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CITES's Last Chance

Stop the illegal totoaba trade
to save the vaquita

Briefing to the 18th Conference of the Parties
to CITES and the 71st Standing Committee

August 2019



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We investigate and campaign against environmental crime and abuse.

Our undercover investigations expose transnational wildlife crime, with a focus on elephants, pangolins and tigers, and forest crimes such as illegal logging and deforestation for cash crops like palm oil. We work to safeguard global marine ecosystems by addressing the threats posed by plastic pollution, bycatch and commercial exploitation of whales, dolphins and porpoises. Finally, we reduce the impact of climate change by campaigning to eliminate powerful refrigerant greenhouse gases, exposing related illicit trade and improving energy efficiency in the cooling sector.

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EIA UK

62-63 Upper Street,
London N1 0NY UK

T: +44 (0) 20 7354 7960

E: info@eia-international.org

eia-international.org

Environmental Investigation Agency UK

UK Charity Number: 1182208

Company Number: 7752350

Registered in England and Wales



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Above: Illegal totoaba swim bladders on sale in Shantou, China, 2016

Front cover: Composite image: Illegal totoaba fishing ©Alejandro Olivera; Vaquita ©Chris Johnson



@Oscar Ortiz

Introduction

Above: Vaquita mother "Ana" with her 2018 calf demonstrating that vaquitas are healthy and can give birth annually

The illegal trade in totoaba fish maws is rapidly driving the vaquita marina to extinction. This small rare porpoise endemic to Mexico's Upper Gulf of California is collateral damage in the pursuit of huge profits by organised criminal networks that sell totoaba swim bladders in Asian markets, primarily China.

At the 17th Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2016, a series of decisions were agreed aimed at tackling the illegal fishing of and trade in totoaba, an Appendix 1 listed species, in order to prevent the extinction of the vaquita. Just over two and a half years later, these decisions have had no discernible impact.

The illegal fishing and international trade in totoaba maws continue apace, are even increasing, as a result of Mexico's failure to effectively crack down on organised criminal networks perpetuating the trade. Mexico has completely failed to stop illegal fishing for totoaba, even within the relatively small area that is home to the world's remaining vaquita, thought to number less than

19 and perhaps as few as six.¹ According to experts, this lack of enforcement of fishery regulations and other wildlife laws is "systemic, long-standing and deeply entrenched."²

Parties to CITES must take all possible steps to help Mexico eliminate gillnet use and other damaging fishing practices in the Upper Gulf of California, dismantle the organised criminal groups that engineer the smuggling of totoaba from Mexico to Asian export destinations and tackle the demand for totoaba maw, particularly in the main market of China. It is not just the survival of the vaquita at stake, but the survival of Mexico's unique marine biodiversity heritage in the Upper Gulf of California upon which so many communities depend.

This briefing summarises investigations by the Environmental Investigation Agency (EIA) into the illegal trade in totoaba and offers recommendations to the Parties to CITES to consider at the 18th Conference of the Parties and Standing Committee meetings in August 2019.

Facing extinction – the status of the vaquita marina

The vaquita porpoise is the world's smallest and most endangered cetacean, with an estimated nine individuals remaining.³ Its distribution is restricted to a very small area, approximately 24km by 12km, in the northernmost Gulf of California, Mexico.⁴

The status of the vaquita and its catastrophic race towards extinction has been well-documented over the past 20 years by the International Committee for the Recovery of the Vaquita (CIRVA), a body of international experts in the field of cetacean studies. In 1999, CIRVA endorsed a vaquita abundance estimate of 567 individuals, based on surveys conducted in 1997.⁵ By 2012 the population was thought to number just 200 animals. When CIRVA met in 2014 it issued a stark warning that the species was in imminent danger of extinction, having been reduced to fewer than 100 individuals with just 25 reproductively mature females.⁶ Just five years later, CIRVA's eleventh report published in February 2019 estimated that around 10 individuals – no more than 22, and potentially as few as six – remained alive in the summer of 2018.⁷ A published paper later refined the estimate to just nine individuals remaining, with a 95% certainty that between six and 19 remained.⁸ **This represents a 98.6 per cent population decline since 2011.**⁹

Scientists have warned for more than two decades that the survival of the vaquita was dependent on eliminating bycatch in gillnets and other entangling nets. In particular, bycatch of vaquita in illegal gillnets used to catch totoaba fish was identified in 2012 as the key driver of a sudden and rapid decline of the species.¹⁰ Totoaba fishing has been banned since 1975 and in 1977 the species was placed on Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), banning all international trade.¹¹

Despite an emergency gillnet ban in 2015, the vaquita has continued to rapidly decline, by an estimated 48 per cent in 2017 and 47 per cent in 2018.¹² Illegal fishing of totoaba continues unrestrained, to supply a demand for their dried swim bladders, or maw. The main market is in China, where totoaba maw is sought for its supposed health benefits.¹³

Mexican enforcement efforts have been completely ineffective in addressing the illegal totoaba fisheries in the Upper Gulf of California. Incredibly, the latest CIRVA report noted a clear “increase in illegal fishing for totoaba”, based on the number of illegal gillnets removed from the area.¹⁴ In 2018, 659 pieces of fishing gear were removed, mostly active illegal totoaba gear (67 per cent), with a very high overlap between the locations where gear was found and vaquita habitat.¹⁵ Net removal teams are facing violent attacks from illegal fishers, further curtailing their success.¹⁶

In March 2019, shortly after the CIRVA report was published, a suspected dead vaquita was found in a gillnet by Sea Shepherd Conservation Society.¹⁷ It was later confirmed to be a precious female.¹⁸

Mexico's efforts to protect the last remaining vaquitas have fallen short on several other fronts. These include loopholes in the gillnet ban which allow for mackerel and curvina fisheries that could be used as a cover for carrying and setting illegal gillnets; a failure to prohibit the possession, sale and manufacture of gillnets in the area; lack of control or monitoring of fishing effort; and delays in the development of alternative fishing gear and in permitting the use of available alternative gear.¹⁹ The development of alternative livelihoods in the region has equally shown little progress.

In the short-term, the vaquita's extinction is preventable only by eradicating illegal totoaba fishing and removing abandoned gillnets in the small area where the last few individuals remain. The latest CIRVA report emphasised that “there is still hope” for the species, with the remaining animals still healthy and producing calves.²⁰

Below: Illegal gillnet fishing for endangered totoaba near San Felipe, Mexico, April 2019



EIA investigations into the illicit totoaba trade

A series of undercover investigations conducted by EIA since 2015 in southern China and Mexico reveal a persistent illicit trade in totoaba maws, with the black market being supplied by criminal syndicates spanning both the source country and main markets.

Between May 2015 and October 2018 EIA carried out four on-site investigations into the illegal totoaba market in Hong Kong and mainland China's southern province of Guangdong.²¹ During that time, public information campaigns and inspections have increasingly curtailed the open sale of totoaba maws in the main marine products markets in Guangzhou city, Qingping and Yide. Initially EIA investigators documented 800 fish maws labelled as totoaba openly on sale, yet three years later the trade had been driven underground although it continued to thrive in other locations in southern Guangdong, notably the coastal cities of Shantou and Chaozhou. EIA first revealed the emergence of Shantou as a key totoaba maw hub in 2016.²² A single company based in the city offered EIA investigators 700 maws stored at its processing factory. Subsequent investigations in Mexico have exposed the central role of Taishan city in Guangdong's Jiangmen in totoaba trafficking, with most of the Mexico-based criminals engaged in the trade hailing from the area.



Above: Two totoaba maws being weighed in marine product processing factory, Mexico City, 2017

Inset: Fresh totoaba maws offered to EIA investigators by the same group in April 2018

Mexico Findings

In June 2017 an EIA investigative team carried out a two-week investigation in Mexico to ascertain how totoaba sourced from illegal fishing operations are traded, processed and transported to the main markets in southern China. A series of undercover meetings with totoaba traders took place in the main centres for the business; Mexico City, Culiacán in Sinaloa State and Tijuana and Mexicali in Baja California State. Through these meetings and subsequent communications, EIA uncovered a network of Chinese-led criminal groups, mostly led by individuals from Jiangmen and Taishan, Guangdong, engaged in trading a range of illegal marine products and connected to other crimes such as people smuggling and drug trafficking.

In Mexico City EIA investigators were taken to two marine product processing factories run by a pair of Chinese men. At one of the factories, investigators were introduced to a third member of the group, a Mexican national who served as the registered owner of the factories and as a front man for the group. Both revealed connections to a gang based in China's Fujian Province which moved Chinese nationals into the US illegally.

Both of the Chinese men came from Taishan in Guangdong and were partners in a business dealing in lucrative and largely illegal marine products including fish maw, sea cucumber, sea horse and shark fin. Their

factories are largely makeshift and comprised of equipment necessary for basic processing, including pails for soaking marine products, drying rooms with electric heaters, layers of drying racks and so on. One room was stacked with 20-30 empty luggage cases previously used to move products to and from China. At the time of EIA's visit, they did not hold many totoaba maws in stock and only showed EIA five as a sample. However, they contacted another syndicate and confirmed there were between 200-300 maws available in Mexicali.

The Mexico City based group claimed to have previously supplied a group of four Chinese traders, alleged to be among the biggest totoaba traders in Mexico. The group is primarily based in Mexicali, with a factory in Mexico City.

During the meeting the pair explained how fresh totoaba maws were sourced from a cartel in Sinaloa State which dominates the trade to such an extent that outsiders attempting to enter the business have been kidnapped and killed. The entire route from Sinaloa is controlled by the cartel and any problems en route are dealt with through a phone call to corrupt officials. They highlighted how bribery is commonplace if seizures occur, mentioning one instance when a friend was caught in Mexicali with 40kg of totoaba maw and paid



a bribe of US \$200,000 to avoid arrest. These routes are believed to be the same ones used to transport drugs.

Once the fresh maws arrive at the factory in Mexico City they are dried, wrapped in plastic and shipped overseas via airfreight, often concealed amongst legitimate marine products. They spoke of working with a shipping agent in Hong Kong who was able to move the maws into mainland China, and of having buyers in Yide market in Guangdong. Buyers usually pay half of the purchase price in advance and the rest upon delivery in China, with the traffickers using bank accounts in China and Mexico.

Remote contact between EIA investigators and the group continued until February 2018, at which time they were planning to source 100kg of totoaba maws from a supplier in Culiacán, Sinaloa, but had been unable to travel to view the maws due to in-fighting between different groups seeking to control the illegal fishing and smuggling operations along the coastline. They were also expanding the business by purchasing 11 fishing boats to increase supply.

The EIA investigators also travelled to Culiacán, Sinaloa State, a major centre for the distribution of totoaba maws obtained from illegal fishing operations further along the coastline. The team met with two Chinese nationals who were partners in trading a range of marine products including fish maw, shark fin and seahorses and ran a restaurant as a front business. Both were originally from Taishan in Guangdong and had been living in Mexico for over a decade. One claimed to have formerly worked as an enforcer for a local Mexican drug gang.

The two traders specialised in directly sourcing fresh totoaba maws from fishing ports around Culiacán, recounting how stretches of the gulf coast are “owned” by mafia linked to drug cartels, of which there are between six to eight groups along the entire coastline. These groups oversee collection of all marine products, including shark fins, sea cucumbers, sea horses and totoaba maws. The groups normally assign a broker who handles all sales. These brokers only sell to known buyers and generally do not entertain newcomers. Buyers who attempt to undercut the price of brokers by going directly to fishermen, unless with knowledge and approval of the brokers, often face violent threats against them. One tactic the pair spoke of was to take such buyers out to sea to drown them. EIA investigators were taken to a port in Dautillos and were quickly offered a frozen totoaba maw by one of their suppliers.

At the time of the meeting EIA investigators were shown one totoaba maw but the pair claimed to have 30 totoaba maws in stock, mostly weighing between 100-200g each. They explained how the fresh maws were dried and processed at a safe location away from the restaurant and sold to buyers in Mexico City who then arranged onward transport out of the country through the city's airport.

The investigators also travelled to Tijuana, Baja California State, next to the US border and another important hub in the illicit totoaba trade. A meeting was held with a third totoaba trafficking group, again led by two Chinese nationals both originally from Taishan in Guangdong. The pair were cousins and were running a

business processing marine products including totoaba maws.

They described sourcing fresh totoaba maws, paying up to US\$15,000 per kilogram and claimed to have 30 maws in stock in Culiacán. They dried and processed the maws themselves and then sold them through buyers based in Mexico City who would then arrange the smuggling route to China. One of the pair described two main smuggling methods out of Mexico City; directly to China via international courier services in small packages and concealed in the luggage of willing air passengers operating as transporters for a fee. These carriers would usually take an indirect route to China, via third countries such as Malaysia and Japan to avoid detection by customs in China.

They also revealed that their marine products business, including trade in totoaba maws, was being financed by an investor from the US based in nearby San Diego.

EIA's investigations into totoaba trafficking in Mexico reveal important insights into how the trade is carried out and the identification of some of the main criminal groups involved. Most of the Chinese nationals involved come from the same city of Taishan in Guangdong, and have been based in Mexico for years, rarely travelling back to China. While some groups specialise in sourcing totoaba maws directly from fishing ports, others carry out processing and arrange export out of the country. Several of the traffickers boasted of involvement in other forms of crime and described violence as being routine amongst the Mexican crime gangs competing to control the coastline where illegally-caught totoaba fish are landed. Corruption is a key enabler of the underground totoaba trade, with the Chinese traders describing routine payments to enforcement officials along the supply route and main exit points such as Mexico City airport. Air transport remains the favoured smuggling method, with Chinese nationals in Mexico being recruited to transport dried totoaba maws in suitcases, usually via indirect routes including South Korea, Vietnam and Japan.

Enforcement efforts

Mexico

Mexican enforcement agencies have regularly seized large consignments of totoaba maws. These seizures have been mostly the result of random inspections and have almost exclusively targeted low-level couriers. There is no evidence that the seizures have led to any meaningful prosecutions or penalties, and no evidence of any intelligence-led enforcement to tackle the criminal networks that organise the illegal fishing and trade. This is despite the provision of intelligence information on key networks by EIA as early as 2017.

From 1 January 2018 to 31 July 2019, more than 2,000 totoaba maws were seized in Mexico according to online reports.²³ In addition more than 100kg of maws were seized where the number of individual maws was not specified. During a peak three-week period between April-May 2018, 940 individual maws and more than 40kg of totoaba maws (mostly fresh maws) were seized (see Table 1).

The major hotspot for seizures has been the International Airport of Mexico City, where nine cases were reported and over a thousand totoaba maws confiscated. Totoaba maws have also been discovered at international airports in Chihuahua city, Mérida and Monterrey. Reported onward destinations from these airports are primarily in China (Beijing, Shanghai, Hong Kong and Guangzhou via Tokyo, Japan) but also South Korea (Seoul) and the US (New York and Washington state).

Left: Totoaba maw for sale in Guangzhou, China, October 2018



Table 1: Main totoaba seizures in Mexico since January 2018

Location	Date	Description	Number/weight of maws
Tijuana	25/02/2018	Following a surveillance operation, federal police discovered 87 totoaba maws in 32 plastic bags in a hidden compartment of a vehicle stopped on the Tijuana-Ensenada highway. ⁴³	87 maws
Mexicali	10/03/2018	22 totoaba maws were seized in Mexicali Valley following surveillance by the Municipal Police, who stopped a pick-up truck with one person on board. The maws were hidden behind a seat in a black rucksack. ²⁵	22 fresh maws / 10.83kg
Golfo de Santa Clara	19/03/2018	A man transporting 20.9kg of totoaba was stopped by police and soldiers on the Gulf of Santa Clara-San Luis Río Colorado highway. ²⁶	20.9kg (unclear if fresh or dried)
San Felipe	07/04/2018	32 totoaba fish found dead in a fishing net, 180m long and 15m wide, located by federal officials of CONAPESCA in San Felipe. ²⁷	32 maws
Mérida International Airport	19/04/2018	2.9kg of suspected totoaba maws were seized in Fedex parcels at the Merida International airport. According to the paperwork, the maws originated from Chetumal and were destined for Renton, Washington state. ²⁸	2.9kg dried maws
Golfo de Santa Clara	21/04/2018	40kg of totoaba maws seized by Federal Police on Gulf of Santa Clara-San Luis Río Colorado highway. Two men and a woman arrested. ²⁹	40kg fresh maws
International Airport of Mexico City	22/04/2018	A man was detained at the International Airport of Mexico City for trafficking 408 dried totoaba maws hidden in two suitcases. The Chinese citizen with permanent Mexican residence was traveling to Seoul, South Korea. ³⁰	408 maws
International Airport of Mexico City	24/04/2018	Federal Police and PROFEPA arrested a Chinese citizen transporting 417 fish maws (355 officially recorded as totoaba). The man was flying to Guangzhou via Tokyo, Japan. ³¹	355 maws
Mexicali	04/05/2018	209 pieces including 177 whole totoaba maws in three coolers were seized following a surveillance operation. The driver of the green Mazda Protégé was identified as Francisco Eduardo "N", 25 years old. ³²	177 fresh maws/ 100kg
International Airport of Mexico City	31/05/2018	A Chinese citizen was detained at the International Airport of Mexico City by the Federal Police following a random baggage inspection. Destined for Beijing, the suitcase contained 57 seahorses, 1.8kg of totoaba maw and nearly 3kg of sea cucumber. ³³	1.8kg dried maws
International Airport of Mexico City	31/07/2018	PROFEPA seized 21 totoaba maw at International Airport of Mexico City following a report from Correos de México. Labelled "PESCADO", the package weighed 2.45kg and contained further unidentified species. It came from Mazatlán and was destined for China. ³⁴	21 maws
International Airport of Mexico City	08/08/2018	PROFEPA seized 16 totoaba maws destined for New York. The shipment, intercepted by Correos de México, contained 1.3kg of totoaba maw and other fish maw. The package was from Hermosillo, Sonora. ³⁵	16 dried maws/ 1.3kg
International Airport of Mexico City	02/10/2018	Federal Police seized 271 totoaba maws that allegedly arrived on a flight from Panama City. Customs requested PROFEPA's support to inspect the suitcase, which contained clothing to conceal the maws. ³⁶	271 maws
Mexicali	04/11/2018	PROFEPA and SEDENA (Mexican army) stopped a man at a military check-point, finding 33 totoaba maws during inspection. The detainee was travelling from Ensenada to Mexicali to sell the products. ³⁷	33 maws
Chihuahua International Airport	18/04/2019	28kg of totoaba were found at Chihuahua International Airport in a cooler during random parcel checks. ³⁸	28kg (unclear if dried or fresh)
San Felipe	11/05/2019	49 totoaba maws were seized at San Felipe port by the FGR (Fiscalía General de la República). ³⁹	49 maws
Mérida International Airport	23/05/2019	Two boxes containing 18.9kg of totoaba maw were found in Mérida International Airport, destined for Hong Kong. ⁴⁰	18.9kg dried maws
International Airport of Mexico City	01/06/2019	A Chinese woman Peiyi "H" was fined 203,989 pesos (approx. US\$10,700) for the trafficking of 47 totoaba maws. Arriving from Culiacán and connecting to Shanghai, she was arrested at the International Airport of Mexico City. ⁴¹	47 maws
Puertecitos, Ensenada	23/06/2019	FGR seized 43 totoaba maws while conducting surveillance tours in the town of Puertecitos, Ensenada. ⁴²	43 maws
Monterrey International Airport	10/07/2019	A routine check-up at Terminal B of Monterrey airport uncovered 647 pieces of sea cucumber and 90 pieces of totoaba swim bladder in the suitcases of four people, including two of African nationality and two Mexicans, who intended to travel to Hong Kong. ⁴³	90 maws (pieces)

United States

In May 2019, 132 dried totoaba swim bladders were seized in the US after a van with Mexican licence plates was stopped for speeding on southbound interstate 5 in Orange County, California. Two Chinese nationals, Yikang Liang and Haoyu Huang, who claimed to work as chefs in a Tijuana restaurant, were transporting three boxes containing the swim bladders of 132 totoaba, weighing roughly 104 pounds and valued at between \$940,000 and \$3.76 million.⁴⁴

US border patrol noted that two days earlier, on May 12, 2019, both Liang and Huang had driven separate vehicles into the US from Mexico, entering 17 minutes apart. The Orange County deputy sheriff identified the method of entering the US in separate vehicles and returning to Mexico in one vehicle as a tactic frequently used to move narcotics or currency. To date, the report authors are not aware of any case against Liang and/or Huang being brought to trial.⁴⁵

China

In contrast to the lack of effective enforcement in Mexico, there are encouraging signs that enforcement efforts along the supply chain, especially in the main market of China, are being stepped up and leading to the dismantling of some of the crime syndicates involved. Within China, tackling the illegal import of totoaba maws has become a priority for China Customs Anti-Smuggling Bureau as part of a wider effort to tackle the illegal wildlife trade. As a result, since 2018 China has made a series of seizures and arrests of totoaba traffickers. Major cases include:

- In December 2018 China Customs announced that a special operation "SY608" against totoaba traffickers had resulted in the arrest of 16 suspects and the seizure of 444kg of totoaba maws, valued at RMB182 million (US\$26 million). The operation focused on important centres of the totoaba trade, notably Jiangmen in Guangdong and Nanning in Guangxi Province bordering Vietnam,

including the border town of Dongxing, known as a smuggling route for a host of illegal wildlife products bound for China. The investigation revealed how the trafficking syndicate obtained processed maws in Mexico and smuggled the contraband back to China in concealed compartments of suitcases used by couriers taking indirect flights, often involving multiple transit stops.⁴⁶

- In December 2018 judicial authorities in Shanghai announced the first conviction in China for totoaba trafficking. Li Jiangfeng and Li Jiayi, originally from the coastal town of Taishan in Guangdong province, were caught in February 2018 at Shanghai Putong Airport in possession of 351 processed totoaba maws concealed in two suitcases, valued at RMB2.2 million (\$320,000). The two defendants were sentenced to jail terms of eight and seven years and fined RMB200,000 and RMB100,000 respectively. As part of its judgment the court noted that public possession of totoaba maws is illegal and emphasised that the supposed medicinal benefits of consuming totoaba maws needed to have scientific proof.⁴⁷

- In March 2019 the judicial authorities in Jiangmen announced the prosecution of 11 suspects implicated in trafficking totoaba maws on a vast scale. The group's ringleader was identified as Liang Weihua and was responsible for trafficking 20,000 maws over a three-year period, valued at RMB800 million (\$119 million). The syndicate used multiple trafficking routes to dispatch totoaba maws sourced in Mexico to China, including via Cambodia, Laos, Vietnam and Hong Kong.⁴⁸

- Also in March 2019 China customs officers at Hongqiao Airport, Shanghai, seized 122 totoaba maws concealed in the baggage of a young female traveller in transit whose flight originated in Mexico and was bound for the major totoaba market of Shantou in Guangdong. The suspect worked at a Chinese restaurant in Mexico and was six months pregnant, leading China customs to believe she had been recruited intentionally to avoid inspection.⁴⁹

While these enforcements actions in China have dismantled a series of totoaba trafficking syndicates, recent reports from Mexico show that illegal fishing for totoaba continues unabated and has even increased.⁵⁰ Stronger efforts are needed in the source country of Mexico, focusing on the Chinese-led crime groups operating in the country, such as those exposed by EIA, and not just the couriers. Mexico and China also need to strengthen cooperation, including with key transit countries such as US, Japan and Vietnam.

Far right: Juvenile totoaba at the Earth Ocean Farms hatchery near La Paz, Mexico

“In danger” list for Gulf of California World Heritage site

The unchecked decline in the vaquita has resulted in a decision in July by the World Heritage Committee (WHC) to list Mexico's Islands and Protected Areas of the Gulf of California as a World Heritage site in danger.⁵¹ The area of 244 islands, islets and coastal areas became a World Heritage site in 2005 for its exceptional marine biodiversity, home to 39 per cent of marine mammal species and a third of the world's cetacean species, including the endemic vaquita. Both the vaquita and totoaba are designated as species of “Outstanding Universal Value” by the WHC.⁵²

The World Heritage in Danger listing is a mechanism designed to facilitate emergency conservation action and international assistance to support severely threatened World Heritage sites. For the area to be removed from the ‘in danger’ list, Mexico must work with UNESCO to develop corrective measures to save the vaquita.

Captive breeding of totoaba - creating a market in an endangered species?

In May 2018, the CITES Secretariat announced that the Mexican Government had applied to register Earth Ocean Farms (EOF) as a captive breeding operation for totoaba, an Appendix I listed species.⁵³ According to the CITES treaty, if the facility is registered, Mexico would be allowed to commercially export totoaba parts upon issuance of a valid Appendix II export permit or certificate.⁵⁴

EOF operates a fish hatchery, a 343-hectare offshore aquaculture farm and a processing plant in the southeastern region of the Gulf of California, close to La Paz, Baja California Sur. In addition to totoaba, EOF also cultivates Pacific red snapper (*Lutjanus peru*). Once both species reach a certain size, the fish are transferred from the hatchery to offshore cages until the fish are large enough to be sold. Despite the fact that the totoaba is an endangered species and protected under Mexican law, EOF has been allowed to cultivate totoaba under a special permit called a Unidad de Manejo Ambiental (UMA, or management unit for the conservation and sustainable use of wildlife).⁵⁵

In addition to EOF, other companies have been registered as UMAs for totoaba cultivation. These include the Biotechnology and Pisciculture program of the Autonomous University of Baja California (UABC),

the Center for Reproduction of Marine Species of the state of Sonora (CREMES), Pacific Aquaculture S.de RL de CV, Acuario Oceánico, Desarrollo del Alto Golfo de California and Cygnus Ocean Farms SA de CV. All seven facilities are allowed to exploit farm-raised totoaba for domestic commercial use.⁵⁶ EOF and other farms have been selling totoaba meat to restaurants in a number of Mexican cities, including La Paz, Los Cabos and Mexico City.⁵⁷

While UABC has released juvenile totoaba into the Upper Gulf of California for a number of years, recently joined by EOF, studies of the survival rates for the released fish are limited, and only four captive-bred totoaba have been recovered.⁵⁸

The EOF application states that exports will include whole fish, filets and “fresh products, frozen and dehydrated.” The controversial totoaba swim bladders, the target of the illegal fishing driving the vaquita to extinction, are mentioned in the application, which provides the weight of the swim bladder in comparison to that of a whole fish. An information document submitted by Mexico to the 71st meeting of the CITES Standing Committee makes clear the intention is to develop the totoaba maw export market, claiming it will benefit vaquita and totoaba conservation, as well as economic development, by reducing totoaba poaching.⁵⁹

The information document claims that, according to ongoing research (which as of publication is not available or peer reviewed), a legal trade of totoaba swim bladders from aquaculture can promote the reduction of illegal trade. This statement is based on the theory that a legal supply of totoaba maws would suppress prices for illegally-sourced maws, thereby reducing the incentive for illegal fishing.

Given the current size of the totoaba market, which is relatively small compared to other wildlife products with supposed medicinal properties, it is likely that a legal supply would fuel the market for totoaba maws, which could not be sufficiently met by farmed totoaba. It could also increase the incentive for the illegal harvest of older, wild-caught fish with the most valuable (i.e. much larger) swim bladders. EIA’s investigations documented an oversupply of small illegal totoaba maws which resulted in a significant devaluation of maws in China from peak prices in 2012.⁶⁰ These price drops did not reduce illegal fishing for totoaba in Mexico or decrease trade in totoaba maws to China. A key reason for this is the sizeable profit margins for traders even when prices are at rock bottom. Traders are also known to stockpile supplies particularly of the larger more valuable maws whilst prices remain low, speculating on the value rebounding. Moreover, Chinese traders speaking to EIA undercover investigators have offered reassurance that the totoaba maws they are selling are wild-caught, not farmed, indicating a clear higher perceived value for wild products.

There is also the potential that competition from aquaculture-raised totoaba could induce criminal networks involved in trafficking to increase totoaba extraction in order to counteract their losses.⁶¹

A legal trade in farmed totoaba would irrefutably complicate the enforcement challenge faced by CITES Parties in addressing the trafficking of totoaba. The traceability scheme proposed by EOF, which includes genetic markers and the use of QR coded tags is problematic. While genetic marking may be appropriate for totoaba parts in trade, the Mexican customs agency (Aduana Mexico) and many other nations lack sufficient capacity and funding to regularly conduct genetic testing. The QR codes are inadequate; they can be replicated, copied or reused to launder illegal totoaba parts.⁶² The application did not address disposal, storage or security procedures for any bladders not traded.

Both the United States and Israel objected to the EOF proposal while CITES Animals Committee raised a number of questions regarding the proposal.⁶³ As a result, the registration is to be discussed at the 71st Meeting of the Standing Committee meeting in August 2019.⁶⁴

The EOF proposal directly contradicts CITES Decision 17.147 which instructed the Parties to “eliminate supply of and demand for totoaba.”⁶⁵ Furthermore, CIRVA, the IUCN and the UNESCO WHC have also urged Mexico to reduce demand for totoaba.⁶⁶ Authorising a legal international market for totoaba bladders directly contradict these recommendations. It opens new supply lines for the product, while simultaneously de-stigmatising and legitimising totoaba bladder consumption. Given the critical status of the vaquita, the EOF proposal should be rejected outright.



Recommendations to the 71st Standing Committee (SC71) and to the 18th Conference of the Parties to CITES (CITES CoP18)

At the 17th Conference of the Parties to CITES in 2016, a series of decisions were agreed aimed at tackling the illegal trade in totoaba. Parties were directed to intercept illegal shipments, share information on illegal catches and trade, engage in awareness raising activities, eliminate supply of and demand for totoaba and increase law enforcement efforts to prevent and address illegal fishing and trade.⁶⁷ The Secretariat was directed to commission a report on the current status of totoaba and vaquita, including conservation efforts, information on illegal trade and markets and recommendations to guarantee the recovery of totoaba and vaquita and combat illegal trade.⁶⁸ The Standing Committee was tasked with making recommendations for additional actions, based on data and information submitted by Parties.⁶⁹ Finally Parties and other stakeholders were urged to support efforts to stop illegal fishing, trafficking and support activities benefitting the recovery of totoaba.⁷⁰

These decisions have patently failed to have the desired effect. Illegal totoaba fishing and trade have increased, the vaquita hovers on the edge of extinction and Mexico is proposing to exacerbate the already critical situation by promoting international trade in captive bred totoaba maws.⁷¹

Implementation of the CITES Decisions has been incomplete, inadequate and ultimately ineffective:

- An August 2017 trilateral enforcement meeting between Mexico, China and the US initially promised the required urgent coordination of enforcement efforts, including an enforcement contact group and joint international operations. However there appears to have been little or no follow up to the meeting. Indeed, the US response to CITES Notification 2018/090 notes that requests for information on nationals from China, Mexico and South Korea related to totoaba seizures and arrests made in the US “often go unanswered”,⁷²
- At the 69th meeting of the Standing Committee (SC69) in November/December 2017, Mexico announced its support for a high-level diplomatic mission to Mexico with a view to addressing the urgent conservation status of the totoaba and vaquita. The mission did not take place until May 2019.⁷³ During those 1.5 years, the vaquita population declined by at least 48 per cent;
- Full funding has still not been secured for the CITES Secretariat to commission the report requested in Decision 17.149;
- Only two Parties, Mexico and the US, responded to Notification 2018/090 on 12 November 2018 that invited range, transit and consumer states to provide information on the implementation of the CoP17 decisions.

This inertia is inexcusable in the face of imminent extinction of the vaquita.



A spate of high-profile seizures and prosecutions in China since 2018 indicates increased resolve by the country's enforcement agencies to curb totoaba trafficking. These efforts must continue and be replicated by other totoaba transit and consumer countries. However the onus is clearly now on Mexico to target the Chinese-led crime groups in the country supplying totoaba maw and to end illegal totoaba fishing operations.

The proposed draft Decisions in CoP18 Doc. 89⁷⁴ fail to reflect the urgent need for action. At the current rate of decline the vaquita will be extinct by the 19th Conference of the Parties. Compliance procedures must be initiated against Mexico in light of its repeated failure to enforce the Appendix 1 listing of totoaba.

AWI, EIA, NRDC and the Center recommend that CITES SC71/CoP18 adopt trade suspensions under Article XIII against Mexico until such time as Mexico demonstrates that it has put in place measures that will:

- ensure protection of the remaining vaquita by maintaining a net-free zone in the small area that the few remaining vaquita inhabit, with 24/7/365 surveillance by sufficiently resourced and armed personnel to respond to any attempts to set gillnets and with the authority to arrest anyone violating Mexican law;
- increase enforcement on land and in water to eliminate all setting of gillnets in the range of the vaquita and to seize all gillnets;
- ensure totoaba fishers and traffickers are prosecuted, with the application of penalties that are sufficient to deter continued criminal activities;

Below: Fisherman extracting swim bladder from totoaba fish, April 2019

- fully fund and expand the net removal program and ensure the protection of net removal teams;
- strengthen existing laws to prohibit the sale, possession and manufacture of gillnets in the Upper Gulf (on land and water);
- strengthen collaboration with law enforcement authorities in totoaba demand and transit countries, including China, the United States, South Korea and Vietnam.

AWI, EIA, NRDC and the Center further recommend that SC71/CoP18

Directs the Secretariat to undertake an immediate compliance mission to Mexico, and other missions to China, the United States, South Korea and Vietnam to assess the efficacy of actions to combat the illegal totoaba trade.

Directs all Parties to:

- a) support, through financial and in-kind support, all efforts to promote the conservation of wild populations of totoaba and vaquita;
- b) eliminate supply and demand for totoaba and strengthen transnational law enforcement efforts to prevent and address the illegal totoaba trade;
- c) communicate to the Secretariat the specific activities undertaken under this Decision in time for the information to be reviewed by the Standing Committee at its 73rd and 74th meetings.

AWI, EIA, NRDC and the Center also urge SC71 to reject Mexico's application to register Earth Ocean Farms as a captive breeding operation for totoaba.



REFERENCES

- Jaramillo-Legorreta AM et al. 2019 Decline towards extinction of Mexico's vaquita porpoise (*Phocoena sinus*). R. Soc. Open sci. 6: 190598. <http://dx.doi.org/10.1098/rsos.190598>
- Report of the Eleventh meeting of the Comité Internacional para la Recuperación de la Vaquita (CIRVA), 2019. <http://www.iucn-csg.org/wp-content/uploads/2019/03/CIRVA-II-Final-Report-6-March.pdf> Hereafter referred to as CIRVA-11
- Jaramillio-Legorreta et al., *ibid*
- CIRVA-11, *ibid*.
- Comité Internacional para la Recuperación de la Vaquita, Scientific Report of the second meeting, 7-11 February 1999 (CIRVA-2). Available at: <http://boycottmexicanshrimp.com/CIRVA-Reports-I-II-III-Vaquita-1997-1999-2004.pdf>
- Report of the fifth meeting of the 'Comité Internacional para la Recuperación de la Vaquita' (CIRVA-5) Available at: <https://iucn-csg.org/wp-content/uploads/2010/03/Report-of-the-Fifth-Meeting-of-CIRVA.pdf>
- CIRVA-11, *ibid*.
- Jaramillo-Legorreta et al. (2019), *ibid*.
- Jaramillo-Legorreta et al. (2019), *ibid*.
- CIRVA-5, *ibid*.
- Totoaba macdonaldi. CITES Appendix I. <https://www.cites.org/eng/app/appendices.php>
- CIRVA-11, *ibid*.
- EIA (2017) Facing Extinction: Survival of the vaquita depends on eliminating the illegal trade in totoaba. Available at: <https://eia-international.org/report/facing-extinction-survival-of-the-vaquita-depends-on-eliminating-the-illegal-trade-in-totoaba/>
- CIRVA-11, *ibid*, p11.
- CIRVA-11, *ibid*, p9.
- For example, see <https://www.globenewswire.com/news-release/2019/01/10/1685912/0/en/SEA-SHEPHERD-SHIP-ATTACKED-INSIDE-VAQUITA-REFUGE.html>
- See <https://seashepherd.org/news/sea-shepherd-discovers-dead-vaquita-caught-in-gillnet/>
- IUCN February 2019 Vaquita Update. Dead vaquita found in totoaba net. Available at: <https://iucn-csg.org/dead-vaquita-found-in-totoaba-net/>
- Eighth Meeting of the Comité Internacional para la Recuperación de la Vaquita (CIRVA-8) Southwest Fisheries Science Center, Nov 2016. Available at: <http://www.iucn-csg.org/wpcontent/uploads/2010/03/CIRVA-8-ReportFinal.pdf>
- Taylor et al. (2019). Likely annual calving in the vaquita *Phocoena sinus*: A new hope? Marine Mammal Science. <https://onlinelibrary.wiley.com/doi/abs/10.1111/mms.12595?af=R&>
- EIA produced three reports: EIA (2016 - January) Dual Extinction: The illegal trade in the endangered totoaba and its impact on the critically endangered vaquita. Available in English and Chinese at: <https://eia-international.org/report/dual-extinction-the-illegal-trade-in-the-endangered-totoaba-and-its-impact-on-the-critically-endangered-vaquita/> EIA (2016 - November) Collateral Damage: How illegal trade in totoaba swim bladders is driving the vaquita to extinction. Available for download in English, Spanish and Chinese at: <https://eia-international.org/report/collateral-damage/> EIA (2017) Facing Extinction: Survival of the vaquita depends on eliminating the illegal trade in totoaba. Available at: <https://eia-international.org/report/facing-extinction-survival-of-the-vaquita-depends-on-eliminating-the-illegal-trade-in-totoaba/>
- EIA (2016), Dual Extinction, *ibid*.
- EIA totoaba illegal trade database. See visual representation <https://eia-international.org/wildlife/wildlife-trade-maps/illegal-trade-seizures-totoaba/>
- Sin Embargo, 2018. Authorities have located traces of Totoaba specimens inside the vehicle. Available at: <http://www.sinembargo.mx/25-02-2018/3390387>
- Debate, 2018. Decomisan 22 buches de Totoaba en Mexicali; un detenido. Available at: <https://www.debate.com.mx/policiacas/totoaba-mexicali-decomiso-detenido-colonias-nuevas-profepa-sedena-pgr-20180310-0144.html>
- El Imparcial, 2018. Passenger found with 20.9 kilos of totoaba. Available at: <http://www.elimparcial.com/EdicionEnLinea/Notas/Sonora/19032018/1319303-Cae-pasajero-con-209-kilos-de-totoaba.html>
- Lopez-Doriga, 2018. 32 dead totoabas found in Baja California. Available at: <https://lopezdoriga.com/nacional/encuentran-red-con-32-totoabas-muertas-en-baja-california/>
- Noticaribe, 2018. Aseguran casi 3 kilos de aparente buche de totoaba en el aeropuerto de Mérida. Available at: <https://noticaribe.com.mx/2019/04/19/aseguran-casi-3-kilos-de-aparente-buche-de-totoaba-en-el-aeropuerto-de-merida/>
- Noticias diario binacional sin fronteras, 23 April 2018. <https://www.diarionoticias.info/aseguran-federales-40-kilos-de-totoaba/>
- Excelsior, 2018. Chinese citizen found with 408 totoaba maws at the International Airport of Mexico City. Available at: <http://www.excelsior.com.mx/nacional/cae-chino-con-408-buches-de-totoaba-en-el-aicm/1234126>
- Excelsior, 2018. Cae chino con 417 buches de totoaba en el AICM; el segundo en una semana. Available at: <http://www.excelsior.com.mx/nacional/cae-chino-con-417-buches-de-totoaba-en-el-aicm-el-segundo-en-una-semana/1234864>
- Federal Attorney for Environmental Protection, 2018. <https://www.gob.mx/profepa/prensa/en-coadyuvancia-con-pgr-realiza-profepa-peritaje-de-identificacion-de-209-buches-de-totoaba-en-mexicali-b-c?idiom=es.%20See%20also%20>
- La Jornada, 2018. Chinese man who carried sea horses and totoaba are arrested. Available at: <http://www.jornada.unam.mx/ultimas/2018/05/31/detienen-a-hombre-chino-que-portaba-caballos-de-mar-y-totoaba-5838.html>
- Excelsior, 2018. Incautan 21 buches de totoaba en el AICM, iban a China. Available at: <https://www.excelsior.com.mx/comunidad/incautan-21-buches-de-totoaba-en-el-aicm-iban-a-china/1255704>
- Excelsior, 2018. Decomisan 16 buches de totoaba en AICM; iban a NY. Available at: <https://www.excelsior.com.mx/comunidad/decomisan-16-buches-de-totoaba-en-aicm-iban-a-ny/1257382>
- Excelsior, 2018. Profepa secures 271 abandoned totoaba maws in the AICM. Available at: <https://www.excelsior.com.mx/comunidad/profepa-asegura-271-buches-de-totoaba-abandonados-en-el-aicm/1268903>
- La Voz, 2018. 33 totoaba maws secured at military check point. Available at: <https://www.lavozdelafrontera.com.mx/policiaca/aseguran-33-buches-de-totoaba-en-reten-militar-2618906.html>
- Excelsior, 2019. 28 kilos of totoaba detected in Chihuahua airport. Available at: <https://www.excelsior.com.mx/nacional/detectan-28-kilos-de-totoaba-en-aeropuerto-de-chihuahua/1308318>
- Notimérica, 2019. 49 Totoaba buches confiscated in the Mexican state of Baja California. Available at: <https://www.notimerica.com/sociedad/noticia-confiscan-49-buches-totoaba-estado-mexicano-baja-california-20190511200311.html>
- Motoinforma 2019. 19kg totoaba seized in Mérida airport. Available at: <http://motoinforma.com.mx/?p=21256>
- Comunicado FGR 263/19 <https://www.gob.mx/fgr/prensa/comunicado-fgr-263-19-fgr-obtiene-reparacion-del-dano-tras-aseguramiento-de-47-piezas-de-carne-de-totoaba>
- Comunicado FGR 307/19 <https://www.gob.mx/fgr/prensa/comunicado-fgr-307-19-asegura-fgr-en-baja-california-43-piezas-de-totoaba-206091>
- ABCNoticias.mx 2019. Protected marine animals seized in airport. Available at: <https://www.abcnnoticias.mx/aseguran-en-aeropuerto-animales-marinos-protegidos/140005>

44. Quartz 2019. "Tourists" caught in US with endangered fish bladders worth \$3.7 million. Available at: <https://qz.com/1646387/smugglers-caught-with-3-7-million-of-endangered-totoaba-bladders/>
45. US District Court for the Southern District of California. Application for search warrant. Filed 4 June 2019. Case no 19MJ2329
46. China Customs, 2018. "Joint Efforts of Jiangmen and Nanning Customs in crushing a spectacular Gulf of California totoaba fish maws smuggling case"
47. Criminal Verdict of Shanghai Third Intermediate People's Court on smuggling Mexican totoaba fish maws (Dec 2018) http://www.hshfy.sh.cn/shfy/qweb2017/flws_view.jsp?COLLCC=4234343237&pa=adGFoPaOoMjAxOKOpu6YwM9DMs/U5ObrFJndzeGg9MgPdcssPdcssz and China Court News Jan 2019, <https://www.chinacourt.org/article/detail/2019/01/id/3650936.shtml>
48. Chinese People's Procuratorate Information Portal: See <http://www.ajxxgk.jcy.cn/html/20190306/1/9181333.html>
49. Legal Daily of China 2019. See http://www.legaldaily.com.cn/index/content/2019-03/21/content_7807163.htm
50. CIRVA-11, *ibid*.
51. UNESCO 2019. The Islands and Protected Areas of the Gulf of California (Mexico) inscribed on the List of World Heritage in Danger. Available at: <https://en.unesco.org/news/islands-and-protected-areas-gulf-california-mexico-inscribed-list-world-heritage-danger>
52. IUCN 2019. The looming extinction of the vaquita puts Gulf of California on World Heritage danger list. Available at: <https://www.iucn.org/news/iucn-43whc/201907/looming-extinction-vaquita-puts-gulf-california-world-heritage-danger-list>
53. CITES Notification No. 2018/054, 2018. Registration of operations that breed Appendix-I animal species in captivity for commercial purposes 30 May 2018. Available at: <https://www.cites.org/sites/default/files/notif/E-Notif-2018-054.pdf>
54. According to CITES Article VII (4), Appendix-I specimens "bred in captivity for commercial purposes . . . shall be deemed to be specimens of species included in Appendix II." Consequently, if the facility is registered, Mexico may commercially export totoaba parts upon issuance of a valid Appendix II export permit or certificate.
55. Business Wire 2015. Earth Ocean Farms recibe concesión comercial para su granja de peces marinos en México. Available at: <https://www.businesswire.com/news/home/20150825005403/es/>
56. CITES SC 71 Inf.2. Additional Information Regarding the Registration of the Operation "Earth Ocean Farms. S. De R.L. de C.V." Breeding Totoaba macdonaldi.
57. Alanis Pasini, Y., Rivas Soto, M., Anzures Aguilar, M., Rojas Ortega, L. and Olivera Bonilla, A. 2019. Vaquita Marina. En que te hemos fallado? 34 pp.; See also https://www.tripadvisor.com/Restaurant_Review-g152516-d9565209-Reviews-La_Marea-San_Jose_del_Cabo_Los_Cabos_Baja_California.html; https://www.tripadvisor.co/ShowUserReviews-g152516-d10226779-r684117222-Vela-San_Jose_del_Cabo_Los_Cabos_Baja_California.html; https://www.tripadvisor.com.pe/ShowUserReviews-g150771-d1925087-r647393325-Las_Tres_Virgenes-La_Paz_Baja_California.html; <https://m.facebook.com/Costabravasteakseafood/photos/pcb.343940682990546/343939046324043/?type=3&theater>
58. Trazabilidad genética por pruebas de paternidad (per Cerda-Balcazar 2018 and UABC 2019). Slide presented to the CITES High Level Mission to Mexico, 28 May 2019.
59. CITES SC 71 Inf.2, *ibid*
60. EIA 2016. Dual Extinction, *ibid*.
61. Castellanos, M. and Steinkruger, A. 2018. Driving sustainability in the Gulf of California: fishery management and offshore cultivation for Totoaba Macdonaldi. Project proposal to the Bren School of Environmental Science & Management at University of California, Santa Barbara. 6 pp. The authors cited the following as a source for this concern: Bulte, E. H., and Damania, R. (2005). An economic assessment of wildlife farming and conservation. *Conservation Biology*, 19(4), 1222-1233.
62. See, e.g., <https://www.abacusnews.com/digital-life/chinas-favorite-mobile-payment-technology-has-security-problem/article/3000602>
63. CITES SC71 Doc. 17. Registration of Operations that Breed Appendix-1 Animal Species in Captivity for Commercial Purposes. Registration of the Operation "Earth Ocean Farms. S. De R.L. De C.V." Breeding Totoaba Macdonaldi.
64. CITES SC71 Doc. 17, *ibid*.
65. CITES Decision 17.147 Directed to range, transit or consumer States of totoaba. Parties should engage in awareness raising activities about the endangerment of totoaba and its grave implications for vaquita (*Phocoena sinus*, an endangered species threatened with extinction and listed under Appendix I), eliminate supply of and demand for totoaba, and increase law enforcement measures to prevent and address illegal fishing and trade.
66. CIRVA-11, *ibid*, p5; IUCN (July 2019), *ibid*; and UNESCO (2019), *ibid*.
67. CITES Decisions 17.146-8
68. CITES Decision 17.149
69. CITES Decision 17.150
70. CITES Decision 17.151
71. CITES Notification No. 2018/054, *ibid*.
72. US Response to Notification to the Parties No 2018/090 – annexed to CoP 18 Doc. 89
73. CITES Press Release 2019. CITES Secretary-General in Mexico to address the Vaquita and Totoaba crisis fueled by illegal international trade. Available at: https://www.cites.org/eng/CITES_Secretary-General_in_Mexico_to_address_Vaquita_and_Totoaba_crisis_fueled_by_illegal_international_trade_31052019
74. See Annex 1 to CITES CoP18 Doc. 89 Totoaba (Totoaba macdonaldi) (available at: <https://www.cites.org/sites/default/files/eng/cop/18/doc/E-CoP18-089.pdf>).



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