

George Chamberlain



Global Aquaculture Alliance United States

Dr. George Chamberlain, president of the Global Aquaculture Alliance since 1997, is also a former president of the World Aquaculture Society. With broad experience in farmed seafood, Chamberlain helped establish Integrated Aquaculture International in 2004. Now called iAqua, the company owns and manages breeding, nutrition and production facilities in Asia and the Americas. Chamberlain also developed shrimp feeds and production systems for Ralston Purina Co. and Monsanto.



The Journey to Improved Aquaculture Health

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Aquaculture Disease Outbreaks

- Disease is the single biggest impediment to aquaculture growth
- In 2010 alone, Infectious salmon anemia cost the Chilean salmon farming industry between 350,000 to 400,000 tons of fish, \$2 billion dollars and 30,000 jobs.
- Shrimp losses have amounted to tens of billions of dollars since 1990 and new shrimp diseases are appearing every year.

Challenge is to Anticipate and Prevent Epidemics

- Most management techniques are based on farm level interventions
- Zone management at the regional or national level is seldom implemented.
- Policy usually lags behind the curve, recognizing carrying capacity limits only when they are exceeded

Need for Comprehensive Policy to Reduce the Risk of Outbreaks

- In discussions with the World Bank, we wondered if lessons from past epidemics could help improve future policy.
- This idea led to a proposal for case studies in various countries to characterize outbreaks and recoveries.
- We hoped to identify common lessons learned by comparing and contrasting these experiences.

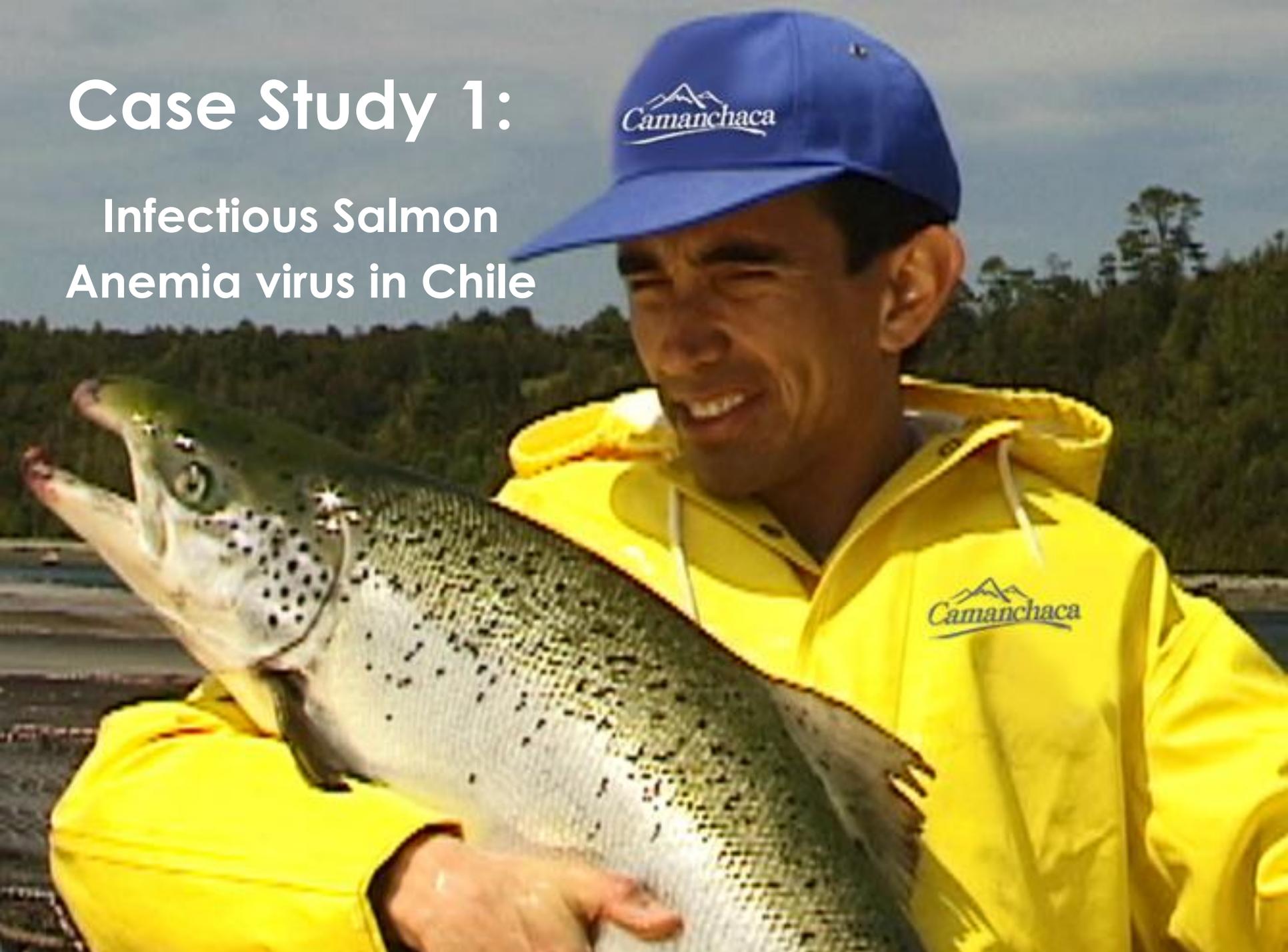
Lesson Sharing in Aquaculture Disease Management

- These studies were funded by the World Bank and undertaken by the Responsible Aquaculture Foundation, a non profit organization dedicated to research, education, and training.



Case Study 1:

Infectious Salmon Anemia virus in Chile

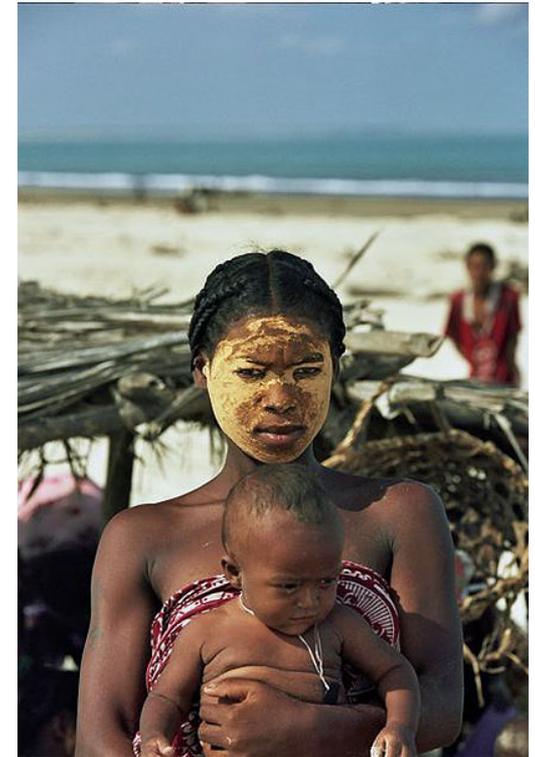




Case Study 2 Early Mortality Syndrome in Vietnam

Case Study 3

WSSV in Madagascar, Mozambique



Preliminary Conclusions

1. Zone management is needed to regulate the density of farms and avoid sharing water inputs and outfalls;
2. Introduction and movement of animals should be controlled by quarantine and movement documents;
3. Sanitary measures are needed at the farm level;
4. Apply Best Aquaculture Practices at farm-level to reduce stress and improve animal welfare;
5. Structure dialogue among farmers,