

Questions to Carl Walters

From the Chair, Peter Young asked how, in this ideal world, with your manager who is quite separate from the users or the governments etc., does this tie in with increased cooperative management expectations?

Carl Walters replied that it is completely inimical to that. He had watched what they call co-management in Canada, which involves sitting down with commercial and recreational fishermen, and hammering out what equates to an ecological harvest policy. It has been absolute nonsense, and what we get is what we deserve out of such processes. When the co-management and the negotiation is about how to allocate a fixed amount of fish — when someone else has already specified what the ecology can take — and the only thing being debated is who gets what percentage or who gets how many fish, those negotiations can work. But that is not the way they go. It degenerates into everybody becoming involved in a debate about what's going on out there in the field, and how productive the stock is, and the Black Hole arguments about the lots of fish that are out there around the corner, just let us go and find them. You know the story!

Tim Ward's (QDPI) concern was more about how much time and space should be allocated to fishing, rather than how many fisheries we should have. Are the same sorts of issues going to be involved?

Carl Walter's view was that there is a fundamental difference — by time and space

closures we can directly regulate, not necessarily accurately but to some degree, what proportion of the fish are exposed to fishing mortality risk. When you restrict the proportion of fish that are available to harvest, that is restricting the mortality rate directly. That's really the answer — it's directly managing the risk of the mortality.

Tim Ward expected that fishermen would ask for more time and space for fishing — and wouldn't the management officers offer a more conservative decision and have a similar sort of argument?

Carl Walter's experience was that this would end up with an ineffective compromise, as happened in Canada's salmon fisheries. The period from about 1990 to 1994 saw a move away from that weekly opening system described in his paper towards the proposition that the stock assessment science was now good enough to use larger area openings and more fishing and so on. That culminated in 1994 with the virtual destruction of the largest salmon stock in Canada. One large fishery opening came within 12 hours of wiping out the Adam's River stock, which is Canada's largest single stock. When it was realized that they did not have the capability that they thought they had, of managing part of the salmon fishery by quota, there began a move back towards simpler sharing arrangements. Where there is a sharing arrangement built into one of these independent, impartial management systems, like the Halibut Commission or the old Salmon Commission,

part of the terms of reference of those Commissions has been an explicit sharing or allocation agreement. In the Salmon Commission the agreement was quite simple — the management agreement was 50:50. The management authority had to give half of the allowable catch to Canada and half to the US, and if they are not able to do it one year there was a formula for making it up. Within that 50:50 split for salmon, Canada has a very complex allocation process among the various users — different kinds of commercial gear and so on, native/non-native fisheries. The Americans do a similar thing, but that management playing field is very well defined. They know what they are going to get, they know what their options are, when they will get it and so on. The management is much more constrained than it is in the typical negotiating setting.

Murray MacDonald (Fisheries Victoria) asked Carl Walters how he would envisage his proposals for area and/or time flows working in situations where you have multiple species being targeted using multiple methods?

Carl Walters thought there are probably some situations that Murray was thinking of, including the South East Trawl Fishery, that are just unmanageable. Where there probably is no sensible compromise, because the situations are too complicated for anybody to deal with sensibly, he wondered whether the best long-term management strategy is to move the fishery towards more selective fishing gears and methods that do allow some control. In those situations, there's a principle of cybernetics that says you can't manage a system that has a lot more degrees of freedom than you have degrees of freedom to control it. There just aren't enough choices to manage that system effectively, no matter how you juggle the regulations, and so on. Every

time you move in one direction, you complicate things in another. So the quotas have caused the massive degradation problem and everything just seems to make things worse rather than better in a situation where you don't have the degrees of freedom needed. It is better to be up front about this — when we just can't do it we had better stop pretending we can. We must be honest and say we just can't help you in a situation like this.

Mike Dredge (QDPI) commented that Carl has provided some good examples of bad fisheries management — how about some examples of how to manage more efficiently?

Carl Walters responded that, firstly, it is wrong to say that cod is an instance of bad management. As far as we can tell, the people who manage the cod fishery never once knowingly did anything stupid. They thought all the way through that they were working with a fixed mortality rate of about 20% and they had no reason to doubt either of the stock size estimates that management was based on until quite late in the piece, nor that the 20% was much higher than it should be. So the managers in that system really thought they were doing the right thing. There are a number of systems that are doing pretty well under basic effort control management: for example, some of the rock lobster and prawn fisheries here in Australia are doing fairly well. The quota management has been in too short a time to find out whether or not they are really going to be able to adjust quotas to some of the massive stock size changes that will need to be coped with if they are going to be successful. In those cases where effort management has been fairly successful, such as the lobster fisheries, there have also been peculiar natural mitigating circumstances. For example, in Western Australia, a good percentage of the female lobsters maturing while

still undersized at the Abrolhos Islands moves offshore to areas where it isn't economical to fish them. So a large proportion of the natural egg production is protected by an economic or biological refuge that wasn't there intentionally; it was luck. Something like that probably takes place in South Australian fisheries for rock lobsters as well. There are places where it hasn't been economical to pursue fish at low densities and where a fairly high proportion of the fish are spread out in

such a way that they don't attract fishing pressure. The early development fisheries are very much like that. In Carl's experience, in every case where something seems to be working, there has been this natural or economical factor that has provided a buffer against management mistakes, an unintended factor. It is galling to have to admit that luck has featured in a lot of cases, but it is time to start being honest.