

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Sixteenth meeting of the Animals Committee
Shepherdstown (United States of America), 11-15 December 2000

Application of Resolution Conf. 10.16 to corals

MARICULTURE AND PROPAGATION OF CORALS

This document has been prepared by the Chairman of the Coral Working Group of the Animals Committee on the request of the Secretariat.

Background

1. For a number of years, corals have been cultured and artificially propagated as a means of supplying specimens for international trade. Compared to the volume of global trade in hard corals, the volume that is derived from cultured origins is small (probably less than one per cent of the total according to Green & Shirley, 1999). However, such mariculture projects are likely to increase in scope and size. One difficulty caused by the development of such techniques for propagating and rearing corals is that it is not clear what source code should be applied to them. Many specimens have apparently been described, probably erroneously (for reasons described below), as being captive bred.

Coral propagation in countries of origin

2. Corals may reproduce sexually but they also have a number of means of asexual propagation. This latter characteristic is most often exploited in the culturing of corals in countries of origin. Fragments of coral are cut from live donor colonies and the fragments are then fixed by wire or glue to a substrate (frequently blocks of limestone or concrete) and are then placed in the marine environment, either suspended from lines or contained in nursery units on the seabed. Specimens are then grown on to marketable size. These techniques are also used to produce corals for transplantation for reef rehabilitation projects. In a separate approach, plates may be placed in the marine environment to enable the natural settlement of coral larvae. Whilst the latter exploit the products of sexual reproduction, most coral culturing makes use of asexual reproduction (and so enables the selection of target species).
3. Such propagation techniques may have significant benefits to corals, coral reefs and the people who depend upon them. The impact of wild harvests may be reduced and alternative sources of income and employment provided for local peoples. However, an assessment also needs to be made of the impact of repeated harvests from donor colonies.

CITES source code

4. Clearly, the methods describe above do not meet the definition of 'captive bred' in Resolution Conf. 10.16 (Rev.) – not only are the specimens usually the product of asexual, rather than sexual,

reproduction but the donor colonies are wild, the specimens are not maintained in a closed environment and so on. In many respects, the means of production are more akin to the artificial propagation of plants but the Convention reserves that term strictly for plants alone and, in any case, the definition of that term in Resolution Conf. 11.11 also requires that specimens are cultivated under 'controlled conditions'. Ranching may be a more appropriate label but even then, the current definition requires that specimens taken from the wild are reared in a 'controlled environment'. With the exception of corals being propagated by aquarists (usually in importing countries) rearing does not often appear to take place in controlled environments (as defined in Resolution Conf.10.16 (Rev.)). One might then simply describe specimens as being of wild origin but this denies the investment and expertise that has gone into producing cultured corals, which may have the positive benefits of a reduced impact of collection of wild corals on reefs and also the provision of specimens that may be actively sought in the market as being from ecologically friendly sources. The distinction in reported trade between propagated and wild-taken corals is not currently possible (with any degree of accuracy).

Issues for consideration

5. The Animals Committee may wish to review the extent of, and methods for, the artificial culturing of corals, the species to which these methods have been successfully applied, the potential impact of such actions on wild populations and the scope for expanding the use of these methods to produce corals for international trade. A definition of what constitutes a 'cultured' coral, rather than simply wild-taken, may be necessary along with advice on what source code should be applied to specimens produced using the different means of propagation. The Committee may also wish to consider any features of cultured corals that may enable them to be distinguished in trade from wild-taken corals.

References

Green, E. & Shirley, F. 1999. The global trade in coral. World Conservation Press, Cambridge.

Comments from the Secretariat

6. The Secretariat welcomes this concise and informative document and thanks the Chairman of the Coral Working Group for having agreed to produce this discussion document at short notice.
7. The Secretariat requested that this subject be discussed by the Animals Committee when it became aware of the difficulties that some Parties may have in determining the environmental impact of exporting coral specimens that have purportedly been produced through means other than direct harvesting from coral reefs. It has subsequently also become aware of the considerable potential that alternative production methods may hold in situations where there is concern over the unsustainable harvesting of coral specimens from reef environments. The Committee may wish to consider the need to investigate this aspect of trade in coral further.
8. The Committee may also wish to note that problems concerning the application of Resolution Conf. 10.16 (Rev.) to various animal production systems are further dealt with in document Doc. AC.16.15.