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# World Heritage Patrimoine mondial

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POUR L'EDUCATION, LA SCIENCE ET LA CULTURE

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CULTURAL AND NATURAL HERITAGE

CONVENTION CONCERNANT LA PROTECTION DU PATRIMOINE  
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**Point 7 de l'Ordre du jour provisoire: Etat de conservation de biens inscrits sur la Liste du patrimoine mondial et/ou sur la Liste du patrimoine mondial en péril**

MISSION REPORT / RAPPORT DE MISSION

Islands and Protected Areas of the Gulf of California (Mexico) (1182ter)  
Îles et aires protégées du Golfe de Californie (Mexique) (1182ter)

9 - 15 April 2017

**REPORT ON THE REACTIVE MONITORING MISSION TO  
ISLANDS AND PROTECTED AREAS OF THE GULF OF CALIFORNIA (Mexico)  
FROM 09 TO 15 APRIL 2017**



**Photo © IUCN/Meike Scheidat**

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## EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

The World Heritage Centre and IUCN undertook a reactive monitoring mission to assess the state of conservation of the Islands and Protected Areas of the Gulf of California World Heritage property as requested by the World Heritage Committee at its 40<sup>th</sup> session (Decision 40COM7B.75).

The mission took place from 9-15 April 2017 and addressed the following issues:

1. Review the ongoing measures undertaken by the State Party to address threats to the Critically Endangered vaquita and totoaba and evaluate the progress achieved by the State Party in the implementation of the World Heritage Committee's request to take urgent additional measures to secure the conservation of these species;
2. Assess the overall state of conservation of the property and evaluate whether the property meets the conditions for inscription on the List of World Heritage in Danger;
3. In line with paragraph 173 of the Operational Guidelines, assess any other relevant issues that may negatively impact on the OUV of the property, including its conditions of integrity and protection and management.

The property includes 244 islands and islets and is recognized as an area of global conservation significance with exceptional biodiversity both terrestrial and marine. The property is of particular importance for migratory birds, includes unique coral systems and is home to a range of critically endangered species such as black sea bass, totoaba and vaquita, endangered species such as blue whale and vulnerable species such as basking shark and sperm whale.

Since the inscription of the property on the World Heritage List in 2005, important steps have been taken to address several threats to the property. The State Party is investing to gradually transition unregulated fisheries into regulated practices throughout the property. Successful programs to transition local fishing communities into more sustainable conservation and education occupations are being implemented and are exemplar in large parts of the property. Financial resources for the management of the property have increased since the property's inscription and mechanisms are now put in place to facilitate large-scale private investment to complement government resources in support of the protection of the property in the future. A national climate strategy has been put in place in which targets are implemented through a range of community and other programs including across different parts of the property.

Despite the positive trends toward increasing the protection of the property, illegal, unregulated and unsustainable fisheries remain a concern for the protection of the property's OUV and efforts to protect the critically endangered vaquita have not been successful.

First, while a ban on totoaba fisheries was established in 1975, illegal fishing continued and increased substantially since 2010-2011 as a result of renewed international demand for totoaba swim bladder, primarily from China. While the population of the vaquita has been in decline from well before the inscription of the property on the World Heritage List, its numbers began to rapidly drop toward extinction as a result of this surge in illegal fishing of totoaba as vaquita is caught as bycatch in gillnets used to fish the totoaba.

Second, the Integral Strategy for the Protection of the vaquita that is implemented as an emergency measure since April 2015 has not delivered the expected results. Despite substantial efforts to patrol and monitor the Vaquita Refuge and the Gillnet and Longline Suspension Zone, illegal fishing of the totoaba continues with few illegal fishermen actually being prosecuted due to complex inter-institutional responsibilities to detect, determine, halt and prosecute illegal activities. In addition, the economic compensation to local fishermen affected by the 2015 ban has not been implemented satisfactorily in particular because investment in alternative productive activities did not materialize and failed to transition affected communities into sustainable livelihoods. Efforts undertaken to design and test alternative fishing methods were few, mostly undertaken out of season and without taking into account available technical and local expertise, thereby preventing a possibly successful outcome. Equipment, training and permits for alternative fishing methods could have stimulated the transition to vaquita-safe fisheries but were not issued. Both CONAPESCA and INAPESCA, responsible for the establishment of a viable alternative fishing program and permits, have been largely absent in the implementation of the Integral Strategy for the Protection of the Vaquita thereby contributing to its failure.

Third, the illegal international trade in totoaba that is fueled by demand in China continues and is the primary factor that drives the illegal totoaba fisheries and vaquita bycatch, bringing the latter to imminent extinction. Despite efforts to address the issue, illegal international trafficking of totoaba swim bladders has only increased in the recent years. The trade appears to be highly lucrative, caters to luxury communities in China, and is largely conducted by criminal groups that ship their ware through ports in the United States of America.

Based on the many consultations the mission conducted throughout the visit, it concludes that the Islands and Protected Areas of the Gulf of California World Heritage property (hereafter called 'the property') continues to demonstrate OUV and is overall managed satisfactory but illegal, unsustainable and unregulated fisheries are a concern for the protection of the OUV of the property.

The mission further considers that the dramatic decline in its population, from approximately 300 at the time of the inscription of the property (see figure 2) to estimated 30 individuals in 2016, and the risk of imminent extinction of the vaquita, specifically recognized as part of the property's OUV and endemic to the Gulf of California, represents a clear ascertained danger to the OUV of the property in line with paragraph 180 c) i) of the Operational Guidelines. Immediate implementation of the most urgent recommendations of the mission related to the illegal fishing of totoaba is imperative to prevent iconic attributes of the OUV of the property from becoming irreversibly lost.

**It is therefore recommended that the Committee inscribe the Islands and Protected Areas of the Gulf of California (Mexico) on the List of World Heritage in Danger at its 41st session in 2017.**

**The mission considers that the State Party should take the following urgent measures with immediate effect to prevent iconic attributes of the OUV from becoming irreversibly lost:**

**R1.** Establish, with immediate effect, a permanent ban on the use of gillnets (including the sale, manufacturing, possession and use of all gillnets on land and at sea) for the Vaquita Refuge and the Gillnet and Longline Suspension Zone, and significantly strengthen the associated surveillance, monitoring and prosecution measures currently in place in order to ensure effective law enforcement;

**R2.** Establish, within one year, a viable alternative fishing program that develops alternative fishing gear that does not cause entanglement of marine mammals, sharks or turtles and trains and equips local fishing communities affected by the ban to develop meaningful alternative livelihoods with vaquita-safe fishing gear, ensuring effective involvement of all key federal agencies, in particular CONAPESCA and INAPESCA.

**R3.** Streamline and simplify procedures for the enforcement of the regulations established for the Vaquita Refuge and Gillnet and Longline Suspension Zone, in particular concerning the official registration of illegal activities and their prosecution through the entire compliance and enforcement chain.

**R4.** Pursue, at the highest level of government, the necessary and urgent cooperation with the State Party of China to halt the consumption and demand for totoaba swim bladders and with the United States of America to halt transit of totoaba swim bladders through its ports, and also with all other identified destination and transit countries involved in this trade, in particular through the implementation of the recommendations that have been made by the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES);

**The mission considers that the following recommendations to further improve the conservation of the property and strengthen its management should be implemented as soon as possible:**

**R5.** Continue the highly successful community programs aimed at strengthening the involvement of local communities into the protection of the property and their transition into sustainable livelihoods, as well as climate change adaptation programmes;

**R6.** Accelerate the successful transition from unregulated fisheries into regulated practices that adhere to clear guidelines for sustainable catch;

## 1 BACKGROUND TO THE MISSION

The property Islands and Protected Areas of the Gulf of California was inscribed on UNESCO's World Heritage List in 2005 and extended in 2007 and 2011. The property is inscribed for three natural World Heritage criteria. The description below is based on the retrospective Statement of the Outstanding Universal Value adopted in 2013. However, the mission noted some errors in this statement and has proposed some changes (Annex VI). The description below already reflects these proposed changes

1. Its stunning landscape beauty with dramatic contrasts between the rugged and seemingly inhospitable islands, coastal deserts and the brilliant reflection from the surrounding turquoise waters (criteria vii);
2. As a major foundation of the Gulf California's phenomenal marine productivity that are nutrient-rich upwelling oceanic currents supporting abundant phytoplankton and zooplankton which in turn provides nurseries for larval reef fish as well as its ongoing evolutionary speciation and endemisms of major significance to conservation and science (criteria ix); and
3. Its extraordinary diversity of terrestrial and marine life of global priority for biodiversity conservation including 700 species of vascular plants, 115 species of reptiles with nearly half of them endemic, 154 land bird species, almost 900 species of fish of which about 10% occurring exclusively in the Gulf of California. These include the critically endangered species black sea bass and totoaba, as well as the vulnerable Basking Shark. The property provides habitat for about 35% of the world's total number of cetacean species, including the smallest one, the critically endangered vaquita. In addition a large number of California sea lion colonies occur throughout the property. The endangered Blue Whale and Fin Whale as well as the vulnerable Sperm Whale also visit the property. The coral reef systems at Cabo Pulmo are among the most important in the Eastern Pacific (criteria x).

The property comprises 244 islands, islets and coastal areas that are located in the Gulf of California in north-eastern Mexico. The property was inscribed in 2005 and extended in 2007 and 2011. It is inscribed as serial site composed of 12 components including:

1. Islands of the Gulf of California
2. Upper Gulf of California – Colorado river Delta (marine portion)
3. Isla San Pedro Martir
4. El Viscaíno (marine and coastal belt in the Gulf of California)
5. Bahía de Loreto
6. Cabo Pulmo
7. Cabo San Lucas
8. Islas Marias
9. Isla Isabel
10. Archipelago of San Lorenzo
11. Islas Marietas
12. Balandra Zone of Ecological Conservation and Community Interest



The joint World Heritage Centre/IUCN reactive monitoring mission was requested by the World Heritage Committee in Decision **40COM7B.75**. As outlined in the Terms of Reference for the mission, the main objectives of the mission were to:

1. Review the ongoing measures undertaken by the State Party to address threats to the critically endangered vaquita and totoaba and evaluate the progress achieved by the State Party in the implementation of the World Heritage Committee's request to take urgent additional measures to secure the conservation of these species;
2. Assess the overall state of conservation of the property and evaluate whether the property meets the conditions for inscription on the List of World Heritage in Danger;
3. In line with paragraph 173 of the Operational Guidelines, assess any other relevant issues that may negatively impact on the OUV of the property, including its conditions of integrity and protection and management.

A copy of the terms of references, itinerary, programme and composition of the mission team are provided in Annexes I, II and V of this report.

## 2 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

### 2.1 Relevant national legislation

Overall, there are 17 national regulations applicable to the protection of the vaquita, totoaba and their habitat.

The General Law of Ecological Equilibrium and Environmental Protection (La Ley general del equilibrio ecológico y la protección al ambiente (LGEEPA)) provides the overarching legislative framework for the establishment and management of protected areas in Mexico.

In 1978 all islands within the Gulf of California were declared a Wildlife and Migratory Birds Reserve and Refuge and in 2000 this protected area was transformed into a new category of Flora and Fauna Protected Area (Área de Protección de Flora y Fauna). Consequently marine areas around some of the islands were also declared protected areas. In 2005 a decree established the Marine Zone of San Lorenzo Archipiélago National Park and in 2007 the Bahía de los Angeles, Canales de Ballenas y Salsipuedes Biosphere Reserve<sup>1</sup> and the Marine Zone of the Archipiélago Espíritu Santo National Park were created. An overview of all protected areas which compose the property is provided below in the Management structure section.

Most of the islands are the property of the Federal Government. One of the exceptions is the Tiburon Island whose ownership by the indigenous people Comcaac was officially recognized by a Presidential Decree in 1975.

In addition to protected area laws, a number of legislative instruments provide a framework for protection of certain species of flora and fauna. The Official Standard (Norma Oficial Mexicana) NOM-059-SEMARNAT-2010 defines categories of endangered species and outlines regulations for their protection. It includes the vaquita and the totoaba in the “endangered species” category.

#### International treaties

Mexico is signatory to a number of international environmental treaties and conventions, including:

- Convention on Biological Diversity (CBD)
- Convention on Wetlands of International Importance (the Ramsar Convention)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Totoaba has been listed in Appendix I of CITES since 1977 and vaquita since 1979.

### 2.2 Institutional framework

#### CONANP

Federal protected areas in Mexico are managed by the National Commission of Protected Natural Areas (CONANP, Comisión Nacional de Áreas Naturales Protegidas) which was

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<sup>1</sup> In Mexico Biosphere Reserves are a category of national protected areas which may or may not be also recognized as Biosphere Reserves under the UNESCO Man and the Biosphere Programme

created in 2000 as a decentralized agency of the Mexico's Environment Ministry SEMARNAT (Secretaría del Medio Ambiente y Recursos Naturales).

### PROFEPA

The Federal Attorney's Office for Environmental Protection (Procuraduría Federal de Protección al Ambiente, PROFEPA) is a decentralized agency of SEMARNAT responsible for law enforcement related to the protection of the environment.

### CONAPESCA

The National Commission of Aquacultura and Fisheries (CONAPESCA, Comisión Nacional de Acuacultura y Pesca) is a decentralized agency under the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA) responsible for the development and implementation of policies and programmes for the fisheries and aquaculture sectors in Mexico.

### INAPESCA

Another decentralized agency of SAGARPA, National Fisheries Institute (INAPESCA), is responsible for supporting the fisheries sector through research in relevant fields, including fishing technology and gear, and through provision of scientific basis for fishing regulations.

### SEMAR

The Secretaría de Marina Armada de México (SEMAR) includes the Mexican naval forces and its ministerial sector. SEMAR is currently involved in the surveillance and law enforcement operation undertaken in the Gulf of California.

## 2.3 Management structure

This serial property consists of several protected areas of different categories which all have their own management. CONANP operates through Regional Directorates who are responsible for all federal protected areas in their regions and the property falls under management of three different Regional Directorates. The table below provides an overview of this structure:

<b>Name of the component of the property</b>	<b>Name of the protected area under Mexican legislation</b>	<b>Management</b>	<b>Regional Directorate</b>
Islands of the Gulf of California	Islands of the Gulf of California Flora and Fauna Protected Area	Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Baja California	Regional Director of the Peninsula de Baja California y Pacífico Norte
		Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Baja California Sur	
		Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Sonora	Regional Director of the Noroeste y Alto Golfo de California
		Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Sinaloa	
Upper Gulf of California - Colorado River Delta (marine portion)	Upper Gulf of California and Colorado River Delta Biosphere Reserve	Director of the Upper Gulf of California and Colorado River Delta Biosphere Reserve	

Isla San Pedro Martir	Isla San Pedro Mártir Biosphere Reserve	Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Sonora	
Bahía de Loreto	Bahía de Loreto National Park	Director of the Bahía de Loreto NP	Regional Director of the Peninsula de Baja California y Pacífico Norte
Cabo Pulmo	Cabo Pulmo National Park	Director of the Cabo Pulmo NP	
Cabo San Lucas	Cabo San Lucas Flora and Fauna Protected Area	Subdirector of the Cabo San Lucas Flora and Fauna Protected Area	
Archipelago of San Lorenzo	Archipiélago de San Lorenzo National Park	Director of the Islands of the Gulf of California Flora and Fauna Protected Area in the State of Baja California	
Balandra Zone of Ecological Conservation and Community Interest	Balandra Flora and Fauna Protected Area	Director of the Balandra Flora and Fauna Protected Area	
El Vizcaíno (marine and coastal belt in the Gulf of California)	El Vizcaíno Biosphere Reserve	Director of the El Vizcaíno Biosphere Reserve	
Islas Marias	Islas Marias Biosphere Reserve	Director of the Isla Isabel National Park, Islas Marias Biosphere Reserve and the Islas Marietas Flora and Fauna Protected Area	Regional Director of the Occidente y Pacífico Norte
Isla Isabel	Isla Isabel National Park		
Islas Marietas	Islas Marietas Flora and Fauna Protected Area		

While all individual protected areas that are part of the property have well established management programmes and plans, no integrated management structure exists for the entire property, although coordination between different protected areas and management units appears to be well organized. Substantial efforts are being made in large parts of the property to transition fisheries into regulated practices and move communities away from extractive use into more sustainable livelihoods.

Each of the property's components has a management budget in place. While the budget provided through CONANP has decreased for some parts of the property in recent years, the overall budget for the management of the property has increased considerably since its inscription on World Heritage List. Large-scale conservation projects and expertise funded through foreign governments have been successfully implemented and mechanisms are now being put in place to facilitate private funding to complement government budgets in support of the future protection of the property.

The property is also subject to climate change policies and targets that are set at the national level and implemented, in part, through community programmes in large parts of the property.

### 3 IDENTIFICATION AND ASSESSMENT OF ISSUES AND THREATS

#### 3.1. Illegal, unreported and unsustainable fisheries in the Gulf of California

Illegal, unreported and unsustainable fisheries are the overall most important threat to the conservation of the OUV of the property. The most devastating effects of illegal fisheries are visible in the upper part of the Gulf of California where the illegal fishing of totoaba has resulted in the near extinction of the critically endangered vaquita.

A diverse range of fishing activities targeting different species occur throughout the property. Targeted species include octopus, shellfish, finfish, shrimp, among other. Fishing techniques range from the use of pots for crabs, spear fishing, longlines, trawls and gillnets.

Fishing activity in the Gulf of California was historically unregulated. However, in recent years, considerable effort has been made to transition unregulated fisheries into regulated practices that adhere to sustainable fishing policies. The progress is slow but steady and allows a progressively better distinction between legal and illegal fisheries.

Both legal and illegal fisheries appear to contribute to the problem of unsustainable levels of fishing in the property. Overfishing occurs when a fish stock is depleted so fast that it cannot replenish itself. This can lead to a complete breakdown of the fishery, having a disastrous effect on not only the fish populations but also on the commercial fishermen that depend on them. For most marine resources (fish or invertebrates) there is a lack of knowledge on reliable population sizes of the target species, making it difficult to assess the potential impacts of fishing activities on marine wildlife in the property. Recent ecological assessments as well as other information received during the mission indicate however that while some declines are visible the overall state of fisheries appears in relative good health throughout the property apart from the upper Gulf of California.

While any fishing gear can have a potential impact on non-target species, such as whales or turtles, gillnet fishery has been proven to be the most destructive through unintentional bycatch. The highest amount of gillnet fishery occurs in the shallow habitats of the upper Gulf of California.

Different gillnet types exist, but their main characteristic is that they consist of strings of netting walls (one, two or three) that are placed vertical in the water column. They are generally set in a line of nets ('fleet'), generally with floats on the upper line (headrope) and weights on the lower line (footrope). The fishing gear can either be anchored to the bottom, or it can be left drifting. Also it can either be free or connected with the vessel. Target fish (or in the case of the Gulf of California also shrimp) swim into the net and get entangled in the thin twine (this is why this type of net is also called "entanglement net"). Also, the curvina fishery in the Gulf of California uses a special technique in which a gillnet is used as a purse seine net. It is also called "gillnet used rodeo-style".

One type of fishery using gillnets is the shrimp and finfish fishery. This fishery is a legal fishery by registered fishermen of the local communities. The other type of fishery is the illegal catch of the totoaba (*Totoaba macdonaldi*).

An additional problem is caused by illegal and abandoned gillnets in the vaquita range. These nets are often left by illegal fishermen when they are feeling not secure enough to retrieve them. A multi-institutional program has been in place to find and remove these nets. It is vital that this program continues so that all gillnets are removed from the vaquita habitat.

### 3.1.1. *Totoaba fishery*

The totoaba (*Totoaba macdonaldi*) belongs to the croaker family. It lives up to 30 years and can grow up to 2m in length. Totoaba are endemic to the Gulf of California and they have an annual breeding migration to the northernmost part of the gulf in the Colorado River Delta. Adult totoaba migrate northward in the winter along the east coast of the Gulf of California to the Colorado River Delta and remain there for weeks before spawning in the spring. Adults then migrate back south along the west coast (Cisneros-Mata et al., 1994). The warm, low salinity waters of the Delta are necessary for the spawning and are not found anywhere else in the Gulf. Totoaba feed on fish and shrimp (Findley 2010).

The totoaba is listed as critically endangered by the IUCN Red List and in danger of extinction under Mexican wildlife law. Based on fishing data available until 1975, it was estimated that the species declined more than 95% in a period of 60 years. However, more precise estimates of the current population of totoaba are not available.

The fishing of totoaba has been officially banned in Mexican waters since 1975 and the species was placed on the List of Mexican Endangered Species (NOM-059-SEMARNAT-2010). Shortly after, it was placed on the endangered list (Appendix I, threatened with extinction) of CITES and added to the U.S. Endangered Species list.

Since 2011, the long-standing illegal fishery for this species has increased dramatically in the upper part of the gulf. The main factor that is driving the boost in illegal fishing of totoaba is the high demand for its swim bladder in China.

Outside of this trade, there is also a substantial bycatch of juvenile totoaba in the shrimp fishery. The (illegal) gillnets used for totoaba fishing are known to have a bycatch of other marine species that are (critically) endangered. Totoaba are also caught using long-lines which remain illegal but do not have a similar bycatch. There are no accurate estimates available of the population size of the totoaba or its current population status.



Figure 1: A totoaba and a vaquita, both being caught in a gillnet. Photograph: Omar Vidal

### **3.1.2. Curvina fishery**

The curvina golfina (*Cynoscion othonopterus*) is another fish that is endemic to the northern Gulf of California. It is listed as a vulnerable species by the IUCN Red List due to overfishing, which is in particular caused by fishing activities taking place during the spawning season. This legal fishery takes place with entanglement nets that are set “rodeo style”. This means they are used as a purse seine net which is placed around fish visible at the surface. If the curvina nets are deployed in this way they most likely do not pose a bycatch threat to vaquita.

The main threat for vaquita (and totoaba) is that the curvina (and other) fishery can be used as a cover up for the illegal totoaba fishery. The vessels can hide totoaba nets under the curvina nets when leaving the port or could deploy their curvina nets as a traditional gillnet, which would mean they can catch totoaba as well as vaquita. It is virtually impossible to know which vessel out at sea is conducting legal or illegal fishery operations without close inspection.

### **3.1.3. Shrimp fishery**

The Gulf of California supports more than 80% of the total catch derived from the Mexican Pacific shrimp fishery. The primary target in the Upper Gulf is the blue shrimp (*Litopenaeus stylirostris*) and the brown shrimp (*Farfantepenaeus californiensis*). Shrimp are caught using a variety of methods, including trawls. Here we will refer only to the use of entanglement or gill nets (chinchorro de línea) in the artisanal fisheries in the Upper Gulf of California. These shrimp nets have bycatch of vaquita, totoaba and grouper.

### **3.1.4. Long line fishery**

The long line fishery will catch totoaba and it has bycatch of other marine wildlife such as turtles. It will not catch the vaquita, but it can be used as cover up for illegal fishery operations.

## **3.2. Protection of the critically endangered vaquita**

The vaquita is critically endangered due to the bycatch in gillnets used in artisanal commercial fisheries and illegal fishing of totoaba. The decrease in the vaquita population started well before the inscription of the property and continued at an alarming rate. At the time of inscription of the property on the World Heritage List, the population was approximately 300 species and declined sharply to an estimated 30 individuals in 2016.

### **3.2.1. Protection measures established by the Government of Mexico**

Actions aimed at protection of totoaba and vaquita date back to 1975 when the Ministry of Fisheries introduced a ban on totoaba fishing to halt its overfishing. The ban is still in force today although it has not been rigorously enforced and the fishery has continued since.

In 1993, the Upper Gulf of California and Colorado River Delta Biosphere Reserve was established and the NOM-012-PESC-1993/NOM-024-SEMARNAT-1993 on “Measures for the protection of the totoaba and the vaquita in the federal waters of the Gulf of California” prohibited all fishing activities within the core zone of the Reserve. In 2002, the Emergency Official Mexican Standard NOM-EM-139-2002 aimed at reducing the mortality of the vaquita through the establishment of a ban of 6 inch mesh gillnets in the Reserve.

In 1997 the Mexican government established the Comité Internacional para la Recuperación de la Vaquita (CIRVA) to address the decline of the vaquita in the Upper Gulf of California.

The CIRVA has since held nine meetings resulting in reports and recommendations. As early as in 1999 CIRVA recommended the banning of all gillnets throughout the vaquita's range.

In 2005, the government established the Refuge Area for the Protection of the Vaquita (see map 1) that includes the areas known for the highest concentration of this species. The area has a total surface of 1,263.85 km<sup>2</sup> of which 80% is located within the Upper Gulf of California and the Colorado River Delta Biosphere Reserve. An associated program was developed to protect the Vaquita in the Refuge Area.

In 2007 the Mexican government developed the Vaquita Conservation Action Plan (Programa de Acción para la Conservación de la Especie: Vaquita or PACE–Vaquita). In this plan: 1) a compensation programme was developed for fishermen who voluntarily stopped fishing within the vaquita refuge area 2) a buy-out program was conducted for gillnet fishing permits and boats. 3) a plan was made to develop alternative fishing gear which would allow fishermen to substitute gillnet gear.

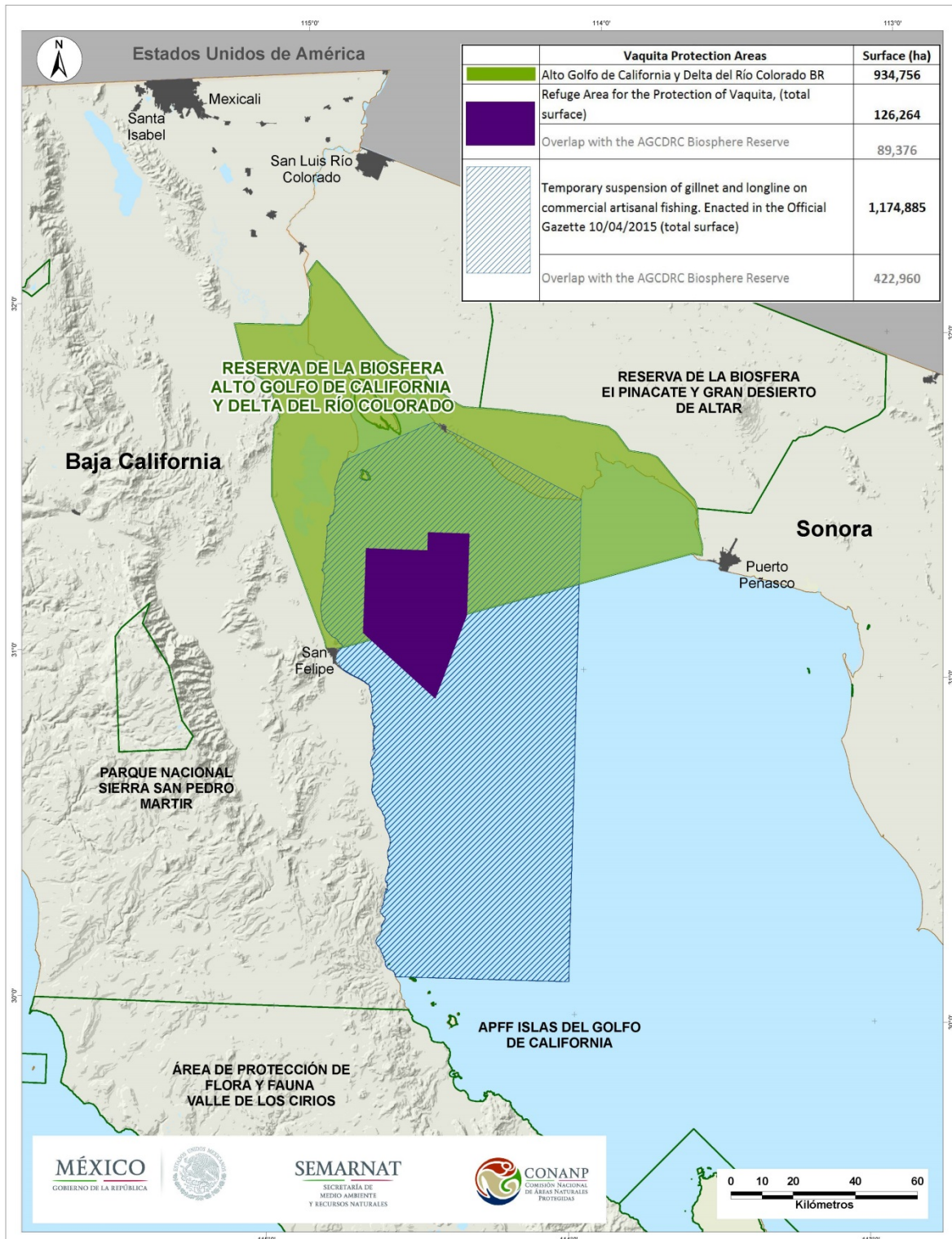
In 2013, in response to the sharp decline of the vaquita, the Advisory Commission to the President's office was established with the focus to protect the vaquita.

In 2015, the Integral Strategy to protect the vaquita was put in place and continues to the present day. The Integral Strategy has four main goals, including, expansion of the protected area, economic compensation, law enforcement and improvement of fishing gear. Their effectiveness is discussed in the following sections.

#### *Temporary ban on all commercial fishing using gillnet and/or longline*

In April 2015 a temporary, 2-year emergency ban was established on all commercial fishing using gillnet and/or longline for vessels operating in the northern Gulf of California (Gillnet and Longline Suspension Zone; see map 1) with the exception of curvina fisheries which remains allowed in the period between February and April. The ban expired at the time the mission took place and was extended for another two months (until 31<sup>st</sup> of May 2017). A copy of the decree extending the ban until the 31<sup>st</sup> of May 2017 was provided to the mission (Annex III).





Map 1. Demarcation of the temporary Gillnet and Longline Suspension Zone, as well as the Vaquita Refuge (dark blue) and the boundaries of the Upper Gulf of California and Colorado River Delta Biosphere Reserve (green). Source: CONANP

Economic compensation

An estimated total of 1,443 fishermen with 806 artisanal boats as well local and regional value chain participants were directly affected by the ban established in 2015. A compensation programme has been put in place with the objective to provide fishing

communities with financial means to carry out other activities while contributing to eliminate fishing gear that affect vaquita. The mission was informed however, that the compensation package, while welcomed, is not a sustainable solution for the future and requires to be rapidly replaced by effective initiatives that provide fishermen with vaquita-safe fishing gear and necessary permits allowing them to return to self-sustaining livelihoods.

### Law enforcement

Since 2015, eight federal government agencies have the responsibility to secure that the goals of the Integral Strategy are being met. Enforcement measures focus on prevention of illegal fishing, prevention of illegal trade of endangered wildlife species products, and the prevention of organized crime. Enforcement of the gillnet ban is coordinated by the Mexican Navy with a number of partners, including PROFEPA, CONANP and CONAPESCA.

With regards to inter-institutional cooperation, the mission considers that the establishment of cooperation between the Ministry of Environment, the Mexican Navy and CONAPESCA with the purpose of ensuring enforcement of the temporary Gillnet and Longline Suspension Zone introduced in 2015 has been unprecedented in its scale and commitment but a lack of cooperation by some of the partners is hampering a successful outcome.

Based on a range of observations, visits and discussions the mission considers the surveillance measures put in place are substantial and merit recognition. However, despite the serious investments made to enforce the gillnet ban, actual enforcement is weak. While illegal activities are being detected, procedures to detect, register and prosecute them are too complex and therefore little effective. Currently, in order to officially register an illegal fishing activity presence of representatives of PROFEPA and CONAPESCA and, in case it occurs within a protected area, of CONANP is required. The Navy supports detection and interception of illegal fishermen. While PROFEPA and CONAPESCA might have limited presence on the ground, particularly in remote protected areas, it becomes difficult to register illegal activities as the representatives of CONANP, for example rangers, alone have no authority to register an illegal act. While it should be acknowledged that all authorities play their unique and important roles and mutually support each other, when it comes to concrete enforcement actions on the ground, the procedures are too complex to be effective.

Coordination between authorities on land and at sea further complicates the matter. The mission was informed that the illegal activities are mostly undertaken by organized crime groups who are armed and operate increasingly at night time making detection and prosecution even more challenging.

The prevention of illegal trade is also weak and requires strengthening. While some measures are being taken, the mission was informed that, for example, gillnets and associated equipment are still easily available in local stores. The illegal trade of totoaba in China is further discussed under point 3.4 of this report.

Important to note is that also a removal of illegal and abandoned fishing gear in the range of the vaquita was initiated in a multi-institutional program, including governmental agencies, civil society organizations and fishermen who agreed to participate in the programme. The first field work took place from in October and November 2016. During this campaign 31 totoaba gillnets were found. From December 2016 through April 2017 the Sea Shepard Conservation Society retrieved 183 totoaba gillnets in this area, of which 150 were active.

### Development of alternative fishing gear

The fourth key goal of the Integral Strategy is to transition local fishermen affected by the ban into sustainable practices and equip, train and permit them to use vaquita-safe gear.

The goal was to ensure the timely development of alternative fishing gear, conduction of the necessary trials and issuance of permits for the use of newly developed gear so that the fishermen could be provided with opportunities to sustain their livelihoods during the two-year gillnet ban introduced in 2015 by either continuing to fish in ways that do not threaten vaquitas or by advancing their possibilities for doing so in the future.

Conversations with different stakeholder and experts the mission met made it clear that this goal has not been achieved and needs urgent addressing. No viable alternative fishing programs were developed in ways that could produce successful results. The minimal testing that was done was undertaken during wrong seasons or executed without the use of local and expert knowledge. During its visit, the mission has held meetings with the representatives of local fishermen who remain highly committed to switching to alternative fishing gear, but who expressed their dissatisfaction with the way the process of identifying possible technical solutions has been organized so far, noting that it has been slow and ineffective, including due to the fact that testing of some of the proposed alternative gears for shrimp fishing has been organized during the times outside the main season for shrimp fishing leading to inadequate outcomes.

Meetings the mission attended made it very clear that adequate involvement of CONAPESCA and INAPESCA is largely lacking and is a key reason why alternative, vaquita-safe fishing gear continues to be unavailable. Such programmes require the full cooperation of these authorities and a transparent full-scale testing initiative designed with the help of recognized experts and local fishermen. The implementation of these measures requires adequate financing that in the short to mid-term will help remove dependence on compensation schemes. It further requires the immediate delivery of permits for the alternative fisheries that proof viable.

The mission also notes that the burden on enforcement could increase considerably if many fishing boats are allowed access to the gillnet-free area. Therefore, a caveat to all recommendations concerning experimental fishing operations is that they should be implemented transparently, conducted in close communication with enforcement authorities, and closely and effectively monitored through a system developed in collaboration with the Navy. It is expected that the experimental protocols will provide assurance of such monitoring.

Considering these key issues and threats described above, the mission concludes that because entanglement in illegal gillnets is the main cause of vaquita mortality a number of key measures are urgently required in order to prevent the irreversible loss of one of the attributes of the OUV of the property - the endemic vaquita species. The immediate establishment of a permanent ban on the use of gillnets throughout the vaquita range is considered the most urgently needed measure. It is recommended that the ban is extended beyond just use of gillnets to also prohibit sale, manufacturing and possession of gillnets on land and at sea in order to facilitate enforcement activities.

The effectiveness of the ban can only be guaranteed if its enforcement continues and therefore it will be essential that the cooperation between CONANP, PROFEPA, CONAPESCA and the Mexican Navy continues and is strengthened and is also supported by increased effectiveness of prosecutions of illegal activities.

At the same time, the regulatory and enforcement measures can only be viable in the longer term if solutions can be developed for local communities who depend on legal fisheries (mainly for shrimp) in the Upper Gulf of California for their livelihoods and way of living. To implement the gillnet ban, the legally operating artisanal fishermen until now have been compensated for not using their fishing gear to fish for shrimp and finfish. This is not a viable long-term solution. Instead, efforts are needed to develop alternative fishing gear in close

cooperation with the fishing community and the lead agencies. During the transition time the fishermen that are participating in this process of development of gear and the training of its use, will need to continue to receive compensation for their work. The development of alternative gear is a technical challenge, but the expertise is available (i.e. through the Expert Committee on Fishing Technologies), so this challenge can be addressed in a short time frame. The use of alternative gear would allow the legal fishermen to get back to work and it would also set the foundation for a long-term ecologically viable fishery.

Based on these observations, the mission made the following recommendations:

### **Recommendation 1**

Establish, with immediate effect, a permanent ban on the use of gillnets (including the sale, manufacturing, possession and use of all gillnets on land and at sea) for the Vaquita Refuge and the Gillnet and Longline Suspension Zone, and significantly strengthen the associated surveillance, monitoring and prosecution measures currently in place in order to ensure effective law enforcement;

### **Recommendation 2**

Establish, within one year, a viable alternative fishing program that develops alternative fishing gear that does not cause entanglement of marine mammals, sharks or turtles and trains and equips local fishing communities affected by the ban to develop meaningful alternative livelihoods with vaquita-safe fishing gear, ensuring effective involvement of all key federal agencies, in particular CONAPESCA and INAPESCA;

### **Recommendation 3:**

Streamline and simplify procedures for the enforcement of the regulations established for the Vaquita Refuge and Gillnet and Longline Suspension Zone, in particular concerning the official registration of illegal activities and their prosecution through the entire compliance and enforcement chain.

Despite the significant measures undertaken by the Mexican government the illegal fishing for totoaba continues. The latest CIRVA report (CIRVA 2017) notes high level of illegal fishing activities both day and night and indicates that despite the emergency measures in place since 2015, dead vaquitas continue to be found with five dead animals reported between March and April 2017. Information received by the mission during its visit from the Sea Shepherd Conservation Society, which is currently involved in an operation in the Upper Gulf of California aimed at detection of illegal activities and removal of ghost nets, confirms the high level of illegal activities.

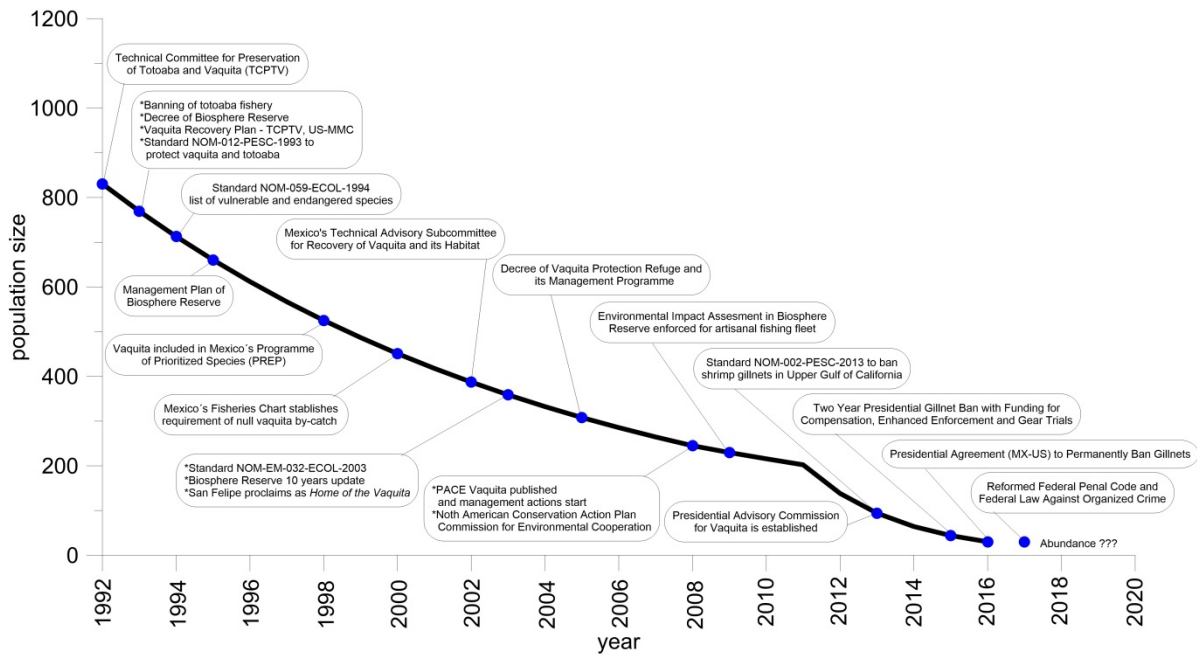


Figure 2: Figure showing the population decline of the vaquita alongside key management events taken up to 2015 (updated from CIRVA-5)

### 3.3. The illegal trade in totoaba swim bladder

As noted earlier in this report, the main driver behind the illegal totoaba fisheries and the associated near extinction of the Vaquita is the high demand for its swim bladder in China.

The totoaba has been listed in CITES Appendix I since 1977; however, illegal international trade in totoaba swim bladders, also known as “maws”, has continued even since then and has significantly increased in the recent years. A large totoaba swim bladder can be sold for up to USD 15,000 on the black market in China (Greenpeace East Asia 2015, Guilford 2015), with prices sometimes going up to USD 50,000 for larger specimen (Environmental Investigation Agency, 2016).

A recent report by Greenpeace East Asia (Greenpeace East Asia, 2015) noted that the most common route involves trafficking of swim bladders from Mexico to the USA from where they are sent to Hong Kong and transported into mainland China.

It is clear that while the actions undertaken by the State Party to establish the ban, organize surveillance and compensate affected fishing communities have been unprecedented in their scale, it is unlikely that the Government of Mexico alone can stop the illegal fishing of totoaba and prevent the vaquita from going extinct. Urgent measures need to be taken by the State Party of China to address the issue of illegal trade of totoaba swim bladder along with actions by transit countries, particularly the United States of America which serves as the main transit point. It is also absolutely crucial to halt the demand for totoaba swim bladders. While little action has been taken by China to prevent consumption and use, prevention of its transit through ports in the USA is also weak and requires strengthening.

Based on these observations the mission makes the following recommendation:

#### Recommendation 4:

Pursue, at the highest level of government, the necessary and urgent cooperation with the State Party of China to halt the consumption and demand for totoaba swim bladders and with the United States of America to halt transit of totoaba swim bladders through its ports, and also with all other identified destination and transit countries involved in this trade, in particular through the implementation of the recommendations that have been made by the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES);

### 3.4 Other threats and issues

The property has a very high diversity in habitats, a high productivity and provides relatively calm and warm waters in winter and spring. This makes it a home of about 39% of the world's marine mammal species, some of which use this area for calving. A variety of human activities can pose threats for marine mammals. Some factors need to be taken into account to secure overall protection of the conditions supporting marine mammals are maintained. These include:

- 1) *Contaminants*: contaminants such as heavy metals and organochlorine pesticides can accumulate in marine mammals (and other top predators) and cause serious health issues. In other areas of the world this is one of the primary problems for marine mammals. From the data available the contaminant level in marine mammals in the Gulf of California is low compared to other areas of North America or the world and there is no indication that they are suffering significant health issues due to contaminants.
- 2) *Noise pollution*: Marine mammals, and in particular cetaceans, rely heavily on sound for navigation, communication and foraging. This is why noise in the water can have a highly detrimental impact. Sound sources include military sonar, seismic surveys, offshore construction and shipping in general. There are records of seismic surveys potentially causing the death of beaked whales in the Gulf of California (e.g. Taylor et al. 2004). There is a lack of data on the sound production within the property and its impact on in particular deep diving species. Nevertheless, with the current knowledge, the marine mammals within the property are most likely not significantly impacted by noise pollution.
- 3) *Tourism*: Tourism in the form of whale watching occurs following Mexican guidelines as well as local guidelines<sup>2</sup>. These guidelines are of international standard and there is no indication that this activity has a negative impact on the cetaceans occurring in the property.
- 4) *Ship strikes*: There is no indication of ship strikes between marine mammals and vessels.
- 5) *Bycatch and entanglements*: Bycatch occurs primarily in gillnets and small cetaceans and sea lions are the marine mammals most impacted. For the vaquita it is evident that the bycatch clearly has a detrimental impact. For sea lions there are indications that there is a significant bycatch in some areas (Underwood et al. 2008). For other species data on bycatch rates in relation to population numbers are lacking. Entanglements in fishing gear occur primarily with large cetaceans (such as two Brydes whales that were found dead entangled in totoaba nets). It is not known what the impact of this is on the populations.

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<sup>2</sup> <http://rabenmexico.org/wp-content/uploads/2014/02/Reglamento-2013.pdf>

## **4 ASSESSMENT OF THE STATE OF CONSERVATION OF THE PROPERTY**

### **4.1 Assessment of the property as a whole**

A recent ecological assessment of all marine protected areas (MPAs) in Northeast Mexico (CONANP, 2016) provides a valuable overview of the conservation status of the protected areas comprising the property. Based on expert opinion and compiled through a series of workshops, these assessments evaluate the status and trends of 12 indicators and associated standard questions which reflect the condition of three main components of each MPA – waters, habitat and living resources. For each indicator, its current condition (choosing from 6 possible categories – excellent, good, acceptable, poor, critical or data deficient) and trends (rapidly improving, improving, stable, declining, rapidly declining or data deficient) are evaluated.

The summary below provides an overview of key indicators reflecting the state of conservation of the property in relation to criterion (x) (biodiversity, key species, endangered species) for those components of the property for which assessment is available. The results of the scorecards show that the terrestrial components of the property are mainly in a good state of conservation, except for the Upper Gulf of California and the Colorado River Delta Biosphere Reserve where the dams and associated alterations have had a profound impact on the delta, although the scorecard indicate a potential positive trend thanks to restoration activities. Improvements in the conditions of other terrestrial parts, such as Isla San Pedro Martír, have also occurred thanks to successful invasive species eradication programmes.

Marine areas are in good condition in parts of the property (Cabo Pulmo, San Lorenzo), but are in poor condition and showing decline in other parts, particularly in south-eastern parts along the coast of Nayarit state (Isla Isabel and Islas Marietas). For Isla Isabel Islas Marietas the scorecard notes the significant decline in populations of some marine species which are commercially used and that recuperation of their populations is at risk.

Component of the property	Biodiversity			Key species			Endangered species		
	Marine	Terrestrial		Marine	Terrestrial		Marine	Terrestrial	
Upper Gulf of California - Colorado River Delta (marine portion)	dd	improving		dd	improving		declining		stable
Bahía de Loreto	dd	improving		dd	stable		stable		stable
Cabo Pulmo	Improving			stable			dd		
Archipelago of San Lorenzo	Stable			dd			dd		
Islands of the Gulf of California, BC		Stable			stable				dd
Islands of the Gulf of California, Sonora		Stable			stable				NA
Islands of the Gulf of California, Sinaloa		declining			dd				improving
Balandra Zone of Ecological Conservation and Community Interest	Stable			dd			dd		
El Vizcaíno (marine and coastal belt in the Gulf of California)	Stable	Stable		stable	stable		stable		dd
Isla Isabel	Declining	rapidly improving		rapidly declining	stable		declining		stable
Islas Marietas	rapidly declining	improving		rapidly declining	stable		declining		dd

Isla San Pedro Martir	Coastal	Pelagic	Terrest.	Coastal	Pelagic	Terrest.	Coastal	Pelagic	Terrest.
	Improv.	dd	Improv.	dd	stable	rapidly improv.	stable	stable	rapidly improv.

Figure 3: Key results of the ecological assessment of marine protected areas in Northeast Mexico (based on data from CONANP, 2016)



It is important to note however that the declines in populations of some species started before the inscription of the property on the World Heritage List and considerable efforts have been undertaken in the recent years to transition fisheries from being historically unregulated into regulated and sustainable practices.

The mission had an opportunity to meet with three out of thirteen directors responsible for the management of different components of the property and had phone calls with another three. Based on these conversations, the mission concluded that the management of individual component protected areas is efficient and that for marine components there has been a positive trend towards shifting the fisheries associated with these marine protected areas towards sustainable and regulated fisheries. No-take fishing zones have recently been established in a number of components through participatory mechanisms involving local communities and the ratio between unregistered and registered fishermen has been shifting towards the predominance of the latter. A number of highly successful programmes have been developed in recent years, including through innovative approaches that engage local communities into monitoring, research and education activities. There is also a high level of cooperation between the different protected areas comprising the property and exchange of best-practice examples and replication of successful models should be further encouraged.

Based on these observations, the mission makes the following recommendations:

**Recommendations 5:** Continue the highly successful community programs aimed at strengthening the involvement of local communities into the protection of the property and their transition into sustainable livelihoods, as well as climate change adaptation programmes;

**Recommendation 6:** Accelerate the successful transition from unregulated fisheries into regulated practices that adhere to clear guidelines for sustainable catch;

## 4.2 Assessment of the current status of critically endangered vaquita

The vaquita (*Phocoena sinus*) is a small member of the family of porpoises (Phocoenidae). It is endemic to a small area of approximately 12000 km<sup>2</sup> in the northern Gulf of California. Due to its influx from the Colorado river delta the area is highly productive and houses shrimp, fish, turtles, sea lions and cetaceans. It is also providing the base for fishing activities relatively close to the shore for two villages (San Felipe & El Golfo de Santa Clara).

Population sizes and trends for vaquita have been determined using state-of-the art visual and acoustic methods. The estimated numbers dropped from 567 (95% C.I. 177 – 1073) in 1997, to 245 (95% C.I. 68 - 884) in 2008 (figure 2). The use of stationary passive acoustics allowed the calculation of a trend for the vaquita population. From 2011 to 2015 the annual rate of decline was 34%, the overall decline for this time period was 80% (Jaramillo-Legorreta et al. 2016). Combining both visual and acoustic methods resulted in an estimate of 59 vaquita left in autumn of 2015 (Taylor et al. 2016). A further projection of this trend resulted in an estimated 30 animals left at the end of 2016 (CIRVA 2016). Extinction of the vaquita is imminent.

The estimation of population size for very small populations such as the vaquita is extremely challenging. The fewer animals there are, the more difficult it will be to obtain reliable data. The acoustic monitoring applied in the northern Gulf of California has been specifically designed to address this problem. It needs to be continued to allow a reliable estimation of trends and in particular the efficiency of conservation and management measures.

As indicated in section 3.3.1 of this report, the problem of bycatch of vaquita in gillnet fishing and its potential danger to the survival of the species has been recognized for several decades. All evidence confirms that the continuing gillnet fishery will clearly lead to the extinction of the vaquita which is likely to occur in the near future unless a complete stop on gillnet fishing in the Vaquita Refuge and Gillnet and Longline Suspension zone takes immediate effect.

## Conclusions and recommendations

As outlined in its Terms of Reference, the main objectives of the mission were, on one hand, to assess the measures undertaken by the State Party to address threats to the critically endangered vaquita and totoaba and, on the other hand to evaluate the overall state of conservation of the property. While it was not possible for the mission to visit all components of the property, based on the visits to some of the components and the discussions with representatives of CONANP, local communities and NGOs, the mission could conclude that overall the property continues to demonstrate OUV and that its terrestrial components remain in a good state of conservation or are improving following successful invasive species eradication programmes. With regards to its marine areas, while pressures remain high in some areas, overall there has been a positive trend in the recent years towards shifting the fisheries associated with the marine components of the property towards regulated and sustainable ones. No-take fishing zones have recently been established in a number of components through participatory mechanisms involving local communities and the ratio between unregistered and registered fishermen has been shifting towards the predominance of the latter.

With regards to the situation with the critically endangered vaquita, the mission noted the scale of measures undertaken by the State Party in the last two years to address the threats to the vaquita, including the establishment of a temporary ban on all commercial fishing using gillnet and/or longline for vessels operating in the northern Gulf of California introduced in April 2015 and the unprecedented cooperation between key federal agencies, including the Mexican Navy, that was established to enforce the ban.

However, despite all efforts, the population of the vaquita continues to decline towards extinction. From 2011 to 2015 the annual rate of decline was 34%, the overall decline for this time period was 80% (Jaramillo-Legorreta et al. 2016). Combining both visual and acoustic methods resulted in an estimate of 59 vaquita left in autumn of 2015 (Taylor et al. 2016) and a further projection of this trend resulted in an estimated 30 animals left at the end of 2016 (CIRVA 2016).

The mission concluded that entanglement in illegal gillnets used for illegal fishing of totoaba is the main cause of vaquita mortality and therefore a number of key measures are urgently required in order to prevent the irreversible loss of one of the attributes of the OUV of the property - the endemic vaquita species. The immediate establishment of a permanent ban on the use of gillnets throughout the vaquita range is considered the most urgently needed measure. It is recommended that the ban is extended beyond just use of gillnets to also prohibit sale, manufacturing and possession of gillnets on land and at sea in order to facilitate enforcement activities.

However, the effectiveness of the ban can only be guaranteed if its enforcement continues and therefore it will be essential that the cooperation between CONANP, PROFEPA, CONAPESCA and the Mexican Navy continues and is strengthened and is also supported by increased effectiveness of prosecutions of illegal activities.

At the same time, the regulatory and enforcement measures can only be viable in the longer term if solutions can be developed for local communities who depend on legal fisheries (mainly for shrimp) in the Upper Gulf of California for their livelihoods and way of living. To implement the gillnet ban, the legally operating artisanal fishermen until now have been compensated for not using their fishing gear to fish for shrimp and finfish. This is not a viable long-term solution. Instead, efforts are needed to develop alternative fishing gear in close cooperation with the fishing community and the lead agencies. During the transition time the fishermen that are participating in this process of development of gear and the training of its

use, will need to continue to receive compensation for their work. The development of alternative gear is a technical challenge, but the expertise is available (i.e. through the Expert Committee on Fishing Technologies), so this challenge can be addressed in a short time frame.

On the other hand, it should be noted that the main driver behind the illegal fishing of totoaba is the high demand for its swim bladder in China. The totoaba has been listed in CITES Appendix I since 1977; however, illegal international trade in totoaba swim bladders has continued even since then and has significantly increased in the recent years. A large totoaba swim bladder can be sold for up to USD 15,000 on the black market in China (Greenpeace East Asia 2015, Guilford 2015), with prices sometimes going up to USD 50,000 for larger specimen (Environmental Investigation Agency, 2016)

It is clear that while the actions undertaken by the State Party of Mexico have been unprecedented in their scale, it is unlikely that the Government of Mexico alone can stop the illegal fishing of totoaba and prevent the vaquita from going extinct. It is therefore crucial that urgent measures are also undertaken by State Party of China to address the issue of illegal trade of totoaba swim bladder along with actions by transit countries, particularly the United States of America which serves as the main transit point, including through the implementation of the recommendations.

Based on the many consultations the mission conducted throughout the visit, it concludes that the Islands and Protected Areas of the Gulf of California World Heritage property continues to demonstrate OUV and is overall managed satisfactory but illegal, unsustainable and unregulated fisheries are a concern for the protection of the OUV of the property.

The mission further considers that the dramatic decline in its population (from approximately 300 at the time of the inscription of the property to estimated 30 individuals in 2016) and the risk of imminent extinction of the vaquita, specifically recognized as part of the property's OUV and endemic to the Gulf of California, represents an ascertained danger to the OUV of the property in line with paragraph 180 c) i) of the Operational Guidelines. Immediate implementation of the most urgent recommendations of the mission related to the illegal fishing of totoaba are imperative to prevent iconic parts of the OUV of the property from becoming irreversibly lost.

**It is therefore recommended that the Committee inscribe the Islands and Protected Areas of the Gulf of California (Mexico) on the List of World Heritage in Danger at its 41<sup>st</sup> session in 2017.**

Based on these observations, the mission made the following recommendations:

#### **Recommendation 1**

Establish, with immediate effect, a permanent gillnet ban (including the sale, manufacturing, possession and use of all gillnets on land and at sea) for the Vaquita Refuge and the Gillnet and Longline Suspension Zone, and strengthen the associated surveillance and monitoring measures currently in place;

#### **Recommendation 2**

Establish, within one year, a viable alternative fishing program that develops alternative fishing gear that does not cause entanglement of marine mammals, sharks or turtles and trains and equips local fishing communities affected by the ban to develop meaningful

alternative livelihoods with vaquita-safe fishing gear, ensuring effective involvement of all key federal agencies, in particular CONAPESCA and INAPESCA.

**Recommendation 3:**

Streamline and simplify procedures for the enforcement of the regulations established for the Vaquita Refuge and Gillnet and Longline Suspension Zone, in particular concerning the official registration of illegal activities and their prosecution through the entire compliance and enforcement chain.

**Recommendation 4:** Pursue, at the highest level of government, the necessary and urgent cooperation with the State Party of China to halt the consumption and demand for totoaba swim bladders and with the United States of America to halt transit of totoaba swim bladders through its ports, and also with all other identified destination and transit countries involved in this trade, in particular through the implementation of the recommendations that have been made by the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES);

The mission considers that the following recommendations to further improve the conservation of the property and strengthen its management should also be implemented as soon as possible:

**Recommendations 5:** Continue the highly successful community programmes aimed at strengthening the involvement of local communities into the protection of the property and their transition into sustainable livelihoods, as well as climate change adaptation programmes;

**Recommendation 6:** Accelerate the successful transition from unregulated fisheries into regulated practices that adhere to clear guidelines for sustainable catch;

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## TERMS OF REFERENCE

### Joint World Heritage Centre/IUCN Reactive Monitoring Mission

#### Islands and Protected Areas of the Gulf of California (Mexico)

9-15 April 2017

At its 40th session, the World Heritage Committee requested the State Party of Mexico to invite, as a matter of urgency, a joint World Heritage Centre/IUCN reactive monitoring mission to the Islands and Protected Areas of the Gulf of California World Heritage Site (**Decision 40 COM 7B.75**, Annex 1). The objective of the monitoring mission is to assess the current state of conservation of the property and to evaluate whether the property meets the conditions for inscription on the List of World Heritage in Danger. The mission will be conducted by Fanny Douvere representing the World Heritage Centre and Dr. Meike Scheidat and Elena Osipova representing IUCN.

In particular the mission should undertake the following:

1. Review the ongoing measures undertaken by the State Party to address threats to the Critically Endangered vaquita and totoaba and evaluate the progress achieved by the State Party in the implementation of the World Heritage Committee's request to take urgent additional measures to secure the conservation of these species;
2. Assess the overall state of conservation of the property and evaluate whether the property meets the conditions for inscription on the List of World Heritage in Danger;
3. In line with paragraph 173 of the *Operational Guidelines*, assess any other relevant issues that may negatively impact on the OUV of the property, including its conditions of integrity and protection and management.

The State Party will facilitate necessary field visits to key locations. In order to enable preparation for the mission, the State Party should provide the following items in appropriate format, including web links, to the World Heritage Centre and IUCN as soon as possible and preferably no later than one month prior to the mission:

- a) The results of the most recent population surveys and other studies on the vaquita and totoaba populations;
- b) Any relevant information regarding existing fishing regulations within the boundaries of the property and in the natural range of vaquita;
- c) Information on other measures undertaken or planned by the State Party which are aimed at addressing the threats to the vaquita and totoaba, including those in the framework of the CITES Convention.
- d) The management plan(s) for the protection of the Outstanding Universal Value of the property;

The mission will hold consultations with the relevant Mexican authorities, particularly the SEMARNAT (Secretaría de Medio Ambiente y Recursos Naturales), CONAPESCA, PROFEPA, SEMAR and CONANP. In addition, the mission will hold consultations with a range of relevant stakeholders, including: representatives of CIRVA (International Committee for the recovery of the vaquita), non-governmental organizations (NGOs), as well as relevant scientists, researchers and experts.

Based on the results of the above-mentioned reviews, assessments and discussions with the State Party representatives, authorities and stakeholders, the mission will prepare a concise report on the findings and recommendations within six weeks following the site visit, following the attached reactive monitoring mission report format (Annex 3). The mission's recommendations to the Government of Mexico and the World Heritage Committee will have the objective of providing guidance to the State Party that will ensure the ongoing conservation of the property's OUV. It should be noted that recommendations will be provided within the mission report and not during the mission implementation.



Annex II

Mission agenda and itinerary and list of people met

**LA MISIÓN CONJUNTA DE MONITOREO REACTIVO  
AL BIEN DE PATRIMONIO MUNDIAL  
“ISLAS Y ÁREAS PROTEGIDAS DEL GOLFO DE CALIFORNIA”**

**LUNES 10 DE ABRIL**

- *Reunión de Inicio De Misión*

NOMBRE	CARGO
<b>MIEMBROS DE LA MISIÓN</b>	
Fanny Douvere	Coordinadora del Programa de Patrimonio Mundial Marino-CPM UNESCO
Meike Scheidat	UICN
Elena Osipova	Oficial de Monitoreo del Patrimonio Mundial-UICN

NOMBRE	CARGO
<b>SEMARNAT</b>	
Ing. Rafael Pacchiano Alamán	Secretario de Medio Ambiente y Recursos Naturales
Enrique Lendo Fuentes	Titular de la Unidad Coordinadora de Asuntos Internacionales
Guillermo Roberto Schiaffino Perez	Coordinador de Asesores
Ariel Alain Arias Toledo	Coordinación de Acuerdos y Compromisos, Oficina del C. Secretario
Luz Maria Ortíz Ortíz	Directora General Adjunta de Acuerdos Ambientales Multilaterales
Ida Alejandra Guzmán Olgún	Directora para la Agenda Verde
Ricardo Cano Rentería	Subdirector de la Agenda Verde
<b>CONANP</b>	
Lic. Alejandro del Mazo Maza	Comisionado Nacional de Áreas Naturales Protegidas
David Gutierrez Carbonell	Director de Proyectos Especiales
Laura Martínez Pepin Lehalleur	Encargada de la Dirección General de Desarrollo Institucional y Promoción
María Pia Gallina Tessaro	Directora de Patrimonio Mundial Natural y Programa MaB
José Francisco Bernal Stoopen	Director de Especies Prioritarias para la Conservación
Dulce María Avila Martínez	Directora de Coordinación Intersectorial para la Recuperación de Especies Marinas en Riesgo

Alejandro Rafael Nyssen Ocaranza	Director General de Operación Regional
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NOMBRE	CARGO
<b>SEMAR</b>	
Capitán de Navío C. G. Dem. Carlos Guerra Ortega	Jefe de la Subsección de Protección Civil y Contingencias
<b>INAH</b>	
Francisco Vidargas	Subdirector de Patrimonio Mundial
<b>SRE</b>	
Emb. Joel Antonio Hernández García	Director General para la Organización de las Naciones Unidas
Andrea García Guerra	Asesora del Director General
Hernán de Jesús Ruíz Bravo	Director General Adjunto para Temas Globales
Santos Roberto Hernández Lopez	Subdirector de Medio Ambiente
<b>CONALMEX</b>	
Claudia Salinas Rodríguez	Encargada del Área de Patrimonio Mundial y Cultura CONALMEX
<b>SAGARPA</b>	
José de Jesús Gallo Ramírez	Visitador Regional
Martha Estrada Jiménez	Directora de Proyectos Estratégicos
Elías Reyes Bravo	Secretaría de Agricultura Ganadería, Desarrollo Rural, Pesca y Alimentación
<b>PGR</b>	
Jesus Ortíz Jimenez	Director de Delitos Previstos en Leyes Especiales
<b>POLICÍA FEDERAL</b>	
Leopoldo Velarde Ortíz	Director para América del Norte
Benjamín Grajeda Regalado	Titular de la División de Gendarmería
<b>SAT</b>	
Judith Rodríguez Bustamante	Subadministradora de Asuntos Internacionales
<b>SECRETARÍA DE ECONOMÍA</b>	
Salvador Behar Lavalle	Director General para América del Norte/Asesor De Análisis Económico

#### LUNES 10 DE ABRIL POR LA TARDE

- *Vuelo a la Cdad. de Hermosillo Sonora.*
- *Plática sobre Gestión y Manejo en el APFF Islas del Golfo de California, Sonora*

Participantes: Ana Luisa Figueroa Carranza, Directora del APFF Islas del Golfo de California, Sonora y de la RB Isla San Pedro Mártir.

## MARTES 11 DE ABRIL

- *Visita de campo a Isla San Pedro Mártir*

NOMBRE	CARGO
<b>Miembros de la comunidad que apoyan con monitoreo a través de PROCODES</b>	
Misael Sola Leon	Monitoreo especies exóticas
Delfina Mendoza Tinoco	Promotora ambiental en escuelas
Ramón Gilberto Leon Ibarra	Monitoreo submarino
Maria Guadalupe Tejeda Elizalde	Monitoreo de aves y Lobos marinos

- *Encuentro en Punta Chueca con Líderes de la Comunidad ComCaac*

Participantes:

NOMBRE	CARGO
<b>Miembros de la comunidad ComCaac</b>	
Alberto Mellado	Operador del Programa de Conservación para el Desarrollo Sostenible de CONANP
Romelia Barnet	Monitoreo de Tortuga Marina en Canal del Infiernillo
Betina Romero	Artesana y Cantante tradicional
Servando López	Monitoreo de Venado Bura en Isla Tiburón

## MIÉRCOLES 12 DE ABRIL

- *Traslado al Buque Durango y visita de campo en Isla San Esteban*

Participantes: La tripulación del Buque Durango, miembros de la Misión y acompañantes.

- *Visita del barco e intercambio con tripulantes del Durango*
- *Visita de campo a Isla Partida*

## JUEVES 13 DE ABRIL

- *Embarque de miembros del CIRVA y personal CONANP al Buque Durango*

NOMBRE	CARGO
<b>MIEMBROS DEL CIRVA</b>	
Lorenzo Rojas Bracho	Coordinador de Investigación y Conservación de Mamíferos Marinos-INECC (Instituto Nacional de Ecología y Cambio Climático)
Armando Jaramillo Legorreta	Investigador del Programa Nacional de Investigación y Conservación de Mamíferos Marinos-INECC
Gustavo Cárdenas	Investigador del INECC
Martín Sau Cota	Director de la RB Alto Golfo de California y Delta

	del Río Colorado, Comisión Nacional de Áreas Naturales Protegidas (CONANP)
Jesús Zatarain González	Director del PN Archipiélago de San Lorenzo, Comisión Nacional de Áreas Naturales Protegidas (CONANP)
<b>CONANP</b>	
Francisco Javier Valverde	Guardaparque y Monitoreo de Vaquita Marina
<b>SEMARNAT</b>	
Ariel Alain Arias Toledo	Coordinación de Acuerdos y Compromisos, Oficina del C. Secretario
Alfonso Blancafort	Delegado de la SEMARNAT en Baja California

- *Recorrido por el Área de Refugio para la Protección de la Vaquita Marina*
- *Reunión del COI y del CIRVA en San Felipe*

<b>NOMBRE</b>	<b>CARGO</b>
Contralm. C.G.DEM. Marco Antonio Pescina	Comandante del Sector naval de San Felipe, Secretaría de Marina-Armada de México (SEMAR)
Oscar Baylon Grecco	Subdelegado de la Comisión Nacional de Pesca (CONAPESCA)
Capitán de Navío I.M. DEM. Antonio Campos	Representante Comandante RN-4, Secretaría de Marina-Armada de México (SEMAR)
General Brigadier Inf. Luis Ernesto García	Comandante Guarnición Militar San Felipe, Secretaría de la Defensa Nacional (SEDENA)
Eduardo Fragoso	Secretaría de Administración Tributaria (SAT), ADUANA EN MEXICALI
Roldán Maldonado Ponce	Coordinador Comisión Nacional de Pesca (CONAPESCA)
Paul Padilla	Investigador Instituto Nacional de Pesca (INAPESCA)
Ricardo Valenzuela	Agente del Ministerio Público Federal, Procuraduría General de la República (PGR)
Suboficial Olan Díaz	Gendarmería Ambiental
Martín Sau	Director de la RB Alto Golfo de California y Delta del Río Colorado (CONANP)
Jesús Zatarain	Director del PN Archipiélago de San Lorenzo (CONANP)
Ricardo Orantes	Inspector de la Procuraduría Federal de Protección al Ambiente (PROFEPA)
Jaime Abonce	Secretaría de Pesca y Acuicultura de BC
Francisco Sosa	Delegado de la Secretaría General de Gobierno en San Felipe
Joel Espinoza	Centro de Investigación y Seguridad Nacional (CISEN)

- *Comida con Sea Shepherd y Pronatura*

Participantes:

NOMBRE	CARGO
Oona Isabelle Layolei	Capitán SEA SHEPHERD
Alejandro Castillo	PRONATURA

#### VIERNES 14 DE ABRIL

- *Llamadas telefónicas con Directores de las Áreas Naturales Protegidas: Parque Nacional Bahía de Loreto y Parque Nacional Cabo Pulmo*

CONANP contactados por Teléfono	
Javier Alejandro Gonzalez Leija	Director del PN Bahía de Loreto
Carlos Ramon Godínez Reyes	Director del PN Cabo Pulmo
David Gutiérrez Carbonell	Director de Proyectos Especiales

- *Teleconferencia con ONGs*

NOMBRE	CARGO
<b>WWF México</b>	
Jorge Rickards	Director de Operaciones y Director de Programas de Campo y Alianzas
<b>Animal Welfare Institute</b>	
<b>Greenpace México</b>	
Miguel Rivas	Campañista de Océanos
<b>Center for Biological Diversity</b>	
Alejandro Olivera	Representante en México del CBD

- *Reunión de cierre con CONANP*

Participantes: Laura Martínez, Maria Pia Gallina y por teléfono David Gutiérrez.

**ACUERDO por el que se amplía la vigencia del similar por el que se suspende temporalmente la pesca comercial mediante el uso de redes de enmalle, cimbras y/o palangres operadas con embarcaciones menores, en el Norte del Golfo de California, publicado el 10 de abril de 2015.**

Al margen un sello con el Escudo Nacional, que dice: Estados Unidos Mexicanos.- Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación.

JORGE ARMANDO NARVÁEZ NARVÁEZ, Subsecretario de Agricultura, en suplencia por ausencia del Secretario de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, con fundamento en los artículos 18, 28 y 35, fracciones XXI y XXII, de la Ley Orgánica de la Administración Pública Federal; 4o. de la Ley Federal de Procedimiento Administrativo; 1o., 8o., fracciones I, III, XII, XXXVIII, XXXIX y XLI; 10, 17, fracciones VII, VIII y X, 19, 29, fracciones II; 124, 126 y 132 de la Ley General de Pesca y Acuicultura Sustentables; 1o., 2o., letra D, fracción III, 3o., 7o., fracción X, 39, 41, 44, 45 y Octavo Transitorio del Reglamento Interior de la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, vigente, en correlación con los artículos 37 y 39 fracciones III, VIII y XXII del Reglamento Interior de la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, publicado en el Diario Oficial de la Federación el 10 de julio de 2001, y los artículos Primero, Segundo y Tercero del Decreto por el que se establece la organización y funcionamiento del organismo descentralizado denominado Instituto Nacional de Pesca, publicado en el Diario Oficial de la Federación el 1 de julio de 2013, y

#### CONSIDERANDO

Que es facultad de la Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación a través de la Comisión Nacional de Acuicultura y Pesca, administrar y regular el uso, así como promover el aprovechamiento sustentable de los recursos de la flora y fauna acuáticas, ordenando las actividades de las personas que intervienen en ella y estableciendo las condiciones en que deberán realizarse las operaciones pesqueras; así como también proponer, formular, coordinar y ejecutar la política nacional de pesca sustentable; establecer las medidas administrativas y de control a que deban sujetarse las actividades de pesca y fijar los métodos y medidas para la conservación de los recursos pesqueros, así como regular las zonas de refugio pesquero para proteger las especies acuáticas que así lo requieran;

Que el Gobierno de los Estados Unidos Mexicanos, decidió establecer una suspensión temporal de la pesca con redes de enmalle, incluyendo además a las cimbras o palangres, en la zona de distribución de la vaquita marina (*Phocoena sinus*), durante dos años, como medida que contribuya a la conservación de la especie, mediante el Acuerdo por el que se suspende temporalmente la pesca comercial mediante el uso de redes de enmalle, cimbras y/o palangres operadas con embarcaciones menores, en el Norte del Golfo de California, publicado en el Diario Oficial de la Federación el 10 de abril de 2015;

Que el Instituto Nacional de Pesca (INAPESCA) emitió opinión técnica recomendando ampliar la vigencia del citado Acuerdo.

Que en consecuencia, fundándose las presentes disposiciones en razones de orden técnico y de interés público, he tenido a bien emitir el siguiente:

**ACUERDO POR EL QUE SE AMPLÍA LA VIGENCIA DEL SIMILAR POR EL QUE SE SUSPENDE TEMPORALMENTE LA PESCA COMERCIAL MEDIANTE EL USO DE REDES DE ENMALLE, CIMBRAS Y/O PALANGRES OPERADAS CON EMBARCACIONES MENORES, EN EL NORTE DEL GOLFO DE CALIFORNIA, PUBLICADO EN EL DIARIO OFICIAL DE LA FEDERACIÓN EL 10 DE ABRIL DE 2015**

**ARTÍCULO ÚNICO.-** Se amplía desde la fecha de publicación del presente Acuerdo en el Diario Oficial de la Federación y hasta el 31 de mayo de 2017, la vigencia del Acuerdo por el que se suspende temporalmente la pesca comercial mediante el uso de redes de enmalle, cimbras y/o palangres operadas con embarcaciones menores, en el Norte del Golfo de California, publicado en el Diario Oficial de la Federación el 10 de abril de 2015.

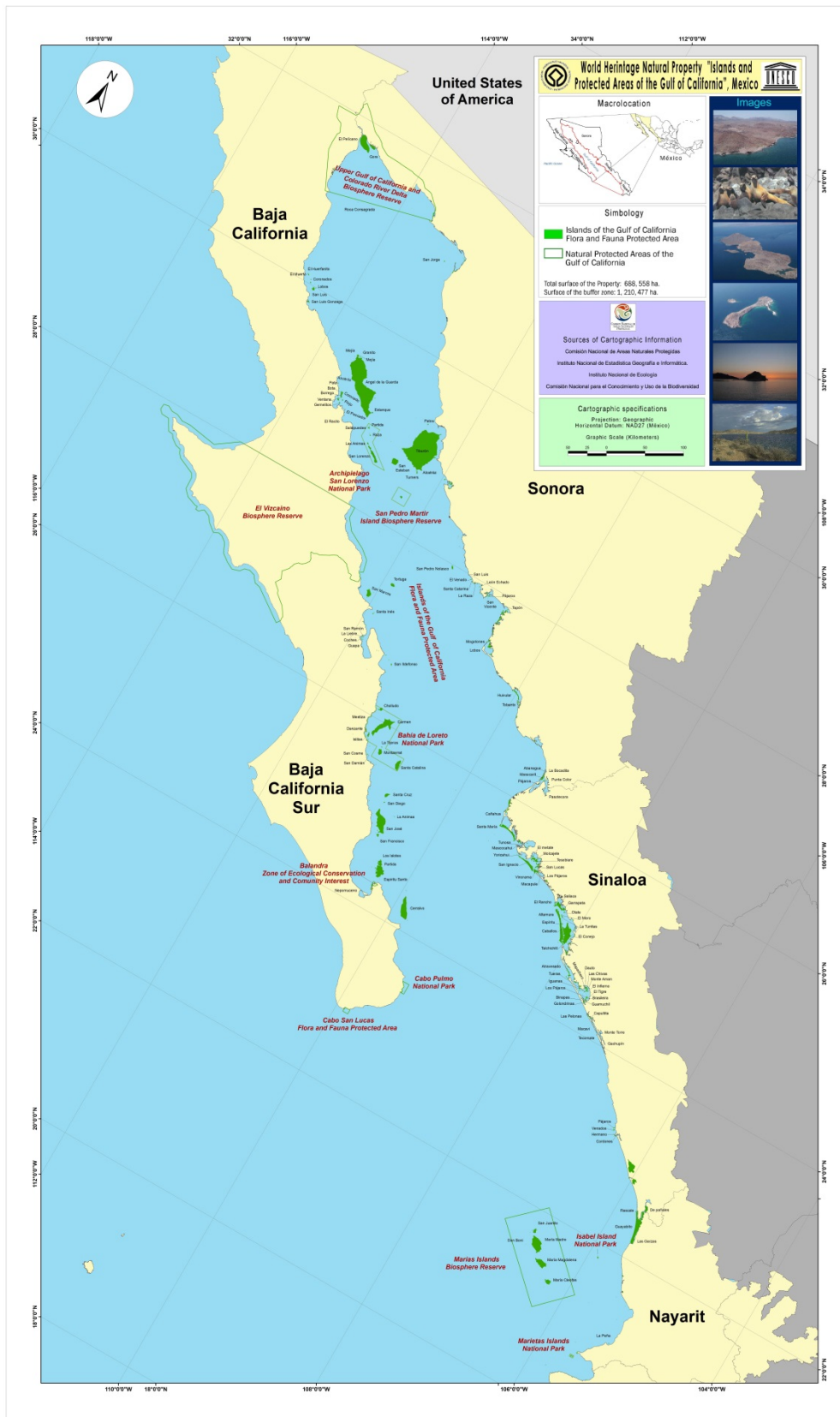
#### TRANSITORIO

**ÚNICO.-** El presente Acuerdo entrará en vigor el día de su publicación en el Diario Oficial de la Federación.

Ciudad de México, a 10 de abril de 2017.- El Subsecretario de Agricultura, Jorge Armando Narváez Narváez.- Rúbrica.

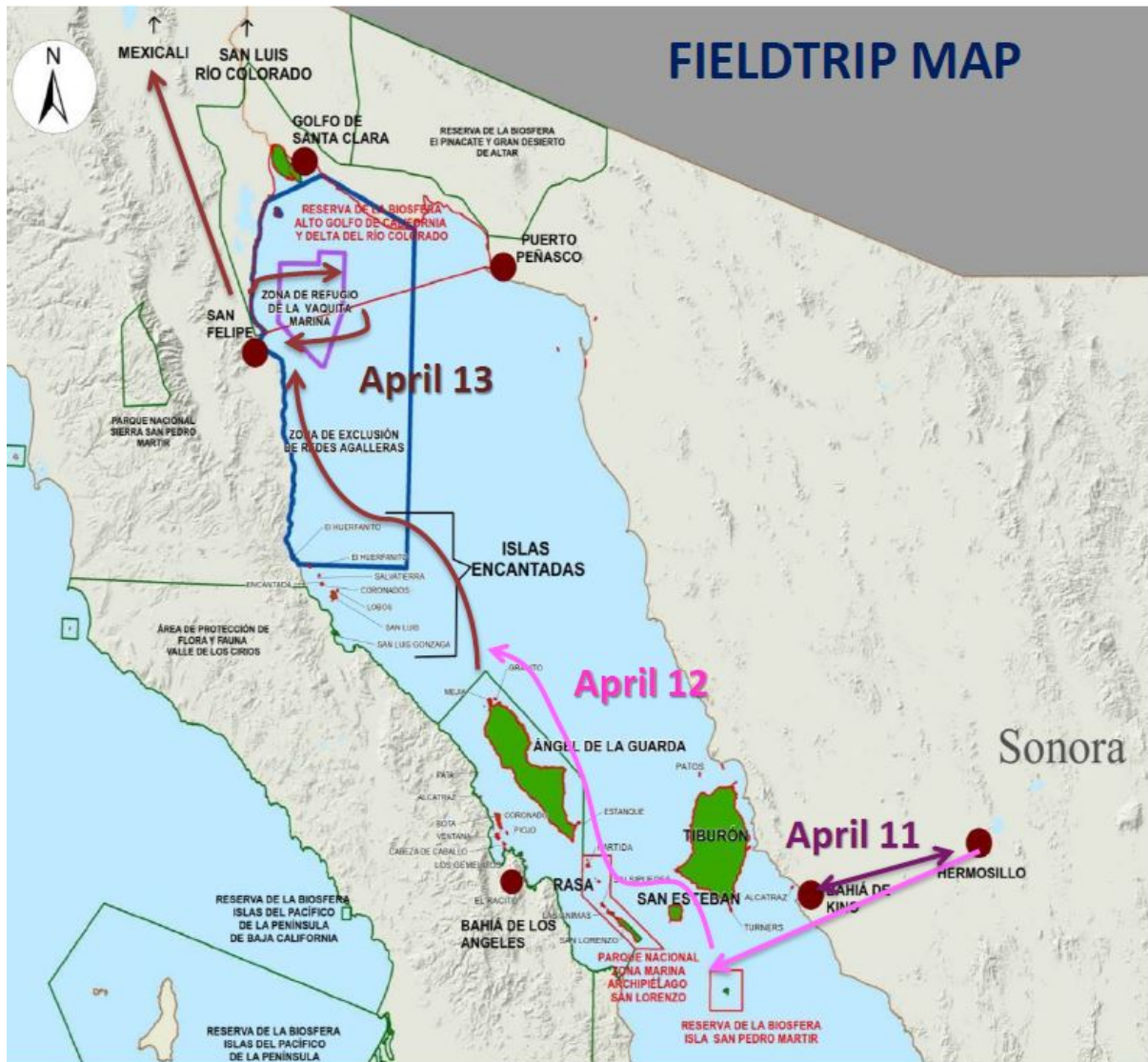
Annex IV

Map of the property



Annex V

Mission itinerary





## Annex VI

Statement of Outstanding Universal Value of the property with changes proposed by the mission to correct inaccuracies

### Property **Islands and Protected Areas of the Gulf of California**

State Party **Mexico**

Id. N° **1182ter**

Date of inscription **2005**

#### **Brief synthesis**

The Gulf of California in Northwestern Mexico, once famously dubbed the "Aquarium of the World", is recognized as an area of global marine conservation significance. Less known but equally spectacular are the terrestrial conservation values of the islands and coastal areas most of which are part of the Sonoran Desert. As a serial property, Islands and Protected Areas of the Gulf of California includes representative components of all major oceanographic zones of the biogeographically diverse Gulf, thereby capturing a broad spectrum of landscapes and conservation values. Extending from the Colorado River Delta in the north to 270 kilometres southeast of the tip of the Baja California Peninsula, the property includes 244 islands and islets clustered in eight major groups and another nine protected areas with coastal and marine zones. The total area is 1,837,194 hectares, of which about one quarter are terrestrial and the remainder marine.

The rugged islands and coastal desert contrasting with the surrounding turquoise waters are of striking natural beauty. Speciation both on land in the many islands and in the Gulf has resulted in a notable diversity of life forms with a high degree of endemism. The productivity of the Gulf also leads an extraordinary natural abundance of many marine species. There are some 900 species of fish, around 90 of them endemic, and roughly one third of the World's marine mammals occur within the property. The islands and islets are mostly of volcanic origin. There are numerous species of succulents, including some of the World's tallest cacti, exceeding 25 meters in height. Overall, some 700 species of vascular plants have been recorded. There are many species and impressive numbers of resident and migratory birds with some small islands hosting major proportions of the global population of Heermann's Gulls, Blue-footed Booby and Black Storm Petrel.

**Criterion (vii):** The serial property is of stunning landscape beauty with dramatic contrasts between the rugged and seemingly inhospitable islands, coastal deserts and the brilliant reflection from the surrounding turquoise waters. High rocky cliffs and sandy beaches in countless forms and colours rim the islands and coasts. The beauty of the desert landscape is complemented by the fascinating and highly diverse desert vegetation and the ubiquitous birds. To the south, the islands are covered with deciduous vegetation and stand out from the vast blue sea. The diversity and abundance of marine life associated with spectacular submarine terrain and unusual water transparency turn the underwater seascape into a globally renowned diver's paradise.

**Criterion (ix):** A major foundation of the Gulf of California's phenomenal marine productivity are nutrient-rich upwelling oceanic currents supporting abundant phytoplankton and zooplankton, which in turn provide nurseries for larval reef fish. However, many other oceanographic processes, such as wind-driven currents, tidal mixing and thermohaline circulation, occur in the property, giving it extraordinary importance for conservation and the study of marine and coastal processes. The Gulf of California is notable for containing ecologically distinct bridge islands, populated across past land bridges, and oceanic islands populated by sea and air. The multitude and diversity of islands in terms of origin, size,

environmental conditions and distance to the mainland has enabled an ongoing evolutionary speciation and endemism of major significance for conservation and science. The many components of the property are both part of a vast landscape and distinctive in many ways, ranging from a variety of pelagic and benthic environments to coral reefs, as well as mudflats, coastal wetlands and various types of desert and deciduous forest.

**Criterion (x):** The diversity of terrestrial and marine life in the property is extraordinary and constitutes a global priority for biodiversity conservation. On land, the close to 700 species of vascular plants are notable within a desert environment. There are 115 species of reptiles, almost half of them endemic, in some cases even to individual islands. 154 land bird species have been recorded and the property is of particular importance to migratory species. Almost 900 species of fish have been documented with some 90 species occurring exclusively in the Gulf of California or parts of it. These include the critically endangered species Black Sea Bass and Totoaba, as well as the vulnerable Basking Shark. The serial property provides habitat for ~~roughly one third~~ **about 35%** of the world's total number of ~~marine mammals~~ **cetacean species, including the smallest one, the critically endangered vaquita. In addition a large number of California sea lion colonies occur throughout the property.** ~~sometimes in impressive numbers, for example huge colonies of California Sea Lion. The five species of dolphin include the critically endangered Gulf Porpoise or "Vaquita".~~ Eleven species of whale visit the northern Gulf, such as the endangered Blue Whale and Fin Whale and the vulnerable Sperm Whale. The coral reef at Cabo Pulmo is one of the most important in the Gulf of California and in the eastern Pacific. The marine habitats also harbour large concentrations of macro-invertebrate life with many endemic species, especially in the intertidal zones.

### **Integrity**

All of the marine area and most of the 244 islands of the serial property are federally owned with only very few in private hands. Private owners typically do not live on the islands and the majority of the islands have no inhabitants, with some containing small settlements and camps of fishermen. Isla Maria Madre has been a state penitentiary since 1905. One particularity is the uninhabited Isla Tiburon (Shark Island), which is communally owned by the Seri indigenous peoples. The Seri consider the island a sacred site and carry out ceremonies. Overall, the past human impacts on land, for example from guano extraction and egg collection, are moderate. The serial approach is an adequate reflection of the biogeographic range and diversity of the Gulf of California and its islands. The great challenges to the integrity of the marine and coastal areas mostly stem from developments outside the protected areas, most importantly excessive fisheries, tourism and coastal development. Further extensions, including of vulnerable coastal areas and additional islands is an explicit element of the regional conservation strategy and would help consolidate the integrity of the property and the entire Gulf of California.

### **Protection and management requirements**

The vast serial property has a step-wise formal conservation history going back at least to the 1950s. All of the islands within the property have a formal protection status under Mexican environmental legislation. While all of the marine area and most of the islands are federally owned, even the privately owned islands are bound to conservation and management requirements determined for each protected area at the time of its declaration and refined in management plans. All islands are protected and managed by the National Commission for Natural Protected Areas (CONANP), a specialized agency of the Mexican Ministry of the Environment and Natural Resources cooperating with several other involved governmental agencies. CONANP being a decentralized agency, management activities are implemented by the pertinent regional branch and their local operational units. Conservation, management and research are financially and technically supported by a number of local, national and international non-governmental organisations. There is an Integrated Management Program guiding conservation and management activities in the entire serial

property and co-management arrangements with local communities are sought. Major challenges in the operational management are the securing of long-term funding, as well as coordination and cooperation across five different states and differing formal conservation status of components.

The coasts of the Gulf of California and the larger islands close to the shore were historically settled before imported diseases severely decimated the indigenous cultures. More recently, guano and egg collection, hunting of sea lions and whaling occurred in the Gulf of California. Most such activities have long been phased out leaving the affected areas to recover naturally. Threats today include, on land, alien invasive species with herbivores and predators menacing the delicate small island systems. The biggest, ongoing impact on the marine conservation values stems from artisanal, industrial and sport fishing. Fisheries and shrimp trawling play an important role in the local economy but put ever more pressure on the resources. Management responses are needed to ensure that harvesting levels are adapted to the productivity in the entire Gulf. Looming potential threats include plans for large-scale tourism development. While adapted forms of tourism can have important benefits in terms of awareness-raising and conservation funding, some proposed projects appear incompatible with long-term conservation and local development objectives. From the coasts pollution from agriculture, industry and sewage are increasing. The Gulf of California is a global conservation gem, invaluable to science and as a resource for local economic development, namely fisheries and tourism. Investing in the property's conservation is an investment in the maintenance of its productivity and economic potential.