

# C4ADS

innovation for peace



## Hooked

How Demand for a Protected Fish Lined the Pockets of Mexican Cartels  
& Sunk the Future of an Endangered Porpoise Species

*August 2017*



## ABOUT C4ADS

C4ADS ([www.c4ads.org](http://www.c4ads.org)) is a 501(c)(3) nonprofit organization dedicated to data-driven analysis and evidence-based reporting of conflict and security issues worldwide. We seek to alleviate the analytical burden carried by public sector institutions by applying manpower, depth, and rigor to questions of conflict and security.

Our approach leverages nontraditional investigative techniques and emerging analytical technologies. We recognize the value of working on the ground in the field, capturing local knowledge, and collecting original data to inform our analysis. At the same time, we employ cutting edge technology to manage and analyze that data. The result is an innovative analytical approach to conflict prevention and mitigation.

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## COVER PHOTO

The cover photo for *Hooked* was taken by Sea Shepherd's Operation Milagro III in the Gulf of California in March 2017. An illegal totoaba gillnet containing 66 dead totoaba floats in the foreground, and Sea Shepherd's ship, the M/V Farley Mowat, approaches in the background.

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The logo for Panjiva, featuring the word "panjiva" in a lowercase, blue, sans-serif font.

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## Abbreviations

- AFCD: Hong Kong Agriculture, Fisheries and Conservation Department
- AIC: Mexican Criminal Investigation Agency
- CBP: U.S. Customs and Border Protection
- CIRVA: Committee for the International Recovery of the Vaquita
- CITES: Convention on the International Trade in Endangered Species of Wild Fauna and Flora
- CONANP: Mexican National Commission for Protected Natural Areas
- CONAPESCA: Mexican National Aquaculture and Fishing Commission
- DOT: U.S. Department of Transportation
- EAL: Elephant Action League
- EIA: Environmental Investigation Agency
- FWS: U.S. Fish and Wildlife Service
- HSI: U.S. Homeland Security Investigations
- NGO: Nongovernmental organization
- PESP: Mexican State Police
- PGR: Mexican Attorney General
- PROFEPA: Mexican Federal Attorney for Environmental Protection
- SEDENA: Secretariat of National Defense
- SEMAR: Mexican Navy
- SEMARNAT: Mexican Secretariat of Environment and Natural Resources
- SSCS: Sea Shepherd Conservation Society
- UAV: Unmanned aerial vehicle
- UNODC: United Nations Office on Drugs and Crime
- WWF: World Wildlife Fund

## Executive Summary

Once essential to the economy of the Gulf of California in Mexico, the totoaba fish has suffered a precipitous decline over the past century due to overfishing. The problem reached its zenith in the 1970s, resulting in a ban on totoaba fishing, and the species' receipt of the highest levels of protection under Mexican, U.S., and international law. After a few decades of comparative calm, the totoaba is under attack once again. Illegal fishermen hoping to amass a few kilograms of the totoaba's famed bladders – potentially earning them over a year's salary in a single night – are destabilizing the remaining totoaba population.

But the totoaba's high value signals trouble for more than just the continued viability of the species; the nets used to catch them, called gillnets, are devastating marine life in the Gulf. One species in particular, the vaquita, the world's smallest porpoise species, has suffered disproportionately from the resurgence of totoaba poaching. A reclusive and shy animal, the vaquita have suffered substantial losses at the hands of totoaba poachers, declining from 567 individuals in 1997 to an estimated 26 by May 2017. With illegal totoaba fishing showing no signs of decreasing – some evidence suggests that totoaba fishermen have only become more brazen – and despite a gillnet ban, gillnet removal operations, and other programs, the vaquita face a dark future without an immediate and substantial change.

Compounding the problem (and further imperiling the vaquita), organized criminal networks entered the totoaba trafficking scene in about 2013, attracted by the prospect of a little-known fish bladder worth as much as its weight in cocaine.<sup>1</sup> Their entrance signaled the arrival of a period of volatility and insecurity in the region, as criminal bosses jockeyed to control the totoaba trade in seaside towns and cities, and criminal fishermen began to use their law-abiding counterparts as a smokescreen for illegal activity.

Mexican authorities have struggled to address the problem, with little help from foreign governments who recognize totoaba trafficking as a conservation problem, but not a major criminal or security issue. In the meantime, organized criminal groups have solidified their hold on the totoaba trade in the Gulf, corrupting those officials who stand in their way (even those who proved resistant to the corrupting influence of narcotics traffickers), and frightening the local populations into silence.

Without a concerted, international effort to loosen their grip and reverse the devastation wrought on the Gulf of California, the totoaba and the vaquita could both be lost. Organized criminal actors will then turn to some other high-value crime. Newly minted totoaba traffickers may join them, unwilling – and perhaps unable – to return to the unassuming, often difficult life of a legal fisherman.

*Hooked* examines the totoaba trafficking supply chain, from the Gulf of California, through the United States, and into Chinese destination markets. The report is broken down into the following sections:

- **Fishing** briefly examines the history of totoaba fishing and panga activity in the Gulf, and traces the origins of the current crisis. Recent gillnet retrieval data is used to shed light on fluctuations in illegal fishing activity, and the *modus operandi* of totoaba fishermen are described in detail. Finally, the recent involvement of organized criminal groups in totoaba fishing – and the resulting impact on regional stability and security – is revealed.
- **Trafficking** follows the totoaba supply chain from the Gulf of California to Chinese destination markets, beginning with the methods used to move totoaba bladders from the shores of the Gulf to consolidation and processing points. Trafficking methods and routes between Mexico, the United States, and Asia are exposed, and various possible explanations are given for the recent decline in identifiable totoaba trafficking activity, despite little to no observed changes in illegal totoaba fishing.

- **Destination** first describes known and suspected trafficking methods between the Americas and Asia, as well as between Hong Kong and mainland China. The significant drop in totoaba prices and overt market activity since 2012 are assessed, and the still thriving online trade for totoaba bladders is analyzed.

Finally, C4ADS identified a number of small-scale networks moving totoaba from the Gulf of California to Asia, occasionally passing through the United States on the way. C4ADS found that even in cases where networks could not be identified, common *modus operandi* associated with the illicit totoaba trade were highly suggestive of organized criminal activity, rather than opportunistic fishing by a small sub-set of local fishermen. A number of cases given slight coverage in the Mexican press, and almost no coverage beyond the Gulf of California area, cast light on the links between the totoaba trade and other crime types, and highlight the need to address totoaba trafficking as the organized crime it has become.

The totoaba trafficking crisis has escalated to the point that Mexican authorities cannot fix the problem alone; additional support – from other governments, NGOs, and the international community – is desperately needed. Continuing to think of totoaba trafficking as only a conservation issue ignores the clear security implications it has and could have for Mexico and the United States, including the long-term destabilization of the Baja California region. Surely addressing the problem now, and perhaps saving the vaquita, is preferable to watching the biodiversity of the Gulf continue to decline, and in so doing, driving the further deterioration of the Gulf economy and allowing for the insidious expansion of Mexican organized crime's already substantial reach and power.

## Map of Baja California and the Surrounding Region





## Introduction

Just before 1 a.m. on April 10, 2013, Song Shen Zhen arrived at the United States – Mexico border crossing in Calexico, California and told U.S. customs agents he had nothing to declare. Upon inspection of his car, however, a Customs and Border Protection (CBP) agent discovered that the rear floor mats in his car were not lying flat on the ground – plastic bags full of apparent contraband had been stashed underneath. Despite this discovery, Song reiterated his claim that he had nothing to declare.<sup>ii</sup> Instead of challenging his assertion, officials kept only one bag for testing and allowed Song to leave with the rest.

Unbeknownst to Song, U.S. officials then followed him to his home in Calexico. After receiving a warrant to search the premises, they discovered the home had little furniture and was set up as a factory, designed to store, process, and ship high-value contraband smuggled over the border from Mexico. But instead of narcotics, a total of 241 swim bladders had been carefully laid out to dry, with fans positioned to speed up the process.

Although perhaps innocuous to the casual observer, Song's 241 swim bladders<sup>i</sup> had an estimated value of \$3.6 million in Asian markets at the time of their seizure.<sup>iii</sup> The key to the high value of Song's particular bladders lay in their origins: the bladders had been taken from the highly protected totoaba, a large croaker fish species endemic to the Gulf of California.

### *Totoaba Background and Demand*

Totoaba bladders – also known as *buches*, “aquatic cocaine,” or “money maw” – are in high demand in China, where consumers believe the bladders have medicinal properties.<sup>iv</sup> Small bladders are most often used to make fish maw soup, while larger bladders are used as expensive gifts among the elite or, increasingly, as financial investments.



*Image 1. A totoaba macdonaldi. Source: International Game Fish Association*

Mexican fishermen have fished for totoaba since the early 20<sup>th</sup> century, when both totoaba meat and swim bladders were consumed in Mexico, the United States, and China. By 1942, the annual totoaba catch in the Gulf of California totaled over 2,000 tons. Totoaba could not withstand such high levels of fishing, however,

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1      A swim bladder is an organ used by certain fish species to regulate buoyancy.

and by 1975, the annual catch had fallen by 97% to 59 tons.



*Image 2. A commercial catch of totoaba at Bahia San Luis Gonzaga in Baja California in 1954. At the time, some totoaba weighed over 300 pounds. Source: Tony Reyes Baca*

Mexican authorities responded to the totoaba's drastic decline by banning commercial fishing for totoaba from "the mouth of the Colorado River to Fuerte River, Sinaloa, in the east coast [of the Gulf of California] and from the Colorado River to Concepción Bay, Baja California Sur, in the west coast."<sup>v</sup> Further legal protections followed: totoaba were listed on CITES Appendix I<sup>2</sup> in 1975, the U.S. Endangered Species Act in 1979, and on Mexico's Law for Endangered Species Protection in 1994. Two years later, in 1996, the species was designated as critically endangered by the International Union for Conservation of Nature (IUCN).<sup>vi</sup> Despite the totoaba's

new protections, relatively weak enforcement efforts meant that totoaba fishing never entirely ceased within the Gulf,<sup>vii</sup> although it did drop enough to temporarily save the totoaba from an abrupt extinction.

More recent demand for totoaba bladders can be partially attributed to the decimation of the totoaba's only perceived equal, the Chinese bahaba, through rampant over-fishing; the recent growth of the Chinese middle class; and the 2008 global financial crisis, which allegedly drove consumers in China to purchase totoaba bladders and other high-value assets as perceived safe investments.<sup>viii</sup>

### *Recent Upsurge in Totoaba Fishing*

The recent spike in totoaba bladder demand has spurred a dramatic increase in totoaba fishing in the Gulf of California, as fishermen and other individuals realized the potential profits from catching even one totoaba. One fisherman told Greenpeace in 2015 that totoaba fishermen can earn as much as \$8,000 per kilogram of totoaba bladders, compared to 300 pesos, or about \$19,<sup>3</sup> per kilogram of shrimp.<sup>ix</sup>

Communities in the Gulf of California began to notice a shift away from commonly fished Gulf species towards the protected totoaba in about 2011. The high profits associated with the illegal totoaba trade even at the fishing level meant it grew quickly. In 2013 alone, the totoaba trade was estimated to be worth at least \$2.25 million, although a series of totoaba seizures in 2013 suggest the trade could have been worth as much as \$7 million that year.<sup>x xi</sup>

By 2014, locals were reporting that organized criminal groups had entered the totoaba market, attracted by

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2 The Convention on International Trade in Endangered Species (CITES) is an international agreement intended to monitor the international wildlife trade. Partner countries can vote at each CITES meeting to place endangered or protected species on one of three Appendices. Species on Appendix I can only be traded in exceptional circumstances (and never for commercial purposes), and species on Appendix II can only be traded under certain conditions and with the necessary paperwork. Appendix III species require certain export permits and certificates of origin.

3 Price according to March 2015 exchange rate.

the prospects of a commodity worth more by weight than cocaine,<sup>4</sup> and with few of its associated risks. For example, although convicted narcotics traffickers in Mexico face 10 to 25 years in prison and 100 to 500 days' fine,<sup>5</sup> those found smuggling or illegally fishing for totoaba until recently faced no more – and generally far less – than a two-year prison sentence.<sup>xii xiii</sup>

#### TOTOABA SEIZURES IN CONTEXT: THE VALUE OF THE ZHEN SEIZURE IN DRUGS



Totoaba bladders laid out to dry in Song Shen Zhen's Calexico home. Source: Associated Press

On April 10, 2013, Song Shen Zhen was found with a total of 241 totoaba bladders, estimated at 16.5 kg based on the weight of the 27 bladders seized in Calexico (see Introduction for more information). The bladders were estimated to be worth roughly \$361,500 in Mexico.

## \$361,500 BUYS:



**16.5 KG**  
TOTOABA BLADDERS



**10.3 KG**  
HEROIN



**24.9 KG**  
METHAMPHETAMINE



**4518.8 KG**  
MARIJUANA



**29.0 KG**  
COCAINE

Note: Drug values per kg based on the most recent UNODC estimates

Limited enforcement capacity and effort mean that an illegal fisherman or trafficker caught with totoaba can reasonably expect to lose only the nets and totoaba they are found with. Those involved in the totoaba trade are aware that actual investigations and prosecutions of totoaba traffickers are limited, if not nonexistent; as of June 2016, the Mexican Attorney General's Office (PGR) and the Mexican Criminal Investigation Agency (AIC) were only aware of two totoaba trafficking operations in the Federal Police's archives.<sup>xiv</sup> The lack of publicly available information on the outcomes of these cases suggest they may have ended without significant, or any, enforcement action.

The recent resurgence of totoaba fishing has had another negative consequence. In addition to the clear threat overfishing poses to the totoaba, the fishing nets used to capture them have an unfortunate tendency to ensnare the totoaba's most endangered and elusive neighbor – the vaquita.

#### Implications for the Critically Endangered Vaquita

4 The price of totoaba has since fallen slightly below that of cocaine.

5 The Mexican fine system is based on the Mexican minimum wage. Since the Mexican minimum wage in 2017 is 80.04 pesos per day (\$4.49), a narcotics trafficker convicted this year in Mexico could receive a fine of anywhere from 8,004 pesos (\$448.81) to 40,020 pesos (\$2,244.06).

Totoaba share the Upper Gulf of California with the vaquita, the world's smallest porpoise species. The nets fishermen use to catch totoaba, called gillnets, are also effective at trapping other marine creatures. The large, anchored nets are usually set at night and hang from just below the surface of the water – making them particularly difficult to spot – down to the sea floor, and can be left in place for days, weeks, or even months

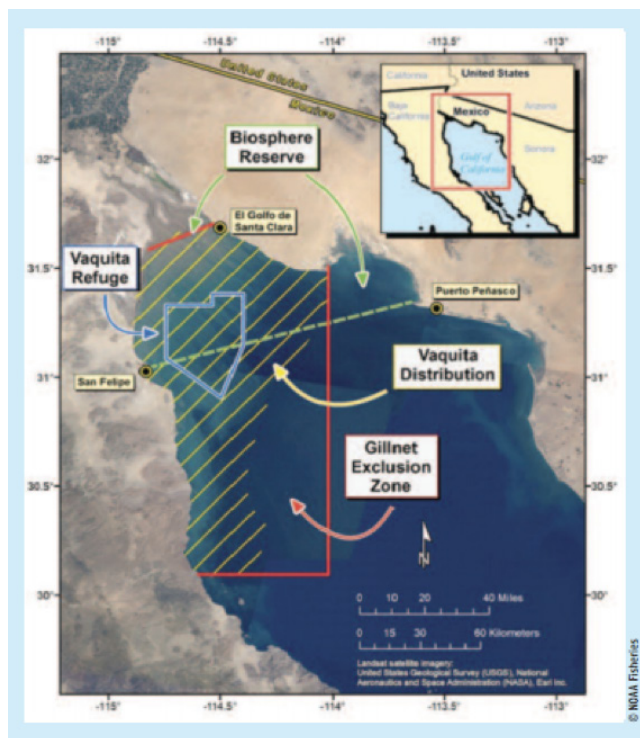


Image 3. A depiction by NOAA of the vaquita refuge, gillnet exclusion zone, and known vaquita distribution. Source: NOAA

before they are retrieved or discovered. Marine life seems to find gillnets about as difficult to avoid as humans consider them difficult to find; fish, sharks, rays, and even dolphins have been found tangled in the nets.<sup>xv</sup>

One type of gillnet, generally known as a totoaba or large mesh gillnet, is used to target totoaba specifically. The mesh on these nets are set 20 to 30.5 centimeters apart, just large enough to ensnare the head of a totoaba, and just small enough to prevent their escape. These types of nets in particular pose a significant threat to the vaquita, since the porpoises are roughly the same size as the totoaba.

Little is known about vaquita behavior, but both their limited population and vulnerability to gillnets has been well-documented. The International Committee for the Recovery of the Vaquita (CIRVA), created to determine, monitor, and reverse the causes of the vaquita's decline, found that there were only 567 individuals left in the Gulf in 1997.<sup>xvi</sup> Five years prior to CIRVA's

finding, one study identified 128 dead vaquitas in gillnets between 1985 and 1992.<sup>xvii</sup> Using CIRVA's 1997 estimate as a baseline, these lost vaquitas could have accounted for as much as 23% of the entire species at that time.

As the plight of the vaquita was first coming to light in the early 1990s, the Mexican government began taking steps to protect what remained of the species. In 1993, the Biosphere Reserve of the Upper Gulf of California and Colorado River Delta was created.<sup>xviii</sup> Four years later, the Mexican government created CIRVA to bring together scientists from Europe, the United States, and Mexico to create a recovery program for the vaquita.<sup>xix</sup> By CIRVA's second meeting in 1999, the committee had concluded that gillnets were by far the biggest threat to the continued viability of the species, and recommended that the Biosphere Reserve be extended to include the entirety of the vaquita's known habitat.<sup>xx</sup> In late 2005, a gillnet-free Vaquita Refuge Zone was declared in the Upper Gulf to protect the remaining population.<sup>xxi</sup>

Despite these apparent steps forward, little was done to enforce the rules of the Reserve or to ensure the improved health of the species. Between the mid-1990s and 2004, the number of pangas<sup>6</sup> – used as a rough

6 Small motor boats used by totoaba fishermen. The US GAO defines pangas as “open-hulled, flat-bottomed fishing vessels designed to arrive and depart directly from a beach. These vessels are between 20 and 60 feet long, and are fitted with one or more outboard motors.”

See: United States Government Accountability Office. “BORDER SECURITY: Additional Actions Could Strengthen



estimate of the incidence of gillnet fishing in the Gulf – at least doubled.<sup>xxii</sup> Between 2005 and 2007, the number of pangas on the water doubled again.<sup>xxiii</sup>



Image 4. This photo, taken in February 1992 in Santa Clara, depicts a dead vaquita lying on a gillnet, and a totoaba being held above it. Source: AFP/WWF/Omar Vidal

The increase in the number of pangas in the area corresponded with an acceleration in the vaquita's decline. By 2008, the vaquita population was estimated at 245 individuals,<sup>xxiv</sup> and by 2015, the population had dropped another 76% to 59 individuals.

More recently, in April 2015, Mexican President Enrique Peña Nieto declared a two-year ban on gillnets in the Gulf, complete with a compensation scheme intended to support fishermen and fishing cooperatives sure to lose significant income as a result of the ban. But the ban has failed to restrict the use of gillnets, and the compensation plan designed to provide replacement income to gillnet fishermen has been fraught with problems, reportedly pushing some fishermen to engage in illegal totoaba fishing to support their families. CIRVA's latest estimates from the fall of 2016 indicate that less than 30 vaquita remain, a 49% drop from the previous estimate.<sup>xxv</sup>

Year	Est. Population	Est. % Annual Decrease
1997	567	n/a
2008	245	7.6%
2009	209	18.5%
2013	189	18.5%
2014	97	49%
2015	59	39%
2016	30	51%

Figure 1. Recent years for which vaquita population estimates exist. CIRVA estimated a decline of 7.6% per year between 1997 and 2008, and a decline of 18.5% per year from 2008 to 2014. Estimated annual decreases are italicized. Population estimate numbers all from CIRVA reports.

Since the increase in totoaba fishing began, vaquita mortality has spiked during the totoaba and corvina

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DHS Efforts to Address Subterranean, Aerial, and Maritime Smuggling." May 2017. [www.gao.gov/assets/690/684408.pdf](http://www.gao.gov/assets/690/684408.pdf).

fishing seasons, which overlap in March and April. Vaquita mortality is generally measured by the number of dead vaquitas found floating in the Gulf and on shore, as fishermen that find dead vaquita entangled in their nets remove them and throw them back out to sea. In the spring, vaquitas are generally found near areas associated with illegal totoaba fishing, mostly around San Felipe, Puertecitos, and the Golfo de Santa Clara.<sup>xxvi</sup> During last year's season, three dead vaquita were found in March, all with injuries suggesting they had drowned after becoming tangled in gillnets.<sup>xxvii</sup> PROFEPA reported that an additional four vaquita were found in March and April of this year,<sup>xxviii</sup> reducing the population to an estimated 26 remaining individuals.

Without vastly improved surveillance and enforcement efforts in the Gulf of California, the vaquita will be lost within the next few years. The situation is now so critical that, in accordance with recent recommendations from CIRVA, the Mexican and U.S. governments are coordinating the capture of the remaining vaquita with the help of U.S. Navy dolphins.<sup>xxix</sup> Whether the vaquita can survive in captivity remains to be seen.

### *Organized Criminal Involvement*

Further complicating matters is the increasingly clear involvement of organized crime in the totoaba supply chain, with some criminal actors even threatening the lives and families of people pulling up gillnets in the Gulf.<sup>xxx</sup> Locals from around the Gulf claim that organized crime entered the totoaba business in 2013 or 2014. According to one Army official, "They entered with everything into the business: organizational structures, a level of corruption and of organization, established networks, routes, contacts, outlets, and sponsors in institutions. That which they applied to the drug trade, they implemented in the case of totoaba."<sup>xxxi</sup> The high price and comparative safety of totoaba trafficking have proven irresistible to organized criminals, who can rely on their existing networks to move totoaba with relative ease. William Woody, Chief of Law Enforcement for the U.S. Fish and Wildlife Service, said in June 2016 that "[FWS has] documented...Mexican drug organizations in the totoaba trade."<sup>xxxii</sup>

While Mexican government agencies have generally refrained from directly connecting narcotics to totoaba trafficking networks, a number of Mexican government agencies and news outlets have pointed to the clear overlap between them.<sup>xxxiii</sup> For example:

- A Mexican Senate document released in early 2017 attributed totoaba bladder's nickname, aquatic cocaine, to the shared use of certain trafficking routes by both narcotics and totoaba networks.<sup>xxxiv</sup>
- Local media has reported that criminal organizations have been known to send fishermen into the protected zone in the Gulf of California to ensure that any enforcement boats stationed nearby will be distracted by the intrusion, allowing speedboats carrying narcotics and other illicit goods to slide by undetected.<sup>xxxv</sup>
- Local journalists have also detailed the alleged involvement of known narcotics traffickers in the totoaba trade in Santa Clara.<sup>7 xxxvi</sup>

On shore, fishermen have described a clear increase in violence, as competing groups of community outsiders fight over the spoils of totoaba trafficking.<sup>xxxvii</sup> In a few documented instances, men have even been killed for their involvement in the totoaba trade.<sup>xxxviii</sup>

Finally, totoaba originate in a fairly remote area,<sup>8</sup> where criminal distribution networks are already well-

7 See **The Narcobucheros of Santa Clara** below for more information.

8 Although there are some small cities and large towns in Baja California and western Sonora, these settlements

established. At the very least, existing criminal networks and totoaba traffickers must use the same routes, and must pass through the same few towns and cities before exiting the region. Some overlap is therefore inevitable. But despite this and other evidence, the issue of totoaba trafficking is still largely considered a conservation issue, particularly outside of Mexico.

At this point, failing to recognize the nexus between totoaba trafficking and organized crime will only stall the development and implementation of enforcement strategies needed to tackle the sophisticated networks that have begun to direct the totoaba trade. Allowing totoaba trafficking to continue unimpeded will further destabilize the Gulf of California region, creating more and more opportunities for the expansion of other forms of organized crime in the area. Furthermore, delaying the implementation of effective counter-efforts will waste a valuable resource – time, the only thing remaining between the vaquita and extinction.

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are connected by few major roads, and are generally surrounded by desert, mountains, or both.

## Methodology

The information contained within *Hooked* is based on extensive multi-lingual analysis by C4ADS' analysts over the course of several months in late 2016 and early 2017. All of the information used in this report was compiled from publicly available sources in Mexico, the United States, and China, including, but not limited to, the following:

- Published releases and reports on totoaba demand markets, including Greenpeace's "How the illegal totoaba trade in Hong Kong is pushing Mexico's vaquita to the brink of extinction" (May 2015), the Environmental Investigation Agency's *Collateral Damage: How illegal trade in totoaba swim bladders is driving the vaquita to extinction* (September 2016), and the Elephant Action League's Operation Fake Gold (May 2017);
- Mexican, U.S., and Chinese media articles;
- Raw data and insights from the Gulf of California via Sea Shepherd's Operation Milagro III campaign;
- A totoaba seizure database including all publicly available totoaba seizures prior to June 2017, compiled by C4ADS's analysts;<sup>9</sup>
- Freedom of Information Act information provided to C4ADS by the U.S. FWS and CBP;
- Interviews with enforcement officials, scientists, and other experts;
- Information provided to C4ADS through our law enforcement and NGO partner network; and
- Our own open source<sup>10</sup> investigative techniques.

Finally, C4ADS, in conjunction with local partners, conducted a review of overt totoaba sales in Hong Kong over the period of one month in the early spring of 2017. C4ADS simultaneously reviewed online e-commerce websites popular amongst Asian consumers to identify likely totoaba advertisements and other evidence of online totoaba trafficking activity.

Note that the analysis within the **Trafficking** section of this report relies heavily on seizure information, which is prone to inherent biases and vulnerabilities. For example, seizures are likely to reveal the same trafficking methods repeatedly, while more creative smuggling attempts are likely to evade detection by enforcement agencies. Similarly, seizures can only suggest the true extent of trafficking activity, and cannot determine whether apparent trafficking hotspots are reflective of actual trafficking levels, or simply law enforcement awareness and efficacy.<sup>11</sup>

Unless otherwise stated, all prices are in U.S. dollars.

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9 The majority of our analysis of totoaba trafficking routes and methods was derived from our totoaba seizure database, which contains 48 totoaba bladder seizures between 2009 and May 2017. Totoaba's narrow supply chain, paired with ineffective enforcement and the difficulties associated with identifying dried totoaba bladders, means that totoaba seizures are rare compared to seizures of other illicit commodities.

10 Open source information refers to data collected from publicly available sources, such as public business registries, trade databases, news articles, press releases, social media, etc.

11 For a more in-depth discussion of seizure data biases, see **Appendix I: Seizure Data Biases & Vulnerabilities** from *Flying Under the Radar* (May 2017) by C4ADS and the Reducing Opportunities for Unlawful Transport of Endangered Species (ROUTES) Partnership.



## Fishing

### Estimated Totoaba Bladder Value in Mexico: \$1,500<sup>xxxix</sup> per bladder (\$8,500<sup>xl</sup> per kilogram)

The main communities around the Gulf of California – San Felipe in Baja California, and Puerto Peñasco and the Golfo de Santa Clara in Sonora – rely on the Gulf fisheries for the majority of their income. At the time of its first meeting in the 1990s, CIRVA determined that about 58% of the entire employed population in the Upper Gulf of California Biosphere Reserve made a living from fishing,<sup>xli</sup> with Santa Clara earning as much as 99% of its income from fishing activities.<sup>xlii</sup> CIRVA estimated that there were about 700 pangas total in operation between all three communities, with a majority concentrated in San Felipe on the eastern coast.

When CIRVA first met, fisheries in the Gulf were changing. One scientist at the meeting noted that catches of shrimp, the most valuable Gulf species after totoaba, had fallen from 7,000 metric tons to 2,000 metric tons between 1989 and 1992, a 71% decrease.<sup>xliii</sup> At the same time, fishermen were switching from working on trawlers, a type of boat designed to drag fishing nets, to the much smaller pangas.<sup>xliv 12</sup>

In the years following, illegal fishing began to escalate. A 2006 fisheries buyout program designed to compensate fishermen for voluntarily turning in their fishing permits had little effect on its rise, in part because fishermen participating in the program were not required to turn in their fishing gear, but were required to permanently leave the fishing sector.<sup>xlv</sup> In 2008, the program was restructured and improved, and began to require that fishermen surrender their gear in addition to their permits.<sup>xlvi</sup> Although the improved program initially reduced the legal fishing fleet by one third,<sup>xlvii</sup> CIRVA found that it had no discernible effect on the number of pangas in the Gulf, and therefore likely had a negligible impact on illegal fishing.<sup>xlviii</sup>

### *Current Enforcement Efforts*

In recent years, the Mexican government has invested a substantial amount of time and resources into the Gulf of California in an attempt to reduce illegal fishing and save the vaquita, but with few results. Most attempts to make a difference in the Gulf have either had limited impact or, in some cases, have contributed to the increase in criminal activity. In the spring of 2015, President Enrique Peña Nieto announced his Integrated Strategy for the Recovery of the Vaquita, intended to bring together and coordinate enhanced enforcement efforts between the various federal agencies and organizations involved in the fight to reduce illegal fishing and save the vaquita. As part of this strategy, the Secretary of SEMARNAT reported to CIRVA in May 2016 that surveillance operations had been intensified by personnel from PROFEPA, SEMAR, the Federal Police, and CONAPESCA. SEMAR added that they had obtained “a helicopter, Persuader and Maul marine patrol airplanes, six Defender rigid inflatable boats, two jet skis, four interceptors, three small boats, five pick-up trucks, and two Unimog vehicles” as well as a UAV (drone) system.<sup>xlxi</sup> They also described their extensive anti-totoaba trafficking efforts through May 12, 2016:

SEMAR has inspected 3,278 boats, 17,133 persons, 6,699 vehicles, 48 buildings, and 275 ships. It has deployed 1,244 personnel from the Navy, 289 from the Army, and 243 from other services. These personnel have seized or detained 122 small boats, 77 people, 20 vehicles, 79 totoaba specimens, 177 totoaba swim bladders, 600 gillnets or pieces of fishing gear, and four larger vessels. They have inspected more than 120 tons of fish products and more than 17 tons of equipment.<sup>1</sup>

SEMAR also claimed to have conducted 526 counter-totoaba trafficking investigations prior to May 2016.<sup>li</sup>

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<sup>12</sup> Since pangas are used to set gillnets and fish for totoaba, an increase in the number of pangas in the Gulf is often considered an indication of increasing illegal fishing activity.

Still, illegal fishing has not subsided, and no major prosecutions of Mexican totoaba traffickers are known to have occurred.

#### *Current Status of Totoaba Fishing and Illegal Gillnet Activity*

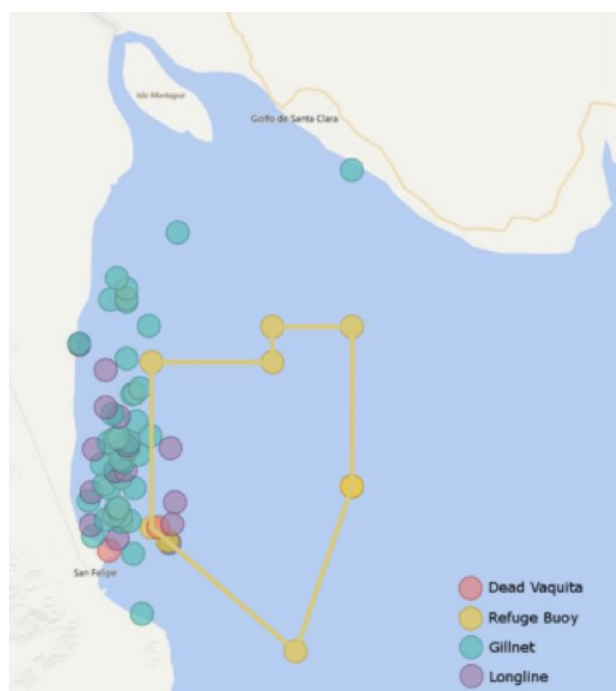
Today, as in the past, totoaba fishing centers around the three main Gulf communities: San Felipe on the eastern coast, the Golfo de Santa Clara (or simply Santa Clara) to the north, and Puerto Peñasco on the western coast. Until recently, the exact locations of illegal fishing activity in the Gulf were unknown; there simply were not enough surveillance and enforcement boats in the water to systematically find illegal gillnets and track the movements of totoaba fishermen. While “the true distribution of illegal totoaba gillnet fishing” remains elusive, recent efforts by SEMAR and the Sea Shepherd Conservation Society (SSCS) have shed some light on the situation.<sup>lii</sup>

In 2015, Sea Shepherd partnered with the Mexican government to patrol the Upper Gulf, pull up gillnets, and identify pangas fishing illegally. At the end of the totoaba season in the spring of 2016, Sea Shepherd presented their results to CIRVA. Overall, they had retrieved 42 illegal gillnets, 16 illegal longlines, and found many live and dead marine animals – including two of the three dead vaquitas discovered in March 2016.

Sea Shepherd’s gillnet retrieval data revealed a heavy concentration of nets along the western coast just north of San Felipe. There are a number of potential explanations for this heavy congregation of fishing activity; for example, fishermen could find it safer to fish close to shore, allowing for a hasty retreat should they come across enforcement patrol boats. This explanation loses some credibility, however, when fishermen from Santa Clara and Puerto Peñasco on the east coast are taken into account – if enforcement at sea were a concern, surely they would prefer to fish closer to home. But the most likely explanation comes from the totoaba themselves. Each year, the fish return to spawn in the shallow, rocky-bottomed water immediately adjacent to the western coast, where they become vulnerable to entanglement in gillnets, or even to longlines cast from shore. As a result, the presence of gillnets in this area is likely primarily a reflection of totoaba movements.

It is also possible that, as CIRVA notes, the comparatively few nets found in the vaquita refuge may be a reflection of Sea Shepherd’s and SEMAR’s limited ability to detect illegal nets in deep water. Although the net retrieval data does not show high levels of activity near the Colorado River, Sea Shepherd noted that the radar on their vessels pick up panga activity in that area.<sup>liii</sup> In this case, strong currents in the Colorado River Delta prevent the safe removal of gillnets.<sup>liv</sup>

Despite the efforts undertaken as part of President Peña Nieto’s vaquita conservation strategy, net retrieval data from the fall of 2016 to the spring of 2017 indicates that illegal fishing remains commonplace. In the



*Image 5. Sea Shepherd’s net retrieval data for the 2015 to 2016 season, as presented to CIRVA-7 in May 2016.*

fall, a multi-institutional program intended to identify, retrieve, and destroy illegal fishing gear found a total of 136 pieces of “illegal, abandoned, or derelict fishing gear” in a small section of the Upper Gulf.<sup>13</sup> Between mid-December 2016 and April 8, 2017, Sea Shepherd detected and retrieved an additional 202 illegal nets, including 171 totoaba gillnets, 21 illegal shrimp or corvina gillnets, 21 longlines, and four bottom trawl nets.

Together, these efforts identified and removed 264 illegal gillnets, compared to 42 from the previous year. Although the 2016-2017 data seems to indicate that the use of illegal nets has increased six-fold since the 2015-2016 season, the increase is for the most part due to improvement in Sea Shepherd’s and SEMAR’s net detection and retrieval capabilities.

One notable difference between the 2016-2017 data and the 2015-2016 data is the much higher number of nets found within the vaquita refuge and set close to San Felipe. This change could be a result of the shifting movements of fish in the Gulf, Sea Shepherd’s improved net detection capabilities, or a reflection of the increasing boldness of illegal totoaba fishermen. For instance, according to Sea Shepherd, fishermen that used to set out exclusively at night to evade detection are now setting out in broad daylight, perhaps aware that they are unlikely to suffer negative consequences.<sup>lv</sup>

Despite some remaining unknowns, recent net retrieval data indicates that illegal totoaba fishing in the Gulf has not decreased in response to President Peña Nieto’s vaquita recovery strategy. Instead, some sources indicate that poor implementation of the 2015 gillnet ban has led to increased illegal activity.

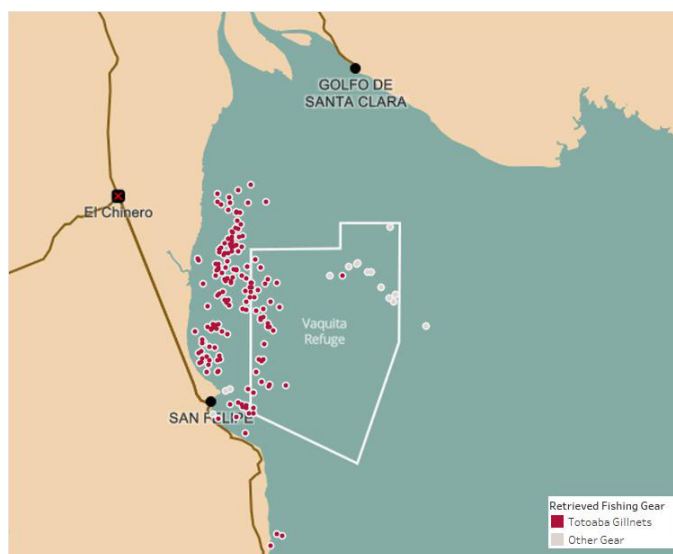


Image 6. Sea Shepherd’s net retrieval data for the 2016 – 2017 season.

### 2015 Gillnet Ban

The two-year gillnet ban in the Biosphere Reserve began in April 2015, and was intended to provide the vaquita population with at least a two-year window to recuperate. To compensate gillnet fishermen for their lost livelihoods, the Mexican government created a registry of all fishermen, fishing permit holders, and fishing cooperatives in the Gulf that would be affected by the ban, and then dispersed replacement income to those individuals. The program was funneled through permit holders and cooperative owners, who registered the fishermen they employed and divided up the bulk sum they received from the government to each of their employees.

13 PROFEPA, CONANP, and SEMAR all participated in the program, in addition to Sea Shepherd, the Whale Museum of La Paz, and WWF. Of the 136 pieces found, 36 were totoaba nets, 36 were shrimp gillnets, and 24 were longlines. Shrimp gillnets have also been known to kill vaquita.

See Source: República de México. Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT). Retiran Redes Fantasma en el Alto Golfo de California para Proteger a la Vaquita Marina. 15 December 2016. [www.gob.mx/semarnat/prensa/retiran-redes-fantasma-en-el-alto-golfo-de-california-para-proteger-a-la-vaquita-marina](http://www.gob.mx/semarnat/prensa/retiran-redes-fantasma-en-el-alto-golfo-de-california-para-proteger-a-la-vaquita-marina).

By the fall of 2015, the ban seemed to be working. According to CIRVA, there were almost no pangas on the water during the fall 2015 shrimp season. But success was short-lived. CIRVA noted “extensive evidence of illegal fishing for totoaba...during the months from December-May, clearly demonstrating the inadequacy of the enforcement effort.”<sup>lvi</sup> New net retrieval data from the fall of 2016 to the spring of 2017 reinforce and extend CIRVA’s finding to the 2017 totoaba and corvina season.

The crux of the ban’s failure can perhaps be found in its accompanying reimbursement program. According to those affected by it, the reimbursement program was deeply flawed. Some argued that independent fishermen<sup>14</sup> were not accounted for or compensated,<sup>lvii</sup> some said the payments were insufficient,<sup>lviii</sup> and many others claimed the system was easily manipulated. According to reports, some permit holders had listed family members and acquaintances as employees in order to receive a higher payout.<sup>lix</sup> Others allegedly did not disperse funds to their employees, or did not disperse them equitably, preferring instead to keep the payments for themselves. The program’s failings, some argued, pushed otherwise law-abiding fishermen to enter the totoaba trade.<sup>lx</sup> For example, in May 2016, CIRVA members recognized that fishermen included in the ban’s registry had been caught illegally fishing for totoaba with gillnets.<sup>lxi</sup>

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14 Most fishermen in the Gulf of California work for fishing cooperatives or *permissionarios* (fishing permit holders), but some hold their own permits and fish independently.

## The Armenta Family <sup>lxii</sup>

The realization that a small fortune could be made from totoaba trafficking, and the subsequent entry of organized crime into the communities surrounding the Gulf of California, have created an increasingly unstable environment around the Gulf. One confrontation between suspected totoaba traffickers and local police in March 2016 illustrated the volatility in the Gulf as each side jockeyed to maintain, or win back, dominance in the region.

In the early morning of March 23, 2016, two Sonora state police officers came across José Isaías Armenta Armenta (known as “El Hermano Pepe”) and his wife Maribel near the public beaches of Santa Clara. What happened next is subject to some debate, with locals claiming the official version of the story presents a partial or inaccurate picture of what actually occurred. The general consensus amongst locals is that the officers, aware of Armenta’s links to the totoaba trade, demanded Armenta give them \$30,000.<sup>15</sup> When Armenta refused or could not pay, the officers arrested him, hitting his wife when she tried to intervene. The officers then took Armenta to a municipal judge, but did not have anything to charge him with.<sup>16</sup> The officers left to collect information, but returned with still no charges, so Armenta was released.<sup>17 \*</sup>

Later that same morning, two different police officers, Armando Arreola and Víctor Ramírez, were confronted near the public beach by a white Tahoe and a Ford pickup.<sup>18</sup> One or more of the vehicles’ passengers shot at the officers, hitting both. Stranded and seriously wounded, the officers called for help, and a cadre of police officers set off in pursuit of both vehicles. The officers found the Tahoe parked near a mobile home, and opened fire, killing Armenta (witnesses later stated that Armenta was shot after he had already surrendered).<sup>19</sup> The Ford was found on Guerrero Street, and one of its passengers, José Arturo Armenta Romero (Armenta’s 21-year-old son), was arrested. Another five suspects – including José Arturo’s brother, Martín Isaac, and other fishermen from Sinaloa state – were eventually arrested as well.



Image 7. Mexican officials surrounding the home where José Isaías Armenta was killed. Source: B15 Noticias



Image 8. José Arturo Armenta at the time of his arrest. Source: ZETA Tijuana

In the days following, José Arturo and one other suspect were charged with murder and “injuries to the detriment of two police officers.”<sup>20</sup> José Arturo was also reportedly charged with stealing the vehicle he rode

15 Cordero, Sergio Haro. “Los Narcobucheros del Golfo de Santa Clara.” ZETA Tijuana. ZETA, 4 April 2016. <http://zetatijuana.com/2016/04/04/los-narcobucheros-del-golfo-de-santa-clara/>.

16 Melgoza Vega, Humberto. “Golfo de Santa Clara Paraíso de ‘Narco-Bucheros.’” Contraseña. Semanario Contraseña, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

17 Cordero, Sergio Haro. “Los Narcobucheros del Golfo de Santa Clara.” ZETA Tijuana. ZETA, 4 April 2016. <http://zetatijuana.com/2016/04/04/los-narcobucheros-del-golfo-de-santa-clara/>.

18 Melgoza Vega, Humberto. “Golfo de Santa Clara Paraíso de ‘Narco-Bucheros.’” Contraseña. Semanario Contraseña, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

19 Cordero, Sergio Haro. “Los Narcobucheros del Golfo de Santa Clara.” ZETA Tijuana. ZETA, 4 April 2016. <http://zetatijuana.com/2016/04/04/los-narcobucheros-del-golfo-de-santa-clara/>.

20 Melgoza Vega, Humberto. “Golfo de Santa Clara Paraíso de ‘Narco-Bucheros.’” Contraseña. Semanario Contraseña, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

in and “*narcomenudeo*,” or small-scale drug trafficking;<sup>21</sup> one news report claimed that he had been found with two packages of a drug called “ice” in his pockets at the time of his arrest.<sup>22</sup> On March 28<sup>th</sup>, José Arturo’s mother, Maribel Romero, went to the State Commission for Human Rights (the *Comisión Estatal de Derechos Humanos*) to file a complaint, stating that her son had been beaten and tortured by officials after his arrest; that he had bruises all over his face, jaw, ears, chest, and hands; and that he had lost consciousness as a result of the beating.<sup>23</sup> On March 30<sup>th</sup>, he was sent to the Social Re-Adaptation Center of San Luis Río Colorado, where he apparently remains.<sup>24</sup>

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In the aftermath of Armenta’s death, one former illegal fisherman described him as:

...one of the principal [totoaba fishermen], he made a lot of money, but he was quiet, he didn’t mess with anyone, he did illegal things but he was quiet. He was a buyer, he took them to Ensenada. One time he bought a new Dodge Charger from Ensenada, brought \$50,000 in payment for small totoaba buches, but on the way he was stopped and robbed by federal officials.<sup>25</sup>

Armenta’s involvement in totoaba trafficking was also visible in other ways. One journalist noted how different the Armenta’s house was from their neighbors, “Not only because of the big block fence, but also because of its two floors, painted white and with columns painted the same shade around the house’s exterior.”<sup>26</sup>

Despite Armenta’s involvement in totoaba trafficking, Armenta and his family members had been receiving payouts through the government’s gillnet ban compensation system since its inception in the spring of 2015. Armenta was registered as a “*permisionario*” under the system, meaning that he was responsible for distributing compensation payments to the fishermen he employed, while his son José Arturo was registered as a fisherman. Although Armenta was scheduled to receive monthly payments of 99,774.22 pesos (or 1,197,290.64 pesos annually), compensation plan data from May to December 2015 reveals that Armenta received 1,287,601.17 pesos in eight months, roughly equivalent to 160,950.15 pesos per month (61,175.93 pesos per month over his allowance). Over the same time period, his son received the standard fishermen’s salary of 64,000 pesos.

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Mexican officials launched an investigation into the events of March 23rd, including into the two police officers that initially stopped and allegedly tried to extort Armenta. The official story has remained that the Armentas were at fault, and suffered the consequences of escalating an otherwise routine traffic violation.

Locals disagree. In response to a reporter who approached her for an interview as she drove a car with American plates through Santa Clara, Armenta’s widow, Maribel Romero, said simply, “Talk to the people.”<sup>27</sup>

\* A later, official version of the story claimed that Armenta had been arrested for “disturbing the peace” and driving through a zone where no vehicles were allowed – this version also claimed the Armentas shot at the officers during the arrest.<sup>28</sup> Another version

21 Vizi3n San Luis RC. “Auto de Formal Pris3n a Presunto Homicida de Polic3a.” Facebook, 5 April 2016. <http://bit.ly/2u1l6Lr>.

22 Melgoza Vega, Humberto. “Golfo de Santa Clara Para3so de ‘Narco-Bucheros.’” *Contrase3a*. Semanario Contrase3a, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

23 Cordero, Sergio Haro. “Pesca Ilegal de Totoaba: Corrupci3n y Simulaci3n.” ZETA Tijuana. ZETA, 11 April 2016. <http://zetatijuana.com/2016/04/11/pesca-ilegal-de-totoaba-corrupcion-y-simulacion/>.

24 Ibid.

25 Ibid.

26 Cordero, Sergio Haro. “Pesca Ilegal de Totoaba: Corrupci3n y Simulaci3n.” ZETA Tijuana. ZETA, 11 April 2016. <http://zetatijuana.com/2016/04/11/pesca-ilegal-de-totoaba-corrupcion-y-simulacion/>.

27 Ibid.

28 Ibid.

claims that the family and their associates had been up all night drinking and doing drugs before they were arrested for a traffic violation.<sup>29</sup>

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<sup>29</sup> Melgoza Vega, Humberto. "Golfo de Santa Clara Paraíso de 'Narco-Bucheros'." *Contraseña. Semanario Contraseña*, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.



### *Organized Criminal Involvement*

The high profits and low risks associated with totoaba trafficking have attracted the attention of organized criminal groups operating in Baja California and Sonora near the Gulf. These criminal networks have benefited from confusion and discontent generated by the often unclear federal fishing regulations created to save the vaquita.<sup>lxiii</sup> Their intrusion into the totoaba trade in 2013 or 2014 signaled a dangerous escalation for the entire region; they brought with them violent competition, weapons, drugs, and increased corruption. One fisherman claimed that “while honorable fishermen are prevented from leaving to work by the authorities, criminals in the service of the Pacific or Sinaloa ‘cartels’ that control [totoaba] trafficking infiltrate peaceful protests to generate violence and distract the public so that they can leave to set their gillnets.”<sup>lxiv</sup> An NGO representative at CIRVA’s Seventh Meeting in May 2016 reported that “the unstable socio-political environment in the Upper Gulf over the last few months has seriously affected the implementation of projects in this region...the involvement of organized crime in the illegal totoaba fishery, and the collusion of some officials with these actions, has been a fundamental obstruction to progress.”<sup>lxv</sup>

Since at least 2014, a number of deaths, attacks, and related incidents have been attributed to organized criminal involvement in the totoaba trade:

- One murder of an alleged narcotrafficker in 2014 and two subsequent revenge killings of another narcotrafficker and his bodyguard later that year, were reportedly driven by desired control of the totoaba trade in Santa Clara (see **The Narcobucheros of Santa Clara**).<sup>lxvi</sup>
- Police chief Francisco Vázquez was shot and killed in September 2015, just prior to the implementation of PESP’s counter-totoaba trafficking Coordinated Command strategy.<sup>lxvii</sup>
- In March 2016, fighting between officials and a family suspected to be involved in totoaba trafficking left one police officer and one fisherman dead (see **The Armenta Family**).<sup>lxviii</sup>
- On the evening of September 7, 2016, a crewmember of Sea Shepherd’s M/V Farley Mowat received a phone call demanding that the Mowat not move south. According to the crewmember, “They knew my name, my mother’s and daughter’s names, what I looked like, a home address in Chile...They knew the boat’s name, its movements and said if we go back south my daughter and I will be dead.”<sup>lxix</sup> The callers identified themselves only as “the cartel.”<sup>lxx</sup>
- One protest in March 2017 ended with four PROFEPA inspectors injured; 28 officials from SEMARNAT, CONAPESCA, AND CONANP hurt; public offices ransacked; and 15 official vehicles set on fire.<sup>lxxi</sup>
- Recently, stories have circulated in the Gulf of pangas found carrying totoaba bladders, narcotics, and weapons,<sup>lxxii</sup> although definitive evidence of these instances cannot yet be found in the open source.

In addition to the involvement of Mexican organized crime, multiple sources report that Asian organized criminal networks based in California are involved in the trafficking aspect of the totoaba trade (see **Trafficking**).

The entrance of sophisticated organized criminal actors into the totoaba trade has exacerbated and extended the destabilizing effects of Mexican organized crime in the Gulf of California region. As former Mexican president Felipe Calderón put it,

...the expansion and strengthening of transnational organized crime erodes the rule of law and... the damaging consequences of this situation go beyond high crime rates. Organized crime not only



deteriorates social order and individual liberties, but it is also a real threat to democracy and the State itself, as it tends to displace and substitute law enforcement agencies and institutions...Once the State has lost control of its own institutions, reality eclipses Hollywood stories of extortion, kidnapping, and killing. The response to this threat must be global through international cooperation mechanisms, and it must definitely involve national and sub national actions.<sup>lxxiii</sup>

Although Calderón was not speaking about totoaba specifically, his observations are nevertheless pertinent when considering organized crime's involvement in the totoaba trade.

## The Narcobucheros of Santa Clara <sup>lxxiv</sup>



Image 9. Samy Gallardo Castro prior to his death in 2014. Source: Peninsular Digital

Nowhere are the links between totoaba and narcotics trafficking more apparent than in Santa Clara, if local media reports detailing cartel involvement, violence, and revenge killings are any indication.

On June 11, 2014, Samuel Gallardo Castro was walking on the beach in Santa Clara with his family when he was shot by someone in a passing vehicle.<sup>30</sup> Samuel, or “El Samy,” was well-known to his associates and neighbors as a narcotics trafficker working with the Sinaloa cartel to move drugs from the Gulf of California to the United States.<sup>31</sup>

But his death had little to do with narcotics. Peninsular Digital reported that Gallardo had ostensibly left the drug trade in response to increased military pressure on drug operations between 2010 and 2012. He had instead decided to apply his business acumen to more simplistic endeavors, like the hotel and fishing businesses in Santa Clara, although locals have claimed he did not leave drugs entirely behind (he allegedly moved between eight and ten tons of marijuana on pangas through the Gulf from Sinaloa).<sup>32</sup>

In part due to his role as the leader of the Upper Gulf Fishing Cooperative (Cooperativa Pesquera Alto Golfo), Gallardo was able to position himself as one of the primary beneficiaries of the burgeoning illegal totoaba trade,<sup>33</sup> likely using his established expertise in trafficking illicit goods in the region to further extend his influence. His rise was aided by his significant popularity. One of his former workers described him as the “Robin Hood” of Santa Clara, distributing food to the needy when fishing was bad;<sup>34</sup> one local journalist seemed to admiringly portray his funeral as a mourning period for all of Santa Clara, writing of his funeral procession passing by “the church, the San Antonio Hotel, and the ‘Cocodrilos’ bar (businesses created by the deceased),” and adding, “The neighbors in Santa Clara...have showed their sadness and concern during the mournful celebrations – with band music included – and given their last condolences to the relatives of the well-known fishing businessman, hotelier, and narcotics trafficker.”<sup>35</sup>

About a month and a half after Gallardo’s murder, David Guadalupe Fonseca turned himself into police.<sup>36</sup> He claimed that he had killed Gallardo over a \$1 million debt that he claimed Gallardo owed him from a totoaba shipment. But officials soon released Fonseca, explaining that they doubted both the validity of his story and his mental state;<sup>37</sup> besides, a more convincing story had emerged.

Locals loyal to Gallardo seemed to believe someone else was at fault entirely – another alleged drug trafficker,

30 Melgoza Vega, Humberto. “Golfo de Santa Clara Paraíso de ‘Narco-Bucheros.’” *Contraseña*. Semanario Contraseña, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

31 Díaz, Rodrigo. “Opera Crimen Organizado Tráfico Ilegal de Buche de Totoaba.” *Peninsular Digital*. Peninsular Digital, 4 August 2014. <http://peninsulardigital.com/nacional/opera-crimen-organizado-traffic-ilegal-buche-totoaba/151568>.

32 Cordero, Sergio Haro. “Los Narcobucheros del Golfo de Santa Clara.” *ZETA Tijuana*. ZETA, 4 April 2016. <http://zetatijuana.com/2016/04/04/los-narcobucheros-del-golfo-de-santa-clara/>.

33 Díaz, Rodrigo. “Opera Crimen Organizado Tráfico Ilegal de Buche de Totoaba.” *Peninsular Digital*. Peninsular Digital, 4 August 2014. <http://peninsulardigital.com/nacional/opera-crimen-organizado-traffic-ilegal-buche-totoaba/151568>.

34 Alvarado, Enrique, Andrés M. Estrada, and Alejandro Melgoza. “Totoaba. La Disputa por la Plaza.” *El Universal*. 14 December 2016. [www.eluniversal.com.mx/articulo/periodismo-de-investigacion/2016/12/14/totoaba-la-disputa-por-la-plaza-narcobuchera](http://www.eluniversal.com.mx/articulo/periodismo-de-investigacion/2016/12/14/totoaba-la-disputa-por-la-plaza-narcobuchera).

35 Díaz, Rodrigo. “Opera Crimen Organizado Tráfico Ilegal de Buche de Totoaba.” *Peninsular Digital*. Peninsular Digital, 4 August 2014. <http://peninsulardigital.com/nacional/opera-crimen-organizado-traffic-ilegal-buche-totoaba/151568>.

36 Ibid.

37 Bargent, James and Camilo Mejía. “¿Están Incursionado los Narcos de México en el Lucrativo Mercado de Vejiga de Pescado?” *InSight Crime*. InSight Crime, 6 August 2014. <http://es.insightcrime.org/noticias-del-dia/narcos-mexico-lucrativo-mercado-vejiga-pescado>.

Alfredo Colín Ortega, or “El Gordo Colín.”<sup>38</sup> Colín was linked to the operations arm of the Arellano Félix cartel in Tijuana, Mexicali, and San Luis Río Colorado. He had participated in the June 2006 ambush – involving “large arms” and a grenade launcher – of the armored vehicle of the former Secretary of Public Security for Baja California in Mexicali.<sup>39</sup> After the assassination attempt failed, Colín spent a number of years in a maximum security prison before returning to San Luis Río Colorado in 2013, where he “began to sow terror” by allegedly ordering the murders of multiple men.<sup>40</sup> At some point, he reportedly learned of the high profits that could be his for a fraction of the risk if he were to switch to trafficking totoaba, but determined that one thing stood between him and domination of the region’s totoaba trade – Samy Gallardo. To clear his path forward, he allegedly contracted a pair of *pistoleros*, or gunmen, to shoot Gallardo from a passing car.

But Colín’s newfound dominance was short-lived. On August 26<sup>th</sup>, six hooded men – allegedly Sinaloa pistoleros – with guns and bullet-proof vests arrived at Colín’s house in the early morning, dragged him out of bed, and shot him and his bodyguard dead.<sup>41</sup> Later that day, Mexican officials investigating the murders discovered several pangas and totoaba gillnets in the courtyard of his house.

One local fisherman put it simply, “There are a lot of *narcobucheros* here. When there aren’t *buches*, they traffic narcotics, or vice versa.”<sup>42</sup>

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38 Melgoza Vega, Humberto. “Golfo de Santa Clara Paraíso de ‘Narco-Bucheros.’” *Contraseña*. Semanario Contraseña, 1 April 2016. <http://contrasena.com.mx/semanario/2016/04/golfo-santa-clara-paraíso-narco-bucheros/>.

39 Ibid.

40 Ibid.

41 Ibid.

42 Cordero, Sergio Haro. “Los Narcobucheros del Golfo de Santa Clara.” *ZETA Tijuana*. ZETA, 4 April 2016. <http://zetatijuana.com/2016/04/04/los-narcobucheros-del-golfo-de-santa-clara/>.

*Modus Operandi*

As it has become clear to those in the Upper Gulf of California that current enforcement efforts are limited and prosecutions are almost nonexistent, totoaba fishermen have become increasingly bold. In some cases, they live in large, luxurious houses, especially compared to the modest accommodations of their neighbors. For example, one suspected totoaba fishing family lives behind “a big block wall” in a house with two floors, painted white and complete with columns.<sup>lxxxv</sup> Other fishermen have told reporters and NGOs that totoaba fishermen are easy to spot; even though a panga fishing legally only needs about two people to operate, pangas carrying five or more people are frequently seen leaving from shore.<sup>lxxxvi</sup>

Sources in the Gulf indicate that there are essentially three types of fishermen engaged in totoaba fishing. The first group consists of normal fishermen who have independently taken up totoaba fishing, perhaps as a result of the ban, to support their families, or simply to increase their incomes. The second group also consists of normal fishermen, but these have been recruited by organized criminals to fish on their behalf<sup>lxxxvii</sup> – they are supplied with the fishing gear they need and are paid by the criminals they support.<sup>lxxxviii</sup> The third group is made up of criminals, often described as *narcobucheros*,<sup>lxxxix</sup> who do the fishing themselves.

All three types of fishermen seem to follow the same patterns and use the same methods to obscure their activity. The various *modus operandi* associated with totoaba fishermen include, but are not limited to:

- **Use of secret compartments onboard pangas**

Totoaba bladders are rarely found on pangas, likely in part due to totoaba fishermen’s use of secret compartments. In one instance in 2014, PROFEPA and SEMAR arrested a group of totoaba fishermen as they were driving away from the Gulf in a truck hauling their panga.<sup>lxxx</sup> After an inspection, officials found six dead totoaba, seven totoaba fillets, and 12 totoaba bladders hidden in a secret compartment of the boat.<sup>lxxxi</sup> In another seizure from January 2016, CONAPESCA personnel came across a panga without a name or number,<sup>lxxxii</sup> with two totoaba bladders stored in a hidden onboard compartment.<sup>lxxxiii</sup>

- **Operating at night**

Until recently, totoaba fishermen primarily operated at night to avoid detection.<sup>lxxxiv</sup> To counter this, CONAPESCA announced in July 2016 that a ban on night fishing would go into effect before the end of the year, as part of additional emergency measures to save the vaquita.<sup>lxxxv</sup> Still, patrol vessels continue to come across illegal fishermen at night.

While night fishing may remain the norm, it should be noted that illegal fishing during the day is escalating. According to CIRVA, Sea Shepherd reported “recent daylight encounters between [Sea Shepherd] personnel and masked



Image 10. On December 12, 2016, Sea Shepherd and SEMAR worked together to interdict a number of pangas that were found fishing illegally at night. Source: Sea Shepherd

fishermen” in November 2016.<sup>lxxxvi</sup>

- **Launching from remote beaches and use of beach camps**

According to PROFEPA, SEMAR, and local media accounts, illegal fishermen in the Gulf prefer to launch from remote beaches, where the chances of discovery are remote.<sup>lxxxvii lxxxviii</sup> Information from SEMAR, combined with gillnet detection and totoaba seizure data, suggest that the beaches extending from Puertecitos, through San Felipe, and over to Santa Clara are most likely to be exploited by illegal fishermen.<sup>lxxxix</sup>



*Image 11. Some of the nets found in December 2015 by PROFEPA, SEMAR, and CONAPESCA at a Puertecitos fishing camp. Source: Zeta Tijuana*

These fishermen do leave behind traces, however. For example, totoaba crews will often leave a car hidden on the beach in case they need to make a quick escape. In one case from March 2017, authorities detected a boat illegally fishing in the vaquita refuge.<sup>xc</sup> When they attempted to approach, the fishermen fled, and led the officials on an 80-kilometer chase to shore.<sup>xcii</sup> The fishermen were eventually caught when the getaway car they had hidden on the beach was trapped by high tide.<sup>xcii</sup>

Similarly, some fishermen prefer to conduct their illegal operations from beach camps, rather than from one of the shore-side towns along the Gulf. Fishing camps have been documented from Puertecitos to remote beaches north of San Felipe.

In one instance in December 2015, PROFEPA, SEMAR, and CONAPESCA discovered an illegal fishing camp near Puertecitos.<sup>xciii</sup> The fishermen at the camp managed to escape, but officials recovered 16 totoaba gillnets and eight longlines from the campsite.<sup>xciv</sup> The total value of the recovered fishing gear was estimated at 800,000 pesos,<sup>xcv</sup> or about \$48,171 (\$2,007 per piece of equipment).<sup>43</sup>

- **Unusually large crews**

Fishermen claim that totoaba pangas are clearly discernible, given the unusually large size of their crews.<sup>xcvi</sup> As previously mentioned, totoaba crews typically number around five to seven men, far more than the usual two needed for legal fishing.<sup>xcvii</sup>

- **Use of large-mesh gillnets**

As discussed previously, totoaba fishermen primarily rely on large-mesh gillnets to entrap their prey.<sup>xcviii</sup> As gillnet detection efforts in the Gulf have intensified in the recent past, Sea Shepherd has noted that fishermen have increasingly been setting their nets and quickly retrieving them, hoping to find even a few totoaba before surveillance or enforcement patrols arrive.<sup>xcix</sup> In some cases, when totoaba fishermen perceive enforcement pressure to be particularly high, they will simply abandon their nets, preferring to purchase new ones rather than risk discovery.<sup>c</sup>

- **At-sea totoaba bladder removal**

To avoid having to bring totoaba back to shore, totoaba fishermen cut out their bladders at sea, before

43 Prices based on December 2015 exchange rate.

throwing the fish back into the water. They then likely hide the bladders under their clothes, in a small bag, or in secret compartments onboard their pangas before returning to shore.<sup>ci cii ciii</sup>

Some reports suggest that the fishermen place stones in the mouths of the fish to drag them under water before throwing them overboard, in an attempt to prevent anyone from discovering dead totoaba floating on the surface of the water.<sup>civ</sup> Regardless of whether the fish sink, the Gulf's currents often push the fish carcasses to the Gulf's beaches.<sup>cv</sup>

- **Use of legal fishing permits as a cover for illegal totoaba fishing**

Totoaba fishermen likely use legal fishing permits to explain their presence on the water in the event they are found by enforcement. For instance, Sea Shepherd reported to CIRVA in May 2016 that illegal fishermen were using corvina or sport fishing licenses to hide their true activities.<sup>cvi</sup>

One seizure from early 2017 supported this assertion. In January, military officials tried to stop a Nissan Pathfinder on the highway between Puertecitos and San Felipe.<sup>cvi</sup> The passengers of the car tried to escape, throwing away 17 totoaba bladders in the process.<sup>cvi</sup> According to media reports, two fishing permits in the names of San Felipe residents were discovered along with the bladders.<sup>cix</sup>

Prior to the gillnet ban, corvina fishing licenses in particular were vulnerable to exploitation by totoaba fishermen for a variety of reasons.<sup>cx</sup> First, the corvina fishing season overlaps with the totoaba fishing season every winter and spring. Second, corvina fishermen also use gillnets, although they use them to encircle fish, instead of leaving them hanging in the water.<sup>44</sup>

Totoaba poachers have also been known to claim that they are sport fishing or just transiting through the Gulf to excuse their presence on the water at night.<sup>cx</sup>

The involvement of organized criminal networks, and the professionalization of illegal totoaba fishing, have transformed totoaba trafficking from a conservation issue into a regional security problem. Although the Mexican government has recently taken steps to address the illegal totoaba trade as the security threat it is, their efforts will be futile without investigations and prosecutions of high-value targets. Until Mexican authorities are able to follow totoaba trafficking networks from low-ranking and easily replaceable fishermen to the powerful individuals who direct them, illegal totoaba fishing will continue, and the vaquita will be lost.

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44 Although totoaba fishermen have been known to use corvina fishing as a cover, effective enforcement should be able to easily differentiate the two. As mentioned above, corvina fishermen use gillnets very differently than totoaba fishermen. Furthermore, corvina gillnets are easily differentiable from totoaba gillnets due to differences in their design. Finally, more heavily policing corvina fishing seems to have had a negligible impact on totoaba fishermen. During the most recent corvina and totoaba seasons, for example, the majority of legal corvina fishermen were prevented from fishing under the gillnet ban, and yet totoaba poaching activity was at its highest.



## Trafficking

### Estimated Totoaba Bladder Value in the U.S.: \$5,000 per bladder<sup>cxii</sup>

Once totoaba bladders are successfully brought to shore, they must be processed and trafficked to their ultimate destination. While this leg of the supply chain leaves the least footprint – with no gillnets or totoaba advertisements as evidence – seizure data provides a window into the trafficking of totoaba. For instance, seizure data from around the Gulf of California reveal that once totoaba bladders reach the shore, they are generally transported to a consolidation point where they can be processed prior to export. From there, they are either smuggled across the border into the United States before shipment to Asian destination markets, or sent directly from Mexico.

Recently, however, as the totoaba trade has grown more prominent in the Gulf, and enforcement officials in Mexico, the United States, and China have become more familiar with the issue, totoaba networks have been forced to professionalize and move further underground. As a result, many of the trafficking methods used for totoaba have begun to mirror those used by drug traffickers within Baja California. For example, totoaba smugglers have been increasingly relying on more sophisticated concealment techniques, like hidden car compartments, rather than the coolers and backpacks that were previously common.

This professionalization is also evident in a drop in totoaba seizures made at the U.S.-Mexico border after 2013. While at least five totoaba bladder seizures were made at the border in the spring of 2013, none appear to have been made since. Although it is possible that totoaba traffickers stopped using the United States as a transit point in response to these seizures, overall totoaba trafficking activity and one well-known court case from 2015 suggest that totoaba bladders continued to be smuggled into the United States (see **Rich Mahogany**). It is therefore more likely that totoaba traffickers have found a new way to move totoaba bladders through the United States without enforcement interference.

#### *Processing and Consolidation*

An analysis of totoaba seizure information sheds light on the processing and consolidation aspect of the totoaba supply chain. Past totoaba seizure data suggest<sup>cxiii</sup> that fresh or wet bladders are usually moved to consolidation centers in San Luis Río Colorado in Sonora or Mexicali, Tijuana,<sup>cxiv</sup> or Ensenada in Baja California.<sup>cxv</sup> The bladders are then put through a drying process using salt to ensure their continued freshness.<sup>cxvi cxvii</sup>

Virtually all of the seizures that took place close to the Gulf in San Felipe, Puertecitos, the Golfo de Santa Clara, and San Quintin, or that occurred en route to a known consolidation center (e.g. on the Mexicali-San Felipe highway or on the way to San Luis Río Colorado), were of wet bladders. In one instance in February 2016, Mexican officials found two people with six totoaba bladders at a military checkpoint on the San Felipe-Puertecitos highway.<sup>cxviii</sup> After inspecting the car and both of its occupants, SEDENA officials found six wet bladders wrapped in plastic and taped to the body of one of the passengers. In another seizure from 2014, officials discovered six wet totoaba bladders in a blue backpack behind the driver's seat of a white sedan.<sup>cxix</sup> The car had been stopped leaving Puertecitos.

Once bladders reach the larger cities in Baja California and Sonora, locals claim that officials can no longer find or confiscate them.<sup>cxx</sup> Totoaba seizure data seems to support this claim; there has been only one seizure<sup>cxxi</sup> in any of the four likely consolidation points since at least 2009, even though there have been at least seven seizures of totoaba en route to one of these points in the same time period (at least five of which were of wet bladders). The lack of seizures in any of the four consolidation cities may be due to the difficulty of finding

totoaba bladders when they are not in transit, or to higher levels of corruption.



Image 12. Two individuals who were discovered trying to smuggle six wet totoaba bladders out of Puertecitos by car. Source: Monitor BC

In two instances, wet bladders have been found hidden in coolers leaving Mexico. Both seizures took place at the Calexico border crossing into the United States in the spring of 2013. Since then, no other wet totoaba bladders have been found outside of Mexico, while dry totoaba bladders are still occasionally discovered en route to destination markets. While it is possible that traffickers have developed a new way to smuggle wet bladders across the border, the simpler answer is that bladders may be increasingly processed nearer to the Gulf, especially given the additional cost and effort required to move wet bladders (which are heavier, have a stronger odor, and need to be kept cold) versus dry bladders.<sup>cxxii</sup> It follows then that dry bladders are more likely to be smuggled out of Mexico, regardless of their destination.

#### *Trafficking Routes within Mexico*

Traffickers in the Baja California region, particularly those close to the Gulf, have limited transportation options. There are only a few main roads connecting the major towns and cities in the area, and airports only exist in the more populous cities (San Felipe, Tijuana, Mexicali, and Ensenada). Furthermore, trafficking by plane is both more expensive and more difficult. For example, traffickers trying to fly their fresh bladders to processing points closer to the border or in southern California must develop methods to evade airport security and customs. As a result, traffickers are more likely to choose the simpler, low-cost option of moving their unprocessed bladders by land. Totoaba seizure data reflects this reliance on the highway systems connecting Puertecitos to San Felipe; San Felipe to Ensenada, Tijuana, and Mexicali; and the Golfo de Santa Clara to San Luis Río Colorado and Mexicali.

The routes from San Felipe to Mexicali-Tijuana-Ensenada appear to be particularly prominent. According to various Mexican government agencies, over 4,000 totoaba bladders, worth about 300 million pesos or \$14,502,632,<sup>45</sup> have moved on these highways in the past 16 years.<sup>cxxiii</sup> These paths are allegedly used frequently enough by narcotics and totoaba traffickers to have earned the nickname “*la ruta narcobuchera*” – the *narcobucheros* route.<sup>cxxiv</sup>

45 Price based on December 2016 exchange rate.



A sample of drug seizures<sup>cxv</sup> in the region from 2009 to 2016 reveal a similar pattern. Drug and totoaba smuggling routes seem to overlap in particular at consolidation points in Tijuana, Mexicali, Ensenada, and San Luis Río Colorado. Prior to consolidation, San Felipe stands out as both a totoaba and drug hotspot.<sup>46</sup> From the coast around Puertecitos and San Felipe, traffickers can choose one of two ways to move their contraband to the consolidation cities by road: Highway 5 (San Felipe to Mexicali) or Highway 3 (San Felipe to Ensenada).



Image 13. Totoaba seizures and highway systems in Baja California and Sonora, Mexico.

The only alternative to driving bladders to the cities is what locals call the “*método hormiga*,” or “ant method,” meaning the wet bladders are moved in small quantities in coolers or bags across “gaps in the desert” to towns farther north or along the west coast.<sup>cxvii</sup> In order to traverse the mountainous and fairly difficult terrain of Baja California without relying on the region’s major roadways, totoaba traffickers would have to move bladders across the desert by truck, off-road vehicle, dirt bike, or on foot. Regardless of the method chosen, crossing both the desert and the fairly forbidding San Pedro Mártir mountain range seems to pose a significant challenge to any traffickers considering this route. The absence of totoaba seizure information for this area may signal that the route is too challenging to be used often, or it could mean the exact opposite –

46 Some reports claim that drugs are moved across the Gulf in speedboats prior to landing on the beaches of the western coast of the Gulf around Puertecitos and San Felipe – likely the same beaches used by totoaba fishermen.

that the region is remote enough to prevent effective enforcement activity.<sup>47</sup>



Image 14. Totoaba seizures and a sample of drug seizures superimposed over major highways in Baja California and Sonora, Mexico.

However, given the challenging terrain, it could take traffickers as much as a week or more to move totoaba bladders across the peninsula's 85-mile width, raising the question of whether enforcement along the highway system is substantial enough to warrant the use of such a difficult route. The *método hormiga* would be particularly problematic for smugglers of wet bladders, which need to be kept cold, and make up the majority of bladders trafficked in this area. Further investigation of the desert route is necessary to determine the frequency of its use, as well as the comparative benefit to totoaba traffickers of using it, instead of the established highway system.

A third option combines the *método hormiga* with the use of the region's roadways. Instead of smuggling bladders

<sup>47</sup> There has been at least one drug seizure in the San Pedro Mártir mountain range; in May 2015, Mexican officials discovered 200 kilograms of marijuana, 90 kilograms of "crystal," 50 kilograms of cocaine, and 30 kilograms of "opium gum" in a truck with California plates in "the vicinity of the San Pedro Mártir mountain range."

See Source: "Asegura la Sedena 370 Kilos de Droga en San Pedro Mártir." *La Jornada Baja California*. Desarrollo de Medios, SA de CV (DEMOS), 10 May 2015. <http://jornadabc.mx/tijuana/10-05-2015/asegura-la-sedena-370-kilos-de-droga-en-san-pedro-martir>.

across the Baja peninsula to Highway 1 on the west coast, it is possible that traffickers simply use the *método hormiga* to move small quantities of bladders through the desert around established checkpoints like El Chinero in Baja California and El Doctor in Sonora. This method would shorten the week-long trek through the desert to a few hours or less, and would allow traffickers to circumvent one of the riskiest portions of their route.

#### *Trafficking Modus Operandi within Mexico*<sup>48</sup>

Since about 2013, totoaba trafficking methods in Mexico have gradually shifted towards more sophisticated techniques, largely in response to increasing enforcement pressure. Seizures in Baja California and Sonora reveal some of the methods used to smuggle totoaba at this step of the supply chain, and hint at the ongoing evolution of totoaba trafficking *modus operandi*:

- **Bags, backpacks, and coolers** <sup>cxxvii</sup>

A number of seizures in and around the Gulf of California have highlighted traffickers' use of bags, backpacks, and coolers to move bladders.

In one instance in March 2014 (mentioned previously), officials discovered six wet totoaba bladders weighing 8.2 kilograms in a backpack behind the driver's seat of a sedan with California plates.<sup>cxxviii</sup> The car had been stopped on its way from Puertecitos to San Felipe on Highway 5.

A little over a year later, in April 2015, Federal Police officials came across two individuals walking along the San Felipe – Mexicali highway (also part of Highway 5) at night.<sup>cxxix</sup> When the individuals noticed the officials, they abandoned a backpack they were carrying and “escaped into the foliage” alongside the road. The officials discovered 90 bladders inside the backpack with a combined weight of 25.5 kilograms, and worth about \$127,500.

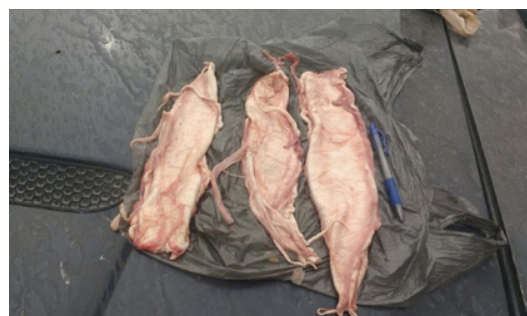
In September 2015, officials in San Quintín on the west coast of Baja California came across an apparently abandoned Ford Explorer.<sup>cxxx</sup> The officials discovered a cooler in the back of the car containing 16 Ziploc bags of totoaba bladders weighing 22.18 kilograms.

In December 2016, municipal and military officials stopped a Ford Mustang without license plates on the San Felipe-Puertecitos highway (Highway 5).<sup>cxxxi</sup> After the officials inspected the vehicle, they discovered three wet totoaba bladders in a black plastic bag in the car's trunk, along with 60 corvina fish. The vehicle's two passengers reported that they were moving the bladders from Puertecitos to Mexicali.

- **Taped to the trafficker's body**



*Image 15. A cooler containing 22.18 kilograms of totoaba bladders discovered in San Quintín. Source: Ensenada.net*



*Image 16. Three wet totoaba bladders discovered in a car with California plates between Puertecitos and San Felipe. Source: La Voz*

48 Estimated prices based on a conservative estimate of \$5,000 per kilogram of bladders.

In February 2016, SEDENA officials stopped a car at a military checkpoint on the road from Puertecitos to San Felipe.<sup>cxxxii</sup> After inspecting the car and its two passengers, officials discovered that one passenger had six wet totoaba bladders wrapped in plastic bags and taped to his body under his clothes.

- **Spare tires**

In March 2016, Federal Police officials stopped a 28-year-old man from San Felipe for speeding, and discovered 121 wet bladders in 33 black plastic bags in the spare tire of the car.<sup>cxxxiii</sup> The entire haul weighed 39 kilograms and was estimated to be worth at least \$150,000. The suspect told the officials that he was taking the totoaba bladders from Santa Clara to a house in Tijuana.<sup>cxxxiv</sup>



*Image 17. Two of 121 wet totoaba bladders being pulled out of black plastic bags hidden in the spare tire of a GMC pickup truck. The 121 bladders were destined for Tijuana. Source: Excelsior*

- **Vehicle doors and hidden compartments**

On a number of occasions, Mexican officials have discovered totoaba bladders concealed within vehicle doors and hidden compartments.

In one seizure from March 2015, Mexican Army officials at the El Chinero military checkpoint north of San Felipe found 34 totoaba bladders (weighing 23 kilograms) inside the doors of a white Toyota.<sup>cxxxv</sup> The two suspects in the car at the time of the seizure reported that they had purchased the bladders from fishermen in San Felipe and were taking them to Mexicali to sell them.



*Image 18. Nine wet totoaba bladders discovered in a cooler in a hidden compartment of an Infiniti SUV between Santa Clara and San Luis Río Colorado. Source: PESP Sonora*

In another instance from May 2016, Federal Police agents stopped a white sedan with Nevada plates on the way to Mexicali (Highway 5) for an inspection.<sup>cxxxvi</sup> The agents found 11 wet totoaba bladders stuffed in four plastic bags and hidden inside the right rear door of the car. The driver of the car was arrested.

In March 2017, state police and military officials detected “irregularities” in a gray Infiniti at the El Doctor military checkpoint on Highway 40 between Santa Clara and San Luis Río Colorado.<sup>cxxxvii</sup> Upon further investigation, the officials discovered a cooler containing nine plastic bags of wet totoaba bladders within a hidden compartment. The driver and a passenger were arrested.

- **Vehicle gas tanks**

In March 2017, state police and military officials operating the El Doctor military checkpoint stopped a couple driving from Santa Clara to San Luis Río Colorado along Highway 40.<sup>cxxxviii</sup> The officials found 24 wet totoaba bladders weighing 17 kilograms in plastic bags in the gas tank of the couple’s vehicle. The accused were each fined 25,000 pesos (about \$1,253 each,<sup>49</sup> or 1.5% of the estimated value of the totoaba bladders).



*Image 19. 24 wet totoaba bladders found in the gas tank of a vehicle moving from the Golfo de Santa Clara to San Luis Río Colorado on the Mexico – U.S. border. Source: Contraseña*

49 Price based on March 2017 exchange rate.



## Seizure Parallels: Drug Trafficking Methods <sup>CXXXIX</sup>

Many of the trafficking methods used by totoaba smugglers can be seen reflected in common methods used by drug traffickers.

- **Taped to the trafficker's body**

In one instance in 2013, a Mexican woman was arrested attempting to enter the United States through the Morley Pedestrian Gate in Sonora with more than a pound of methamphetamines hidden in spandex underneath her clothes.<sup>50</sup>

- **Spare tires**

In November 2016, U.S. CBP arrested an American man for attempting to smuggle over 40 pounds of cocaine and methamphetamine into the United States through San Luis Río Colorado.<sup>51</sup>

- **Hidden compartments in vehicles**

On July 24, 2016, CBP officers referred a woman's car for a secondary inspection as she was trying to cross the U.S.-Mexico border from Sonora.<sup>52</sup> During the inspection, a CBP canine alerted to the presence of a hidden compartment near the vehicle's trunk. Inside, officials discovered over 37.5 pounds of heroin and four pounds of cocaine.

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<sup>50</sup> United States of America. Customs and Border Protection (CBP). "Nogales CPB Officers Seize \$138 Million in Hard Drugs." 7 November 2013. [www.cbp.gov/newsroom/local-media-release/nogales-cbp-officers-seize-138-million-hard-drugs-0](http://www.cbp.gov/newsroom/local-media-release/nogales-cbp-officers-seize-138-million-hard-drugs-0).

<sup>51</sup> United States of America. Customs and Border Protection (CBP). "San Luis CBP Officer Find Meth/Cocaine in Spare Tire." 8 November 2016. [www.cbp.gov/newsroom/local-media-release/san-luis-cbp-officers-find-methcocaine-spare-tire](http://www.cbp.gov/newsroom/local-media-release/san-luis-cbp-officers-find-methcocaine-spare-tire).

<sup>52</sup> United States of America. Customs and Border Protection (CBP). "CBP Officers Arrest Mexican Woman, U.S. Juvenile in Separate Attempts to Smuggle Heroin, Cocaine." 25 July 2016. [www.cbp.gov/newsroom/local-media-release/cbp-officers-arrest-mexican-woman-us-juvenile-separate-attempts-smuggle](http://www.cbp.gov/newsroom/local-media-release/cbp-officers-arrest-mexican-woman-us-juvenile-separate-attempts-smuggle).

*Trafficking Routes and Modus Operandi between Mexico and the U.S.*

After arrival in Mexicali, Tijuana, Ensenada, or San Luis Rio Colorado, totoaba bladders are generally dried and repackaged for export to the United States. In 2013, a spate of seizures on the U.S. border revealed the smuggling methods used by traffickers crossing into the United States, and highlighted traffickers' ability to sneak totoaba past customs and enforcement officials undetected. Between February and April 2013, U.S. CBP stopped at least five totoaba bladder trafficking attempts in Calexico (across the border from Mexicali), seizing a total of 235 bladders. In three of the five cases, the seized bladders were dry. In the other two, the bladders were likely on their way to processing centers in the United States.

## Totoaba Bladder Seizures at the U.S. – Mexico Border<sup>53 cxi</sup>

- February 27, 2013 dry bladder seizure at Calexico East<sup>54</sup>

On February 27, one individual, referred to in U.S. court documents only as JN, entered the Calexico East border crossing with six dried totoaba bladders in his car. JN told CBP officials that he thought the bladders were squid, and that another individual, Oi Chung, had paid him \$150 to drive the bladders – worth an estimated \$12,500 – into the U.S. Officials seized the six bladders and released JN.

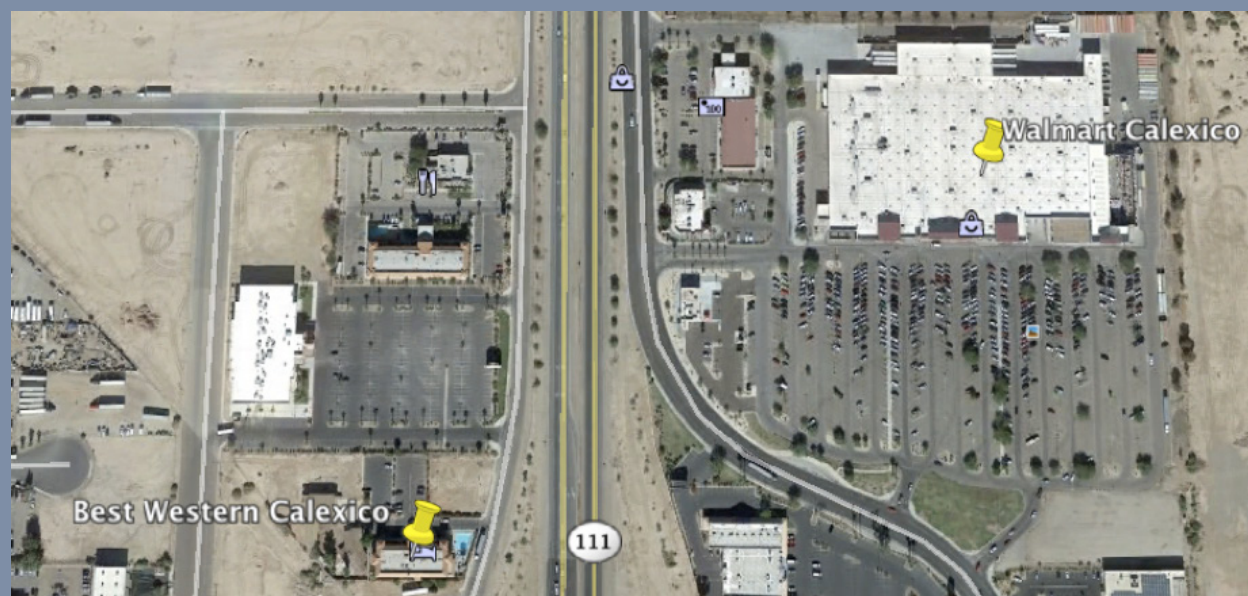
- March 30, 2013 dry bladder seizure at Calexico East<sup>55</sup>

A little over one month later, Oi “Sean” Chung drove into Calexico East and was referred to secondary inspection. CBP officials noted one cooler in his car containing fish and clams, as well as five dried totoaba bladders “hidden in two duffle bags wrapped in clothing inside the vehicle.” Like in the case of JN, officials seized the bladders but allowed Chung to leave.

In coordination with U.S. officials, JN later agreed to deliver the six bladders from the February 27 seizure to Chung. On April 12, JN met Chung at a restaurant in Rosecrans, California to exchange the bladders for \$1,000. Chung was subsequently arrested and charged with smuggling 11 totoaba swim bladders in violation of CITES and U.S. law.

At an estimated price of \$12,500, JN had received .08% of the bladders’ value. After the exchange, Chung was arrested and charged with illegally smuggling endangered wildlife in violation of CITES and U.S. law.

- March 30, 2013 wet bladder seizure at Calexico West<sup>56</sup>



*Image 20. Both the Best Western and the Walmart used by Jason Xie’s network are seen in satellite imagery of Calexico. Both businesses are just over two miles from the Calexico West border crossing on the U.S.-Mexico border. Source: Google Earth*

<sup>53</sup> Totoaba bladder value estimates either based on a price of \$5,000 per kilogram, or on court documents released by the U.S. Department of Justice.

<sup>54</sup> United States of America v. Oi Chung. United States District Court - Southern District of California. 27 February 2013. [www.justice.gov/sites/default/files/usao-sdca/legacy/2015/04/30/Chung%20complaint.pdf](http://www.justice.gov/sites/default/files/usao-sdca/legacy/2015/04/30/Chung%20complaint.pdf).

<sup>55</sup> Ibid.

<sup>56</sup> United States of America v. Jason Jin Xie (1), Anthony Sanchez Bueno (2). United States District Court - Southern District of California. 30 March 2013. [www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Xie%20Complaint.pdf](http://www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Xie%20Complaint.pdf).

The first of the two wet bladder seizures occurred on March 30 at the Calexico West border crossing. According to court filings made public by the U.S. Department of Justice, Anthony Sanchez Bueno arrived at Calexico West in the late morning, driving a Plymouth Voyager with California plates. Sanchez Bueno told the CBP inspector that approached his car that he was “bringing in fish to take to a church he could not further identify as a favor for a friend.” Consistent with Sanchez’s claim, the inspector discovered three coolers in the back of the vehicle, and opened the first. He found that the cooler’s top layers of fish fillets and ice were hiding a lower layer of swim bladders.

Sanchez Bueno then told a second inspector that he was carrying fish. When confronted with the hidden bladders, he admitted to having swim bladders as well. A more thorough inspection of the coolers in the car revealed 102.65 kilograms of totoaba bladders, taken from at least 170 individual fish. The entire haul was worth an estimated \$850,000 in the United States.

Sanchez Bueno told investigators that he had been paid \$700 to smuggle the bladders into the United States - \$200 per cooler, plus an additional \$100 for gas and lunch. He claimed that he had driven two coolers of product into the United States in February as well, and had delivered those coolers to an Asian man in the parking lot of Calexico’s Walmart.

This time, Sanchez Bueno had received instructions to deliver the three coolers not to the Walmart in Calexico, but to the neighboring Best Western. In order to identify the individuals actually managing this smuggling operation, CBP officials, along with HSI and FWS agents, set up a controlled delivery of the bladders to the Best Western in question. The resulting investigation uncovered what appeared to be a totoaba smuggling and money laundering network operating out of the United States, and extending into Mexico and China. See **Shell Network** for more details.

- April 1, 2013 wet bladder seizure at Calexico West<sup>57</sup>

Two days later on April 1, Raquel Castañeda arrived at Calexico West just after 7 am. She told the CBP inspector that approached her car that she was on her way to San Diego to “return some items she had purchased and to visit her brother.” The inspector, however, noticed a cooler in the back of the vehicle and, aware of smugglers’ use of coolers to transport totoaba, decided to open it for further inspection. Inside, the top layers of whole fish, fish fillets, and shrimp hid a lower layer of 28 swim bladders, which Castañeda claimed were squid. The bladders together weighed 16.02 kilograms, and were estimated to be worth between \$42,000 and \$80,100.

In secondary questioning, Castañeda maintained that she was traveling to San Diego to see her brother. She then revealed that she and her husband jointly owned a seafood restaurant in Mexico, and that she was bringing the fish into the United States from San Felipe. Despite her clear involvement in the seafood trade in and around the Gulf, she claimed that she was not aware that totoaba are a protected and endangered species.

- April 10, 2013 dry bladder seizure at Calexico West<sup>58</sup>

The final 2013 border seizure involved Song Shen Zheng (mentioned previously), and led U.S. agents to the largest totoaba drying operation uncovered to date.

<sup>57</sup> United States of America v. Raquel Castaneda. United States District Court - Southern District of California. 1 April 2013. [www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Castaneda%20complaint.pdf](http://www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Castaneda%20complaint.pdf).

<sup>58</sup> United States of America v. Song Shen Zhen. United States District Court - Southern District of California. 19 April 2013. [www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Zhen%20complaint.pdf](http://www.justice.gov/sites/default/files/usao-sdca/legacy/2015/06/23/Zhen%20complaint.pdf).



Taken together, these seizures share a few characteristics that can be considered “red flags” for future totoaba smuggling attempts:

- **Use of coolers**

Totoaba traffickers often rely on coolers to keep wet bladders fresh in transit.

Three of the five totoaba seizures at the U.S.-Mexico border involved the use of coolers. In at least one instance, the arrested trafficker indicated he had also moved wet bladders over the border in coolers previously.

Note that since coolers are only associated with the trafficking of wet bladders, the more that having a cooler becomes a red flag for customs officials at the border, the more processing activities will occur within Mexico, rather than in the United States. This holds true for trafficking and processing operations within Mexico as well; the more enforcement pressure is placed on traffickers with coolers at military checkpoints on the way to the cities along the border, the more processing will take place closer to the Gulf, making the identification of smuggled totoaba more difficult in the earliest steps of the totoaba supply chain.

- **Hidden under frozen fish**

Totoaba traffickers generally attempt to hide wet bladders under other types of frozen fish, perhaps hoping that untrained enforcement officials will not be able to tell the difference.

There is also evidence of totoaba being packed in frozen fish before export from the Americas to Asia by air or by sea. This may be for the same reason that other types of traffickers use frozen fish to obfuscate their contraband; the strong smell of fish products is thought to throw off sniffer dogs.<sup>59</sup>

- **Claims that the bladders are “squid”**

Although the majority of the spring 2013 seizures appear to be associated with distinct trafficking networks, two traffickers in separate trafficking instances told U.S. officials that the bladders in their cars were squid.

In the first case, the smuggler, JN, appeared to be a trafficking mule<sup>60</sup> working for Oi Chung, with little knowledge of the totoaba issue. In the second case, Raquel Castaneda seemed more involved – given her position as a seafood restaurant owner around San Felipe – but did not appear to be managing the export of bladders to China, like identified traffickers Song Shen Zhen or Jason Xie.

This may suggest that traffickers believe describing the bladders as “squid” will allow them to pass through customs unimpeded.

Past seizures can also expose some of totoaba traffickers’ underlying operations:

- **Trafficking “mules”**

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59 For example, in one seizure in Ensenada in 2012, the Mexican Army discovered 425 kilograms of marijuana inside a truck and hidden in boxes containing frozen fish.

See source: “Ejército mexicano decomisa drogas y pirotecnia en BC.” Informador.mx. Unión Editorialista, SA de CV, 2012. [www.informador.com.mx/mexico/2012/415394/6/ejercito-mexicano-decomisa-drogas-y-pirotecnia-en-bc.htm](http://www.informador.com.mx/mexico/2012/415394/6/ejercito-mexicano-decomisa-drogas-y-pirotecnia-en-bc.htm).

60 Couriers with limited knowledge of the trafficking supply chain.

A number of totoaba traffickers caught at the border have been trafficking mules. In totoaba networks overall, however, the individuals acting as cross-border traffickers seem to vary. In some cases, a mule fills the role, but in others, the higher level traffickers themselves take the part. Which type of trafficker is involved may be determined by network size; in smaller scale networks, the organizing trafficker may be involved in moving totoaba as well, while in larger networks, the organizing trafficker may prefer to contract out to a trafficking mule.

The distinction blurs, however, when higher level traffickers both hire individuals to move totoaba and move the bladders themselves. Oi Chung, for example, both paid JN \$1,150 to drive bladders over the border and did it himself one month later.

- **Repeat offenders**

The recurring involvement of relatively few individuals in totoaba seizures at the border may indicate that totoaba trafficking efforts are often successful, as evidenced by the seizure of 274 bladders at Song Shen Zhen's home in Calexico. It may also indicate that totoaba trafficking penalties are too low to act as a meaningful deterrent (with fines often as low as 10% or less of the price of one bladder), or that the chances of getting caught are low enough for traffickers to risk multiple attempts.

- **Involvement of restaurant owners**

Some sources suggest that, as in the case of Raquel Castañeda, totoaba trafficking networks often tie back to restaurants in Mexico, the United States, and Asia.<sup>cxli</sup> Certain restaurant owners in the Americas have allegedly facilitated the movement of totoaba through Mexico and the United States to Asia, reportedly keeping some of the bladders for use in their own establishments.<sup>cxlii cxliii cxliv</sup>

- **Shell companies**

In some cases, totoaba trafficking operations seem to be sufficiently lucrative to warrant the creation of apparent shell companies.

For instance, the investigation following the March 30, 2013 seizure involving Anthony Sanchez Bueno revealed links between a higher level trafficker, Jason Xie, and a recycling company. C4ADS' analysis of this company revealed only limited business activity; although the company claimed to be engaged in recycling activities, U.S. Department of Transportation (DOT) information revealed that the company only had one registered driver.<sup>cxlv</sup> In addition, the company does not appear to have maintained a public presence at its registered address during its five-year period of operation.<sup>cxlvi</sup> During the same time period, Xie received about \$4 million in payments originating in China, up to \$2.1 million of which remained unaccounted for at the time of his restitution hearing in 2014.<sup>cxlvii</sup> One possible explanation for this could be that Xie was using this recycling company to move money associated with his totoaba trafficking activities. See **Shell Network** for more information on Xie and his network.

- **Trafficking supplies provided to cross-border traffickers**

The materials used to traffic totoaba across the border (e.g. cars, coolers, additional fish products) are likely supplied to trafficking mules in Mexico.

For example, Anthony Sanchez Bueno reported to U.S. officials that he had delivered two coolers containing fish fillets and totoaba bladders to an Asian man in Calexico prior to his implication in the March 30, 2013 seizure.<sup>cxlviii</sup> He stated that the man had given the fish fillets back to him, and "told him to return them to the man who had given him the coolers in Mexico."<sup>cxlix</sup> Sanchez Bueno then reached

out to his contact in Mexico, but was instructed to keep the fillets.<sup>cl</sup> He admitted to U.S. agents that he knew “there was something illegal about the swim bladders, and that the purpose of the fillets was just to conceal [them]....”<sup>cli</sup> Sanchez Bueno’s testimony demonstrates that he had been given the coolers and the entirety of their contents prior to departing for the United States.

## Shell Network <sup>clii</sup>

On March 30, 2013, Jason Jin Shun Xie was arrested during a controlled delivery of 169 totoaba bladders in Calexico, California.<sup>61</sup> A FWS-led investigation of Xie's assets revealed that he had dealt in considerable sums of money, receiving over \$3 million in wire transfers alone over an eight-month period.<sup>62</sup> Court documents and C4ADS's analysis suggests that Xie may have been relying on a network of companies – including shell companies – to launder the profits he received through totoaba trafficking, and to obfuscate the true nature of his activities.

According to court documents from Xie's March 2014 restitution hearing, he is associated with two companies: Gerber Recycling, a Sacramento-based recycling company, and J&J Xie & Company.<sup>63</sup> The restitution hearing transcript reveals that Xie told authorities that he and his brother were planning to open a restaurant in Seattle, and were in the process of obtaining a lease for the restaurant. The prosecutors in Xie's case believed him to be referring to the Purple Dot Café, a Chinese restaurant allegedly owned by J&J Xie & Company in Seattle. Although the restitution hearing documents refer multiple times to "J&J Xie & Company," C4ADS's analysts could not find references to a company bearing this name in the open source. There is, however, a "J&J Xie Corporation" registered in Washington state and owned by Jin Z. Xie, Xie's brother who was also present during the March 30 totoaba seizure in Calexico.<sup>64</sup> The company was registered on July 26, 2013.

At the time of the hearing, however, the Purple Dot Café had been open and active since at least 2007. A search for the Café's current phone number and address revealed that both used to link to a company named Saam Tai Enterprise Limited.\* This company's registration expired on September 30, 2013, two months after the registration of J&J Xie Corporation. It seems possible then that the Xie brothers purchased the Purple Dot Café from its original owners sometime in 2013, perhaps with totoaba trafficking proceeds.<sup>65</sup>

Although the brothers' initial involvement with the Purple Dot Café remains somewhat unclear, the company clearly conducts legitimate business activities; the Café is easily discoverable, and dozens of customer reviews support its existence. Gerber Recycling's operations, by contrast, were far less evident. Although Gerber was active between July 2010 and September 2012,\*\* the company's 8390 Gerber Road address appeared to be occupied by an automotive center in April 2012. At the time, a large "For Lease" sign hung in the building's central window.<sup>66</sup>



Image 21. Purple Dot Café in September 2016.  
Source: Google Maps



Image 22. 8390 Gerber Road in April 2012. Sources: Google Maps

61 United States of America v. Jason Jin Xie (1), Anthony Sanchez Bueno (2). United States District Court - Southern District of California. 30 March 2013. [www.justice.gov/sites/default/files/usaosdca/legacy/2015/06/23/Xie%20Complaint.pdf](http://www.justice.gov/sites/default/files/usaosdca/legacy/2015/06/23/Xie%20Complaint.pdf).

62 United States of America v. Jason Jin Xie. Restitution Hearing Transcript. United States District Court – Southern District of California. 26 March 2014.

63 Ibid.

64 United States of America. State of Washington. Secretary of State, Corporations Division.

65 The prosecutor in Xie's case believed that "a good portion of [the] millions of dollars in cash" that Xie received through totoaba trafficking were used to purchase the Purple Dot Café. United States of America v. Jason Jin Xie. Restitution Hearing Transcript. United States District Court – Southern District of California. 26 March 2014.

66 Google Maps Street View.

**JASON J XIE****DBA: GERBER RECYCLING CENTER**

U.S. DOT#: 2853008  
 Address: 8390 GERBER RD  
 SACRAMENTO, CA 95828  
 Number of Vehicles:  
 Number of Drivers: 1  
 Number of Inspections: 0

*Image 23. U.S. DOT information for Gerber Recycling.*

U.S. DOT information (current as of June 2017) for Gerber Recycling shows that the company had one driver, an undisclosed number of vehicles, and zero inspections.<sup>67</sup> Furthermore, customs and trade data for the United States revealed that Gerber did not import or export anything during its brief period of operation.

Gerber Recycling seems to be the first of a string of short-lived recycling companies likely owned by Xie in Sacramento. California business records revealed that three other companies, J&J Recycling Center, J&P Recycling Center, and W.S. Recycling Center were all registered in Sacramento, California under Jason J. Xie or Jason Xie between April 26 and May 19,

2011.<sup>68</sup> Each company, including Gerber Recycling, maintained their fictitious name filings for exactly five years before expiring without renewal. Each company is almost nonexistent in the open source, and each company's address links back to a building with no apparent connection to the company allegedly based there.



*Image 24. The reported address for J&P Recycling in August 2011. Source: Google Maps*

Not one of these companies have import or export trade data that could explain the \$2.3 million in wire transfers from China that Xie received between August 16, 2012 and March 7, 2013. Instead, the only potential explanation is a number of shipments sent by Xie to a contact in Asia during the time period in question. Xie sent 15 Federal Express packages that were

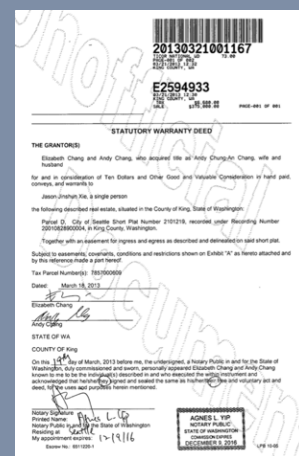
declared as shipments of “dry fish gift,” each to the same individual who was responsible for wiring Xie the entirety of the \$2.3 million.<sup>69</sup>

The U.S. prosecutor for Xie's case estimated that these unseized shipments contained at least 560 dried totoaba bladders, based solely on those shipments with a declared weight. These 560 bladders would have been worth about \$2.8 million total for Xie, and would have sold for much more in China.

This estimate is plausible given both the \$2.3 million in wire transfers Xie received, and an estimate of Xie's income provided by an official witness during the restitution hearing. This witness analyzed four bank accounts held by Xie at Wells Fargo and JP Morgan Chase, and determined that he had received \$930,002 in cash and \$3,073,861 in wire transfers from China, for a total of \$4,003,863.

In Xie's hearing, however, the court acknowledged that Xie's net income was only \$165,000 at the time of his trial. What then happened to the majority of Xie's income?

- According to the same witness, Xie sent at least \$515,000 in wire transfers to a “casa de bolsa”\*\*\* in Mexico between November 2012 and late June 2013.
- Xie wired an additional \$174,150 to unknown recipients.
- Xie withdrew \$117,483 in cash.
- Xie had a total amount of debits and checks totaling \$1,056,174.



*Image 25. Sale document for the Seattle residence to Jason Xie, on March 18, 2013.*

<sup>67</sup> United States of America. Department of Transportation. Federal Motor Carrier Safety Administration (FMCSA). [www.fmcsa.dot.gov](http://www.fmcsa.dot.gov).

<sup>68</sup> United States of America. State of California. Secretary of State, Business Search.

<sup>69</sup> United States of America v. Jason Jin Xie. Restitution Hearing Transcript. United States District Court – Southern District of California. 26 March 2014.

- Just twelve days prior to his arrest, Xie purchased a \$375,000 home in Seattle. Despite the value of the home, Xie only paid Elizabeth and Andy Chang “ten dollars and other good and valuable consideration in hand paid” for the property. Information on the other goods that were exchanged to make up the difference is not publicly available.

These estimated deductions from Xie’s accounts come to just under \$2 million, leaving an additional \$2.1 million unaccounted for.<sup>\*\*\*\*</sup>

The creation of multiple similar companies in quick succession, with little to no traceable public presence, is common in shell company networks. Pair this with large sums of money moving to unknown destinations in a relatively short timeframe, and the most likely scenario becomes that the companies are designed to hold large sums of money to hide or obfuscate the footprints of organized criminal activity.

At the time of Xie’s sentencing, the presiding judge stated,

[Xie] was the operator here. He was coordinating with people in Mexico to capture these fish, to harvest them, to take the bladders, and arranging to have them transported to the United States where he met with the person who brought them across the border and made all the arrangements to ship them to China, and as far as the Court can tell from the financial documents I have, the money went to him, and he was much more than a middleman here...<sup>70</sup>

In the end, Xie received four months of jail time; eight months of house arrest; and forfeited 170 totoaba bladders (valued at \$255,000 in Mexico and \$850,000 in the United States), the property in Seattle valued at \$375,000, and \$500,000 for restitution to a totoaba breeding facility in Mexico.<sup>71</sup>

\* Although the Washington Secretary of State website lists “Saam Tai Enterprise Limited,” most other open source websites give the company’s name as “Tai Saam Enterprise Limited.”

\*\* At which point court testimony states that Xie sold Gerber Recycling to an unknown party. The company has since had virtually no online footprint, and the fictitious business name filing reserving its name expired in July 2015 and was not renewed, suggesting that Gerber Recycling is no longer in operation.

\*\*\* A money exchange or brokerage house.

\*\*\*\* Note that the judge in Xie’s restitution hearing examined the submitted financial documents of the case, and came to the conclusion that only \$231,000 of the \$4 million remained unaccounted for, although she acknowledged that she was unaware of what the \$3,800,000 that left Xie’s accounts had purchased, or where it had gone.

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70 United States of America v. Jason Jin Xie. Restitution Hearing Transcript. United States District Court – Southern District of California. 26 March 2014.

71 United States of America v. Jason Jin Xie. Sentencing Transcript. United States District Court – Southern District of California. 25 October 2013.



Analyzing the five 2013 border seizures in the context of the totoaba supply chain as a whole reveals a number of inconsistencies. First, as discussed previously, no other totoaba bladder seizures have been reported at the U.S. border since the spring of 2013. But information from the 2013 cases revealed that many hundreds of bladders had been successfully smuggled into the United States previously,<sup>cliii</sup> and FWS information from 2016 suggests that bladders have been found in the United States since. How then can it be that there have been only five bladder seizures at the U.S.-Mexico border, and all of them in the space of a couple months?

Second, although a number of totoaba seizures in Mexico have involved finding bladders hidden in spare tires, taped to the bodies of passengers, and stuffed in secret compartments within the traffickers' cars, none of the seizures at the border have involved these more complex smuggling methods.

The clearest explanation for this is that the series of seizures at the border pushed traffickers to find better, more efficient ways to move bladders into the United States.<sup>72</sup> In response, processing may have begun to shift southward, and traffickers may have increasingly opted for more inventive smuggling methods to better evade detection.

But processing moving southward and the development of ever-more complex smuggling methods does little to explain why totoaba seizures have reportedly occurred exclusively at the Calexico border crossing, particularly since the Tijuana-San Ysidro crossing experiences more traffic than Calexico. Furthermore, past seizures on the Mexican side of the border clearly demonstrate the presence of totoaba bladders in Tijuana. For example, in April 2014, two Chinese individuals were detained after they failed to adequately explain the origins of 2.76 kilograms of dried totoaba bladders and 4.62 kilograms of sea cucumbers found in their car.<sup>cliv</sup> Similarly, San Luis Río Colorado is a prominent processing center, and likely trafficking point, for bladders moving across the border into Yuma.<sup>clv</sup> Yet there have been no reported totoaba seizures in or around San Luis Río Colorado.

Taken together, this information suggests that a large number of totoaba bladders may be successfully smuggled into the United States each year.

### *Involvement of Asian Organized Crime*

Chinese immigration to Baja California, particularly Mexicali and Tijuana, dates back to at least the early 1900s. The Chinese population of Mexicali in particular began to grow during Prohibition in the United States, when Americans began to travel south of the border to purchase the alcoholic drinks they could no longer buy at home.<sup>clvi</sup> In response to the sudden influx of American demand, Chinese laborers and farmers in the surrounding areas moved to Mexicali to open bars, casinos, restaurants, and hotels in the city's quickly growing Chinesca district. Within a few years, Chinesca "housed virtually all of the city's casinos and bars, and an underground tunnel system connected bordellos and opium dens with Mexicali's counterpart city on the U.S. side, Calexico."<sup>clvii</sup>

By 1920, the rapid arrival of Chinese immigrants to Mexicali meant the city's Chinese population outnumbered its Mexican population by about 14:1. Seven years later, Chinese businesses had grown prominent enough to prompt a series of Tong wars<sup>clviii</sup> in Mexicali and elsewhere in northern Mexico "over control of gambling and prostitution rings."<sup>clix clx</sup>

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72 The recent dearth of seizures at the border could also be indicative of a shift towards eastern trafficking routes, where authorities tend to be less aware of the totoaba trafficking issue. However, little evidence currently exists to support this theory.

Chinese immigration to the area continued throughout World War II, but began to slow in the years following, until the Mexican population grew to outnumber the Chinese remaining in the city. By the early 2000s, the Chinese population of Mexicali had fallen to about 5,000.<sup>clxi 73</sup>

In more recent years, Mexicali's status as the Mexican city with the largest Chinese population was passed to Tijuana, whose Chinese population tripled from 5,000 in 2009 to 15,000 in 2012. This dramatic increase has been attributed in part to the creation of a direct flight on Aeroméxico from Tijuana to Shanghai in 2008, making Tijuana Airport the only Mexican airport to offer a direct route to China.<sup>clxii clxiii clxiv</sup>

Since then, Chinese involvement in the totoaba trade in Mexico has become increasingly overt. For instance, Chinese citizens and expatriates have been found smuggling totoaba bladders across the border into the U.S., moving bladders within Tijuana, and trafficking them directly from Tijuana to Shanghai. Totoaba traders in China and Hong Kong have also reported that "Chinese immigrants in Mexico were involved in facilitating the trade [in totoaba bladders]."<sup>clxv</sup> For example, in 2015, Greenpeace reported that totoaba traders had told them that the price for totoaba bladders began falling in 2013 "after a number of Chinese citizens moved over to the coast of San Felipe."<sup>clxvi</sup>

The opening of the direct flight has also provided Chinese traffickers with an additional trafficking route. In one instance, Mexican Federal Police discovered a large quantity of bladders during a random search of three suitcases in Tijuana Airport that were en route to Shanghai. In addition, one ex-PROFEPA official claimed that late night flights to Shanghai do not go through standard screening, saying, "The key is the flights that leave at two in the morning for Shanghai. They aren't reviewed."<sup>clxvii</sup>

Furthermore, the organized criminal elements of certain Asian communities in the region have the capabilities necessary for involvement in totoaba trafficking. Asian organized criminal groups' long history of engaging in smuggling activity across the U.S. border, combined with their long-standing reliance on complex tunnel systems in border towns like Mexicali, and their close ties to individuals based in the United States and Asia, make these groups well-suited to smuggling totoaba bladders.

A number of Mexican and American officials have mentioned the involvement of Asian organized crime in totoaba trafficking, and highlighted the expertise of such groups in cross-border trafficking. One security official in Baja California mentioned that "Chinese criminals...traffic in endangered animal species, including local species such as...the fish totoaba...which are smuggled back to China."<sup>clxviii</sup> Another official, Marco Antonio Carrillo Maza, the director of municipal public security for Tijuana, pointed out that while Asian organized criminal groups in the Gulf are primarily involved in human trafficking, they also smuggle endangered animal species, counterfeit goods, opium, and chemicals used to manufacture methamphetamines.<sup>clxix</sup> Finally, a U.S. FWS official noted the ease with which Chinese gangs smuggle totoaba across the U.S. border:

Many Chinese gangs operating in Mexico smuggle [totoaba bladders] north to California. Business owners confirm that it is easy to get merchandise across the border without export fees, paperwork, or even an inspection, simply by bribing border officials, who reportedly wave through Chinese textiles and appliances every day.<sup>clxx</sup>

The extent to which these networks are involved in the illegal totoaba trade, however, remains unclear. Their involvement in smuggling a wide variety of contraband suggests that they are opportunistic traffickers, and will move whatever brings in profit. They may only be involved in the transport of bladders – or they may be involved in managing the totoaba trade. Regardless, additional information is needed on the overlaps between

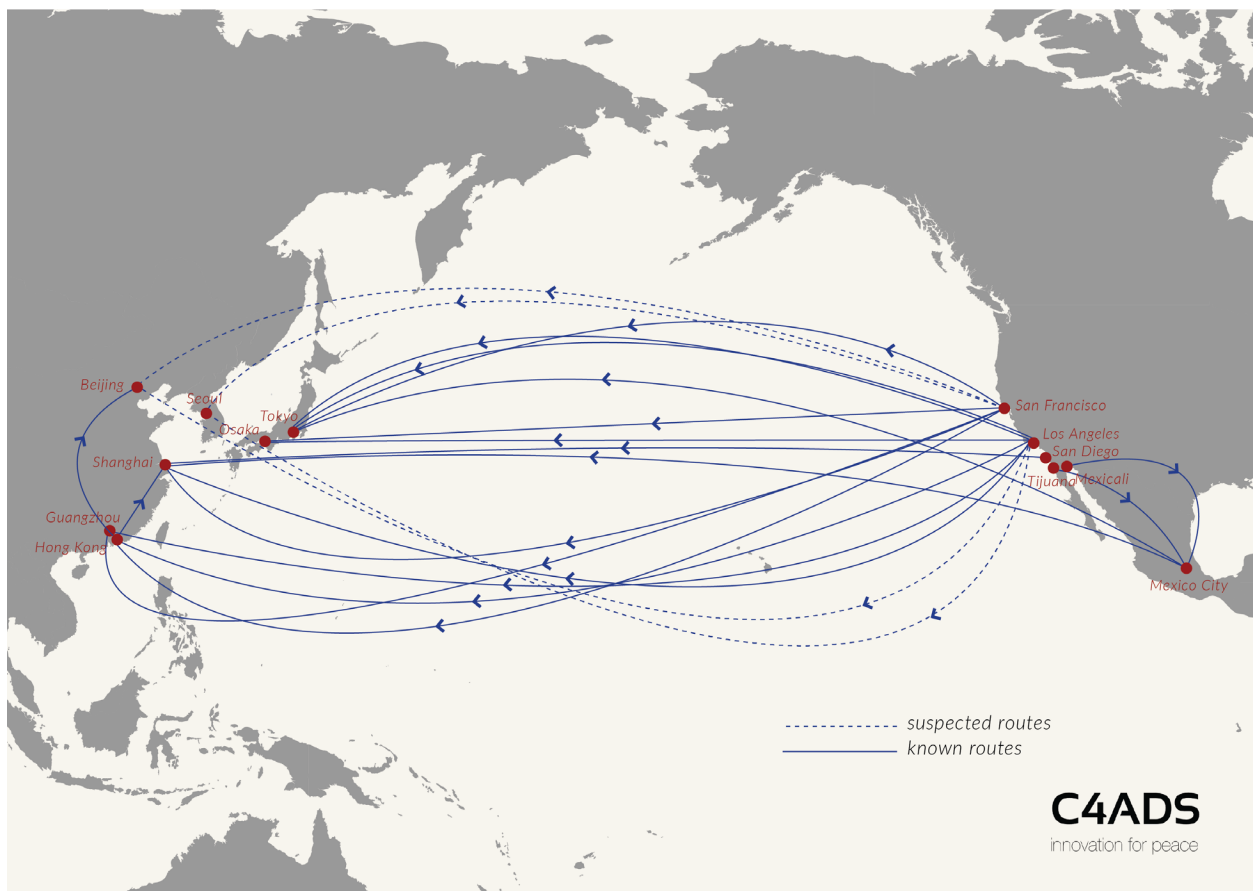
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73 Mexicali reportedly still possesses the highest number of Chinese restaurants per capita of any city in Mexico, with about 100 restaurants serving a total population of just under one million.

Mexican trafficking networks closer to the Gulf, and Asian, or Asian American, trafficking networks closer to the U.S. border, to be able to make this determination. It is clear, however, that the influx of Chinese immigrants into Baja California has had an impact on totoaba poaching in the Gulf, as well as totoaba trafficking from Mexico to Asia and the United States.

#### *Trafficking Routes and Modus Operandi between North America and Asia*

The Americas to Asia leg of the supply chain seems to be dominated by Chinese individuals or expatriates living in Mexico and the United States. Most known seizures at this level seem to involve Chinese middlemen arranging for the export of bladders from the west coast of the United States or Mexico to China or Hong Kong.<sup>clxxi</sup> This portion of the supply chain is also where totoaba traffickers overlap the most with commercial transportation systems; anything leaving the west coast of the Americas for the eastern coast of Asia must go through one of relatively few major airports or sea ports.



Only about six seizures of totoaba shipments in transit to Asia have been reported. A couple additional seizures allegedly of totoaba can be found in local media accounts, but they do not follow the usual pattern seen with totoaba shipments, and their identification as totoaba is contested by law enforcement officials contacted by C4ADS. For the purposes of this report, these seizures are not considered to be reflective of totoaba smuggling methods, and have been removed from the below analysis.

*“International [totoaba] trafficking is done primarily through shipments in containers mixed with other marine products, by parcel service, and hidden in luggage.” PROFEPA*

The *modus operandi* used by traffickers moving bladders to Asia often reflect the methods used by cross-border traffickers. For instance, the pattern of restaurant owners' involvement in totoaba trafficking seems to hold true throughout the supply chain.<sup>clxxii</sup> 74 One Mexican journalist noted:

...restaurant owners of Chinese origin of both the area of Oakland, San José, Sacramento, and southern California, order bladders to sell them in soups in their businesses, but also to transport them to China, Taiwan and Hong Kong, through the port of San Francisco...Often in [Calexico] Chinese businessmen receive the merchandise and move it to the destination, where they have restaurants, or to San Francisco, where they pack the cargo and send it via boat to Hong Kong, Taiwan, China and Vietnam.<sup>clxxiii</sup>

These seizures and other publicly available information about past totoaba trafficking cases in the United States reveal additional similarities, as well as a few methods unique to this portion of the supply chain:

- **Hidden in fish and other food products**

Fish products remain a popular obfuscation method for totoaba shipped to Asia.

On May 22, 2013, during a routine health inspection, Mexican officials in Ensenada opened a shipping container bound for Vietnam that was packed with various fish products. Customs agents found the container's contents did not match the information listed on the shipment paperwork. When the consignment's shipper, Mar de Coruña S de RL de CV, could not provide documentation proving the legality of the shipment, the agents decided to open a second container owned by the company. This container's contents also did not match its associated paperwork, and this time included 142.8 kilograms of dried totoaba bladders, 108 kilograms of totoaba fillets, and 17,430 kilograms of "fish swim bladder." See **Convenience Trading & Mar de Coruña** for more information.

In at least one instance, totoaba traffickers have relied on food products other than fish to obfuscate bladders.

On August 10, 2015, Hong Kong Customs identified a shipment of three totoaba bladders "in a transshipment express cargo" at Hong Kong Airport. The three bladders weighed only 0.635 kilograms, but were valued at HKD300,000 (or about \$38,000 USD). The bladders were discovered when customs officials at the airport noticed "suspicious images" in the X-rays of an express cargo shipment that had been declared as "corn flakes sample." The shipment had originated in Mexico, transited through the United States, and was destined for mainland China.



Image 26. The three totoaba bladders found in an express shipment of corn flakes.  
Source: Hong Kong Customs

- **Shell or front companies**

Shell and front companies are likely used to both launder the large sums of money associated with totoaba trafficking, and to hide totoaba bladders amongst shipments of other goods.

In one well-known case from the United States, a Los Angeles-based furniture company and its owner, Kam Wing Chan, were charged with smuggling totoaba bladders and other endangered marine animal

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74 Raquel Castaneda, for example, testified that she and her husband owned a seafood restaurant in Mexico; Jason Xie was in the process of opening a Chinese restaurant in Seattle, Washington with his brother Jin Xie.

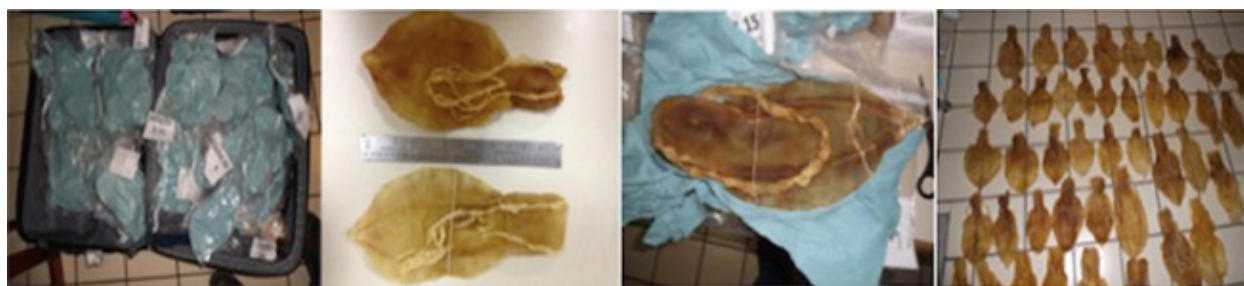
products in 2015.<sup>clxxiv</sup> Kam Wing Chan's company, Kaven Company, had allegedly been purchasing and importing the illegal products from suppliers in Mexico before exporting them to Convenience Trading Co., Ltd., a Hong Kong-based company. A subsequent investigation by U.S. officials found that the owner of Convenience Trading, "Faye Chan" (or Chan Shek Ying on official Hong Kong documentation), is a close relative of Kam Wing Chan (see **Rich Maw-hogany**).<sup>clxxv clxxvi</sup>

- **Trafficking mules**

Although the seizures made thus far do not clearly reflect the use of trafficking mules to move totoaba between continents, it is widely suspected by law enforcement officials and others that certain individuals are paid to carry dried totoaba bladders in their carry-ons or checked baggage through American and Asian airports.<sup>clxxvii clxxviii</sup> One Hong Kong-based trader told Greenpeace in 2015 that Hong Kong Customs was "free entry," and explained that bladders were sent to Hong Kong in checked luggage each month.<sup>clxxix</sup> The unfamiliarity of most customs and airport officials with totoaba bladders, as well as the remote chance that scanners will be able to pick up the presence of bladders, likely contribute to the supposed success of this strategy.

- **Use of checked baggage**

According to Mexican government sources, dried totoaba bladders are often hidden in checked luggage by passengers transiting from the Americas to Asia.



*Image 27. Various photos of the 274 totoaba bladders discovered wrapped in blotting paper, placed in vacuum bags, and stuffed in three suitcases in Tijuana Airport. Source: PROFEPA*

In one instance in July 2015, Mexican Federal Police discovered 274 dried totoaba bladders (weighing 34.78 kilograms) en route to Shanghai<sup>clxxx</sup> in three suitcases during a random search of passenger luggage in Tijuana Airport.<sup>clxxxi</sup> The bladders had been wrapped in drying paper and stored within vacuum bags "so that the product would not bulge or smell." Officials immediately identified and arrested the three Chinese owners of the bags.

- **Reliance on air freight**<sup>clxxxii</sup>

Totoaba smugglers have also been known to use air freight shipments to transport totoaba bladders across the Pacific.

On November 19, 2014, Mexican customs officials discovered 385 dry totoaba bladders at the Mexican Mail facility at Mexico City Airport.<sup>clxxxiii</sup> The bladders had been placed in black plastic bags in three packages that had originated in Mexicali Airport and were destined for China.<sup>clxxxiv</sup>



*Image 28. Some of the totoaba bladders discovered in the November 19, 2014 seizure. Source: PROFEPA*

In addition, court documents associated with Jason Xie and packaging materials found in the home of Song Shen Zhen suggest that both traffickers relied on air couriers like FedEx to transport totoaba shipments from the United States to China and Hong Kong.<sup>clxxxv clxxxvi</sup>

- **False declarations (e.g. “fish products”)**<sup>clxxxvii</sup>

Traffickers moving totoaba bladders by air freight or by sea must declare the products they are shipping in customs paperwork. Many totoaba shipments are declared as various fish products, perhaps to compensate for any fishy smell emanating from the cargo, or perhaps to confuse customs officials and scanners that are not familiar with totoaba.

In the Mar de Coruña seizure, the container in question had been declared as “frozen fish maw,” while the purchase documents associated with the shipment claimed the containers were moving frozen corvina, frozen sea cucumber, and jellyfish.<sup>clxxxviii</sup> Similarly, customs documentation recovered by U.S. case agents for Jason Xie’s totoaba shipments revealed that he generally declared his cargo as “dried fish gift shipment[s]” (See **Convenience Trading & Mar de Coruña**).<sup>clxxxix</sup>



Rich Maw-hogany <sup>CXC</sup>

Shipment	
Bill of Lading Number	ECURFPKAD1386
Bill of Lading Type	House
Master Bill of Lading Number	NYKSHW020498500
Number	
Arrival Date	Sep 28, 2016
Shipment Origin	Hong Kong
Shipment Destination	Olney Mesa Station, Olney Mesa Station, California
Port of Loading	Port of Long Beach, Long Beach, California
Port of Loading	Hong Kong, Hong Kong
Place of Receipt	HONG KONG
Transport Method	Maritime
Vessel	OOCL BEIJING
Is Containerized	yes
Volume (TEU)	0.68
Volume (CBM)	0.680026
Quantity	23 CTN
Measurement	
Weight (kg)	600
Weight (lb)	0
Weight (Original Format)	600 KG
Value of Goods (USD)	90
HS Code	742723
Manifest Number	742723
Transportation and Exportation (T/E)	Transportation and Exportation (T/E)
Number of Containers	1
Has LCL	yes
Company	
Consignee	Kaven Co. Inc.
Consignee (Original Format)	KAVEN COMPANY INC 3623 RIVER AVE. NO. 8 ROSEMEAD, CA 91770 USA ROSEMEAD CA91770 US
Consignee (Global HQ)	
Consignee (Domestic HQ)	
Shipper	Convenience Trading Co., Ltd.
Shipper (Original Format)	CONVENIENCE TRADING CO LTD FLAT 2 178 LAUREL IND CENTRE 32 181 YAU STREET SAN PO KONG HONG KONG HK
Shipper (Global HQ)	
Shipper (Domestic HQ)	
Carrier	EOCL - Ecu Line
Notify Party	NYK - Nya Line Nippon Yusen Kaisha
Notify Party (SCAC)	
Container 1	
Container Number	#NYKUS83591
HS Code	8473
Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles: Electrical machines and apparatus, having individual functions, not specified or included elsewhere in this chapter; parts thereof.	
Goods Shipped	23 CTNS OF DRY SEA CUCUMBER
Volume (Container)	0.68
Volume (Container)	0.68
Container Marks	KAVEN COMPANY INC 3623 RIVER AVE. NO. 8 ROSEMEAD, CA 91770 GROSS WEIGHT NET WEIGHT MEASUREMENT 50X40X30CM CARTON OF NO # Divided across 22 shipments
Divided LCL	View LCL
Container Type of Service	
Container Type	4500
Departure Goods	90

Image 29. This bill of lading from September 28, 2016 is for a shipment of “dry sea cucumber” shipped from Convenience Trading to Kaven Company. Note that the shipment’s declared HS code is for electrical machinery, not marine products. Source: Panjiva

In January 2015, the U.S. Department of Justice reported that Kaven Company, Inc., a U.S.-based furniture company, had been importing illegal fish products, including totoaba bladders, abalone, and sea cucumber, into the United States before exporting them to a Hong Kong-based company named Convenience Trading.<sup>75</sup>

An investigation by U.S. officials revealed that the owner of Kaven Company, Kam Wing Chan, was a sibling of Convenience Trading’s owner, Faye Chan, and that the total value of goods smuggled by the family members was over \$3.2 million.<sup>76 77 78</sup> Kam Wing Chan subsequently pled guilty to the charges and was sentenced to a fine of \$12,500, a restitution payment to the Mexican government of \$50,000, three years of probation, and the forfeiture of any smuggled fish still in his possession.<sup>79 80</sup> It seems that Convenience Trading was never charged in association with the incident. Shipments of sea cucumbers and other seafood products between Kaven Company and Convenience Trading continued at least until April 12, 2017, the date of the last available shipment at the time of writing.<sup>81</sup>

According to U.S. customs records, Kaven Company was the only U.S. importer of goods shipped by Convenience Trading between June 2012 and April 2017, although Kaven began requesting that some of its shipment data not be shared publicly beginning in 2014.<sup>82</sup> While the majority of the shipped consignments were declared as furniture, a number of shipments were openly declared as sea cucumber, despite Kaven Company and Chan’s previous convictions for smuggling totoaba, sea cucumber, and other protected marine species.

Faye Wing Chan and other likely family members also own two other companies, Phase Creative Manufacturing Limited and Enfund Limited, both of which share an address with Convenience Trading.<sup>83</sup> Phase Creative Manufacturing appears to be a furniture and clothing company, although it sent quite a few shipments of

<sup>75</sup> United States of America. Department of Justice. U.S. Attorney’s Office, Southern District of California. “Furniture Company Used Front for International ‘Fish’ Smuggling Operation.” 9 January 2015. [www.justice.gov/usao-sdca/pr/furniture-company-used-front-international-fish-smuggling-operation](http://www.justice.gov/usao-sdca/pr/furniture-company-used-front-international-fish-smuggling-operation).

<sup>76</sup> According to court documents associated with the case, Chan personally traveled to Mexico to purchase over \$2 million of abalone, sea cucumber, and totoaba. He then arranged for the seafood products to be smuggled into the United States prior to export to his sister’s company in Hong Kong.

<sup>77</sup> United States of America. Department of Justice. U.S. Attorney’s Office, Southern District of California. “Furniture Company Owner Admits Role Running International ‘Fish’ Smuggling Operation.” 21 July 2015. [www.justice.gov/usao-sdca/pr/furniture-company-owner-admits-role-running-international-fish-smuggling-operation](http://www.justice.gov/usao-sdca/pr/furniture-company-owner-admits-role-running-international-fish-smuggling-operation).

<sup>78</sup> United States of America v. Kaven Company, Inc. (1) and Kam Wing Chan (2), aka “Kevin Chan”. Indictment. United States District Court – Southern District of California. September 2013.

<sup>79</sup> United States of America v. Kaven Company, Inc. (1) and Kam Wing Chan (2), aka “Kevin Chan”. Judgement. United States District Court – Southern District of California. 5 October 2015.

<sup>80</sup> United States of America v. Kaven Company, Inc. (1) and Kam Wing Chan (2), aka “Kevin Chan”. Forfeiture Order. United States District Court – Southern District of California. 8 October 2015.

<sup>81</sup> US trade data retrieved from Panjiva ([www.panjiva.com](http://www.panjiva.com)).

<sup>82</sup> Ibid.

<sup>83</sup> People’s Republic of China. Hong Kong Special Administrative Region. Integrated Companies Registry Information System (ICRIS).

undeclared products to Kaven Company between 2007 and 2012.<sup>84</sup> Enfund Limited has far less of a public presence, but seems to have imported shipments of sea cucumber in the past.

In order to gain a better understanding of the operations of Faye Wing Chan's various companies, C4ADS's partners visited the companies' address in early 2017. They found that although the building had an office directory on the ground floor, it did not list the occupant of Convenience Trading's office. Furthermore, there was no signage on the office entrance, and the space seemed to be used more as a storeroom than anything else, with multiple locks on the front door. The door also displayed signs of possible forced entry; the metal of the door had been bent back, and multiple screws had been partially removed. On one occasion, a woman was seen inside the office space amidst boxes and bags, at least some of which appeared to be holding dried seafood. CCTV equipment was also visible.



Images 30 – 32. Convenience Trading's Hong Kong location.

With no clear storefront or online website, how Convenience Trading sells their products, and who they sell them to, remains unclear. To date, although Convenience Trading has been openly linked to multiple large shipments of totoaba and other protected marine species, they do not appear to have been prosecuted or investigated by Hong Kong authorities.

84 US trade data retrieved from Panjiva ([www.panjiva.com](http://www.panjiva.com)).

As totoaba trafficking has become increasingly prevalent, totoaba smugglers seem to have shifted slightly away from using the United States as a common processing point, and now are likely managing most processing operations within Mexico, allowing traffickers to pass dried bladders through the United States and China. As enforcement in Mexico and at the border intensified in response to the rapid growth in totoaba trafficking, traffickers professionalized their smuggling methods to evade detection. Still, the extremely limited number of totoaba seizures outside of Mexico indicates that totoaba enforcement efforts elsewhere are lacking. Without a concerted effort to dismantle the entirety of the totoaba supply chain within Mexico and other jurisdictions, the totoaba mafia will continue to operate with impunity.

## Destination

### **Estimated Totoaba Bladder Value in China: \$5,000 to \$250,000 per bladder<sup>cxci</sup>**

China is the world's largest consumer of seafood products, accounting for over one-third of the world's annual seafood consumption.<sup>cxcii</sup> Over the past few decades, rising incomes and the growth of the Chinese middle class have led to rapidly increasing demand for luxury seafood products, including abalone, shark fin, and sea cucumber, as well as swim bladders from totoaba and other fish. Chinese seafood imports over the past few years have responded to surging demand, increasing from \$3.9 billion in imports in 2009 to \$5.5 billion in 2015.<sup>cxci</sup>

Like ivory and rhino horn, these luxury seafood products generally serve two broad purposes: first, to demonstrate wealth and status in Chinese society; and second, to bestow perceived health benefits upon the consumer. Amongst high-end seafood products, totoaba in particular is believed to have a particularly potent health benefits, including the ability to “stop bleeding, nourish the liver and kidneys, improve skin condition and invigorate circulation”<sup>cxci</sup> when prepared in fish maw soup. Smaller, less expensive totoaba bladders are generally reserved for this purpose. Recently, however, it seems that consumption of totoaba bladders has decreased, with most consumers seemingly more interested in the bladders due to their economic value.<sup>cxci</sup> Recent evidence suggests that only a select few customers are willing to pay over \$5,000 for soup made with totoaba bladders, particularly when fish maw soup can easily be made with more affordable and readily available swim bladders<sup>cxci</sup>. Instead, totoaba bladders seem to be purchased mostly as investments, or as gifts to business partners or government officials.<sup>cxci</sup>

To better understand the current state of totoaba demand in Asia, C4ADS and C4ADS's partners conducted a survey of seafood retailers, wholesalers, and other potential sellers to identify evidence of totoaba sales between February and March 2017. Our primary focus during this limited timeframe was Hong Kong, which is known to be a major retail and distribution hub for totoaba and other high-end luxury seafood products. In the course of our research, investigators visited almost 100 dried seafood stores across the island, following on two major surveys conducted by Greenpeace and EIA in 2015 and 2016. At the same time, C4ADS's analysts searched online retail sites such as Alibaba, Taobao, and Tencent Weibo to identify current and past advertisements for declared or suspected totoaba bladders. In general, we found significantly reduced overt activity in Hong Kong, mirroring a trend found in other studies of totoaba markets.

The first of these surveys, conducted by Greenpeace in February and April 2015, found totoaba trafficking activity concentrated in Sheung Wan, a fairly affluent district in Hong Kong. The next report, by EIA, monitored totoaba retailers over the course of one year, from April 2015 to July 2016, in Hong Kong and Guangdong province in mainland China. EIA found a more limited market for totoaba in Hong Kong than Greenpeace had found, but identified an apparently thriving market in Guangzhou and Shantou in Guangdong. A third report was published by EAL in May 2017, detailing undercover work that took place in Guangdong in March 2017. EAL also uncovered a decline in the number of shops selling totoaba in Shantou, compared to EIA's findings from less than a year earlier.

The findings of C4ADS's investigation provide an update on how the end of the totoaba supply chain is reacting to increased public and enforcement attention, revealed additional sectors and entities of interest from a trafficking and retail perspective, and identified areas of lingering uncertainty within the final links of the totoaba trafficking chain.

### *Recipient Trafficking Networks*

As totoaba bladders leave the Americas, be it by airline passenger, air cargo, or container vessel, they must have intended recipients on the other side. Information on the movements of totoaba traffickers and bladders immediately after arrival in Hong Kong, mainland China, or elsewhere, however, remains extremely limited; there have been only two known cases against totoaba retailers in Hong Kong, and only one known seizure of totoaba bladders on arrival in Asia. As a result, unlike in Mexico and the United States, seizure information cannot be used to determine trafficking routes and methods in Asia.

Our current understanding of Asian totoaba bladder importers therefore derives from on-the-ground investigative work, such as Greenpeace's 2015 report, and past enforcement activity in Mexico and the United States. This information reveals that totoaba is likely imported by three types of entities:

- **Seafood retailers and wholesalers**

Direct importation of totoaba bladders by seafood retailers and wholesalers seems to be a relatively common method used to move totoaba to demand markets.

One retailer told Greenpeace's undercover investigators that he could help them purchase small, young bladders directly from Mexico or the United States – presumably from stockpiles held there by his associates – and that the “delivery time would be around one week.”<sup>cxviii</sup>

Yong De Chang Zibu Hang, a wholesaler in Guangdong, reportedly had been sourcing frozen totoaba bladders directly from Mexico for about six years at the time of EIA's visit in December 2015.<sup>cxix</sup> The owners of the company, the Ji family, “claim to be one of the biggest wholesalers in Shantou, supplying to large businesses and other traders in Guangdong, Hong Kong, Fujian and...Shanghai and Beijing.”<sup>cc</sup>

- **Individuals acting as trafficking middlemen**

Multiple traders have reported that they receive totoaba bladders from a “friend” who either orchestrates trafficking between the Americas and Asia in coordination with traffickers in Mexico and the United States, or smuggles the bladders over personally in their checked baggage. In both situations, retailers seem to place orders with their “friends,” some of whom appear to manage their own stockpiles, and some of whom may acquire more totoaba bladders only upon receipt of an order.<sup>cci</sup>

In one case, a retailer described how he purchased his totoaba bladders from a friend in the United States, whom he claimed smuggled totoaba into Asia about three times a year, each time carrying between 10 and 20 bladders.<sup>ccii</sup>

- **Front companies**

Front companies may be used by traffickers for larger shipments of totoaba bladders and other illicit seafood products. The use of a front company allows traffickers to hide behind the name of a registered company, and helps them avoid using a person's name on the paperwork associated with air cargo or containerized maritime shipments. Furthermore, a front company ostensibly engaging in the trade of a licit commodity will have ample opportunity to smuggle small quantities of illicit products within larger, otherwise legal shipments. They will likely also be more engrained within international trade and transportation systems, and therefore may be less likely to raise suspicions when shipping goods seemingly unassociated with their registered business activities.

Companies engaging in this behavior will exhibit a number of risk indicators. First, they will often be registered as engaging in business activities unrelated to the trade they are actually engaging in (e.g. a clothing company shipping seafood). Second, they will send and receive both shipments and payments

for shipments, but they will often not maintain a storefront or online presence. In some cases, front companies will rent a store and create their own website, but they will not appear interested in selling to the general public; the store will receive few customers, and the website will have no clear way to pay for products, or will refrain from posting products for sale entirely. Finally, the documentation associated with their shipments will likely contain a variety of anomalies, including mismatching shipment content descriptions and HS codes (e.g. a shipment declared as statues under the HS code for mattresses), inaccurate or unavailable shipper and consignee information, and inaccurate or inconsistent weight and estimated value declarations.

More investigation is necessary to develop a deeper, more thorough understanding of the totoaba trade at this stage, and to confirm or deny the tentative findings that have emerged thus far through on-the-ground investigative work and open source analysis.



## Mar de Coruña <sup>cciii</sup>

One totoaba bladder seizure from 2013 highlighted how totoaba traffickers use licit transportation systems to move illicit products, and revealed previously uncovered links between individuals, companies, fishing groups, and NGOs with ties to totoaba trafficking.

On May 22, 2013, Mexican officials at the port of Ensenada opened a container of fish products for a routine health inspection.<sup>85</sup> After opening the container, they found that its contents did not match the container's documentation, and that the estimated price of the shipment was significantly undervalued. Mexican customs asked the owner of the shipment, Mar de Coruña S de RL de CV, for a document proving the legal providence of the marine species in the container, but the company was only able to deliver a copy of a May 20, 2013 bill for 7,925 kilograms of frozen corvina, 6,570 kilograms of frozen sea cucumber, and 3,151 kilograms of jellyfish.\*

Because of the inconsistencies found in the first container, Mexican officials opened a second container owned by Mar de Coruña later that same day.<sup>86</sup> Although this second shipment had been declared as “frozen fish maw,” Mexican customs found many boxes of sea cucumber, seahorses, chano, clams, abalone, and other fish species inside the container, as well as 142.8 kilograms of dried totoaba bladders and 108 kilograms of totoaba fillets.

**Documento Válido**

**MAR DE CORUÑA S DE RL DE CV**  
 Regimen Fiscal: REGIMEN GENERAL DE LEY PERSONAS MORALES  
 MCO091218197 EMILIANO ZAPATA No. 1 Int. No. 271 EL SAUZAL DE RODRIGUEZ  
 ENSENADA 22700  
 ENSENADA BAJA CALIFORNIA MEXICO

Cliente: CONVENIENCE TRADING COMPANY LTD.  
 F.C.: KEXX010101010  
 Emisor: FLAT B 14F WONG KING INDUSTRIAL BUI No. SIN  
 Teléfono: Colonia: LOING 2-4 TAI YAU ST C.P.: CHINA  
 Ciudad: SAN PO, KONG KO Estado: WLOON, HONG KON País:  
 Lugar de expedición: ENSENADA, BAJA CALIFORNIA, MEXICO

Cantidad	Unidad	Concepto / Descripción	Valor Unitario	Importe
15.540	TONELADA	VENTA CONGELADO FROZEN FISH MAW 1036 BOXES OF 15 KGS EACH ONE CONTAINER: HUCU 606891 - 0 BOOKING: ESE300123700 DESTINATION HONG KONG VESSEL: HANJIN SHANGHAI 0127 W	65.00	1,010.10

Importe con letra: DIEZ DOLARES 10/100  
 Método de Pago y No. Cuenta:   
 Certificado:   
 SUBTOTAL: 1,010.10  
 I.V.A.: 0.00  
 TOTAL: 1,010.10

Image 33. The bill of lading for the second container, shipped by Mar de Coruña S de RL de CV and destined for Convenience Trading in Hong Kong. Source: Ensenada.net

Both shipments displayed a number of common red flags for illicit shipments:

- **Undervaluation.** The bills of lading for the shipments declared their value at just over \$1,000 each, a vast undervaluation given that the totoaba bladders in the second container alone were likely worth at least \$856,800 in Mexico.
- **Missing permits.** Both shipments lacked proof that the marine species being shipped were legal, such as corresponding fishing permits, permits for the potentially protected species in the containers such as sea cucumber and abalone, etc.

85 Vargas, Elizabeth. “Exportaba a 1.30 Pesos el Kilo de Productos Marinos.” Ensenada.net. Ensenada.net, 3 June 2013. <http://ensenada.net/noticias/nota.php?id=29691>.

86 Ibid.

- **Incorrect descriptions.** Neither shipment accurately declared the marine products being shipped.

Although the true owners of the shipment were not mentioned in news reports of the seizure, a registration document for Mar de Coruña shows that the company is owned by the Arias López family, with the father of the family, Federico Alejandro Arias Suárez, owning the majority share (50%; his wife and three children each own 12.5%).

Arias Suárez clearly plays a fairly prominent role in the fishing community in Ensenada, serving as the legal representative for a number of fishing companies and NGOs, and serving on the board of other organizations. A partial list of the organizations that Arias Suárez seems to be involved with includes the following:

- Mar de Coruña S de RL de CV
- Industriales Pesqueros de Baja California (Industrial Fishermen of Baja California)<sup>87</sup>
- Integradora Comercial AMS, SA de CV<sup>88</sup>
- Consejo Consultivo de Pesca y Acuicultura de Ensenada (CCPAE) (Ensenada Fisheries and Aquaculture Advisory Council)<sup>89</sup>
- Comité Sistema Producto Pelágicos Menores de Baja California (Minor Pelagic Product System Committee of Baja California)<sup>90</sup>

In addition, the phone number for Industriales Pesqueros de Baja California matches the phone number of a seafood, produce, and minerals exporter, MLP Distribuidora Internacional, SA de CV. Archived versions of MLP Distribuidora Internacional's website reveal that the website has never contained information about the company, vacillating instead between a blank page, a page reading "MLP: Under Construction," and a page for CONUMMEX, an Ensenada-based gold mining company. Advertisements posted by MLP Distribuidora Internacional on Taobao Weiku\*\* and other trade websites mention that the company deals in "iron ore, manganese, coal, barite, copper and gold" as well as "abalone, lobsters, and sea cucumbers."\*\*\*<sup>91 92</sup>

Finally, information from Buholegal on a 2017 court case suggests that Arias Suárez, as representative of his company Integradora Comercial AMS, sued the Mexican president, PROFEPA, and other Mexican government agencies.<sup>93</sup> Documents associated with the case reveal that Arias Suárez sought a provisional suspension of laws passed by the Mexican government that prevented activity in protected nature habitats.

The discovery of the containers also had implications outside of Mexico. Convenience Trading Co. Limited, the Hong Kong-based company that both containers were meant for, has also been known to source illegal totoaba bladders, sea cucumbers, and other species from the Americas. The company, owned and operated by Faye Wing Chan, was implicated in the 2015 court case involving the California-based Kaven Company

87 "Industriales Pesqueros de Baja California." AsociaciónCivil.co. Humana.org.mx, 29 March 2017. <http://asociacioncivil.co/ong/industriales-pesqueros-de-baja-california/>.

88 República de México. Integradora Comercial AMSSA de CV v. Presidente Constitucional de México y Otros (Case Number: 25/2017). Buho Legal. [www.buholegal.com/listaacuerdos/federal/?circuito=15&organismo=1360&tipo=expediente&tipoexpediente=1&noexpediente=25/2017](http://www.buholegal.com/listaacuerdos/federal/?circuito=15&organismo=1360&tipo=expediente&tipoexpediente=1&noexpediente=25/2017).

89 "Instalaron Consejo Consultivo de Pesca y Acuicultura de Ensenada, lo Primero Será Revisar su Reglamentación." PLEX Online. PLEX, 12 October 2014. [www.plexmx.info/2014/10/12/instalaron-sin-reglamentacion-el-consejo-consultivo-de-pesca-y-acuicultura-de-ensenada/](http://www.plexmx.info/2014/10/12/instalaron-sin-reglamentacion-el-consejo-consultivo-de-pesca-y-acuicultura-de-ensenada/).

90 "Comité Sistema Producto Pelágicos Menores de Baja California." AsociaciónCivil.co. Humana.org.mx, 29 March 2017. <http://asociacioncivil.co/ong/comite-sistema-producto-pelagicos-menores-de-baja-california/>.

91 MLP Distribuidora Internacional, SA de CV. Advertisement for Geoduck Clams. Taobao Weiku. Weiku.com. [www.weiku.com/products/4135120/Geoduck\\_Almeja\\_Generosa\\_o\\_Chiluda.html](http://www.weiku.com/products/4135120/Geoduck_Almeja_Generosa_o_Chiluda.html).

92 MLP Distribuidora Internacional, SA de CV. Gmdu.net. Global Trades From Here. <https://www.gmdu.net/corp-671290.html>.

93 República de México. Integradora Comercial AMSSA de CV v. Presidente Constitucional de México y Otros (Case Number: 25/2017). Buho Legal. [www.buholegal.com/listaacuerdos/federal/?circuito=15&organismo=1360&tipo=expediente&tipoexpediente=1&noexpediente=25/2017](http://www.buholegal.com/listaacuerdos/federal/?circuito=15&organismo=1360&tipo=expediente&tipoexpediente=1&noexpediente=25/2017).

(previously mentioned), although it does not seem to have faced any penalties as a result of its involvement.

\* The container's actual contents consisted of 3,171 kilograms of jellyfish, 345 kilograms of sea cucumber, 4,339.69 kilograms of dried shark fins, and 4,950 kilograms of sea cucumbers.

\*\* The ad is for geoduck clams, which the company states can be found in the Gulf of California. They claim they pack product in "Styrofoam cases with sponges and ice packs" in Ensenada before shipping it "via ground to...LAX Airport by truck, where it gets flown to Asia to its final destination arriving within 36 hours after leaving Ensenada."

\*\*\* Note that abalone and sea cucumbers are often protected and require special permits to export.

### *Changing Demand*

The price of totoaba bladders in destination markets varies depending on the size, age, and quality of the bladder. Larger, older bladders of better quality receive the highest prices, and can be sold for as much as HKD2 million (about \$255,000).<sup>cciv</sup> Smaller, younger bladders are sold for much less, occasionally going for as little as HKD35,000 (about \$5,000).<sup>ccv</sup> However, bladder prices vary substantially throughout the market. Greenpeace noted that “bladders of similar size and quality can cost HKD40,000 [\$5,000] in one shop and HKD120,000 [\$15,500] in another.”<sup>ccvi</sup> Greenpeace attributed the widely variable price range to “scattered distribution,” meaning the shops engaged in the trade received their bladders over a wide timeframe, from tens of years ago to only a few months previously.<sup>ccvii</sup>

A significant amount of trade is conducted through retail outlets, which are the most obvious links to the majority of totoaba consumers. Demand seems concentrated in comparatively affluent neighborhoods in Hong Kong and southern China, where customers are more likely to be able to afford totoaba’s high prices.<sup>ccviii</sup> Past studies have found Sheung Wan district in Hong Kong to be particularly prominent,<sup>ccix</sup> as well as the Qingping and Yide Road markets in Guangzhou, and Jinping District in Shantou.<sup>ccx</sup>

At the time of Greenpeace’s investigation in 2015, at least 13 wholesalers and retailers out of 70 shops visited in Sheung Wan were actively engaged in selling totoaba (in other words, 18.5% of shops visited). EIA’s first survey took place around the same time in both Hong Kong and Guangzhou, and came up with similar results: of the 23 retailers EIA visited, at least six of the Guangzhou retailers had totoaba bladders to sell (26% of shops visited). But during EIA’s next visit a few months later (after the publication of Greenpeace’s findings), retailers in Guangzhou appeared much more cautious, with some even displaying a poster on the illegality of totoaba sales from Guangdong Oceans and Fisheries Administration. Still, five of the nine traders involved in this second review admitted at least to continued possession of totoaba bladders. A third trip to Shantou during the summer of 2016 identified multiple shops and markets with totoaba openly on sale.

In March 2017, EAL returned to Shantou and found that 12% of 18 shops visited were still openly displaying totoaba bladders for sale. About another nine shops “admitted to carrying ‘gold coin’ fish maw for sale,” meaning either totoaba or Chinese bahaba bladders.

Around the same time, C4ADS’s contacts visited just under 100 shops, restaurants, and hotels in Hong Kong, including 63 locations in Sheung Wan alone.<sup>ccxi</sup> None of the locations visited openly advertised totoaba bladders for sale, and many of the shopkeepers were clearly aware of totoaba’s illegality, reacting either defensively or evasively upon its mention. A small number indicated that totoaba could still be made available. Despite their evasive behavior, a select few of the businesses visited are suspected of continued involvement in totoaba trafficking given past enforcement actions and trade activity.

The combined picture of totoaba sales created by these four investigations suggests that the totoaba trade has moved further underground as public and enforcement attention to the issue has increased. Totoaba sales in Hong Kong in particular seem to have declined, with more and more of the trade ostensibly shifting to “safer” locations in Shantou and Guangzhou on the mainland (See *Law Enforcement Efforts and Possible Corruption* below).

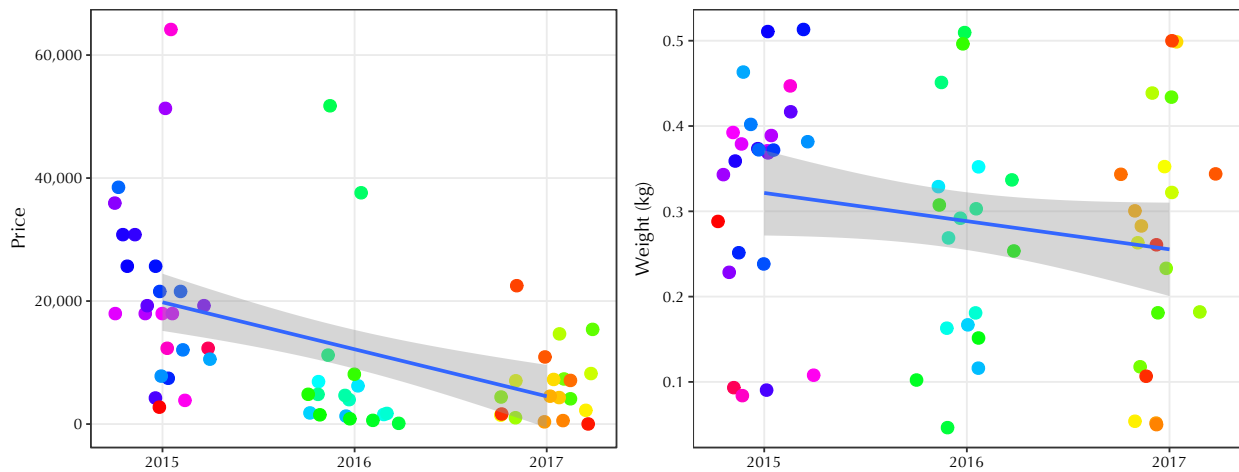
### *Shifting Prices*

The apparent decline in overt totoaba sales is reflected in the steadily decreasing price of totoaba in demand markets. Multiple traders described a substantial fall in totoaba prices to Greenpeace, EIA, and C4ADS’s partners. On average, traders reported that totoaba bladders’ value fell 60% to 80% between about 2012 and

2015.<sup>ccxii ccxiii</sup>

In 2015, the most common explanation for this drop was that prices were high until about 2013 or 2014, when a large influx of supply from Mexico caused prices to crash, as supply exceeded and overwhelmed demand for the bladders.<sup>ccxiv ccxv</sup> 94 Some traders attributed this influx to a number of Chinese citizens who allegedly moved to San Felipe in 2013.<sup>ccxvi</sup> It should be noted that this timeline also coincides with the suspected entrance of Mexican organized crime into the totoaba supply chain around 2013.

The price decrease has certainly been substantial enough to affect the number of totoaba bladders currently on sale, and to create incentive for traders to stockpile bladders, waiting for the return of more advantageous pricing. For example, two of the nine traders in EIA's second survey in the winter of 2015 declared that they were waiting for the price to increase before offloading their totoaba stock.<sup>ccxvii</sup> One explained that he had spent about \$1,500,000 in 2013 and 2014 to grow his totoaba inventory from 100 to 200 bladders, and he seemed unwilling to risk a loss on his substantial investment. Another trader complained that sales had fallen from more than 1,000 bladders a month in 2014 to only about 30 a month in mid-2016, and claimed that few bladders were being imported due to the related price drop.



Figures 2 and 3. The first graph depicts the weights of the identified totoaba bladders for sale between 2015 and 2017. The second maps the asking price (USD) for each bladder. Each individual bladder has its own color, allowing the bladders to be traced from one graph to the next.

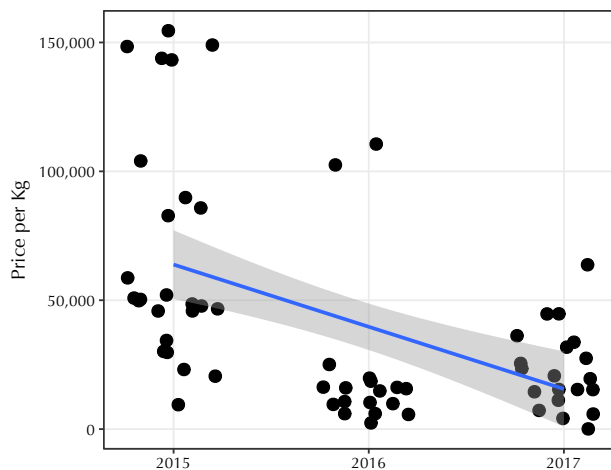


Figure 4. Each totoaba bladder known to have been for sale in China and Guangdong between 2015 and 2017 is depicted in the graph to the left. The bladders are mapped based on their price (USD) per kilogram.

94 Another, less common explanation for the drop pointed to decreased demand due to the ongoing anti-corruption campaign in mainland China.

In other cases, traders are believed to be stockpiling bladders, but not only to avoid a loss. As the intertwined plight of totoaba and the vaquita has grown more urgent, some traders seem to be betting on the future collapse of the species, and a subsequent massive spike in prices.

Although the number of totoaba bladders on sale in Hong Kong and Guangdong seems to have decreased, steady or increasing illegal totoaba fishing and trafficking activity suggests that some sales in Hong Kong and Guangdong continue. It seems likely that totoaba is now more frequently sold online or directly to previously identified, high net-worth, trustworthy consumers. This latter theory is reinforced by a report from one trader, who claimed that “a core group of ‘loyal’ totoaba consumers” were using the substantial drop in prices to create their own stockpiles.<sup>ccxviii</sup>

However, Shantou, where EAL identified totoaba bladders for sale as recently as March 2017, seems to be the last remaining stronghold of direct-to-consumer totoaba sales. This is consistent with suggestions that the true heart of the totoaba trade lies in Guangdong Province, rather than in Hong Kong, which seems to have been used as little more than a transit point for totoaba traffickers until the recent enforcement crackdown on totoaba sales.

### *Law Enforcement Efforts*

Although totoaba has been CITES-listed since 1976, officials in China largely neglected to enforce the international ban on the totoaba trade until about 2015, despite being the most prominent destination for totoaba bladders. The Hong Kong government’s first major counter-totoaba trafficking operation took place between May and June of 2015.<sup>ccxix</sup> As part of the operation, AFCD officials inspected about 150 dried seafood shops, and found two stores to be in possession of a total of 14 totoaba bladders (three bladders were found in the first shop, 11 in the second).<sup>ccxx</sup> In December 2015, the owner of Yue Hing Marine Products Trading Co. was found guilty of possession of three totoaba bladders, and was fined HKD30,000 (\$3,853).<sup>ccxxi</sup> The case marked the first prosecution for totoaba related crimes in Hong Kong, but the fine was only a small fraction (23%) of the bladders’ HKD130,000 (\$16,692) sales price.<sup>ccxxii</sup>

After the publication of Greenpeace’s report in June 2015, AFCD carried out undercover investigations of the retailers and wholesalers mentioned in the report. They found no evidence of totoaba sales at any of the shops identified by Greenpeace. AFCD then conducted additional inspections of another 450 dried seafood shops between August and November 2015 that similarly “revealed no irregularities.”

The AFCD’s findings are at odds with the results of the investigations undertaken by Greenpeace, EIA, and C4ADS’s partners, all of whom surveyed fewer shops than AFCD but found greater evidence of illegal totoaba possession and sales. One possible explanation for this may be found in Shantou, where some totoaba traders told EAL that “government inspectors would notify them before showing up for an inspection,” giving them enough time to hide any illegal seafood products.<sup>ccxxiii</sup> Although Shantou is, of course, in Guangdong province and not in Hong Kong, it is certainly possible that any remaining totoaba traders in Hong Kong receive similar warnings prior to inspections.

Regardless, since 2015, Hong Kong and Guangdong officials have made clear efforts to raise awareness of totoaba trafficking and highlight the penalties associated with possession of totoaba bladders. The Guangdong Oceans and Fisheries Administration, for example, handed out a poster to seafood traders in 2015 warning that involvement in totoaba trafficking would lead to seizures of the offending products, a fine, and possible prosecution.<sup>ccxxiv</sup> One trader told EIA in late 2015 that inspections had taken place in Guangzhou, and some retailers had been found with totoaba bladders and fined as a result.<sup>ccxxv</sup> In early 2017, Guangdong



officials conducted 5,331 inspections of markets, retailers, hotels, and restaurants;<sup>95</sup> disseminated posters and pamphlets on China's Wildlife Conservation Law<sup>96</sup> and CITES; and distributed media reports to raise awareness.<sup>ccxxvi</sup> In Hong Kong, the AFCD has provided training to the Hong Kong Customs and Excise Department, as well as developed a totoaba identification guide for law enforcement officials.<sup>ccxxvii</sup> Their awareness raising efforts appear to be working; a large number of seafood traders told C4ADS's partners that they knew totoaba bladders were illegal, and therefore refused to carry them.

This apparent progress is overshadowed, however, by the continued existence of totoaba demand, however slight, and the persistent sale of totoaba bladders in Shantou and elsewhere. C4ADS's partners found that some individuals involved with the seafood industry in Hong Kong were aware of a few wealthy individuals who are known to possess and/or consume totoaba, but who have managed to avoid detection by Hong Kong authorities. In other cases, the main reason shopkeepers did not carry totoaba was not due to its illegality or perceived risk, but because they claimed that totoaba bladders were prohibitively expensive, and were purchased too infrequently by consumers to warrant the investment. In addition, although Hong Kong customs reported in 2015 that they had seized 17 suspected totoaba bladders in three cases in two years, no investigations or prosecutions resulted from the seizures.<sup>ccxxviii</sup> Most importantly, these recent enforcement developments have had a negligible impact on illegal totoaba fishing in the Gulf of California, where totoaba and the vaquita still suffer at the hands of totoaba fishermen.

#### *Asian Trafficking Routes and Modus Operandi*

What limited information is available on totoaba trafficking within Asia suggests that totoaba bladders are generally moved to or through "safe" jurisdictions prior to delivery to consumers. For example, in 2015, Hong Kong totoaba traders described Hong Kong customs as "free entry," and told Greenpeace that "Hong Kong customs were very loose and had very little knowledge about the bladders...Chinese customs were much stricter and would need to be 'dealt' with extra care."<sup>ccxxix</sup> One explained that "the officials in Hong Kong don't care, only drugs are prohibited. [Totoaba] is not a prohibited item."<sup>ccxxx</sup> A number of these traders described how they would sell totoaba bladders to mainlanders, and then arrange for the delivery of the bladders to mainland China in exchange for a fee of HKD2,000 to 3,000 (about \$250 to \$385) per bladder.

EIA's findings were similar. EIA noted that the traders they approached had also mentioned smuggling bladders from Hong Kong into mainland China, in addition to explaining that buyers from the mainland purchased bladders in Hong Kong "due to the perceived higher quality of supplies from the city and the higher risk of fakes in Guangzhou."<sup>ccxxxi</sup>

Multiple traders have confirmed Hong Kong's prominence as a transit hub, some even going so far as to explain the specific methods they used to move bladders into mainland China, including:

- **Corruption**

One trader mentioned that bribes of customs officials would be necessary to guarantee safe passage into Guangzhou.<sup>ccxxxii</sup> This is perhaps unsurprising, given that officials in Guangzhou are likely aware of totoaba trafficking, unlike officials in the more distant cities of Beijing and Shanghai. Rumors of corruption in Guangdong are also consistent with reports from other traders that officials in the province warn seafood shops of impending inspections.<sup>ccxxxiii</sup>

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95 The inspection findings were not publicly reported.

96 Officially known as the Law of the People's Republic of China on the Protection of Wildlife.

- **Stockpiles held elsewhere**

Some retailers and wholesalers source from large stockpiles of totoaba bladders they have amassed over time. A few sellers mentioned to investigators that their inventories were held outside of Hong Kong, in the United States or China,<sup>ccxxxiv</sup> suggesting that some traders have associates that actually manage and maintain their stockpiles on their behalf.

One prominent fish maw company in Guangdong, Yong de Chang Zibu Hang, claimed to have a stockpile of 600 to 700 totoaba bladders in June 2016, well after totoaba prices and demand began to fall.<sup>ccxxxv</sup> This lends credence to the theory that major traders continue to accumulate totoaba bladders even in the face of declining sales.

- **Use of authorization forms**

Some sellers require their customers to sign authorization forms before they arrange for the purchased bladders to be smuggled out of Hong Kong.

For instance, one shopkeeper told Greenpeace that totoaba buyers would be “guaranteed to be safe from ‘trouble’” after they signed the form.<sup>ccxxxvi</sup>

- **Hidden in suitcases wrapped in plastic**

Some bladders are flown out of Hong Kong, instead of being driven across the border into Shenzhen on the mainland. In those cases, the bladders seem to be packed in traffickers’ suitcases for transport, where they are unlikely to be identified and recovered by customs or enforcement officials.

One trader explained that the traffickers have their suitcases wrapped in plastic at Hong Kong Airport to further reduce the likelihood their bags will be searched.<sup>ccxxxvii</sup> He also mentioned that his bladders were usually flown on direct flights from Hong Kong to Beijing.

- **Trafficking mules**

Trafficking to the mainland is arranged by retailers, but often executed by external hires that are brought on exclusively to move totoaba bladders.<sup>ccxxxviii</sup>

For example, one retailer on Des Voeux Road West explained that his shop would hire people to carry bladders in their suitcases from Hong Kong to Beijing.<sup>ccxxxix</sup>

- **Trafficking fee of HKD2,000 (\$256) to HKD3,000 (\$385)**

Retailers in Hong Kong seem to charge an additional HKD2,000 (\$256) to HKD3,000 (\$385) per bladder for the trouble of smuggling the contraband through Hong Kong and Chinese customs.<sup>ccxl</sup>

- **Declared as regular fish maw**

Similar to the way totoaba bladders are moved from the Americas to Asia, intra-China smugglers are known to declare the swim bladders in their luggage or shipment as regular fish bladders, or simply “fish maw.”

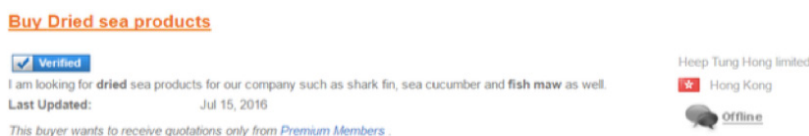
The success of this method is based almost entirely on the (often correct) assumption that officials are either unaware that fish maw can be illegal, or that they are not familiar enough with totoaba to be able to identify totoaba bladders. One trader warned that declaring totoaba simply as “fish maw” would be acceptable in Beijing, but not at Lo Wu border crossing between Hong Kong and Shenzhen,

where customs officials are more aware of totoaba trafficking.<sup>ccxli</sup> Other traders explained that fish maw consignments are not routinely scanned by customs, although they failed to specify which air or sea ports they were referring to.<sup>ccxlii</sup>

- **Online information exchange**

Sellers and traffickers have also been known to exchange information on social media and on other online platforms about different trafficking methods and routes. For example, in early 2016, one commenter warned that officials at a specific border crossing point between Hong Kong and mainland China were conducting enhanced inspections, and recommended that traffickers use a different route.<sup>ccxliii</sup>

Seafood importers have also been known to request fish maw, shark fin, and sea cucumber – all of which can be illegal depending on the species imported – through posts on trade websites. For instance, one seafood importer, Heep Tung Hong Ltd., which allegedly imported shark fins into Hong Kong by mislabeling shipments as “products of animal origin” or “dried fish,” published a buy offer for seafood products on a trade website in 2016.<sup>ccxliv</sup>



*Image 34. A buy offer posted by Heep Tung Hong on a popular trade website in July 2016.*

The recent improvements in the Hong Kong government’s treatment of totoaba trafficking, however, and the subsequent decline in the number of Hong Kong businesses engaging in the trade, suggest that Hong Kong’s importance as a transit region may be decreasing, as traffickers opt for cities, airports, and sea ports where awareness is significantly lower. Flight routes to mainland China from the Americas indicate that other potential import cities could include Beijing, Shanghai, and Guangzhou, all of which are connected to the United States through direct flights to Los Angeles and San Francisco.<sup>97</sup>

Common flight routes can also reveal likely transit airports used by totoaba smugglers. For example, San Diego and Mexico City only offer one direct flight to Asia, and both to the same airport – Narita Airport in Tokyo. Given that Narita is a large airport positioned directly between totoaba’s supply and demand regions, and has many flights connecting the two, it seems likely that totoaba traffickers sometimes pass through Tokyo on their way to China or Hong Kong. Other potential transit cities include Seoul, Singapore, Taipei, and Osaka, all of which offer nonstop flights to either Los Angeles or San Francisco.

Some evidence from government officials and undercover investigations support this theory, suggesting that flight routes are a good indicator for previously overlooked or little known transit points for totoaba bladders. PROFEPA officials, for instance, have previously stated that totoaba bladders are occasionally moved through Japan on their way to Shanghai or Hong Kong.<sup>ccxlv</sup> In 2014, a totoaba trafficker turned himself in to Mexican authorities and reported that Samy Gallardo had dealt directly with buyers in Japan and South Korea prior to his death (See **The Narcobucheros of Santa Clara**).<sup>98 ccxlv</sup> One trader told Greenpeace that totoaba trafficking is “safe” in Singapore, where customs officials may not even be aware of the totoaba trafficking issue. In

97 Note that higher levels of totoaba trafficking awareness in Guangzhou may mean that traffickers rely less on Guangzhou Baiyun Airport to import bladders, although totoaba import information remains too limited to definitively determine whether this is the case.

98 Officials later released him after they found his testimony to be questionable.

addition, although flights from southern California to Bangkok's Suvarnabhumi Airport are not direct, a trader in Shantou recently told EAL that bladders are moved through Thailand as well, where customs officials are probably unaware of the species' protected status.

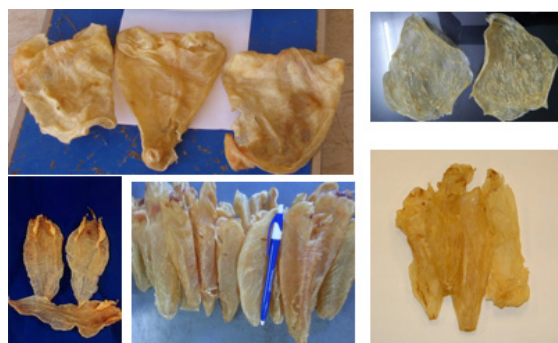
### Online Sellers

Online sales free retailers from geographic constraints, offering them the opportunity to market to a much broader array of potential customers. In the case of illicit products, online sales also provide retailers additional layers of protection. For example, sellers can post advertisements on online platforms using false or altered information to obscure their true identity. Reliance on online transactions also reduces or removes the need for retailers to maintain storefront shops, which are both resource-intensive and can put sellers of illegal products at risk. As a result, online ads can be an important source of revenue for totoaba retailers, wholesalers, and other sellers. Over the past few years, as customs and enforcement attention to totoaba trafficking has increased, online sales may offer retailers a way to offload their totoaba stock without risking discovery during a surprise inspection.

Since the totoaba trafficking supply chain is very narrow, with less than 50 traders identified by past undercover investigations, online totoaba advertisements are limited in number. Furthermore, because totoaba is illegal and increasingly well-known, most sellers with online advertisements do not declare their products as totoaba – instead, they use a variety of terms familiar to experienced or knowledgeable buyers, and include photos that are recognizable as either totoaba or bahaba bladders (i.e. bladders with long tubules).<sup>99</sup>



*Image 35. A totoaba bladder for sale in Hong Kong with the characteristic long tubules. Source: Greenpeace*



*Images 36 – 40. Various fish maws of other species. Note that none possess the long tubules seen on totoaba bladders. Sources: Alibaba, 21Food, ERLIN Seafood*

Using these known obfuscation strategies to identify likely totoaba ads, EIA documented 21 advertisements for totoaba bladders (an additional five were allegedly bahaba maws,<sup>100</sup> but may actually have been totoaba) in 2015 and 2016. A little less than a year later, in four months between February and May 2017, C4ADS identified eleven ads for totoaba bladders,<sup>101</sup> suggesting that online sales have persisted or increased despite

<sup>99</sup> In some cases, consumers may not know the actual name of totoaba, relying instead on its many nicknames.

<sup>100</sup> The Chinese bahaba is classified by the IUCN as critically endangered due to overfishing. The bahaba is only protected in mainland China, and is not CITES-listed.

<sup>101</sup> Eight of these eleven ads are showcased below.

the apparent drop in in-person totoaba sales.<sup>102</sup>

<b>By Any Other Name</b> The Names and Phrases Used to Refer to Totoaba Bladders		
English	Chinese	Transliteration (Pinyin)
(Dried) Fish/Swim Bladder	鱼肚	yú dǔ
(Dried) Fish/Swim Bladder	鱼胶	yú jiāo
(Dried) Fish/Swim Bladder	鱼鳔	yú biào
(Dried) Fish/Swim Bladder	花胶	huā jiāo
Chinese Drum	鲛鱼*	mín yú
Money Fish (money maw)	金钱鱼 (鱼肚/鱼胶/鱼鳔/花胶)*	jīnqián yú
Money Drum	金钱鲛*	jīnqián mín
American Money Drum	美国金钱鲛*	Měiguó jīnqián mín
Large-Whisker Money Drum	大须金钱鲛*	dàxū jīnqián mín
Croaker (Drum)	石首鱼	shíshǒu yú
Money (Golden Coin) Drum	金钱鲛*	jīnqián mǐn
San Francisco Money Drum	金山金钱鲛*	jīnshān jīnqián mǐn
Totoaba	托头石首鱼	tuōtóu shíshǒu yú
Totoaba Macdonaldi	麦氏托头石首鱼**	màishì(zhī) tuōtóu shíshǒu yú
California Yellow Croaker	加州犬型黄花鱼	Jiāzhōu quǎnxíng huánghuā yú
Gulf of California Croaker	加利福尼亚湾石首鱼	Jiālìfúnyàwān shíshǒu yú
Aquatic Cocaine		
<b>Spanish</b>		
Totoaba Buche		
* Colloquial terms for totoaba and totoaba bladders		
** Scientific name for totoaba		

Likely totoaba ads have been found on the following platforms:

- **Artron.net**

Artron.net is a Chinese art website that provides an auctioning platform for users to sell art and antiques online. EIA found auction records for 25 “money maws” on the site between mid-2015 and mid-2016. They determined that 18 of the auctioned bladders were of totoaba, “either via their listed name (e.g. ‘big whiskered money maw’ or ‘American money maw’)” or by analyzing the photographs of the bladders.

C4ADS monitored Artron.net during the spring of 2017 for new totoaba postings, but found only one likely totoaba auction, scheduled to begin on June 8.<sup>103</sup> The bladder in question weighs 503 grams, making it one of the biggest bladders to be put up for sale online, according to both EIA’s and our own findings (other large bladders sold online have weighed “under 500” grams<sup>ccxlvi</sup> and 505 grams<sup>ccxlviii</sup>).

- **Alibaba**

<sup>102</sup> If the approximate rate of totoaba postings from 2015 and 2016 had continued into 2017, we would have expected to find three or four online totoaba ads between February and May of this year. Finding eleven advertisements in four months equates to an apparent increase of about 214%.

<sup>103</sup> As of early August 2017, it did not appear that this bladder had sold.



Alibaba is the world's largest e-commerce company, and owns three main commerce websites – Taobao, Tmall, and Alibaba.<sup>ccxlix</sup> In early August 2016, EIA found three ads on Alibaba that were allegedly of bahaba maws, but were being sold for totoaba bladder prices, suggesting that the traders behind these ads may have been trying to pass off totoaba bladders as having come from the much rarer bahaba.<sup>ccli</sup>

C4ADS identified two additional ads on Alibaba in the spring of 2017.

- **Taobao**

Taobao is owned by Alibaba, and is China's biggest online shopping site, akin to Amazon in the United States.<sup>ccli</sup> EIA identified at least three advertisements on Taobao in early August 2016 that appeared to be of totoaba bladders. Two additional ads on the site claimed to be selling bahaba maws, but their low prices suggested that may have been totoaba bladders as well.

C4ADS found three postings for likely totoaba bladders during our investigation. None of the ads included the date of posting, so we could not determine whether the ads were new, or the same ads that EIA had identified ten months previously.



*Images 41 – 44. Photos of likely totoaba bladders posted on Shantou Fish Maw Canyuan Nutritious Products' Taobao page.*

- **YOYCart**

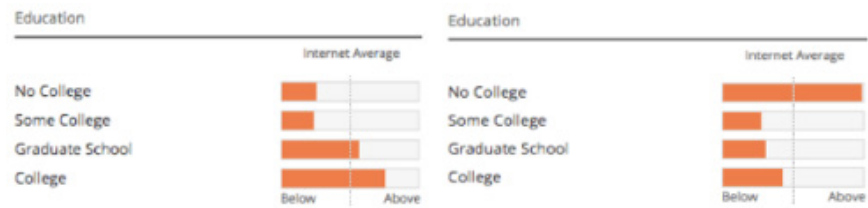
YOYCart is another of Alibaba's commerce websites.

C4ADS discovered five likely totoaba ads on YOYCart, as well as one additional ad that seemed to be of totoaba, but did not fit the pattern of a standard totoaba sale. Two of the ads we identified were duplicates of posts on Taobao, but the YOYCart versions of the ads were for significantly more than their Taobao counterparts.<sup>104</sup> The difference in prices could stem from the difference in user demographics between the two sites. YOYCart seems to be primarily used by Chinese men with college degrees, while Taobao's standard user population is much more likely to have no college experience.<sup>105</sup>

<sup>104</sup> For example, a post on YOYCart from Haifu Fish Maw at first appears to be a duplicate of an ad posted on Taobao (the photos used are the same), but on closer inspection, the YOYCart ad is for a 50-gram, rather than a 350-gram, bladder. The smaller maw on YOYCart is being sold for RMB 15,390 (\$2,233), which is far more per kilogram than the larger bladder on Taobao (\$4,145 per kilogram versus \$44,668).

<sup>105</sup> The YOYCart ads also offered discounts for purchases of larger numbers of bladders for each of the ads we identified. For example, consumers wishing to buy anywhere from 11 to 15 bladders from Shantou Fish Maw Canyuan Nutritious Products would receive a discount of almost two U.S. dollars per bladder. The discounts were consistent across all the identified ads, suggesting this may be a feature provided by YOYCart, and may not be reflective of the





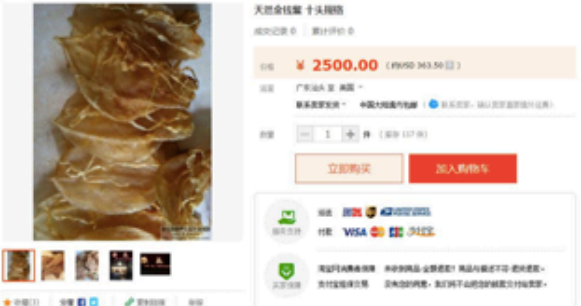




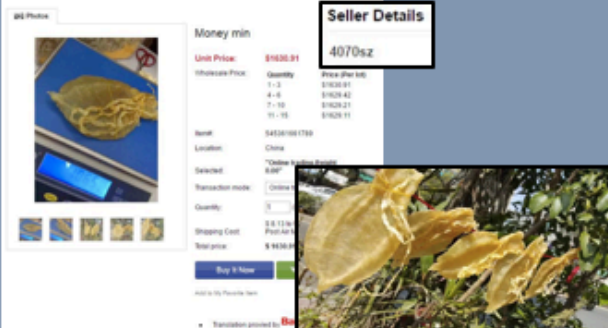
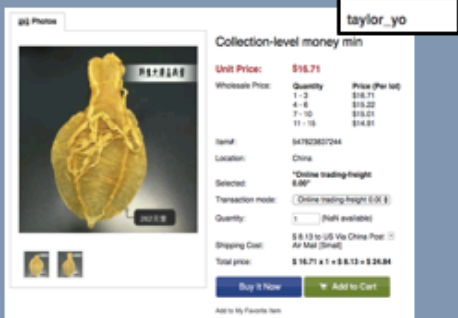
Images 45 and 46. Both graphics split website users by level of education. The first graphic depicts YOYCart’s users; the second maps Taobao’s. Source: Alexa.com

The final ad is odd; while the photos used in the post do not appear to be stock photos (often indicative of fake advertisements), the 262-gram bladder is being sold for only \$16.71, or \$63.78 per kilogram. The other likely totoaba bladders on YOYCart are sold for an average of \$18,207 per kilogram, 285.5 times more than the price of the bladder in this post. It is highly unlikely that the bladders are simply from a cheaper fish – the only other type of fish with comparatively long tubules on its swim bladder is the Chinese bahaba, which commands an even higher price than totoaba.

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sellers’ actual sales policies.

Advertisement	Seller	Website	Details
	Beijing Dongcheng Auction Co., Ltd. (北京东正拍卖有限公司)	Artron.net	503-gram bladder scheduled for auction. The post states that the bladder was appraised at RMB 150,000 to RMB 160,000 (\$21,768 to \$23,219).
	Ai Youyou (北海市海城区爱就就干海味商行)	Alibaba	280-gram bladder for RMB 29,680 (\$4,307), and 295-gram bladder for RMB 31,270 (\$4,538).
	Haizhong Haiwei (广州市越秀区海中汇海味行)	Alibaba	500-gram bladder with an asking price of RMB 50,000 (\$7,254). The post has since been “shelved” according to the company’s Alibaba page.
	Shantou Fish Maw Canyon Nutritious Products (汕头鱼胶参元滋补品)	Taobao	50-gram bladder for RMB 2,500 (\$363). The company’s post mentions that they have 117 of these bladders in stock; the photos of dozens of bladders included in the ad suggest that this may be true. In addition, under “Item Details,” the seller states that the bladders are from the United States, and are packed as “edible agricultural products.”

Advertisement	Seller	Website	Details
	Haifu Fish Maw (海富鱼胶)	Taobao	One ad, from Haifu Fish Maw (海富鱼胶) in Shantou, appears to be selling three bladders, but mentions that "In addition to these three there are other sizes...first come first served! If interested, contact the seller to choose..." The post also claims that the sellers have "99,999 bladders" in stock.
	Paula Hall (葆兴堂)	Taobao and YOYCart	343-gram bladder that a Guangdong-based company, Paula Hall (葆兴堂), appears to be selling as a gift for RMB48,888 (\$7,105).
	n/a	YOYCart	106.5-gram bladder priced at \$1,631 and for sale by "4070sz." The account owner appears to have at least four other bladders, according to photos included in the ad.
	n/a	YOYCart	262-gram bladder being sold for only \$16.71. The seller is identified as only "taylor_yo."

During the course of our investigation into online totoaba advertisements, we came across a few ads that were likely fake. Totoaba's high price, combined with the inherent secrecy of the internet, creates incentive for fake posts attempting to scam unsuspecting consumers out of a fairly significant amount of money. Most of the fake ads we uncovered shared a few important characteristics: the photos in the ad were taken from news articles, press releases, or even other ads for totoaba; the company "selling" the product was based outside of totoaba's usual supply and demand regions; the posts were written in English, rather than the more usual Mandarin; and the ads actually included the word "totoaba," instead of relying on a more obscure option like "money maw."

## Fake Totoaba Advertisements

C4ADS identified one post, from the e-commerce website Taobao Weiku, that displayed all of the known red flags for fake advertisements, and revealed an unusual method used by scammers to appear legitimate.

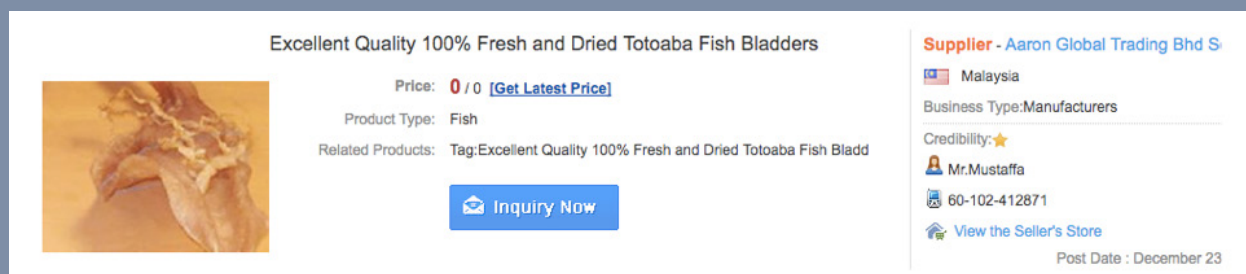


Image 47. A likely fake totoaba ad posted on Weiku in December 2016.

In this case, the post does not include a price (a common method used for multiple types of illegal activity). The photo used is at first undiscoverable in the open source, but closer inspection of a photo from a news article reveals a clever method used by online scammers:

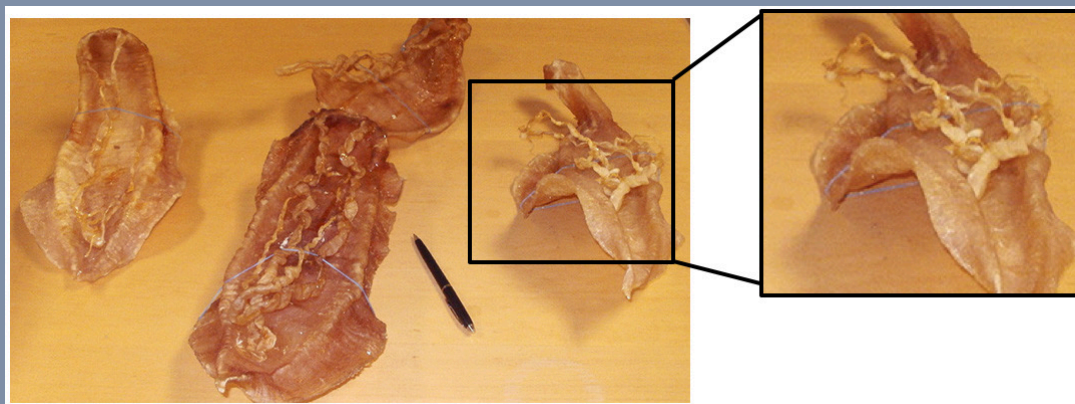


Image 48. A media photo of three dried totoaba bladders. The smaller photo was screenshot by C4ADS to replicate the image used in the advertisement. Source: Marty Graham / Reuters

The image was simply a cropped screenshot of a photo of dried totoaba taken for Reuters. Clever workarounds like this help scammers and traffickers obfuscate their true identity and pass, for a time at least, as legitimate business entities.

In general, each survey conducted thus far on totoaba demand markets has revealed a steadily declining number of totoaba bladders openly on sale in stores, in addition to a corresponding drop in totoaba bladder prices. Traders in Hong Kong and Guangdong have become increasingly wary of undercover investigations and enforcement actions, making them increasingly unlikely to openly sell or discuss totoaba bladders. This reluctance to engage with strangers hampers the ability of enforcement officials, investigative journalists, and NGOs to track changes in the totoaba trade and identify trafficking patterns associated with totoaba sales and movements within Asia. This becomes particularly problematic when coupled with the extremely low number of totoaba seizures in the region that would otherwise shed light on the end of the totoaba supply chain. In addition, as law enforcement awareness and presumably seafood shop inspections continue to increase, totoaba traders may increasingly rely on preexisting relationships with trusted, high net-worth totoaba consumers, as well as online e-commerce websites, to do business. More work must be done on the Asian aspect of totoaba trafficking moving forward – preferably in the form of longer term, more intensive undercover investigations directed by Hong Kong and Chinese law enforcement – to determine how the totoaba trade is continuing to flourish and who exactly is involved. Finally, Beijing and Shanghai seafood markets have so far escaped scrutiny, even though previously seized totoaba has been destined for Beijing; this oversight should be remedied to determine the extent of these cities’ involvement in the totoaba trade. The suffering totoaba and vaquita populations cannot withstand the continued existence of totoaba demand in China or Hong Kong.



## Conclusion & Recommendations

Totoaba and their beleaguered neighbors, the vaquita, are suffering from an epidemic they cannot survive. Although totoaba fishing, even illegal totoaba fishing, is nothing new in the Gulf of California, the high profits and low risks that totoaba trafficking offers have become increasingly tempting to poor fishermen, and have become irresistible to organized criminal actors in the area who see totoaba as an easy path to profit.

As word spread in the early 2010s of totoaba bladders' high value, more and more criminal actors entered the region. Totoaba trafficking became an organized criminal activity in its own right, benefiting from the same trafficking routes, *modus operandi*, and network connections underpinning crimes like narcotics trafficking in the region. As Mexican and U.S. law enforcement officials have become aware of totoaba trafficking, totoaba networks have shifted their operations to accommodate changing enforcement dynamics, with apparent success – no totoaba bladder seizures have been made at the U.S. border since 2013, even though totoaba bladders still leave the United States for Asian markets. Effective enforcement in Hong Kong and mainland China has been limited, with only a few seizures of totoaba ever recorded, even as known totoaba importers continue to operate with impunity within China's borders.

In addition, C4ADS's investigation has revealed that enhanced enforcement activity along the U.S.-Mexico border has resulted in the increasing importance of Mexico as a processing point, as traffickers opt for moving harder-to-detect dry bladders over national borders. Our investigation also highlighted the decreasing relevance of Asian seafood shops and storefronts, as the number of overt totoaba sales in brick-and-mortar stores continues to drop, and totoaba retailers and consumers become increasingly difficult to identify.

With vaquita numbers hovering below 30, and with destabilizing Mexican and Asian organized criminal networks continuing to enrich themselves off the circumstances causing their decline, decisive action must be taken by government authorities, the public sector, and the private sector to prevent the loss of the vaquita species. Continued complacency will mean the extinction of the vaquita and the sustained enrichment of organized criminal actors around the Gulf of California, who know they will not be made to face the consequences of their crimes.

Furthermore, the involvement of sophisticated organized criminal actors into the totoaba trade has exacerbated the destabilizing effects of Mexican organized crime in the Gulf of California region. As long as totoaba prices remain high and prosecutions of totoaba traffickers remain nonexistent, the insidious creep of organized crime will continue to erode the legitimacy of the Gulf's government agencies, lowering the chances of future effective enforcement and bolstering traffickers' sway and power. Past experience instructs that as government influence deteriorates, legitimate business structures often lose support and begin to crumble. In the worst case scenario, this process continues until locals are left to choose between a life of licit poverty or a life of illicit subsistence.

Finally, what if the vaquita is lost? There is a real danger that the loss of the vaquita would mean the reduction or removal of anti-gillnet fishing efforts in the Gulf, leaving totoaba and other species behind to defend themselves against an invisible aggressor. If this occurs, organized criminal gangs will be even more empowered than they already are. If the totoaba is then eliminated as well, organized totoaba networks – now without a clear source of revenue – will be left to find another way to support their new lifestyles. But organized criminals generally do not return to a life of legality once their primary revenue stream has run dry.

Time is running out. Without a substantially strengthened effort to not only remove gillnets from the Gulf of California, but also to identify and prosecute the individuals driving totoaba trafficking around the Gulf and in China and the United States, the vaquita will be lost. None of the Mexican government's restrictions

designed to protect totoaba and save the vaquita will have any effect unless they are supported by quick and decisive enforcement action. Similarly, no intermediaries or traders will opt out of the lucrative totoaba trade until U.S. and Chinese officials ascribe the correct weight to the magnitude of their crimes, and prosecute them accordingly. Simple seizures and fines have never sufficed, and will certainly make no difference now.

Therefore, C4ADS recommends the following steps be taken to reduce the supply of, trafficking of, and demand for totoaba bladders.

#### Source Zone

Resource constraints and corruption are significant obstacles to enforcement efforts in and around the Gulf of California. Although we recognize these impediments, we believe that the implementation of the following recommendations, or some assortment of them, would significantly reduce illegal fishing in the Gulf, and would impede the ability of totoaba trafficking networks to operate.

*Note that on June 30, 2017, the Mexican government passed a new law permanently banning gillnets in the Upper Gulf of California and enacting a few of the measures included in the below recommendations. The law also prohibits the transport or possession of gillnets in and around the Gulf, bans panga fishing between 9 pm and 5 am, restricts panga launch zones to a few specific areas, and requires that an appropriate monitoring system be installed and functioning on each fishing panga, in addition to a number of other stipulations. Each recommendation that has been implemented as part of this law is marked with an asterisk (\*).*

#### **1. Permanently ban gillnet fishing in the Gulf, as well as gillnet possession and transportation on land.<sup>cclii</sup> \***

CIRVA has repeatedly recommended that all types of gillnets in the Gulf be permanently prohibited, as most gillnets pose a threat to totoaba, vaquita, or other marine life in the Gulf. Those nets that pose less of a threat still provide totoaba fishermen with an excuse to possess gillnets – they can simply argue that their gillnets are for shrimp, not totoaba. Despite CIRVA's urgent advice, a permanent and total gillnet ban remains elusive, leaving fishermen instead to try to make sense of the overlapping, slightly different, and unclear gillnet bans that remain in place. The most prominent ban, announced by President Peña Nieto in 2015, was set to expire in May 2017, which could have created the impression that gillnet use is now permissible – but the area still falls under a secondary, longer-lasting gillnet ban put in place by CONANP. To reduce confusion, and help ensure the continued existence of the vaquita, a well-publicized, permanent gillnet ban is needed across the entire Upper Gulf.

Gillnet possession should be banned on land as well. As long as on-shore possession of gillnets remains legal, totoaba fishermen are safe to store their nets on land, and can simply use them at night when the chances of being caught are particularly low.

In the words of the IWC's Scientific Committee, "The choice is simple and stark: either gillnetting in the Upper Gulf ends or the vaquita will be gone."<sup>ccliii</sup>

#### **2. Immediately dedicate more resources to removing all gillnets from the Upper Gulf of California, with particular attention paid to the known range of the vaquita.**

Although recent gillnet removal efforts in the Upper Gulf have been fairly substantial, it is clear that an even more extensive effort is needed.

CIRVA laid out a plan for a gear removal program in September 2016 that was enacted between October 10

and November 15 of that year. The plan relied on 19 pangas operated by 45 local artisanal fishermen to detect nets. This program should be expanded to include the current gillnet removal program managed by SEMAR, and executed by Sea Shepherd and other organizations.

Sufficient funding should be raised from the Mexican, American, and Chinese governments, in addition to other sources, to deploy a much larger number of monitoring vessels to the Gulf in coordination with existing successful gillnet removal programs. The extended program should not be limited by time of year (CIRVA's program only lasted for a month; Sea Shepherd and other vessels only patrol during the totoaba and corvina seasons) to ensure the discovery of forgotten gillnets, as well as the retrieval of gillnets set for other species outside of the typical totoaba season. The program must continue to involve both government and NGOs to reduce the risk that corruption will subvert the program's success. Search efforts must be conducted over the entirety of the vaquita refuge and the vaquita's known range at a minimum to ensure that fishing gear posing the greatest threat to vaquita is removed promptly.

**3. Dedicate additional resources to the development and implementation of a gillnet exchange program.**<sup>ccliv</sup>

During the initial implementation of the permanent gillnet ban, a program should be developed to offer fishermen a short window of opportunity to turn in their gillnets for compensation, in the form of either money or different fishing gear (in the latter case, adequate training on how to use the new gear would be required). Previous gillnet exchange programs have been enacted in the Gulf, reportedly with varying results – lessons learned from these programs should be incorporated into any new gillnet exchange. For instance, a stratified compensation scheme depending on the age or state of each gillnet may create positive incentive for fishermen to pull up gillnets found in the Gulf. Note that a program designed ineffectively – for example, an exchange program lasting indefinitely – will only incentivize fishermen to make or buy additional gillnets in return for compensation. Similarly, steps should be taken to ensure that payments for exchanged gillnets are not going only to a few *permissionarios* without being properly disseminated to individual fishermen.

**4. Ensure proper disposal of retrieved gillnets.**

There is some concern that confiscated gillnets will find their way back to totoaba and other fishermen through corruption, negligence, or some other loophole. For example, the nets that were retrieved as a result of CIRVA's 2016 gear removal program were moved to a temporary storage center before being recycled. CIRVA then mentioned the location of the storage center in their eighth report, providing traffickers and illegal fishermen with an opportunity to exploit the gear removal system and steal back their nets, or at the very least put pressure on the individuals tasked with guarding them.

While recycling nets is a good disposal method for seized gillnets, gear disposal programs should keep the locations of the confiscated nets as confidential as possible, work to minimize the amount of time the nets spend in storage, and enact measures to ensure the trustworthiness of the individuals tasked with moving, monitoring, and ultimately disposing of the nets (See **Recommendation 11** below).

**5. Revise, and eventually rescind, the current gillnet compensation program.**

Although the current gillnet compensation program is flawed, and can be easily exploited by *permissionarios* for personal gain at the expense of poorer fishermen, a gillnet compensation program will be necessary to provide financial support for fishermen until feasible alternative fishing gear or livelihoods can be developed and implemented. For the time being, the current program should be revised and continued. The absence of a similar compensation program will almost certainly add to the number of fishermen willing to fish for totoaba to provide for their families, compounding the current problem. Once alternative gear has been

developed and adopted by the fishing community, the program can be rescinded (See **Recommendation 6** below).

- 6. Dedicate additional resources to the creation and implementation of alternative fishing development and training programs. To the greatest extent possible, attempt to include local fishermen, particularly those most affected by the gillnet ban, in the creation and execution of these programs.**

An essential aspect of the success of any gillnet ban is the existence or creation of alternative and comparable fishing gear or employment opportunities for local fishermen in the Gulf region. Multiple Mexican government agencies, CIRVA, and some NGOs have been involved in trying to develop alternative fishing gear that can replace Gulf fishermen's reliance on gillnets. So far, these efforts have had limited success, often stymied by a lack of community buy-in, slow response from government officials, or the inefficiency of the gear itself. Since the development or identification of replacement fishing gear is essential to the survival of the vaquita, more resources should be dedicated to continuing and improving these programs until a sustainable solution (or solutions) is identified. Similarly, relevant Mexican government officials should heavily prioritize responding quickly to program needs, so as not to unnecessarily delay the progress of such a time-sensitive effort. The most successful program would be a well-coordinated effort between teams working on developing multiple solutions at once, all with significant input and assistance from local fishermen, from the beginning of the program to its conclusion. See CIRVA-7 and CIRVA-8 for discussions on what has worked, what has not worked, and what can be done to improve alternative fishing gear programs moving forward.<sup>cclv</sup>

At the same time, local fishermen who have been pushed out of work due to the gillnet ban should be hired as frequently as possible to assist in conservation efforts. CIRVA's reliance on local fishermen during their gear removal program is a good example of one way that community members can be brought in to the vaquita-survival, anti-totoaba trafficking effort.

- 7. Ensure that the vaquita refuge extends far enough southward to cover the known range of the vaquita.**<sup>cclvi</sup>

CIRVA has noted repeatedly that vaquita have been spotted and heard outside of their protected range, particularly to the south of the refuge. Naturally, vaquita spending time outside of their designated protected area are at an unusually high risk of being ensnared in gillnets or other fishing gear, particularly if they happen to stray westward, towards the shallow waters where totoaba fishing is particularly prominent. Expanding the vaquita's refuge slightly to cover the entirety of their territory will not only be safer for the vaquita, it will also simplify Mexican enforcement agencies' efforts to ensure the security of the remaining vaquita population.

- 8. Restrict fishing permits in the Upper Gulf to residents only.**<sup>cclvii</sup>

Since a significant amount of illegal totoaba fishing is driven by individuals who are not local to the Upper Gulf area, and because some of the illegal fishing is carried out by people who moved to the Gulf in response to the totoaba trade's high profits, fishing in the Upper Gulf should be restricted to local fishermen, with exceptions made only for sport fishing. This restriction should benefit local fishermen many times over as competition for fish decreases, fish populations increase, and local fishermen obtain a larger share of the fishing market in the region. The restriction could also reduce poverty in the Upper Gulf communities as fishing profits increase, thereby reducing the incentive for fishermen to seek additional illicit income, and strengthening their ability to push back against intrusions by opportunistic outsiders.

- 9. Require pangas to carry VMS or similar transmitters, prohibit at-sea panga operation at night, and require pangas to launch from designated launch zones.\***

Even with the successful implementation of all the above recommendations, illegal fishing activity will likely persist to some extent as criminal networks and fishermen continue to find totoaba revenues preferable to the profits obtained by other means. New regulations for pangas can help to mitigate this risk, and provide Mexican law enforcement with easier ways to identify potential totoaba fishing and other illegal activity.

Requiring pangas to carry VMS or similar transmitters (and requiring them to keep them on) will make it much more difficult to operate without detection in the Gulf. If panga operators turn off their transmitters, enforcement officials and others will be able to see that they ceased transmitting, which could signal enforcement to check in on that boat. Any pangas found without operating transmitters would be subject to a fine, adding to the costs associated with engaging in illegal activity. However, without support, many fishermen may not be able to acquire, afford, or set up their own transmitters. As a result, a plan to subsidize the cost of the transmitters should be developed (ideally involving public and private sector funds) alongside a program to train fishermen on how to use them.

Similarly, preventing panga operation at night will make it easier to monitor the Upper Gulf for instances of illegal activity. For example, a transmitting vessel that takes off from shore at 1 a.m. could send an automatic alert to enforcement. Any pangas found on the water at night would warrant further inspection, and panga operators could no longer claim they were sport fishing or simply transiting through the Gulf to excuse their presence on the water.<sup>cclviii</sup> CONAPESCA announced in 2016 that they would enact a ban on night fishing by the winter to try to stymie illegal fishing, but the ban alone has done little to discourage fishermen from operating at night. Ensuring adequate enforcement of the ban should therefore be seen as a priority.

Requiring pangas to launch from designated zones will also reduce the amount of enforcement effort necessary to identify fishing vessels operating suspiciously. Law-abiding pangas will concentrate in launching zones, reducing the total number of pangas operating from remote beaches. All pangas found launching from undesignated areas will warrant further investigation, and may receive a fine for noncompliance. Those illegal fishermen attempting to blend in with legal panga operators at the designated launch zones could then be identified by a simple risk assessment – is this boat carrying an unusually high number of crew? Do they have a clear reason to go out on the Gulf (e.g. are they carrying legal fishing equipment)? The enactment of these restrictions could significantly narrow the number of pangas that need to be monitored by enforcement officials, without dramatically overburdening legal panga operators.

**10. Dedicate Mexican enforcement agents or military officials to scanning the shore, particularly the western shore, of the Gulf of California for getaway vehicles.**

Since illegal fishermen often leave hidden getaway vehicles behind as they fish on the Gulf, Mexican enforcement and military officials could work to identify these vehicles onshore, and wait for the return of the panga and its crew. At sea, illegal fishermen fleeing official vessels have a fairly good chance of escaping. On land, particularly on the coast, suspected illegal fishermen can be cornered more easily.

To avoid having to deploy a large number of officials to constantly patrol the Gulf's many beaches, drones could be used as a first step to identify potential vehicles of interest. Officials would then verify the drones' preliminary findings, reducing enforcement's time commitment while simultaneously boosting efficiency.

**11. Increase the number of Mexican enforcement agents and military officials on and around the Gulf of California.**

The number of enforcement agents and military officials on and around the Gulf currently are too few to pose any significant threat to the much larger numbers of illegal fishermen on the water, and totoaba traffickers on land. The Fifth Meeting of CIRVA, for example, determined informally that PROFEPA's resources would

have to increase ten times to combat totoaba trafficking effectively.<sup>cdlx</sup> Although the Mexican government over the past few years has consistently dedicated more resources to combatting totoaba fishing and trafficking, more are needed to match the capabilities of the criminal networks involved in totoaba trafficking.<sup>106</sup> In the effort to make the most of limited resources, efficient and comparatively cost-effective enforcement strategies (e.g. the use of drones) should be implemented whenever possible to reduce the burden on law enforcement and military officials.

The U.S. and Chinese governments, as important players in the totoaba trafficking supply chain, could contribute resources, investigative support, or training to the Mexican agencies combatting the illicit totoaba trade at its source.<sup>cdlx</sup> Supporting enforcement efforts in Mexico will mean that fewer resources will be needed for totoaba cases elsewhere.

**12. Implement a system to reduce the risks of corruption within the Mexican military and government units tasked with monitoring the Gulf.**

Totoaba's high value, combined with comparatively low wages for government employees, and the arguably unstable security situation in the Gulf, mean that those officials tasked with pursuing totoaba fishermen and traffickers are at a high risk of becoming corrupt, as totoaba traffickers offer to pay them for their silence and cooperation.

One way to help reduce corruption amongst the relevant government officials could be to rotate the agents and officials in the Gulf region with agents operating elsewhere in Mexico. This should prevent totoaba traffickers from being able to rely on established relationships with officials to operate with impunity. Similarly, officials staffed from outside the Gulf region will be less susceptible to threats, since their families and property will be located elsewhere.<sup>107</sup>

Regardless of the method implemented, the chances of officials becoming corrupt in the Gulf is far too high for enforcement and the military to successfully operate without at least an anti-corruption program.

*Trafficking*

**13. Investigate the organized criminal networks supporting and benefiting from totoaba trafficking.**

Enforcement authorities in Mexico, the United States, and China should work to map the networks behind totoaba trafficking to understand how totoaba is moved, who is involved in moving it, and who primarily benefits from the illicit sale of totoaba. In other words, law enforcement should treat totoaba trafficking like any other transnational organized crime and “follow the money” moved by the network to identify its most powerful and essential players.

Once sufficient evidence has been compiled, network members should be arrested and charged in accordance with **Recommendation 14** below.

In the past, other crime types have been prioritized by government officials, particularly in the United States and China, since totoaba trafficking has been considered a conservation problem. While this is to some

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<sup>106</sup> Re-allocating resources away from ineffective or poorly designed programs to well-functioning ones would also improve results while at the same time limiting additional costs.

<sup>107</sup> It should be noted that this approach could have unexpected downsides – for example, enforcement agents from other areas in Mexico may be unaware of the sensitivities surrounding local community dynamics.



extent unavoidable, the organized crime element of totoaba trafficking elevates it from a conservation issue to a transnational security problem, and should be prioritized accordingly. Furthermore, if totoaba trafficking remains a low priority, totoaba networks will continue to expand and professionalize, creating a larger security threat immediately adjacent to the United States' southwest border.

**14. Actively pursue prosecutions of identified totoaba traffickers. Ensure that convicted higher-level traffickers receive substantial criminal penalties, and that anti-totoaba trafficking cases are reported by the press at least after their conclusion.**

To date, there have been no significant prosecutions of high-level totoaba traffickers in Mexico, even though some traffickers are known to locals, and likely to local law enforcement as well. As a result, traffickers know they face not only a low chance of being caught, but also a virtually nonexistent chance of receiving punishment for their crimes. This perception must be changed in order to successfully deter people from engaging in the totoaba trade. To do so, Mexican authorities should actively pursue criminal investigations of known and suspected traffickers, and should try to ensure that totoaba cases make it to court. To be effective, a number of high-profile suspects will need to receive substantial penalties. The cases should be publicized to ensure that the high risks associated with totoaba trafficking are well known.

The above strategies will do little to deter and combat illegal fishing in the Gulf without the promise of certain prosecution and jail time.

**15. Determine cause for lack of totoaba seizures at the U.S. border since 2013.**

U.S. and Mexican customs and enforcement officials should work together to understand why and how totoaba bladders moving into the United States have escaped detection since 2013. Although many bladders may now be processed in Mexico and then sent directly to Asia without passing through the United States, some totoaba bladders are still moving into the country. Traffickers therefore appear to have found a way to evade detection at U.S. border crossings. Determining how this has been possible may also have implications for how customs officials search for other illicit goods, like narcotics or weapons, at that same section of the border.

**16. Educate enforcement and customs officials in central and eastern Mexico on the issue of totoaba trafficking.**

As enforcement awareness of totoaba trafficking has increased in northwestern Mexico and along the U.S. border, totoaba traffickers may have begun to move eastward, towards regions where totoaba is all but unknown. Escalating enforcement pressure in Baja California may also push totoaba traffickers towards the east, through Sonora and towards Chihuahua. Beginning to raise awareness now will ensure that the relevant Mexican officials are prepared to combat this shift.

**17. Similarly, educate enforcement and customs officials outside of the southwestern border region in the United States, as well as officials in Hong Kong, mainland China, and Japan.**

The dearth of totoaba seizures outside of Mexico is likely due to a lack of awareness of totoaba trafficking on the part of non-Mexican government officials. This is particularly true in Asia, where seizures have been virtually nonexistent thus far, even though thousands of totoaba bladders have successfully arrived in Hong Kong and mainland China over the past few years. Including totoaba in customs and enforcement agents' training programs should significantly improve totoaba seizure rates in these prominent transit and destination regions.

While southwestern U.S. customs officials are generally aware of totoaba trafficking, U.S. officials elsewhere

generally are not. Since traffickers may be flying totoaba out of Baja California to airports further north in the United States to avoid knowledgeable U.S. border agents, a broader group of U.S. customs officials should be educated on identifying totoaba.

**18. Train sniffer dogs at Mexican and U.S. border crossings and airports to check for totoaba.**

Because totoaba bladders can be difficult to identify, sniffer dogs should be trained to pinpoint totoaba in cargo shipments, checked baggage, and on traveler's persons. These dogs could then be deployed at Mexican and U.S. road checkpoints, border crossings, ports, and airports on the western coast. In addition to detecting a far greater number of bladders, the dogs' discoveries will likely reveal how so much totoaba trafficking has gone undiscovered.

*Destination*

**19. Investigate known importers, retailers, and consumers of totoaba bladders in Hong Kong and elsewhere.**

Similar to **Recommendations 13 and 14** above, known importers of totoaba should be thoroughly investigated by Hong Kong and mainland Chinese authorities. As in Mexico and the United States, enforcement authorities need to make clear that they are dedicated to combatting totoaba trafficking, and that identified importers and sellers of totoaba will face the full extent of the law. The promise of swift punishment will help to reduce demand for totoaba, incentivizing both traders and consumers to opt for different fish maw products instead.

**20. Survey Beijing and Shanghai seafood shops and markets to determine the extent of their involvement in totoaba sales.**

As mentioned previously, the extent to which Beijing and Shanghai seafood retailers are involved in selling totoaba products remains unknown, even though there is evidence to suggest that totoaba is often destined for, or transits through, both cities. Since both Beijing and Shanghai are far from Hong Kong and southern China, and because past identified totoaba shipments destined for both cities have left from Hong Kong, it is likely that totoaba destined for either Beijing or Shanghai is meant for internal seafood markets, rather than shipment southward to totoaba's better known demand region.

Undercover and unannounced investigations by Chinese enforcement or NGOs should be undertaken to determine whether the cities' seafood markets are involved in totoaba trafficking. The results will reveal the extent to which anti-totoaba trafficking measures should be enacted there.

**21. Improve surveillance and enforcement regarding totoaba sales in Guangdong province.**

Guangdong province seems to be the most prominent demand region for totoaba bladders in the world, and as such has a large role to play in the eradication of totoaba demand, and the survival of the totoaba and vaquita species. Both EIA and EAL have found totoaba sales in Guangdong's cities Guangzhou and Shantou to be prominent, even as totoaba sales have diminished or gone underground in Hong Kong in response to enforcement activity. Guangdong traders told EAL investigators that although inspections of seafood shops and markets are now being performed, officials warn shopkeepers of impending inspections with enough time for them to hide their illicit seafood products. This lax enforcement behavior has provided totoaba traders with a way to continue to sell totoaba bladders even in the face of increasing awareness of totoaba trafficking. Steps should be taken to improve enforcement practices regarding totoaba in this region.

Note that significantly increasing enforcement, without also investigating and prosecuting identified totoaba

retailers, wholesalers, and consumers, will cause the most persistent portion of the totoaba trade to better conceal itself, rather than stopping those companies and individuals from engaging in it.

**22. Monitor e-commerce websites for both overt and covert totoaba advertisements, remove likely totoaba ads, and ban users that seem to repeatedly post totoaba for sale.**

C4ADS found that online sales of totoaba bladders have continued, seemingly unaffected by declining bladder prices and increasing anti-totoaba trafficking enforcement activity in Hong Kong. We noted that if totoaba's value continues to decrease, totoaba traders may increasingly turn to online sales to avoid the additional costs that come from selling products in brick-and-mortar stores. In addition, during the course of our investigation, we discovered that prominent Chinese e-commerce sites have done little to ensure that the fish maw ads on their website are not illicit.

Since the continued viability of the vaquita becomes more precarious every day, e-commerce websites should do their part to ensure that they are not part of the problem, and are instead helping to support the solution. Websites that take this duty seriously could champion their dedication to the health of the environment and endangered species. Finally, since there are at most only a few totoaba bladder ads on prominent Chinese e-commerce sites at any given time, monitoring and removing those ads and their posters should not be time-consuming or eliminate a large number of users from the platforms.

## Citations

- i The price of totoaba bladders has since declined slightly.
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ccliv The post-meeting report from CIRVA-2 discusses different ways to design a gillnet exchange program.

cclv CIRVA-7. [www.vivavaquita.org/assets/cirva-7-final-report2.pdf](http://www.vivavaquita.org/assets/cirva-7-final-report2.pdf).

CIRVA-8. <http://vaquitafilm.com/wp-content/uploads/2017/02/CIRVA-8-Report-Final.pdf>.

cclvi Recommendation is in part based on a recommendation made by CIRVA after their Second Meeting.

cclvii Recommendation is in part based on a recommendation made by CIRVA after their Eighth Meeting.

cclviii CIRVA-7. [www.vivavaquita.org/assets/cirva-7-final-report2.pdf](http://www.vivavaquita.org/assets/cirva-7-final-report2.pdf).

cclix CIRVA-5. [www.vivavaquita.org/assets/cirva2014.pdf](http://www.vivavaquita.org/assets/cirva2014.pdf).

cclx Note that the U.S. government has already begun to support the Mexican government on this issue.





**C4ADS**

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