

INTERACTION BETWEEN SCIENTISTS AND INDUSTRY IN THE NORTHERN PRAWN FISHERY

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Summary

Throughout the 25-year history of the Northern Prawn Fishery (NPF), fishermen and scientists have both been studying the biology of the prawn resources. However, their motives have differed: individual fishermen have been seeking information that might help them in their fishing exploits while the scientists have been seeking the same information to help them ensure the sustainability of the resource. It has been this common pursuit of knowledge that has helped forge closer links between the industry and the scientists in the NPF; it has been the way this knowledge has been used that has strained these links.

Joint industry/scientist workshops, a more stable and mature industry, and increased industry participation in the management process have been important factors in developing a productive working relationship between industry and researchers in the NPF. The relationship is now one of mutual respect: the industry understand that the researcher's role is that of ensuring the long-term viability of the stocks while the scientists understand that the industry are seeking long-term viability of their fishing operations. The message finally seems to be getting across: as long as industry takes a long-term view, the goals of both groups are not all that different.

Introduction

To many fishery scientists, if they were to choose but one word to encapsulate their perception of the fishing industry, it would be "greed". It is a commonly held view that the fishing industry in general has a relatively short-term horizon when it comes to conservation of stocks. Success has traditionally been measured by how much you can catch and how fast you can catch it. This is what I would call the "fast buck" syndrome, where fishermen spend most of their creative time dreaming up ways of exploiting stocks even more effectively. Clearly, it is this perception of the fishing industry that has made the quest for individual transferable catch quotas so popular in many fisheries management agencies.

Has the Northern Prawn Fishery (NPF) been any different?

Throughout the 25-year history of the NPF, fishermen and scientists have shared a common goal in gaining an understanding of the biology of the resources of the fishery. Individual fishermen needed an edge over their competitors in the race to exploit the resource and were keen to find out all they could about such things as prawn behaviour and the factors that influenced their distribution and productivity. Scientists on the other hand, have been gradually building the biological picture with the aim of ensuring the sustainability of the resource.

In many respects, it has been this common pursuit of knowledge that has helped forge the links between the industry and the scientists in the NPF; it has been the way this knowledge has been used that has acted to strain these links.

How has the industry cooperated with researchers?

In a fishery the size of the NPF, with around 6000 km of coastline, it would be beyond the resources of any research institution to tackle the huge task of describing the stock dynamics independently of the fishing industry. Fishermen are in the field and making observations for a much longer period and with a much greater intensity than could be achieved by the limited number of scientists available.

The fishing industry have helped researchers in the NPF in many ways:

- fishermen have completed daily logsheets ever since 1970, creating a comprehensive catch and effort database that must be the envy of many a fishery scientist in other countries.
- fishing and processing companies associated with the NPF have provided details of all landings from the NPF, which in turn has helped ensure the accuracy of the catch and effort data.
- fishermen have always been enthusiastic participants in the various prawn-tagging experiments that have been conducted in the NPF, returning tagged recaptures with all of the relevant details.
- fishermen have always welcomed scientists onboard, making space available for them to conduct specific studies during normal commercial fishing activities.
- boat owners have from time to time provided vessels used in conducting research surveys in various parts of the fishery. Normally such boats have been under charter, but at times such as during pre-season sampling trials in the mid-1980s, several

vessels and crews were made available at no cost.

- individual fishermen have participated in collaborative projects such as describing species and size composition of commercial catches across the extent of the fishery and monitoring the by-catch of turtles.
- the industry has supported the research effort financially through research levies.

Where has the relationship between industry and researchers been strained?

In the early years of the fishery, fishermen in the NPF were focussed on exploiting the stocks to the full, with little consideration for conservation. For example, in years of high banana prawn catches, hundreds of tonnes of prawns were simply dumped as fishermen tried to maximise their share of the catch without regard to the inadequate infrastructure in what was then a developing industry.

When researchers suggested that by the mid-1970s, the banana prawn stocks of the Gulf of Carpentaria were fully exploited, the news fell on deaf ears. The fishery had had a record banana prawn catch in 1974 and there were at least 30 new boats on the drawing boards at the time. Besides, in their view, the tiger prawn fishery had hardly been touched and no one could be sure what the limits to the resource might be. Industry still were not listening when, in the late 1970s, researchers were warning of the extremely rapid rate of increase in fishing effort on tiger prawns at a time when so little was known about the stocks.

By the mid-1980s, the situation had changed. Firstly, researchers had gained credibility through being able to forecast banana prawn catches in parts of the fishery and secondly, the catch of tiger prawns had begun to decline and the industry turned to the scientists for advice.

Like other fisheries with similar problems, individual transferable catch quotas have been seriously considered as a possible solution, but for various reasons were found to be impractical in the NPF. The painful restructuring of the fishery that has taken place since the mid-1980s has seen the fleet reduce by more than 50%, but the lessons that have been learnt will hopefully not be forgotten.

Other factors have also helped forge stronger links between industry and researchers over the last ten years. For a start, the industry has matured and become a much more unified body. As such, it has been taking a greater role in the management of the fishery. The composition of the industry has also changed, with those remaining having made a long-term commitment to the fishery. Another factor that should not be underestimated was an industry/research workshop which was held in 1982. This was so successful in helping communication between the two groups that it has been an annual event ever since.

Conclusion

I believe the current relationship between industry and researchers in Australia's Northern Prawn Fishery (NPF) to be one of mutual respect: the industry understand that the researcher's role is that of ensuring the long-term viability of the stocks while the scientists understand that the industry are seeking long-term viability of their fishing operations. This relationship has traversed what has at times been a bumpy road, but the message finally seems to be sinking in: as long as industry take a long-term view, the goals of both groups are not all that different.