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

Seventy-first meeting of the Standing Committee
Geneva (Switzerland), 16 August 2019

ADDITIONAL INFORMATION REGARDING THE REGISTRATION OF THE OPERATION "EARTH OCEAN FARMS. S. DE R.L. DE C.V." BREEDING *TOTOABA MACDONALDI*

1. This document has been submitted by Mexico in relation to agenda item 17.*

2. This document contains additional and more detailed information to that presented in the Earth Ocean Farms Registration application (the application can be consulted in full in SC71 Doc. 17, Annex 1a), as well as the response to the comments of the Animals Committee (SC71 Doc. 17, Annex 4a). In addition, Mexico has submitted summaries of law enforcement measures for totoaba in the wild that can be found in the document SC70 Doc. 62.2 R1.

1. Conservation status of wild totoaba and its legal use in Mexico

1.1. History and fishing ban

The totoaba (*Totoaba macdonaldi*) is distributed in the most important and productive fishing zone in Mexico (Gulf of California). In 1920, the fishing of this species influenced the establishment of fishing villages in the Upper Gulf, but it was until 1929 that it was commercially exploited, increasing fishing to 2,000 tons per year between 1940-1950, for meat consumption. In 1955, the government of Mexico established a seasonal ban to protect the breeding areas in the critical stages (mouth of the Colorado River); in 1974, this area was decreed a Reserve for the species subject to fishing. Due to the fact that by 1975 there was already a significant decline in the commercial totoaba fishery (maximum of 59 tons per year), a permanent and total ban was decreed for its fishing. In 1977, the totoaba was included in CITES Appendix I, and in 1979, the United States of America (USA) included it in its Endangered Species Act (ESA), to prevent the introduction of this species into its territory, since it was the most important destination since the opening of its fishery (INAPESCA, under review). Currently, the ban remains, and unlike the legal fishery to take advantage of its meat, currently the illegal capture focuses exclusively on obtaining the swim bladder or "buche".

In recent decades, Mexico has included additional regulations, such as the prohibition of specific fishing gear in 1992 (special gill nets called "totoaberas", in which the vaquita porpoise can get entangled), the spawning area was declared a Natural Protected Area, all fishing activity in that area is prohibited; in 2002 it was included as an Endangered species in Mexican legislation (NOM-059-ECOL-2001, SEMARNAT 2002), status which it has maintained to date (NOM-059-SEMARNAT-2010, DOF 2010); and in the last decade, inspection and surveillance has been strengthened, along with removal of ghost nets (placed during the night and left in the area for days), the protection areas and systems of monetary compensation to inhabitants for fishing suspension have been increased, and most recently, a Standard for the marking and monitoring of specimens bred in captivity was published. The current ban does not affect captive breeding or the commercialization of products derived from it. The actions can be consulted in more detail in CITES documents SC69 (Doc. 65.1) and SC70 (Doc. 62.2 R1).

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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.*

1.2. Current conservation status of the wild totoaba population

The National Institute of Fisheries and Aquaculture of the Government of Mexico (INAPESCA), during 2017 and 2018, carried out the project "Evaluation of the totoaba population in the Gulf of California", in order to determine the current status of the species (study currently in revision). This study documents the recovery of the species during the decade after the ban, but also an increase in illegal catch due to the high value of the swim bladder ("buche") in China. In 2017, an illegal catch of approximately 520-700 tons per year was estimated (Castellano-Rico et al., 2019, INAPESCA, 2019). Through genetic analysis, it was observed that there was never a contraction of the population due to overfishing (Valenzuela-Quiñones et al., 2014, 2015), and there is even evidence of a possible expansion of the distribution area of the population, since specimens were captured in areas where they had not been previously registered (Valenzuela-Quiñones et al., 2016). In bodies (bones) recovered from garbage dumps of illegal captures, totoaba specimens of all ages and sizes were found, that is, all age categories were represented, the same as those observed in scientific studies conducted in the wild (Valenzuela -Quiñones et al., 2014, 2015). According to INAPESCA, the population is not yet at the limit reference point (where it would be considered overexploited), but the populations are not at the top of their carrying capacity either. Therefore, the population cannot be considered as "Endangered", although it is still threatened by illegal capture.

1.3. Legality in the captive breeding of wildlife

In Mexico, the General Wildlife Law (LGVS) regulates the use of wild species and it is only allowed through Management Units for the Conservation of Wildlife (UMA). This law regulates all species of terrestrial fauna, and the aquatic species or populations that are at risk (Article 1). Therefore, the use of totoaba, being a species at risk, is regulated by the Ministry of Environment and Natural Resources (SEMARNAT) under the UMA scheme. These units are registered properties and facilities that operate in accordance with a management plan approved by the SEMARNAT, and can be of free-range management and intensive management: a) Free-range management is carried out with specimens or populations of species that develop in natural conditions, not imposing restrictions on their movement; while b) Intensive management is carried out on specimens or populations of wild species in conditions of captivity or confinement.

In particular, for the captive breeding of species, there are two figures, the Management Units for the Conservation of Wildlife (**UMA**) of intensive management, and the Facilities that Manage Wildlife in confined form, outside their natural habitat (**PIMVS**). These figures differ in the type of goals (the UMA carry out actions for the conservation of native wildlife and their habitat, while PIMVS do not), in the type of wildlife they manage (native or exotic), and in the requirements for their registration and management. However, both figures must demonstrate land tenure, legal origin of the specimens, detailed -through management plans (reviewed and approved by the Authority)- objectives, registered species, stock, species biological information and care measures, habitat management, populations, specimens, contingency measures, surveillance, forms of use, description of the infrastructure, marking and transportation of specimens, among others.
The management plans must be prepared by responsible technicians accredited by the Environmental Ministry (SEMARNAT), which, in the case of intensive management UMA, should be in turn responsible for the sustainable use of wildlife and its conservation, as well as the habitat, together with the owners of the UMA. The Ministry also reviews the technical and operational capacity for the execution of the management plans, and it ensures that the minimum requirements necessary for the management of each species are met.

It should be noted that, in order to grant registries and authorizations related to specimens, parts and derivatives of wild species outside their natural habitat, the authorities must also verify their **legal acquisition**, whether they were taken from the wild or they were produced in captivity.

<u>Species at risk (NOM-59-SEMARNAT-2010)</u>
According to the LGVS, SEMARNAT will prioritize the reproduction of wildlife outside its natural habitat for the development of repopulation and reintroduction activities, especially of species at risk (**Article 77 of the LGVS**). In addition, it will only authorize the use of these species for scientific research, reintroduction, restoration and restock, while other uses (such as commercial) will be subject to prove that the above objectives were met, and that the specimens have been captive bred, besides actively contributing to programs for the development of wild populations (**Article 85 of the LGVS**) previously authorized and/or endorsed by SEMARNAT.

1.4. Captive breeding of totoaba (in UMA)

Individuals or corporations that carry out intensive breeding (in confinement) and/or fattening of specimens, parts or derivatives of totoaba (*Totoaba macdonaldi*) must be registered as an UMA, and must have a Management Plan approved by SEMARNAT. Although there are no specific requirements for the facilities, SEMARNAT requests that they be described in detail; the facilities and demands will depend on the objectives and activities that are intended to be carried out. In the evaluation, it is verified that the description contains at least the following:

Detailed description of the enclosures and facilities in the management plan, including breeding area (if applicable), area of development and growth of specimens, incubation area (if applicable), laboratories (where applicable), support areas (quarantine area, preparation area, storage or food production, etc.), plans of the entire facilities, technology to be applied once the UMA is registered, resources with which the UMA will operate (personnel, services and equipment available to carry out the management activities), equipment that will be used for the installation of infrastructure (in case of activities at sea, for the installation of marine pens), and equipment for measuring physical-chemical parameters.

If the UMA is also going to carry out intensive management activities of totoaba at sea, it is necessary to prove the legal possession of the surface in the sea where the UMA facilities are located, including the species *Totoaba macdonaldi*, approved for management in said Unit (e.g., Permission for Aquaculture for Development or Marine Concession); provide geographic coordinates and UTM of offshore facilities; demonstrate that the management at sea is strictly in conditions of captivity or confinement and ensure the containment of the specimens in any situation; and specify the monitoring mechanisms. Finally, proof that the specimens subject to intensive management are the product of controlled reproduction, and are not extracted from the natural environment (in case that reproducers coming from the wild are intend for use, it will be necessary to previously request SEMARNAT an authorization for the corresponding extractive use).

NOM-169-SEMARNAT-2018

For individuals or corporations that carry out activities for commercial and non-commercial purposes of specimens, parts and derivatives of totoaba, NOM-169-SEMARNAT-2018 is mandatory. It establishes the specifications for the marking of specimens, parts and derivatives of totoaba (*Totoaba macdonaldi*) that come from sustainable use in the Management Units for the Conservation of Wildlife (UMA), to have elements that allow to recognize the movements that they have from the UMA to the final trader; that is to allow their traceability. This standard includes the requirement to make the genetic determinations of the parental individuals.

1.5. List of current operations in Mexico that have a registration for the captive breeding of totoaba (in UMA)

Table 1. UMA registered in Mexico for totoaba.

N°	Name of UMA/Registration key	Location	Goals
1	**Unidad de Biotecnología en Piscicultura de la UABC** DGVS-CR-IN-1084-B.C./09	**Ensenada, Baja California**	Reproduction, research, repopulation and commercial use
2	**Centro Reproductor de Especies Marinas del Estado de Sonora (CREMES)** DGVS-CR-IN-1396-SON/11	**Hermosillo, Sonora**	Reproduction, research, repopulation and commercial use
3	**Earth Ocean Farms, S. de R.L. de C.V.** DGVS-CR-IN-1485-B.C.S./12	**La Paz, Baja California Sur**	Reproduction, conservation and commercial use
4	**Pacifico Acuaculture S. de R.L. de C.V** DGVS-CR-IN-1519-B.C./12	**Ensenada, Baja California**	Fattening and comercial use
5	**DENEB** (CYGNUS OCEAN FARMS, S.A. DE C.V.) DGVS-UMA-IN-1821-SON/17	**Guaymas, Sonora**	Reproduction, repopulation and commercial use
6	**Acuario Oceánico** (ACUARIO OCEÁNICO, S. DE R.L. DE C.V.) DGVS-UMA-IN-1848-B.C./18	**San Felipe, Mexicali, Baja California**	fattening, commercial use, research and environmental education
7	**Desarrollo del Alto Golfo de California** DGVS-UMA-IN-1859-SON/18	**San Luis Río Colorado, Sonora**	Fattening and comercial use

2. Additional issues regarding totoaba production and Earth Ocean Farms

2.1. Legal establishment

Earth Ocean Farms (EOF) was established in 2007, and did not start operations until 2011 due to a financial crisis in 2008, and to the processing of adequate permits (aquaculture concessions, impact assessments, management plans, etc.). In 2011, it carried out shrimp culture tests in submersible cages, as well as trials with Gulf weakfish (*Cynoscion othonopterus*) and Spotted rose snapper (*Lutjanus guttatus*). Currently, in addition to totoaba, EOF produces Pacific red snapper (*Lutjanus peru*).

It was not until 2012 that the company registered its operations for totoaba and began to breed specimens of this species. These individuals were obtained and transported from the Autonomous University of Baja California (UABC, see record in Table 1) in Ensenada. In 2013, 2014 and 2015, EOF bought more juveniles from the UABC

and CREMES in Sonora (Table 1). Both are Research Centers funded by the Government of Mexico that have been producing totoaba for several years. In 2014, EOF also obtained permission to capture wild broodstock and established a breeding center in La Paz, Baja California Sur. In 2015, EOF started producing its first juveniles, and in 2016 all the juveniles that the farm had, came from the wild EOF broodstock. Some of the totoaba that were produced at EOF in 2015, were kept on the farm to produce the first generation of reproducers (F1).

2.2. Additional biological and technical aspects regarding totoaba in captivity

a) Life story of totoaba

For wild specimens:

Table 2. Table of correspondence between stage, ages, length and weight of totoaba in the **wild**:

Stage	Age (years)	Total length (cm)	Approximate weight (kg)
Fingerlings	0.5	7.6-15.4	0.002-0.18
	0.6-1.5	30-45	0.37-0.7
	2-2.5	65.61-73	1.84-2.5
Juveniles/subadults	3-3.5	88-90	4.5
	4-4.5	108-106.9	5.4-8.232
Adults	5-9.5	111-164	7 -30.8
	10-14.5	139-188.8	18 -46.9
	15 -18.5	135-197.6	28-53.9
Senescent Adults	19.5-24.5	168-203.24	38.5 -58.8
	25-27	139-210	48.5-59.5
	30	185-215	59.6

* the table was constructed combining unedited information (not published) from: UABC (2019) and INAPESCA (2019, in revision).

- The weights and lengths can vary widely, depending on the diet and conditions of the totoaba.
- Weights, lengths and age of first reproduction decrease in captive specimens.

For captive specimens (aquaculture)

Table 3. Table of correspondence between stage, ages, length and weight of totoaba in **captivity**:

Stage	Age (hours/days/years)	Size (cm)	Approximate weight (gr/kg)
Egg	24 Hrs	0.9-0.95	Undetermined
Larva with yolk sac	50 Hrs	3.6	Undetermined
Larva	25 Days	3.6-20	<0.5g
Fingerling	25-40 Days	20-35	0.5-2gr
Juvenile	1.2 years	>35	2-3,500g
Reproductive Adults	>3 years	>80	>15kg

* The table was constructed according to EOF's observations.

- The totoaba in aquaculture shows an accelerated growth with respect to the wildlife specimens, as mentioned in Point 3 of Annex 4a in Document SC71 Doc. 17
- The totoabas are placed in the farm's marine cages when they reach 10-25 gr, between 70-90 days of age, and are harvested as juveniles after 1.2 years, with a weight of around 3 kg.

Mortality rates

For totoabas in the **wild**, different mortalities have been reported (from 0.14 to 0.35, Molina-Valdez et al., 1988, Cisneros-Mata et al., 1995, Pedrín-Osuna et al., 2001 De anda-Montañez et al., 2013, Valenzuela-Quiñones 2014). INAPESCA (2019, in review), considers a general mortality of 0.26/year (Cisneros-Mata et al., 1995, Valenzuela-Quiñonez et al., 2014), although by age categories, it indicates that: a) juveniles and fingerlings of 0.5 to 2.5 (M = 0.549 / year), subadults and adults of 3.5 to 18.5 (M = 0.069/year), and older adults of 19.5 to 26.5 (M = 0.411/year).

In **captivity**, the mortality rate reported by EOF from egg to larva is around 20%; from larva to fingerling of approximately 80%, from juvenile to harvest size, between 10 and 12% (this is also explained in document SC71. Doc. 17 Annex 3 in Section 7); and that of broodstock is less than 1%.

b) Technical

Artificial manipulation to induce reproduction: use of hormones by EOF

The thermal control of the tanks that contain the reproductive specimens allows to simulate the natural reproduction season and obtain spawning in different periods, adjusting to the production cycles of the farm. With these controls (light, water and temperature), the farm manipulates most of its maturation. However, the spawning (final part of maturation) seems blocked in captivity, so it needs an induction. This induction is done with the use of gonadotropin-releasing hormone. This induction is a common practice in aquaculture, and allows farmers to reproduce and breed species profitably.

When the temperature regime is suitable for reproduction, the farm takes samples of all the fish in the tank, and it weighs them, measures them, and checks if the males present spermatogenesis, while for the females, a biopsy of the gonads is taken in order to determine the development of the eggs. Subsequently, the farm chooses the females with the highest maturation state for hormonal induction. It is worth mentioning that this management is carried out with anesthetized fish. The day after the hormonal implantation (24 to 28 hours after implantation), the females release the eggs and the males release their sperm. The females will continue spawning for three days after the implant, and the amount of eggs collected will depend on the number of females implanted and the weight of each one. The average fertility for totoaba on the farm (measured in the number of eggs per weight of each fish) is around 87,463 eggs/kg; which means that a female can release up to 1,561,374 eggs per year during two or three spawning events. All fertilized eggs float and are collected. During the mentioned process, the fish are kept in the same parental tank along with the rest of the parental fish.

Movements between different enclosures depending on age/size

Although the information is included in the original application, for better understanding, information on the movement of the specimens in the production plant and the farm is presented according to their age:

1) The breeding animals (parental females and males - Broodstock) are in three different tanks, each with 70 m^3 of water. These are their permanent “stay” tanks, where even the reproduction occurs.

2) When the eggs are collected, they are sent to six hatching and larval culture tanks. Each tank has 1.8 m^3 (1,800 liters), and the larvae remain in them approximately 30 days (the weight of each larva can reach one gram).

3) The larvae are transferred to the nursery tanks. The facilities have 12 tanks with a capacity of 8 m^3 each. The larvae remain there for 30-60 more days, reaching a weight between 5-20 grams. These specimens are classified and prepared for shipment to marine cages, or where appropriate, to be transported and released to the natural environment.

4) Farm - Aquapods: the specimens are deposited in cages at a density that does not exceed 20 kg/m^3 (considering the density in the harvest size). Although EOF usually does not exceed said density, when there is a greater success of growth and it is exceeded, extractions and changes of cages are carried out in order to reduce the biomass. These actions are unusual.

Sacrifice of specimens

Although there is no specific regulation in Mexico for fish slaughter, EOF has certificates issued every two years by SENASICA (National Service for Agrifood Health, Safety and Quality) and endorsed by the Ministry of Agriculture and Rural Development (SADER), on Good Aquaculture Practices (on compliance with a handbook of best practices); in this handbook, it is indicated that the fish should be taken as quickly as possible to death without pain (such as a sharp blow to the head) or by provoking unconsciousness to death, using, for example, ice-water. The fish are packed, whether fresh or frozen, in coolers with Gel-Ice; the fillets are packed in high vacuum and placed in coolers with Gel-Ice for transport.

It is worth mentioning that the harvest rates are calculated according to the estimated production, which must be periodically reported to SEMARNAT, and this must correspond to the products requested for use. This information can be assembled at any time by the inspection authorities.

2.3. Additional aspects of conservation and information generation

a) Information generation and conservation

Breeding in captivity has allowed the observation and comparison of different biological aspects of totoaba; such as fertility, natural mortality, and even has enabled to compare among artificial reproduction systems (tanks vs. marine cages). Likewise, care techniques in captivity, reproduction and feeding have been refined, both for liberation and commercial purposes (Mata-Sotres 2010, True 2012). It should also be noted that the management

of totoaba taken in the wild is difficult, since it is sensitive to handling and extraction; but for the establishment of broodstock and scientific catch, new techniques have been developed that improve survival and adaptation to the captive environment (such as bladder puncture to avoid decompression gas problems; less invasive conditions have been determined for transport, from the use of special containers, temperatures, oxygenation and maximum distance to travel without significant mortalities).

Specimens from captivity have been used by INAPESCA in studies to determine the sound signature of totoaba swim bladders in order to carry out further abundance studies of the wild population by bioacoustics (INAPESCA 2019, in progress). In addition to this, different genetic studies have been developed (both from captures in the wild and from the variability in captivity) and the captive specimens have helped obtain samples for genetic analysis, and compare them with wildlife specimens or with those obtained of seizures from illegal trade (García de León, 2010; Valenzuela Quiñonez et al., 2014, 2015, 2016).

As it is currently a species classified as Endangered in the Official Mexican Standard, captive activities must include a conservation component. In the case of Earth Ocean Farms, as well as for other UMAs, part of the fingerling production is released to the wild. Although the success of these specimens has yet to be determined, studies are still underway (see point 8 of Annex 4a of document SC71 Doc. 17), and EOF (and other UMAs) will participate with the academia and the government for the development of said studies.

b) Promotion of alternative livelihoods: The Sustainability Initiative in the Upper Gulf

The Gulf of California (also called the Sea of Cortez) is an area of great importance for Mexico, at a biological level as well as at the economic and social levels. The Mexican government recognizes the importance of the area, and for this reason, has established the "Sustainability Initiative in the Northern Gulf of California." The objective of this initiative is the creation of environmentally sustainable and resilient coastal communities, through a permanent space for dialogue and coordination for decision making. The initiative will be implemented based on a common agenda and goals among all the participants, promoting these lines of action: integral community development; governance and security, sustainable and responsible fishing, the conservation of ecosystems and species, and sustainable productive diversification.

These lines seek to: strengthen law enforcement for the protection of totoaba and vaquita (inspection and surveillance), continue the removal of ghost nets, use alternative fishing gears that do not interact with the species to be conserved (bycatch), promote technology transfer for sustainable fishing activities for the inhabitants, continue with international cooperation to prevent and combat illegal trade (through CITES), promote the aquaculture of endangered species to discourage illegal trade, and seek social integration in all these activities.

c) Hatchery registration - aquaculture

The application presented for the registration of “EOF” in CITES for breeding in captivity totoaba for commercial purposes, is an alternative to the illegal fishing of this species in the wild. We believe that the registration of a single UMA will not achieve the goal of totally discouraging illegal trade in the short term, but we do believe that in that same short term it will have a strong positive impact, and that, in the medium term, with the registration of more UMA, the goals can be achieved regarding the significant decrease of illegal trade and the reduction of the price of swim bladders. In addition to the UMAs that legally produce totoaba, both for research and commercial purposes, there is broad interest in establishing new breeding centers, mainly in the high and middle gulf areas, in Sonora and Baja California.

d) Benefits for conservation by commercial aquaculture of totoaba

According to reports from an ongoing research by the Bren School for Environmental Science and Management, at the University of California, Santa Barbara ("Conservation benefits of commercial aquaculture for *Totoba macdonaldi*", Castellanos-Rico et al., 2019), legal trade of totoaba swim bladders from aquaculture can promote the reduction of illegal trade. That is, the aquaculture of totoaba products would enter market dynamics; by including legal bladders of acceptable sizes to consumers, demand may increase by the first year, but even with an increase of 1,000%, conservation benefits would continue. In addition, it is emphasized that the totoaba is a species of rapid growth and high reproduction rates.

In this research, three scenarios were highlighted: 1) the *status quo*, where the illegal catches are at an approximate level of 520 tons of wild biomass per year, but without captive breeding operations and with a reference point (to consider overfishing) of 12,000 tons of wild biomass; 2) The commercial opening of a single farm (EOF, in this case), could promote the recovery of 2,500 to 3,900 tons of wild biomass in 10 years, where for each ton preserved it could reduce the price per gram in $ 5.3 USD) ; and 3) the registration of multiple farms, which would lead to the production of greater biomass than that historically captured, and where it is estimated that the production of only 15 tons of biomass would reduce the illegal catch from 50% to almost 100% in 10 years.

Finally, it is emphasized that the opening of aquaculture and the sale of legal bladders should be a complementary strategy for the conservation of the habitat of totoaba and vaquita porpoise, from the point that the decrease in illegal demand would cause a decrease in the placement of illegal fishing nets (incidental vaquita fishing); however, strict measures of law enforcement and inspection would continue. Although they do not explicitly know the socioeconomic impacts that the opening of farms would have on the international market, it would be expected that, by reducing the illegal catch, the current closure of all fishing activities could, with time, be lifted with suitable fishing gears and directed to other species, reactivating the local fishing economy (currently suspended).

e) Procedure and legislation on the inspection or monitoring of the production process and the commercial chain (general information on this can be found in SC71 Doc. 17, in section 13, and section 4 of Annex 4a).

In accordance with the General Law of Ecological Equilibrium and Environmental Protection (LGEEPA) and the General Wildlife Law (LGVS), the Federal Attorney's Office for Environmental Protection (PROFEPA), which is the CITES Law Enforcement Authority in Mexico, can perform inspection and surveillance actions necessary for the conservation and sustainable use of wildlife. Through duly substantiated inspection orders, UMAs can be inspected in a random or directed manner when inconsistencies are detected in management plans, inventories, reports, legal acquisition, etc., in order to verify that both the infrastructure and the activities correspond to authorized plans and reported inventories/production. These operations are obliged to o enable the inspection of the facilities.

The commercial chain of the totoaba, operates under the guidelines of the UMA (LGVS and its Regulation), as well as the Official Mexican Standard NOM-169-SEMARNAT-2018, which establishes the marking specifications for specimens, parts and totoaba derivatives from UMA, and which is a regulatory instrument that has elements that allow recognizing the totoaba specimens' movement from the UMA to the final trader; that is, it allow its traceability.

Regarding the legal origin of the specimens, parts and derivatives of totoaba, PROFEPA must verify the authorization of extractive use of specimens, parts and derivatives of wildlife, the receipt (proof of purchase) or note of reference -as the case may be-, and the marks referred to in the aforementioned standard, as applicable. In the case of non-commercial transactions, the receipt or reference note must serve to demonstrate the legal acquisition of the specimens, parts and derivatives, as long as they comply with the specifications of the mentioned standard (NOM).

Regarding the import, export and re-export of specimens, parts and derivatives of totoaba, PROFEPA must verify that these are carried out in accordance with CITES regulations. The information included in CITES permits must correspond at all times to the information of harvesting authorizations issued by SEMARNAT.

f) Penalties for unauthorized (illegal) cargoes, laundered specimens, or, if applicable, illegal specimens identified when performing a genetic analysis.

Under these cases, the penalties may be, depending on the case and the seriousness: written reprimand, fine; suspension and/or temporary, partial or total closure of the corresponding authorizations, licenses or permits; revocation of the corresponding authorizations, licenses or permits; administrative arrest for up to 36 hours; confiscation of specimens, parts or derivatives of wildlife, as well as instruments directly related to infractions; payment of expenses to the depositary of specimens or goods that, due to an administrative procedure, have been disbursed.

In the case of fines, these can be established from: $ 1,689.8 to $ 422,450.00 Mexican pesos ($ 87 to $ 21,650 USD) to whoever omits the presentation of reports; from $ 4,224.5 to $ 4,224,500.00 pesos ($215 to $216,650 USD) to whoever destroys or damages the wildlife or its habitat, makes use of it without the corresponding authorization or in contravention of it, presents false information, marks and sells wildlife specimens that do not correspond to a harvest, alter for illicit purposes the marks and receipts of wildlife, export or import wildlife specimens without authorization or permission; and, from $ 16,898.00 to $ 6,336,750.00 pesos ($866 to $325,000 USD) to anyone who kills any specimens of wildlife, without authorization or in violation of the law.

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