

## Solutions in the sea

### **Technology Expert panel to examine Canadian aquaculture as untapped answer to food problems**

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Keith Culver thinks Canadian aquaculture could hold the key to solving the world's food problems.

The UNB philosophy of law professor says he's putting together a forum of international experts who will meet in Oxford, England by year's end to look at the issue. Although he does not have a specific background in aquaculture, he hopes his expertise in philosophy can help to consider its wider applications.

"I'm interested in any situation where people face new technology, and a choice of governing that technology," he said.

"Even good drug therapies if taken in excess can harm people. We need rules to use these technologies."

Culver says that while the capacity of land-based crops is well known, the sea's potential bounty is still a mystery. He hopes to use Canada's aquaculture industry as a case study at the forum once it has been organized.

"Canada is a global leader, along with the Norwegians, the Chileans and the Scots in developing aquaculture technology," he said. "And this technology is pretty much unexplored in terms of its potential contribution to global food security, and yet we're so ambivalent about it."

The federal Department of Fisheries and Oceans reports that aquaculture is a \$715-million industry in Canada, employing 3,900 people in 2005. In New Brunswick alone, the industry is worth about \$250 million and employed some 1,500 people in 2005. Salmon is dominant, with an annual production of 35,000 tonnes.

Paul Harpelle of the federal Department of Fisheries and Oceans said Canada in general and New Brunswick in particular are a good source of advice on aquaculture.

"I think one of the things that we bring to the table in New Brunswick is that local expertise that has evolved through our industry over time," he said. "We're on the leading edge when it comes to cage and feeding technology."

University of British Columbia professor James Tansey, who is another of the forum's organizers, stressed that the gathering would not consider any potential economic benefit to Canada.

"When you're looking at technology transfer, you tend to find that high value-added technologies are transferred between countries, and that's the basis for international trade," says Tansey, whose research interests include the ethics of new and emerging technologies.

"But that's not the primary motivation, it's more a well-being focus than an economic return focus. It's more about bringing Canada's role in international development into the 21st century."

Tansey said the Canadian example was also instructive in the potential pitfalls of growing aquaculture industries.

Jamey Smith, executive director of the New Brunswick Salmon Growers Association, said the industry has had decades to learn how to minimize the ill-effects of the industry.

"Here in New Brunswick we've worked to develop environmental performance based standards that are based on science from Fisheries and Oceans Canada, as well as from science and academia," he said.

"We've worked to develop the appropriate farm operational practices to ensure that those standards are maintained."

The salmon industry in New Brunswick was criticized by environmental groups in the past few years, citing concerns over PCBs and lice salmon. The risk from PCBs was later shown by health officials to be within a safe range, and federal agencies did not find high levels of sea lice in salmon in New Brunswick rivers.