

## IS OUR INSHORE FISHERY SUSTAINABLE?

A mate of mine was in a meeting on marine matters in Cairns recently when the Chair said that if he heard the word “sustainable” again he would crack up. He said different people imply different things when they use it and it had become just another overworked buzzword.

I could see where he was coming from – as a fisheries officer in Hong Kong in the 90’s I observed an inshore fishery that some thought could keep on going for ever. It targeted abundant fast-growing, fast-maturing anchovies and sprats in nutrient rich coastal waters.

There was always plenty of these small pelagics. They bred so fast people just assumed the fishery would be sustainable. The catch was sold off the back of the boat direct to the mariculture industry and, until I came along, had slipped under the radar, never having been examined by the authorities.

The method was pair trawling, two boats towing a large net over muddy bottom in inshore waters. Interestingly China did not permit that method in their adjacent coastal waters.

Fresh from working in the relatively pristine waters of PNG, I learned there were no detailed records of the recent catches from Territory waters. I suggested to my employers, the Department of Agriculture and Fisheries, maybe we should take a look at what the pair trawlers and indeed other boats in local waters were catching.

Just for a trial run, we boarded a pair-trawler as it completed hauling its net. We found they were using a 12 mm stretched mesh cod-end (bag at the end of the trawl net). They were catching just about everything in the water column from under two centimetres in length and larger.

I discovered the catch was not just small pelagics but also juveniles of bottom dwelling commercial species including bream, croaker, golden-thread and several others. This bycatch had never previously been examined. Naturally the mariculture people never complained about a little variety in the fish feed they bought.

So even if fishing the anchovies and sprats was sustainable, what was this method doing to numbers of larger fish in local inshore waters – if indeed there were any left? Where were the breeders, the parents of the fingerlings of commercial species I found in the bycatch?

A wonderful old book, published in 1940, found in our library archives, illustrates 8 fish species that were common in Hong Kong waters and the local markets at over three feet in length and several more which were common at over two feet.

It seemed a good idea to find out how these were surviving the pair trawl fishery.

I drew up a project to sample the commercial catches of all types of fishing vessels whilst they were fishing HK waters (*Oh to get out of the office!*). The good old Hong Kong Jockey Club came up with the funding so we bought a dinghy and got started.

My team of two Cantonese technicians and I buzzed around on a dinghy one day a week, over several months and went alongside or boarded a total of 105 fishing boats whilst they were actively fishing.

We recorded their commercial catches and interviewed the skippers. We covered small-scale gillnetters, handliners, longliners, and cage trappers mostly using dinghies and also boarded various larger trawlers.

We never encountered any fish over 50 cm in length in 105 commercial catches!

You’ll find this hard to believe but the more common species we sampled averaged out at lengths of around 10 to 15 cm – four to six inches in the old lingo. That included one species of grouper which we also get here in FNQ, the brown-barred rockcod.

This little lass is sexually mature in Hong Kong waters by one year old at around 10 cm in length and transforms to a hulky male before reaching 20 cm!

The 1940 Hong Kong fish book says that barramundi in local waters were “*any size up to 5 feet 6 inches*” whilst king threadfin “*reaches 6 ft*” and jewfish “*common size 3 to 4 feet*”, a migratory mackerel was “*common at 2 to 3 feet and reaches 5 feet*”.

Where were these fish? According to the fishermen we interviewed, the answer was simple, there just weren’t any left. They had long since been fished out.

The skippers considered any juveniles of the larger species that were in the bycatch must have drifted in on the current from nearby Chinese waters, where, you will recall, inshore pair trawling was not allowed.

The trawlermen were not particularly bothered by the presence of bycatch fingerlings as they considered they had a “sustainable” fishery and were paid good money by the mariculture industry for anything they caught.

The small boats may also have had a “sustainable” fishery as they targeted those few small, fast maturing species such as rabbitfish, rockfish and brown-barred rockcod that abound in Hong Kong’s nutrient rich waters along the rocky coastline, out of reach of trawlers.

The small boat owners made their money by delivering live, plate-sized fish, (we are talking small plates here) in large numbers direct to selected restaurants or their nominated buyers.

Ours became the pilot study for a subsequent much larger one that indicated virtually all the large fish illustrated in the old book I found in the archives had become locally extinct throughout Hong Kong waters. Despite this, Hong Kong still had flourishing fisheries that appeared “sustainable” despite the absence of these previously preferred species.

*My conclusion from that experience was that if you are going to describe whether a fishery is sustainable you need to include a description of what stock levels you wish to maintain.*

In North Queensland, most of us who have fished in the same estuary or adjacent inshore waters over many years have witnessed an on-going decline in availability and sizes of our larger fish. Even a boom and bust in the case of grey mackerel.

Are we going to be satisfied with eventually just being able to catch bream, flathead and whiting? If not, we are going to have to make a real effort to halt and reverse the decline we are observing.

Last year at this time, just before the election, state politicians appeared to be listening to those of us who have been pointing this out for years.

They finally accepted there were too many gillnets in use. Overnight it became politically correct to recognize that the Queensland east coast inshore gillnet fishery was in trouble, and by implication, not operating “sustainably” (despite a recent assessment by the Feds in Canberra that it was).

So much public pressure had built up prior to the election that something had to be done. Authorities being in denial no longer cut the mustard: the polities laid down the law and a gillnet buyback was announced.

LNP is currently proceeding with phase one of the gillnet buyback; but at the end of it all, and the expenditure of the \$9 million allocated, will we have a sustainable inshore fishery? As we have just seen, that of course largely depends on what you mean by “sustainable”.

It goes without saying that in NQ no-one wants any estuary or region to lose, like Hong Kong did, any of our key iconic species. After the current buyback of gillnets there will be no danger of that happening here, right?

Many of us beg to disagree. We have collated local observations up and down the coast and reviewed some recent scientific findings. We conclude that there will still be serious risks to some larger fish species in many areas unless significant changes are made to the east coast inshore fishery.

This is explained in more detail in our reports at: [http://www.ffc.org.au/Grey\\_Mackerel.html](http://www.ffc.org.au/Grey_Mackerel.html). These outline significant risks to all our larger inshore species as a result of inadequate control of gillnetting. One of the more obvious is allowing unrestricted netting of spawning fish (grey mackerel frame pictured with almost ripe roe).

Local populations of threadfin, grey mackerel and fingermark and probably even barra and others will remain at risk after buyback of gillnets is complete unless a few important changes are made to the management of our inshore fishery.

We have recently written to the Hon. John McVeigh, Minister for DAFF to recommend 12 management changes. A copy can also be found on the above website.

Next month in NQ Fish & Boat, as a follow-up to what we have discussed here, we shall take a look at what the risks to fish stocks are under its current management. We shall also look at what needs to be done to ensure the fishery is set on a sound course towards sustainability at acceptable stock levels.

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