

Agenda Item 4.3

Priorities in the Implementation of the  
Triennium Work Plan (2010-2012)  
Review of New Information on Bycatch

Document 4-10

**The community: a missing link of  
fisheries management**

**Action Requested**

- Take note
- Consider implications for ASCOBANS

Submitted by

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# The community: a missing link of fisheries management<sup>☆</sup>

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## Abstract

Fisheries management, as it is currently done in most countries, ignores the community level. Instead, it is almost exclusively based on a relationship between a government agency and individual users. This paper calls for a stronger emphasis on the roles that communities can play in fisheries management. Effective resource management is a necessary condition for the viability of fisheries communities, but I argue that viable communities are also an important contribution to the preservation of healthy fish stocks. Thus, before one can hope to rebuild fish stocks, one must start to rebuild communities; one cannot succeed without the other. The paper also offers some reflections on solutions and strategies, in particular on co-management as a potential community-building institution and how communities can play a supportive role in fisheries co-management. © 1999 Elsevier Science Ltd. All rights reserved.

*Keywords:* Fisheries co-management; Community development; Civic society

## 1. Introduction

Let me begin by stating the obvious: *Viable fisheries communities require viable fish stocks*. If fisheries management does what it is supposed to do, that is ensuring that fish stocks are sustained, then, as a consequence, it can be an effective contribution to making fisheries-based, human communities viable.

Social scientists, like myself, have no problems with this statement. That fisheries-dependent communities depend on viable fish stocks for their sustenance, is something we would hold as a truism. The thesis is trivially true. If the fish resource disappeared, as it has for instance in Newfoundland, fisheries communities would perish or they would have to find alternative employment; but, then, they would no longer be characterized as fisheries communities. So, there is no reason to dwell long on the thesis that viable fisheries communities require viable fish stocks.

In this paper I argue that the opposite also holds true. That is; *viable fish stocks require viable fisheries communities*. Typically, however, communities are regarded as the dependent and not the independent variable of the fisheries management equation. They are frequently ignored or seen as a drag on fisheries management rather than as a critical source of contribution. The question is: How could it be possible that viable fish stocks require viable communities, and not just the other way around? At the root of this argument is a different image of the community as a social entity rather than the one current management systems implicitly build on. In addition to making the case that well-functioning communities are an important contribution to fisheries management, I also offer some reflections of what needs to be done in order to build stronger communities, and how communities can become more involved in fisheries management. Much can be accomplished by means of fisheries management. But also conditions external to fisheries management are important, in particular policies that aims at strengthening the civil society institutions at the community level.

## 2. Community failure

Overfishing is often seen as a typical example of 'market failure'. Fishing involves subtraction due to the fact that fishermen are drawing from a common resource

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pool where no-one has property rights. Therefore, the costs of overfishing are not internalized in transactions but treated as an externality. This eventually leads to the well-known 'Tragedy of the Commons' [1].

Another perspective holds that overfishing may well be a sign of 'community failure' [2]. In other words, overfishing, or the Tragedy of the Commons, can signify a more basic social problem than market failure. Social scientists claim that fishermen are not simply strategic, atomistic players in 'stock markets' — (stock as in fish stocks). Fishermen are born, raised and live in local communities. They are enmeshed in cultural and social systems that give meaning to their lives and directions for their behavior. Their fishing practices are guided by values, norms and knowledge that are shared within their community. With the concept of the great French sociologist Emile Durkheim, we argue that overfishing/the Tragedy of the Commons may well be a consequence of 'anomie', that is normative confusion, which occur when social ties are weak and moral standards unclear. Therefore, it follows that communities that disintegrate socially and morally are a threat to fish stocks. Overfishing results when the norms of self-restraint, prudence and community solidarity have eroded. It occurs when fishermen do not care about their resource, their community and about each other. Then, their ability to communicate among themselves, to agree and to cooperate is lost. Instead, their social relations are featured with opportunism, strife and conflict. Hence, their capacity for collective action becomes severely weakened. It is being suggested that managers should therefore look into, and care for, the community, rather than only searching for solutions to the tragedy of the commons dilemma in the market. Although lip-service is being paid to the 'community' today, it is still the missing link in fisheries management. But unlike the evolution of the human species the missing link can be easily identified.

If the thesis that viable fish stocks require viable fisheries communities was fully reflected in fisheries management, I suggest that fisheries management systems would look quite different from what they do now. Moreover, one additional concern would be included into the goal-structure of fisheries management designs: Managers would be careful not to damage the social structure and culture of fisheries communities, by fisheries management or any other measure. They would avoid management designs that threaten the social fabric of fisheries communities, designs that make communities disintegrate and become more stratified. Instead, managers would adopt designs that would potentially restore and reinforce the solidarity and cultural qualities of fishing communities. For instance, they would install both internal and external mechanisms of the management system that encourage cooperation, build networks, and improve trust within and among local communities.

Social scientists criticize current fisheries management systems for dismally failing on this account. It is said that existing management practices create more disintegration, not less. Management responsibilities are 'lifted out' of the community and assembled in distant bureaucracies. Consequently, management systems are eroding social solidarity among resource users by weakening their social bonds, their traditional values and sense of social responsibility. Fishermen, among whom norms of equity and reciprocity used to reign, have now, much as a consequence of fisheries management, become selfish profit-seeking individuals, who regard management systems in opportunistic terms. As a result fishermen have become more like the social actors that Garrett Hardin portrayed, thus making his theory of the tragedy of the commons into a self-fulfilling prophecy [3]. Management systems, particularly if they are based on purchasing and selling of quotas, are also changing the social relations among fishermen much in the same way as Georg Simmel described in his classic treatise on money; they depersonalize relationships between social agents. People start to regard each other in terms of concepts of rational calculation and utility [4]. Furthermore, as management systems install the principles of limited access to fishing through quota-rights and licences, communities become more socially stratified as some members of the community get the opportunity to accumulate capital, and hence power, which others are fenced off from. Fisheries management is, of course, only one of several challenges that fisheries communities are facing. New technologies, migration, and, also increased globalization have a strong impact on community social relations and destinies. Fisheries management is also challenged by these developments. But this does not detract from the importance of using fisheries management to address atomization and stratification of communities. Today, fisheries management does not confront those concerns.

This is the thrust of the social science argument pertaining to fisheries management, as I read it. Admittedly, it is harsh criticism. The claim is not that these outcomes are always wanted, or that they are deliberately aimed at by fisheries managers. The criticism is more of neglect than intent. More often than not they are an unforeseen consequence of a fisheries management system which is narrowly focused on two very important concerns. These are (a) conserving viable fish stocks and (b) making harvesting practices more efficient in economic terms. Both are relevant concerns, but there are other interests that are of no less significance. At a practical level, I argue that a fisheries management system which has no appreciation for the second thesis, i.e. that community makes a difference, is bound to fail. It will come short not only in supporting viable fisheries communities, but also in creating viable fish stocks for reasons listed above. At a theoretical level, I claim that there are flaws in the basic assumptions underlying fisheries management systems

with respect to the characteristics of community. It is on these theoretical underpinnings of fisheries management that I will dwell next.

### 3. Images of community

I will introduce this section by a remark by the Norwegian fisheries minister made recently in a newspaper article in defense of some changes proposed in the current Norwegian quota-system. The article was in response to some heavy criticisms that had been raised, some from within his own political party.

The experiences we have with the unit-quota system are good. We regard it as a suitable vehicle in promoting capacity adjustments, in strengthening the economy of the remaining vessels, and in creating a profitable development within the fishing industry, based on sustainable resource management (My translation) [5].

There are several points that could be made here, but I will reflect on two. The first is that the word community is not mentioned, neither in the article nor in this quotation. If communities are affected by fisheries management in the ways as I have already asserted, this statement is at best unbalanced, particularly when considering the criticism of the new reform. The fear is widespread that the reform will further a *de facto* but informal transferability within the current quota system and that many coastal communities, particularly in Northern Norway, will suffer as a consequence. (Officially there is no ITQ system in Norway but, still, informally, transferability exists. Quotas are allotted to vessels and follow them when sold, thus inflating the price).

It should be noted that the fisheries minister is not alone in “forgetting” the community. The community is also absent in Garrett Hardin’s Tragedy of the Commons model, the ideas and presumptions which form a cornerstone for modern fisheries management. As Fife points out when commenting on the Hardin model; ‘each herdsman (entrepreneur) acts alone for his own good without regard for the good of others; there is no community’ [6]. Thus, when translated into practice, fisheries management is basically a relationship between a government agency on the one hand, and the individual user on the other. The general pattern is that quotas and licenses are allotted to individual fishermen, not groups of fishermen, and hardly ever to communities. Communities do not play any intermediate role in modern fisheries management, at least not in those management models that governments and scientists favor. Communities play no role in management decision-making for instance pertaining to quota allocation or access rules. The Alaska Community Development Quota System, some examples from Atlantic Canada, and, more prominently, the Japanese management system for inshore fisheries, are

exceptions [7,8]. Nevertheless, as exceptions from the general rule these examples demonstrate that allocating resource and management rights to communities is not an unrealistic option.

A government that does not provide communities some roles in fisheries management loses an important opportunity, not only to support community viability but also to make management systems work more proficiently. A management system that sees the relevance of the second thesis, that viable fish stocks require viable communities, would reconsider this practice. Undoubtedly, resource rights vested in communities are among the most potent vehicles at hand in creating those community qualities that are crucial for sustaining the resource, and, hence, the viability of the community as claimed by the first thesis. The effect is circular and reinforcing.

The second observation concerns the minister’s remark that the quota arrangements are ‘strengthening the economy of the *remaining* (italics mine) vessels’, i.e. when the number of vessels has been reduced as a consequence of the new rules. In other words, a reduction in the number of boats and fishermen will improve the working conditions for those who remain in the fishery. This seems rather obvious: The fewer the vessels, the larger the share of the resource for each of them within a given TAC. Although this is not a guarantee that the resource will be sustained, it is to be expected that the efficiency, and, hence, the profitability of individual remaining vessels, will improve. I will call this the ‘consolidation theory’, as it is demonstrated in Fig. 1.

In the figure we see a curve that is falling steeply but that is flattening out, then reaching equilibrium. At that point the stocks as well as fisheries employment have reached a level of sustainability. This, apparently, is what the minister wants to achieve. His political party is strongly committed to the idea of maintaining a decentralized settlement structure in Norway, including the survival of small and scattered fisheries communities. In fairness to this party, it should be noted that it is against the introduction of ITQs in the Norwegian fisheries, and the minister himself has also had reservations pertaining to the unit-quota system, especially applied to the small-scale fleet. However, the question of general interest here is whether consolidation will occur when the number of fishermen are reduced. Are there risks involved? What else may happen with the fisheries community when the level of employment goes down? Could it be that the sum of all impacts is negative rather than positive?

Even though the community is conspicuously missing in Hardin’s model and in the Norwegian fisheries minister’s defense of the quota system, I would hold that there is an implicit theory of community in the argument of both. The consolidation theory assumes that fishermen are competitors in the fisheries commons, that their social relations overall are ‘positional’, as Fred Hirsch

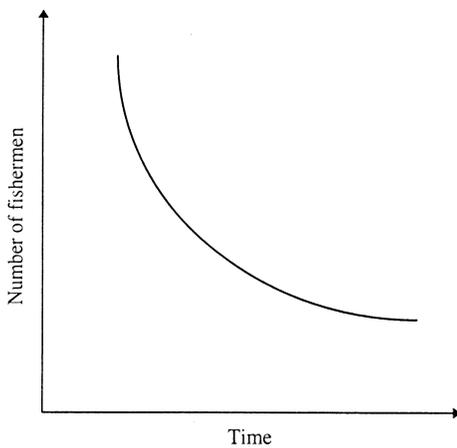


Fig. 1. The fishing community as an interdependent system.

described relationships within zero-sum games [9]. In other words, what is good for one is bad for the other. When one loses, the other gains. As in a bus queue, the people lined up may not have any other relation to each other than being at a particular place at a particular time, all with the same goal in mind, that is to get on the bus and find a good seat. From the perspective of the individual, other passengers are nothing more than a nuisance. They are merely in the way. Obviously, vessels on the fishing ground can be seen in this way, likewise communities, especially if one adopts the perspectives of methodological individualism and rational choice that are underpinning the Garrett Hardin argument.

The impact on the community of these theoretical assumptions turned into fisheries policy is vividly (but unintendedly) described by Mr. Steinar Friis, the chairman of the Norwegian Coastal Fishermen's Association. He is quoted by the same Tromsø newspaper *Nordlys* on Saturday (October 17, 1998), that is a few days after the Fisheries Ministers article appeared, as saying:

Since 1990 the fisheries policies have had a fatal impact on Norwegian fishing hamlets and coastal communities ... We [the fishermen] have learned that we cannot afford to have neighbors, because without the neighbor there will be more fish and quota for ourselves. The community (in Norwegian 'fellesskapet' — my emphasis) has been lost. (My translation).

A different image of community is expressed here. This model regards community as a system of symbiotic relationships, where fishermen as community members are mutually dependent and supportive, and where individuals regard each other as "comrades in arms". In the social science literature, local communities are frequently described as 'gemeinschaft', 'learning systems', 'employment systems', or 'social networks', all hinting at the integrative social qualities of communities. Here, communities are more than simply aggregates of individuals that are driven by self-centered utilitarian motives, but

well connected systems rooted in kinship, culture and history. In these models the individual does not perceive fellow fishermen as a distant 'they', but as a 'we', as a collegium [10].

Imagine, for instance, a fishing net that loses one of its knots. In addition to making a whole in the fabric, other knots are affected since they must carry more of the burden. In our context, not just an individual but several relationships are influenced when the number of fishermen or vessels is reduced. As 'knots' the remaining fishermen feel the loss of a colleague and a partner. This leads to a totally different prediction of what will happen to the community. Those that remain are left worse off, not better off as the consolidation theory holds. The downfall of one fisherman leads to the downfall of another. Fishermen suffer as a group, and since they also have multiplex roles in the community the fabric of the community dissolves. This, I would call the 'domino theory' of fisheries management. It is depicted in Fig. 2.

Here, we see a fisheries employment system that is vulnerable. In comparison with the previous graph, the curve takes a different slope. Once the downturn process is started, it accelerates. The fisheries community has a 'critical mass'. After some point the fishing population falls steeply until, possibly, the community is abandoned — as has happened so often in Norwegian coastal districts. If we check the public statistics, many Norwegian municipalities have totally lost their fishing activities over just a few years. The fisheries employment system collapsed and brought the community with it [11].

To clarify further this point, one can fruitfully make use of the French sociologist Raymond Boudon's distinction between 'functional' and 'interdependent' systems [12]. By the first category he means systems of interaction where the actors involved assume positions within a scheme of division of labor. Thus, functional systems require a minimum of organization. A firm is a typical example. Interdependent systems, on the other hand, are

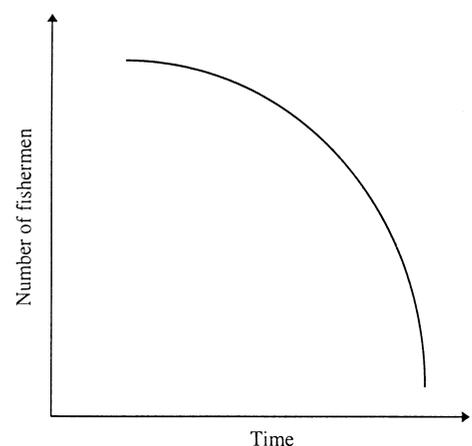


Fig. 2. The fishing community as a functional system.

‘those systems of interaction where individual actions can be analyzed without reference to the category of a role’. In interdependent systems there are no predefined rights and obligations that relate actors to each other and prescribe their behavior in an orderly fashion. Nevertheless, actors affect each other with their individual behavior. The bus-queue example used above, which is adopted from Jean-Paul Sartre, illustrates the essence of an interdependent system<sup>1</sup>.

The impact of a fisheries management policy narrowly aimed at down-scaling the fishery, is thus dependent on the characteristics of the fisheries system, whether it is functional or interdependent. Since fisheries and fisheries communities in reality seldom fit the pure theoretical form but exhibit a mixture of both system characteristics, the outcome in practice is uncertain. Only prior empirical investigation into the particular form and process of the fisheries system, can make predictions reliable. Depending on prevailing system traits, down-scaling can in some situations lead to consolidation but it may well end up triggering a domino effect that makes fisheries communities rapidly, and by their own momentum, disintegrate and evaporate.

A management policy based on the premise that fisheries communities are by essence interdependent, risks dissipating the social capital that is invested in the community. It neglects what institutions and organizations can do to build communities. The interdependent systems model has few reservations regarding a fisheries management system aimed at down-scaling the fishery. It would argue fisheries management would automatically be an investment in the community. But that is simply stating our first thesis (viable fish stocks make viable communities) and missing out the second (viable communities make viable fish stocks). In contrast, the functional system model of the fisheries community leads to the claim that investing in the community is also to invest in the resource. To use the bus-metaphor: If functionally organized, rather than rushing for a seat, bus passengers would enter orderly and share the seats that are available. And if they are too many, they would rotate the seats among themselves rather than letting some sit all the time while leaving the rest to stand up or stay behind when the bus takes off. In that way, the bus can carry more passengers, and it is less likely that struggle for seats would lead to hostility among them and the bus to be over-filled. There are many examples from the literature which demonstrate that when fishermen cooperate in sharing the resource, the resource can carry more of them than when fishing grounds are dominated by fierce competition where some are able to expand their operation at

the expense of others [13]. When space is scarce, fishermen must have rules of access and they must coordinate the setting and pulling of gear to avoid gear mingling. Without it, fewer would be able to fish in that particular area.

The challenge here would be, in metaphorical terms, to move the bus passengers from forming an interdependent system into forming a functional system. This problem finds a parallel in fisheries. How do we transform fisheries from being interdependent into functional systems? Or, for that matter, how do we maintain them as functional systems in the era of fisheries resource management? The general solution, following Boudon, is organization — as ‘organisation inevitably implies the introduction of norms and constraints restraining individuals’ margins of autonomy and leading to the inclusion of certain categories of action in roles [12, p. 60]. Organization can do a lot to invigorate cooperation, cohesion, social solidarity, and integration. In short, organization will lead to uprise of community. Organization is also the means by which planning and collective action is carried out. The particular answer promoted in the social science literature with respect to fisheries is *co-management*: Give fishermen’s organizations a pro-active role in fisheries management! Let them be co-authors, not just passive receivers of management scripts presented to them from above, that is from the government! But this may be easier said than done. Communities are not always ready, competent, and/or willing to handle co-management responsibilities. However, a management system that invests in the community, would search out opportunities to overcome these barriers.

#### 4. Community-based co-management

The co-management solution is well known to the readers of Marine Policy, so I will not go into it in great detail here. The idea is simply that resource users become directly and formally involved in the management decision-making process through the delegation of regulatory functions to fishermen’s organizations, or to organizations especially designed for management purposes where resource users retain central collective role of authority. The aspirations are that co-management will further cooperation among resource users, create more responsible attitudes towards resource use, and promote learning and rule-compliance. Of particular interest in this context is that co-management is supposed to strengthen, or if lost, restore social integration among users and within and among local communities. Thereby, co-management will establish a basic condition for a management system, functioning not only top-down but also bottom-up in a dialectic process.

Co-management does not come as a standardized single organizational model. The particular design of

<sup>1</sup>Boudon’s distinction is analogous with the series vs. group dichotomy introduced by Jean-Paul Sartre (see his book *Critique of Dialectical Reason*. Verso/NLB, London, 1976).

co-management is important. For co-management to be supportive of community integration, equal opportunity, and collective action, it must be designed with these goals in mind. The community must be allowed to play a role in its particular formation. As mentioned above, for a fisheries management system that aims at supporting the community, community quotas rather than individual quotas may be an effective vehicle. Co-management may have a similar impact provided that it is rooted in the community. For this reason, fishermen's organizations in Atlantic Canada insist on the term Community-based Fisheries Co-management, not just co-management [14,15]. In other words, the community as an entity must have a role in the decision-making process. Fisheries organizations at the community level must be involved as the most basic unit of the management system.

Norway has long-standing traditions in fisheries co-management. But Norway has little of community-based co-management because the fisheries communities, through representation or otherwise, play no role in it. Instead, the Norwegian co-management system is predominantly union-based. This principle also now applies to the Lofoten co-management system which used to be founded entirely on the gear-group representation principle. However, it is worth to note that the Norwegian Fishermen's Union (Norges Fiskarlag) now, after the system was recently reformed, elects representatives to the regulatory committees from the local areas. Previously representatives to the regulatory committees could come from other parts of Norway provided that they took part in the Lofoten cod-fishery season [16]. Fjord fisheries co-management outside the Lofoten area has no community representation: They have union representation in the regulatory committees that exist only at the county level. It is just by coincidence that fishermen representatives come from the adjacent communities when regulatory decisions are made [17]. In none of these cases do the co-management committees of fishermen reside over resource rights such as quotas. Instead, they make decisions regarding the type of fishing-gear allowed in different fishing-territories at different times of the year.

Fisheries communities do not always fulfill the sociological criteria of an ideal community; that is a "social group possessing shared beliefs, a stable membership, the expectation of continuing interaction and a pattern of relations that are direct and multiplex" [18]: On the contrary, communities are often characterized by social fissures, conflicts, inequities, and power-differentials. Co-management may well entrench or reinforce such qualities of communities. Who speaks in the interest of whom is a pertinent question to raise also at the community level. In most cases it is in the interest of those who already wield power in the community to take advantage of the devolved management responsibility [19]. Thus,

co-management is inevitably political — as fisheries management always is. Co-management should always challenge illegitimate power. If not, the management system is prone to fail as compliance is likely to be low. However, it should not be forgotten that co-management introduces some formal rules and roles that make the decision-making process more routinized, standardized, and transparent, thus countervailing some of informal power structures that may be played out "back stage" in the community.

Although co-management can make a big difference, one should not expect that management system designs themselves will be sufficient in providing those mechanisms that will turn fisheries communities into functional systems in Raymond Boudon's sense. A policy for viable functional communities cannot only rest upon the fisheries management system. It must employ a broader strategy and tap into all the opportunities for community development that exist. In this direction some decisions must be made pertaining the enhancement of economic structure and organization, the role of product- and labor markets, technology, health, education, infrastructure, and finance.

Drawing from his research-experience in Caribbean fisheries communities, Håkan Sandersen stresses the importance of a well-functioning civil society as a necessary condition for co-management [20]. In many Caribbean fisheries communities, residents are poorly organized beyond the household level. Fishermen and their families do not have a history of associations and institutions that work within the community. Hence, community members have little training in collective action, representation, and deliberation both within their own local community and vis-a-vis the larger society. I think Sandersen's point needs to be stressed: We often think of the importance of civil society for generating communities that are attractive for people to live in and that are instrumental for the moral, cultural and social upbringing of the younger generation. Managers rarely see the importance of civil society with respect to fisheries management and resource conservation. Civil society is not becoming obsolete, even if its particular structure and organization changes over time as a result of the development of the modern welfare state and globalization [21]. The lessons from Alexis de Tocqueville's famous study of democracy and civil society in America more than a century ago are still valid, also in fisheries management [22].

## 5. Conclusion

The point I have tried to make throughout this paper is that it is essential to begin to recognize the link between, on the one hand, the overall health and vitality of communities — of which the civil society is an important ingredient — and, on the other, the viability of the

natural resource and environment on which fisheries communities rely. One demands the other.

Co-management holds prospects as a means of creating community integration necessary for fishermen and their communities to become effective agents of collective action, and even more so if it is supported by community resource rights. But there is no guarantee that co-management will build functional systems (cf. Boudon) out of communities, as is demonstrated in the case of Norwegian fisheries. For this it must be deliberately designed to so. Co-management must then be embedded in the community, preferably supported by communal property rights. However, community-based co-management cannot be alone in facilitating these processes. It can only work effectively as part of a larger scheme for community development, which includes the civil society as an arena for social integration, building trust and networks, learning and internalization of democratic virtues and social responsibility through participation in public affairs [23]. This, of course, applies to developing and developed countries alike. Community development must go hand in hand with fisheries management as they mutually augment one another in a process that is progressive. If this does not happen, the communities are likely to be subject to the domino effect. Fisheries management and community development will then work mutually reinforcing, albeit in a process that is degressive.

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