We Know Better

By Barry Darby

The Quota-based management system involves many assumptions and practices that we know – or should know – are false. Here are some examples.

1. Basic animal husbandry teaches us that when we harvest from a flock or herd, we select and harvest the young, and preserve the older productive members to regenerate the stock. Yet in harvesting Northern Cod, we mainly use either gillnets, which select the older, more fecund fish, or otter trawls, which harvest indiscriminately.

This ignores what should be the obvious lesson – a lesson that people in the outports already knew long ago. In the early 1960s, as a teenaged harvester, I was fishing with nylon gillnets, which were new on the scene at that time. I was told repeatedly by older harvesters that we could not continue to catch the "mother" fish, which gillnets catch most effectively, and still expect a sustainable fishery. Yet we continue.

2. Lobster presents a very different picture. A key aspect of our lobster harvest management is the incorporation of the lessons from the previous paragraph – protecting the mature spawning biomass. Reports on CBC in January and February 2020 indicate that in the past five years, our lobster harvest has doubled in size and tripled in value, and the stocks remain healthy. This success was accomplished without a "rebuilding plan" in the DFO toolkit, and without quotas (see https://barrydarby.com/the-proposal/, Section B2).

3. We know that high quality fish produce greater economic and social returns. Yet our current cod harvesting rules, under quota management, favour gillnets over long lines. The 2018 stock assessment shows the result: approximately 40% of our catch was grade B or lower, with a net economic loss to harvesters and our rural society of three to four million dollars.

4. We know, or should know, that there are significant differences between gear that attract their prey – hook and line and baited pots – versus fishing gear that pursue it – otter trawls, purse seines, and (practically speaking) gillnets. When forage fish are in low supply, fish are hungry, and prey-attracting gear help ensure sustainability by catching mainly hungry fish, leaving more food for those that remain. Yet except for lobster, our regulations seldom reflect that understanding.

5. Soak time is the length of time that gear is in the water and effectively fishing. Longlines have an effective soak time of 1-4 hours, while gillnets have a 24h soak time per set – a much longer soak time, which seriously reduces quality and increases bycatch. These are important differences, yet for many policy purposes, the two gear types are not considered separately.

6. We know that different fishing gears cannot co-exist on the same fishing ground, and there has been some policy recognition of that fact. DFO now excludes otter trawls from areas where gillnets are allowed, since allowing otter trawls on a ground effectively excludes all other gear types. But the same principle applies to gillnets and longlines. Yet the rules generally allow both, thus effectively excluding long lines.

7. We should be making the most of our resources. Again in the early 1960s, observing a brand new stern trawler arriving at Burin fish plant fully loaded with 500,000 lbs, I heard an older fisherman say, "There's enough fish there to keep four or five families for a year, and all they're getting is two weeks wages." Moreover, these large trawlers have a heavy carbon footprint, damage the ocean floor, contribute to the accumulation of ocean plastics, and are extremely inefficient in overall economic terms. Yet DFO policies continue to effectively favour otter trawls over all other fishing gear.

8. Every animal stock has a tendency to grow. Studies show that an individual cod will double in mass in three or four years, or 25-35% per year. In addition, in the way we measure biomass, a new year class is added every year. Despite this potential growth, recent DFO stock assessments show that the cod stock in 2J3KL has remained stuck below 400kt. We harvest about 2.5% of it annually, (10,000 metric tones), while natural mortality is close to 40% (160,000 metric tones). The stock assessments also point out that a significant factor in this high natural mortality is the lack of caplin. Yet our policy is still to "keep removals (of cod) at the lowest possible levels," treating harvesting as the key factor and ignoring the caplin. Surely there are other policy conclusions that should be considered.

All these examples show that current fishery management system is ignoring known facts and continuing to follow paths to failure. That has to change.