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

Nineteenth meeting of the Conference of the Parties
Panama City, Panama, 14-25 November 2022

Interpretation and implementation matters

Regulation of trade

TRANSPORT OF LIVE SPECIMENS:
IMPROVING IMPLEMENTATION OF THE TRANSPORT REGULATIONS

1. This document has been submitted by Canada, Côte d'Ivoire, Kenya, Mexico, Nigeria, Senegal and the United States of America.*

Introduction

2. Ensuring safe, healthy, and humane transport is a CITES requirement when trade involves a live CITES specimen. The Convention (Articles III, IV, V, and VII) requires Management Authorities to be satisfied, before granting permits to authorize trade in live specimens, that specimens will be so prepared and shipped as to minimize the risk of injury, damage to health, or cruel treatment. Article VIII further requires Parties to ensure that “all living specimens, during any period of transit, holding or shipment, are properly cared for to minimize the risk of injury, damage to health or cruel treatment.” This transport requirement for trade in live CITES specimens is in addition to other applicable CITES requirements for trade (e.g., non-detriment findings and legal acquisition findings).

3. To assist Parties in implementing and enforcing this CITES requirement for safe and humane transport of live specimens, Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens recommends that Parties use, promote, and help to update three sets of transport guidelines: IATA Live Animal Regulations, IATA Perishable Cargo Regulations, and the CITES Guidelines for the Non-Air Transport of Live Wild Animals and Plants. These guidelines are deemed to meet the CITES transport requirements for live specimens. The Resolution also recommends that Parties incorporate the transport guidelines into domestic legislation.

4. Further, Resolution Conf. 12.3 (Rev. CoP18) on Permits and certificates states that permits and certificates for live specimens are “only valid if the transport conditions comply with the IATA Live Animals Regulations (for animals), with the IATA Perishable Cargo Regulations (for plants) or, in the case of non-air transport, with the CITES Guidelines for the Non-Air Transport of Live Wild Animals and Plants.” A statement to this effect is required to be included on CITES permits and certificates.

5. Adhering to IATA guidelines reduces mortality during transit and may reduce the need for further harvesting of animals from the wild. For instance, one study showed that mortality rates for IATA-compliant shipments containing live birds were half that of non-compliant shipments.1 Additionally, complying with transport regulations, including appropriate shipping containers and transport conditions, could reduce opportunities for pathogen transmission (e.g., overcrowding) and reduce stress on live wildlife. Stress can disrupt immune function, making animals more susceptible to infectious disease. Maintaining the transport requirements for

* The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

live specimens is essential for Parties “to minimize the risk of... damage to health” (Articles III, IV, V, VII, VIII), including mortality, injury, exposure to pathogens, and preventable stressors.

6. Millions of live CITES-listed animals and plants are transported internationally each year. For example, the CITES Trade Database shows that 8,360,095 live CITES-listed animals (5,109,198 vertebrates and 3,250,896 invertebrates) and 241,751,820 live CITES-listed plants were transported internationally in 2018. For these and all live specimens, the transport conditions under which they travel impact whether they arrive healthy and unharmed.

7. Implementation of the transport requirements has been inconsistent. As one example, a recent study analyzed live wildlife shipments documented on social media from one Party for the period 2016-2020 and found that 85% of live wildlife exports did not supply water to the animals (one-fourth of which were CITES-listed), and many shipments packed animals into overcrowded conditions and mixed multiple species. Examples of mortality during transport are summarized in paragraphs 25-31 of the present document.

8. Failing to provide appropriate transport conditions may be the result of insufficient capacity (e.g., not enough trained personnel) or limited knowledge and distribution of the transport guidelines to CITES Management and enforcement authorities.

9. Accessing the text of the IATA regulations is an essential starting point for implementation, but access remains a challenge. Parties are required to ensure specimens are transported according to the International Air Transport Association (IATA) Live Animal Regulations (hereafter, IATA LAR) and the IATA Perishable Cargo Regulations (IATA PCR) for all international air shipments. However, the cost of these guidelines (over $300 USD each, annually) can be prohibitive to Parties and make it difficult for CITES Authorities to enforce up-to-date transport requirements. Although Parties can get a 15% discount, the annual cost remains restrictive. The CITES Transport Working Group noted in 2008 that “only very few Parties actually purchase the IATA Live Animals Regulations” (AC24 Doc. 15.1), and this seems to remain the case. At the 74th meeting of the Standing Committee (SC74; Lyon, March 2022), several Parties raised concern about the accessibility of the IATA regulations (SC74 Sum. 11, p. 1).

10. The COVID-19 pandemic has sparked renewed interest in live animal transport requirements, due to the role of wildlife transport in zoonotic and infectious disease dynamics. At SC74, the Secretariat noted that the CITES Guidelines for the Non-air Transport of Live Wild Animals and Plants may need revisions considering the pandemic. Further, during the present intersessional period, the Standing Committee convened a working group to consider what role, if any, CITES could play in reducing zoonotic disease risk. The working group discussions highlighted, among other issues, the need to address live animal transport in this context.

11. We propose four measures to enhance the implementation of the transport requirements for both animals and plants. Specifically, we recommend that the Conference of the Parties take steps to:

a) Make relevant content of the IATA Live Animals Regulations and IATA Perishable Cargo Regulations accessible to all Parties, free of charge;

b) Hold a workshop and online training to share up-to-date best practices in live specimen transport for Management Authorities and enforcement authorities;

c) Encourage Parties to extend the guidelines required for international transport of live CITES-listed specimens to the domestic portions of international transport journeys (i.e., the in-country transit of live CITES-listed specimens to ports of export and from ports of import); and

d) Amend the preambular text of Resolution Conf. 10.21 (Rev. CoP16) to clarify when to use the regulations and to acknowledge health implications for risk of zoonotic and infectious disease transmission.

History of CITES transport guidelines

12. The Parties have been discussing the transport of live specimens since the inception of CITES. At the 1st meeting of the Conference of the Parties (CoP1; Bern, 1976), the Parties agreed on the need for guidelines on the care and shipment of live CITES specimens. Initially, a special working session of the Conference (Geneva, 1977) determined that such guidelines should apply to all animals and plants (not just those

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currently listed under the Convention), all types of transport, be practically useful, and targeted toward enforcement authorities and those handling consignments. The resulting CITES Guidelines for Transport and Preparation for Shipment of Live Wild Animals and Plants were finalized in 1981, and these were based largely on the IATA LAR.

13. At the 4th meeting of the Conference of the Parties (CoP4; Gaborone, 1983), the Parties agreed that the IATA Live Animals Regulations were generally considered to meet CITES transport requirements for air transport of animals (Resolution Conf. 4.21). The Technical Committee also established the first CITES working group on transport of live specimens (Document CoP5 Doc. 5.37).

14. The Parties identified the need for technical assistance to carry out transport requirements very early on. At the 5th meeting of the Conference of the Parties (CoP5; Buenos Aires, 1985), the Parties noted the need for "more effective methods of training among airlines and enforcement agency personnel" (Document CoP5 Doc. 5.37 Annex I).

15. Implementation of the transport guidelines has been a major challenge since the 1980s. At the 7th meeting of the Conference of the Parties (CoP7; Lausanne, 1989), Resolution Conf. 7.13 states that "very few, if any, of the Parties to the Convention have adopted and applied the recommendations of Resolution Conf. 4.21" (Document CoP8 Doc. 8.36). At subsequent CoPs, the working group has continued to express concern about lack of implementation.

16. Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens was adopted at CoP10 (Harare, 1997), and built on numerous previous Resolutions related to the topic. The Conference of the Parties at its 11th meeting (CoP11; Gigiri, 2000) indicated that Resolution Conf. 10.21 "appears to be implemented by very few Parties" (CoP11 Doc. 11.54).

17. The need for training and technical assistance to carry out transport requirements again emerged as an issue at the 12th meeting of the Conference of the Parties (CoP12; Santiago, 2003). The Parties asked the Animals Committee to help identify "model practices" for the transportation and shipment of live wild animals (see Document CoP12 Doc. 25). In 2009, the Animals Committee recommended developing a training program for airline personnel (AC24 Doc. 15.1, 15.2). However, by 2010, the Animals Committee had received few responses from Parties indicating an interest in training opportunities (Document CoP15 Doc. 33).

18. The Parties later decided that the IATA Live Animal Regulations could be used for non-air transport as well. At CoP12, the Parties agreed that the IATA LAR provides appropriate guidance in most situations for the transport of live wild specimens of CITES-listed species regardless of the mode of transport (Document CoP12 Doc. 25). At the 14th meeting of the Conference of the Parties (CoP14; The Hague, 2007), the Transport Working Group amended Resolution 10.21 to recommend that the IATA LAR and IATA PCR "should be used as a reference to indicate suitable conditions for carriage by means other than air."

19. Concerns about lack of access to the IATA regulations were first raised at the 23rd meeting of the Animals Committee (AC23 WG7 Doc. 1). The Secretariat sent Notification to the Parties No. 2008/050 (July 2008) to ask if Parties are interested in receiving the IATA Live Animal Regulations manual and CD-ROM. Thirteen Parties responded affirmatively, and the Secretariat worked with IATA to provide the IATA LAR to these Parties via CD-ROM in 2008 (AC24 Doc. 15.3). The issue was raised again at the 74th meeting of the Standing Committee (during discussion of SC74 Doc. 45), as discussed below.

20. At the 15th meeting of the Conference of the Parties (CoP15; Doha, 2010), the Parties directed the Animals Committee to develop a supplement to the IATA LAR for CITES-listed taxa that required transport conditions additional to or deviating from those found in the IATA Live Animals Regulations (Decision 15.59). This later became the CITES Guidelines for the Non-air Transport of Live Wild Animals and Plants, replacing the former guidelines.

21. In 2015, the CITES Secretariat and IATA Director General and CEO signed a Memorandum of Understanding (MOU), which aims to strengthen collaboration for implementation of the Convention and to improve transport conditions for CITES-listed specimens. The MOU emphasizes the Parties’ commitment to using and promoting the transport methods advocated by IATA and CITES (paragraph 2.13).
Challenges with accessing transport guidelines

22. According to the IATA website, the IATA Live Animals Regulations are the “worldwide standard for transporting live animals by commercial airlines.” Management Authorities and enforcement authorities use the IATA LAR and IATA PCR for inspection and clearance of CITES shipments to ensure compliance with CITES requirements that specimens are transported under safe, healthy, and humane conditions. The shipping regulations have also been recommended to be integrated into Parties’ domestic legislation. As new methods evolve, guidelines are revised by conservation and aviation experts regularly, with a new edition released every year.

23. However, accessing these resources presents a financial barrier to many CITES Parties. Most parties require multiple copies for various authorities and ports. Without easy access to these regulations, CITES inspecting authorities face challenges in addressing transport violations to deter future non-compliance. Providing inspecting authorities with the necessary resources and technical expertise can result in increased outreach to shippers on CITES transport requirements – proactively preventing unsafe transport and assisting enforcement authorities.

24. At SC74, the Standing Committee asked the Secretariat to consider (in consultation with IATA) options proposed by Canada to improve access to the IATA Live Animal Regulations, and to report to the Standing Committee at SC77 (Document SC74 Sum. 11, p. 1). Canada recommended three possible options, with no cost to Parties: (1) making the relevant, summarized information, with references to IATA removed, openly available on the CITES website, (2) developing CITES Checklists based on the IATA regulations, or (3) making relevant sections of the IATA regulations accessible through a secured CITES portal for registered users (SC74 draft SR, p. 96).

Mortality, Injuries, and Stress During Transport

25. Failure to meet CITES requirements for safe, healthy, and humane transport can increase the risk that live specimens experience injury, mortality, or stress. However, information remains scant for monitoring these risks in CITES specimens in transport. Most reports examining mortalities focus on illegal activities or on non-CITES trade. For trade in CITES-listed specimens, news reports typically highlight only extreme cases of non-compliance for high-profile species, and such severe cases appear to be rarely reported in CITES trade.

26. Other mortality data reported by certain Parties provide a limited view on this issue, and these data suggest that mortality is low in CITES trade when considering it across species. Between CoP7 and CoP11, the Secretariat issued multiple Notifications to the Parties and letters to collect mortality data, with very little response from Parties. The Transport Working Group assessed data that were submitted for CoP12. The data represented records from 12 Parties and 83,971 live animals during 1999-2001 and indicated an average mortality rate in transit of 1.25%. Due to the limited reported mortality rates and the difficulty of collecting these data, a decision was made to focus on other aspects of Resolution Conf. 10.21 (Rev. CoP16) rather than continue to collect those data (Document CoP12 Doc. 25). Similarly, a study from the German government examining data of nearly 7.5 million live animals shipped internationally for the period 1988-2001 indicated a mortality rate in transit of 1.36% for birds, 4.96% for amphibians, 3.14% for reptiles, 0.65% for mammals, and 5.99% for arthropods; more than half of the data were of CITES-listed species, mostly birds imported to several European countries.³

27. Existing data on mortality rates give an incomplete picture of the conditions of live CITES specimens in international trade.

28. First, even low average mortality percentages can – when dealing with millions of transported specimens annually – translate to large numbers of dead animals. For instance, when ~3.4 million live CITES-listed reptiles are shipped each year (based on typical numbers in the CITES Trade Database), even a 3% mortality rate could result in over 100,000 dead reptiles annually. Further, a significant proportion of consignments may contain dead animals (one or more individuals). For instance, while the study from the German government showed a low mortality rate overall, 35% of vertebrate shipments (mostly birds) contained at least one mortality.⁴ This fact merits closer consideration, as knowledge of any injuries or deaths can help to further refine transport methods, with the goal of eliminating injuries or losses caused by

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⁴ Id.
avoidable factors. We recognize that some mortality or injuries may be inevitable, but these should be the exception, not the norm.

29. Second, transport mortality can be high for certain species and routes. For example, one study found that graceful chameleons (Chamaeleo gracilis; CITES App. II) suffered mortality rates of 12.5% in international trade, consistent with other studies showing sensitivity of chameleons to captivity and transit.\(^5\) Banggai cardinalfish (Pterapogon kauderni; not CITES-listed) were found in another study to be packed at high densities (30–50 fish/container), with infrequent water changes contributing to a mortality rate of 25–30% on average\(^6,7\) and leading to greater harvesting from the wild.\(^8\) Similarly, false clown anemonefish (Amphiprion ocellaris; not CITES-listed) showed 10% mortality in shipping containers due to deteriorating chemical changes in the water and fluctuating temperatures.\(^9\) Corals experience even higher rates of mortality due to paperwork delays, poor water quality, and shipment damage.\(^10\) Certain trade routes result in higher mortality rates. Reef fish from some export countries experience high rates of mortality in transport as well. A study focused on tropical fish exported from Indonesia showed that 11–40% of delivered fish were dead on arrival.\(^11\)

30. Third, transport mortality data typically report “dead on arrival” specimens after an international shipment but do not capture steps that immediately precede and follow international transit. For instance, holding facilities at import and export facilities can prove hazardous, and mortality rates in these pre-and post-transport steps may exceed those in transport, depending on the species. For birds, mortality in quarantine can be 2–3 times greater than that in transportation.\(^12\) For tropical fishes, researchers showed that fishes imported into the United States from Indonesia and the Philippines experienced 0–16% mortality (depending on the species) at import holding facilities, where injuries, infections, and stress behaviors were also observed.\(^13\) Another study of ornamental fishes showed that an additional 8.5-24% died at holding facilities before export.\(^14\) Some data also suggest that mortality may occur during the domestic portions of international CITES transport (i.e., the in-country transit of live specimens to ports of export and from ports of import). In 2011, 730 African Grey parrots died during a domestic transport between Johannesburg and Durban, South Africa. The birds were reportedly part of a legal CITES transport that originated from the Democratic Republic of the Congo.\(^15\)

31. Fourth, the mortality rates do not capture other effects on health during transit. Different modes of handling and processing during transport impact stress levels, as measured by cortisol, in a variety of species. For some species, cortisol increases at the start and end of the conclusion of transport, such as in Japanese Tokara Goats.\(^16\) However, other species like the Fijian ground frog (Platymantis vitiana, not CITES-listed) can show lasting stress even after the conclusion of transportation for upwards of 15 days.\(^17\) Time, methods, and frequency of handling and transport impact stress, such as in salmonid fishes which showed increased

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stress with handling times greater than 2 hours. Stress can also interact with disease, such as with Banggai cardinalfish, which succumb to an iridovirus disease due to higher susceptibility caused by stress during capture, handling, crowding, and transport. Previous experience of animals in transport can also impact stress; for instance, tigers previously exposed to transport showed stress for 3-6 days, while naïve tigers (not previously acclimated to transport) had elevated stress for 9-12 days. Two consistent themes emerging from the literature on stress in transport include: (1) keep the animals calm during the initial phase of transportation, as once stress levels are elevated, they are difficult to reduce; and (2) best practices should be developed and should be species-specific.

Recommendations:

32. We recommend the Conference of the Parties take the following actions, outlined in the draft decisions presented in Annex 1 and proposed amendments to Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens presented in Annex 2.

a) Make key content of the IATA Live Animals Regulations and IATA Perishable Cargo Regulations accessible to all Parties. While additional options are explored under the decision recommended by SC74, we propose that CITES work with IATA in the short-term to make an abridged electronic version of the IATA LAR and IATA PCR available to Parties via a secure web portal. This would build on the suggestion by Canada (as option 3) at SC74. Most Parties will need multiple copies, and electronic access is likely the most efficient mode of distribution. Essential sections of the LAR would include Container Requirements in Chapter 8 focused on preparation and shipment of live animals and the taxon listing in Chapter 6 to locate the appropriate requirements. Only preapproved enforcement and management authorities would receive access. Some Parties may prefer to receive hard copies of the relevant sections of the LAR and PCR, and they should also be given that option depending on the needs of the Party.

b) Hold a workshop and create an online training webinar to share best practices in live transport of CITES-listed animals and plants. This would allow Parties to exchange technical expertise on implementing CITES transport requirements. The workshop could focus on how to use and apply the IATA Live Animal Regulations and IATA Perishable Cargo Regulations to inspect imports and exports of live animals and plants. Topics could include understanding crate and shipment requirements, observing signs of health, infection, or injury, practicing emergency triage of live animals, communicating with Scientific Authorities and veterinary experts, and using the CITES Guidelines for the Non-Air Transport of Live Wild Animals and Plants.

c) Amend Resolution Conf. 10.21 (Rev. CoP16) to encourage Parties to extend the international transport guidelines (IATA LAR, IATA PCR, and CITES Guidelines for the Non-Air Transport of Live Wild Animals and Plants) to the domestic portions of any international transaction for live CITES-listed animals and plants (the in-country transit of live specimens to the port of export and from the port of import). To reduce mortality or damage to health during transport, conditions should comply with CITES and IATA requirements not only during the cross-border portion during international trade but during the domestic portions of the journey to/from international ports from which CITES trade will take place. Article VIII requires Parties to ensure that “all living specimens, during any period of transit, holding or shipment, are properly cared for so as to minimize the risk of injury, damage to health or cruel treatment.” This should also include domestic portions of journeys associated with CITES trade. It is also relevant to note that member airlines of IATA (of which there are over 200) are already required to abide by the IATA LAR and IATA PCR for all air transport (domestic or international) of all live animals and plants.

d) Amend the preambular text of Resolution Conf. 10.21 (Rev. CoP16) to acknowledge implications for risk of zoonotic and infectious disease transmission.

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33. The Conference of the Parties is invited to adopt the draft Decisions in Annex 1 of the present document and the draft amendments to Resolution Conf. 10.21 (Rev. CoP16) in Annex 2 of the present document.
DRAFT DECISIONS ON TRANSPORT OF LIVE SPECIMENS

Directed to the Animals Committee and Plants Committee

19.AA The Animals and Plants Committees, in consultation with the Standing Committee, Secretariat, and International Air Transport Association (IATA), shall hold a workshop to share best practices related to live animal and plant transport. The Animals and Plants Committees shall invite Parties with expertise in this area to present on their management of live animals and plants in trade and steps to support other Parties in meeting CITES requirements for live animal and plant transport consistent with Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens.

Directed to Secretariat

19.BB The Secretariat shall, in consultation with the Standing Committee, work with IATA to make relevant sections of the IATA Live Animal Regulations and IATA Perishable Cargo Regulations available to authorized representatives of Management Authorities and enforcement authorities as electronic or hard copies, depending on the needs of the Party, free of charge.
PROPOSED AMENDMENTS TO RESOLUTION CONF. 10.21 (REV. CoP16)
ON TRANSPORT OF LIVE SPECIMENS

Amend the Preamble of Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens, as follows (proposed new text underlined):

FURTHER NOTING the extent to which, in the case of the transport of live animals, regardless of the method of transport, the Live Animals Regulations of the International Air Transport Association (IATA) and, in the case of the transport of live plants, IATA’s Perishable Cargo Regulations, are to be used for transport of live specimens and that the Live Animals Regulations and the Perishable Cargo Regulations are amended annually and are therefore more quickly responsive to changing needs;

RECOGNIZING the need to address the transport of all live specimens;

ACKNOWLEDGING that the improper transport of live specimens can increase the risk for injury or mortality, which may negatively impact wild populations resulting in additional take of wild specimens, and that transport-induced stress through non-compliant transport methods may compromise immunity, with implications for infectious disease risk;

Insert a new paragraph, after paragraph 5 of Resolution Conf. 10.21 (Rev. CoP16):

6. ENCOURAGES Parties to minimize the risk of injury, damage to health or cruel treatment for live CITES-listed specimens by taking measures to transport these specimens during the domestic portions of international CITES transports (the in-country transit of live CITES-listed specimens to the port of export and from the port of import), according to the transport standards provided by the IATA Live Animal Regulations, IATA Perishable Cargo Regulations, and the CITES Guidelines for the Non-air Transport of Live Animals and Plants.
TENTATIVE BUDGET AND SOURCE OF FUNDING
FOR THE IMPLEMENTATION OF DRAFT RESOLUTIONS OR DECISIONS

According to Resolution Conf. 4.6 (Rev. CoP16) on Submission of draft resolutions, draft decisions and other documents for meetings of the Conference of the Parties, the Conference of the Parties decided that any draft resolutions or decisions submitted for consideration at a meeting of the Conference of the Parties that have budgetary and workload implications for the Secretariat or permanent committees must contain or be accompanied by a budget for the work involved and an indication of the source of funding.

- Implementation of the amendments in the draft resolution presented in Annex 2 would potentially have few workload implications for the Secretariat

The workshop and outputs from collaboration with IATA called for in Decisions 19.AA and 19.BB, respectively, will be undertaken subject to external funding where funding is needed, and we anticipate that additional support from the Secretariat to implement Decisions 19.AA and 19.BB contained in the present document can be accommodated within the work of existing Secretariat staff.