**YESSELS** dedicated to this fishery (average)







in annual earnings

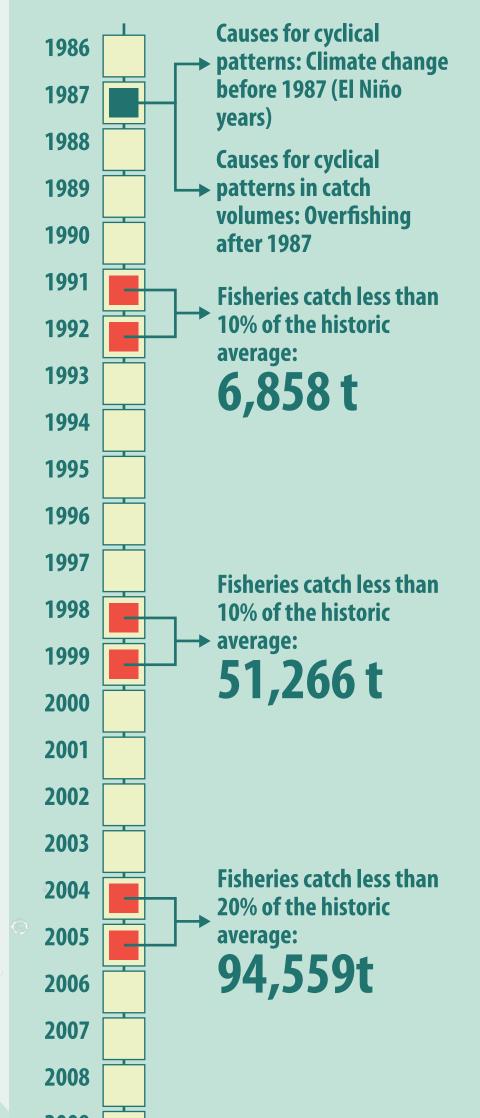


Group: minor pelagics

s Fleet: Industrial

# Collateral effects:

Changes in nesting and migration patterns in birds. Collapse of other fisheries like Dorado, Marlin, and snappers.



**5333** HOUSAND TONS in annual catch (2006-2014)

TONS

total catch per

night (average)

500% OF THIS FISHERY would not be profitable without subsidies because of the cost of fishing trips

> **257.5** MILLION PESOS in total subsidies between 2010-2017 (**32.8 million pesos a year on**

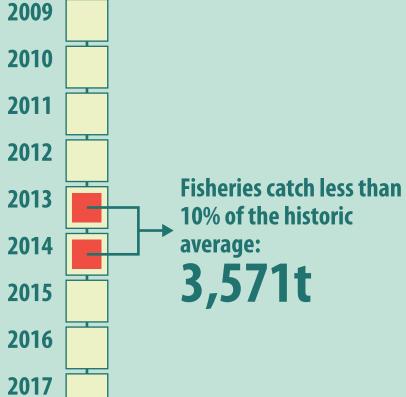
### FORRAGE FISH:

MACROCOSMOS

they connect the microcosm with the rest of the food chain, feeding on microalgae, growing rapidly, and reproducing in massive aggregations; they are food for species higher up in the food chain.

MICROCOSMOS

**STATES BENEFITED:** 



600% OF THE BIOMASS of this fishery is lost in conversion to flour and oil (average)



#### average)



> **28** COMPANIES benefited to modernize their fleet



## **SUBSIDIES BY STATE:**

Sonora: 169.7 million pesos

Sinaloa 59.8 million pesos

Baja California: 18.7 million pesos

Baja California Sur: 9.5 million pesos

100

150

200



50

0

# What are the oil and flour used for?











Industrial market in processed foods Animal feed for cows, chicken, and farmed fish Paints, synthetic products, and solvents

2018

Pharmaceutical industry

# Is there an alternative that can derive better value?

(\$1)

Less fishing could generate more economic benefits.

#### **INDUSTRIAL MARKET**

**ARTESANAL MARKET AND GOURMET CONSUMPTION** 





20 sardines equal one peso

### Sources:

-Indexmundi.com
-Mendoza, 2011. Editorial Noroeste.
-Byelashov & Griffin (2014).
-dataMares, 2018.
-dataMares (2018). doi.org/10.6075/J07S7KZS
-Jimenez, V.M.; Mendez, A. (2018).
doi.org/10.6075/J0CJ8BPH

-Velarde, E., Ezcurra, E., y D. W. Anderson (2013, 2015). -Velarde, E., Ezcurra, E., Cisneros-Mata, M.A.,

Lavin, M.F. (2004)

**1 sardine equals 20 pesos** 

