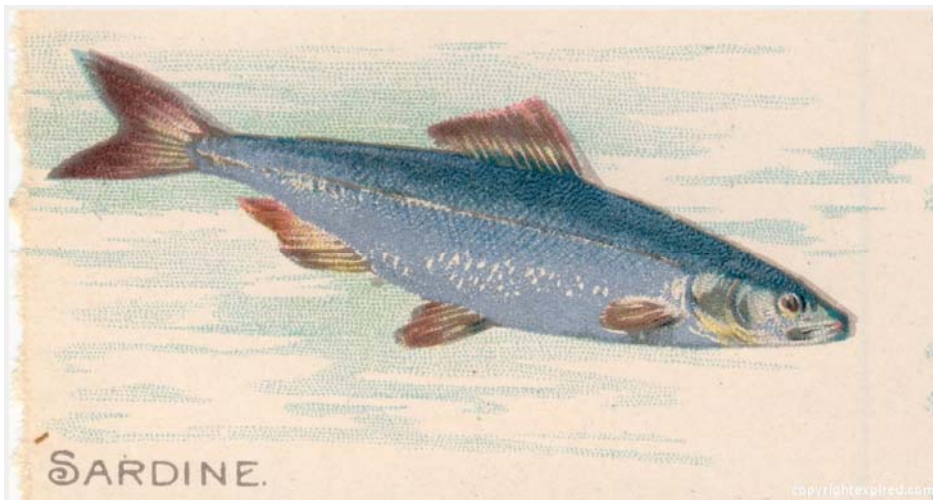


Attached is a sample selected from 23 letters written to the Council by Mr. Jason Finney's fourth grade class at Garfield Elementary School in Olympia, Washington and copies of the two news articles referenced in the letters.



RECEIVED

JUN 18 2015

Dear Pacific Fishery Management Council,  
**PFMC**  
My name is Teferi. I live in Olympia, Washington. I am in fourth grade at Garfield Elementary School. I love learning and reading. Our class has been reading an article about the vanishing Sardines on the Pacific Coast. I found the article very interesting and want to know more.

I have read the problem of Sardines vanishing and how it affects fish, birds, sea lions, and fisherman. Sardines are a big part of our ecosystem. We have learned that the two problems are over fishing and the ocean water temperature is dropping.

I hope Sardines will recover to healthy numbers again so the ecosystem will be back in balance which will help sealife and fisherman. I also hope men and women in the fishing industry will be able to get their boats and go

fishing for sardines again. What do you plan on doing differently in the future to help the sardines increase in population??

I think the fishing council made a good decision to stop fishing for sardines to let it regrow. I want to thank the fishing council for letting the sardines rebound.

Sincerely,

Teferi

RECEIVED  
Dear Pacific Fisheries Management  
Council,

JUN 18 2015

Hi, my name is Gianna. I am ten years old and I live in the beautiful Olympia, Washington. I go to school at the lovely Garfield Elementary School. I am in 4<sup>th</sup> grade in Mr. Finney's class. I enjoy reading and writing and I play soccer. I loved learning about the sardine article. It made me want to learn more and more about it.

I have read about sardines vanishing. After we read the article about sardines we stated what are class thought was the problems and effects. We think the problems are... One may be because of overfishing. Two may be because of colder water temperature. The third reason we may think might be the problem is predation. After about two or three days we watched a video about sardines vanishing and the video showed us that one reason may be because of predation. Then our class found effects. One effect is that it is affecting the ecosystem. The second effect is that it is affecting brown pelicans. Brown pelicans rely on sardines. Now,

that there is few sardines brown pelicans are dying and starving. A third effect is that sardines are energy rich fish and full of nutrition and mother sea lions are having to eat squid and other fish which is producing less nutrition and less milk for their young. Their babies are underweight.

I really hope that all the wonderful fishermen get their jobs back. I also hope brown pelicans won't starve and I also hope baby sea lions will get the nutrition they need. I hope the sardines recover. Thank you for taking your time to read my letter. I appreciate it.

Sincerely,

Gianna 😊



RECEIVED

JUN 18 2015

Dear Pacific Fishery's management council

PFMC

My name is Isaac.  
I live in Lacey, Washington.  
I'm 9 years old. I go to Garfield  
Elementary in forth grade. My  
favorite subject is reading. My  
favorite series is The Percy Jackson  
series. I like playing soccer. My  
teacher's name is Mr. Finnek.

We're learning about the short-  
age of sardines. You already  
know that sardines are vanishing  
from the pacific coast. There possible  
that sardines are vanishing is overfishing  
temperature drop off the coast and Red tide.  
It effects sea-lions, Brown Pelican and  
other birds. Fisherman are also losing  
there jobs.

I hope that the sardine  
population replenishes they are a  
major food source to the ecosystem  
because everything depends on everything.

I also hope fisherman in the  
Saltine industry get another job.  
The people on the Council have  
to make hard decisions

Sincerely

Isaac

## **West Coast sardine season called off amid population decline**

By *JEFF BARNARD Associated Press* | Published: Apr 13, 2015 at 5:49 PM PDT (2015-04-14T0:49:12Z)



FILE - This Aug. 22, 2007 file photo shows freshly caught sardines awaiting sorting at West Bay Marketing in Astoria, Ore. (AP Photo/The Daily Astorian, Alex Pajunas)

Fisheries managers have decided to call off the West Coast sardine fishing season that starts in July because of rapidly dwindling numbers, hoping to save an iconic industry from the kind of collapse that hit in the 1940s and lasted 50 years.

Meeting outside Santa Rosa, California, the Pacific Fishery Management Council voted Sunday to close the season starting July 1.

It had little choice. Estimates of sardine abundance have fallen below the level for a mandatory fishing shutdown.

"We know boats will be tied up, but the goal here is to return this to a productive fishery," David Crabbe, a council member and commercial fishing boat owner, said in a statement.

The council next will decide whether overfishing has been a factor in the latest collapse, which could trigger an emergency shutdown of the current season, which runs through June. It votes Wednesday.

Made famous by John Steinbeck's novel "Cannery Row," the once-thriving sardine industry crashed in the 1940s.

It revived in the 1990s when fisheries developed in Oregon and Washington waters, but population estimates have been declining since 2006, and catch values since 2012. The reasons are not well-understood, though it is widely accepted that huge swings in populations are natural, and generally are related to water temperatures.

Council member Frank Lockhart of NOAA Fisheries Service noted that several other fisheries - such as salmon, lingcod and rockfish - have recovered after going through steep declines.

Today, about 100 boats have permits to fish for sardines on the West Coast, about half the number during the heyday. Much of the catch, landed from Mexico to British Columbia, is exported to Asia and Europe, where some is canned, and the rest goes for bait.

West Coast landings have risen from a value of \$1.4 million in 1991 to a peak of \$21 million in 2012, but are again declining.



Geoff Shester, California campaign director for the conservation group Oceana, said this is the first shutdown of sardine fishing on the West Coast since the council began regulating harvests in 2000. He added the fishery should have been shut down years ago, when it first became clear more fish were being harvested than reproduced.

Shester said every ton of sardines left in the ocean is important as a food source for other wildlife and as a foundation for rebuilding the population.

The council allowed some sardines to be caught inadvertently in the course of related fisheries but reduced the amount. That means boats targeting anchovies, mackerel and herring won't have to stop fishing but could run up against limits in sardines caught that would shut them down, as well.

The council also allowed the Quinault tribe in Washington state to go ahead with a small sardine fishery.

# Climate cycle causes crash in sardine numbers

By Los Angeles Times, adapted by Newsela staff on 01.17.14

Word Count **745**



Corbin Hanson and others who fish off California for sardines have been hit in the pocketbook by reduced numbers. Scientists say dwindling sardine schools are affecting other animals, such as pelicans, who dine on the energy-rich fish. Photo: Gary Friedman/ Los Angeles Times/MCT

**LOS ANGELES** — The sardine fishing boat moved slowly as its tired captain grew more desperate. After 12 hours, Corbin Hanson and his crew returned to shore. They hadn't caught a single small, silvery sardine.

Tonight shows you how things have been going, Hanson said. "Not very well."

To blame is the biggest drop in the number of sardines in years. The drop has made the fish rare on the West Coast, which has had a big effect on fisherman. There are now limits on the amount of sardines they are allowed to catch. Scientists say it is affecting the ecosystem. Brown pelicans and sea lions that eat the oily fish could be starving.

If the situation doesn't improve soon, experts warn there could be serious problems. The West Coast's ocean animals, seabirds and fishermen could suffer for years.

## **Cold Waters Off California**

Sardine populations change a lot and it is always difficult to tell what they will do. Will there be a lot of sardines this year or none at all?

For reasons that are unclear, their numbers are dropping and scientists say their population will get smaller and smaller.

One reason is a naturally occurring climate pattern known as the Pacific Decadal Oscillation. It brings cold water that is rich with nutrition to the West Coast. Those conditions have helped some types of fish, but have hurt sardines.

A study last fall showed the size of the problem. The number of sardines has dropped by three-fourths since they were last doing well in 2006.

The government has limited the number of fish that can be caught by more than two-thirds. But some environmental groups have argued the catch should be halted outright.

The Pacific sardines rise or go down in numbers depending on natural shifts in the ocean. When conditions are poor, sardine populations plunge. When seas are better, they do very well. Their height in the 1940s made Monterey, Calif., one of the world's best places to fish.

## **Sea Lions, Brown Pelicans Hurting**

But by the 1950s, sardines had practically disappeared. In the 1960s, California stopped letting people catch sardines for 18 years. The population made a comeback in the 1980s and fishing resumed, but never at the level of what it was before.

Since the 1940s, scientists have debated what caused the decrease. How much of it was because of ocean conditions? And how much was it from too much fishing?

In the last few years, scientists have gained a deeper understanding of sardines' value in the ocean food web. They are small and packed with nutrition. They eat tiny plankton. Then they are preyed on by big fish, seabirds, seals and whales.

Some ocean predators like sea lions may be starving without sardines. Scientists saw a big problem in early 2013. Hundreds of starving sea lion pups washed up along beaches from Santa Barbara to San Diego, Calif.

Nursing sea lion mothers could not find fatty sardines, said one scientist, Sharon Melin. She is a wildlife biologist at the National Marine Fisheries Service. They fed on market squid, rockfish and hake that had less nutrition. The mothers produced less milk for their young. The following year, their pups showed up on the coast in large numbers, stranded and too thin.

Biologists also suspect the drop is hurting brown pelicans. The pelicans mate on California's northern Channel Islands. They have shown signs of starving and have largely failed to mate or hatch chicks there since 2010.

### **A Night Without A Bite**

Hanson is an example of how fishermen have been affected. Just a few years ago, Hanson didn't have to travel far from shore to find sardines. He'd pull in nets overflowing with sardines.

Not anymore. If his crew catches sardines now, they are larger, older fish. They are mostly shipped overseas and ground up for pet or fish food. Largely absent are the small and valuable young fish that can be sold for bait or canned and eaten.

He was trying to be hopeful when he embarked for Catalina Island on a December evening. "We're going to get a lot of fish tonight," he told another boat on the radio.

But after cruising the island's shallow waters for hours, they heard another boat captain's voice on the radio: "I haven't seen a scratch."

The boats turned around, hoping to catch sardines in their usual hideouts.

No such luck. Hanson piloted the big boat back to shore after pulling in his empty nets.