



**Vaquita update  
(an uncertain future for an iconic species)**



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&  
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# Outline

(i) International Recovery Team (CIRVA)

(ii) Vaquita 101

(iii) Situation over the past decades

(iv) Actions on the ground in Mexico)

- Stepwise substitution of shrimp gillnets
- CIRVA's 5<sup>th</sup> meeting

(v) What's the situation now

- Vaquita population trends and the Totoaba blackmarket

(vi) What recent steps have been taken to save vaquita

- The two year agreement gillnet ban and the comprehensive strategy to protect the marine ecosystem of the Upper Gulf of California
- Vaquita Expedition 2015
- Summary of key issues

(vii) Next Steps and Actions



Comité Internacional para la Recuperación de la Vaquita (CIRVA, 1997):

Create a Recovery Plan for this species

(i) Based on the best available scientific information

(ii) Contemplate and consider the socio-economic impacts of any required regulations on the resource users in the affected areas

The International Recovery Team awarded with the SMM's 2015 CONSERVATION MERIT PRICE



# CIRVA'S RECOMMENDATIONS FOR THE RECOVERY OF VAQUITA

## **Reduce vaquita bycatch to zero**

- *Eliminate gillnets*
- *Develop alternative fishing gear and vessel modifications*
- *Consider socioeconomic alternatives*
- *Provide full and effective enforcement*
- *Continue vaquita population monitoring*
- *Enhance communication*
- *Seek international support*

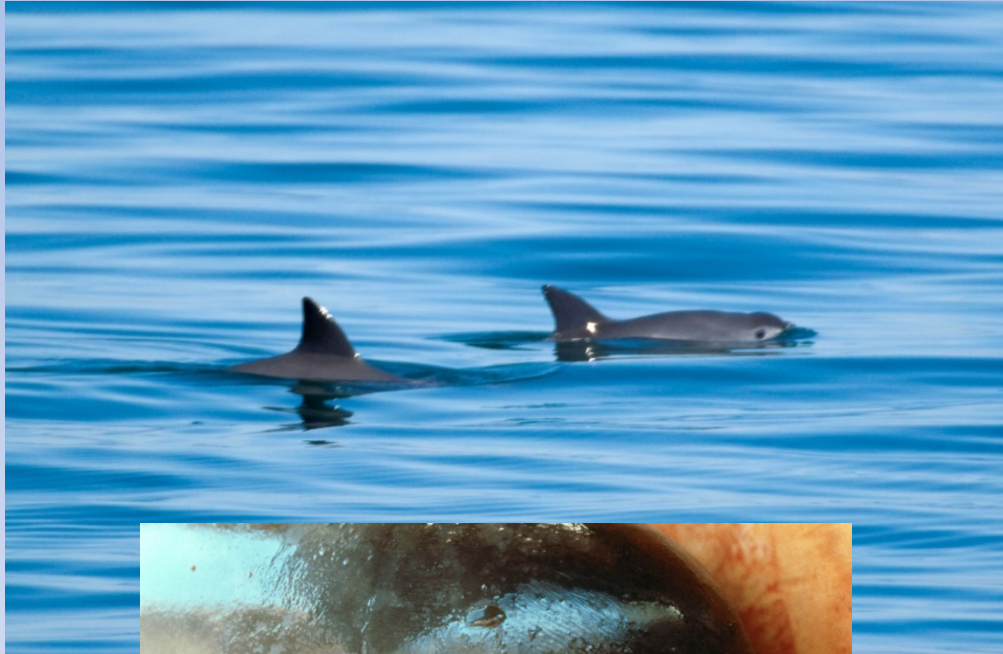
# **VAQUITA 101**

**Most Critically Endangered marine  
mammal species in the world**

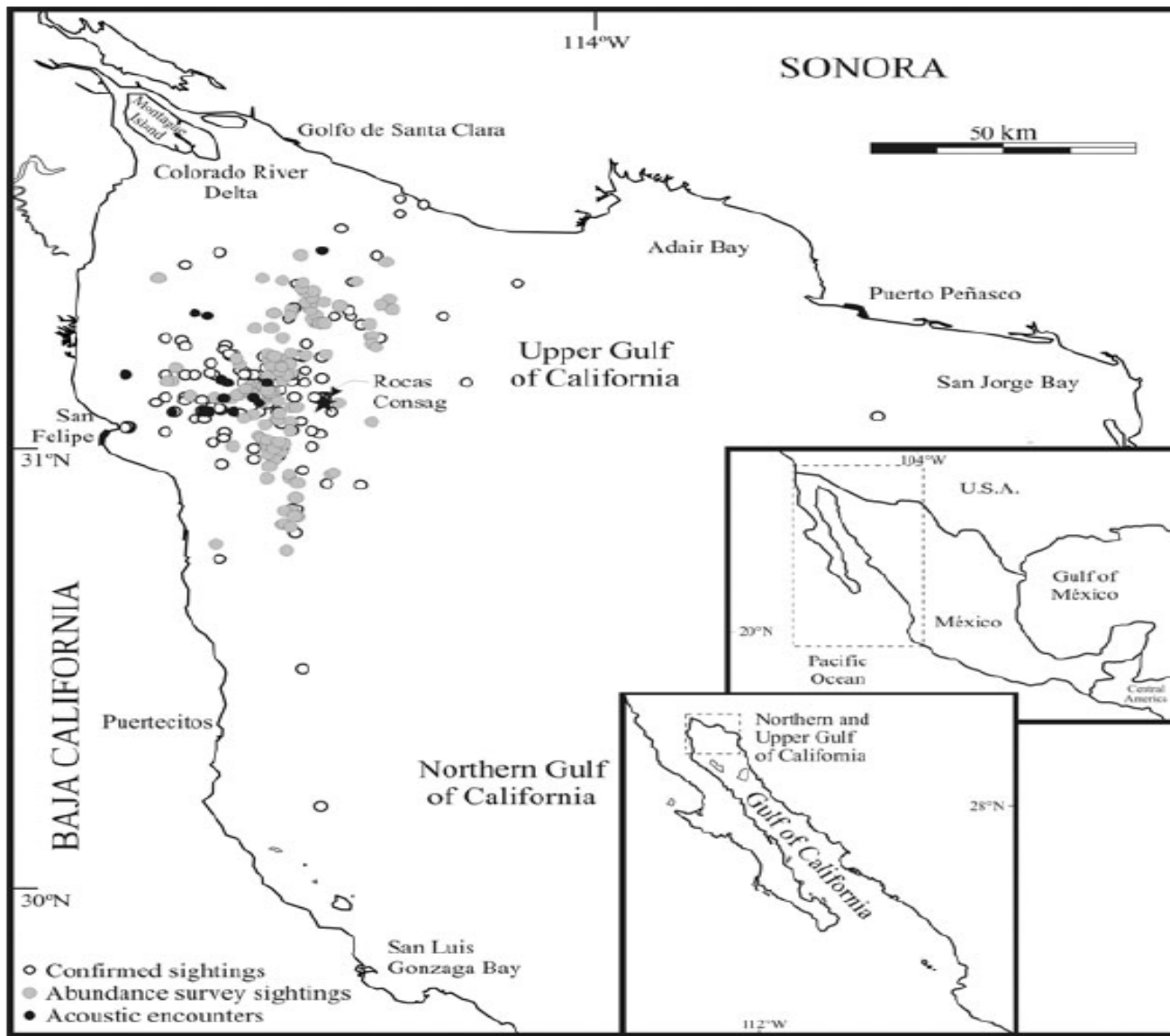
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## Summary Vaquita 101 - Biology

### *Most Critically Endangered marine mammal species in the world*



- Endemic to the Upper Gulf of California
- One of the smallest cetaceans (~1.5m)
- Unlikely to breed annually (slow breeder)
- Feeds on 24 species of fish and squid
- Produce distinctive high-frequency echolocation clicks that can be used in passive acoustic monitoring programs
- Shy and difficult to observe at sea



The modern range of the vaquita is limited to an area of approximately 4,000 km<sup>2</sup>

The species is not known from any other area of the world's oceans

Rojas-Bracho et al. (2006)

# ABUNDANCE AND POPULATION TRENDS

YEAR	POULATION SIZE	IC/CRI	% DECLINE
1997	567	95% C.I. 177 - 1073	NA
2008	245	95%CI 68- 884	FROM 1997-2008 57%
2015	59	95% CI 22 – 145	FROM 1997 - 2015 92%

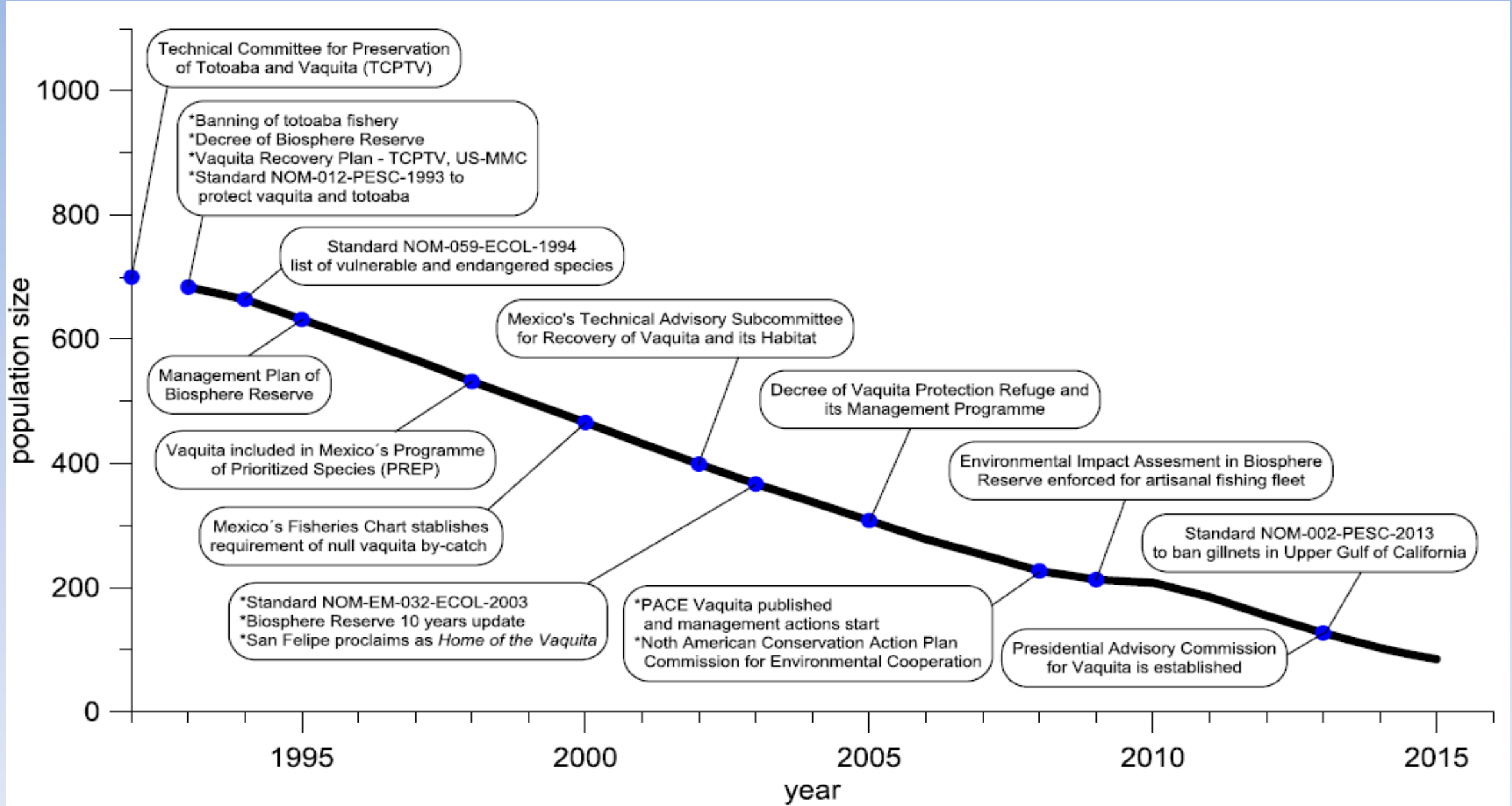


# WHAT THE SITUATION HAS BEEN OVER THE PAST FEW DECADES



Gustavo Cárdenas

# The population decline of the vaquita alongside key management events.



# Actions on the Ground in Mexico





THE  
ADVISORY COMMISSION OF THE PRESIDENCY OF  
MEXICO FOR THE RECOVERY OF VAQUITA  
FEBRUARY 2013

# Agreements reached by the Advisory Commission

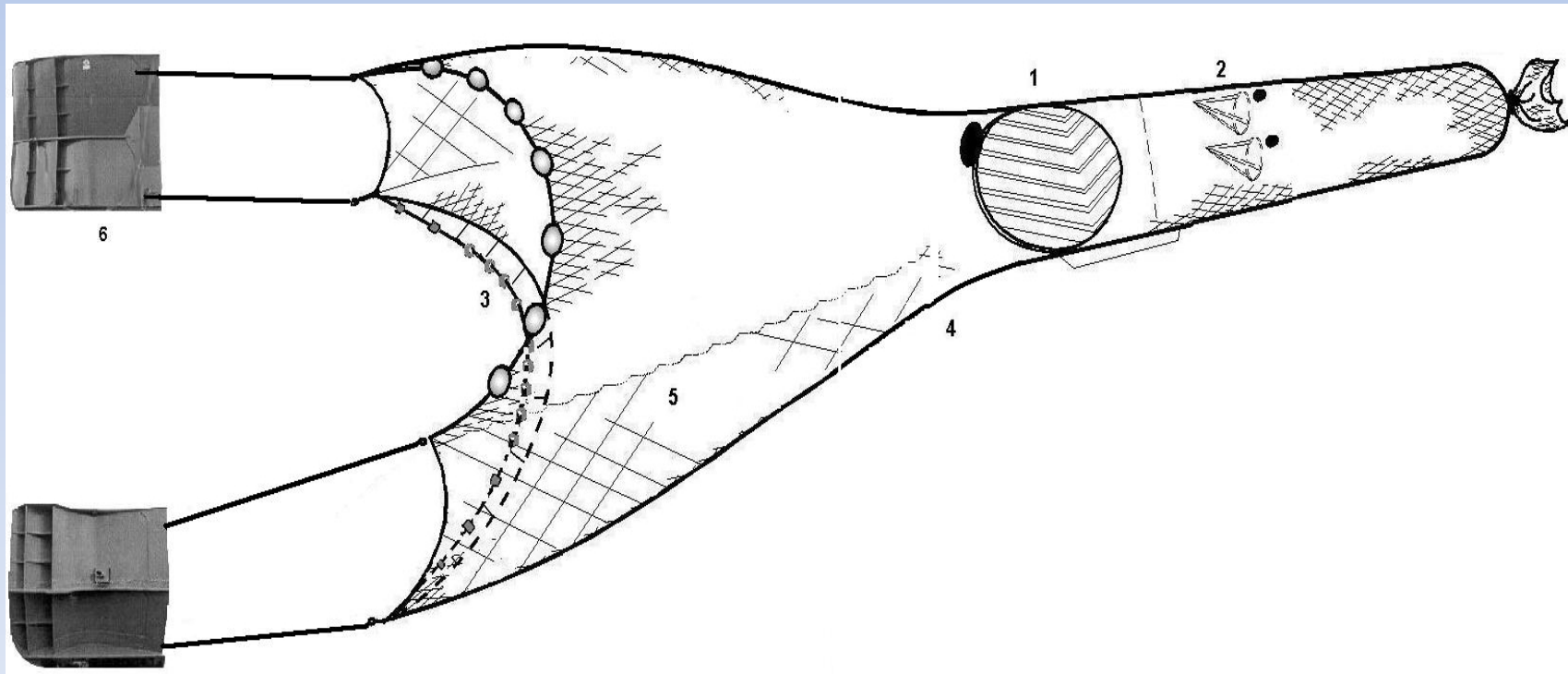
**Legal framework to eliminate gillnets that threaten the vaquita**

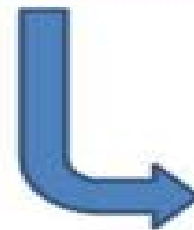
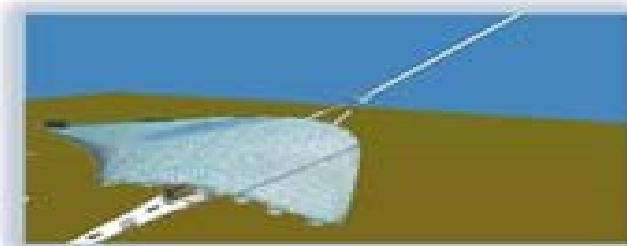
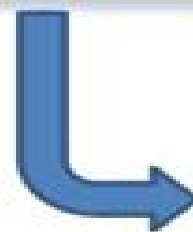
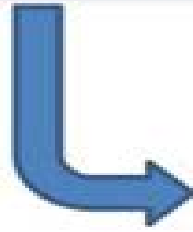
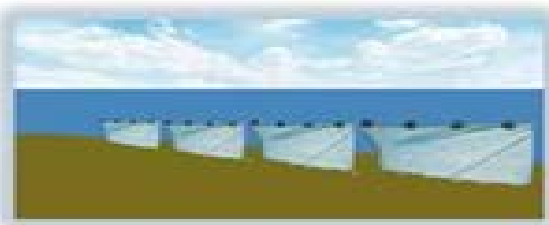
Strengthen immediately the inter-agency  
**Enforcement**

Eliminate gillnets and other entangling nets throughout the vaquita's range and to establish a  
**compensation program for fishermen**

# Primary product of Presidential Commission: Mex Std 002 published in June, 2013

- Stepwise substitution of shrimp gillnets by alternative net in three years 30% + 30% + 40%





A major problem is that many fishermen are against the conversion to small trawls. Gillnetters are needed that provide access to small trawls. One of the main reasons for this is that they block small trawls.

**CIRVA: Spatial management measures are needed that provide access incentives for shrimp fishermen who use small trawls rather than gillnets.**

**Converted fishermen did not have specified times and/or areas to use the gear during the regular season.**

# REPORT OF THE FIFTH MEETING OF THE CIRVA

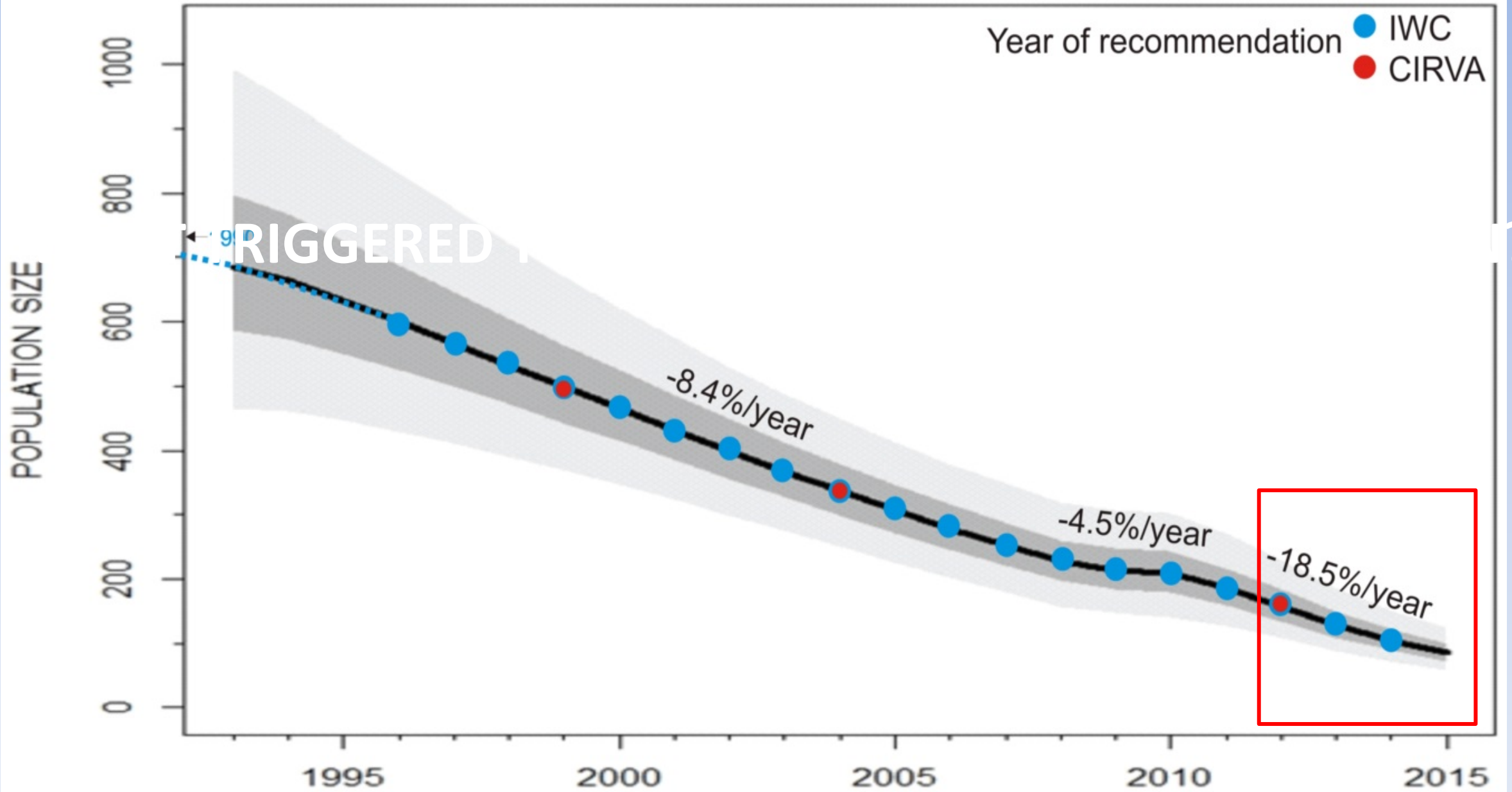
July 8 –10, 2014

- Acoustic monitoring showed a catastrophic decrease to fewer than 100 vaquita





# vaquita population trajectory



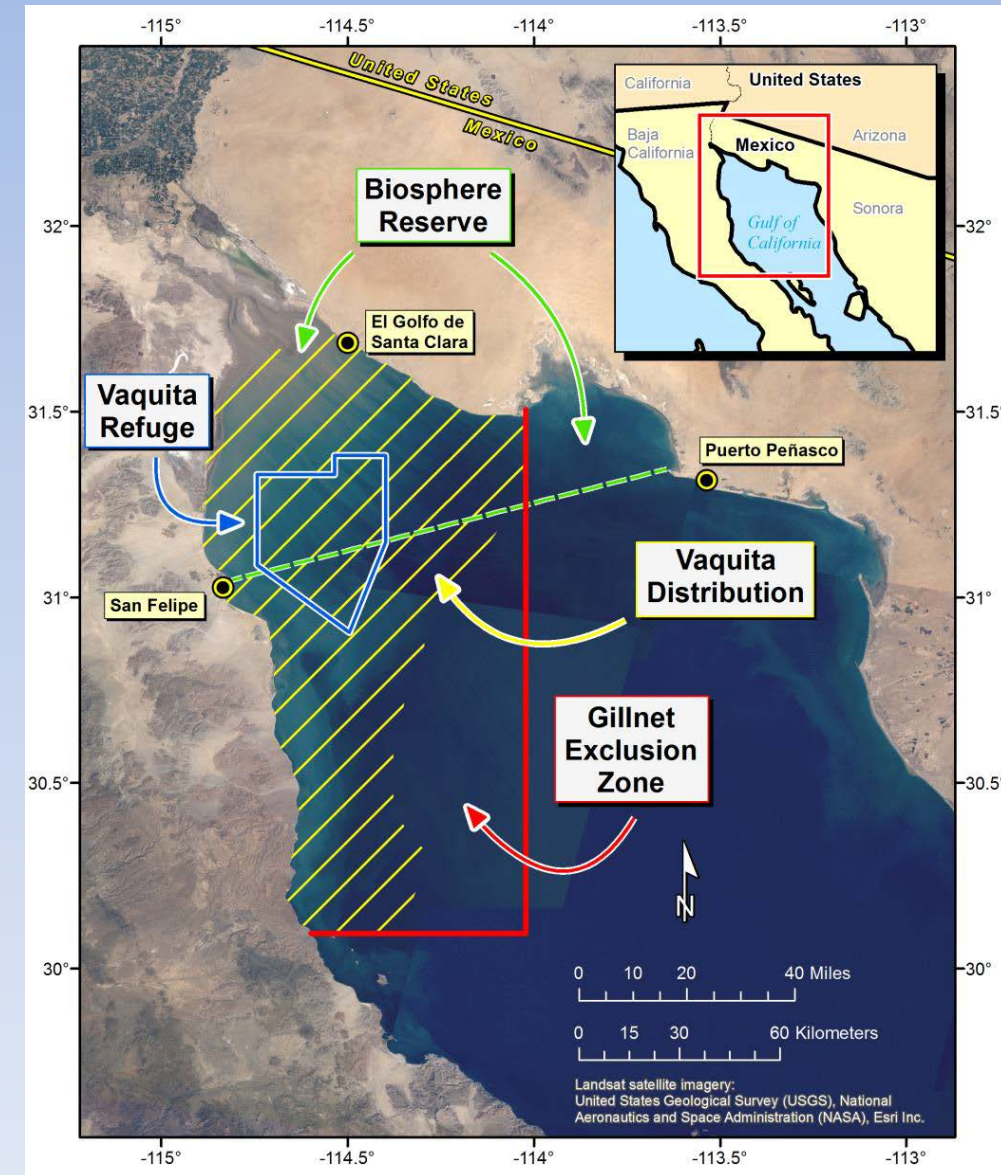
*There is no longer time to wait to phase-in new fishing technologies before immediate action is taken to save the vaquita*



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# THE VAQUITA IS IN IMMINENT DANGER OF EXTINCTION EMERGENCY REGULATIONS ARE REQUIRED

CIRVA **strongly recommends** that the Government of Mexico enact emergency regulations establishing a **gillnet exclusion zone** covering the full range of the vaquita -not simply the existing Refuge - starting in September 2014.



# What is going on with vaquita's dramatic 18.5%/year decline?

Mexican Cartel Linked To Smuggling Of Fish Bladders To Feed Chinese Market For Endangered Species

1, August 8, 2014 by jonathanturley





## WHY A TREMENDOUS INCREASE IN TOTOABA ILLEGAL FISHING?

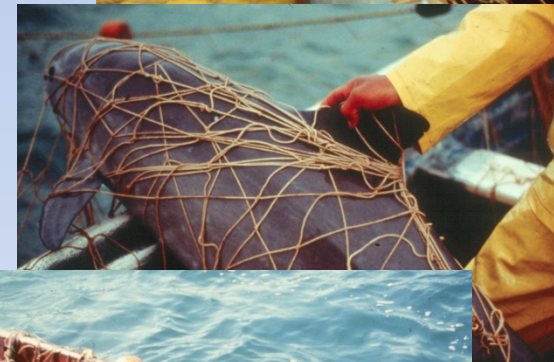
- \$8500 USD/KG OF SWIM  
BLADDER

(John Reed, supervisor ICE US  
Gov.)



# 1993 Totoaba gill nets banned (mesh size 12 inches and greater)

- At least 128 vaquitas killed in fishing gear between 1985 and early 1992: 65% in the totoaba fishery
- The recent increase in the rate of decline can primarily be attributed to increased illegal gillnet fishing for totoaba.



## (ii) Totaba in Chinese markets (EIA)

Interviewees (initials)	Reported market price in 2012 (RMB)	Reported market price in 2015 (RMB)
CDH	200,000 (32,230 USD)	80-90,000 (12,890-14.500 USD)
TWH	200,000 (32,230 USD)	50,000 (8,000 USD)
DHH	200,000 (32,230 USD)	40,000 (6,445 USD)
	10,000,000 (1,611,550 USD)	4,000,000 (644,470 USD)

Online resources and traders cite that the overstocking of totoaba maws led to its consequent devaluation

A post on shared on a Facebook group describes totoaba maw as the king of fish maws

2014年8月4日 · 已編輯 · 🌟

花胶情缘：- 金山金钱鳖

昨晚跟一位同业先进聊起一个话题：金山金钱鳖已上抬做菜  
近期在深圳一带有地富客自來極品珍貴花膠交向酒家代工烹調，有越食越倍修之势！…… 查看更多



👑 金钱鳖（即黄唇鱼，老的虎门新湾渔民称白花，这是由于当年网络、文化问题导致名称混淆。现时，在虎门有两个人工养殖场）是为鱼胶之王，非常罕见，一般都被当做收藏品收藏起来，斤价在几十万上

讚好 · 回應 · 分享

👍 有 29 個人讚這好。 熱門評論

🔗 20個分享

# WHAT STEPS HAVE BEEN TAKEN TO SAVE VAQUITA







INICIO > PRESIDENCIA DE LA REPÚBLICA > PRENSA

## Anuncia el Presidente de la República una estrategia integral para preservar el ecosistema marino del Alto Golfo de California

Publicado el 16 de abril 2015 en [Comunicado](#)

Twittear

Me gusta



El Presidente Enrique Peña Nieto resaltó hoy que el Gobierno de la República es un gobierno verde que impulsa políticas públicas y estrategias innovadoras en favor del medio ambiente, y en congruencia con este deber ético anunció la puesta en marcha de una



The President of the Republic announces the Strategy on the Comprehensive Care of the Upper Gulf  
*April 16 de 2015 in San Felipe, BC*

On April 10, 2015, Official Journal of the Federation (DOF) the **AGREEMENT** that bans for two years the use of gillnets and longlines throughout all of vaquita's distribution area

# Key components of this strategy are:



**Enforcement**



**2 yr gillnet  
ban  
&  
compensation  
for fishermen**



**Development  
of alternative  
fishing gear**



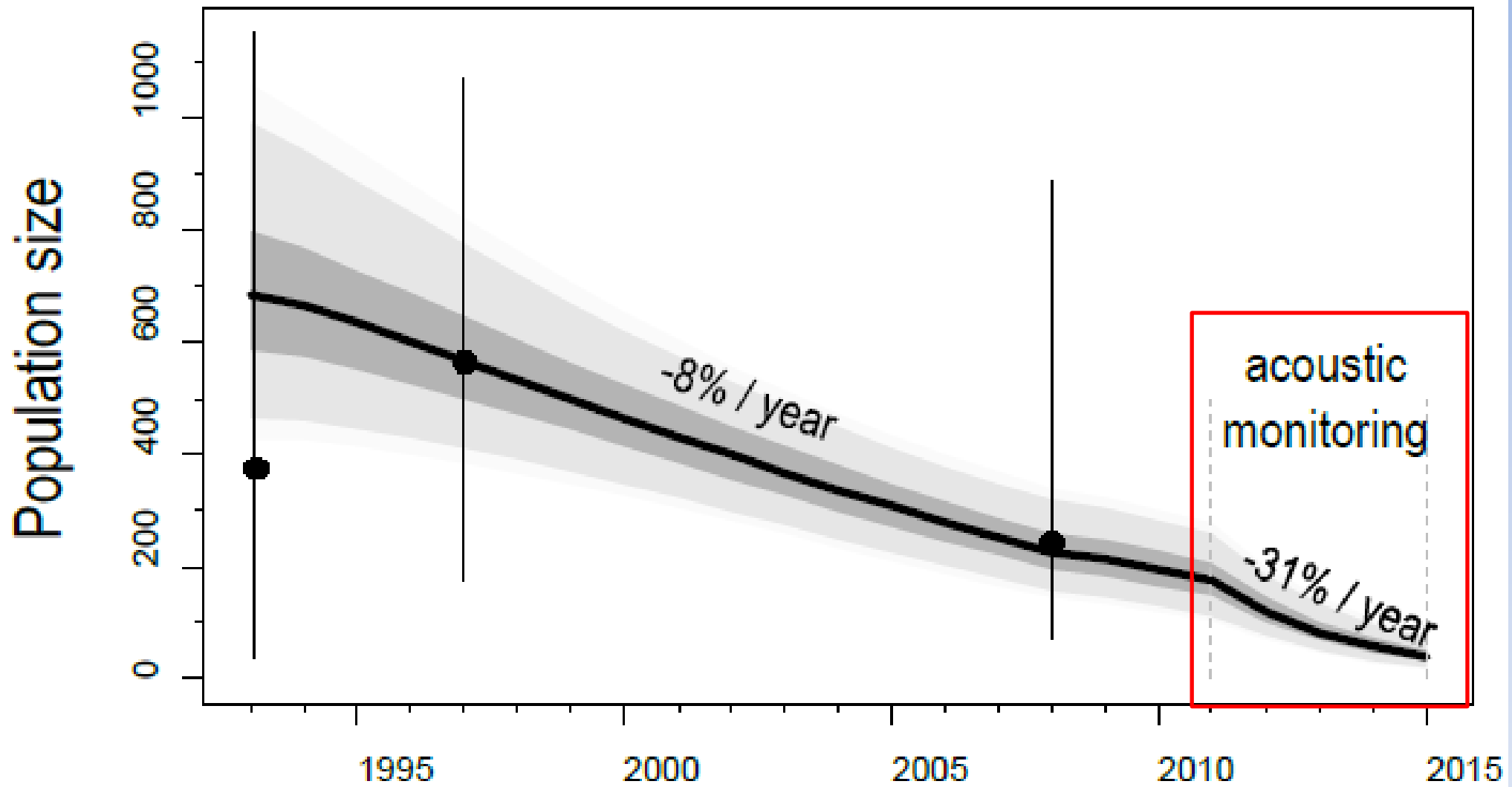
**Vaquita  
Monitoring  
Program**

TWO YEARS 2015-2017

# Recommendations from Sixth CIRVA Meeting to the Agreement and Strategy (San Diego, CA. May 22nd 2015)



# Population trajectory 2011-2014 - acoustic monitoring program





# INTERNATIONAL RECOVERY TEAM CIRVA VI MEETING Enforcement

## STRATEGY RECOVERY ACTIONS

- Strengthening the team of agencies involved and building coordination across them, providing new high-speed patrol boats, and committing to a greater overall enforcement presence in the region led by the Navy

## CIRVA RECOMMENDATIONS

- CIRVA recommends that the GoM maintain its strong commitment to interagency enforcement led by the Navy.
- Also that the GoM increases enforcement, including night-time surveillance, to ensure that all gillnet fishing is eliminated within the exclusion zone
- Support of third parties



## INTERNATIONAL RECOVERY TEAM CIRVA VI MEETING

### **2 yr ban & fishermen compensation**

#### STRATEGY RECOVERY ACTIONS

- Ban completely all gillnet fisheries for at least two years in the area proposed by CIRVA (except those for curvina Feb 1- Apr 30)
- Provide full compensation to all fishermen and those who work in fishery-related activities (eg, workers in shrimp packing plants). (\$37 million/year!)

#### CIRVA RECOMMENDATIONS

- Survival of the vaquita depends on a permanent gillnet ban
- CIRVA strongly recommends that the GoM to immediately initiate the process of making the ban permanent, following the emergency regulations



## INTERNATIONAL RECOVERY TEAM

### CIRVA VI MEETING

# Development of alternative fishing gear

#### STRATEGY RECOVERY ACTIONS

- Promotion of "new forms of fishing, much friendlier, which are sustainable, respect the surrounding environment..."

#### CIRVA RECOMMENDATIONS

- The gillnet ban will only be successful if fishermen are given the opportunity to develop alternative livelihoods.
- CIRVA recommends, as has done in the past, to increase efforts to develop and introduce alternatives to gillnet fishing in communities affected by enforcement of the exclusion zone (specially finfish)



# INTERNATIONAL RECOVERY TEAM CIRVA VI MEETING **Vaquita population monitoring**

## STRATEGY RECOVERY ACTIONS

- **Vaquita monitoring**

## CIRVA RECOMMENDATIONS

- CIRVA strongly recommends that the acoustic monitoring program continue indefinitely, with adequate financial support, to determine whether mitigation efforts are working





## Expectations related to evaluating the efficacy of the gillnet ban

### STRATEGY RECOVERY ACTIONS

- The Agreement will be assessed through the results of the prospecting trips that will be carried out to count vaquitas in exclusion zone and calculate the percentage of population growth

### CIRVA RECOMMENDATIONS

- The Committee strongly emphasized that a period of two years is completely insufficient to determine any effects of the current two-year gillnet ban on vaquita abundance



# SUMMARY CIRVA KEY RECOMMENDATIONS

- Gillnet ban must be permanent
- This remaining period (1.5 yr) is a unique and only chance to develop alt fish gear. Resources should be dedicated to this as a priority.
- Enforcement has to be coordinated by the Navy, with the support of third parties (e.g. SSCS)
- Permanent acoustic monitoring program
- Removal of illegal and ghost gillnet gear

# Actions for the Species of Common Concern Table

- Many years of CIRVA recommendations and efforts by Mexico to conserve this species.
- Vaquita are not extinct! Aggressive action is needed now.
- Request that the Executive Table—
  - Endorse the recommendations of CIRVA, where appropriate;
  - Request that CIRVA review their recommendations, and all existing recovery plans and provide recommendations for recovery actions and timelines.
  - Request that CIRVA present these findings to the 2017 meeting of the Trilateral Committee.
  - Other ideas for action?