

## **Response to *Canada Gazette* Part 1**

### **A Notice of Intent to Regulate Fish Pathogen and Pest Treatments**

Fish pathogen and pest treatments represent a high risk to the marine environment particularly to non-target species such as crustaceans which are of ecological and commercial importance. We argue therefore, that continued chemical and antibiotic treatments have no legitimate place in the 'very-connected' marine environment. Adult lobster mortalities have been linked to pesticide use and there is little recognition of the effects on larval and juvenile stages. Antibiotic resistant bacteria have been documented in the vicinity of finfish aquaculture sites and the impacts on marine and human health have not been studied.

The sea-surface microlayer is known to enrich concentrations of contaminants such as heavy metals, pesticides, bacteria and viruses to levels several times greater than in the water column below. This is a neglected pathway of effect by which elevated concentrations of contaminants can be transported rapidly and widely. Preliminary research by Friends of Port Mouton Bay has demonstrated that copper in the vicinity of a fallowed salmon farm can be enriched in the sea-surface microlayer to levels greatly in excess of the CCME guidelines for marine health. Early stage lobster larvae and eggs of some species of fish occupy this surface layer and from available evidence are expected to be harmed by copper at these concentrations.

Further, the use of chemical and antibiotic treatments in aquaculture will jeopardize traceability [a tracking system which traces products from their source to the point of sale], the emerging marketing tool for many fish species, in particular lobster, a multi-million industry in Atlantic Canada. The reputation of crustaceans and other marine species in the marketplace must be protected.

It is of the utmost importance that Environment Canada maintain its independent surveillance of and over harmful and deleterious substances in the oceans. Fisheries and Oceans Canada has a responsibility to protect the ocean and its environment on behalf of Canada and all Canadians. It is unacceptable for Fisheries and Oceans Canada to occupy the position of "promoter" [as they do] of finfish farming and "regulator" [protector of the ocean on behalf of Canada/Canadians] at the same time. This is a startling conflict of interest that is worrying to every other participant in the ecological maintenance and harvesting of the ocean.

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