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Salmon Farming in the UK

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Introduction

Salmon farming may contribute to socio-economic development in remote regions by creating jobs where there are few other means of employment. It may also provide a stable supply of high quality food product for which there is consumer demand. The arrival of salmon farms may lead to conflicts with existing and potential other users of the marine environment. Uncontrolled expansion of the industry may lead to general decrease in environmental quality standards, to pest and disease epidemics among farmed as well as wild fish. It may also lead to a situation on the world market where supply of farmed salmon outstrips demand.

The paper describes the development of the marine salmon farming industry in the UK. A comparison is made between West Scotland and the Shetland Islands, with special focus on the institutional framework that was in place to govern (potential or actual) conflict of interests between salmon farmers and other users of the coastal zone. It is argued here that differences between Scotland and Shetland must be explained with reference to the communicative rationality of the decision making process, rather than with reference to the property rights arrangements or to socio-cultural characteristics of the Scotland and Shetland communities.

Impact of salmon farming

The first experiments in salmon farming in Scotland took place in Lochailort in the mid 1960s. Growth was slow in the early years as multinational companies, such as Unilever through its subsidiary Marine Harvest, invested considerable sums trying to overcome problems of nutrition, breeding, disease and equipment design. By the late 1970s, most of the initial technical and husbandry problems had been solved. The prospect of good returns encouraged other companies to invest in the industry and a period of extremely high growth rates began. Production in Scotland increased from 600 tonnes in 1980 to over 40,000 tonnes in 1991 (SOAFD 1991).

In 1991, there were some 365 sites in operation distributed widely along the coasts of Strathclyde and Highland regions and the western and northern isles (Hebrides, Orkneys and Shetlands, respectively). Direct employment in the industry was estimated at 1,014 full time jobs and 272 part time jobs (SOAFD 1991). Farmed salmon was to replace sheep in terms of export value. The arrival of salmon farming to isolated communities throughout the highlands and islands contributed to reversing a depressing spiral of depopulation and decrease in community services. Schools remained open, roads were being renovated, etc.

With the successful domestication of wild fish species such as the Atlantic salmon the marine environment is no longer the domain of the hunter and his prey (the fisherman chasing wild fish) but it has become the 'world's largest farm'. In the well-chosen words of the Scottish Salmon Growers' Association (SSGA) 'in the future, the sea will remain a major source of food, but only if we respect it and learn to harvest its wealth

sensitively and responsibly. Now we understand better how to farm the sea, to harvest its riches, while allowing its wild stock to prosper. Species such as the *Salmon salar*, the Atlantic Salmon, can continue to grace the rivers of Scotland while the farms can meet the increasing demand for this delicious fish' (SSGA info leaflet).

However, right from the start there have also been far less glowing evaluations of the arrival of salmon farms to Scottish waters. The presence of salmon farms affects the other uses, both existing as well as potential, of the marine environment.

The siting of salmon farms could interfere with existing fishing grounds whether it be for white fish or shellfish (HCAC, p. 387).¹ Especially in exposed areas where sea conditions can deteriorate very rapidly as on the west coast of Scotland it is important that fish farms do not occupy sheltered areas of water for anchoring which have traditionally been safe havens in bad weather. This affects both commercial fishermen as well as recreational yachtsmen (HCAC 1990a, p. 411). Salmon farms may disturb access to Ministry of Defence depots, of which there are several on the Scottish west coast. Sea cages, and the associated land based facilities, may be located in areas of high scenic quality (HCAC 1990a, p. 107). The pristine beauty of the Scottish landscape and seaside is valued not only by local residents but also by second-home owners and by tourists from all over the world.

The intensive culture of salmon has a range of effects on the environment and its wildlife and most of these were not yet fully understood (HCAC 1990a, p. 128). Soluble nitrogenous and phosphorous waste products are excreted by the fish and also leach from the food pellets. The disturbed nutrient balance resulting from this may contribute to the risk of algal blooms. Solid waste, resulting from fish faeces and uneaten food, collects below cages, smothering the seabed and benthic organisms (decrease in biodiversity and 'site souring').

A variety of chemicals is used in the industry for disease and parasite treatments, disinfection and antifouling of nets and cages. These chemicals are used in the open sea, their effects can not be confined to the site, but pass into the wider environment. Dichlorvos, the organophosphorus pesticide used to kill sea lice (*Lepeophtheirus salmonis*) on farmed fish is also toxic to arthropods, including commercial species such as crabs and lobsters, and it is particularly harmful to larval stages. Antibiotics are widely used for the treatment and prevention of bacterial diseases such as Furunculosis, Vibriosis and Bacterial

¹ This overview of the effects of salmon farming on other users of the marine environment in Scotland is based on evidence presented in a Report by the House of Commons Agriculture Committee on Fish Farming in the UK (HCAC 1990a, Volume I and II, 1990) to be discussed later in this paper.

Kidney Disease. There is concern that continued use of antibiotics and the persistence of drugs residues in the sediments could encourage the proliferation of antibiotic resistant bacteria. This factor was already complicating disease treatment for neighbouring fish farmers, but the implications of antibiotic resistant bacteria on human health and the wider marine environment were unknown.

The build-up of natural growth of algae, etc. on nets and cages, causing for example reduced ventilation of the cage with clean oxygen-rich water, could be prevented by using paints containing antifoulants such as Tri-butyl Tin (TBT). Research had shown a variety of acute and chronic effects of TBT on estuarine and marine organisms, including shell thickening, meat reduction and reproductive failure in a number of molluscs (SWCL 1988, p. 20). The effects of TBT have been firmly implicated in the decline and failure of shellfish operations in the vicinity of salmon farms. The UK Government banned retail sales of TBT-treated nets in early 1987 and further controlled the use of TBT in July 1987.

Predatory wildlife such as common and grey seals, herons, cormorants and shags and occasionally otters and mink were attracted to salmon farms as a source of food. Even if preventative measures were taken (e.g. the use of anti-predator nets and siting at a distance from seal colonies and heronries) fish farmers could still suffer considerable losses from predation. In such cases they might actually resort to the shooting of seals and birds.

There were also considerable concerns raised by wild salmon anglers and conservation societies about the potential effects of salmon farms to wild salmon stocks, in terms of diseases being transferred from farmed to wild salmon, confusion of the homing instinct and also the long term genetic impact of interbreeding between farmed salmon escaped or being released and wild salmon (HCAC 1990a, p. 383). Wild salmon fishing rights are leased to those that can afford them, this commercially very attractive business implies not just right owners but also ancillary services such as hotels, gear shops etc.

The Hardin parable.

Users of the coastal zone, even if they operate at large distances from each other, affect each other's use and are affected by each other's use. Each user is capable of subtracting from the welfare of others. It is not possible to exclude oneself from the effects of the use of others. Therefore the marine environment in which fish farms operate can be defined as a common pool resource (Berkes 1989, p. 3).

In his famous article 'The Tragedy of the Commons' Hardin stated that if the exploitation of a common pool resource is not regulated, the resource will inevitably collapse and become of little or no value to anybody -the famous tragedy of the commons. Each user of it will be tempted to increase his or her use gaining the full benefits while sharing the costs with all

other users. Even if the over-all carrying capacity (or carrying capacities if there are various uses) of the ecosystem was known, for each individual user there is no incentive to stay within it. No user will be stimulated to unilaterally restrain his or her use because in an unregulated situation others will immediately increase their use to fill in the open space. Eventually all users will interfere with each other in an unregulated and unrestrained way. 'Freedom in a commons brings ruin to all' (Hardin 1968, p. 1244).

In his article Hardin also argued that one of the most difficult problems in governing common pool resources is the lack of criteria for judgements and systems of weighting to realize the 'greatest good for the greatest number'. What is good for one group of users cannot be compared with what is good for another group because the goods are incommensurable. 'Incommensurables cannot be compared' (Hardin 1968, p. 1244). Hardin stated that although theoretically speaking it may not be possible, in real life we explicitly or implicitly commensurate the incommensurables. 'It is when the hidden decisions are made explicit that the argument begins'.

Given the common pool nature of the marine environment one might expect problems with the *legitimacy* as well as with the *quality* of management decisions (see also Jentoft, 1989).

There are technical problems as to the lack of information on which to base decisions, and to the practical difficulty to enforce these decisions. There are problems with establishing the exact nature of ecological interdependencies, carrying capacity, etc. Salmon farming is still very young industry. We do not fully know its effect on ecosystem. Given non-statutory nature of water, it is likely that some effects are pervasive rather than local (this is to some extent different from land-based developments). Marine ecosystems are very complex (little is known of how they function and what we know is researched to large extent after salmon farms were introduced). There are problems of enforcement. These are practical problems as to obtaining the technology and equipment to monitor salmon farming, to actually measure non-point emissions from floating cages, to actually count the numbers of salmon which is licensed, etc.

But there are also evaluative problems as to balance possibly conflicting interests. Different uses represent different values and these will have to be evaluated. Although Hardin recognized that the problem of balancing diverse interests cannot be solved by only applying techniques available from the natural sciences 'demanding little or nothing in the way of change in human values or ideas of morality' (Hardin 1968, p. 1243), he didn't provide a perspective on bringing about acceptable compromises. 'The problem for the years ahead is to work out an acceptable theory of weighting' (Hardin 1968, p. 1244). Drawing from the work of Jürgen Habermas, it is argued in this paper that the diversity in views held by different users of a common pool

resource may converge in communicative processes governed by rational argumentation.

The point to be made is that even if there had been formal planning authority, it is not likely that the technical and socio-political problems that arise because of salmon farming could have been solved easily e.g. through monetary incentives and bureaucratic regulation (as the property rights school argues) or through shared values (as the community approach argues). There is just not enough information to solve externalities through monetary compensations and/or bureaucratic controls. There are conflicting interests, representing conflicting values. And it is not at all likely that these will converge.

Institutional framework in Scotland

Above, it is argued that even if there had been planning authority, the problems are difficult. However the biggest problem in Scotland was that there was no formal planning authority for the use of the coastal zone. Before marine salmon farming arrived coastal zone had not been used intensively. Only around ports there were Harbour Authorities. The existing (formal) institutional framework pre-dated intensive exploitation of coastal zone.

Under the Town and Country Planning (Scotland) Act 1972 local authorities have planning authority. Planning control does not extend beyond the low water mark. Planning system applies to land covered by fresh water, and it therefore covers the establishments of salmon hatcheries, trout farms, etc. But local planning authorities (LPAs) are not in position to control the mooring of salmon farming cages or the carrying out of any other activity at sea.

Even though LPAs do not control seaward development, they are affected by it. They have to provide local infrastructure (roads, bridges to newly established salmon farms). They have to give planning permission for land-based facilities. In worst case their decisions in these matters are pre-empted by de facto establishment of salmon farm. In best case they are informed of applications, but the decision will in any case be prejudged towards pleasing the applicant. The application has been made already, there has been no opportunity to pro-actively guide development e.g. by zoning.

Local authorities are also dependent on the jobs to be provided by salmon farms. They tend to be afraid that developer will withdraw application and move to other area, if the conditions they attach to development are too severe, or if the support they give as local authority is too meagre. Local authorities can be played out against each other, especially by firms that are not dependent on particular region for sites.

Even though local authorities do not control marine development, the arrival of salmon farms was not a complete random process.

The Crown Estate Commissioners are owners of the foreshore (between high and low water mark) and seabed under territorial sea (out to twelve miles). The CEC are not a government department but a statutory corporation created by Act of Parliament (Crown Estate Act 1961), and appointed by Sovereign to manage Crown Estates. Under feudal law the Sovereign owned the land, foreshore and the sea-bed as far as it could be defended from the shore (three miles at that time). In 1760 George III surrendered the surplus obtained from the estate to Parliament in return for provision of Civil List.

Each marine salmon farm needs a permit from the Crown Estate Office to moor farm to seabed. Crown Estate collects a fee dependent on tonnage of fish and prices of salmon at Billingsgate market.

Crown Estate Commissioners although formally speaking just owners of the seabed assumed a 'voluntary role' in planning marine salmon farming development. Until October 1986 leases were issued without consultation. Committee of Inquiry into the Functions and Powers of the Islands Councils 1984. Secretary of State for Scotland and CEC agreed a voluntary consultation procedure. Proposals were advertised in local press and by notices at post offices, copies of applications sent to wide range of consultees (list of consultees attached).

It is this voluntary planning role of the CEC that has been so controversial. In the following I will discuss three of the major issues, each by presenting both sides of the argument.

The controversy issue by issue

1/Parties to be consulted complained that they had 'difficulties to participate constructively and meaningfully in the consultation process'. They complained that information supplied by lease applicant was often inadequate, data on pre-consultation leases (pre Oct 1986) near the proposed development was unavailable, and the time for response was insufficient to allow the necessary site survey and secondary consultations. CEC rarely referred back to consultee for further details or discussion of conflicting advice, CEC were insufficiently resourced to respond to detailed inquiries.

CEC argued that some leases were contended but technically speaking they made few bad decisions. 'We are more efficient than Whitehall'. In response to local complaints, CEC developed Very Sensitive Area concept.

And it must be noted that indeed the formal constitution of the CEC role was such that they had no statutory obligation to allow public involvement in their decision making process, neither was their a right of appeal for anyone.

2/No surprise therefore, that interest groups complained about the lack of public accountability and democratic control in the CEC decision making process. LPA applications have to be published in case of bad neighbourhood development and within

conservation areas. Applicant has right of appeal to Secretary of State if permission is refused or made subject to conditions. CEC procedure did not have a right of appeal.

Interest groups argued that role as planning authority incompatible with role as landlord. CEC would be both control authority as well as beneficiary of the rental income accruing from lease allocations. Note that this combination of functions (control over use and beneficiary from use) in one hand is the normal situation for any private owner, but the fact that interest groups made this argument implies that they saw CEC as publically accountable owner rather than as private owner (who can do what property under his control as he likes). Also note that Hardin argues that it is precisely the fact that control over use and benefits from use are matched as with exclusive ownership (such as by CEC) that will actually prevent overexploitation of the resource. It is in the best interest of any owner to exploit resource in sustainable way, sole owner can actually do so because there is no freerider, there is no dissipation of rent as in open access situation. Clark has shown that even if there is a monopoly owner of the resource, when interests rates are sufficiently high it may be in the owners long term interest in overexploitation. I will come back to this.

CEC could have defended themselves by arguing that the way they did it was the way they were supposed to do it. To do it differently would be to go against the explicit will of Parliament at time CEC was formally constituted. 'It is the general duty of the Commissioners to maintain and enhance the value of the Crown Estate and the return obtained from it, but with due regard to the requirements of good management'. Leases must be 'for the best consideration which can reasonably be obtained, having regard to all circumstances'. Directions can be given by Chancellor of the Exchequer, and Secretary of State for Scotland. Surplusses will go the Exchequer. It was considered essential requirement of the constitution of Crown Estate that they should be independent of Government.

Government introduced Bill with specific reference to put CEC at arm's length from Government Departments. There were one or two Members of Parliament complaining about new Bill (it would give CEC a 'monopoly of the seabed', and also 'being landlord is not just maximising profits it also includes duty to the community and stewardship to land') but it was decided that CEC should operate separately. Note that Commissioners although not directly elected or directly accountable to local electorate they are constituted by Act of Parliament, hence part of the UK democratic system, albeit organised at arms length of daily politics.

3/Interest groups also argued that there was no government policy guidance, no overall plan where, what, who. There were no publicly debated priorities.

The CEC policy was according to the 'first come, first served' principle. It worked out that multinationals well equipped to be the first were to take big share of the pie. Rush for the best

places. Gold rush. This is where I got the colonisation metaphor from. White settlers. Stop the Clearances, Settlers home!

There are several considerations which are taken into account if locally owned companies are to be compared with non-locally owned companies. Firms that have no local ties but that operate or can operate at several locations have more leverage to bargain for attractive conditions at one particular site. They may withdraw application and/or withdraw investment if extra conditions are imposed. Non-locally operating companies can impose their will on local authorities. Local authorities are played against each other. They want to attract employment and are therefore forced to accept certain conditions, and even to provide local infrastructure etc. to attract development.

If farm is also non-locally owned then resource rent would not be locally re-invested but would fly out of region to central office/non-local share holders. Non-locally owned companies might have more difficulties to integrate with other sectors of the local economy/society.

There also may possibly be opportunistic behaviour on part of multinational: reap short term benefits and go somewhere else. It was thought that local company with fewer alternatives would have longer term perspective, would be more careful with exploitation, would spend more in local economy, etc.

CEC argued that it was formally impossible to put more criteria to identity or nature of person/company applying for development (EU regulation, common market, open competition). Permission goes with the land not with the applicant. CEC also argued that multinational companies had done great deal in developing and spearheading the industry. If one is not going to reward innovation properly, there will be no incentive to do research and development, and R&D is in the public interest.

Institutional framework Shetland

It is all the more interesting to study the development of salmon farming in the UK because the system under which the industry developed in Shetland differs remarkably from Scotland. Under a Private Act of Parliament (Zetland County Council Act 1974), the Shetland Island Council (SIC) has unique powers to regulate all developments in its coastal waters. Council has broad powers as Harbour Authority for the whole area around Shetland. Act was response to developments in off-shore oil industry, but it was deliberately framed to include development other than oil (at that time one thought only of mussel farming; Shetland doesn't have native salmon due to lack of freshwater rivers). Anyone wishing to undertake off-shore developments must obtain a Works Licence from the SIC and comply with the conditions attached to it.

All applications for works licenses must be advertised. SIC consults directly with interest groups (it must be noted that

sometimes these are just other branches of the SIC itself). Decisions on applications are taken by Council with all observations or objections being considered in public. Both applicant and objectors, who are aggrieved by the Council's decision to refuse or grant a works licence have a right of appeal to the Secretary of State for Scotland. A local inquiry will be held and the Secretary of State publishes a decision after considering the inspector's report.

Unlike CEC's decisions on leases, decisions on works licence applications are taken in public and by a democratically elected body. In works licence procedure both applicant and objectors have right of appeal. In CEC there is no statutory right of appeal, only a voluntary Advisory Committee. Local inquiry which precedes Secretary of State's decision provides opportunity for public involvement and forum for debating the various options. CEC procedure consultees act in isolation and do not have opportunity to comment on representations made by each other.

SIC developed a Works Licence Policy which aims were 'a/ to encourage the development of a salmon farming industry in Shetland, provided that it does not significantly interfere with existing fishing, navigation, recreation and environmental interests, b/ to use salmon farming as a key element of Rural Development Strategy and to ensure that there is as great a geographical spread of the industry and its participants as possible, bearing in mind the natural and technical limits on potential sites, c/ to maximise the benefit to the local economy.

SIC only granted works licences to applicants that could demonstrate a 75 percent local shareholding. Existing farmers were only permitted to take a minority shareholding in other salmon farms, subject always to appropriate agreement between the parties and the written consent of the Council. SIC would give first preference to resident occupants of the nearest possible shoreline to a particular application site. The SIC policies led to a spread of salmon farming throughout Shetland, it gave the 'small local chaps a chance to get in', it spread ownership among as many people as possible.

Discussion

For social scientists the interesting question is how can difference in levels of conflict be explained, or how can difference in legitimacy of decision making process be explained. I will briefly go into three different types of explanation, notably the property rights paradigm, the communitarian perspective and the communicative perspective

Property rights approach.

From a property rights perspective one could argue that there is no problem at all because there are clear property rights, if not for the water column itself then at least for the seabed to which cages must be attached. It is therefore in principle possible to exclude outsiders and it is also possible (to some extent) to control users who have obtained a lease. Theoretically speaking the CEC as sole owners of the seabed

should be able to control development through restrictive leasing as well as to attach conditions to the lease.

This does not take into account however that there are users of the coastal zone that don't use the seabed as such but still suffer the cost: local authorities, yachtsmen, fishermen, hotel owners. These incur costs that would have to be compensated to get efficient solution, or they would have to compensate CEC for not developing. This opens the possibility e.g for potential users not subject to CEC control but that might harm existing users that are subject to CEC control and protection to threat with development and ask CEC for compensation not to develop (sewage that might harm salmon farmers). One must also note that the CEC did not take into account the possibility of non-development. It wasn't even possible for conservation trusts to buy stretches of coast to prevent development. Planning is development control in Scotland. Government through CEC is under pressure to provide jobs to remote regions, even if this includes some deterioration of environmental standards

It assumes that CEC has only income from marine estate, and that it will be in its own long term interest to not overexploit this income. In fact CEC may overexploit marine environment in short run, abandon marine estate and put money in other investments. Sustainable rate of return on exploitation of marine estate is likely to be lower than rate of return on industrial projects (Clarck). More industrial uses (that is uses that are more capital intensive and make more use of non-renewable energy) are favoured over more capital intensive uses. Historical users may be less profitable than new users. They would have to be compensated. Mussel farming is not very profitable, salmon farming is very profitable. We will only see salmon farms, no mussel farms. There will be fewer people employed. Society at large is interested in keeping as much people at work as possible. This is also historical meaning of common property.

In any case the property rights approach assumes that incommensurables can be made commensurable through putting monetary value upon them. This is highly problematic both from an ecological as well as from a social-cultural point of view. Not all value embodied in nature can be put in monetary terms. Nature as such cannot be compensated by money. Also not all socio-cultural aspects can be put into monetary terms. It might just be that we want to secure patches of wild nature. These do not have monetary value but we still like them.

This does not address the issue of whether existing property arrangement is also most legitimate arrangement. Note that Shetlanders have challenged ownership status of CEC in Constitutional Court. The point is that the actual distribution of property rights is historical fact, it is not necessarily also most desirable distribution of property rights. For property rights distribution to be legitimate it must e.g. show to somehow reflect the interests of all concerned. In response to this one might argue that the CEC are not just any sole owner but a non-departmental public body under political control of

Exchequer will develop the seabed to maximise profit in public interest.

CEC cannot just arbitrarily exclude anybody, even not if this was to give the local chaps a chance. CEC is subject to public policies, if not to policies particularly designed for marine development then at least to policies that apply in general to economic action, such as general development policies (permission goes with land not with person) and anti-trust policies (CEC being sole owner must be very cautious not to be seen as exercising monopoly power, hence a first come first served bases).

It also overlooks that formal ownership does not necessarily imply actual control. Both in Scotland as well as in Shetland CEC are formally speaking owner of the seabed. In Shetland, SIC controls access to coastal waters not through ownership of seabed but through Works Licensing as Harbour Authority. Apart from legal control, one must also look at economic control. SIC has funds available to support local ownership (see below). Note that actual control (juridical ownership and/or economic power) does not necessarily imply legitimate control (see below). SIC must not only have access to material resources but also to symbolic resources (they must be accepted as management authority).

Community approach

Another explanation of the difference in legitimacy of SIC as compared to CEC control might be that in Shetland users share common values. This is the popular explanation for the success of the Shetland arrangement as opposed to the Scotland arrangement. Shetland is after all an island community, where everybody knows everybody and everybody is dependent on everybody as well as on long term productivity of ecosystem. This line of argument would however be equally true for West Scotland communities, and communities on Hebrides. One could argue that Shetland because it has funds from oil is just better able to actualise its concerns for socio-cultural identity, as well as ecological sustainability. SIC was able to provide funds to local chaps to get into industry. Local owners/operators are less dependent on outside capital, either from shareholders or banks. This is possible a valid interpretation. But this line of argument is not single-mindedly based on a socio-cultural interpretation but includes an analysis in terms of access to material resources to actualise and protect these socio-culturally shared values.

We must note that factual control however does not necessarily mean legitimate control. The SIC may very well have been in position, de jure and/or de facto, to control access and regulate use, but for this control to flourish and to last it must be perceived as legitimate, it must be accepted by those affected on the merits of its practical consequences. For actual authority to be legitimate authority its exercise of control must produce consequences that are universally acceptable (Habermas).

Below I will argue that in fact conservation groups were as critical about SIC decisions as they are about CEC decisions. It is not the actual decisions but the way decisions are made that makes SIC system more legitimate (open debate between all concerned, right of appeal).

Both in Scotland and Shetland there is the difference in value-orientation between those that are materially dependent on development and those that are dependent on non-development. Given structure of ownership in Shetland (locally owned) as opposed to Scotland (non-local ownership), there may be less suspicion, less difference between non-locals and locals in Shetland than in Scotland. This is not the cause but the result of differences in the institutional set-up. Therefore a socio-cultural interpretation along these lines doesn't suffice.

If we look at extent to which values are shared between users in Shetland as compared to Scotland it must be noted that in both cases there is a difference between conservation interests and development. Non-local conservation groups are equally (if not more) concerned about salmon farming development in Shetland than about Scotland. And they are equally critical about actual management decisions of SIC. SIC is as development oriented as CEC. There are no no-go areas in Shetland. Note that zoning is the communitarian way to deal with conflicting interests, conflicting values. This is what anthropologists call fissioning. If there are unsurmountable conflicts of interests, values, if traditions are interpreted in diverging ways, than community will split into separate communities with more homogeneous membership.

Representative of conservation group actually argued that: "in Shetland system is right but the values that they put into it are not right". Civil servant of Scottish Office told me that people don't like the process because they don't like the outcomes.

Communicative approach

The main difference between CEC and SIC decisions is the extent in which they are validated with arguments.

Appendix

LIST OF CONSULTEES FOR CEC LEASE APPLICATIONS

Existing Leaseholders	Recorded Leaseholders
	Other Potential Developers
Landowners/Tenants	Recorded Landowners
	Scottish Landowners' Federation
	Scottish Crofters' Union
	National Farmers' Union of Scotland
Fishing Department	Scottish Office Agriculture and Fisheries
	(formerly Department of Agriculture and Fisheries for Scotland)
	Scottish Fishermen's Federation
	Local Fishermen's Association
	District Salmon Fishery Boards
	Salmon Fishery Owners
Navigation	Department of Transport
	HM Coastguard
	Royal Yachting Association
	Port/Harbour Authorities
	Ministry of Defence
Environment	Nature Conservancy Council for Scotland (until 31.3.92)
	Countryside Commission for Scotland (until 31.3.92)
	Scottish Natural Heritage (from 1.4.92)
	Scottish Wildlife Trust
	Royal Society for the Protection of Birds
	Association for the Protection of Rural Scotland
	National Trust for Scotland
Other Government Departments and Agencies Board)	Highlands and Islands Enterprise (formerly Highlands and Islands Development Board)
	Crofter's Commission
	Forestry Commission
Public Authorities	Regional Planning Authority
	Local Planning Authority
	River Purification Board
General Public	Respondents to newspaper advertisement
	Respondents to Post Office notices
	Special Interest Groups

(SOEnD 1991, p. 31)