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# *A HISTORY (1990-2015) OF MISMANAGING THE VAQUITA INTO EXTINCTION- A MEXICAN NGO'S PERSPECTIVE*

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## Abstract

The population of the critically endangered vaquita has decreased alarmingly to less than 100 individuals due to by-catch in legal and illegal fisheries of totoaba, shrimp, shark, and others in the Upper Gulf of California. Mexico has implemented a series of conservation and fishery management measures to protect the vaquita since the early 1990's but to no avail. Most of these measures were put in place for political or economic reasons, and many were designed to fail. Fishery authorities worked for the benefit of fisheries and many times against environmental authorities. Two decades of lack of enforcement of weak and badly designed protection measures have doomed the vaquita to almost certain extinction. [JMATE. 2015;8(1):15-25]

Keywords: totoaba, fishery, panga, bycatch, embargo

**Abbreviations Used:**
CIRVA: International Committee for the Recovery of the Vaquita
CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora
CONAPESCA: National Commission of Fishery and Aquaculture
IUCN: International Union for Conservation of Nature
NAFTA: North American Free Trade Agreement (USA, Canada, and Mexico)
NGO: Non-Governmental Organization
PACE VAQUITA: recovery Plan for the Vaquita
PROFEPA: Environmental Enforcement Agency
SEMARNAP: Ministry of Environment Natural Resources and Fishery
SEMARNAT: Ministry of Environment and Natural Resources
TED: Turtle Excluder Device

The population of the Critically Endangered vaquita (*Phocoena sinus*) was estimated to be in July 2014 down to 97 individuals and it is expected to go extinct by 2018 (12). Mexico has implemented many conservation and fishery management measures to protect the vaquita since the early 90's (12), and it would appear that the Mexican government has been doing its upmost to save the vaquita from extinction but that is not the reality. Many of these conservation measures were put in place not to save the vaquita but for economic or political reasons, some were designed without using the best available information and some were designed to fail. We will present information of the legal measures taken by the Mexican government to protect the vaquita starting in 1990 until 2015, the way these measures were supposed to work, comments on how and why these measures were created or chosen, and their end result.

## 1990-1994 The NAFTA Years

Many of the conservation measures of the early 90s were the result of the Mexican government eagerness to demonstrate to detractors of the North American Free Trade Agreement negotiations (NAFTA) in the USA, that Mexico was really changing and trying to achieve similar levels of environmental standards as the rest of North America (13, 37). To attain this objective, Mexico's President pledged reforms to national and international policies, laws, environmental and enforcement institutions, government transparency and openness to the participation of society in environmental decisions (37).

The campaign to gain a quick signature of the NAFTA had immediate consequences for the conservation of the vaquita. In 1991 Mexico signed and ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) without any reservations which included in its Appendix I the vaquita and totoaba (*Totoaba macdonaldii*) (3, 37, 43). This was unheard off given that Mexico had been unwilling to sign most international environmental treaties before the 90's (37). In fact, some authorities, like the Fishery Ministry, were totally against it.

In 1991, the first ever Mexican official list of endangered and threatened species was published with

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the vaquita and totoaba listed as endangered (17). Before that Mexico used international wildlife lists like the IUCN red list to identify which species were endangered or otherwise in the country, and this did not set well with fishery authorities.

Vaquitas were dying as by-catch of the totoaba fishery and for some time it was assumed that this was the main threat to the vaquita (56). In early 1992 the gillnets called "totoaberas" utilized to capture totoabas were banned (18). The fishery of this endangered species was banned in 1975 and it took the Fishery Ministry 18 years to ban the gillnets as well (20). This ban was significant for the conservation of the vaquita given that an important amount of legal and illegal bycatch continued to occur within this fishery (56). The Fishery Ministry allowed fishing of the banned totoaba under the form of "research" from 1983 to 1993 (56). This was done, even though they captured endangered vaquitas. This was frowned upon by the experts who said: "Given what was known already by the 1980s concerning the vaquita's endangered status and its susceptibility to entanglement in totoaba gill nets, it seems incredible that an 'experimental' fishery was allowed to proceed" (42).

The creation of the biosphere reserve of the Upper Gulf of California and Colorado River Delta in 1993 while the NAFTA negotiations were still going on was certainly the most important conservation action for this region. The decree established a total and indefinite ban in all of its area to the capture of vaquita and totoaba as well as several species of cetaceans, birds, reptiles, including all species identified as endemic, rare, threatened, or endangered (19). It established that the Fishery Ministry would define the areas and seasons for the bans on marine species not mentioned in the decree and that the management program of the biosphere should be published no later than one year after the decree entered into force.

**1994- 2000 The Environment Fishery Ministry Years**

The Fishery Ministry would not let environmental authorities tell them what they could and could not do to manage fisheries and published the Official Mexican Norm 012 that established measures for the protection of the totoaba and vaquita, which contained two dispositions, one was the unnecessary ban of the "totoaberas" gillnets since they were already banned and the other established a fishing ban in the core area of the biosphere reserve to stop the by-catch of the vaquita and totoaba (21). On first glance this would seem a good protection measure but it was not. The Fishery Ministry should have established indefinite or seasonal bans for other fisheries (shark, mackerel, shrimp, sierra, corvina, chano) within the reserve not only for the core area but for the buffer zone as well, and since they did not it meant that any fishery could work year round in the buffer zone. This would have a serious effect on the protection of the vaquita since essentially most of the sightings had been done outside of the core area, and thus the majority of its distribution area laid in the unprotected buffer zone and even outside of the reserve's boundaries (9).

This bickering between fishery and environmental authorities was just the first round of a very long fight which essentially has spelled the doom of the vaquita. The fishery authorities had their own agenda and it was not the conservation of a non-commercial species. Their objective has and will always be to ensure that the annual volume of capture of any commercial fishery does not drop. Even though they clearly stated in their fishery Norm 012 that by-catch was the problem the vaquita faced, they devoted their resources to prove otherwise by creating doubts in the recent classification of endangerment of the vaquita nationally and internationally, the mortality rates in fisheries and blaming the USA for cutting off the supply of fresh water from the Colorado River into the delta in the Upper Gulf of California and thus changing the whole marine ecosystem and decreasing nutrient inputs (31). In 1994, to the chagrin of those fishery authorities that refused to accept the vaquita's classification as endangered (30), the vaquita was again classified as endangered in the new format of Mexican Official Norms (known as NOM-059) which can only be reviewed and modified after 5 years of entering into force (22).

Later that year in December the Fishery Ministry received a serious slap in the face when the new President of Mexico, named a conservation biologist as head of the Fishery Ministry and a few weeks later dissolved the ministry and demoted it to a sub Ministry inside the newly formed Ministry of Environment Natural Resources and Fishery (SEMARNAP) again

with the conservation biologist heading it (7). In 1995, the Environmental Enforcement Agency (PROFEPA) created the office of natural resources within it. They would be in charge to enforce environmental laws including regulations to protect the vaquita and any other endangered species.

This change in the administration's institutions brought hope to the environmental sector that marine conservation issues would soon attain the importance they deserved but that hope was short lived. Although the fishery institution had suffered a severe blow, it was still too powerful and it became obvious that the management of fisheries would continue with business as usual, that is, paper thin measures favoring fisheries with no enforcement and no conservation.

The misgivings that the fishery authorities had created about the conservation status and threats to the vaquita only served to delay any real actions for its protection forcing all scientists to focus their research looking for documented proof that the vaquita was in real danger from fishery by-catch. Rojas *et al.* (2010) stated "Until the early 1990s there were disagreements on what were the most significant risk factors for vaquita survival (by-catch, lack of flow of the Colorado River and pollution). This controversy hindered management actions. Some authorities still believe today that by-catch is not the main threat to the vaquita." (41).

Probably the most damning affirmation from the fishery authorities was that the totoaba legal fishery only produced a by-catch of 4 vaquitas in ten years from 1983 to 1993 (30). Rojas *et al* (2006) questioned this affirmation: "It has proven impossible to determine how or why Fleischer (1996) reported only four vaquitas taken in the experimental fishery over the entire period from 1983 to 1993; in contrast, Robles *et al*. (1987) reported 3.5 times that number taken in the same fishery in one area (near El Golfo de Santa Clara) during the months of March and May 1985 and February 1986" (42). Additionally, Rojas *et al.* quoted that "Vidal (1995) listed 77 vaquitas definitely known to have been by-caught in totoaba gill nets during the period of the experimental fishery, 1983–93" (42). But we do know why Fleischer under reported the vaquita by-catch in the totoaba fishery. Specifically it was the result of a common used tactic by the fishery authorities to dismiss and discredit any by-catch information that could lead to an embargo.

This tactic of dismissal and discredit was used in the late 1980's during the tuna-dolphin dispute with the USA (32). Mexico was embargoed and had to change the way its tuna fleet operated (43). In the early 1990's they used the tactic again to avoid a shrimp embargo by manipulating the data of their sea turtle by-catch studies in the shrimp fleet (43). The embargo was avoided but they still had to change the way the fleet operated by making it mandatory to use Turtle Excluder Devices (TED) in trawl nets (20). In 2014, to avoid another embargo, the same tactic was used to dismiss decades of data of loggerhead sea turtle by-catch in the Gulf of Ulloa, BCS, including their own data (52). The decision of this embargo threat is still pending.

Vidal (1995) reported a bycatch of 128 vaquitas in several fisheries from 1985 to 1992: totoaba (68%), shark (28%) , mackerel and shrimp trawl fishery (7%) (56). D'grossa *et al.* (1995) confirmed that in 1993-1994 vaquitas were being caught in all kinds of nets for shark, ray, mackerel, chano, sierra and gill nets for shrimps used by small artisinal boats or pangas (14). This proof of by-catch occurring in many fisheries should have been enough to prove its threat to vaquitas and take measures to stop it or at least decrease it, but it was not.

In 1995 the Environmental and Fishery Ministry published the management plan for the biosphere reserve (46). However, it only described general dispositions that already existed in shrimp fishery regulations for the Pacific Ocean like using TEDs in trawl nets or trawling deeper than 10 meters (20). This does not help vaquitas since this depth puts the nets in direct contact with them (14,35). There was nothing in the management plan to address the by-catch of vaquitas in gill nets or shrimp trawls (35). It did not contain dispositions to reduce fishing effort of large vessels or pangas and only established that new studies needed to be made to mitigate the impact of fisheries in the buffer zone (35). Fishery authorities were able to block any language in the management program that would affect any fishery inside the biosphere reserve and still delay any future actions by demanding more research.

It was not until 1997 that something was done by the government that could have some impact in the conservation of the vaquita and that was the creation of the International Committee for the Recovery of the

Vaquita (CIRVA) (33). Finally there was an international task force that could work without most of the pressure from the fishery authorities to analyze data, focus research and give recommendations of what needed to be done to save the vaquita. Their first recommendations defined which risk factors were important (by-catch) and which were not (pollution, decrease of flow of Colorado river, nutrient decline, inbreeding). They found that regulations were not being enforced so they recommended enforcement be implemented. Their strongest recommendations was that "the Committee felt that existing mortality estimates strongly indicate actions to reduce by-catch be implemented at the soonest possible time" (9).

Fishery authorities disregarded the recommendations of CIRVA and continued to support fisheries and increase fishing effort n the Upper Gulf. As a result there was an increase in number of pangas fishing in the Upper Gulf. In 1995 it was estimated that there were 635 pangas working inside the reserve; 390 in Puerto Peñasco, 215 in Golfo de Santa Clara and 30 in San Felipe (1). Then in 1996 fishery authorities authorized the state of Sonora to increase their fleet by 41% in the Golfo de Santa Clara and 98% in Puerto Peñasco, and San Felipe in the state of California had an increase of almost 100% (39). By 1997, the number of pangas had doubled to 1269; 390 in Puerto Peñasco, 225 in Golfo de Santa Clara and 233 in San Felipe (1). Even fishers of the Upper Gulf were against the increase given that it meant more competition for them and they asked authorities to stop the increase in pangas (10).

During CIRVA's second meeting in 1999 they recognized problems that had been evident since 1993, the core area of the biosphere reserve did nothing for the conservation of the vaquita: "…the existing nuclear zone of the Reserve, designed primarily to protect totoaba spawning habitat, provides no meaningful protection to the vaquita." (10). The director of the biosphere reserve said: " …protection of vaquita from by-catch has probably not been significantly affected by the current boundary of the Reserve nor by the zones within it" and "the staff does not have punitive powers and, although they discourage illegal fishing activities, they are unable to prevent illegal fishing in even the nuclear zone of the Reserve" (10). We have to recall that the biosphere decree banned all fishing of vaquitas and totoabas, that norm 012 banned fishing in the core area, and the shrimp fishery regulation made it mandatory to trawl in depths where vaquitas live. So the only three existing fishing regulations were useless given they did not take into account the information on the distribution or habitat of the vaquita when they were drafted and could not be enforced inside the reserve. CIRVA recommended for the first time that the boundaries of the biosphere reserve needed to be expanded to encompass the real distribution area of the vaquita, along with a ban of gill nets and trawl nets, stop increase in number of pangas and increase enforcement of the regulations (10). None of this happened.

In 1999 Greenpeace Mexico launched a campaign to create a sanctuary for whales in all of the waters of Mexico. This proposal consisted of most of the large cetaceans that inhabit Mexican oceans but it also included the vaquita. At first SEMARNAP would not hear of it but by the end of 2000, the authorities of the National Institute of Fishery had come on board and supported it openly. Unfortunately in 2000 the administration ended and the campaign momentarily came to a halt.

Several law changes took place before the end of the administration, the National Fishery Charter was published in the Official Register which stated that the vaquita population consisted of 567 individuals in accordance to mortality estimations in gillnets. It also established that the bycatch limit for this species should be 0.2% per year (or zero rate) (24). The rules for Natural Protected Areas for the Law of Ecological Equilibrium and Protection of Environment were published (25). These rules brought with them the most strict dispositions regarding fishing inside reserves and basically they were the only real regulation that could stop by-catch of vaquitas. Article 81 established that during fishing activities inside reserves, by-catch could not exceed the volume of the object species and by-catch could not consist of species classified as at risk (endangered, threatened, under special protection) (25). No by-catch of vaquitas, totoabas, sea turtles or any other species at risk were allowed. Thus, there could not be any fishing for shrimp, since by-catch represented ten times more than shrimp in the Upper Gulf (50). This also applied to any fishery using gill nets since they capture incidentally several species at risk.

Another change was the creation of the Wildlife Law which established that all aquatic species that were classified in any category of risk such as extinct in the wild, endangered, threatened or especial protection (vaquita, totoaba, sea turtles, all marine mammals, among others) would be managed by this new law.

**2001- 2006 The Hopeful and Dark Years**
**The Hopeful Period**

A new Environment Ministry was created (SEMARNAT) and the sub Ministry of Fishery was once again demoted and became a mere commission, it was separated from the Environment Ministry and incorporated into the Agriculture Ministry where it is still today. This change would not solve the in-house bickering between fishery and environmental authorities. The new Wildlife Law was the domain of the Environment Ministry and thus, fishery authorities had no say in matters relating to the conservation or use of marine species classified as 'at risk'.

The campaign for the whale sanctuary started once again and was readily accepted by the environmental authorities. Nevertheless, most of the cetacean species in the proposal were not listed in categories of risk in norm NOM-059, so the norm was changed to include all marine mammals (22). This consequently gave the Environment Ministry the full decision in the creation of this refuge area. The campaign was successful and the whale refuge area was decreed in 2002 becoming the first ever refuge area under the new law. But before that happened there was an agreement from the NGOs supporting the campaign to drop the vaquita from the proposal, and seek a separate refuge area for the vaquita.

Fishery authorities refused to abide by the 2000 new rules for the natural protected areas and continued to issue permits for fishing inside the biosphere reserve, even though none of the shrimp trawlers or gillnetters could comply with the rules. So in September 23, 2002 the Environment Ministry issued an emergency norm (good for 6 months only) informing that the Agriculture Ministry (Fishery Commission) had lifted the ban on the shrimp fishery inside the biosphere reserve on September 6, 2002. However, this did not have any restrictions to said fishery to safeguard the species or habitats of the reserve (26). The emergency norm prohibited - any activity that used equipment to drag on the floor of the reserve (shrimp trawls), any fishing in the core area, any use of gill nets of more than 6 inches in the buffer zone, and any bottom gill nets. It only allowed 6-inch-mesh corvina nets and mesh shrimp nets under 200 meters in length, and only local fishers that inhabited the reserve when it was created could fish inside it (26).

The emergency norm would certainly stop any by-catch of vaquitas but it did not sit well with fishery authorities or fishers. It was recognized that: "… the problem when fishery authorities instead of working together with environmental authorities decide to be on the side of fishers, creates hard situations of conflict" (6). Most of the shrimp trawlers of the Upper Gulf have their port in Puerto Peñasco and fishers started protesting in front of governmental offices and blocked highways while federal police monitored the situation (53). After a series of negotiations and a month after the norm entered into force an agreement was reached between SEMARNAT and the shrimp trawling fleet, allowing only those from the region to enter the reserve with restrictions to avoid the vaquita distribution area. As well, they had to present an environmental impact assessment before the next shrimp season (53).

**The Dark Period**

The hopeful period only lasted two years when a new Environment Minister took over. In 2003 a group of NGOs decided to form a coalition to fight for the conservation of the vaquita and the Upper Gulf. The main objectives of this coalition were to get the Environment Ministry to decree a refuge area that would encompass all of the distribution of the vaquita and to ensure environmental law be complied with and enforced.

In September 5, 2003, an environmental impact assessment was presented by the shrimp trawler fleet of Puerto Peñasco to allow them to fish inside the biosphere reserve. Just 24 days later the Environment Ministry disregarding all the violations to the law, especially the rules for natural protected areas, resolved in favor of the shrimp trawlers (47). In October 2003, NGOs presented a legal recourse against this resolution and got a favorable sentence in November of 2004

annulling the Environment Ministry's resolution of the year before (48). The legal battle did not sit well with the new administration which took a different route of action with terrible consequences for the vaquita.

In 2004 during a meeting with the Commission of Natural Protected Areas, the NGO coalition was informed that for the conservation of the vaquita it would be either the refuge area or the law, not both. They said article 81 of the rules for natural protected areas was impossible to comply with and was causing conflict among fishers, governors, congressmen, and fishery authorities, so it would be modified, and it was in December 2004 (27). The modification allowed the authority to interpret the restrictions of article 81 as they wished. NGOs used all legal recourses against the illegal modification of the only existing rule that could stop by-catch of vaquitas, but to no avail.

In 2005, the President of Mexico announced the creation of the refuge area for the vaquita and the announcement immediately brought a flurry of protests from fishers, governors, fishery authorities, and congressmen. However, the Environment Minister who had the intention of running for the presidential ticket of his Party, refused to publish the decree not wanting to be stuck with the political scandal of it. The NGO community was fed up with him and his myriad of bad decisions on a whole range of environmental issues and decided to confront him through media pressure, he soon left without publishing the decree.

The third Environment Minister of this administration met with NGOs and accepted to take on any political costs from decreeing a refuge area, which he did in September 1995 (28). Later in December, the management program for the refuge area was published (29). Everyone was glad that the vaquita had its own protected area, but the area decreed was smaller than the distribution area and the management program did not clearly prohibit the use of gill or trawl nets inside it. It also established that fishery authorities should end the process of individualization of permits. The system allowed a fisher to have many different permits (8). Each permit was good for one panga or many (5). The fairly loose permit system made it impossible to know how many pangas existed in the Upper Gulf, with estimates contradicting each other (36).

The refuge area failed since it had no impact on the fisheries through lack of enforcement (5). Shrimp fishing went on unimpeded as "…75.72% of the shrimp artisanal catch is done in the Biosphere Reserve and inside 92.22% of the Vaquita Refuge" (39). Without any control, the number of pangas doubled from 2005-2007 (6). In fact the number of pangas has tripled since 1995 from 636 to 2070 by 2004 (1). The panga problem was much worse due to a high percentage of illegal pangas compared to legal ones working in the Upper Gulf. These were estimated by some to represent 40% (5). Others suggested it was 50% (8). There was controversy as still others claimed it to be >50% (50). At its worst, it was said that there were 3 illegal pangas for every legal panga (2). To the government, informal or independent fishers do not exist, they only recognize the permits issued (8).

**2007-2012 The Buyout Years**

A new administration took over in 2007, and a new management program for the biosphere reserve was published. It established the prohibition of commercial fisheries with any type of net inside the refuge area of the vaquita (50). Unfortunately this prohibition did not apply to the refuge area that lay outside of the biosphere reserve and fishing has concentrated in this area. Nevertheless it was apparent that the refuge area was not working and it was suggested that the problem was that fishers were not being compensated for their loss of income due to fishing restrictions and estimates of how much funding was needed for a buyout were being developed (57).

In 2008 the recovery Plan for the Vaquita (PACE Vaquita) was published and it determined that a compensation for fishers was needed (49). The compensation program is voluntary for fishers that can choose from 3 options: (a) Buy-out, fisher surrenders all fishing permits assigned to the boat, along with boat, motor and fishing gear (the number of permits surrendered determines the amount paid: 1 permit US$40, 000, 2 permits US$50,000 and 3 or more US$60,000); (b) Switch-out, fisher permanently uses alternative fishing gear for US$35,000; and (c) Rent-out, fisher stops fishing with gillnets inside the refuge area during the season for US$4,500 (4).

The results of this program were not what was expected. Participation decreased over time: in Buy-out, 153, 18 and 0 boats were turned in during 2008, 2009 and 2010 respectively; Switch-out was 51, 54 and 49;

and Rent-out was 542, 214 and 508 respectively (4). The sum of pangas being turned out permanently is 325 (Buy-out 171 and Switch-out 154). In 2014, after seven years of the program, the number of boats turned out permanently was only 247 (Buy-out) and 230 (Switched-out). Nevertheless there was no assurance that those fishers in the Switched-out option were really using the alternative gear (12).

The program has certainly not been a success mainly because the authorities did not take into account several factors including that most fishers don't want to stop fishing (40). As well, mostly older fishers about to retire were interested in the Buy-out and once all of these retire the Buy-out option would be useless and richer fishers are the only ones willing to risk a Buy-out. (4). Then there are those fishers that had enough permits and pangas to sell one and keep fishing, or those that cheat. Fishers are accustomed to receiving annual subsidies from fishery authorities worth millions in the form of pangas, outboard motors, fishing gear and fuel. The states of Sonora and Baja California in the Upper Gulf are number 1 and 3 respectively as the states who receive the most subsidies (44). As a result, fishers feel entitled to receiving government handouts so they can take or leave any program. But the real problem was that the program only worked for permit holders, thus disregarding half the fleet working in the area made up of illegal or independent fishers who don't have permits.

**2013-2015 The Totoaba Embargo Years**

Shrimp fishing efforts have increased dramatically in the past 20 years. In 1993 D'Agrosa *et al.* (2000) estimated 1358 fishing trips, while in 2006-2007 the estimate went up to 15,000 fishing trips (36). Then, in 2013-2014, it soared to 50,692 trips (55). In 2014 CIRVA announced that nothing had worked and the vaquita was heading for extinction in the next four years (12). The aerial survey showed no significant decrease of boats fishing inside the refuge area (12).

But most alarming was the increase in totoaba illegal fishing because the black market in China is paying more than US$8,000 for a kilo of swim bladder. It is assumed that most fishers in the area are now fishing illegally for totoaba and that organized crime is also involved.

International illegal trade of high value wildlife commodities cannot be stopped just from the supply end of the trade as it has been demonstrated with elephant ivory, rhino horn, tiger bone, bear gall bladder, rosewood, among many others (38, 54). Trying to restrict supply through law enforcement only increases the price of the commodity making it more desirable for criminals to participate in the trade. Trying to increase supply to lower the price through aquaculture will not work for two reasons: (a) Chinese don't value captive bred specimens and it only creates a new legal market for those willing to accept these specimens (34, 51); and (b) it does not account for the illegal fishing since their black market is not affected. The only measure that will work is decreasing demand in China to lower the price, but this takes time which the vaquita does not have.

Mexico announced a 2 year fishing ban along with a new compensation plan but has been delaying its entry into force while fishing inside the refuge area continues. This plan does not take into account the 50% of the fleet of illegal fishers without permits or the 20-30 years of recovery needed by the vaquita. It seems like another flawed measure which has come about for the wrong reasons as explained by Fishery authorities: "…if measures are not taken to mitigate the decrease of the vaquita population, the risk exists of an embargo to Mexican fishery products which will bring negative consequences to the national economy…"(45).

As long as environmental and fishery authorities keep working against each other and keep coming up with the same strategies that have not worked for the past two decades, the vaquita is doomed. This is the last opportunity to save the species so the authorities need to change the way they are addressing the problem. It is not a feud between fishery and environmental authorities or between fishermen and the vaquita. The solution is certainly not a stop measure for an embargo. It is only about using the best available information to develop correct protection measures and enforcing them to save a critically endangered species from extinction, just as Mexican laws mandate.

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