

# Red Herrings

## A Simulation Exercise on Fisheries Decision Making

### Fishermen's Briefing

#### The Context:

Fishermen are like all other business people and in the market economy they must compete with others, hoping to sell their catches to the highest bidder.

And in an economic environment where consumers and retailers nowadays have wide choices about where they can purchase their fish, the fisher/business men have to work harder to ensure they catch the most and the best fish in order to make the profit which is their livelihood. In this they realise that any fish they don't catch could instead be caught by another vessel, so it's in their interests to catch that fish first!

All this means that skippers, who run the fishing boats, will want to invest some of their profits in new and more efficient technology, to keep up with the other vessel owners.

Fishermen complain that they cannot survive the present EU management regime and cite decommissioning of vessels, declining communities and unemployment as the results of a draconian and centralised EU fisheries policy.

Another problem for the fishers is that though some North Sea quotas have been cut by over fifty five per cent in the past few years, there has not been a significant increase in the price of fish. Fishers blame cheap imports and blackfish landings (fish caught and illegally landed outside of fishers' quota limits) for keeping prices low, and maintain that the cost of the regulatory infrastructure far and away outstrips the current economic worth of the industry.

So fishermen hate being regulated and say that EU's rules stop them from making a living in an industry that is highly costly. Where fuel prices have increased dramatically and boat engines can cost as much as a house!

#### What Fishermen Say:

Fishers say "we are fishermen, so we must fish" (Fisherman). They have a strong sense of territory too, and deeply embedded beliefs about their rights to fish, dating back to the first sea laws of the 17<sup>th</sup> Century when fish were thought plentiful and belonged to no one until caught.

The fisher sees himself (very few fishers are female) as a hunter who should be free to catch "his

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prey in order to support a family and community. He pits his knowledge, skills and luck against adverse natural forces”

“North Sea fish are not in a perilous state [terse]! I’ve seen my husband come home from a trip the week before last, and he had two, maybe three, cod in one fishbox! Three of these fish actually in one box of fish [gestures with hands wide apart] ....And you can imagine how big the cod was! [giggles] (Fishermen’s wife, Morag).

The Scottish Fisherman's Federation: "draconian cuts" to allowances would have a serious impact on the Scottish fleet.

Northern Ireland's Fish Producers Organisation: “the problem of low cod stocks is down to climate change rather than overfishing (i.e. fish are migrating to other areas as sea temperatures change.

### **Fishermen & Their Feelings about Science**

North Sea fishers and their industry representatives regularly dispute scientific forecasts, which they say are categorically flawed and grossly underestimate fish stock levels. For fishers, this underestimation of stocks causes policymakers to recommend, in their view, needlessly low quotas which damage their industry.

Fishermen generally do not have much time for the methods of this conventional science, which, they say, ignore the realities on the ground - or, as in this case, at sea. Fishers often allege that scientists do not have a sophisticated awareness of actual, *local* conditions. For instance, the President of the EU fishermen’s network, Europêche has claimed that:

We don’t rely on the scientific evidence...we don’t trust it much. Because either it’s not that accurate or it’s not sufficiently founded [...] We have our feet in water all day! We know, maybe better than [scientists], what the *real* local situation is, and we think that the situation is not as bad as they are saying.

Some research maintains that fishers have a better understanding of ecosystems than fisheries scientists. It is believed that scientists, who use rigid linear ecosystem models, are less appreciative of the nuances and non-linear reactions within ‘local ecosystems’.

By contrast, fishers have been shown to have sophisticated knowledge about specific habitats and the annual, seasonal, lunar and food-related variations in the behaviour and movements of marine fishes

Fishers’ local knowledge is often said to be, at least partially, tacit or intuitive by which they have a ‘feel for the sea’ and can ‘sniff out the fish.

Fishermen also reason that scientists surveys, to find out stock levels and where they are, employ ‘out of date’ trawl equipment that is consequently less effective than their own modern gear. Fishing industry representatives have called the broad-scale randomised scientific surveys ludicrous: ‘staying away from where the fish are doesn’t give you a proper overview of stocks!’

Since fishers spend their daily lives at sea it is believed that they have a perception of the ocean that is simply not obtainable through the centralised and universal scientific survey technique. In other

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words, since fishers regularly work within small fishing grounds, they may observe ‘local’ processes that operate at fine scales. These could be missed by a fisheries science that generally ranges over larger scales.

North Sea fishers maintain that the universal scientific technique will not generate an accurate picture of local stock conditions. They also reason that scientist’s surveys employ ‘out of date’ trawl equipment that is consequently less effective than their own modern gear. But the scientists again defend this practice *a propos* the scientific method. According to one bureaucrat:

Scientists don’t use the latest fishing technology [...] they use the same [gear] year on year, which shows the relative changes in abundance in the same areas, year on year on year (First Secretary UK Permanent Representation to the EU, Fisheries Division).

Thus fishing industry groups frequently argue, deploying their local knowledge of the fishing grounds, that stocks are in fact in better shape than scientists say.

Fishermen also have support from some scientists. Hilborn (2006) a leading fisheries scientist, has implicitly argued in his paper on flawed fisheries science that some of the widely cited apocalyptic scientific reports about the *global* overfishing crisis have used ‘highly selective data’ based on figures that did not represent the *local* specificities of stocks.