

Click here for **5 tips** on managing market ups and downs from the leader in financial planning.*

Ameriprise Financial Services, Inc., Member FINRA.

LEGAL +

Salmon Virus Indicts Chile's Fishing Methods

Published: March 27, 2008

(Page 2 of 2)

“It is simply not possible to produce fish on an industrial scale in a sustainable way,” said Wolfram Heise, director of the marine conservation program at the Pumalin Project, a private conservation initiative in Chile. “You will never get it into ecological balance.”

[Enlarge This Image](#)



Joao Pina for The New York Times

A fish farm near Puerto Montt owned by Marine

When companies began breeding non-native Atlantic salmon here some two decades ago, salmon farming was seen as a godsend for this sparsely populated area of sleepy fishing towns and campgrounds.

SIGN IN TO E-MAIL OR SAVE THIS

PRINT

SINGLE PAGE

REPRINTS

SHARE

ARTICLE TOOLS SPONSORED BY

IN SELECT THEATRES 3/19

More Articles

Great Gets by E-Mail

Sign up NYTime

MO

E-

1

2

3

Sal

St

E

company that is the largest producer of farm-raised salmon and exports 20 percent of the salmon that come from Chile.

Related

[Times Topics: Salmon](#)

[Times Topics: Chile](#)

[Enlarge This Image](#)



Joao Pina for The New York Times

Fish at a Puerto Montt market. The industry is moving to cleaner waters, leaving local people fearful for the future.

[Enlarge This Image](#)



Joao Pina for The New York Times

An industry boat off Puerto Montt. The industry admits some problems, but denies that it endangers consumers.

[Enlarge This Image](#)

The industry has grown eightfold since 1990. Today it employs 53,000 people either directly or indirectly. Marine Harvest runs the world's largest "closed system" fish-farming operation at Rio Blanco, near Puerto Montt, where 35 million fish a year are raised until they weigh about a third of an ounce.

As the industry abandons the Lakes region in search of uncontaminated waters elsewhere, local residents are angry and worried about their future.

The salmon companies "are robbing us of our wealth," said Victor Guttierrez, a fisherman from Cochamó, a town ringing the Gulf of Reloncavi, which is dotted with salmon farms. "They bring illnesses and then leave us with the problems."

Since discovering the virus in Chile last July, Marine Harvest has closed 14 of its 60 centers and announced it would lay off 1,200 workers, or one-quarter of its Chilean operation. Since the company announced last month that it would move south, to Aysén, the government has said

4. [Asking a J Maybe a V](#)
5. [Shifting C Insurance](#)
6. [David Bro](#)
7. [Circuits: A Photo Fur to Red-Ey](#)
8. [Theater R It's Patti's](#)
9. [The Unite](#)
10. [Salmon V Methods](#)

[Go to Complete](#)

The New York



Owen Wilson

Also in Movies:

[Watch the trailer c](#)

[Who has Owen W](#)

[What films has Ov](#)

ADVERTISEMENT



Joao Pina for The New York Times

Salmon pens in the Gulf of Reloncavi. Crowded pens are blamed for water pollution and potentially unhealthy fish.

the virus has spread there as well, in two outbreaks not involving Marine Harvest.

Industry officials say Chile is suffering growing pains similar to salmon farming operations in Norway, Scotland and the Faroe Islands, where a different form of the I.S.A. virus struck previously.

Norway, the world's leading salmon producer, eventually decided to spread salmon farms farther apart, reducing [stress](#) on the fish, and responded to criticism of high antibiotic use with stronger regulations and the development of vaccines.

Researchers in Chile say the problems of salmon farming go well beyond the latest virus. Their concerns mirror those of the [Organization for Economic Cooperation and Development](#) in Paris, which heavily criticized Chile's farm-fishing industry in a 2005 report.

The O.E.C.D. said the industry needed to limit the escapes of about one million salmon a year; control the use of fungicides like green malachite, a carcinogen that was prohibited in 2002; and better regulate the colorant used to make salmon more rosy, which has been associated with retina problems in humans. It also said Chile's use of antibiotics was "excessive."

Officials at Sernapesca, Chile's national fish agency, declined repeated requests for interviews for this article and did not

In a world of se
opinions, get th
first.

Safeguard your
prescriptions. S
your teens.

All the news th
personalize.

Safeguard your
prescriptions. S
your teens.

All the news
that's fit to
debate.
nytimes.com/opinio

respond to written questions submitted more than a week ago.

But Cesar Barros, the president of SalmonChile, an industry association, said, "We are working with the government to improve the situation."

He dismissed the broader criticism of sanitary conditions, saying there was no scientific evidence to support the claims. But researchers charge that the industry has been reluctant to pay for scientific studies, which Chile sorely needs.

Residual antibiotics have been detected in Chilean salmon that have been exported to the United States, Canada and Europe, Dr. Cabello said.

He estimated that 70 to 300 times more antibiotics are used by salmon producers in Chile to produce a ton of salmon than in Norway. But no hard data exist to corroborate the estimates, he said, "because there is almost an underground market of antibiotics in Chile for salmon aquaculture."

Researchers say that some antibiotics that are not allowed in American aquaculture, like flumequine and oxolinic acid, are legal in Chile and may increase antibiotic resistance for people. Last June the United States [Food and Drug Administration](#) blocked the sale of five types of Chinese seafood because of the use of fluoroquinolones and other additives.

But huge numbers of fish go uninspected. The F.D.A. inspected

only 1.93 percent of all imported seafood in 2006, Food and Water Watch said, citing F.D.A. data.

Stephanie Kwisnek, a spokeswoman for the F.D.A., said that she did not know the percentage inspected. But she said the F.D.A. tested 40 samples of the 114,320 net tons of salmon imported from Chile in 2007. None of them tested positive for malachite green, oxolinic acid, flumequine, Ivermectin, fluoroquinolones or drug residues, she said.

The F.D.A. is planning an inspection trip to assess Chile's overall controls on its farmed salmon, she added.

Mr. Petersen, the managing director of Marine Harvest in Chile, said the company planned to return to the Lakes region in a few years, once the area had become free of contamination. In the longer term, he said, Marine Harvest will leave Chile's freshwater lakes and produce more older salmon in closed systems where it can maintain "biological control."

Meanwhile, neighboring fishermen who have been affected by the fish-farming industry can only hope for better days. Mr. Guttierrez, 33, said that just six years ago he and his fishing partner would haul in 1,100 pounds of robalo on a typical day. On a recent day he pointed to that morning's catch of only 88 pounds in a cooler in the bed of a pickup truck.

He lamented the changes he had observed in the fish: they are rosier than before, and their skin is flabbier. He said he

suspected that the wild fish were eating the same food pellets that the salmon were being fed, which he said were falling to the sea floor.

“If the water continues to be contaminated, we will simply have to go to another area to find our fish,” he said. “But it is getting harder and harder.”

[« PREVIOUS PAGE](#) | [1](#) | [2](#)

Pascale Bonnefoy contributed reporting from Santiago, Chile.

[More Articles in World »](#)

Need to know more? 50% off home delivery of The Times.

Tips

To find reference information about the words used in this article, double-click on any word, phrase or name. A new window will open with a dictionary definition or encyclopedia entry.

Past Coverage

[Earth, Wine and Fire \(March 20, 2005\)](#)

[World Business Briefing | Americas: Chile: Retail Unit Acquired \(December 27, 2003\)](#)

[Royal Ahold to Sell Its South American Businesses \(April 4, 2003\)](#)

[TRAVEL ADVISORY; By Land and Sea, In Pursuit of Food \(September 22, 2002\)](#)

Related Searches

Chile	Add Alert
Food	Add Alert
Agriculture	Add Alert
Salmon	Add Alert

MUSIC »



Jay-Z's Assurance,
Mary J. Blige's
Suffering

STYLE »

Brookland and Sanfrooklyn

A young population is shuttling between artsy, gentrifying areas in Brooklyn and their counterparts in the Bay Area.

IN THE REGION »



An Unlikely
Obsession: School
Auctions

OPINION »

Cavett: Candidate, Improve Your Appearance!

MAGAZIN



The Repu
Party's Ca
Blues

[Home](#) | [World](#) | [U.S.](#) | [N.Y. / Region](#) | [Business](#) | [Technology](#) | [Science](#) | [Health](#) | [Sports](#) | [Opinion](#)
| [Real Estate](#) | [Automobiles](#) | [Back to Top](#)

[Copyright 2008 The New York Times Company](#) | [Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [First](#)
[for Us](#) | [Site Map](#)