

Property Rights and Use Rights in Fisheries

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Discussions of property rights in fisheries tend to focus on the rights of the resource harvesters, rather than those of the resource owners. This has led to a situation where fishery property rights are often viewed as being ill-defined, whereas in reality, ownership of fish in the sea is typically clear-cut. Most often, the state owns the fish, on behalf of the citizens. In high seas fisheries, the situation is more complex and problematic, but United Nations efforts of recent years have helped to resolve these issues. Overall, in discussing fishery property rights, there is little cause for concern over ill-defined resource ownership.

This is a crucial point, since presumably one of the advantages of owning property lies in the opportunity to benefit from that ownership. In the fishery, the resource owners should be able to set the objectives and conditions for use of the fish, and to reap at least some of the benefits. This reality should underlie any fishery policy: we know who owns the resource, and thus we know who should reap the benefits of resource use.

The idea of use rights.

But what about the harvesters? Property rights held by the resource owners (over fish in the sea) are very different from those held by resource exploiters (over the right to fish). This has led to many misunderstandings and some unnecessary conflict, particularly in debates over "privatizing" the fishery. To avoid this confusion, the term "use rights" (rather than the more general "property rights") seems preferable in referring to the right to fish. This terminology will be adopted herein.

A wide variety of use rights are utilized in fisheries of the world (Townsend and Charles, 1996); these can be classified in three principal categories:

- * territorial use rights,
- * input (effort) rights,
- * output (harvest) rights.

These forms of use rights provide resource exploiters with some security of tenure over a fishing area, an allowable set of inputs, or a quantity of fish to catch. In other words, they provide some rights over usage of the resource.

Use rights and resource owners.

But the question arises: why would the resource owners (citizens of a nation) provide use rights to those harvesting the resource? What benefit would the resource owners so obtain?

Here we come to the true rationale for use rights. Implementing such rights is, in reality, a matter of strategy and pragmatism on the part of the resource owners. Experience suggests that fisher behaviour at sea is likely to be incompatible with the maximization of sustainable benefits to society, unless the fishers have a stake in resource management. One approach to ensuring the latter lies in use rights systems. This does not mean that use rights are merely, to use Scott's (1986) term, an "instrument of administration". But they are indeed an instrument of policy, a tool to be used at the will of the resource owners.

The need for use rights is by no means a great new insight of modern fishery economists. Informal and/or traditional use rights have existed for centuries in a wide variety of jurisdictions. The key idea is that without some form of secure tenure, fishers will have an incentive to over-harvest, something which experience suggests is nearly impossible for society to limit. On the other hand, with security of fishery access, users are more likely to adopt a "conservation ethic"; conservation measures to protect "the future" will simultaneously protect their own long-term interests.

So we have, in many if not most fisheries, a situation in which:

(a) Property rights over fish in the sea (resource ownership) are well-defined and well-established, typically resting with the state on behalf of society.

(b) The establishment of use rights (specifying the right to fish) helps to improve compliance and conservationist behaviour, thereby providing a pragmatic means to maximize benefits accruing to society from the fishery, provided that incremental benefits outweigh the costs of implementation.

The diversity of use rights.

While use rights may be beneficial in many fisheries, a key issue remains: what form should such rights take? Will they be access rights, as in limited entry arrangements? Will they be individual rights of each fisher to exert certain levels of fishing effort? Will they be individual harvest rights, as in Individual Transferable Quota (ITQ) arrangements?

In fact, we should beware of any claim that one form of use rights is somehow inherently superior to others. Such claims, which seem to reflect more the advocate's philosophical beliefs than any systematic empirical evidence, are often "proven by anecdote" -- references to this or that fishery, in order to support the desired position. The reality is that the appropriate choice of use rights is a context-sensitive empirical question, depending on the structure, history and traditions of the fishery in question (cf. Berkes et al, 1989).

Indeed, there is nothing wrong with a diversity of use rights approaches, even within the same jurisdiction. For example, on the Atlantic coast of Canada, the groundfish fisheries (for cod, haddock, flatfish, and the like) operate under a variety of regulatory frameworks:

- (1) The corporations that predominate in the "offshore" sector operate with "enterprise allocations", individual quotas that are not generally transferable on a permanent basis (although in-season transfers are permitted).
- (2) The "midshore" medium-sized vessels mostly operate with individual transferable quotas (ITQs), although there are some restrictions on quota ownership.
- (3) The fixed-gear fishers and the small "inshore" boats operate under limited entry with a "competitive quota" (a part of the TAC) and some effort rights.

Meanwhile, the lobster fishery in the same area has operated successfully with a combination of limited entry, individual effort rights, somewhat informal territorial use rights, and various biological controls (with no output controls of any kind).

The need for a thoughtful, empirical assessment of use rights approaches applies as well to assessment of past performance. For example, consider the case of limited entry licensing, perhaps the most common modern version of use rights. There is a tendency these days amongst some to conclude that limited entry has been a failure, on the grounds that many fisheries operating under limited entry have been unsuccessful economically and/or biologically.

But does the latter prove the failure of limited entry as a use rights scheme? Of course, the answer is no. A more complete analysis shows that limited entry came into being at the same time as an "us versus them" attitude developed among both resource users and resource managers (at times due to the neglect by government of accepted, longstanding management institutions). It is this attitude that is much more likely to have caused fishery failures. With managers seen as the "conservers", and fishers as "exploiters", the former set themselves up to "control" the latter, and the latter focus on thwarting the former. In such a situation, can successful conservation be achieved? The record suggests not.

Does this "us versus them" problem disappear if fishers are given individual harvest rights, such as individual transferable quotas (ITQs)? The answer is "not necessarily". For example, in the Atlantic Canadian groundfishery, otter trawl fishers operating under what is essentially an ITQ scheme do not seem to be any more or less conservationist in their actions, and in the viewpoints they express, than their counterparts in the limited entry fixed-gear fishery. In fact, all sectors of this fishery are subject to the same entrenched attitudes (Charles, 1995).

There are two key points to be made here. First, we need comparative, empirical studies of fisheries under a variety of use rights arrangements, in order to assess the relevant merits of these arrangements, and more importantly, to attempt to predict the circumstances under which the various options might be preferred.

The second point is that the challenge of improving fishery management goes beyond merely implementing use rights; there is also a crucial need for involvement by fishers in management decisions, in order to overcome the "us versus them" attitude described above. Two major approaches are being proposed to deal with this:

(1) Self-regulation. If the operation of the fishery is given over to private interests, to be managed as a private business, this may produce the efficiency benefits of sole ownership, although at the cost of a lost capability by government to directly control the fishery in the interests of society.

(2) Co-management. By recognizing the mutual interest of resource users and resource owners in achieving a successful fishery, and establishing a suitable institution within which users and government representatives can work together to determine appropriate management measures, the interests of both sets of players in the fishery may be met.

Which is superior: self-regulation or co-management? The answer depends on the situation. If society's objectives, as resource owner, can be met through self-regulation (whether coincidentally or by imposing suitable constraints on resource users) then this may well be optimal. On the other hand, conflicting objectives between society and the fishers may be best resolved through various co-management structures. Such arrangements, in place in many jurisdictions, are receiving increasing attention from researchers worldwide (e.g. Pinkerton, 1989; Charles, 1994).

Conclusions.

Use rights are important ingredients in fisheries management. But in the push to promote use rights, it is important to remember that use rights schemes are implemented as a means to maximize the benefits accruing to the resource owners, usually society as a whole. What will, in reality, maximize benefits is an empirical question. In particular, the choice of whether or not to

implement use rights in a given situation, and the specific choice of use rights, depend heavily on society's objectives and on the circumstances of the fishery in question. People come in different shapes and sizes, so one size of clothing does not fit all. Fisheries have enormous biological, economic and social complexity, so one policy answer does not apply everywhere.

This is where economists can play an important role – not in voicing opinions, but in objective analyses, working together with social scientists to understand the diversity of use rights and institutional arrangements in fishery systems. Under what circumstances have output rights (such as ITQs) proven more effective than input rights (such as effort controls), and vice versa? When have TURFs (territorial use rights) proven desirable? What management institutions work for the various combinations of fishery resources, industry structure and political jurisdictions? What factors determine the desirable balance of power between resource owners and resource users, from central government control to co-management to self-regulation? These are all fascinating research questions, worthy of our attention for years to come.

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