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**WHO SHOULD HAVE A VOICE IN MANAGEMENT OF  
LOCAL MARINE RESOURCES?**

*SOME COMMENTS ON THE COMMON PROPERTY DEBATE AND THE DESIGN OF  
CO-MANAGEMENT INSTITUTIONS FOR NORTH-NORWEGIAN FJORD FISHERIES*

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1995.**

First, I want to discuss some of the most important concepts of the common property debate, essentially by asking what we mean by *management of common property resources*.

In the second part of this paper, I want to discuss some problems of reforming, or designing *co-management institutions* and the question who should be entitled to participate in such democratic institutions.

As students, we are often advised to define and clarify important concepts as we write our thesis. Since our subject is management of common property resources, we should ask; what is a *natural resource*? What is *management*? And what is *common property* or even *property*?

#### **Why are resources resources?**

We usually think of natural resources as some factors in the natural environment that contribute to our own lives. Every household must use resources to supply itself with food, energy, clothes etc. But natural resources are not always easily defined. Different components of nature acquire their status and value as resources, not only by their *objective characteristics* such as amounts of energy, protein and minerals.

Resources also become resources because of the *meaning* we attach to those specific components of nature, a meaning which is different from one culture to the other. A valuable resource in a Inuit household in Greenland may be a problem waste to us, or vice versa.

It is not only the question of which resources are to be found in our environment that decides which of them we use in our households. Whether or not a certain tree or a certain stone, an animal, etc. is a resource to us, is very much a question of culture; traditions, knowledge, technology and institutions.

Certain resources have a very strong *symbolic aspect*, they may be crucial for defining ones own identity, to an extent that their symbolic value by far overshadows their monetary value. One North-Norwegian example is the *salmon*, which is a crucial symbol of identity to the people of Alta and Tana in Finnmark (Heitmann 1984). Other animals may have status as «sacred beings» as the *whales* have now become for many western environmentalists. Whales are an extremely good example of the symbolic power of resources, since besides being a sacred animal for Greenpeace people, in Norway and Iceland they have become a strong symbol of national sovereignty over the management of «our own» resources, a symbol of the very idea of national ownership of resources (Kalland 1993, Brydon 1991). This is very clearly demonstrated by the Norwegian policy on whaling. The Norwegian government treats whaling as a very important issue, but it is certainly not very important to the Norwegian economy.

People also treat certain natural components as *non-resources* or taboos, even if these components have the same objective characteristics as resources. For instance we don't eat meat from cats and dogs, though dogmeat, which is a delicatessen in some other cultures, could potentially be an important resource if calories and proteins were the only characteristics that counted.

A resource is thus not a resource just by its own objective nature, but by the meaning we give to it. And as the examples demonstrate, this is not only true of the more «exotic» cultures, but our own western culture as well.

### **Management of resources**

The common property debate is very much about the *management* of common property resources, or what we think of as management. - And what is management actually? The word itself brings

associations to company directors who manage their business, persons sitting at the top of an organization.

The idea of management of *natural* resources, or the management of nature itself so to speak, pictures man as the sovereign master of nature, a central idea in the anthropocentric western thought. «Man the resource manager» is a rational, paternalistic figure. Scientific knowledge enables him to control nature and force it to the point of «maximum sustainable yield».

But according to anthropologists and other social scientists that have made contributions to the common property debate, indigenous peoples also manage their resources, hunters manage their game, fishermen manage the fish, pastoralists manage grazing lands etc.

In this context, it sometimes seems unclear what is the difference between *management* and *adaptation*. Traditional management, indigenous management or whatever, sometimes seems to be synonymous to almost any social institution or any form of social organization which has something to do with harvesting and use of resources. We may of course see ourselves as managers of our own lives within any social setting, but does it mean that all social practices related to harvesting of resources is *management*? Do people manage their resources without knowing it themselves?

Many non-European cultures certainly do not see themselves as sovereign masters of nature, but rather as an integrated part of a natural whole. We might ask if the idea of resource management makes sense to these cultures?

In the common property debate, the point has often been to demonstrate that «Hardin was wrong»; people who harvest common resources are not only greedy individualists, but also social and cultural beings, integrated into households, communities, organizations and societies. To social scientist like ourselves, this is hardly a surprise.

It may be, that in our eagerness to show that resource harvesting people actually organize their activities in a variety of social institutions, - we sometimes use a rather broad definition of management. To ourselves, this is not a serious problem, but as soon as we want to communicate with government institutions who manage common resources, it may become a problem. Our «discovery» of traditional resource management, which from our point of view should be taken into account in the design of government institutions for resource management, is hard to communicate to administrators who have a very different idea of what management is all about. Those of us who like to criticize official resource management for its incompetence, inflexibility and a world view based on Hardin's (1968) «tragedy of commons» model, often believe that *rational* management is possible, only if the managers could be enlightened with a more realistic world view and better information.

But how manageable are the natural ecosystems? Chaos theorists (Smith 1990, Wilson, Acheson, Metcalfe and Kleban 1994) argue that *marine ecosystems* are so complex or chaotic that we are not able to predict their future development, at least not more than 2 or 3 years ahead. According to them, this is why so many of the «grand schemes» of modern fisheries management seem to have failed.

Their advice is to abandon the grand schemes, and try to develop more decentralized, community-based forms of resource management, also called *co-management*. To many social scientists, *co-management*, meaning democratic, flexible management institutions, based on traditional harvesting practices and folk knowledge as well as scientific knowledge, has become an alternative model for management of common property resources. I will come back to the problem of developing *co-management* institutions later in this paper.

## Property, common property and commons

The concepts of *property*, *common property* and *commons*, are a cause of considerable confusion in the common property debate. These concepts are being used in a variety of meanings. The idea of property, meaning ownership of natural resources, is like the idea of resource management, a part of western anthropocentric philosophy, picturing man as the **owner** of nature, placed somewhere above it, owning and managing it like the director running her company.

In our western context, the concept of property means a social institution which involves certain *rights*, that is property rights. Property rights can be private or collective, but the set of rights included in the institution of property may vary from one setting to another (Ciriacy-Wantrup and Bishop 1975, Durrenberger and Palsson 1987).

To *own* doesn't mean that we are allowed to do whatever we wish with our property, there are always certain restrictions. In different parts of the world, we may find that rights to use resources are organized in different ways, and that such rights in many cases do not match our idea of property. For instance, the institution of private property of land was introduced in the county of Finnmark only 220 years ago, as a part of the Norwegian colonization of the area. This does however not mean that prior to 1775 there were no social institutions regulating how people used the land.

Different cultures may have different ideas about *what can be owned*. If people see themselves as a part of nature, it will probably not make sense to them to own it.

In western society, the ideas of what can be owned seem to be changing. In the name of economic efficiency, private ownership is being established in areas we could not imagine, only few years ago. Fish resources in the sea, which in the seventies became redefined from open access to *national property*, are now becoming *private property* in countries like Iceland and New

Zealand, as a result of resource management by individual transferable quotas (Eythorsson 1995).

And what seems even more radical, private property of genetic codes of certain plants and animals is being established through patents on such codes. Privatization of genetic codes may generate interesting results, - in a few years we may all have to pay copyrights fees to those who own the patent rights to the genetic codes in our own bodies.

**Common property, or commons,** are concepts that have a very different meaning for different participants in the common property debate. Commons, or the Norwegian «almenning» is originally the name of a certain type of institution, an institution which defines the use rights for a certain group of resource users, typically peasants in rural Europe.

But the way Garret Hardin and many economists have used the concept, it has the opposite meaning; a *non-institution*, a setting where individual actors harvest from open access resources without any restraint from social institutions. Commons and common property, which are being used more or less synonymously, thus have opposite meanings, sometimes they mean institutions defining use rights to resources, and sometimes they mean the total absence of such institutions.

Those who see commons as non-institutions, and the others who see them as institutions are both preoccupied with designing new institutions for the task of resource management. The first are likely to think that the «tragedy of commons» problem should be solved through privatization of common resources, - *the institution of private property*. The others, who understand commons as a certain kind of institution, want to develop management institutions based on the same principles as the old commons. Co-management or folk-management is meant to be decentralized and democratic, and not only aiming at ecologically sound and economically efficient resource

harvesting, but distributional equity and justice as well (Jentoft 1989).

In different parts of the world, frustrated governments are becoming more open to the idea of co-management as an alternative to centralized «grand scale» management schemes. In Northern Norway, such a change in attitude is not unlikely to take place in the near future, in relation to management of fjord fisheries. The background for this possible change is recent biological research, which has established local (coast- and fjord-) stocks of cod and haddock as official categories. Sami ethnopolitical mobilization around the issue of indigenous fishing rights for sami fjord-fishermen is also changing the agenda of fisheries policy in Norway. These two processes, along with a growing interest in social research on local ecological knowledge and informal resource management institutions in fjord- and coast communities, may eventually pave the way to the development of new, local or regional management institutions.

#### **Alternative management institutions**

The Norwegian MAB-programme includes between 10 and 20 research projects which are all inspired by the idea of building new, decentralized resource management institutions. Institutions that would include fishermen's local knowledge in resource assessment and the management process. The guiding idea is that of creating flexible, democratic and just management regimes. Now, when it seems possible that co-management may become practical reality in Northern Norway, it should be timely that we ask ourselves what we, as social scientists, can offer in building such institutions.

Some of us have argued, that there is a fundamental difference between the world-view and knowledge of fisheries managers on one hand, and the world-view and knowledge of small scale fjord



fishermen on the other. The managers see their task as regulating the relationship between two entities, the *Norwegian fisheries sector* on one hand, and the *national resource base* on the other. In their world, there has been no room for possible local fish stocks, nor for native fishing rights for the people of Northern Norway. The alternative world-view, which is gaining ground, includes local spawning stocks, which in principle at least, can be managed separately. It also includes Norwegian and Sami fjord fishermen, who possess local ecological knowledge about these stocks, their behavior, and their relationships with other parts of the marine ecosystem.

A major critique against the present centralized management regime for Norwegian-Arctic cod is that the biology of cod is oversimplified by the management model. It does not make sense to manage local stocks, with different patterns of recruitment and growth, as if they were an integral part of a larger stock of Norwegian-Arctic cod. This alone should be a good reason for decentralizing management. Another reason is, that for the time being at least, local fishermen seem to have the most detailed knowledge of the local resources, and obviously, inclusion of their knowledge in the management process should mean improved management.

Along with the more general reasons for advocating co-management, such as democracy, legitimacy and flexibility, the specific situation in the north-Norwegian small-scale fisheries described above, should provide an obvious case where co-management might be the solution.

#### **A management of symbols?**

So far, so good. But what if we, as social scientists were asked to work out a model for a practical co-management/folk-management scheme for the north-Norwegian coast?. What if the fisheries authorities came to accept the alternative «world-

view» and the idea of decentralized management? Do we have a more comprehensive map of the social landscape in the fisheries than the fisheries administrators, a map that could make management more rational and better informed? Are our constructions of reality better than theirs?

For instance, if we are to establish democratic management institutions, - who exactly should be members of «demos»? (Jentoft and McCay 1995). It may be that our preoccupation with rural communities and marginal adaptations in Northern Norway has left us with a picture of the fjord communities and the fjord fishermen which is slightly outdated.

With only few exceptions, Sami language is now out of everyday use in sami fishing communities. It cannot be denied that fjord fishing, as a way of life, is in decline and extremely few households based on fjord fishing as the main economic adaptation have been established during the last 25 years. The studies of local ecological knowledge in the fjord districts, are for the most part based on interviews with old people. On the other hand, the *sami fjord fisherman* has in some ways become an important symbolic figure, as a bearer of the maritime elements of sami culture (thus a counterpart of the sami reindeer herder). Fjord fishing, considered as a typical sami way of life, has become a legitimization of the struggle for native fishing rights in Northern Norway.

But, since the symbolic importance of fjord fishing is growing inversely proportional to the economic importance, there may be some problems related to the practical implementation of native rights and decentralized folk-management, -or could the management of local stocks simply be handed over to the old fjord-fishermen? In a few years, it may even be too late to ask for the fjord-fishermen's help in managing the resources.

## Who should have a voice in future management of fjord resources?

The current decline of traditional fjord fishing as a way of life, doesn't mean that the north-Norwegian fjords are in general being depopulated or that management of marine areas and marine ecosystems in the fjords is no longer of much importance. Today, there are several «interested parts» which may be interested in having a voice in the future management of these areas.

The fjords have for instance proved to be ideal sites for **aquaculture**. Salmon farming has become one of the most important export branches in Norway, and farming of marine species as cod, saith, halibut and catfish is now developing. Fish-farming does normally not compete directly with fjord-fishing for resources,<sup>1</sup> but it needs *sea-space*, which sometimes means occupation of traditional fishing spots or pollution of local spawning sites.

*Sea-ranching* (havbeite) which is expected to become the future type of fish-farming (Brox 1989, NOU 1994:10) will demand more than that, - it will need large fjord basins with exclusive harvesting rights for salmon, or even exclusive rights for all kinds of fishing in the affected fjords. This is already being proposed in a government report<sup>2</sup>.

If we look farther ahead, if exclusive rights will be granted for salmon ranchers, - why not for cod ranching? The local cod stocks behave in some ways quite similarly as salmon stocks. They leave their place of birth to feed and grow up in the open

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<sup>1</sup> However, large scale cod farming is based om catching small and medium sized cod, and feed it until it reaches the deserved weight. This catch, which is done by efficient fishing gear as Danish-seine or purse-seine, is quite controversial among small scale fjord-fishermen.

<sup>2</sup> A Norwegian law-proposal (NOU 1994:10; Lov om havbeite) suggests that sea-ranchers should be granted exclusive rights in a radius of 5 km from the spot where the fish is set out if the site is in a fjord, but a radius of 10 km. if the spot is on a open coastline.

ocean, but when they reach reproductive age, they come back to spawn in the place they came from. Sea-ranching with salmon is based on the principle of catching the salmon when it returns «home». It should be possible to «ranch» local cod stocks according to the same principle<sup>3</sup>. Then, if the rights to develop sea-ranching of a certain local stock of salmon can be given exclusively to one part, it would most likely be possible to do the same with local cod-stocks. The question is then, who is, or who could become the owner of such stocks. The definition of harvesting rights, and eventually property rights to local stocks is of great importance, as well as the question who is and who might become the owner of the fjord basins.

As it seems rather unlikely that the production potential for fish farming in the northern fjords will remain unused in the future, these questions are likely to influence future resource management in the fjords, and the fish-farming industry will certainly want to have a voice in future co-management regimes.

**Tourism and recreational fishing** are also potentially interested parts. In some fjord districts it is no longer easy to tell the difference between the traditional part-time fisherman and the «modern» recreational fisherman (or should we say the modern part-time fisherman?). Access to recreational fishing for clerks, teachers and social workers is often referred to as privilege which may attract qualified personnel to positions in remote districts. Recreational fishermen already have their nation-wide interest-organization, which certainly would not accept being left out from influencing and participating in future co-management institutions in the fjords. Activity-based tourism, that is offering boats for hire or inviting tourists on organized fishing trips on the fjords, is also developing in many coast and fjord communities. Thus,

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<sup>3</sup> This is of course not very original, the traditional winter fisheries in Lofoten and other cod spawning sites is also based on that principle.

there is a growing interest in what we may call *modern fjord fishing*, and the user groups involved are likely to engage in the issue of resource management.

**Environmental conservation**, represented by the State administration and the environmental movement, is a third potentially interested part. The Environmental Department (ED) and the Norwegian Environmental Conservation Society (NECS), have both shown a growing interest in *conservation of marine ecosystems*. The NECS has since the fisheries crisis in the late eighties been working fairly active on fisheries issues. It has for some years been represented by an observer in The Regulatory Council (reguleringsrådet), a corporate council where representatives of the fishing industry and the Fisheries Department negotiate over quotas and management measures (Hoel, Jentoft and Mikalsen 1990). The NECS would certainly be interested in some sort of representation in future co-management institutions for the north-Norwegian fjords. Ocean fisheries are normally not subject to the ED, but in certain issues, as salmon fishing in the ocean, the ED has been heavily engaged<sup>4</sup>. Salmon fishing in the ocean is quite important for many fjord-communities in Northern Norway. Conservation plans for marine environments are also becoming an issue for the ED. In 1987, a task force was appointed to make proposals on strategies for the work on conservation plans for marine areas (Miljøverndepartementet 1991). Such plans will be based on criteria like biodiversity, representativity of biotopes, scarcity of species and productivity of ecosystems. The task force report suggests that such conservation plans should include some local spawning sites for cod and other species. It is thus not far-fetched to suggest that both the Environmental Department and the Environmental Conservation

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<sup>4</sup> Since fresh-water fishing is not defined as a domain of the Fisheries Department, the management of salmon is subject to both the Environmental Department and the Fisheries Dept.

Society will be interested parts when it comes to designing of, and participating in, future co-management institutions.

This would also match an international trend towards defining management of marine resources as an environmental issue which should not be exclusively handled by the fisheries sector. For instance, the Report on the 1992 UN Conference on Environment and Development in Rio de Janeiro (Agenda 21) states (in chap. 17.6):

*«Each coastal State should consider establishing, or where necessary strengthening, appropriate coordinating mechanisms (such as a high-level planning body) for integrated management and sustainable development of coastal and marine areas and their resources, at both the local and national levels. Such mechanisms should include consultation, as appropriate, with the academic and private sectors, non-governmental organizations, local communities, resource user groups and indigenous people».*

Since the mid-eighties, and specially since the **Sami Parliament (SP)** was established in 1989, fjord fishing has become an *ethnic issue*. The SP has worked quite actively on fisheries issues. It is now represented in the Regulatory Council, and it has managed to influence the fisheries authorities to soften up the strict quota regulations on small scale fishing in Northern Norway. In 1993, a special committee was appointed by the Fisheries Department, to report on Sami interests in fisheries regulations<sup>5</sup>. Recently (January 1995), a task force appointed by the SP presented a report on *«implementation of a Sami Fisheries Zone»* which includes proposals for comprehensive local management of the marine resources, organized within certain resource-regions. It has also proposed increased influence by the Sami Parliament at all levels of fisheries management (Storslett 1995).

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<sup>5</sup> Prior to that, in 1990, professor Carsten Smith had written a report on the juridical basis for Sami claims for fishing rights in the sea, on request from the Fisheries Department. (Smith 1990).

It is important to note though, that political influence by the SP is not necessarily synonymous to co-management by sami fjord-fishermen.

As noted earlier in this paper, the ethnopolitical engagement in the fisheries management has a strong symbolic aspect. In order to become a legitimate political institution representing *all* Sami, it is important for the SP to engage in the fisheries, which constitute a livelihood for many communities of the partly norwegianized coastal Sami, a relatively large part of the total sami population in Norway. Small scale fishermen, on their side find the SP useful as an alternative track to power, as they find it difficult to voice their interests in fisheries management through the Norwegian Fishermen's Union (Eythorsson 1993, Jentoft and Mikalsen 1994).

#### **Current co-management institutions in the fisheries**

During the last century, institutional arrangements that qualify as co-management have been operative in certain sections of Norwegian fisheries. «The Lofoten Regulations» of 1897, described by Jentoft and Kristoffersen (1989), are still operative in the 15 Lofoten control districts and a handful of other districts in Northern Norway. The Lofoten Regulations are a democratic system of defining and enforcing rules of access for fishing vessels using different types of fishing gear to the most attractive fishing areas. The regulations were a product of a massive protest from the non-motorized small-scale fishermen, facing the threat of bigger motorized vessels «appropriating» the sea-space during the crowded Lofoten fishery. The liberal «Free Law» of 1857 which abolished the landowner's/merchants rights to regulate access to ocean territory, had created a «state of chaos» in the Lofoten season, and the emergence of the new, efficient technology of steam vessels, fishing with big seines, triggered an organized protest by the small scale fishermen. The protest was heard,

and the Lofoten Law of 1897 established a new principle of delegating the responsibility for regulating the access to the fishing grounds to committees and inspectors, elected among the participating fishermen at the opening of each season. Besides being a «traffic regulation», the Lofoten Regulations secure a state of relative justice and equity among the fishermen, as access to ocean territory is granted to all participants, within a set of rules and restrictions which have been democratically agreed upon. Closeness to practice, direct democracy among the participants and uniting the definition of rules, enforcement and control in one non-byrocratic institution, are interesting characteristics of the Lofoten Regulations. This may be explained by the time in which they were established. In 1897 there was no Fishermen's Union, little or none fisheries administration at the regional level and no corporate organizations within a national «fisheries segment».

Another institutional arrangement for local fisheries management, described by Jentoft and Mikalsen (1994), is the system of *Regional Regulatory Committees*, which has been effective since the 1950's. The idea of establishing regional bodies of fishermen to handle conflicts of access to ocean territory in the fjord areas is certainly influenced by the Lofoten Regulations, though the institutional setup is quite different. In short, the responsibility for defining rules of access was not given to the fishermen participating in the seasonal fisheries in the affected district, but to the regional branches of the Fishermen's Union and the Regional Fisheries Administration. The model from the Lofoten Regulations could not be applied directly, as the areas of conflict are scattered, and not subject to concentrated fishing during a specific season to the same extent as the Lofoten area. The social organization of the fisheries had changed since the 1890's. Along with the Regional Fisheries Administration, the Fishermen's Union, an organization of all



Norwegian fishermen, with a strong regional organization, was a natural institution to handle this kind of issues. The Regional Regulatory Committees became a corporate organ, or actually a committee within the Fishermen's Union, supplemented with the chief executive of the Regional Fisheries Administration as a chairman/secretary. The experience with the Regulatory Committees is somewhat mixed. It appears that the leading faction of the Fishermen's Union and the Regional Fisheries Administration in most cases are able to dictate what comes from the committee. Most of the issues the committee receives are protests against depletion of local resources, raised by local fishermen in the fjord districts. Fjord-fishermen though, have none (Troms County), or only one (Finnmark County), representative out of seven in the committee. As pointed out by Jentoft and Mikalsen (1994), a broader representation in the committees, by local fjord fishermen, municipal authorities etc. might add to their legitimacy and make them able to reach better informed decisions. But since the fishermen, (which are supposed to be represented by the Fishermen's Union) and the Norwegian fisheries sector is no longer the only organized interest group involved as a user or a potential user of the fjord resources, it may be that this kind of corporate management is no longer a relevant solution. Besides, the Sami Parliament has become an alternative «route to power» for fjord fishermen's interests as I have already mentioned.

Another reason why the corporate solution may not be relevant any longer, is the erosion of the corporate structure within the fisheries. The Fishermen's Union is about to split into 2-3 separate organizations, and the institutional hegemony and market power enjoyed by the fishermen's organizations since the 1930's, is loosing hold. In Iceland, which until the eighties had the same structure of corporate institutions, this process has advanced quite fast.

### **Redefinition of local management and use rights?**

As «new» participants as aquaculture, recreational fishing, conservationists and sami politicians enter the resource management arena, it is evident that *the definition of the situation*, earlier provided by the fisheries sector, has to be renegotiated. In other words, it is no longer self-evident what *management* is or should be, nor is it likely that the participants have the same idea about what *resources* are, or what aspects of the resources are the crucial ones. From the point of view of environmental conservationists, biodiversity and protection of scarce species are important goals of management, while for aquaculture, access to sea-space and clean sea-water is crucial. For the Sami Parliament, the securing of fishing rights for local fjord-fishermen is about protection of a culture and a sami way of life, as well as management of biological fish stocks. Tourism and recreational fishing is about the recreational values related to free access to fishing and to preservation of the marine and coastal environment (ecological and social).

The establishment of new co-management institutions based on participation by all the parties mentioned, will demand that we concentrate more on defining the use rights and property rights to the resources and to the ocean territory involved. The question of co-management, defined as an institutional setup for making democratic, fair and legitimate decisions, can not be separated from the issue of rights, an issue which seems to be becoming a lot more complicated than before.

The implemenetation of the vessel quota system in 1990 was a major step in a process of changing common fishing rights to private rights. The quota system triggered a discussion on the definition of Sami fishing rights. An extensive development of

sea-ranching in the fjord areas would potentially cause a much more drastic conflict on the rights issue.<sup>6</sup>

### **Conclusion**

Resources, property rights and management are concepts which may have different meanings within different cultural and institutional contexts. The design of co-management institutions for democratic, decentralized management of local marine resources in Northern Norway will, in the present day context, have to involve multiple interest groups. Aquaculture, fjord-fishermen, recreational fishermen, conservationists and Sami politicians may have a quite different views about the objectives of management, of what should be managed, how and why. Such approach towards the design of co-management institutions differs from the current arrangements for decentralized management in the North-Norwegian fisheries as these are designed to resolve conflicting interests between groups of fishermen, in a context defined exclusively by the fisheries sector.

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### **References:**

Agenda 21; A Report on the 1992 UN Conference on Environment and Development in Rio de Janeiro.

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<sup>6</sup> The law proposal on sea-ranching (NOU 1994:10) states that loss of traditional fishing grounds will not entitle fishermen or local communities to any compensation.

Brox, Ottar:(1989) *Kan bygdenæringene bli lønnsomme?* Oslo 1989.

Brydon, Anne 1991: *The Eye of the Guest: Icelandic Nationalist Discourse and the Whaling Issue*. Ph.D. thesis, Dept. of Anthropology McGill University, Montreal.

Ciriacy-Wantrup, S.V. and Bishop, Richard C.:(1975) «*Common Property*» as a Concept in Natural Resources Policy. *Natural Resources Journal* 15:1975.

Durrenberger, Paul, and Pálsson, Gísli: (1987) *Ownership at Sea; Fishing Territories and Access to Resources*. *American Ethnologist* 14(3) 1987.

Eythorsson, Einar:(1993) *Fjordfolket, fisken og forvaltningen. En delrapport fra prosjektet «Bygdeutvikling i kystsamiske områder» (Kommunal og arbeidsdepartementet)*.

Hardin, Garrett 1968: *The Tragedy of Commons*. *Science* 1968 vol 162.

Heitmann, Kari 1984:*Altaværingene og Alta-saken. Sosial identitet og politisk konflikt*. Cand.polit. thesis in anthropology, University of Oslo.

Jentoft, Svein: (1989) *Fisheries Co-Management; Delegating Government Responsibility to Fisheries Organizations*. *Marine Policy*, April 1989.

Jentoft, Svein, and Kristoffersen, Trond:(1989) *Fisheries Co-Management; The Case of the Lofoten Fishery*. *Human Organization* 1989.

Jentoft, Svein and McCay, Bonnie: (1995) *User Participation in Fisheries Management. Lessons drawn from international experiences.* Marine Policy 18(1) 1995.

Jentoft, Svein and Mikalsen, Knut:(1994) *Regulating Fjord Fisheries, Folk Management or Interest Group Politics?* In Dyer, C.L., and McGoodwin, J. R.(eds): *Folk Management in the World's Fisheries,-Lessons for Modern Fisheries Management.* Colorado 1994.

Kalland, Arne 1993: *Management by Totemization. Whale Symbolism and the Anti-Whaling Campaign.* Arctic, vol. 46, 1993.

Miljøverndepartementet:(1991)*Strategi og retningslinjer for arbeid med marine verneområder i Norge. En tilrådning utarbeidet for Miljøverndepartementet.*

Norges offentlige utredninger: (1994) *Lov om havbeite.* Statens forvaltningstjeneste, Oslo.

Smith, M. Estellie 1990: *Chaos in Fisheries Management.* MAST vol 3(2) 1990.

Smith, Carsten 1990: *Samiske interesser i fiskerireguleringssammenheng.* Lov og rett 1990, s.507.

Storslett, Einar: (1995) *Samiske fiskerier mot år 2000. Rapport fra prosjektet: «Handlingsplan for gjennomføring av samisk fiskerisone».*

Wilson, James A., Acheson, James M., Metcalfe, Mark, and Kleban, Peter 1994:*Chaos, Complexity and Community Management of Fisheries.* Marine Policy 1994:18(4).