/DD	Decreasing/Unknown	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=106552&searchType=species
<i>Montipora capitata</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Nuñez Lendo, 2024a	https://www.iucnredlist.org/species/133622/165979277
<i>Montipora palawanensis</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Porter et al., 2024	https://www.iucnredlist.org/species/133285/165812738
<i>Montipora capricornis</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Johnson et al., 2024b	https://www.iucnredlist.org/species/133422/165882264
<i>Montipora digitata</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Nuñez Lendo, 2024b	https://www.iucnredlist.org/species/133194/165764784
<i>Montipora nodosa</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Porter et al., 2024	https://www.iucnredlist.org/species/132944/165642301
<i>Montipora setosa</i>	II [ORDER listing Scleractinia spp.]	EN	Decreasing	2023	Crabbe et al., 2024b	https://www.iucnredlist.org/species/133361/165850939
<i>Montipora</i> spp.	II [ORDER listing Scleractinia spp.]	EN/VU/NT/DD	Decreasing/Unknown	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=129991&searchType=species
<i>Stylophora</i> sp.	II [ORDER listing Scleractinia spp.]	EN/VU/NT/DD	Decreasing	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=129991&searchType=species
<i>Goniastrea</i> spp.	II [ORDER listing Scleractinia spp.]	LC	Decreasing	Multiple species assessed	NA	https://www.iucnredlist.org/search?taxonomies=124169&searchType=species

3. Conservation status

See Table 1 for information on conservation status for the taxa under consideration as presented in the IUCN Red List of Threatened Species.

4. Threats

Stony corals are increasingly threatened by global climate change – driving bleaching, disease outbreaks, stronger El Niño-Southern Oscillation (ENSO) events, storms, and ocean acidification – alongside local stressors such as overfishing, pollution, and coastal development (Andrello et al., 2022; Crabbe et al., 2024a and references therein; Johnson et al., 2024a and references therein). Coral diseases have intensified worldwide, with major outbreaks in the Caribbean, Florida, Indo-Pacific, and beyond; notably, stony coral tissue loss disease (aka white plague disease) has been ongoing in Florida and the Caribbean since 2014 with devastating impact on affected reefs (Precht et al., 2016; Johnson et al., 2024a and references therein). In combination, the above-listed pressures place Indo-Pacific reefs at high risk of collapse (Johnson et al., 2024a and references therein). While aquarium trade collection can deplete rare species locally, its impact is considered minor compared to coral mining and dynamite fishing (Crabbe et al., 2024a and references therein; Johnson et al., 2024a and references therein).

5. Conservation and management measures:

International legislation

Order Scleractinia is listed in CITES Appendix II [Order listing] and under Annex B of the European Union Wildlife Trade Regulations (Crabbe et al., 2024a and references therein; UNEP, 2025).

National legislation

Several range states, including India, Israel, Jordan, Djibouti, Fiji, and the Philippines, have imposed bans on trading or exporting CITES II-listed species, which cover all stony corals. Other range states, like Indonesia, permit maricultured coral trade under strict quotas and regulations to maintain sustainability (Johnson et al., 2024a and references therein).

Conservation measures

See sections on International legislation and National legislation above.

6. Trade/use

Legal

Stony corals are the most heavily traded CITES-listed marine animal species globally, primarily sold live for aquariums and as dead pieces for curios. From 2010 to 2019, over 46 million coral specimens entered international trade (CEFAS, 2022).

According to CITES Wildlife TradeView (2025), 25,340,499 live specimens – by far the dominant trade term – were traded in the period 2015-2024. Fiji, Indonesia, and Australia are top exporting countries while the US, and UK are top importing countries.

Illegal

The scale of illegal coral trade remains unclear due to challenges in identifying traded species (CEFAS, 2020). Substantial levels of import of illegally harvested live corals to the US have been documented (Petrossian et al., 2020; Sosnowski et al., 2020), and its role as an added stressor alongside global threats like climate change and ocean acidification raises concern (CEFAS, 2022).

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