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

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Eleventh meeting of the Conference of the Parties
Gigiri (Kenya), 10-20 April 2000

Interpretation and implementation of the Convention

IDENTIFICATION AND REPORTING REQUIREMENTS FOR TRADE IN SPECIMENS OF HARD CORAL

1. This document was prepared by the Animals Committee and is submitted by the Secretariat on behalf of the Chairman of the Animals Committee. (Comments and recommendations by the Secretariat are presented in paragraph 17.)

Background

2. CITES regulates all international trade in specimens of hard coral species listed in the appendices (with the exception of fossilized specimens). However, there is a need for the Parties to agree on the level of identification required on permits and certificates for different types of specimens of hard corals in trade. A number of products derived from coral, such as coral sand, coral gravel, and coral base rock, including live rock (fragments of base rock to which are attached live specimens of invertebrate species not included in the appendices) may only be readily recognizable at the level of Order (Scleractinia). In some cases, they may not include any specimens of hard coral. Nevertheless, the use of the term Scleractinia for reporting coral sand and gravel has been endorsed through Notification to the Parties No. 1999/85 of 5 November 1999 on Annual Reports.

3. An additional problem that requires resolution relates to the use of standardized units for annual reporting to enable meaningful analyses of reported trade to be undertaken.

4. At its fifteenth meeting (Antananarivo, June 1999), the Animals Committee considered these issues and established a working group to examine in more detail problems associated with identifying hard coral to the species level and the unit of measurement that should be recorded on permits and certificates. The working group, which conducted its business by correspondence, consisted of observers from Indonesia, the United Kingdom (Chairman), the United States of America, PIJAC, TRAFFIC and WCMC and worked under the guidance of the Chairman of the Animals Committee.

Reporting trade in specimens of hard coral

5. Notification to the Parties No. 788 of 10 March 1994 suggested reporting trade in specimens of raw coral in kilograms, however live coral is transported in a manner (alive in bags of seawater) which makes recording weight misleading. Weighing live corals will always be problematic because of the care necessary and because the specimens must always be kept in water in order to minimize disturbance and damage. By contrast, the trade in all dead coral specimens (whether sand, gravel, recently dead corals or base/live rock) transported by any means other than in water should be recorded by weight in kilogram. These principles have subsequently been adopted in Notification to the Parties to the Parties No. 1999/85, issued after the 42nd meeting of the Standing Committee. Green & Shirley (1999) suggest typical weights for pieces of live and dead coral in trade to allow for conversion between the two reporting units.

Defining and recognising specimens of hard coral and parts thereof

6. The trade in coral sand, gravel, and rock (also known as substrate, base rock and live rock) has prompted considerable debate both regarding their definition and whether these specimens should be considered readily recognizable. If some types of specimens of dead coral in trade are to be considered readily recognizable and others not, there has to be an agreed distinction. Many of these

coral products cannot be identified to genus and the use of a higher taxonomic name was proposed in Notification to the Parties No. 1999/41. Under the circumstances, it is questionable whether Article IV of the Convention could realistically or meaningfully be applied to trade in specimens that are not identifiable to species level.

7. A number of terms such as sand and gravel have existing definitions in earth sciences (namely that sand is composed of particles less than 2mm in diameter and gravel of particles 2-4mm in diameter). On these definitions, coral rock would be anything above 4mm diameter. An alternative approach that has been suggested is to retain the accepted definition of sand but alter the definition of gravel to include particles from 2–50mm in diameter. Coral rock would therefore include any pieces greater than 50mm diameter. Annex 1 provides model definitions for the components of the trade in hard corals and these are discussed below.

8. Furthermore, such sand, gravel and base rock are not always of Scleractinian origin and can be composed, entirely or in part, of material other than coral. Sand can include Foraminifera and fragments of molluscan or crustacean shell or coralline algae. Gravel may contain larger fragments of coral plus these other materials. Rock is hard material that can be formed by consolidated coral fragments, cemented sand, coralline algae and other sediments including limestone; this rock may be known as 'substrate', 'base rock' or 'live rock' in the trade (see Annex 1).

9. Notification to the Parties No. 1999/85 indicates the acceptability of using of a higher taxon name for coral rock and of using the term Scleractinia for shipments of coral sand and gravel. Consensus was reached in the working group of the Animals Committee which agreed that coral sand is not readily recognizable and should be exempt from CITES controls. There are divergent views on whether coral gravel and coral rock should also be exempted. This is one of the issues needing to be addressed by the Conference of the Parties. The two views are as follows.

   a) Arguments for the exemption of gravel and rock make the point that if a specimen cannot even be identified to genus (let alone species) then the application of Article IV becomes difficult or even meaningless and *de facto* the specimen is not readily recognizable. Gravel and base rock would have to be declared as Scleractinia if regulated by CITES although, as noted above, shipments of these may not necessarily even be composed of coral or coral remains. Retaining gravel and rock under the control of CITES is, it is argued, related more to the conservation of reef habitats than to coral species which are the true focus of the Convention. Coral rock is often, but not always, loose material that has become naturally detached from the reef. Whilst the conservation of reefs is essential, CITES may not be the most appropriate tool to achieve this objective.

   b) Proponents for retaining coral gravel and rock under CITES control argue that these types of specimens can be readily recognized as derived from stony corals, even though they cannot be identified to species or genus. The application of Article IV of the Convention may be difficult to apply but control of these products contributes indirectly to the conservation of coral species. Because this material (in the case of rock) is biogenic and provides a surface for the attachment of new corals, it is critical to the survival of coral reef ecosystems. Although they may be taken as naturally detached rubble, living rock and substrate may be removed physically from coral reefs with crowbars and hammers, directly affecting coral reefs. The sediments from which gravel is derived are also integral components of reef habitats and their removal may harm reefs by altering patterns of water flow and increasing turbidity during collection. Excluding these products would also, it is suggested, provide a loophole by which other corals, still controlled by CITES, could be smuggled across frontiers. Concern is expressed that the suggested definition of gravel (Annex 1) may exempt raw coral destined for the jewellery trade (although this would only be if it were not recently dead or identifiable to species or genus). It is noted that the Animals Committee, at its 12th meeting (Antigua, 1995) accepted the inclusion of gravel as a specimen to be controlled by the Convention. A previous draft resolution on this subject, presented at the 10th meeting of the Conference of the Parties (Harare, 1997), was subsequently withdrawn.

10. By contrast, recently dead coral (defined as coral either recently dead, or collected alive but exported dead with the individual skeleton/corallites intact) can be recognized to genus or species level and so is readily recognizable.

Identifying live and recently dead corals

11. Problems also arise with the identification to species level of live or recently dead specimens of hard coral. This has led to the refusal by some Parties (recommended in Notification to the Parties No. 1999/41) to accept permits and certificates from exporting countries that indicate the higher-taxon only. It is widely accepted that many live corals cannot be readily identified to the species level. Determination of species' names for many taxa can only be made using cleaned dead specimens – not the live animal. By contrast, other species (e.g. *Euphyllia* spp.) have identical skeletons and can only be distinguished by their polyps. Species are recognized easily in some genera, while in others, especially the big genera such as *Acropora, Montipora, Porites* and *Fungia,* it is much more difficult. A report by WCMC (Green & Shirley, 1999) emphasised the amount of time taken to identify accurately some corals to species level; even identification to genus alone is challenging to the non-specialist (using current identification guides). By contrast, the United States Fish and Wildlife Service has produced a guide that reportedly enables their enforcement personnel to identify 90% of species in trade.

12. At species level, the coral taxonomist is concerned mostly with details of corallumite (skeletal) structure. Skeletal material secreted by a single polyp is called the corallite and the entire skeleton is called the corallum. The corallite has a tube-like morphology that is subdivided by a series of vertical plates radiating from the centre of the tube. These plates are called septa, and are important in species determinations; if these plates extend above and beyond the wall of one corallite they are called costae. The tubes are joined together by horizontal plates and other structures collectively called the coenosteum.

13. Identification of coral species requires an examination of the skeletal features and in some cases the identification of specialized structures (e.g. hydnophores which are found only on corals in the genus *Hydnophora*). For example, identification of a specimen of *Acropora* species requires observation of the growth form of the specimen and the detailed microscopic observation of axial and radial corallites, the size and the shape of septa, and the texture of the coenosteum on the radial and axial corallites. Structure of corals can only be seen easily in dead specimens under a microscope. It is also important to note that variation in species makes identification even more difficult. This is due to their variable growth form in response to specific environmental gradients (e.g. water currents, turbidity, depth, temperature), genetic variation and how they vary from one region to the next. However, most corals can be identified to genus based on gross morphology and close examination of a living specimen.

14. There are at least 70 genera of corals, more than 500 nominal species and an unknown number of true species. Unless a genus is mono-specific or is composed of a number of distinct species, ready identification of corals down to species level is, therefore, difficult. It is arguable, therefore, whether attempting to report trade in all (or most) corals to species level would have measurable benefits for enforcement purposes or for the making of non-detriment findings. Identifying corals to species level is desirable where feasible (and then most readily in mono-specific genera) but in most cases identification to genus alone may be acceptable for the purposes of CITES. This approach is consistent with that stated in section 3(b) of Notification to the Parties No. 1999/85. The issue of which genera can, or should, be identified to species could be addressed by instructing the Secretariat to amend Notification to the Parties No. 1999/41 to specify those taxa that must be identified to species level rather than exempting some genera from this requirement.

Issues to be resolved

15. In light of the foregoing information, the 11th meeting of the Conference of the Parties is requested to make determinations regarding the following issues and, subject to considerations (and any appropriate amendment) to adopt one of the two draft options for a resolution on this issue. The two draft options, annexed herewith, either exempt coral gravel and rock from control under the Convention (Annex 2) or specify that it is subject to control (Annex 3).

16. It is recommended that the Conference of the Parties:

    a) accept that corals may be identified to genus only (with specific exceptions to be advised by the Animals Committee) for the purpose of reporting and the issue of permits;

    b) determine whether Article IV of the Convention can be realistically applied to coral gravel and coral rock, which are not identifiable even to genus and which are normally labelled as Scleractinea;

    c) determine whether coral gravel and coral rock can be considered readily recognizable or not;

    d) determine that specimens of hard coral transported in water should be recorded by number of pieces only and that specimens of hard coral transported by any other means should be recorded by weight in kilogram;

    e) agree that coral sand should be exempted from the provisions of CITES; and

    f) adopt (amended as appropriate) the definitions of types of specimens of hard corals in trade recommended in Annex 1.

Reference

Green, E. & Shirley F. 1999. The global trade in coral. WCMC Biodiversity Series No. 9. Cambridge, WCMC – World Conservation Press.

COMMENTS FROM THE SECRETARIAT

A. The Secretariat appreciates the considerable amount of work done by the Animals Committee on this subject but does not support the adoption of either the recommendations in paragraph 16 or Annex 2 or Annex 3 in their current form.

B. The Secretariat, having considered the proposals from the Animal Committee and recognizing the complexity of the issue and the extraordinary problems for the implementation of CITES concerning corals as well as the need to be as pragmatic as possible, therefore recommends that the Conference of the Parties decide as follows:

    a) to adopt the working definitions for coral sand, coral gravel and coral rock provided in Annex 1 of this document;

    b) that Resolution Conf. 10.2 accordingly be amended under section I. under the first RECOMMENDS by inserting the following new paragraphs after paragraph h):

        i) that, on permits and certificates for trade in specimens that are readily recognizable as coral base rock, substrate or live rock, where the genus can not be readily determined, the scientific name for the given specimens should be “Scleractinia”;

        j) that, any Party wishing to export coral rock (as defined in Annex 1 of this document) and identified to ordinate level only should, in view of the inability to make a the non-detriment finding for coral rock as required in paragraph 2(a) of Article IV, but in terms of paragraph 3 of the same Article:

            i) establish an annual quota for exports and communicate this quota to the Secretariat for distribution to the Parties; and

            ii) provide an assessment by their Scientific Authority(ies) that such exports will not affect the role that coral rock has in ecosystems affected by extraction of such specimens, so that such assessments can be distributed to the Parties by the Secretariat; and

iii) provide the Secretariat with an outline of monitoring programmes for the relevant ecosystems impacted by the extraction of coral rock, aimed at monitoring changes that result from the extraction of coral substrate;

k) that, on permits and certificates for trade in live specimens of hard coral of the following genera, permits and certificates that include only the name of the genus may be accepted: *Acropora* spp., *Lobophyllia* spp., *Montastrea* spp., *Physogyra* spp. and *Turbinaria* spp. In all other cases of trade in live specimens of stony corals, Parties should reject permits and certificates that do not specify the species names;

c) that Resolution Conf. 9.4 (Rev.) accordingly be amended by inserting the following paragraph after the first RECOMMENDS, as follows:

make every effort to report trade in CITES-listed species of coral at the species level or, if this is not practical, at the generic level at least. Trade in live specimens of hard coral of the following genera *Acropora* spp., *Lobophyllia* spp., *Montastrea* spp., *Physogyra* spp. and *Turbinaria* spp. may be reported at generic level. Trade in all other cases of live specimens of stony corals should be reported at species level;

d) that Resolution Conf. 9.6 accordingly be amended as follows:

i) in the preamble, append the following paragraph:

RECOGNIZING that the species or genera of coral from which coral sand and coral gravel are derived can not be readily determined;

ii) insert the following paragraph before REPEALS:

AGREES that coral sand and coral gravel are not considered readily recognizable and are therefore not covered by the provisions of the Convention.

e) that Notification to the Parties No. 1999/85 on Annual Reports shall be amended as follows:

i) section 3(b), first indent, replace 'higher taxonomic level' with 'level of order (Scleractinia)';

ii) delete section 3(b), second indent;

iii) section 5(a), 'Description of specimens and units of quantity', revise description of coral (raw) – COR – to explain that this refers only to dead coral, base rock and live rock and should be reported by kg;

iv) section 5(a), 'Description of specimens and units of quantity', revise description of live – LIV – to explain that specimens of live coral and 'substrate', transported in water, should be recorded by number of pieces only.

f) that the Animals Committee should, in consultation with the Secretariat, include species of corals traded as live specimens in the implementation of Resolution Conf. 8.9, and consider the problem of applying Article IV, paragraph 2(a) when specimens in trade cannot readily be identified to species level and make recommendations to the 12th meeting of the Conference of the Parties;

g) that the Secretariat shall endeavour to provide colour illustrations of coral taxa most frequently traded as live specimens on the CITES Web site and in the CITES Identification Manual in collaboration with the Identification Manual Committee;

h) that Management Authorities, notably the United States of America, be encouraged to distribute material that they have prepared for the identification of coral, for use by other Parties.

DEFINITIONS

Coral sand – material consisting entirely or in part of finely crushed fragments of dead stony coral no larger than 2mm diameter and which may also contain the remains of Foraminifera, mollusc and crustacean shell, and coralline algae. Not identifiable to genus.

Coral gravel (including rubble) – unconsolidated fragments of broken or finger-like dead stony coral and other material between 2 and 50mm in diameter and which is not identifiable to genus (cf 'recently dead coral').

Coral rock (also base rock and substrate) – hard consolidated material, > 5cm in diameter, formed of fragments of dead coral, cemented sand, coralline algae and other sediments including limestone. Individual pieces may, or may not, contain coral. 'Live rock' is the term given to pieces of coral rock to which are attached live specimens of invertebrate species and coralline algae not included in the CITES appendices and which are transported moist, but not in water, in crates. 'Substrate' is the term given to pieces of coral rock to which are attached soft corals (of species not included in the CITES appendices) and which is transported in water like live corals. Coral rock is not identifiable to genus; the definition excludes specimens defined as 'recently dead'.

Recently dead coral – pieces of coral which are recently dead, or which have been collected alive and then exported dead, and in which the structure of corallites (the skeleton of the individual polyp) is still intact; specimens are, therefore, identifiable to species or genus.

Live coral – pieces of live coral transported in water and which are identifiable to species or genus.

RECOMMENDATIONS TO THE CONFERENCE OF THE PARTIES

OPTION 1

Reporting and identification requirements for trade in hard corals

The recommendations below are based on the assertion that unless a specimen of coral can be identified to genus, it is *de facto* not readily recognizable and a non-detriment finding under Article IV of the Convention cannot realistically be made.

Coral sand, coral gravel and coral rock, would be excluded from the provisions of the Convention. By contrast, live coral and recently dead coral are readily recognizable to genus level at least. Permits and reporting would reflect this requirement.

Recommendations

1. Notification to the Parties No. 1999/85 on Annual Reports should be amended as follows:

   i) in section 3(b), delete the paragraph headed 'Stony Corals';

   ii) in section 5(a), 'Description of specimens and units of quantity', revise the description of coral (raw) – COR – to explain that this refers to dead coral only (live coral should be recorded under LIV) and should be reported in kilogram only;

   iii) in section 5(a), 'Description of specimens and units of quantity', revise the description of live – LIV – to explain that specimens of live coral, transported in water, should be recorded by number of pieces only;

2. Resolution Conf. 10.2, under section I, under the first RECOMMENDS, insert the following new paragraph after paragraph h):

   i) that on permits for trade in live or recently dead specimens of hard coral, whilst the specific name is desirable, the scientific name for the specimens must be given to genus at least;

3. Resolution Conf. 9.4 (Rev.) should be amended by inserting the following paragraph after the first RECOMMENDS:

   d) make every effort to report trade in CITES-listed species of coral at the species level or, if this is not practical, at the generic level at least;

4. Resolution Conf. 9.6 should be amended as follows:

   i) in the preamble, append the following paragraph:

      RECOGNIZING that the species or genera of coral from which coral sand, coral gravel, or coral rock (also known as base rock, live rock and substrate) are derived can not be readily determined;

   ii) insert the following paragraph before REPEALS:

      AGREES that:

      coral sand, coral gravel and coral rock are not considered readily recognizable and are therefore not covered by the provisions of the Convention.

RECOMMENDATIONS TO THE CONFERENCE OF THE PARTIES

OPTION 2

Reporting and identification requirements for trade in hard corals

The recommendations below are based on the assertion that coral sand is not considered to be readily recognizable but trade in other materials derived from coral are recognizable if only to the level of Order. However, live and recently dead coral are identifiable to genus at least and permits and reporting should reflect this.

It is noted, however, that if there are CITES-listed invertebrates attached to the live rock or substrate, they should be recorded separately on the CITES document in addition to the living rock/substrate.

Recommendations

1. Notification to the Parties No. 1999/85 on Annual Reports should be amended as follows:

   i) section 3(b), first indent, replace 'higher taxonomic level' with 'level of order (Scleractinia)';

   ii) section 3(b), in the second indent in the paragraph headed 'Stony Corals', delete 'coral sand and';

   iii) section 5(a), 'Description of specimens and units of quantity', revise the description of coral (raw) – COR – to explain that this refers only to dead coral, base rock and live rock and should be reported by kg;

   iv) section 5(a), 'Description of specimens and units of quantity', revise the description of live – LIV – to explain that specimens of live coral and 'substrate', transported in water, should be recorded by number of pieces only;

2. Resolution Conf. 10.2, under section I, under the first RECOMMENDS, insert the following new paragraphs after paragraph h):

   i) that, on permits for trade in specimens that are readily recognizable as coral gravel, coral base rock, substrate or live rock, where the genus can not be readily determined, the scientific name for the given specimens should be "Scleractinia";

   j) that, on permits for trade in live or recently dead specimens of hard coral, whilst the specific name is desirable, the scientific name for the specimens must be given at generic level at least;

3. Resolution Conf. 9.4 (Rev.) should be amended by inserting the following paragraph after the first RECOMMENDS:

   d) make every effort to report trade in CITES-listed species of coral at the species level or, if this is not practicable, at the generic level at least;

4. Resolution Conf. 9.6 should be amended as follows:

   i) in the preamble, append the following paragraph:

      RECOGNIZING that the species or genera of coral from which coral sand is derived can not be readily determined;

i) insert the following paragraph before REPEALS:

AGREES that coral sand is not considered readily recognizable and is therefore not covered by the provisions of the Convention.