

The background of the slide is a blue-tinted photograph of a vast ocean under a cloudy sky. The text is overlaid on this image.

Salmon Aquaculture

What is all the fuss about?

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Outline

- What?
- How?
- Where?
- History in BC
- Impacts
 - economic
 - social
 - environmental (site, local, global)
- More info?

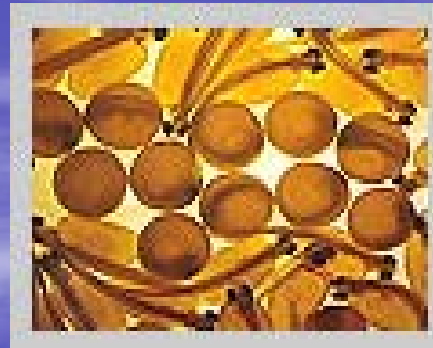


What is salmon aquaculture?



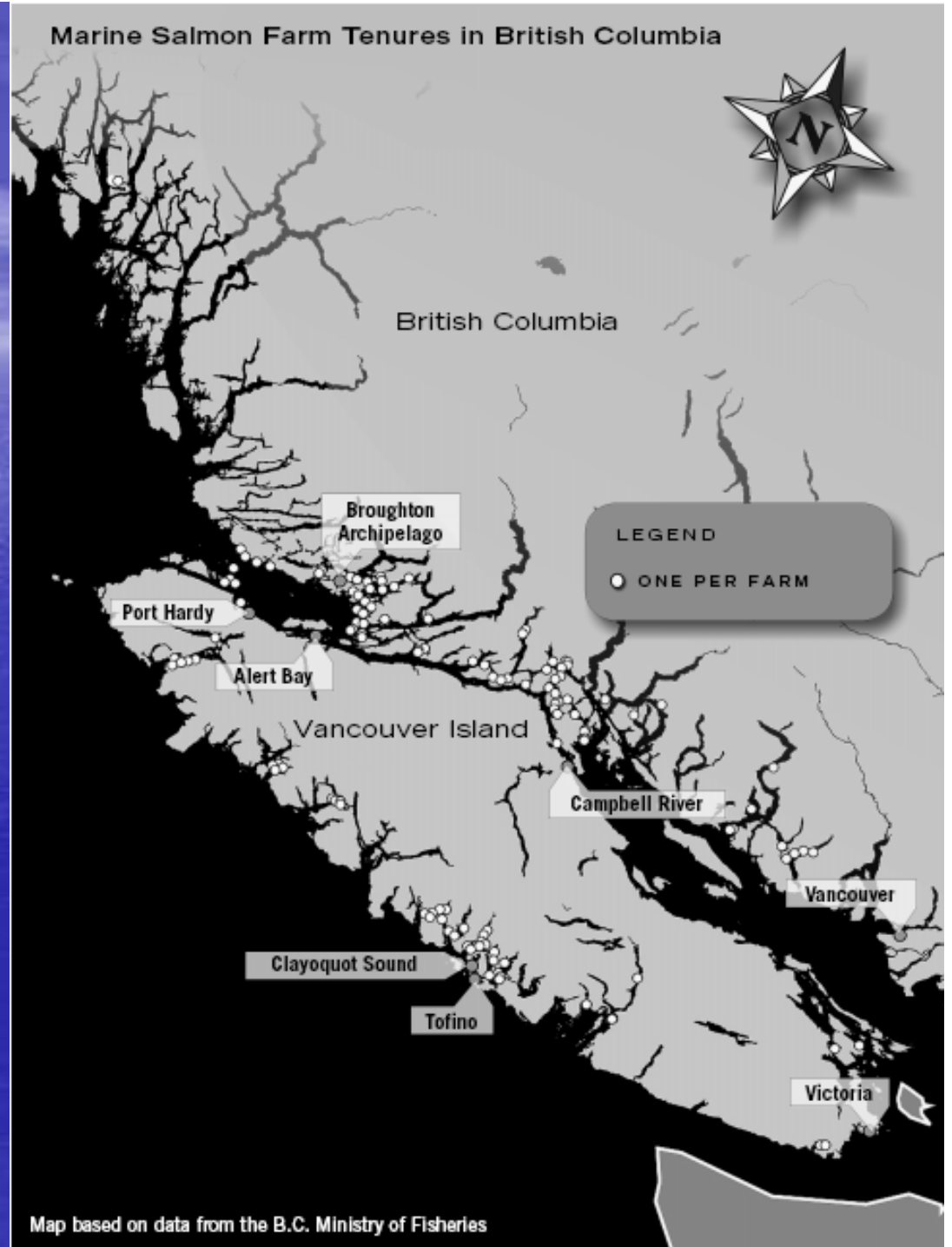
- Farming at sea
- Open net pens
- Salmon mainly Atlantic

How is it done?



Where

- Internationally:
UK, Norway, Chile
- BC -existing
-proposed
- Washington -allowed
Alaska –banned



Brief History in BC

- 1970s –farming on Sunshine Coast
- 1985 DFO allows Atlantic eggs in BC
- 1986 Gillespie Inquiry -1 month moratorium
- 1991 Atlantic salmon spotted in streams
- 1995 Moratorium on new farms but size increases
- 1997 BC Provincial Salmon Aquaculture Review
- 2000 Federal Auditor General notes DFO conflict of interest
- 2001 Senate committee notes DFO not protecting wild fish
- 2002 Leggatt Inquiry (David Suzuki Foundation)
- BC Provincial moratorium lifted
- Broughton archipelago pink salmon stock crashes at 5% of expected

Economic Impact

British Columbia's Fisheries and Aquaculture Sector (2002)

Sector	Revenues (\$millions)	Employment (jobs)
Aquaculture	287	1900
Commercial Fisheries	358	5400
Seafood Processing	602	3900
Sport Fishing	675	8900

Social Impact

- Local jobs, multinational ownership
- Local communities (for and against)
- Native culture
- Interpretation of science/lack of info
- Consumer health
 - fats, PCB/dioxins, carotenoids
- Consumer awareness

Environmental Impact -Site

- Feed
- Feces
- Antibiotics
- Pesticides
- Dead fish

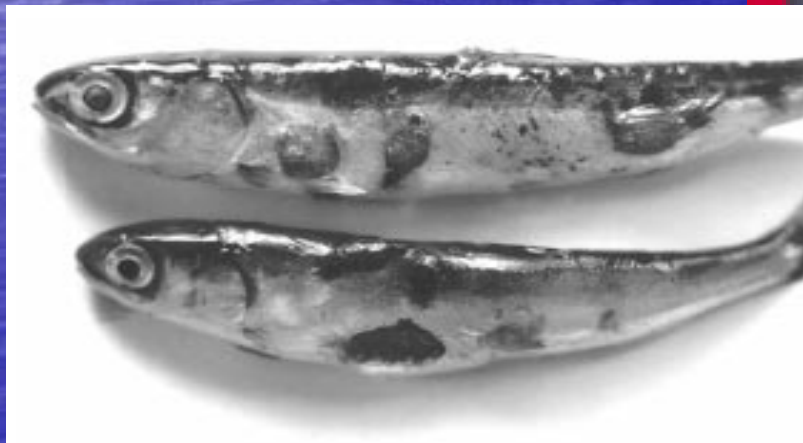
Environmental Impact -Local

- Escapes
 - Competition for food
 - Competition for spawning sites
 - Gene transfer



Environmental Impact -Local

- Disease
- Sea lice
- Predator control
- Night lighting



Environmental Impact - Global

- Efficiency: 2-3 kg feed=1 kg farmed fish
- Source of fish food
- Transport

Summary – Now what do we eat?



More info...

- BC Provincial Government
www.agf.gov.bc.ca/fisheries/bcsalmon_aqua.htm
- Department of Fisheries and Oceans
www.pac.dfo-mpo.gc.ca/aquaculture/default_e.htm
- BC Salmon Farmers Association
www.salmonfarmers.org
- David Suzuki Foundation
www.davidsuzuki.org/Oceans/Aquaculture/Salmon/
- Watershed Watch Salmon Society
www.watershed-watch.org

Additional References

- NOAA Technical Memorandum NMFS-NWFSC-49 **The Net-pen Salmon Farming Industry in the Pacific Northwest**
<http://www.nwfsc.noaa.gov/publications/techmemos/tm49/tm49.htm>
- Krkosek, M., Lewis, M.A., Volpe, J.P.: Transmission dynamics of parasitic sea lice from farm to wild salmon. (in press) Proc. Roy. Soc. Lond. B. <http://www.math.ualberta.ca/~mlewis/publications/SeaLicePub.htm>
- Sergio Paone for the David Suzuki Foundation (2001). Drugs Used on B.C. Salmon Farms and Their Effects on the Marine Ecosystem http://www.watershed-watch.org/ww/salmon_farming.html#Drugs
- W. Bell and S. Paone Human Health Risks Associated With Salmon Farming at <http://www.watershed-watch.org/ww/publications/sf/PaoneBellBriefSCFO.PDF>
- Harris, N. (2003). The case of the escaping salmon: farmed fish, wild fish and ecosystems in British Columbia.