

14 June 2002

The Commissioners  
U.S. Commission on Ocean Policy  
By Electronic Delivery  
Seattle, Washington

Dear Commissioners,

There are serious social, public health and environmental consequences attached to raising salmon and other finfish in open net-cage feedlots. I am writing on behalf of the Institute for Agriculture and Trade Policy to outline some of these consequences and to make recommendations for changes in U.S. policy.

The presence of net cage salmon facilities in the U.S. and worldwide has profound negative effects on wild populations of salmon. The main problems have been well documented: spread of disease, spread of parasites, escapee competition for resources and interbreeding with wild population. In Europe and on the eastern U.S. seaboard these problems have seriously endanger wild populations already under stress from other causes, in some cases eradicating entire runs.<sup>1</sup> Here in the Pacific Northwest that process seems to be well underway, with approximately 400,000 salmon escapes per year in Canada alone and active colonization by feral salmon in 78 British Columbia and 4 Alaska streams.<sup>2</sup> These are the known cases. Vast stretches of coastal waterways in the Northwest and Alaska are not monitored.

Salmon feedlots have not increased world food supplies; they have only increased world farmed salmon supplies. They do so at a terrible price. Around 2.8 kilograms of other fish are required as feed to produce one kilogram of pen-raised salmon. A similar amount is wasted as by-catch at sea. The fish feed business thus depletes the stocks of forage fish required for healthy wild fisheries and a healthy marine environment. The area of impact of a salmon feedlot is thus magnified to 40,000 to 50,000 times its physical size.<sup>3</sup> This takes place mainly in the oceans of the southern hemisphere, to the detriment of fishery-dependent communities in poor countries.

A main ingredient in feed for pen-raised salmon is oily baitfish such as Herring, Mackerel, Sardine and Anchovy. This appears to be the reason feedlot salmon contain

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<sup>1</sup> D. Staniford, *Marine Salmon Farming in Scotland*. F.O.E. Scotland, June 2001. ISBN: 1 901855 11 2.

<sup>2</sup> Alaska Department of Fish And Game Public Web page:  
[www.state.ak.us/local/akpages/FISH.GAME/geninfo/special/AS/AS\\_home.htm](http://www.state.ak.us/local/akpages/FISH.GAME/geninfo/special/AS/AS_home.htm)

<sup>3</sup> Dr. R. Naylor et al, *Science* Vol. 282 30 Oct 1998.

higher levels of persistent environmental toxins than wild salmon, including polycyclic aromatic hydrocarbons, polybrominated biphenyl ethers and organochlorine pesticides. A recent study showed one and one half servings per week of British Columbia feedlot salmon can exceed World Health Organization safe food consumption guidelines.<sup>4</sup>

One useful measure of the economic benefits of salmon farming relative to capture fishing are their respective costs in energy. It takes the energy equivalent of 755 liters of diesel to capture and process a ton of wild Sockeye salmon. It takes the equivalent of 2,612 liters of diesel, over three times as much energy to produce and process a ton of factory Atlantic salmon.<sup>5</sup> This is a foolish use of resources, reflective of inadequate policies.

Open net cage salmon facilities allow for a free flow of seawater, so feces, antibiotic residue, colorants, pesticides, uneaten food and other wastes enter the marine environment. The amounts of waste are on the order of hundreds of thousands of pounds per facility annually. The waste creates dead zones on the sea floor. Other waste derived problems are not well understood. There appears to be a positive relationship between salmon feedlots and antibiotic resistant bacteria in nearby aquatic life and even in humans who come in contact with feedlot fish.<sup>6</sup>

Salmon escapes, colonization, disease spread, parasite spread, wastes, resistant bacteria and other problems are not comprehensively monitored in this country nor in other salmon farming nations like Canada and Chile. In some cases the problems are not monitored at all. This is, if nothing else, a flagrant violation of the precautionary principle. We may be doing far greater harm than we now know or understand.

A key reason feedlot raised salmon come to the market cheap is that feedlot owners are able to externalize many of the environmental and social costs outlined above. In addition, salmon feedlot companies receive U.S. government support through Saltonstall Kennedy funds administered through the National Marine Fisheries Service<sup>7</sup> and through Department of Agriculture rural development funds. There is no good evidence to suggest that, given the levels of environmental and social subsidy to the industry, salmon feedlot development actually creates a net economic gain in jobs and wealth. There is no question that cheap feedlot salmon is seriously damaging rural economies from California to Alaska. We seem to be replacing a long-term sustainable, fully capitalized, job and wealth creating wild capture industry with an unsustainable and potentially deeply costly feedlot industry without assessing real economic benefits or returns. Again the precautionary principle should be applied.

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<sup>4</sup> Easton et al, Chemosphere 46: 1053-1074

<sup>5</sup> Dr. Peter Tyedmers, Dalhousie University, PhD Dissertation

<sup>6</sup> Dr. C. Benbrook. Antibiotic Drug Use in U.S. Aquaculture. Northwest Science and Environmental Policy Center. February 2002.

<sup>7</sup> Federal Register of 14 May 2002, Vol 67 #93.

Unless and until these concerns are substantively addressed, we believe that U.S. policy should be changed as follows:

- Stop federal grants and subsidies to the industry, including support provided by the National Marine Fishery Service and the United States Department of Agriculture.
- Stop expansion of the industry on current sites and do not allowing permitting of new sites.
- Mandate plain labeling of salmon and salmon products to consumers, describing origin and use of additives such as colorants, antibiotics and pesticides.
- Mandate country of origin labeling on imported salmon and salmon products.
- Restrict imports of feedlot-raised salmon to the greatest extent possible under our trade and environmental agreement obligations.

Yours sincerely,

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