

Seals versus cod, the science wars

*Who would have thought ocean biology
was really political science?*

Unravelling the politics of seals and cod makes understanding the Balkans seem simple.

The Fisheries Resource Conservation Council — the mixed science and industry group set up to advise the federal government in the wake of the collapse of the East Coast fishery — has advocated a massive cull (read “kill”) of seals.

Scientific data, as well as anecdotal reports from fishermen, convinced the FRCC “beyond any reasonable doubt” that without a large seal cull, cod stocks would remain in jeopardy.

The next day, Fisheries Minister David Anderson questioned whether there was any scientific proof that the seal kill would increase cod, adding that he would not support the cull if “it’s not science-based.”

Who’s right? Can you believe both “nobody” and “everybody?”

To begin with, look at the scientific “facts” everyone agrees with. First, seals sometimes eat cod. In 1996, the Department of Fisheries and Oceans calculated that harp seals had consumed 150,000 tonnes of Atlantic cod, and grey seals 60,000 tonnes. Nor is there any dispute that many seal populations have grown exponentially in the recent past. The largest group, harp seals, which were thought to number about two million in the early 1970s, are put at five million today.

If seals and cod formed a two-species ecology, it would be clear that killing seals would increase cod numbers. Unfortunately, the ocean is, pardon the mixed metaphor, a jungle. Seals feed on upwards of 100 different species, each of which have tangled relationships with each other. For example, harp seals feed on capelin, a fish the cod also eat. DFO estimated in 1996 that 1.1 million tonnes of capelin vanished down harp seals’ gullets. A simplistic calculation would suggest that fewer seals means more capelin for cod, and, by extension, more cod.

However, seals also feed on Arctic cod (600,000 tonnes in 1996) — a cousin of the Atlantic species. Biologists believe the Arctic and Atlantic cod compete for breeding grounds and food. If there are fewer seals, there should be more Arctic cod and, by extension, maybe fewer Atlantic cod. Finally, seals feed on squid, which also feed on cod. Ergo, fewer cod-eating seals should be counter-balanced by more cod-eating squid.

After all the additions and subtractions, what is the effect of a giant seal kill on cod? We don’t know. Scientists are in the

process of trying to devise very complicated computer models that might give some kind of clearer answer in the next five or 10 years. Might. Truthfully, the problem is so complex that a DFO seal-management backgrounder baldly states: “Definitive answers about the impact of seal predation on fish stocks may *never* (our italics) be possible.”

So, like it or not, increasing seal kills for the sake of cod is a science-related, but not a truly science-based, public-policy decision. Using their science, groups like the FRCC say we have little to lose by what amounts to an ocean-sized cod/seal experiment. Despite the uncertainties, it is possible that seal culls are what is needed to increase the stock of northern cod — a fish that is still sorely depleted more than six years into a fishing moratorium.

Besides, seal demographics suggest that reducing the numbers will not endanger the species. And if seal reduction doesn’t “flip” the Atlantic ecosystem back to producing millions of cod, the worst that can happen is more of the status quo — humans helpless before nature.

The “uncommon sense” group, à la Mr. Anderson, argues that since we don’t know so many things — including whether a much smaller seal population is, in fact, sustainable — doing nothing is the prudent policy. Remember: Humans cavalierly taking risks with the oceans is what got us into this fishless mess in the first place.

Then things get really complicated. East Coast sealers are making noises that they are opposed to the much larger hunt, because it will collapse the price they get for pelts and seal meat. There is an unspoken sentiment among some fishermen that they don’t really need cod. Because shrimp, crabs and other former cod food are suddenly abundant, the value of landed catch has remained much the same in the Maritimes before and after the embargo.

And then how would you kill millions of seals spread out over 1.5-to-2-million-square kilometres? Machine-gun them from the air? And what do you do with their corpses? Do you have to do this year after year? And how would the sight of the maimed and dying play on European television?

The truth of the matter is that the interaction between fish and fishermen is so confused and contentious that nobody really know where biological science ends and political science begins.