

Crew fixing the net on a purse-seiner in the Marshall Islands

Today is 21 September 2023; back in 1983, it was my first trip on a commercial fishing boat. I had to be 18 years old to get my "2nd mate ticket", and even if I had done the equivalence from my Navy one a couple of weeks before while still 17, the day after my b'day (16/9), I was at the Argentinean coastquard (Prefectura) with all the papers.

I had a job lined up as a deckhand in a small coastal trawler of Mar del Plata because while I knew how to take a boat and operate it from A to B, I didn't know anything about fishing. Thankfully, a skipper (a good man named Braulio who lost his son in the war just the year before) took me under his wing and allowed me to learn from him and many others after him.

It was a steep learning curve that, after 40 years, hasn't stopped yet. After a few years of fishing, I got into university and got involved in fisheries science and management to then go back to fishing in the Pacific in the early 90s and to re-start the road that took me to being here today.

Yes, many things have changed since then, some for good, some for bad (and some that feel the same).

I like to be a positive person, so start with the good things:

Stock assessment and data...this is where I see the most significant change. The stock assessment models of today and the data path feeding them is sooooo much better than it ever was. I remember coding in Cobol on pathetic (for today's standards) loops to run Virtual Population Analysis on computers that had less than 0.1 % of the computational capacity of my running phone today. I remember doing plots by hand and working with models that were just minor upgrades from the Beverton-

Holt model. Today, my colleagues in the Pacific Community (SPC), for example, run some of the most sophisticated models in the world that have moved aeons from then; hence the accuracy of the assessments is astronomically better than then. Add to that the almost live capacity of electronic monitoring to feed those models in real-time, and we could be talking about a different universe (even if some of the assumptions of those models stayed the same).

**Monitoring, Control and Surveillance...** technology allows us to know so much more than ever before about fleet dynamics and fishing efforts, when I started, we just left port and came back some time later. We had a radio, and that was it. No one knew where we were, what we were doing, if we sold fish or unloaded fish on the side before coming to port, if the catch declaration on paper (if necessary) matched entries at factories.

Sonar and satellite technology combined, in particular, have made such massive changes to the controls we have on fishing. The other side of the coin about advanced sonar and satellite technology is "effort creep"; finding fish was never so easy as today. We then relied on experience and advice from other friendly or family-related skippers. I remember being a "weirdo" by bringing knowledge about "water mass", fronts and thermoclines. The crew were looking at me like mad when I was dropping thermometers or vertical longlines with a potato every 10 m, leaving it there for a while and then checking the temperatures like a freak to see where the thermocline was... this has become Stone Age in less than 30 years. Fish finding sonars were crude and exorbitantly expensive and required calibration every few weeks with cables on either side of the fishing boat holding a bronze ball that will be progressively levered and the "bouncing" rate adjusted as needed – a total nightmare!

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This is me, about forty years ago. The fisheries world had a lot of promise back then.



And here I am today, a bit more cynical and weary, but hoping fishing can be more fair to fishers.

Communication and positioning safety... another area of incredible development. We just relied on VHF and, if lucky, UHF radios for everything. My mother would not know anything of me for weeks at a time. The idea of the internet on board was science fiction. Positioning was also very complex; all was dead reckoning. I knew how to use a sextant, which I used to take the meridian at lunchtime if the sun was visible; the rest was just guessing. A bit later on the biggest boats we got the capacity to triangulate via coastal radio stations and Loran C. I remember vividly going over the manual of the first proper GPS I got (I was already fishing in the Pacific) and being bewildered by how much safety and efficiency this would bring, particularly as all this tech gets progressively cheaper as well.

This, of course, meant that more and more vessels got built as things became cheaper and the "need" for fish got up. Fishing was a family/cultural job, with the odd one out like me. But back then, high-seas fisheries weren't really a thing. Freezing technology hasn't changed so much, but it has become way more generalized, and crewing was primarily tied to nationals of the Flag State plus highly protected by unions... I will come back to that later.

The number of boats exploded since then, chasing the same amount of fish initially and progressively less since then... we caught fewer fish overall because there were fewer of us, and we had less tech to find them even if the abundance was bigger.

I remember hitting a school of Southern blue whiting on a bottom trawl in the south of Argentina by chance (I could not really estimate biomass with the sounder, yet I knew that the bottom contour was good). In a few minutes, we packed the net all the way to the mouth; the boat slowed down while maintaining the same revs. We struggled to get the net to surface; all hydraulics were at the limit. I cleared the deck as the cables were at full tension. Once afloat, it was a monster; we could not bring it in, as the fully packed net was wider than the boat. The fish was so squashed that it was useless. I had to get on the inflatable dingy and cut the cod end open to let go of the catch... it was a nightmare. We lost a day and then had to repair the net for a further day. I don't think abundance as such is typical today, even if all-around catch volumes may be way higher.

I guess I could go on and on and on. But let me focus on what I personally think has gone worse... or at least burns me up the most.

**Big business and the geopolitics of fish...** fishing does not seem to be only about catching fish for others to eat (and making good money for the hardest and most dangerous job in the world). Fishing has become a huge business and, as such, so much more linked to politics both domestically and internationally, and with that, has taken on board what is, for me, the worst of politics in general and human behaviour in particular, hypocrisy.

I'm constantly biting my tongue in meetings when I see statements, presentations, or read news by NGOs, industry associations, marketing people, eco-labels and private certifications on fisheries issues; and even more so when those delivering them as if it was the ultimate truth, are people that NEVER worked on fishing boat... it really gets to me.

Let's get to the geopolitics first and its ugliest influence on fisheries: subsidies. I preface it with a principle of diplomacy "If you have a presence, you have rights". Let's say high seas longlining does not make money, albeit paying a pittance to the crew and cutting maintenance and living standards... subsidies will support them because the benefit of being in the table (i.e. having X amount of vessels there), outweighs the cost of subsidizing fuel, giving tax exemptions, etc.

The industry has become globalized. It is not just a former fisherman that had a few boats and became a fishing company. It is a corporate business, and as such, like any other big business (from tech to wine and food), it takes advantage of ALL possible (purposely made or not) shortcomings and loopholes in legislation, tax systems and crewing rules, amongst others, that it can. Compounding to this, the regulatory framework for the high seas was regulated when there wasn't almost any High Seas fisheries, so when you have these gaps (as dictated by capitalism), business runs rampant. And this is just not fishing in every industry, so here is one thing that REALLY annoys me ...fishing gets rightly pointed out for many things (around environmental and social impact, tax evasion, etc), but as if it exclusively was a fishing problem and is not in every primary industry as soon as you start peeling layers.

Example: bottom trawling has environmental impacts, no doubt about it, and the gravity of these impacts depends on many issues, ranging from

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the benthos in which they happen to the species being trawled. This is not "one size fits all". Then I hear people saying that bottom trawling is like two bulldozers at each end of a chain going over a forest and destroying everything; then I look outside my house and I see farms, roads, houses, sport fields, etc., and that is literally what has happened to most of the land! There were forests there at some stage not so long ago! A field of soybeans has a biodiversity impact of 100%... everything there was killed and removed to plant an exotic species. So where are the "stop agriculture" or "stop housing development" coalitions?

And another thing I rant on usually: high seas transhipment in the WCPFC, textbook geopolitics-driven hypocrisy.

And the hypocrisy doesn't stop there. Politics and business drove colonialism up to the 1980s and still drive the more subtle neo-colonialism today. I see a direct line between many NGOs, eco-labels, private certifications, some "developing" programmes, etc., with "white (or perhaps rich country) saviourism" as the latest expression of the colonial mindset, where outsiders think they know better what is best for the locals.

But let me focus the end of my rant on what has definitively gone worse as the consequence of all the above:

The fisherman's income and rights are worse today than 40 years ago, and this is so soul-destroying for me personally, to the point of me wanting to walk off the only job I ever had.

The whole edifice of fishing, from boatbuilders to bureaucrats at RFMO meetings, from truck drivers picking up fish to politically-appointed ministers of fisheries, from marketing people in the industry to NGO activists, from eco-labels to industry marketing, and so on... has grown immensely and become so much richer in the last 3-4 decades than it was before. All these people (in 99% of the cases, never worked on a fishing boat), and all their jobs, and all industries associated with them, depend for their existence on fishermen whose income and life perspectives have gone down since then instead of up like the rest.

There is no way that an 18-year-old kid, like I was then for the first time on a fishing boat, could do the path I've taken to get here and be writing this (while taking a break from my present work for the World Bank, the EU, FAO and NZ MFAT), and that saddens me a lot.

The whole business/politics/certification empire has risen on the backs of people, which is worse at all levels than 40 years ago. A union protected my rights, and my income was based on standardized agreements and catch shares. I could take breaks for exams, I would earn enough to live while having access to a decent education and health system, and the flag in the back of the vessels did actually mean something... all that is gone for someone starting today in most (if not all) countries in the world.

For example: I sit in meetings for crewing CMM at an RFMO, and I only see people who have NEVER worked on a fishing boat, trying really hard to find red herrings in an already diluted text; it seems that they are just basically being opposed to act as decent humans and grant fishermen their rights, protections and payments that they will not even think of doing to their own children.

This is the tragedy of fisheries, my 40 years in it... we created an empire, and like all empires, it was built on the backs of those at the basis of it:

the essential workers, the fishermen. They are worse off instead of better than when there wasn't an empire, and that is just not right.

So yeah, it is not a happy 40<sup>th</sup> anniversary, unfortunately. I owe my life to fisheries, yet I find myself increasingly struggling in the moral no-man's land in between cynicism and mercenaryism, the exact two aspects of my work I struggle with the most. Mainly because those two aspects are the basis of the two "attitudes" I dislike the most in people, and fight hard to never fall into as a person: they are ingratitude and pretentiousness. Yet, both seem to abound in the circles I move today. Nevertheless, I try to remain optimistic. Fisheries is about people more than about fish in my opinion, and I know people can make a difference.



On a purse-seiner in the Marshall Islands



Transhipping crew, Solomon Islands



On-board a pole-and-line vessel, Solomon Islands

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