

## **Administrative and Monitoring Implications of listing and down-listing of commercially-exploited aquatic species, including the implications of Annex 4 of Resolution Conf. 9.24**

This paper has been prepared by Anna Willock, TRAFFIC International, under contract to FAO as an information input to the FAO Expert Consultation on 'Implementation Issues Associated with Listing Commercially-exploited Aquatic Species on the CITES Appendices'.

This paper seeks to:

- provide a general introduction to CITES, including an overview of each of the three Appendices
- outline the basic mechanics of trade under each Appendix, including steps that need to be taken by Parties to facilitate trade, institutional requirements and compliance measures
- consider implementation issues likely to arise in relation to aquatic species

Although there are a number of commercially exploited aquatic species currently listed on the CITES Appendices these do not provide direct experience of the range of issues relating to the implications of listing and down-listing such species that this paper seeks to illustrate. For this reason, several examples of species not listed in a CITES Appendix have been used to demonstrate a particular point or problem. These examples have been used for illustrative purposes only and in no way are intended to indicate a position for or against listing these species.

### **Introduction**

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) entered into force on 1 July 1975. The key principle behind the establishment of CITES is that no single country can effectively control international trade in wildlife; therefore the main purpose of the Convention is to provide a legislative and regulatory framework for international co-operation in controlling the international trade of wildlife. CITES does this in two main ways: first, by providing a mechanism for the prevention of international trade in species threatened with extinction and, second, by assisting in the effective regulation of international trade in species that might become threatened with extinction in the absence of such controls.

In Article I of CITES trade is defined as having four elements: import, export, re-export and introduction from the sea<sup>1</sup>. CITES works through having provisions controlling each of these facets of trade for listed species, with the nature of those provisions varying according to in which of the three CITES Appendices a species is listed.

There are currently 164 Parties to CITES<sup>2</sup>.

In regard to commercially exploited aquatic species, several of significance in international trade are currently listed in the CITES Appendices, including Queen Conch *Strombus gigas*, giant clams Family Tridacnidae, all hard corals, and seahorses in the genus *Hippocampus*. Many of these species are harvested on a large-scale by numerous countries and widely traded in high volumes and different product forms. No marine species taken in a large-scale, industrial commercial fishery has yet been listed on CITES although all sturgeon and paddlefish Acipenseriformes spp. are listed in either Appendix I or II and traded in significant quantities.

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<sup>1</sup> The term introduction from the sea is defined under CITES as '...transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State' (Art. I (e))

<sup>2</sup> On 30 May 2004 the number of Parties to CITES will increase to 165 upon the entry into force of the Lao People's Democratic Republic's accession to the Convention.

There are currently around 28 000 species of plants and 5000 species of animals listed in the CITES Appendices. Around 900 of these are listed in Appendix I, over 30 000 in Appendix II and approximately 300 in Appendix III (Anon., 2004a).

### **Purpose of each Appendix**

#### **Appendix I**

An Appendix I listing offers the highest protection for a species under CITES. A species listed in Appendix I has been determined by CITES Parties to be threatened with extinction and affected or potentially affected by international trade. Trade in an Appendix I-listed species may only be authorised in exceptional circumstances and any such trade may not be for a primarily commercial purpose.

Proposals to include a species in or remove a species from Appendix I requires a two-thirds majority of the Parties present and voting at a Conference of the Parties to CITES<sup>3</sup>.

#### **Appendix II**

An Appendix II listing of a species does not necessarily mean that it is currently threatened with extinction nor that trade in that species will be limited, however any such trade must be determined not to be detrimental to the survival of the species. Appendix II includes species that may become threatened if their trade is not effectively regulated.

Through the adoption of listing criteria (Resolution Conf. 9.24), the CITES Parties have concluded that Appendix II should include species for which the harvesting of specimens from the wild for international trade has, or may have, a detrimental impact on the species by either exceeding, over an extended period, the level of harvesting that can be continued in perpetuity, or reducing the species to a population level at which its survival would be threatened by other influences.

In addition to what might be considered the biological listing criteria, Article II.2(b) allows for other species be placed in Appendix II if this is necessary to ensure the effective regulation of trade in species listed in that Appendix owing to trade threats. Resolution Conf. 9.24 clarifies that this should occur when "...the specimens resemble specimens of a species included in Appendix II under the provisions of Article II, paragraph 2(a), or in Appendix I, such that a non-expert, with reasonable effort, is unlikely to be able to distinguish between them." This is commonly referred to as the look a-like provision and is potentially important for aquatic species as these are often traded in high volumes and in a highly processed state, making some species difficult to distinguish from others. This issue is discussed further in the paper.

CITES requires that trade in Appendix II species must only be authorised by governments if certain required management and scientific determinations are made. These requirements, discussed later in more detail, relate to all Appendix II-listed species regardless of whether they were listed due to their conservation status or under the look a-like provision.

As with Appendix I, inclusion of a species in or removal of a species from Appendix II requires a two-thirds majority of the Parties present and voting at a Conference of the Parties to CITES. Appendix II listings of aquatic species by the twelfth meeting of the Conference of Parties (November 2002) included Basking Shark *Cetorhinus maximus*, Whale Shark *Rhincodon typus* and seahorses *Hippocampus* spp..

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<sup>3</sup> There is also provision for decisions on listing proposals to be taken by postal vote however to date this has not occurred.

## **Appendix III**

Species listed in Appendix III are subject to regulation within the jurisdiction of a Party seeking the co-operation of other States to prevent or restrict their exploitation through trade.

A CITES' Party can unilaterally list a species in Appendix III at any time, however Resolution Conf. 9.25 requests Parties to first consult widely with any other range States and the Animals Committee before moving to include a species in Appendix III. A listing Party is also requested to ensure that its "...national regulations are adequate to prevent or restrict exploitation and to control trade, for the conservation of the species" and that its "...national enforcement measures are adequate to implement these regulations" (Resolution Conf. 9.25). Recent examples of Appendix III listings of marine species include Great White Shark *Carcharodon carcharias* (October 2001, Australia) and the Sea cucumber species *Isostichopus fuscus* (October 2003, Ecuador).

## **Reservations**

Parties are allowed to take out a "reservation" on species listings, in which case they are treated as a non-Party to the Convention with respect to that species until their reservation is withdrawn. In relation to listings in Appendix I or Appendix II, a reservation must be taken out within 90 days of the species being listed. With respect to listings in Appendix III, a Party may take out a reservation at any time and in respect to any part or derivative of the species specified in the listing.

## ***Mechanics of implementation***

Trade in species listed in CITES Appendices requires certain actions to be undertaken by exporting, re-exporting and importing countries. Fundamental to these actions is the designation by each Party of a CITES Scientific Authority and CITES Management Authority. These authorities are responsible for providing advice and/or certifying that trade has taken place in accordance with the provisions of the Convention. Trade of a listed species between a CITES Party and a non-Party is allowed under the Convention when comparable documentation to that of CITES permits is issued by a competent authority designated by the non-Party; in effect, documentation certifying that trade is in accordance with CITES provisions. The only aspect of commercial trade in a listed species that would require no documentation under CITES would be trade between two States that were non-Parties to CITES or that had reservations on the species concerned.

In addition to the national CITES authorities, there are also inter-governmental structures under the Convention that guide its implementation. These include the Standing Committee, the Animals Committee, the Plants Committee and the Nomenclature Committee. All of these committees report to meetings of the Conference of the Parties, which are held approximately every two and a half to three years.

## **Monitoring and tracking of trade in species listed in the CITES Appendices**

As noted above, trade under CITES is defined as import, export, re-export and introduction from the sea, with CITES provisions for the monitoring and tracking of trade required to be met in each instance. These provisions, and the obligations of the States engaged in trade, vary depending on the Appendix in which the species is listed.

## Appendix I

Trade in Appendix I-listed species is not allowed for primarily commercial purposes. The export/re-export of specimens listed in Appendix I requires<sup>4</sup>:

- i) a biological (non-detriment) finding – the CITES Scientific Authority in the country of export/re-export has determined that export will not be detrimental to the survival of the species in the wild
- ii) a legal finding – the CITES Management Authority in the country of export/re-export that the specimen was not obtained in contravention of the laws of that State with regard to the protection of fauna and flora
- iii) an import permit has been granted for the specimen concerned by the CITES Management Authority in the country of import upon determining that the purpose of the import is not for primarily commercial purposes and by the Scientific Authority that it would not be detrimental to the species survival

The requirement for both an export permit and an import permit means that both the exporting country and the importing country must ensure that certain conditions for trade have been met for these species.

## Appendix II

The export of specimens of a species listed in Appendix II requires two main conditions to be satisfied:

- i) a biological (non-detriment) finding – that export will not be detrimental to the survival of the species in the wild
- ii) a legal finding – that the specimen was not obtained in contravention of the laws of that State

The Scientific Authority of the exporting Party is responsible for making the non-detriment finding. As part of this finding, the Scientific Authority may determine that limits should be placed on the export of a species in order to maintain it throughout its range at a level consistent with its role in the ecosystems in which it occurs. Annual quotas are one example of such limits and are used, for example, for the export of sturgeon caviar.

Import of Appendix II-listed species requires the prior presentation of the export permit or re-export certificate to authorities in the importing State. If a species is re-exported, the re-exporting State's Management Authority must be satisfied that the species was imported in accordance with CITES provisions. Unlike for Appendix I-listed species, there is no requirement for an import permit to be issued for the international trade of Appendix II species.

The provisions under CITES Appendix II are not dissimilar to the requirements under the catch certification and documentation schemes implemented by some regional fisheries organizations (RFOs). For example the Catch Documentation Scheme (CDS) implemented in May 2002 by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has the following objectives:

- (i) monitor the international trade in toothfish

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<sup>4</sup> Export of a live animal also requires certain steps to be taken however given that most commercially-exploited aquatic species are not traded live this provision will not be covered in detail in this report.

- (ii) identify the origins of toothfish imported into or exported from the territories of Contracting Parties
- (iii) determine whether toothfish imported into or exported from the territories of Contracting Parties, if caught in the Convention Area, was caught in a manner consistent with CCAMLR conservation measures
- (iv) gather data for the scientific evaluation of stocks (Anon., 1999)

The above aims and resulting provisions of the CDS are comparable to those for Appendix II in that the presentation of valid documentation is required at all stages of import (including the landing of catch from high seas areas), export and re-export of toothfish products. Trade is provided for, however such trade is controlled until the products reach the final consumer States<sup>5</sup>.

There are specific circumstances under which certain Parties may be relieved of their CITES obligations with respect to trade in marine species listed in Appendix II. This is discussed further in the section of the paper dealing with implementation issues.

### Appendix III

While a Party may unilaterally list a species in Appendix III at any time, and thereby impose trade monitoring obligations on all CITES Parties, the nature of those obligations for the listing Party is different to that for non-listing Parties.

A country having listed a species in Appendix III must issue an export permit prior to the specimens being exported. An export permit can only be granted when the Management Authority of the State is satisfied that the specimen was not illegally obtained. Unlike the granting of export permits in relation to species listed in Appendix I and Appendix II, there is no requirement for the Scientific Authority of the exporting State to make a non-detriment finding for Appendix III species. This is an important difference as it means that a finding relating to the conservation status of an Appendix III-listed species is not required under CITES in determining whether or not to allow international trade.

Parties that have not listed the species in Appendix III are required to issue a certificate of origin upon export or a re-export certificate where the specimens have previously been imported. Unlike for an export permit issued by a listing Party, there is no requirement for a Party that has not listed the species to make a finding that the specimen has not been illegally obtained prior to issuing a certificate of origin.

### Certificates of Introduction from the Sea

'Introduction from the Sea' is a significant provision in the application of CITES to many marine species. Introduction from the sea is defined within CITES as "...transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State" (Article I (e)). To date CITES Parties have not formally clarified what constitutes waters under a State's jurisdiction.

In relation to species listed in Appendix I or Appendix II, CITES Management Authorities must issue a certificate of introduction from the sea before such an introduction takes place. In issuing the certificate the Management Authority must act on the advice of the Scientific Authority that "...the introduction will not be detrimental to the survival of the species involved" (Article III 5(a) and Article IV 6(a)). There is no requirement for a finding to be made that the specimen was

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<sup>5</sup> A more detailed comparison of the CCAMLR CDS and the CITES Appendix II documentation can be found in Willock (2002).

not illegally obtained. However if the specimens are subsequently exported an export permit is required with concomitant requirements for non-detriment and legal findings.

There are no provisions relating to introduction from the sea for species listed in Appendix III.

The following table summarises the basic mechanisms for the control and monitoring of trade in CITES-listed species.

**Table 1: Summary of conditions for trade under each CITES Appendix**

<i>Appendix</i>	<i>Permit conditions</i>	<i>Export Permit Required?</i>	<i>Re-Export Certificate Required?</i>	<i>Import permit required</i>
<b>I</b>	Not for commercial trade; trade not detrimental to the species; trade is legal; avoids cruel or injurious shipping of live specimens	Yes – granted only if import permit already in hand	Yes – granted only if in accordance with CITES and there is a valid import permit	Yes
<b>II</b>	Trade not detrimental to the species; trade is legal; avoids cruel or injurious shipping of live specimens	Yes	Yes – granted only if import was in accordance with CITES	No – requires prior presentation of the export permit, certificate of origin, re-export permit or re-export certificate (whichever applicable)
<b>III Party has listed the species</b>	Trade is legal; trade avoids cruel or injurious shipping of live specimens		Yes – granted on the basis that the specimens were processed in/ re-exported from that State	No
<b>III Party has not listed the species</b>	Specimen originated from that Party	No – certificate of origin		

Adapted from Clarke, in press.

In addition to the above information, the source of specimens in trade and the purpose of trade are required to be noted on the relevant documents. For example, the export permit for a specimen taken from the wild would include the code ‘W’ to denote the source of the specimen and, if exported for commercial trade, the code ‘T’ would be included as the purpose of that trade. Source codes also exist to designate specimens that have been produced and/or reared in captive conditions. This supports the monitoring of trade from individual countries and overall trade volumes, assessment of the potential trade impacts on wild populations, and compliance with CITES trade controls.

### **Institutions and personnel required**

#### **Management Authority**

CITES requires each Party to designate one or more CITES Management Authorities and Scientific Authorities, with other Parties advised of the names and addresses of these. Wijnstekers (2001) notes that Management Authorities would “...normally be a government body, which is in many cases also responsible for nature conservation. It should therefore be in

the position to establish whether a specimen was legally acquired in its country, i.e. not in contravention of its own laws for the protection of fauna and flora.”

In general terms, the Management Authority is mandated to ensure that the provisions under the Convention are met for trade in a listed species to occur. In performing these functions, the Management Authority must, in some circumstances, rely on advice from the Scientific Authority, including with respect to whether or not the proposed trade will be detrimental to the species concerned. The Management Authority is also responsible for submitting an annual report on imports, exports, re-exports and introduction of the sea of listed species to the CITES Secretariat.

The ability for more than one Authority to be designated by a Party provides for the possibility that a different area of government could be responsible for CITES obligations for particular species. In relation to aquatic species, a separate government department (often the fisheries department) usually undertakes responsibility for management of these resources to that which has primary responsibility for CITES implementation (often the wildlife department). For example, in October 2003 the Ecuadorian Government listed the Sea cucumber species *Isostichopus fuscus*, which is harvested from the Galapagos Islands, in Appendix III. Ecuador has since moved to designate CITES Management and Scientific Authorities for *I. fuscus* within the archipelago itself to ensure more efficient and practical implementation of CITES provisions (Willock *et al.*, in press). It is also possible that in carrying out its mandate the Management Authority may seek advice from other appropriately qualified institutions including regional organisations.

### Scientific Authority

CITES Scientific Authorities are primarily responsible for making findings relating to whether trade in a listed species will be detrimental to the survival of that species. As part of this mandate the Scientific Authority also monitors the level of exports in a species and can advise the Management Authority that a limit on the grant of export permits is required.

In respect to Appendix II-listed species introduced from the sea CITES Article IV.7 provides for the Scientific Authority to consult with “...other national scientific authorities or, when appropriate, international scientific authorities...” with regard to the possibility of setting annual quotas on the number of specimens able to be introduced. This may be of particular relevance to species harvested on the high seas under the mandate of an RFO and for which an annual total allowable catch (TAC) may have been set. While not listed in a CITES Appendix, Southern Bluefin Tuna *Thunnus maccoyii* is an example of a highly migratory fish managed by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) for which global TACs have previously been established.

Practical issues have been encountered in the functioning of Scientific Authorities including the failure by some Parties to designate such an authority, failure of the Management Authority to take into account advice from the Scientific Authority when issuing export permits and a lack of capacity in some Parties to make robust non-detriment findings. Resolution Conf. 10.3 ‘Designation and Role of the Scientific Authorities’ contains advice to Parties on how to overcome these issues, including that trade in listed species should not be accepted from Parties that have not designated a Scientific Authority. Resolution Conf. 10.3 also encourages Parties to enlist the support of other Parties and raises the potential for neighbouring Parties to contribute to common scientific institutions to make the necessary scientific findings.

National capacity to make scientific findings is most likely to be absent in many developing countries with more limited resources available for scientific research and analysis. To overcome such problems national and regional-based initiatives have been undertaken. For example,

capacity-building workshops for both Parties and non-Parties have been held for the small island countries in the Pacific to assist in developing knowledge of the Convention and solutions to practical difficulties experienced in its implementation in the region. Further, in-country support for Fiji, a major exporting hub for wildlife, and particularly aquatic species, in the Pacific region is in place under a UK Government funded project.

### **Non-detriment findings**

Non-detriment findings are a critical aspect of CITES implementation for Appendix I- and Appendix II-listed species. Non-detriment findings are based on scientific consideration as to whether the level of trade in a species is biologically sustainable.

Management regimes for aquatic species vary in complexity from stock assessment models reliant on extensive catch and monitoring data to the application of relatively simple measures such as closed areas and minimum size limits. Depending on the nature of the resource an effective management regime may not necessarily require the most extensive and complex measures to be applied to support a non-detriment finding. There is, however, a fine balance between allowing harvest at levels that are probably sustainable and being precautionary enough to ensure the survival of the species is not put at risk (Anon., 2004b).

Apart from recommendations to Parties on the type of information that might be usefully taken into account when making a non-detriment finding, there is no standard formula or methodology generally applied throughout CITES. Therefore responsibility for determining the basis on which to make a non-detriment finding lies with the Party itself and hence responsibility for determining at what level harvest is sustainable and how that decision is reached.

The geographic range of a CITES-listed species will likely impact the basis for non-detriment findings. Many coastal, inshore fisheries target stocks that are wholly contained within the waters of a single country and are managed under the domestic laws of that country. Therefore the impact of harvest on the stock can be monitored and assessed by that country with regard to making a non-detriment finding. However species found within the waters of a number of States or that migrate between States would require a degree of co-ordination. In some cases, the listing of such species in CITES has given rise to increased co-operation between harvesting States that have enhanced conservation and management efforts. For example, Queen Conch *Strombus gigas* is one of the most important fishery resources in the Caribbean region. From the 1970s harvest for trade and local consumption increased to the point where concerns were held for the future of the resource, resulting in the species being listed in Appendix II in 1992. Through the implementation of the listing, co-ordinated management of the species has been enhanced with a number of countries having introduced national management plans and significant impetus for the development of a regional management strategy (Theile, 2001). Nevertheless, substantial problems in adhering to the CITES requirements are still being encountered in many countries as revealed in the latest significant trade review (Anon., 2003).

A wide range of marine fish commercially harvested from high seas areas are managed by RFOs. These organisations undertake scientific research and assessment of the status of the main stocks under their mandate and this provides the most comprehensive information on which a non-detriment finding under CITES could be based. Furthermore, CITES allows for non-detriment findings to be accepted from “international scientific authorities”, and as such the RFO itself could be recognized as the scientific authority for the species in question (Anon., 2002a). This is discussed further in relation to introduction from the sea.

There are also a number of fish species harvested from the high seas that are not currently subject to any specific management measures. A listing of such a species in Appendix II, for example,

would require a non-detriment finding by a CITES Party to be made and co-ordination between States harvesting these species would be necessary in such circumstances.

### **Financial implications of implementing a listing**

The financial implications of a listing for an individual Party depends on the extent to which that Party is engaged in the trade of the listed species; as an exporting, re-exporting or importing State. Any such costs will primarily relate to listings in Appendix II or III given that trade in Appendix I-listed species occurs only in limited circumstances although illegal trade may require the application of enforcement-related resources.

The main activities associated with the implementation of a listing that would generate costs include:

- i) research upon which to base non-detriment findings
- ii) processing of permit applications, compilation and submission of annual reports
- iii) inspection of imports and exports and detection and prosecution of illegal trade

It is difficult to quarantine the financial implications of implementing a CITES listing as the costs and tasks are usually routinely included by countries within the overall national enforcement programmes for wildlife protection.

Different countries take different approaches to dealing with the financial implications of a listing. The charging of application fees is one approach used by countries, including the USA and Australia. In regard to smaller, developing States Fiji has experienced significant difficulties in ensuring the necessary resources are available to meet its obligations as a Party to the Convention, such that it has been suspended from trade in the past. As part of its response to these difficulties the Fijian Government has also recently moved to recover some of the costs of implementation through the introduction of application fees, for example for registration as a trader, registration to breed in captivity and applications for CITES import / export / re-export documents. Further, Fiji is reportedly also investigating the possibility for a CITES Trust Fund to be established with the revenue, or a part thereof, raised from fees associated with CITES implementation to be used for that purpose (R. Parry-Jones, TRAFFIC Oceania-South Pacific Programme *in litt.* 31 March 2004).

All countries, regardless of economic status, have limited resources to devote to the enforcement of wildlife protection laws with border control priorities more usually directed to such issues as drugs, weapons and people smuggling. Further there are over 30 000 species listed in the CITES Appendices and priority for limited national resources is more often afforded to Appendices I- and II-listed species.

There is a growing number of documentation and labelling laws and schemes seeking to control and/or identify the source of marine fisheries products in trade. For example, in July 1999 Japan amended its Quality Labelling Standards to require all unprocessed fresh fish to be clearly labelled to include information relating to the species and where it was caught or unloaded and for farmed products to be clearly labelled as such and include the place of farming. Fisheries products imported into Japan must also identify the country of export (A. Izawa, TRAFFIC East Asia-Japan, *in litt.* to A. Willock, March 2004). There are also various catch and trade documentation schemes that have been introduced by RFOs that seek to either control or gather information about the source of fisheries product in trade. While maintaining the integrity of purpose for the different trade control schemes, co-ordination between these would reduce the resulting cost burden on both government agencies and industry.

## **Non-adherence with CITES obligations**

While supporting compliance by Parties with all aspects of the Convention is the overall aim, there are a number of avenues available under CITES for remedial action to be taken against a Party that is not fulfilling its obligations under the Convention.

### ***Stricter domestic measures***

While the Convention requires certain actions to be taken by Parties in the trade of listed species it also provides in Article XIV.1 for Parties to adopt “stricter domestic measures regarding the conditions for trade, taking, possession or transport” of listed species or prohibit their trade completely.

The European Union (EU), for example, has implemented stricter measures for Appendix II-listed species such that an import permit must be issued prior to import. Further, the EU also undertakes its own scientific assessment as to the robustness of the non-detriment finding by some exporting States and has in the past decided to prohibit imports of a listed species from a certain country on the basis that trade may in fact be detrimental. This effective double-check has been used to prohibit, for example, the import into the EU of certain species of coral from Indonesia due to concerns over the veracity of the exporting country’s non-detriment finding. Australia is another country that can require import permits for certain species.

### ***Suspension of trade in a particular listed species***

Another process through which CITES Parties investigate compliance with and the effectiveness of an Appendix II listing is through what is commonly known as a ‘Significant Trade Review’, the process of which is set out in Resolution Conf. 12.8. Species are identified for which there is concern that trade might exceed sustainable levels, and further research undertaken to assess whether these concerns are merited. In cases where the sustainability of trade remains in question, the CITES Animals and Plants Committees may develop recommendations to Parties exporting the species requesting additional information or recommending remedial measures. Recommendations are based on implementation of CITES Article IV, specifically as it pertains to the issuance of scientific non-detriment findings and the sustainability of trade. If a Party fails to take action to implement the recommendations resulting from a Significant Trade Review, trade in the affected species with that Party can be suspended by the CITES Standing Committee.

### ***Suspension of trade in all listed species***

Mechanisms exist under CITES for trade in all listed species to be suspended for a particular Party in certain circumstances.

For example, trade in all CITES-listed species has been suspended with a number of Parties due to concerns regarding the level of illicit trade to and from their territory. Such notifications may also be made with respect to trade in listed species with non-Parties to CITES.

There are also allowances for suspending trade in response to longer-term failures to implement the Convention. For example, in cases where a CITES Party has not developed domestic legislation for CITES implementation, as required under the treaty, following a series of encouragements and warnings, notification may be made to other Parties to suspend trade in all CITES-listed species with that country until such time as the legislation is developed. Trade suspensions can also be enacted in cases where Parties have failed to submit annual reports for three consecutive years without adequate justification.

A decision to suspend trade with a Party in all listed species is generally taken as a last resort and usually follows extensive communication and liaison with that Party. Further, through the CITES Secretariat, a programme of assistance is made available to Parties to help them in implementing the Convention.

In some circumstances CITES Parties themselves have voluntarily implemented a moratorium on all trade in CITES-listed species from their country. For example, Paraguay has chosen to implement such a moratorium until measures could be taken to enhance its implementation of the Convention and to combat illicit trade (Anon., 2004c).

## **Implementation issues**

### **Relationship with other conventions and treaties**

Article XIV of CITES deals with the relationship between CITES and the other international or regional treaties and conventions. Of particular relevance to aquatic species is paragraph four of this Article:

Article XIV.4 relieves CITES Parties which are also Parties to an international agreement affording protection to marine species listed in Appendix II, of the obligations related to trade in specimens of Appendix II species that are taken by ships registered in those Parties and in accordance with such other international agreement (Winjstekers, 2001). However the exemption is specific to agreements in force at the time of the coming into force of CITES (i.e., 1 July 1975).

Article XIV.5 extends the exemption of Article XIV.4 such that any export of a specimen taken in accordance with paragraph 4 would only require a certificate from a Management Authority of the State of introduction to the effect that the specimen was taken in accordance with the provisions of the other relevant international agreement rather than an export permit (Winjstekers, 2001).

There are a number of fisheries conventions and agreements that were in force prior to that date, for example the Inter-American Tropical Tuna Commission (IATTC) entered into force on 3 March 1950 while the International Convention on the Conservation of Atlantic Tunas (ICCAT) entered into force on 21 March 1969. If a species managed under the mandate of ICCAT was listed in Appendix II, for example Atlantic Bluefin Tuna *Thunnus thynnus*, the obligations of CITES Parties that are also members of ICCAT would be modified through the application of Article XIV.4 and 5.

### **Introduction from the Sea**

As noted, introduction from the sea is a potentially important CITES provision for many marine species, particularly those taken in large-scale, industrial fisheries where much of the catch may be taken from high seas areas<sup>6, 7</sup>. There are a number of implementation issues relating to introduction from the sea and these are discussed below using marine species to illustrate the issues.

#### **a) non-detriment finding**

Introduction from the sea requires a non-detriment finding to be made by the Scientific Authority of the State where the catch is first to be landed; that is, a finding that it will not be detrimental to the survival of the species involved. Non-detriment findings for marine species introduced from the sea may prove challenging for a Party, particularly in circumstances where vessels from that State may not be engaged in fishing for the species and the State may not itself be a member of any relevant RFO with expertise in and a mandate for the management of that species.

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<sup>6</sup> For the purpose of this section the term 'high seas' will be used for waters that are not under the jurisdiction of any State.

<sup>7</sup> As noted the application of the exemption under Article XIV.4 and 5 may result in there being some circumstances wherein provisions relating to introduction from the sea would not apply.

Article IV.7 of CITES raises the possibility of there being consultation with and advice sought from other national and/ or international scientific authorities when granting certificates of introduction. For certain marine species caught on the high seas there is well-developed scientific analyses of the status of stocks and estimates of the level of sustainable catch. For example, in the case of Patagonian Toothfish *Dissostichus eleginoides*, much of the catch taken in high seas areas is caught within the convention area of the CCAMLR. CCAMLR has well-established scientific research and stock assessment procedures for Patagonian Toothfish that could, if it was a listed species, potentially be utilised by a CITES Party to inform its decision as to whether toothfish catch introduced to its territory is non-detrimental. More specifically, under CITES limits may be placed on the total number (or quantity) of specimens that can be traded of an Appendix II-listed species in a year. The annual TAC limits for toothfish set by CCAMLR could be used as the basis for annual quotas established by CITES. Therefore, co-ordination with existing RFOs for a listed marine species could potentially assist in making non-detriment findings.

Other marine species harvested from high seas areas may not be under the mandate of an RFO and little may be known about sustainable catch, particularly where catch is derived from separate stocks. For example, in the case of Orange Roughy *Hoplostethicus atlanticus* few stocks that are fished in high seas areas are under the mandate of an RFO. As a result there is an absence of co-ordinated scientific assessment and management of any sustainable off-take from such stocks. In such circumstances, the State into which a vessel is seeking to land a catch of Orange Roughy would have little basis on which to assess whether a one-off shipment is detrimental or not to the species. Clearly a high level of co-ordination between Parties would be required in these cases and, in the absence of a relevant RFO, this would most likely need to initially occur through CITES-related mechanisms.

A further possibility under CITES in regard to marine species that may be harvested from the high seas is that, in the absence of a regulatory framework for the conservation and management of such species, there may be no sound basis upon which a non-detriment finding could be made. It may also be the case that unregulated harvest of a stock from one area seriously undermines conservation efforts elsewhere. One option to address this situation would be to determine a nil quota (that is, no trade allowed) for specimens taken from such unregulated areas where harvest was considered to be undermining the conservation status of the species. Though rare, the approach of determining a nil quota has been used by CITES Parties in relation to other species.

#### b) legal status

The decision by a Party to grant a certificate of introduction from the sea does not require a finding to be made that the catch was legally obtained. This raises a concern with regard to the potential for products derived from illegal, unreported and unregulated fishing (IUU) activities to be landed and traded under CITES provisions.

For example, in the case of Patagonian Toothfish IUU fishing is recognised by CCAMLR as posing a significant threat to the long-term sustainability of some toothfish stocks. A key source of illegally-caught toothfish is from waters under a State's jurisdiction that is reported as taken on the high seas. In the case of species such as Skipjack Tuna *Katsuwonus pelamis* or Southern Bluefin Tuna there is similarly the possibility that catch may be taken illegally or in an unregulated manner on the high seas in an area under the mandate of an RFO.

There is no explicit recognition under CITES for the potential for CITES specimens introduced from the sea to have been taken in a manner that contravened the conservation and management measures established by a RFO or in a manner that violated international law. Therefore, where Patagonian Toothfish or Skipjack Tuna, were they ever to be listed, are landed into a port State that is a Party to CITES, the Management Authority of that State has no explicit decision-making

role under which it can take into account whether the catch was taken in a manner that contravened the relevant RFO's conservation measures.

There are a number of potentially mitigating factors in relation to this issue:

- i) the State into which catch is first landed will often not be the one in which it is eventually consumed: that is, it will be subsequently exported, often following some form of processing. Export<sup>8</sup> of an Appendix II-listed species requires both a non-detriment finding and a finding by the Management Authority that the product was not obtained in contravention of that country's laws for the protection of fauna<sup>9</sup>. However unless a member of the relevant RFO, the exporting country's domestic laws are unlikely to reflect the conservation measures in place for the species in question
  - ii) countries have the capacity to implement stronger measures in relation to importation or introduction of CITES-listed species
  - iii) as IUU fishing is widely recognised to be a significant threat to the long-term sustainability of marine fisheries, particularly in large-scale oceanic fisheries, such fishing could reasonably be considered to be inherently detrimental and therefore a decision taken not to make a non-detriment finding for IUU fish (i.e., to disallow its introduction from the sea, or landing). This would, however, require identification of what was IUU catch at the time of its introduction
- c) When is an aquatic species introduced from the sea?

The CITES Parties have not explicitly adopted the jurisdictional regime for marine waters established under the United Nations Convention on the Law of the Sea of 10 December 1982 (LOSC), despite its entry into force in 1994. While some countries maintain that the entry into force of the LOSC automatically altered the definition of what constitutes waters under the jurisdiction of a State under CITES, it is unclear whether this is a widely held view among CITES Parties. Therefore what constitutes waters under a State's jurisdiction has not yet been agreed, which in turn blurs the definition of what constitutes a specimen introduced from the sea.

In the case of Skipjack Tuna, for example, this species may be harvested from near-shore coastal waters, archipelagic waters, remote high seas areas and all waters in between. The current lack of clarity as to what constitutes introduction from the sea would affect any catch of Skipjack taken from waters within a country's Exclusive Economic Zone, with the potential for there to be conflicting permitting requirements depending on where the fish was landed.

A further practical consideration is that it is possible that on a single fishing trip a vessel may fish for a listed species both within and outside wherever the introduction from the sea boundary is determined to be. This 'split-catch' scenario would result in part of the catch being subject to introduction from the sea and the other subject to either export requirements or no CITES provisions, depending where it was landed. In the case of straddling or highly migratory species such as Skipjack Tuna this situation could arise regardless of where the boundary for introduction from the sea commences. This issue is not unique to a CITES listing, with political boundaries separating different management jurisdictions for the same stock a feature of fisheries management at national, regional and international levels. It is routinely addressed in, for example, access agreements and measures relating to transshipment through such tools as automated vessel monitoring systems, observers and single jurisdiction trips.

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<sup>8</sup> The subsequent export of specimens introduced from the sea is considered to be an export not a re-export under CITES.

<sup>9</sup> As previously noted the application of the exemption under Article XIV.4 and 5 may result in there being some circumstances wherein such an export permit is not required.

This lack of clarity has so far not affected the practical application of the CITES provisions despite there being species listed in Appendix I or II that are potentially harvested from such areas, primarily a number of cetacean species. With respect to cetaceans all Parties engaged in the harvest of those species from high seas areas have reservations on these listings and so are considered to be non-Parties for the purpose of the Convention for those species, with no CITES documentation required. Differing interpretations of 'introduction from the sea' are however an area that requires further consideration and clarification and is the subject of a future FAO Expert Consultation.

### **Identifying specimens of listed species in trade**

The problem of identifying specimens of listed species in international trade is likely to be a significant one for many aquatic species. While this is also true of some terrestrial species it may be more pronounced for marine species as these are often widely traded in a highly processed form, making it difficult and in some cases impossible to visually distinguish between the products from listed and unlisted species. In addition such products are often traded in a perishable state requiring rapid clearance procedures at border points.

The effective implementation of a CITES listing is largely dependent on the ability of Customs and other officials to be able to identify specimens derived from the listed species. If the listed species is not able to be readily identified illegally obtained product may be laundered under other species names or products from the listed species may simply enter trade without the necessary documentation having been issued.

There are a number of approaches used under CITES to mitigate the potential for problems with species identification to undermine the effectiveness of a listing. The most effective and practical approach, or mixture of approaches, would obviously vary depending on the biological characteristics of the aquatic species and the nature of trade in specimens derived from it.

#### **i) Look a-like provision**

One approach to this issue for species listed in Appendix I or II of CITES is for so-called 'look a-like' species to also be listed. For example, Patagonian Toothfish and Antarctic Toothfish *Dissostichus mawsoni* are very similar in appearance as whole fish and indistinguishable from each other in filleted form. The two species are not distinguished in trade and share a common market niche (Willock, 2002). If one or other of these species were to be listed in, for example, Appendix II it would be necessary to consider whether the other should also be listed under the look a-like provisions.

As previously noted, once listed in Appendix II all species are then subject to the same CITES trade requirements regardless of why they were listed in this Appendix. While in the case of Patagonian Toothfish and Antarctic Toothfish there is institutional support for non-detriment findings for many fish species such support may be absent and therefore non-detriment findings would be difficult to make. The fact that many marine species and particularly fish appear visually similar in processed form may render the listing of all look a-like species impractical and unwieldy. For example, the fins from many shark species can not be visually distinguished in a dried form. However it may not be practical to list all such species, or the relevant genus, given the volume of trade and therefore paper work that would be generated and difficulties in making robust non-detriment findings for all such species.

Unlike for Appendix II there is no provision within the text of the Convention or in Resolutions for the listing of look a-like species in relation to Appendix III. In regard to Appendix I there is provision within Resolution Conf. 9.24 (Rev. CoP12) for a species that is visually similar to a species listed in Appendix I to be listed in Appendix II.

ii) Identification guides and / or genetic testing

Identification manuals are a widely used tool within CITES to assist visual identification of CITES-listed species. For example, in relation to marine species an identification manual has been produced to assist in the identification of hard coral species and a guide to the identification of seahorses is soon to be published.

Such guides may prove extremely useful for some specimens but for others genetic testing may be the only means by which to distinguish CITES-listed species. For certain species, for example whales, DNA tests are already being used for the purposes of tracking trade at the species level and, in some cases, at the individual specimen level. The main difficulties with such tests are the technical resources required and the costs. As much of the trade in aquatic species originates from the waters of developing countries the use of sophisticated tools such as DNA testing or examination of microscopic details at the point of export may prove beyond current capacity. Overall, it is unlikely to be feasible to implement such rigorous testing regimes as a primary means of detecting specimens of a listed species, particularly Appendix II-listed species for which trade may occur widely and in high volumes. However there is potential to use these methods as a secondary method to verify whether specimens identified by visual means are derived from a listed species.

iii) Omit certain products from the listing

Under Appendix III the ability exists to include only certain parts and derivatives of a species in the listing. For example, the listing of Big-leaf Mahogany *Swietenia macrophylla* in Appendix III included an annotation designating that only logs, sawn wood and veneer sheets were included under that listing. The ability to make certain products exempt from the provisions of CITES may be a useful provision for some aquatic species where there is a practical inability to identify a product from individual species. However careful analysis and caution in the use of this provision would be required as the exclusion of particular products may potentially open the way for unregulated trade to occur in those products.

iv) Intelligence gathering and sharing

There are over 30 000 species listed in the CITES Appendices and although not all are widely traded in high volumes, random inspection of shipments is unlikely to detect such species in trade. The gathering and sharing of intelligence between CITES Parties relating to, for example, trade routes and smuggling methods, is therefore a widely used method to ensure better targeting of limited national resources and thereby improve the effectiveness of the listing.

### **Split listings**

CITES provides for the listing of a species in more than one of the Appendices. This situation is commonly referred to as a split listing. The term also applies to cases where different populations or sub-species are in different Appendices and where a population (or sub-species) may be listed and another may not. Split listings are considered a valuable tool under CITES given that the conservation status of a species may vary considerably across its range.

There are a number of examples of split listings within CITES, notably African Elephant *Loxodonta africana*, for which some populations are listed in Appendix I and others in Appendix II, and Ostrich *Struthio camelus* for which some populations are listed in Appendix I and all other populations are not listed in any of the Appendices. There are also examples of split listings of aquatic species; for example Minke Whale *Balaenoptera acutorostrata* is listed in Appendix I except the population of West Greenland, which is listed in Appendix II.

Although Resolution Conf. 9.24 (Rev. CoP12) advises that split listings should generally be avoided because they create enforcement problems, it also provides guidance to the Parties with regard to split listings where a split listing is considered necessary:

- this should generally be on the basis of national or continental populations, rather than subspecies. Split-listings that place some populations of a species in the Appendices, and the rest outside the Appendices, should normally not be permitted
- for species outside the jurisdiction of any State, listing in the Appendices should use the terms used in other relevant international agreements, if any, to define the population. If no such international agreement exists, then the Appendices should define the population by region or by geographic coordinates
- taxonomic names below the species level should not be used in the Appendices unless the taxon in question is highly distinctive and the use of the name would not give rise to enforcement problems

As noted above, enforcement difficulties are of paramount concern in relation to split listings. In relation to aquatic species, point two above provides specific guidance on those marine species that may be harvested from waters outside the jurisdiction of a State recognising the role of international organisations, for example RFOs, in providing guidance on the demarcation of populations of such species, or what would more commonly be referred to as ‘stocks’ in fisheries management.

In the case of highly migratory aquatic species, of concern is the possibility that the natural movement of species may lead to their being subject to different CITES provisions by crossing a boundary. For example a proposal considered at the 11<sup>th</sup> meeting of the Conference of the Parties to CITES (CoP11) to move the Cuban population of Hawksbill Turtle *Eretmochelys imbricata* from Appendix I to Appendix II was resisted by some Parties on this basis, noting that Cuba’s national boundaries were unlikely to contain the full range of the population. There are many aquatic species, including a number of highly migratory fish harvested in large-scale industrial fisheries where such a split listing would raise similar concerns regarding enforcement issues.

Cross boundary movements also occur with terrestrial animals such as African Elephants however the number of individuals moving across such boundaries is considered to represent only a small proportion of the total number of individuals and therefore to have minimal impact on the conservation status of the population (Anon., 2000a).

Yellowfin Tuna *Thunnus albacares* provides a useful hypothetical example of the type of issues that could arise. There are generally considered to be two distinct stocks in the Pacific – an eastern Pacific stock and a western and central Pacific stock. If the eastern stock was listed in Appendix I and the western and central Pacific stock in Appendix II this could create significant enforcement problems. Strong and effective monitoring, control and surveillance measures would be required to ensure that fish harvested from the Appendix I stock was not transhipped and claimed as having been taken from the Appendix II stock. Fisheries management is not unfamiliar with this type of challenge with many ‘lines on the water’ existing and different management measures applying to the resource on either side of that line, often creating an incentive for mis-reporting. This routinely occurs for species that straddle a coastal State’s waters and potentially unregulated high seas areas. This will soon occur on a significant scale in the Pacific Ocean with the coming into force of the new fisheries convention for the western and central Pacific, immediately adjacent to the existing area covered by the Inter-American Tropical Tuna Commission (IATTC).

## **The application of precautionary measures set out in Annex 4 of Res Conf. 9.24 (Rev. CoP12)**

Annex 4 of Resolution Conf. 9.24 (Rev. CoP12) refers to precautionary measures to be taken into account when amending the CITES Appendices. The preambular paragraph of the Annex states that:

*“When considering proposals to amend the Appendices, the Parties shall, in cases of uncertainty, either as regards the status of a species or as regards the impact of trade on the conservation of a species, act in the best interest of the conservation of the species.”*

The Annex goes on to set out the processes by which listed species may be removed from the Appendices or down-listed. These processes attempt to provide safeguards to ensure that the amendment of Appendices I or II does not result in unintended and negative impacts on the conservation status of the species where it is either transferred from Appendix I to Appendix II or deleted from Appendix II.

The CITES Parties have made use of a number of safeguards when considering amendments to listings and, in particular, when considering the transfer of species from Appendix I to Appendix II. These include:

- establishment of export quotas, with evidence that effective enforcement measures are in place
- allowing only the export of products obtained through non-destructive harvesting (e.g., Vicuña *Vicuña vicugna* cloth produced from wool sheared from live animals)
- imposing conditions under which export of a specified product may be carried out (e.g., one-off sales of ivory from stockpiles once specific conditions have been met)
- specifying an importing country or countries (Anon., 2000b)

As well as restrictions on trade in species that are transferred from Appendix I to Appendix II, the Parties have also imposed restrictions on species already in Appendix II as an alternative to transferring them to Appendix I when trade is perceived as a serious concern. For example, at CoP11 the Asiatic pangolins *Manis* spp. were proposed for transfer from Appendix II to Appendix I on the grounds that they met both the trade and biological criteria for Appendix-I listing. The Parties decided that while this might well be the case, the conservation of the species would be better served by maintaining them in Appendix II with a zero quota. Such a step forms an amendment to the Appendices and may be considered a precautionary measure (Anon., 2000b).

### **Captive breeding**

According to FAO statistics, “...aquaculture's contribution to global supplies of fish, crustaceans and molluscs continues to grow, increasing from 3.9 percent of total production by weight in 1970 to 27.3 percent in 2000” (Anon., 2002b). Further, 210 different farmed aquatic animal and plant species were reported in 2000 (Anon., 2002b).

The potential for listed species to be bred in captivity is recognised within the text of the Convention and special provisions apply to the circumstances for trade in specimens of such species. Given the projected increase in aquaculture, and number of different species being produced by these methods, the captive breeding provisions of CITES may become increasingly relevant.

FAO defines aquaculture as “The farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants with some sort of intervention in the rearing process to enhance

production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated” (Anon., 2004d). This definition is relatively broad and encompasses activities that would not qualify as captive breeding under CITES.

Under CITES the term ‘captive bred’ refers to “...offspring produced in a controlled environment of parents that mated in a controlled environment and requires the capability of the captive breeding stock to reliably produce second generation offspring in a controlled environment” (Wijnstekers, 2001). This definition would exclude many specimens produced in aquaculture operations; for example, the growing practice of capturing small or juvenile wild bluefin tuna and fattening them up in pens would not be considered a captive breeding operation under CITES. However other aquaculture operations may satisfy the CITES requirements.

The Convention specifies that specimens of a species listed in Appendix I that have been captive bred for commercial purposes are deemed to be Appendix II specimens for the purposes of trade. The main outcomes of deeming captive bred Appendix I-listed species as Appendix II species is that these specimens can be commercially traded and no import permit is required. Captive breeding facilities for Appendix I species should be registered with the CITES Secretariat and specimens produced from a captive breeding facility should be clearly marked as such to facilitate trade under the deeming provision. In relation to aquatic species, currently, there is one fish species, Golden Arowana *Scleropages formosus*, numerous species of crocodiles and one species of alligator for which such facilities are registered with the CITES Secretariat.

The potential for captive breeding of Appendix II- and III-listed species is also recognised under CITES. In such circumstances the Management Authority of the country concerned must be satisfied that the specimens were captive bred and may thereby grant a certificate of captive breeding that is acceptable in lieu of any other permits or certificates.

In addition to captive breeding, “ranching” has also come to be recognised under CITES and special provisions developed for such activities. Ranching is defined by Resolution Conf. 11.16 ‘Ranching and trade in ranched specimens of a species transferred from Appendix I to Appendix II’ as “the rearing in a controlled environment of specimens taken from the wild”. Wijnstekers (2001) notes that this normally involves bringing young animals or eggs into a controlled environment and rearing them until they are of a commercially exploitable size. Resolution Conf. 11.16 provides for national species populations to be transferred from Appendix I to Appendix II in conjunction with a ranching operation.

Certain strict controls apply to ranching operations including inventory systems, adequate identification of ranched specimens through a universal marking system, evidence that the ranching operation will be beneficial to the conservation of the wild national population and that related harvests will be adequately controlled and monitored. More stringent examination of proposals to down-list ranched specimens is undertaken where collection of wild adult specimens is envisaged. In relation to aquatic species crocodiles provide an example of a species for which ranching programmes have been recognised under CITES. Given the nature of many aquaculture operations it is likely that some would be considered as ranching operations under CITES.

### **Confiscation and disposal of confiscated specimens**

Under Article VIII.1(b) Parties are required to implement domestic legislation allowing them to confiscate illegally traded specimens so as to ensure enforcement of the provisions of the Convention.

Any dead specimens of Appendix II-listed species that are seized by the Management Authority of a Party may be subsequently sold by that Authority. Resolution Conf. 9.10 (Rev.) provides that such confiscated specimens “...be disposed of in the best manner possible to benefit

enforcement and administration of the Convention”. In regard to fisheries, a number of countries have domestic legislation that enables the proceeds of such sales to be used to fund monitoring, control and surveillance efforts. For example, sale of confiscated abalone *Haliotis midae* by the South African Government provides a significant resource for enforcement efforts in that country (M. Burgener, TRAFFIC East Southern Africa – South Africa, *in litt.* 31 March 2004). No such guidance is given with respect to Appendix-III specimens, with the exception that specimens not be re-exported if there is evidence they were imported in violation of the Convention.

Depending on the legislation of individual Parties, the proceeds from the sale of confiscated specimens could be used to recover costs incurred in the seizure and sale or more generally be attributed to enforcement of CITES by that Party. Subsequent export or re-export of confiscated specimens would then require a special notation to be made on the export permit that these were confiscated items.

The seizure of live aquatic specimens is a possibility with some species traded and valued as live animals. For example, Humphead Wrasse *Cheilinus undulatus* destined for the live reef fish food trade or specimens of ornamental fish for the aquarium trade. For live specimens listed in the CITES Appendices that are seized the Parties have identified a decision-making process to determine the best means of disposal of live animals including the possibility of returning the animal to the country of origin, destroying it or maintaining it in captivity.

### **Summary**

This paper discusses a range of administrative and monitoring implications of listing aquatic species in the CITES Appendices and has identified certain issues that would need to be addressed for such listings to be effectively implemented.

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