

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



Sixty-sixth meeting of the Standing Committee  
Geneva (Switzerland), 11-15 January 2016

Interpretation and implementation of the Convention

Species trade and conservation

TOTOABA (*TOTOABA MACDONALDI*):  
OPPORTUNITIES FOR INTERNATIONAL COLLABORATION  
WITHIN THE CITES FRAMEWORK

1. This document has been submitted by Mexico.\*

Background

2. The totoaba (*Totoaba macdonaldi*) is a fish endemic to Mexico, which is highly valued in the international market for its swim bladder; the species has been listed in CITES Appendix I since 1977.
3. Accordingly, international trade of the species is regulated by Article III of the CITES Convention. Further, the IUCN lists the species as "Critically Endangered", and under the United States Endangered Species Act, it is classified as "Endangered". In Mexico, the species is currently listed as "Endangered" under Mexican Official Standard NOM-059-SEMARNAT-2010, and there has been a permanent ban on wild fishery of the species since August 1975.

Problems affecting the species

4. Although trade in wild specimens of totoaba is banned, illegal fishing and trade nonetheless exist, the main destination being the Asian market. The totoaba swim bladder (also known as "maw") is used as a gourmet ingredient, and is said to have aphrodisiac and healing properties. The price of these fish maws ranges from \$1,500 to \$20,000 per kilogram.
5. It is known that illegal catches are made using totoaba gull nets (which are prohibited in most of the Upper Gulf of California), and longlines. Mesh size may be up to 12 inches, and nets are between 300 and 1,500 metres long. Nylon longlines can have from 50 to 1,000 hooks (#1 and/or #2), and measure between 20 and 1,500 metres in length.
6. Once removed, the fresh or dried totoaba swim bladders (maws) are concealed in parcels or coolers, and transported through the desert or through uninhabited zones using the "ant colony" method of transportation, or taken by boat to border or collection points (at the main fishing ports in the zone). Transport of the dried product means less weight, and greater value.
7. Normally, dried specimens are packed or packaged for shipping, and sent via courier firms or carried in luggage; weight varies between 10 and 15 kg.

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\* *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.*

8. Shipments have been intercepted at various air terminals and seaports, en route to the United States of America and Asia. In this regard, the United States has established legal procedures and seizures in border cities with Mexico.
9. It is estimated that over 900 adult specimens were caught illegally between 2014 and 2015. Supposing that half of these were females, it would mean a loss of approximately 2.5 million eggs for the wild population (calculation based on 5346 eggs per female, according to Cisneros-Mata et al., 1997).

Recent measures adopted by Mexico to address the problems affecting the species

10. In March 2015, the Senate of the Republic ruled to urge the Federal Executive to request CITES to adopt relevant measures for China and the United States of America in order to stop the illegal purchasing and trade of totoaba swim bladders (ANNEX 5). In order to implement this ruling, a meeting was held on 17th March 2015, organized by the Subsecretary for Environmental Management and Protection.
11. On 16th April 2015, in San Felipe (Baja California), President Enrique Peña Nieto launched the "Upper Gulf Comprehensive Conservation Programme", in which several Secretariats are cooperating: Interior, National Defence, Navy, Finance and Public Credit, Communications and Transport, Agriculture, Livestock, Rural Development, Fisheries and Food, along with the General Attorney's Office, and the Governments of Sonora and Baja California. The programme encompasses four lines of action:
  - a) Prevention of illegal fishing activities;
  - b) Conservation of the marine ecosystem, and of the natural protected area;
  - c) Prevention of illegal trade in endangered or specially protected species;
  - d) Prevention of organized criminal groups engaged in drug trafficking in the marine environment.

*Application of the Law*

12. During the period 2013–2015, PROFEPA, in conjunction with SEMAR, CONANP, CONAPESCA, SEDENA, PF, AGA, and SENASICA, carried out marine surveillance activities in the Upper Gulf of California and on the border between Mexico and the United States of America:
  - a) Land inspection of fishing grounds and catches in the Gulf of Santa Clara, Sonora, and the Port of San Felipe, Baja California;
  - b) Ongoing marine surveillance of totoaba and vaquita porpoise ranges;
  - c) Surveillance and inspections at ports, airports, and border crossings;
  - d) Alerting courier firms to identify illegal shipments of totoaba and other species (such as sea cucumbers and seahorses).
13. The results achieved between November 2014 and November 2015 include seizures of 928 totoaba products (swim bladders, specimens, and parts).

*Management and conservation*

14. Since 1993, when the Upper Gulf of California and Colorado River Delta Biosphere Reserve was declared a protected area, several campaigns have been held to promote environmental education, as well as workshops on identification.
15. At least 4 projects have been implemented on totoaba management and culture (UABC, CREMES, Earth Ocean Farms and Pacifico Acuaculture (under the legal figure of an EMU), as well as 7 research projects on totoaba populations and fisheries, one of which comprised 4 working phases (Guaymas Technological Institute, UABCS, IPN, CIBNOR, Conservation of Mexican Island Territories).
16. Between 2013 and 2014, 80,000 captive-bred totoaba specimens were released into the wild under the four aforementioned projects on totoaba management and culture.
17. Based on genetic and morphometric analyses of specimens seized in Mexico and the United States in 2013-2014, Paredes et al (2015) concluded that the population size of the species in the wild is not that small.

### Cooperation within the international framework

18. During the XX Meeting of the Canada/Mexico/US Trilateral Committee for Wildlife and Ecosystem Conservation and Management (San Diego, USA, April 2015), the North American Region agreed to collaborate to address the problems affecting totoaba by:
  - a) Establishing measures for sharing information, experiences, and lessons learned, and analyzing available information for transformation into intelligence;
  - b) Developing outreach and identification material for all relevant stakeholders, including authorities and consumers; and
  - c) Developing and implementing joint surveillance and inspections to foster implementation of CITES, and to close borders to the illegal trade of totoaba.
19. In Notification to the parties No. 2015/050, MEXICO – Totoaba (*Totoaba macdonaldi*) and vaquita porpoise (*Phocoena sinus*) (August, 2015), Mexico urged the Parties to CITES to collaborate in the actions implemented to halt illegal international trade of totoaba as follows:
  - a) To take note of the previous and recent activities undertaken by Mexico to respond to the critical situation of the totoaba and vaquita porpoise, which are described at the relevant links;
  - b) To confiscate illegal shipments of totoaba, and to share information with the Mexican CITES authorities about the illegal trade in totoaba in their countries;
  - c) To disseminate information about the predicament of both species, and to take domestic measures to discourage illegal trade in totoaba; and
  - d) To share successful experiences that could help address the predicament of the totoaba and vaquita porpoise.
20. During a trilateral teleconference on totoaba (held in September 2015), China, the United States of America, and Mexico reached some promising agreements with regard to collaborating toward conservation of the totoaba.

### Recommendations

21. The Standing Committee is invited to:
  - a) Take note of this document;
  - b) Make recommendations to Mexico to foster implementation of CITES provisions that are applicable to totoaba (*Totoaba macdonaldi*).
  - c) Urge the Parties to cooperate with Mexico in sharing any relevant information about illegal trade in totoaba.

### References

- Cisneros-Mata, M. A., Botsford, L. W., & Quinn, J. F. (1997). Projecting viability of *Totoaba macdonaldi*, a population with unknown age-dependent variability. *Ecological Applications*, 7(3), 968-980.
- Paredes, L., True, C., Burnham, C. 2015. Trazabilidad genética de la totoaba (*Totoaba macdonaldi*) en cautiverio y vida libre: Una herramienta para evaluar los niveles de recuperación de la población silvestre y para desalentar la pesca ilegal de una especie en peligro de extinción. Documento presentado en la mesa de especies de interés común para la conservación de la XX Reunión del Comité Trilateral US-CA-MX para la Conservación y manejo de vida silvestre y ecosistemas (San Diego, EUA, abril 2015).