NSERC-Cooke Industrial Research Chair in Sustainable Aquaculture

Farming of fish and shellfish in the ocean is equal in importance to harvest fisheries as a means of seafood production. Concerns about disease and waste management as well as interaction with commercial fisheries have led to controversy among the industry, government regulators, and coastal communities. There are, however, many avenues of environmental improvement feasible for ocean culture of salmon in net pens. Cooke Aquaculture, the largest locally owned aquaculture company in North America, has partnered with Dalhousie University, in a research program on aquaculture sustainability. Professor Jon Grant is the NSERC-Cooke Industrial Research Chair in Sustainable Aquaculture.

An approach involving simulation modelling is being employed using computer models and mapping of aquaculture ecosystems to predict the transport of diseases and waste particles by ocean currents. A field program of oceanographic instruments and sampling at coastal sites, including Cooke Aquaculture farm operations, is being used to check the reliability of the predictions. Various planning scenarios are explored with this method, which can be used to arrange farm sites to minimize the spread of disease or accumulation of waste. Dalhousie's inclusion of training of highly qualified personnel in the research program furthers this cooperation with the aquaculture industry in a new chapter in the practice of environmentally conscious fish farming.

This research into the sustainability of salmon farming includes an ecosystem approach to aquaculture and marine spatial planning.

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