

Hydro dams may limit fish stock

DARTMOUTH, N.S. (CP) — A physicist at the Bedford Institute of Oceanography says hydro-electric dams might be more to blame than overfishing for the decline of fish stocks off Atlantic Canada, and no new dams should be built until the effects are known.

Dr. Ernest Neu said recently that Canada, more than any other nation, has been building water control projects on its estuaries, and no one knows what effect they are having on the ocean into which the rivers flow.

Neu, whose studies have dealt with the physics of water circulation, urged biologists to carry out research to prove whether his belief is correct that dams are the chief cause of declining fish stocks.

He explained that dams disrupt the natural cycle by which nutrient-loaded fresh water flows from the rivers into the ocean.

In their natural state, rivers carry smaller flows during the winter, when precipitation is frozen as snow, and sharply increased flows after the spring thaw. This coincides with the life cycle of marine organisms, increasing food supplies as they come out of their winter hibernation and decreasing supplies when winter returns.

But hydro-electric dams tend to level out the cycles, so storing much of the spring and summer runoff in their reservoir until winter, when consumer demand for power is greater.

This means that fresh water nutrients reach the ocean in the winter, when the fish don't need them, and are lost into the barren depths beyond the continental shelf. In the spring and

summer the nutrient supply fails to increase as rapidly as is needed.

Interruptions of the freshwater supply could have further effects, he said, by interrupting "haline currents" — currents set up by the meeting of fresh and salt water. If these currents were stopped altogether, he said, it is theoretically possible that the coastal waters could freeze over.

Neu cited a scientific study showing that Egypt's Aswan High Dam on the Nile, a hydro-electric and irrigation project, caused a decline in nutrients to the Mediterranean off Egypt, with the result that fishing dropped off sharply.

The catch of sardinella had been 15,000 tons in 1964 but declined to 4,600 tons in 1965 and only 554 tons in 1966. The dam also blocked passage of other marine life such as shrimp and eel.

Canada has more than 20 projects controlling flows at least as great as the Aswan High Dam, Neu said. There has been much concern over the effects these dams have on the inland environment, yet nobody has studied what harm they are doing to the ocean environment.

Neither the provinces who plan the projects nor the bankers who finance them could be blamed for wanting the dams to run profitably, he said.

"But shouldn't there be someone who will stand up and say: 'No, you can't do that.'"

He suggested construction of water-control projects be regulated internationally and that no new projects be permitted until their effects on the ocean are known.