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CM 2005/V:28

Small-scale fishers' perceptions about fisheries governance and other stakeholder groups

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Small-scale fishing is a livelihood characterised by a long history of adapting to changes in the social and natural environment. Fishing forms often a part in the rural pluriactivity: the fisher households combine different sources of income and develop various fishing strategies for coping with the changes. Although the income from fishing is not as high as in larger fishing enterprises, small-scale fishing is often importance to the employment, economy and culture of rural coastal communities. The diversity and complexity of the livelihood forms a special challenge for fisheries governance, which, at the central level, has typically concentrated on managing larger fishing units.

This paper is based on results from a EU -funded project (AQCESS), which studied aquaculture and coastal economic and social sustainability in a multidisciplinary way. The empirical material comprises of personal interviews conducted with commercial fishermen and other stakeholders in the Finnish study area, Archipelago Sea Region, SW Finland. In this area fishing has a long tradition as a source of income combined with agriculture and shipping, but along with the modernization of the society the coping strategies have changed and diversified. The paper will give a special attention to the fishers' perceptions about different decision-making institutions and stakeholder groups and discusses options for developing the governance of small-scale fisheries.

Keywords:
Small-scale fishermen, governance, fisheries authorities, water owners, Archipelago Sea Region

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1. Background

Along with the globalisation and modernisation of the societies, the relative economic importance of coastal fishery has commonly declined, yet small-scale and artisanal fisheries still provide significant employment for people in rural areas around the world. Small-scale fishing is typically heterogeneous in terms of economic preconditions, motivations as well as cultural and ecological basis for the livelihood. Kuperan and Abdullah (1994, 306) state that "Planning and setting objectives for management of small-scale coastal fisheries requires a good understanding of what is meant by small-scale coastal fisheries, the resource attributes, the traditional values of fishing communities, the institutional arrangements and the overall environment in which the small-scale fishermen operate. Without prior knowledge of these attributes, any attempts to manage the small-scale fisheries will often be met with serious resistance and problems of non-compliance". The key for understanding small-scale fishing, whether in developing or developed countries, is to study the importance of these activities on a family basis and further as a part of the local community (Allison and Ellis 2001).

Better awareness of the broad diversity of fisheries and the wider family and local community contexts is needed, because the fisheries governance is often based on stereotypical assumptions of full-time fisherman as an independent economic actor. Fisheries governance in Europe has emphasized economic performance of the fishing fleet and ecological dimension of sustainability, but lately the social and cultural dimensions have become increasingly important issues in attempts to reach overall sustainability. Lately a need has been recognized to widen the knowledge base for fisheries management, produced for example in the ICES, from the conventional approaches towards incorporating the work of social scientists (Daw and Grey 2005).

The point of departure in this paper is that sustainability of local commercial fishing, including the fish resource base and household livelihoods, can be seen as an outcome of local community and culture – rather than solely presuming that community and culture change according to biological and economic premises (Jentoft 2003). The support from the local community and networks may keep commercial fisheries alive through crises with the help of different adaptation strategies. The diversity and complexity of coastal small-scale fisheries is a challenge for governance, which, at national and EU levels, has typically concentrated on managing larger fishing units. The top-down policies in fisheries governance, e.g. within the EU (Gray and Hatchard 2003), are easily too rigid for coping with this challenge.

Our paper is primarily based on results from a EU -funded project (AQCESS), which studied aquaculture and coastal economic and social sustainability in a multidisciplinary way. The empirical material comprises of personal interviews conducted with commercial fishermen and other stakeholders in the Finnish study area, Archipelago Sea Region, SW Finland. In this area fishing has a long tradition as a source of income combined with agriculture and shipping, but along with the modernization of the society the coping strategies have changed and diversified. The paper will give special attention to the fishers' perceptions about different decision-making institutions and stakeholder groups and discusses options for developing the governance of small-scale fisheries.

The livelihood approach (e.g. Allison and Ellis 2001) provides conceptual tools for understanding the multifaceted fishing livelihood and its capability of surviving. One question is what constitutes the relevant economic unit when studying small-scale fisheries. Charles (2001, 62) states that one of the most noticeable manifestations of a failure to examine and understand the fishery system as a whole has been a preoccupation in fishery analyses with fish and fishing 'firms' as the elements of study, rather than the wider context where the fish and fishers live. Our claim is that the fishers' perceptions about governance and stakeholder groups and the decisions made in fishermen's households do not only depend on the needs of the fishing operations, but rather reflect the socio-economic situation of the whole household and the surrounding community.

2. Material & methods

The core empirical material of this paper includes 113 personal interviews conducted with commercial fishermen in the Archipelago Sea Region, SW Finland, in the Baltic Sea. The interviews were made during a EU funded project 'Aquaculture and Coastal Economic and Social Sustainability' (AQCESS, QLRT-1999-31151) in three study sites each covering the area of three municipalities in 2002 (Fig. 1). The Archipelago Sea Region was chosen as the Finnish case study area in the AQCESS project due to its importance as an area for fish production and recreation. In the selected nine municipalities both commercial fishing and fish farming are of importance.

The Archipelago Sea Region comprises of two main parts: Archipelago Sea (total surface area 8300 km^2) closer to the mainland and the province of Åland (6785 km^2) near the Swedish border. Study sites 1 and 2 belong to the province of Southwest Finland and the study site 3 to the province of Åland (Fig. 1). There are slightly over 7000 inhabitants and a total of 9000 summerhouses in the studied municipalities (Kuntafakta 2001). Although the importance of primary production has declined in the study sites, the proportion of primary production greatly exceeds the averages of the provinces and the whole country in all the studied municipalities (Kuntafakta 2001). Services, provided especially by public institutions, have gained a substantial position – although the importance of services is usually smaller than that of the whole country. The official statistics do not, however, reveal the combination nature of different income sources in a household basis, because one household has been categorized in one single branch of activity.

The collected material covers practically all the commercial fishers' households in the studied municipalities. The material comprises of 36 personal interviews in the municipalities of Kustavi, Velkua and Rymättylä (site 1), 34 interviews in Iniö, Houtskari and Nauvo (site 2) and 43 interviews in Brändö, Kumlinge and Föglö (site 3) (Table 1). For the purposes of the AQCESS project also 103 interviews with other stakeholders (e.g. fish farmers and local people) and 9 thematic interviews to key persons were made in order to widen the perspectives of the main research themes. The interviewed key persons included representatives form commercial and recreational fishers' associations, regional fishery administration, Fisheries Regions, municipalities and voluntary organizations. In order to update the knowledge of the development in the small-scale fishing of the Archipelago Sea three supplementary thematic interviews with commercial fishers and their representatives have been conducted in 2005 (Table 1).

In the AQCESS interviews commercial fishers were asked a substantial set of questions concerning household economy and attitudes towards their work and the support from other stakeholder groups. The questionnaires collected background information about the person, basic quantitative data about fishing activities and economy of fishing in addition to its relative importance in the household. Attitudes towards fishing occupation were inquired mostly using a structured questionnaire form or as a combination of structured and qualitative method. For the material collection of the latter type we owe to the qualitative attitude research method developed by Vesala and Rantanen (1999).

3. Small-scale fisheries in the Finnish archipelagos

3.1 Fisheries governance institutions

Archipelago water areas, like most of the Finnish coastal and inland waters, are under private ownership in conjunction with possession of land. The decision maker is commonly a collective, a shareholders association, which jointly controls the interests of individual owners in fishery matters (Salmi and Muje, 2001). In addition to these fishery associations, there are also a large number of waters managed solely by individual owners. Although there are several exceptions, the general rule is that access to fishing waters depends on whether the fishermen are able to fish in waters of their own or if they rent waters from outside. Commercial fishermen commonly dwell near the shoreline, but they often need larger water areas to be able to harvest more efficiently. Fishermen in the Archipelago Sea have had problems with acquiring fishing opportunities for the small and scattered privately owned water areas. Fisheries Regions form geographically

larger management units, often covering water areas of a municipality. These organizations offer a wider forum for decision making among water owners and fishermen, but rarely arrange the supply of commercial fishing licences.

In the governance of commercial fishing the state has substantially increased its influence during the last 20 years. The top-down management by the state is supported by scientific knowledge produced in research institutes and universities. The bureaucratic and academic policy spheres (see Jamison 1997) have become central in managing the use of natural resources. The contemporary Finnish fisheries governance system can be characterized as a combination of local decision-making by the water owners and a top-down management system by the state. The regional level of the state fisheries administration operates under the auspices of the Ministry of Agriculture and Forestry. In addition to the national fisheries policy, the fisheries authorities have the responsibility to implement the common fisheries policy of the European union (EU) in practice. The TAC level and quotas of Baltic herring (*Clupea harengus membras)* and salmon (*Salmo salar)* for Baltic countries are decided annually by the International Baltic Sea Fishery Commission (IBSFC). However, the coastal and archipelago fisheries are chiefly regulated according to national principles, because the fishermen target mostly local freshwater fish species.

Although the basic principle in the Finnish coastal fisheries is that the water owner decides over the use of the area, several use rights of non-owners have been protected by law. For example ice fishing with a rod and angling with a rod and natural bait are allowed irrespective of the ownership of the water (so-called every man's rights). The latest change enhancing the fishing opportunities of non-owners was the adoption of a provincial lure fishing fee in 1997, after a lively debate in Parliament and the media.

The funding of the Finnish commercial fisheries is conducted according to guidelines by the EU. In line with the general tendency towards modernization and industrialization in the fishing sector (e.g. Symes 1996) the common fishery policy (CFP) by the EU has emphasized big professional fishing units, which compete in the market with the small-scale archipelago fishermen (Salmi et al. 2000). The situation is similar with Swedish fisheries, where the subsidizing policy by the EU has benefited mostly the larger units at the expense of the small-scale fisheries (Neuman and Píriz 2000). The tightened regulations together with strong competition in the market have created a general pressure to intensify fishing methods, which leads into lower employment in the field. Additionally, in order to receive fishery subsidies the proportion from fishing must exceed 30 % of the total personal incomes. In Åland, the official management is conducted by the provincial government and its fisheries office, mostly in line with the above-mentioned national fisheries governance principles. The provincial government of Åland has autonomy in most issues, but it co-operates also with the fisheries authorities in the Ministry of Agriculture and Forestry. The most conspicuous manifestation of the autonomic position in fisheries management is that a separate salmon quota is allocated annually to the Åland islands.

3.2 Fisheries and preconditions for operation

As primary production in general, the number of commercial fishermen declined markedly in Finland during the 20th century along with the modernization of the society. In the archipelago region, the population especially in the outer islands has decreased. For instance, in the Swedish speaking parts of the Archipelago Sea the number of full-time fishermen dropped from 2000 in 1934 to current 100 in the 1970s and correspondingly for the part time fishermen from 1450 to 80 (Åbolands Fiskarförbund 1977). Parallel to the national commercial fishing, the value of landings in the Archipelago Sea Region has decreased.

Commercial fishing in the Finnish archipelago areas is primarily a multi-species fishery targeting on five fish species**.** The value of the Baltic herring – the most important species in the Archipelago Sea – landings in the Archipelago Sea Region has been reduced to one third during last two decades. The main reason for diminished catches was a slump in the fur industry during the beginning of 1980s. The collapse of Baltic herring landings was remarkable in the Archipelago Sea Region: in the beginning of 1980s one half of Finnish Baltic herring catch was harvested in the area, but at the turn of the century no more than 14 %. Many herring fishermen in the archipelago area changed target species and fishing methods from trawl or

trap net to gill net. As a consequence the catch of perch (*Perca fluviatilis)*, pikeperch (*Stizostedion lucioperca)* and whitefish (*Coregonus lavaretus)* have become increasingly important for the commercial fishermen. Although the catch of Baltic salmon is relatively low in the whole study area, this species is of higher economic importance to many fishers in the Åland Islands.

The coastal fishing in Finland is traditionally operated on a household basis, but recently other family members' participation in fishing operations has become rare. The fisher typically owns his fishing equipment and especially in the archipelago areas he harvests the near waters of their home island on a seasonal basis. A wide variety of fishing methods permits a rapid switch from one fish species to another. Multi-species fishery is primarily an adjustment to annual changes of catches. Also fierce autumn storms and severe winter ice conditions influence the fishing opportunities and the seasonality of the livelihood.

Along with the transformation of a coastal region of fishermen and peasants to a service-oriented welfare society people have become increasingly dependent on wage work - especially in the public sector. In spite of the diminished economic weight, fishing and fishermen are still valued in the local archipelago communities and the survival of commercial fishing is locally strongly highlighted in the political arena. Along with the development of the region stakeholder groups have multiplied and especially the interests of summer cottage owners and other recreational users of the area have become more decisive. At the same time the increased emphasis on nature protection has produced resistance from the side of local people, who stress their option for the utilization of local natural resources.

3.3 Flexibility of strategies

Livelihoods approach (e.g. Allison and Ellis 2001, 378) has been used for studying the strategies in fisheries from a different perspective than applied in the more usual sector analyses[1]. Two important concepts related to sustainability of livelihoods are resilience and sensitivity. According to Allison and Ellis (2001, 378) "Resilience refers to the ability of an ecological or livelihood system to "bounce back" from stress or shocks; while sensitivity refers to the magnitude of a system's response to an external disturbance". Ideally the livelihood system displays high resilience and low sensitivity, while the most vulnerable displays low resilience and high sensitivity. In fisheries, adaptations to uncertainty can be obtained by flexibility within fisheries operations (targeting different species according to availability), geographical mobility and livelihood diversification. The last alternative is an application of rural pluriactivity, which Eikeland (1999, 360) defines as "gaining an income from more than one economic activity".

The part-time nature of small-scale fishing in the Archipelago Sea Region reflects the seasonally varying availability of target fish species in the fishing grounds, but also the traditions of pluriactivity in the archipelago. The fishermen's income combination strategies were studied in the AQCESS project, where fishermen's households' were divided in four main categories according to the importance of income sources: 1) fishing, 2) agriculture, 3) wage work and 4) service oriented households. The first two groups represent the traditional emphasis on the use of local natural resources as the basis of the livelihood. Households belonging to the former group rely on both fishing and fish farming and the latter group combine fishing incomes with those from farming, forestry and horticulture (see Salmi 2005).

The wage working combination represents fishing households, which receive most of their incomes from paid work. The incomes are often generated from work in a connection boat or a ferry or in some other occupation in the public sector. Nearly one half of all the interviewed fishermen belonged to the wage work group. The service-oriented category comprises of fishermen's households, which acquire part of their incomes straight from the tourist industry or from an own firm providing services for the leisure sector, for example, building summer cottages for the urban dwellers.

[1] By sector analyses we mean the typically national and international studies, which emphasize the economics of larger fishing units. In this article the focus is on the small-scale fishing livelihoods, which require more diversified approaches.

The seasonal nature of the archipelago fishing is reflected in the fact that fishermen work only, on average, on 147 days along the year. The average total incomes before tax of all households was 30 770 € and the average interviewed persons' income from fishing amounted to 8 923 €. The service- and fishing-oriented households received smaller average incomes than other groups. However, the most professional fishermen received best hourly incomes from fishing. Regardless of the livelihood strategy, the fishermen emphasized the way of life, freedom and independence provided by the work: The gained income is important as an element for the living of a household as a whole, but the fishers seldom calculate the profitability of fishing operations in terms of hourly income.

The average age of commercial fisher in the study areas was 52 years and only 7 % were women. A large majority of the fishermen was born in their home municipality. Fishers usually inherited their occupation from their parents and had usually dwelled in the municipality their whole life, for 45 years on average. Many fishers have inherited a farm near to a shore, where they keep their boats and other fishing equipment. The fishing vessel size, typically between six and nine meters, is remarkably small when compared with commercial fishing in many other EU counties. Nearly 93 % of the interviewed fishers had not received any subsidies from the Government or EU during the preceding year of the interview.

A clear majority of the interviewed fishers in the AQCESS project preferred to stay as a commercial fisher for the whole life. However, those interviewees who received major incomes from fishing or services had more often considered leaving fishing. The commitment to the occupation was often grounded by traditions and the way of life near to nature provided by fishing. Also lack of alternatives was put forward as a reason for continuing fishing for lifetime. In addition, the fishers were in general very reluctant to move to another area to continue fishing, yet one in five of the most professional fishers would be prepared to do this. A minority of the interviewed fishers would leave the area even if fishing opportunities would no longer exist. Typical grounds for unwillingness to leave the area were possession of a farm, other income opportunities, spouse's work and possessed real property. Many of the fishers had plans for other livelihoods or survival strategies if fishing fails.

4. Perceptions about stakeholder groups' support and governance

The fishermen's aspirations concerning the support from other stakeholder groups were studied. These groups were: 1) local people, 2) the tourists, summer house dwellers and providers of recreational services and 3) EU, the state and its authorities. Most of the fishermen considered that local people are in support, whereas a clear majority felt that the authorities did not value or support their livelihood (Fig. 2). Attitudes towards the recreational sector varied largely. It was no surprise that those respondents, who are in connection with, and dependent on, the leisure sector most often considered recreational users and providers of the services as supportive. The same livelihood group found most seldom also the locals as not supportive. Interestingly, among the fishers in the Åland islands substantially more fishers answered that the authorities are in support than the opposite.

4.1 Local inhabitants and recreational sector

The positive positions concerning support from local community were motivated by the traditional fit of fishing with the living in archipelago, tax revenues for the municipality, buying fish and the locals' will to rent waters for commercial fishing. For instance, investments in a fish processing facilities were seen as a positive sign from the local policy. Fishers mentioned that most of the local people have positive attitude, because "*everybody fishes out here to some extent"* and they feel fishing as a fundamental element of the archipelago. Some interviewees held that the local network is tighter and more supportive in the outer islands, but attitudes are not so often positive nearer the densely populated areas closer to the mainland.

Part of the locals was considered indifferent or negative towards commercial fishing. The interviewed fishers connected the negative attitudes with enviousness of the catches. According to commercial fishers this view was based on ignorance about the circumstances of their livelihood. Some water owners, particularly those nearer the mainland, were unwilling to rent waters for commercial fishers. An interviewed coordinator of

development projects in the study area was worried about the future in commercial fishing. He claimed that the water and land owners restrict the development of fishing livelihood - if a person intends to invest in the profession and starts fishing in new water areas he should not be hampered by problems in accessing the fishing grounds.

In their answers concerning the support from the recreational sector many interviewed fishers distinguished differences between summer cottage owners and other recreational users. Those recreational fishers, who occasionally visit the archipelago without many connections with the local people, represent a more distant fisher group for the local inhabitants and commercial fishers. The attitudes towards the summer cottage people were often more positive, although the group is very heterogeneous. For instance, a part of the cottage dwellers have their family roots in the islands, but have moved to a city and others are considered more as 'outsiders'. The commercial fishers noted as a positive aspect that summer cottage owners buy fish from the fisher. In addition, tourists and other recreational users of the archipelago generate fishing license incomes. Although the opinions of the commercial fishers towards were rather divided, many summer cottage dwellers appreciate the existence of commercial fisheries in the region. In a separate study (Salmi et al. 2004) the interviewed summer cottage dwellers highlighted the importance of small-scale commercial fishery and fishers' practical knowledge.

Many commercial fishers strongly opposed the introduction of a province-wide free lure fishing fee system (Pirhonen and Salmi 1998), which opened the possibility for recreational fishers to fish with one rod without the permission of local water owners. Rod fishing in private waters, enabled by the province-wide lure fishing fee system constructed by the state, was seen as unsustainable from the perspective of both fish stocks and the harm they cause for commercial fishing. In the AQCESS interviews commercial fishers held opinion that many recreational fishermen harvest more than they use in their own household. A representative of the fishing-oriented group could not understand that recreational fishers are allowed to sell their catch in the market. Some commercial fishers were irritated about trolling, because this fishing method was considered to damage commercial fishers' gill nets.

4.2 Authorities, science and the EU

Commercial fishers in the studied area have accustomed to local fisheries management fishery associations. The introduction of the province-wide lure fishing fee system was interpreted as revealing the state's bad will towards the commercial fishermen and it was further suggested that authorities prefer recreational fishing and thus want to get rid of the commercial sector. Interestingly, also in the service-oriented livelihood group, in spite of their generally positive attitudes towards the recreational sector, the liberation of recreational fishermen's access to fishing waters was found harmful for fishing tourism. They claimed that the new license system has enhanced options for the fishers to enter waters without the need for using, for instance, the local accommodation services, which often provided a fishing license in the same package. The interviewed commercial fishers would like the state and authorities to support their access to private fishing waters.

The rare positive comments highlighted the existence of financial support and publicly funded ferry and boat connections between the islands. The fishers mentioned that the support from the EU, state and authorities has been concretized mostly as financial support in investments, fish transportation and fuel costs and compensations for damages caused by gray seals. Interviewed commercial fishers were annoyed of the situation, where the offshore fishery has better opportunities to get financial support than small-scale fishery. This has lead to the channeling of public support to big fishing enterprises outside the small-scale sector. It was even stated that authorities' support to big industries leads to exhaustive harvesting, which threatens the fish stocks. Particularly the part-time fishermen criticized the income limit system for receiving financial support (fishing incomes must be at least 30 % of the total), which excludes subsidies from many small-scale fishers. The interviewed fishers did not see options for remarkably increasing the efficiency of their own fishing activities

A common line of argumentation was connected to the way the EU has negatively affected fishing livelihood in the archipelago; it has decreased the profitability of the occupation in several fronts. Commercial fishers held that a good example of this kind of governance represent EUs decision to stop drift net fishing in the Baltic Sea in 2008, because of the protection of the porpoise (*Phocoena phocoena*) population. Fishers did not see this feasible, because only few porpoises visit the Baltic Sea annually from the Atlantic Ocean. Concerning the study areas of this paper the stop of drift net fishing affects the salmon fishery in the Åland Islands.

Fishermen argued that the EU does not understand northern circumstances and the local fisheries cannot be compared with those, for example, in Greece or Spain. The fishermen claim that when joining the union in the mid 1990s, the national authorities made a turn of attitude. Fishermen preferred also the pre EU subsidizing policy to the current one: it was commented that currently much unnecessary equipment is purchased due to the requirements for investment support. In the market sector it was seen that joining the EU brought a fall in fish producer prices.

When comparing the four livelihood strategy groups, no dramatic differences in the justifications behind the criticism could be detected. The damages for fishing caused by the fast growing grey seal population (*Halichoerus grypus*) were considered as a serious threat to the occupation and consequently the new legislation for forming seal protection areas aroused irritation. Due to the increased seal populations the fishers have been forced to move their fishing areas from outer archipelago very close the mainland, where seal damages occur more rarely. However, the fishers have faced problems in getting access rights to the new fishing waters. Problems in getting financial compensations irritates commercial fishers in the Archipelago Sea like in many areas along the Finnish coast. An interviewed fisherman, who combines fishing with agriculture, did not understand the unequal position of fishers compared with other livelihoods: why does the state compensate losses in connection to agriculture and reindeer husbandry but not in fisheries. Actions by the Åland Government were judged more positively.

Commercial fishers have been concerned also about cormorants (*Phalacrocorax carbo*), because the breeding population has vastly increased in the northern Baltic Sea. Although the damages caused by this species have been quite small up to the present fishers are aware of the serious problems, for example, in the fishery of southern Sweden, where the population has grown for a longer period.

Commercial fishers regard fisheries research as too bureaucratic and distant from the practical life. Many of the fishers claim that researchers on Finnish Game and Fisheries Research Institute (FGRI) and universities have ignored fishers' local knowledge, for example, concerning management of gill net fishery for pikeperch. Fishers provide information to the research in many projects, but feel that they are not sufficiently informed and their knowledge is undervalued. Fishers demand practical research, which would also support the local commercial fishery. Consequently, a local organization of the commercial fishers in the study area has taken the task of promoting more practical research and development. They have initiated projects in order to find technical improvements for preventing or diminishing the seal damages, especially by developing trap nets.

Many of the statements had a moral undertone and concluded that state and the authorities have no will for keeping the outer parts of the archipelago alive. Fishermen emphasized commonly the need for also other types of support than financial assistance. The most typical subjects when motivating the lack of support from the state, authorities and EU included the increased bureaucracy and paper work and authorities' concentration on making new laws, quotas and restrictions, which diminish the fishermen's freedom. One interviewee commented that the authorities do not discuss the drafts, for example, for the regulations with the commercial fishermen. In the Åland islands the authorities in the provincial government were considered to take actions in line with fishermen's needs more often than in the other studied areas. It seems that the smaller physical, and probably also cultural, distance between fishermen and authorities is smaller in the autonomic province of Åland than in the other parts of the archipelago region.

5. Conclusions

The results show that a vast majority of fishermen have a life long commitment to their occupation and are reluctant to leave their home islands. They have a strong conception of a membership in the archipelago community, where the nature, sea and fish are important elements. Fishers are generally rooted in and supported by the local community. Instead of intensifying fishing they have rested on economic flexibility provided by new forms of pluriactivity. The strong emphasis of independence and way of life as positive aspects of the fishing occupation and the non-monetary aims of work (enough to make a living), indicate that most of the interviewed fishermen carry the values and ideas of the 'simple commodity production' life-mode analysed by Højrup (1989). The traditions and life-mode of the fisherman-peasants are important even in cases where wage work contributes most of the household incomes.

Fishers' lack of trust in the fisheries management regimes can generally be regarded more as a norm than an exception and consequently different types of communication and co-operative management systems have been recommended. Co-management, widely defined as sharing the tasks and responsibilities of resource management between stakeholders and the state, has been a concept commonly highlighted especially by the social scientists in the debate concerning the development of fisheries governance (e.g. Sen and Raakjær Nielsen 1996, Jentoft, McCay and Wilson 1998, Wilson, Raakjær Nielsen and Degnbol 2003). One important element in the development of mistrust and low legitimacy has been the emphasis of scientific research, which has alienated itself from the observations and understandings associated with fishing activities (Degnbol 2003, 47). In addition, the different ideals and even language connected to self-employed and wage-worker life-modes form a challenge for co-operation.

The distance between scientists and fishers seems to be growing and small-scale fishers in the study area have difficulties in coping with new pressures from the governance system. It can be concluded that there is a certain disparity between the (top-down) governance system and small-scale fishing, which rests on household-based pluriactivity and local culture. A positive sign is that the commercial fishers have become active in building partnerships to develop the livelihood.

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TABLES

Table 1. Number of interviews in different informant groups.

Informant groups	Number of interviews	Source
Personal interviews with a questionnaire		
Commercial fishers	113	AQCESS project (2002)
Other stakeholders	103	AQCESS project (2002)
Thematic interviews		
Key persons	9	AQCESS project (2002)
Fishers and their representatives	3	Supplementary interviews (2005)
Total	228	

FIGURES

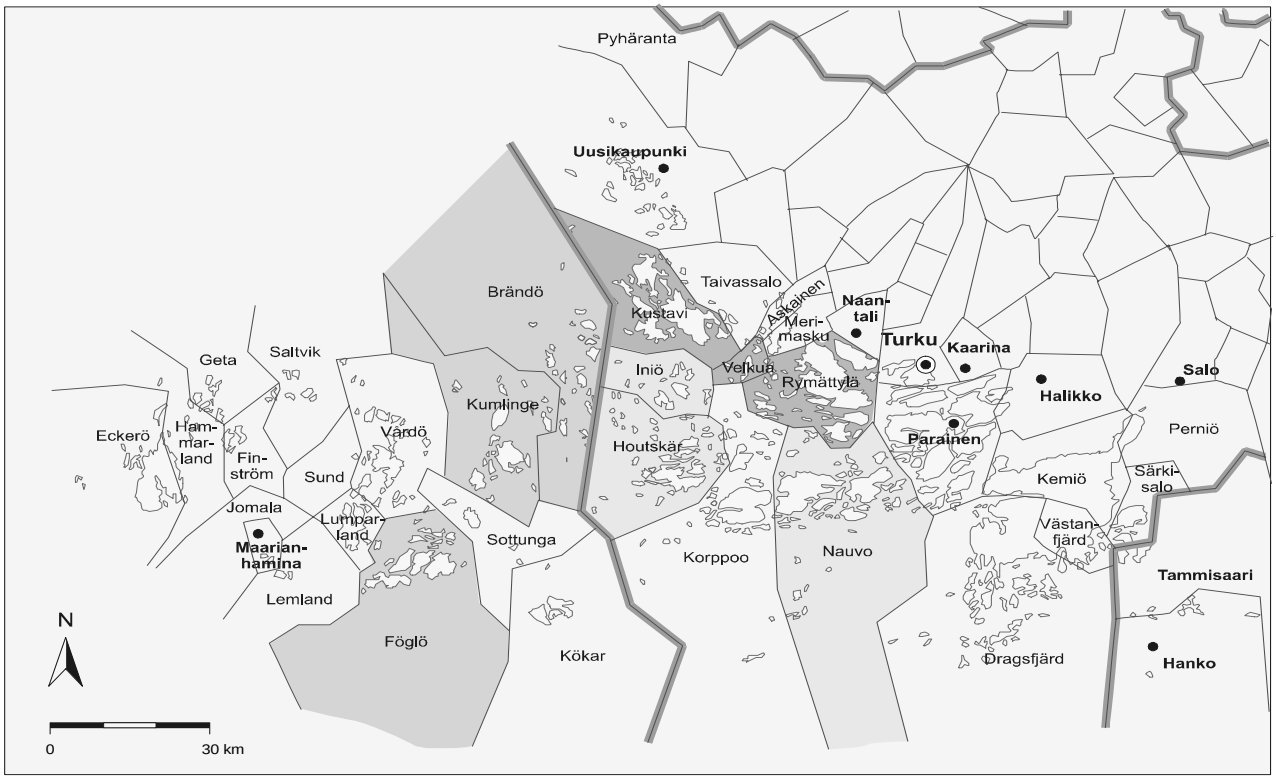

Figure 1. Study areas (9 municipalities) in the AQCESS project.

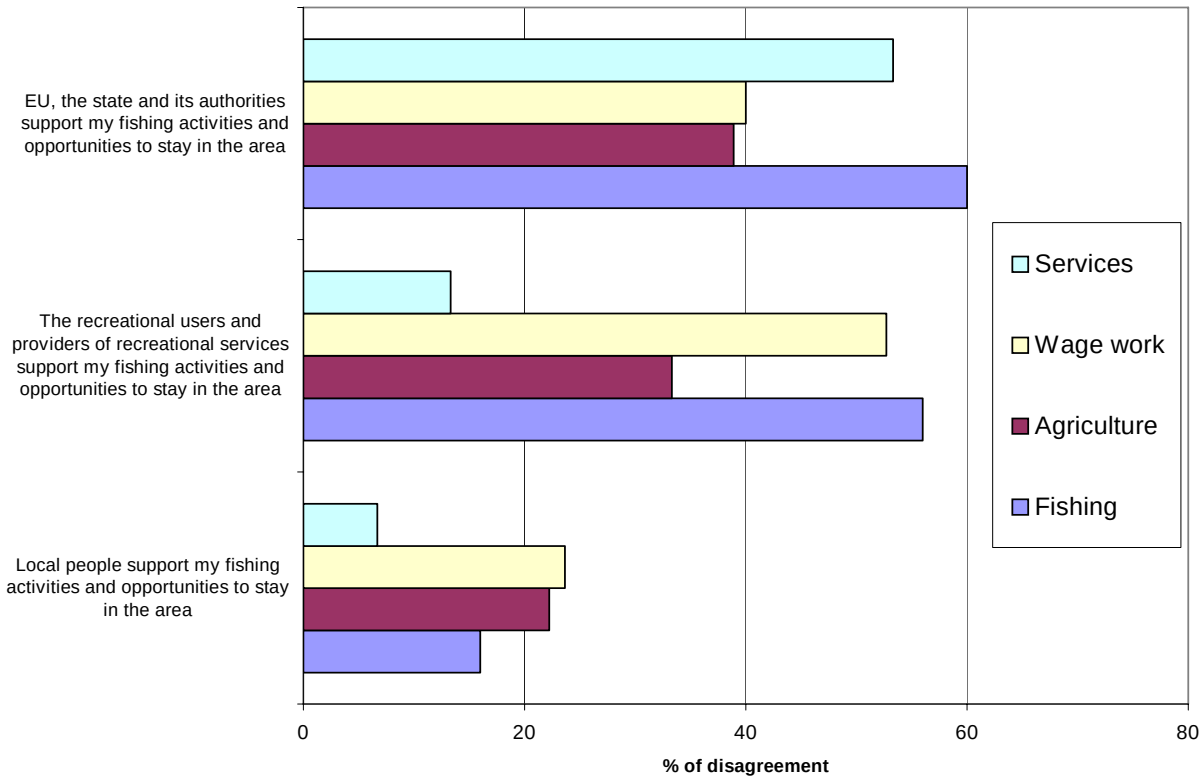

Figure 2. Disagreeing with statements about support for their livelihood from other stakeholder groups.