February 16, 1998

Governing Coastal Resources in Western Ireland and Northern Norway: A Comparative Analysis

by

Audim Sandberg
Department of Social Sciences
Nordland College, Bodo, Norway
and Visiting Scholar
Workshop in Political Theory and Policy Analysis
Indiana University
Email: Audsanb@indiana.edu

Paul Fingleton
EIS Limited, Dublin, Ireland

Workshop in Political Theory and Policy Analysis
Indiana University, 513 N. Park, Bloomington, IN 47408-3895, Tel. #: (812) 855-0441

Governing coastal resources in Western Ireland and Northern Norway - a comparative analysis.

by Audun Sandberg and Paul Fingleton

Comparative institutional analysis in the environmental field is a demanding task. Not only must the different institutional solutions to the collective decision challenges of resource governance be brought on such a form that comparisons are possible. But also the normative basis for governing institutions must be uncovered to a degree that permits comparisons. This is often done through historical analysis of their origin combined with studies of their adaptation to changes and investigations into their self-perpetuative capabilities. As was emphasized in chapter 2, institutions for governing natural resources are in addition arranged in layers, where the same resource can have several different institutions pertaining to govern it - often originating from different periods in the development of modern European societies. This complex empirical situation demands inclusive methods that does not merely compare two or more different institutions governing the same type of resource, but also compares two or more different evolutionary processes - including their in-built dynamics of further change.

The coastal resource governing institutions of Northern Norway and Western Ireland lend themselves to such an inclusive comparative analysis. Although far from complete, the long enduring institutions of both these coasts have written documentation dating back more than 1000 years. In recent years, the conglomerate of contemporary institutions governing the coastal resources here are also well researched and their workings are well understood (Fingleton & MacCann 1996, Sandberg 1996). Together, this favorable situation enables us to undertake comparisons that are fairly close to the ideal of a combined evolutionary/comparative analysis.

The overriding theoretical question in a comparison of two Atlantic coastal regions, is the role of common property type social institutions in these environments compared to the official picture of supremacy of public property based institutions. A number of studies by social anthropologists, ethnologists and sociologists has documented that the perceptions in coastal communities and among fishermen, mussels farmers and aquaculturalists are very often those of a "coastal commons" which are mainly uncodified, but which governs the designing of informal rules that are made as supplements to the official laws and regulations. Thus, one hypothesis goes, the normative base of governing institutions for coastal resources also contains a layer of rules that are anchored in the notion that the coast and its great variety of resources is the common property of coastal dwellers. We shall in the following see to what extent we can identify such rules and perceptions, and what consequences these have for the governing of coastal resources - especially when such governance comes under pressure of new technologies and new and more integrated ways of utilizing coastal resources.

Origin of Western Ireland Institutions

Over the centuries the influence of various influxes of population and invaders have led to the emergence of a complex multi-layered network of property rights in Irish coastal, estuarine and riverine waters.

The earliest settlers in Ireland were primarily fishermen and beachcombers along inland rivers and lakes and the coast of the island with fish providing the principal food item. The importance of fish in the diet continued to Neolithic times when social organization had advanced sufficiently to be able to produce the great megalithic monuments still evident around the island. The salmon had achieved some significance within this society and links have been made between the abundance of salmon in the rivers and the location of some of the major megalithic monuments such as those of the Boyne Valley. This significance can be traced throughout the late Bronze and early Iron Age period and the ancient stories and sagas of Ireland which reflect this period in history frequently impart the high status of the salmon which appears again and again in the story cycles and legends. Although no such details are available, the special status of the salmon must have necessitated the evolvement and operation of a set of rules and laws governing its use and exploitation.

The first clear picture of a system of regulating coastal resources in early Ireland emerges under **Brehon Law.** From about 400AD, Ireland was completely celticised and the society was regulated by the highly developed Brehon Law system. The basic tenet of the law system was one of conflict minimization and avoidance with a complex system of ownership, land classification and division based on the membership of two pivotal institutions, the *Túath* or small kingdom which was tribute paying to a king or *Ri* and the *Fine* or joint family unit. This law system endured in Ireland up until the early 17th century, sometimes absorbing, sometimes working simultaneously with the regulatory systems of the early Christian, Viking and Anglo-Norman establishments.

The Brehon law tracts reveal that Irish society attached great importance to the principle of the private or family ownership of property and this extended to fishing rights. A comprehensive tract of law on coastal and sea issues was developed called *Muirbreatha* or 'sea-judgments'. Unfortunately the full text is now lost but the few quotations preserved give an impression of the kind of issues and areas of conflicts dealt with. Detailed legal guidelines on the ownership and use of estuaries, riverine and coastal waters would probably have been outlined in the lost tracts of the *Muirbreatha.* However, it seems likely that although these waters were held in common as part of the kin land attached to the *Fine,* they were in private or family ownership and were not common property to a larger group like a clan or a village. There were some common rights and minor concessions such as the right to a "quick dip of a fishing net in a stream" but the value of the this land was clearly recognized and jealously guarded with the proximity of land to a river, estuary and the sea significantly increasing its value.

A major element of coastal resource use in early to medieval Ireland was the harvesting of salmon. This was undertaken for the most part by the use of fish weirs called *"cor a eisc".* Privately owned fish weirs were recognized and protected by the earliest laws and one of the few

rights of access a landowner had to his neighbors' land was to erect a fishweir. The construction and use offish weirs was common to many Irish waters and would have been closely regulated as their annual catch would have provided a valuable rental income to the owner. Fish weirs were extremely common until recent times on most Irish rivers.

Riverine weirs were also employed to catch salmon, placed wholly or partly across the span of a river, catching the salmon on their way upstream. This type of weir consistently caused difficulty by obstructing navigation and diminishing fish stocks and their use was controlled by legislation on many occasions under Brehon and later English law. An early Brehon law tract states that "is not to build a weir more than one third of the water". The majority of the fishing weirs of medieval Ireland were in the hands of monasteries, chiefly as a result of grants made by their founders. The monastic claim to fishing rights seem to have been universally recognized by the nobles and later by the English Crown after the Anglo-Norman invasion. Most of the monasteries leased their weirs, but part of the rental generally included a regular supply of fresh fish.

The Viking invaders staked their claim on salmon fishing rights establishing their own salmon weirs at strategic locations, such as the valuable Lax Weir on the River Shannon at Limerick.[1] The Vikings were not the only invaders to recognize the value of the rich river and estuarine waters of Ireland. Very soon after the invasion of Ireland by the Anglo-Normans, the fisheries of the principal rivers also attracted the notice of the English Crown and the Anglo-Norman Barons. They were conveyed in early charters as part of the newly created baronial tenures - with rights *"in aquis, in ripariis etin piscariis "*[2] A number of river fisheries were held by the English king in late medieval times, notably the principal salmon weirs on the River Shannon at Limerick and Athlone and on the River Corrib at Galway. These royal weirs were a valuable source of revenue, eagerly sought for rental by merchants. Under English law the king also claimed the tidal reaches and fisheries of every navigable river by his prerogative.

Thus a network of individual property rights for coastal resources emerged under Anglo-Norman rule in Ireland. However, as time went on the many rights assumed by the Crown and the Anglo-Norman barons became inoperative in many parts of the country. The Gaelic chiefs reclaimed their former territories and the Anglo-Norman settlers adopted a number of native Irish laws and institutions that were still alive "underground". By late Medieval times a very complex web of property rights had developed in Irish coastal, estuarine and riverine waters.

In the West Galway study area (Chonnaught) the O' Flaherty's were during the middle ages the prominent Gaelic family, ruling a vast tract of land west of Galway according to Brehon Laws and native institutions. Galway City had emerged by the middle ages as a prosperous city state

1 Lax is the Danish word for Salmon and also appears in other Irish placenames such as Leixlip, CO Kildare, the "Leap of the Salmon"

2 Hore H.F. *An Inquiry into the legislation, control and improvement of the Salmon and Sea fisheries of Ireland.* The Anglo - Normans and the king himself sometimes had difficulty in wresting the rights to the fisheries from the native families and especially from the monasteries! In the year 1216 King John was obliged to purchase from the Bishop of Limerick, "by a charge often pounds of silver yearly upon the assize of that city, the episcopal claim to the mill seats and fishery there, which he had granted in 1202 to William de Braose, Lord of Bramber in Sussex, together with the whole of the shire - the Bishop being said to falsely challenge the royal right."

controlled by Anglo-Norman merchants and bankers among whom the Martins were prominent. There was much trade and interdependence between the two groups, but conflict also ensued from time to time. O' Neill[3] reports that in 1389/90, Walter de Bermingham - Lord of Athenry, complained that certain Irishmen from Connaught were poaching his waters. The king ordered the sheriff to put a stop to this and commanded the mayor of Galway to prevent the sale of illegally caught salmon in the city!

These Gaelic chiefs and Anglo Norman lords whose lands bordered on fishing grounds benefited directly from landing rights and other duties imposed. For the right to use the fishing grounds in safety, fishermen from all over Europe paid certain dues to the local magnates whether Gaelic or Anglo-Norman. Local families benefited considerably from the seasonal visits of the fishing fleets, imposing charges for fishing in their bays, using the shore for salting fish and for drying nets. By the late 14th and late 15th century considerable tributes of money were being given to the local lords by vessels fishing their waters. Irish families along the west coast rented out "their" fisheries to foreign fleets, frequently enraging the English administration, especially when such local arrangements were made with vessels of the Portuguese and Spanish fishing fleets.

The general impression from the range of early law texts and the other early sources is that fish formed a significant part of the diet in Ireland and that salmon in particular was considered a high status food. Salmon was one of the principal types of freshwater and estuarine fish to figure in the trade of later medieval Ireland and was exported in particular into England in large quantities with vessels from Bristol and other ports in England coming to the west of Ireland to buy salmon. Extensive records also testify to a prolific trade with France, Spain and further afield. The value of the salmon exports in particular were increased by the fact that at this time there were around 100 days per annum of religious abstinence from meat. Not only did private households depend on a supply of salted fish for winter consumption, but no army could at that time be marched or subsist in camp without fish. The most extensive trade in salmon was located in the west and north of Ireland and when subsequently the herring became plentiful in the same areas in the 15th and 16th centuries, the local ruling families (here for the most part native Irish) prospered and were in a position to endow religious houses, build bridges and improve their castles.

Political developments from the beginning of the "modern age" - the 16th and 17th century - brought fundamental changes in land/coast ownership and resource management practices in Ireland. These were added as a "modern" layer of resource governing institutions over the traditional layers (mainly Celtic and roman catholic medieval institutions). First the 1300 years of unbroken property rights of the powerful Irish monasteries were dismantled by the Protestant Reformation and the monastic lands and associated rights were claimed by the English Crown. One of the main charges brought against the monasteries was their "illegal intrusion" into a coastal zone which according to the new legal doctrine should now be interpreted as the "king's waters".

Second the Nine Years War, the Cromwellian conquest and the consequent establishment of the plantations of the 17th century, was a fundamental institutional change in Western Ireland. It

[3] O Neill, T. - "Merchants and Mariners in Medieval Ireland"

effected a complete change in land ownership in Ireland. Cromwell divided the country into two parts - Connaught (including Clare) and the remaining 26 counties. Those who had been involved in the war lost all their estates and their property rights. All those existing landowners who had not been involved were transplanted to Connaught and received a proportion of the amount of land which they had previously held elsewhere. The remaining 26 counties became part of the commonwealth and all lands were granted to English and Scottish settlers. The aim of the massive confiscation and re-distribution of land was to overthrow the long enduring native political, administrative and law system and to secure that the power of the Gaelic lords was finally broken.

Charles I had begun in the early 17th century a process of wresting the rights to coastal and marine waters from the landowners. This process was continued during the Cromwellian transplantations and when many previous estates were re-granted, but with limited or no coastal or riparian rights. By the time of the Restoration, the foreshore and territorial waters which had been "owned" and managed by the Gaelic Kings and Anglo-Norman lords were claimed for the crown. Private riparian, estuarine and coastal rights did however continue to exist.?

In Connaught the O' Flaherty's lost their property to Cromwellian soldiers and adventurers and Anglo-Norman families such as the Martins of Galway. By the end of the 17th century, the Martins had become landowners of the biggest estate in both Britain and Ireland. The tenants of these lands included the remnants of the old Gaelic families now reduced to middle men or small tenants, living in clustered settlements, farming a rundale system, fishing from canoes and sailboats and gathering kelp for burning.

But despite the political upheavals, the rich salmon catches continued and the trade in salmon had continued to flourish through the 17th and 18th centuries. With a more active state, many statutes were enacted during this time which were aimed at protecting the salmon stocks. These included legislation which made the setting of nets in rivers illegal and rules that prevented small-holders and non-land-owners from catching salmon. But it also included environmentally motivated statutes, like rules that prevented pigs and hogs from grazing on the seashore where they might devour the fry of the salmon!

The 17th century had been a period of great political upheaval and by the end of the century the ownership of land and property rights was almost exclusively in the hands of a small Protestant minority. The 18th century consolidated this process with enactment of Penal Laws which forbade Catholics to buy land and put great restrictions on their ability to sell, lease, rent and inherit land. By the end of the 18th century the majority of land was held by a minority Protestant ascendancy determined to maintain their position. Over these centuries, a huge peasant population had developed depending on subsistence farming in increasingly small farms and paying high rents to absentee landlords.

Thus by the early 19th century we find that an extremely complex web of property rights to land and coastal resources had emerged. This was described by Hore in 1850 as one in which,
"mixed rights exist, both commonable and private, in an indefinite and vulnerable description of property".

The coastline was heavily utilized to supplement subsistence farming. Kelp gathering and burning, sand extraction of building and for use as fertilizer, washed up flotsam and jetsam as a source of material, grazing for cattle, fishing from the shoreline. Hore reported in 1850 that; *"thousands of the poorer classes avail them selves of the common law right and circumstances arising out of locality create many conflicting interests among this class which again clash with the varied interests of parties possessing exclusive rights in portions of the coasts and tideways and of the upper or freshwaters. "*

Events of the mid 19th century continued to effect changes on land use and occupation. The dramatic famines of the 1840's decimated the population of the overcrowded West Coast. The famine years also bankrupted many estate owners and estates such as the Martin estate in South Connemara which were sold on. The continuing practice of rack-renting and sporadic famine years, combined with massive emigration to America, continued until the last few decades of the century, effecting a "clearance" of tenants from the large estates and an increase in holding size.

The sea fishing industry was almost non-existent by the 19th century and salmon fisheries were not much healthier mainly due to the confusion of property rights, the lack of central policy and the monopoly of the landlords. However, salmon fishing continued with little central organization and with the emphasis still clearly on traditional fishing weirs and on tideways where draft nets were used. There were a number of different parties claiming legitimate rights to salmon fisheries : namely those involved in freshwater fisheries using rod and line mostly, the tideway fishermen using draft nets and finally fishermen involved in estuary and coastal fishing by means of stationary nets and weirs. But it was not only the economic value of the fish itself that was an important factor in the encouragement of illegal fishing. On the political level the traditional exclusivity of these resource rights to old and new lords and to clergy also produced a lack of concern for the long term health of such stocks from which the common people had no direct benefit.

However, with a growth in the number of professionally trained resource managers in both forestry and fisheries, the mid 19th century also saw the introduction of a series of environmentally motivated legislative measures for fishing including: a closed season; a weekly close time; a minimum mesh size; outlawing of headweirs; a licensing system for salmon fishing; and the registration and licensing of boats. New technologies were also introduced. Stake nets appeared in the early years of the century and had the effect of privatizing what was considered a common resource by many small fishermen as well as significantly depleting stocks. In the latter 19th century drift-netting was introduced off the south and north west, encouraged by the post-famine Congested Districts Board schemes. This is an important point, as it was this poverty targeted measure that in effect changed the emphasis of salmon fishing from the rivers to the "upstream" coastal seas. Salmon fishing had been concentrated to the river areas since pre-medieval times, with a shift to the open sea, the riverine property rights to salmon were rendered gradually less important. This change of emphasis has been in effect to the present and because of its historical justification, it enjoys considerable legitimacy and is hard to put an end to.

Also the monopoly of the Protestant landlords from the beginning of the modern age was eventually broken in most of the island. The Land wars and subsequently the Land acts of the 1880's, 1890's and early 20th Century were results of popular movements aimed at greater freedom and equality. Gradually tenants bought out their own lands with state aid to develop them into the landscape of today where there is a relatively high proportion of owner occupied land holdings. At the formation of the Irish Republican State in 1922, the property rights of coastal and estuarine waters were claimed as the State Foreshore, which is now defined as *"the bed and shore below the line of high of ordinary or medium tides of the sea.* "[4] The seaward extent of the foreshore is assumed to be the State's 12-mile limit and for the most part ownership of the foreshore lies with the State. There are however still some 1000 foreshore sites in private ownership.

The modern Irish State has organized its management of coastal resources in a number of Parliamentary Acts, which applies to the whole republic. Together these represent the modern overlays on governing coastal resources:

Fig. 3.1. Irish State legislation governing coastal resources.

Wildlife Act 1976	Environmental Impact Assessment Regulations 1989
Local Government (Water Pollution) Acts 1977 and 1990	Environmental Protection agency Act 1992
Coast Protection Act 1963	Continental Shelf Act 1908 -1992
Dumping at Sea Act 1981	Fisheries Act 1980
Fisheries Consolidation Act 1959	Fishery Harbour Centres Act 1967
Foreshore Act 1933 & 1992	Harbours Act 1946 and 1990
Marine Works Ireland Act 1902	Maritime Jurisdiction Acts 1959 & 1988
Marine Institute Acts 1991	National Monuments Acts 1933 -1994
Oil Pollution of the Sea Acts 1956 -1977 - Replaced by Sea Pollution Act 1991	Local Government (Planning and Development) Acts 1963 - 1993

But below these official legal instruments there are still the layers of traditional Celtic and Anglo-norman perceptions of rights in coastal seas. These often surface when questions of property rights for new activities, like aquaculture cages or artificial reefs, are brought into the public realm. Some indication of such perceptions can be found as we move closer to the river mouths:

The system of riverine and riparian rights are even today very complex institutions - also legally. At the formation of the Irish State all **inland** waters which were not subject to previous legal ownership were claimed by the State and are managed by various pieces of legislation and administrative structures. However, most rivers have a mosaic of riverine, riparian and fishing

[4] Foreshore Act 1933

rights, some established as far back as in medieval times and often attached to the ownership of land.

Salmon riverine fisheries have gradually become more regulated through the 20th century. In the early part of the century a licensing system for salmon dealers was introduced, as was a ban on netting in freshwater. In 1959/62 further legislation was enacted which provided for measures including:
limiting numbers of commercial salmon fishing licenses issued;
setting specific season lengths for individual fishery districts;
regulation of fishing boat size; and control of type of nets used.

The increasing body of state regulations introduced in this century governing the exploitation of the salmon has had as one of its main intentions to conserve the resource. However, enforcement of the law has been severely flawed and lack of state resources for monitoring and policing have meant that illegal and non-sustainable fishing practices have been widespread. This is also connected to the lack of concern for the long term health of stocks from which the common people had no direct benefit. As in the case of one study area, the fishing rights were in the ownership of one English family until around the beginning of this century. Even today the same family control the fishing rights of one catchment in the area. In such privately owned fisheries in the region, the local fishermen, commercial and recreational, have no legal access to fishing in its waters and have not developed a culture of concern for a sustainable management of the stocks.

Towards the end of the industrial age, there is also in Ireland a renewed interest in the need for an integrated pragmatic approach to the management of the coastal zone. Still the responsibility for managing coastal resources are spread over a vast array of government departments and agencies at national, regional and local level. Many of these agencies are involved in specific aspects of the coastal resources, and with defined responsibilities. Integration between sectors, departments and agencies are not by means of elected political bodies, but is confined to non-statutory consultation processes in issues of mutual interests. At government level Ireland has no explicit management policies for coastal resources. But the Marine Department, the Environment Department and the Department of Arts, Culture and *Gaeltacht* has initiated a Coastal Zone Management Study and a Demonstration Program on integrated management of coastal zones has been initiated by the European Union. [*]
However, with the long tradition of entrenched sectoral management in Ireland , it is not likely that a coherent coastal zone policy will be initiated from the central level.
It is at the local level that the conflicts are actually felt and where the pressure for institutional changes are likely to originate. An example is the South Connemara in Western Ireland, where accelerated development due to generous development funding from the European Community and foreign enterprises has escalated a number of conflicts like water and navigation access for fishing vessels, chemical pollution of aquatic species, visual intrusion of fish cages in bay areas, interference of salmon farming in sea trout fishery etc. Here the State Agency for *Gaelic* affairs has promoted a "Single Bay Management Strategy" which entailed the convening of a forum of all involved groups to reach solutions to the evident problems. This strategy has been successful in resolving some of the conflicts not only between the community and outside interests/regulatory agencies, but also within the community. This locally initiated strategy with

stern support from the state agency responsible for Gaelic culture, has achieved considerable success and may be useful as a model for the implementation of more sustainable governing of coastal resource elsewhere in Ireland. It is thus more likely that there are new developments in the field that spurs new dynamics in the governing institutions for coastal zones, rather than institutional reform contemplated at the central level in anticipation of possible developments.

Origin of North-Norwegian Institutions

The earliest traces of coastal management institutions in Northern Norway date back to the Saga period, thus the written sources are also here much older than human memory or living customs. From around 900. to 1060 A.D the customary law of the various "tribes" settling the north were gradually codified under a system of local and regional assemblies *(Ting).* These were not legislatures in the modern sense, but "assemblies of all free men", later representative assemblies, that interpreted the old laws and secured the social acceptability of these as *dejure* rules. With the simultaneous advancement of Christendom and Royal Power, the rules and laws of landscapes and regions were written down - often by monks trained in the Irish monastic culture. As first codification of customary law - or "Law books" for particular "landscapes" or regions ~ they were skillful blends of codified customary law and structuring elements borrowed from Roman law. The strict adherence to customary law was also necessary because the early Viking kings were far from sovereign, but had to rely on the regional assemblies for initial acceptance and for continued legitimacy in the use of power (Frostatingslova 1994). The best strategy for a "candidate-king", was therefore to identify, codify and stick to the "good old laws that had been there from ancient times" *(afar aldd)* or at least "from the times of Holy King Olav" (f 1033). It is important to understand this tradition of the "positivity of law" (Luhman 1985) that originated in a period before a powerful centralized state was established: Law was not something that was decided upon by decrees or designed by committees, it was there from ancient times and was binding both for royal and commoners. Thus it should not be easy to change the law, and when history later proved that the old laws served as the peasants' best defense against arbitrary decisions by greedy kings, this strengthened these sentiments. These basic perceptions on the role of law in society were vividly alive in the rural population as late as in the 16th century, when attempts by the Danish colonial powers to modernize the country by introducing rules were met by protests from Norwegians claiming that these were unacceptable as they had no base in the ancient Norwegian laws (Frostatingslova 1994). Thus encoded customary law continued to shape the perceptions of resource users until the country had its own legislature in 1814 and gradually adopted the "modern doctrine" of a society able to change itself by enacting new legislation (Luhman op.cit).

Most of Northern Norway was during the Viking age and medieval age part of the Frostating legal area. The exception was the Northernmost counties of Finnmark, where the Sami indigenous rules for coastal resource use were respected and were in force up to the liberalization of the 1830s, while the King had the overall jurisdiction after the peace treaty with Novgorod in 1327 (NOU 1997:4). The Frostating law is preserved almost in total and give valuable insights into the distribution of property rights and the conflict solving mechanisms of the old society. The

settlements were usually coastal, with intensive agriculture on the fertile old sea-beds and less intensive grazing, hunting, fishing and gathering from the "outer fields". In this respect the mountains (the upper) and the island archipelago (the outer) had a similar function for the households and were treated in a parallel way. The sections of the law pertaining to material objects *(ius in re)*, were therefore quite general and well suited to govern a number of different resources in a flexible way. They were also typically «non-roman» in acknowledging «shared property rights» i.e. that the same object could be owned by different judicial persons - for different purposes. However, such general rules required an interpretative body that could apply them to particular cases. Such bodies were the local assemblies *(bygdeting)* which decided in local matters. The exact role of these local assemblies in relation to the governing of resources is not yet fully understood. But initial research into the rich material of ting-protocols reveals a central role for these both before and after 1660 (Tretvik 1996).

A central rule in the old legal heritage is the rule of Commons: "So shall Commons be, as has been from ancient times, both the upper and the outer", (Frostatingslova 1994). This central rule was transformed into identical rules in the unified "country law" of 1274 *(Magnus Lagaboeters Landslov, 1274)* which is among the oldest country laws in Europe. Through the adoption of this into the "Norwegian Law" under Danish rule *(Chr. IV Norske lov,* 1604 and *Chr. V Norske Lov,* 1687), such uniform rules about both mountain, forest and coastal commons survived up to 1993, when the last remaining original "commons paragraph" was removed from the body of active laws - after 950 years ! However, by 1993 the institutional changes in coastal areas had already progressed far beyond the spirit of the codified customary law, and the old "commons paragraphs" pertaining to natural resources in general had been under heavy pressure already since the introduction of supreme rule in 1660. In a modern «Mountain Law of 1920 (revised 1975), and new Common Forests Laws of 1992, the 950 year old customary rules were given a modern legal function for Common Property Resources in the «upper» areas of most of the country (the exception is Northern Norway!). For the «outer» Common Property Resources on the other hand, it is the withering of the coastal commons during the last 350 years which is the typical institutional dynamics of the North Norwegian Coasts.

But still it makes sense to speak of coastal commons in these local Northern coastal communities - today most often referred to as the "fisher-commons" *(fiskaralmenning).* That there is local perceptions of property rights systems that started to wither away more than 300 years ago is linked to a number of single elements that has slowed down the modernization processes on these coasts:

One was a royal prohibition from 1294 on foreigners and Southerners sea travel to the coasts north of the Hanseatic trade post of Bergen *(farbann* prohibition to navigate).(Frostatingslova, VII, Ch.27). Only in 1361 were the traders of Bergen given a general dispensation of navigation and trade along the northern coasts, but no right to fish. This kept foreign and Southern fishermen away from the 13th to the 18th century and allowed local resource governing institutions to evolve and adapt. Most famous among these are the Lofoten Fisheries Institutions which can be interpreted as a large Provincial Commons that lasted from the Kings' pledge to the Haloygs *(rettarbot)* of 1105 and until its gradual breakdown in the 19th century. These flexible institutions governed this large scale indigenous *(Haloyg)* fishing commons with easy access for thousands of

regional migrant fishers for several hundred years (Jentoft, S. og Kristoffersen,T, 1989). In addition there was a large number of smaller and more local fishery governing institutions which has shaped people's perceptions. The easy access large fishery commons of the North has often been misinterpreted as institutions characterized by Public Property Rights *{Allemannsrett)* (Oerebech 1991). And it seems to have been in the interest of the modern state to support this interpretation, since it is the state who is the only possible custodian of public property rights. This notion originates in a doctrine of state from the 16th century where property rights were divided into the King's superior property rights *{dominium directum)* and the subordinate property rights *(dominium utile* - different from *ius utendi* - mere user rights). At the introduction of "sovereign rule" in 1660, the King also claimed to be the owner of the subordinate property rights, thus the Commons of the ancient Laws were termed "the King's Commons" and the right of the indigenous population were reduced to "user rights" (Schiefloe 1957, Tretvik 1996). Although this doctrine of state later proved erroneous in that the nation states' jurisdiction is not a property right, the King's Commons survived into what is today "State Commons" for the "upper" resources. The Commons for the "outer" resources withered away under this doctrine and was gradually seen by the state as public property which could be opened up to the use of all national citizens irrespective of origin and which could be exchanged with other nations in return for fishing rights in their territorial waters. Thus the breaking down of the fishing commons and the transfer to public property in the 1830s was an important step towards the later privatization of fishing rights in the 1980s and 1990s. But in spite of the modernization of salt water fisheries and individualization of fishing rights (licenses and individual quotas) that has taken place during the last 40 years, later developments show that the perceptions of a "fisher commons" are still alive in the coastal communities.

Another element is the existence of "shore commons". Before the boat engine became common, favorable places along the coast were of crucial importance as harbors, beaches and fishers' chalets. These did often - especially before enclosure - function as commons for the local population and they had to some degree controlled access so that strangers could not use them. However, neighboring and migrant fishers with long term relations with the local fishing communities could have a status as bona fide users. At a low level of extraction technology, local control over the "shore commons" thus meant control over the coastal fisheries resources without making explicit property rights to the physical fish stocks themselves. When the king started to issue trade privileges also to non-hanseatic indigenous traders, a number of the relationships in fisheries developed into patron-client relationships. Now it was not only the common harbor facility, but also contractual relationships related to equipment supplies, credit facilities and marketing outlet for fish that constituted the basis for coastal society. This new basis facilitated the introduction of new harvesting technology in coastal fisheries during the 18th and 19th century and facilitated the primary accumulation of capital on few hands - often termed the *vaereier-system.* Some of the common shore was privatized and even today we can find a private fishing harbor and a common fishing harbor side by side.

A third element is the survival of minor commons like "egg-commons", "berry-commons", "kelp commons" and "pasture commons" in many coastal communities. At enclosure during the 1890s, a number of coastal communities chose to keep for instance their egg rocks and islets in common rather than subdivide them into what would have been very small private units. From these

commons, sea-birds' eggs are still gathered at intervals during the season, often connected to intricate institutions of sharing of the egg-catch (Sandberg 1994). For a number of the islands "belonging" coastal communities, we also find local commons institutions for the sharing of cloudberries picked during the season. The existence of such common property arrangements for minor resources contributes to important local perceptions about the existence of a coastal commons in these North Atlantic environments.
Also the grazing of sheep on small islands and the gathering of kelp and sea-weeds required some agreement on property rights. These activities belonged to what was before enclosure termed the "outer commons". Like for birds-rocks, a number of these continued to be "held in common", even after the enclosure, or if subdivided and privatized, the grazing and harvesting practices were often for operational convenience arranged by voluntary contracts in ways that resemble commons institutions.

Like in Ireland, Wild Migrating Salmon has also in Northern Norway a very special significance, together with Sea Trout and Anadromous Arctic Char. Property rights to Salmon have for one thousand years been an important part of river rights, often separated from navigation rights of rivers or the rights to the kinetic energy in the water *(fallrett)*. The co-operation of river salmon-rights holders and government agencies with respect to the various local stocks of salmon, are the best examples of co-management in Norway. At the mouths of rivers and in the fjords leading to important salmon rivers, there were also important property rights to permanent net-or weir- sites at strategic points *(kilnot)* with a secure steady catch. These required intricate floating constructions and the property rights were usually tied to individual farmsteads with property rights to shore lines and were part of the old property tax base for the farmstead. Further out towards the open sea, salmon catches were less secure and property rights less strictly defined. Also in Northern Norway did a special drift-net fishery for salmon develop along the coast, where certain coastal communities specialized on salmon drift-netting. These were usually fishermen with no previous salmon rights connected to rivers or permanent net-sites.
Today the drift-netting for salmon is prohibited along the entire Norwegian coast. It was introduced as a temporary measure in 1989 to help rebuild the dwindling stocks of salmon, after heavy pressure from the river-salmon-rights-owners and the sport fishers' associations. However, the various local stocks of salmon were not rebuilt, as a result of the ban, but continued to diminish. This was now allegedly as a result of "genetic pollution" from runaway farmed salmon, but it was probably also caused by a reduction in stock enhancement effort due to a stricter ideology of genetic purity of the separate river stocks. But in spite of this unclarity in the causal relationships, drift-netting for wild salmon is not likely to be reintroduced along the Norwegian coast.

During the latter part of the industrial age, the governing of the coastal resources has been increasingly more sectoral. Attributing to this has also been the absence of a equitable Northern Assembly with legislative authority related to northern resources. After the transformation of the *Frostating* Assembly to a pure 2nd. order court, and the decay of the Northern local assemblies *(bygdeting)* and the indigenous Sami institutions *(siida)*, modern local government and provincial assemblies have never managed to regain a powerful role in the governing of coastal resources. The municipalities have responsibility for the overall area planning, also in the coastal zone, but this does not include the competence to govern the actual use or prohibition of use of a particular

resource. The design of property rights inherited from the age of sovereign rule is still at the base of the modern institutions. And the various sectors of the state have during the last 90 years become so entrenched, with their own sectoral laws, their own professional identity, their own local departments and "their" corresponding organized interests, that this is now by the urban citizens perceived as the normal situation.

Fig.3.2. Laws governing coastal resources in Northern Norway today.

Law	Year	Competent Authority
Planning and Development Act	1965/85/89	Municipality
Aquaculture Act	1985	Ministry of Fisheries/ Directorate of Fisheries/ Chief Provincial Fisheries Officer
Harbour Act	1984	Municipality and State
Salt Water Fishing Act	1983	Ministry of Fisheries/ Directorate of Fisheries/ Chief Provincial Fisheries Officer
Pollution and Refuse Act	1981	Municipality
Fish Diseases Act		Ministry of Agriculture/State veterinary Authorities.
Nature Protection Act	1970	Ministry of Environment/ Directory of Nature Management, Chief Provincial Environmental Officer.

On the Northern Coasts, we very often find conflicts between these different acts and the sectoral authorities set up under the various acts. Such "domain conflicts" can often be deep and enduring, and very often the municipality who should be close to coordinate resource use within its territory, finds itself caught between two different state sectors, most commonly between the environment sector and the fisheries sector. (Sanderson & Buanes 1995) In trying to advance Integrated Coastal Zone Planning at the municipal level, planners and local government have in a number of instances clashed with either the state fisheries department or the state environmental department. Especially the fisheries department has been eager to object to all local initiatives to have a stricter local regulation of fishing in vulnerable fjord-systems, while the environment department has been eager to object to local initiatives to set aside generous areas for aquaculture development (Bennet & Skjerdal 1996). The environment department has on its side pushed for generous areas designated as wild salmon runways, as marine parks and as coastal protection areas - against severe local opposition. On the other hand the Aquaculturalists' Association has argued for Salmon farming as an environmental friendly activity that should take place in Marine Parks.

In addition to these specialized and organized interests in the former «outer commons» , a number of other modern uses of the coastal zone are making demands on the embryonic planning and management capacity:

local and regional recreational use, development of commercial tourism, scientific and educational use and the use of the coast for revival of coastal culture and belonging. These are not organized in powerful state sectors, but are part of the powerful new and dynamic elements on the North Norwegian coastal scene.

There are in addition other dynamic elements that are going to be still more powerful in the long run. These are associated with new ways of human cultivating and enhancing the coastal environment in the postmodern era. The new ways are closely linked to massive research input into sea ranching and stock enhancement along the Norwegian Coasts for the last 7 years (PUSH 1998). Science was also an important element in the modernization of the way the Norwegian coastal zone has been governed during the last 100 years. Towards the end of the last century Norway was together with USA (Woods Hole) and Japan (Hokkaido) among the first countries to support scientific programs to artificially hatch and rear marine organisms with a view to enhance coastal marine environments. Around 1920, however, the paradigms of more macro-oriented marine biologists gained hegemony and the nation's ability to scientifically manage the large wild stocks of herring and arctic cod in the national waters became the only item on the agenda (Schwach, V. 1996). After decades of trials and fatal errors, and after the territorialization of the High Seas by the Extended Economic Zones of the UN "Law of the Sea", the "resource management rationale" had its final victory with the introduction of quotas in the ancient Lofoten fisheries in 1989 (Holm 1996). This rationale is basically a sectoral stock-management rationale for one or more stocks of fish that will hopefully move within a national EEZ or at least stay within the EEZs of cooperating nations. However, during the last 30 years, the rearing of marine organisms in coastal environments have accelerated, and driven by coastal practitioners, the 1890-research-paradigms of cultivating and enhancing coastal seas are back on the scientific agenda. First as support for the rapidly growing salmon farming industry, later as innovative research intended for new coastal enterprises. And this time a "coastal science" can benefit from a series of innovations in genetics and ecosystem analysis, in artificial hatching and start-feeding and in institutional analysis. Coastal cultivation and enhancement requires "sowing" and caring before harvesting, thus begging for protection of the initial investment by the establishment of some kinds of modern rights. Both aquaculture, mussels farming, lobster farming ,sea ranching and stock enhancement of wild fish requires property rights based on territoriality at a local level. These are rights that will often be in conflict with the stock based quota rights for traditional fishermen and their «right» to go after the fish wherever it moves.

The early attempts at Integrated Coastal Zone Planning and Management in Northern Norway (The Helgeland Project) has clearly shown that the major obstacles to any integration is the problems of vertical coordination, i.e. the coordination between the municipal level and the state sectoral departments at the provincial level. While the horizontal coordination between the different municipalities and the various interests groups in the municipalities works quite well (Bennet & Skjerdal 1996). The typical challenge for North Norwegian Integrated Coastal Zone Management in the years ahead is therefore the creation of institutions that are able to handle property rights based on two fundamentally different rationales:

- A sectorbased rationale for the catch of wild fish, with sufficient flexibility to enable catch.

- A territorial rationale for the rearing of marine organisms and the enhancement of marine environments that secures the initial investment.

This means making equitable and legitimate decisions about the use of a regions' total coastal resources at a level below the national level. Here the 1000 year - old ideas of North-Norwegian coastal commons are again entering the discourse as they readily lend themselves to a redesign of the now near-defunct management institutions of the industrial age.

Dynamics of Western Irish and North Norwegian Institutions for Governing Coastal resources.

Common for both the Western Irish and the North Norwegian coastal resources is the complexity of governing institutions. At the surface, the numerous existing sectoral laws for governing specific aspects of coastal resource use and economic activity looks equally complicated in both countries. And when superimposing the evolutionary dynamics of governing institutions during the last 1500 years upon the bureaucratic rationality of the industrial age, the picture becomes rather complex. However, as the task of social science is to analyze the real world in terms that are recognizable to real world actors, this complex image of institutions as layers on top of each other is probably more realistic than analysis and comparisons of "rules in force" alone. The local perceptions of property rights and of fair and legitimate use of coastal resources are the results of local interpretations of these multiple layers as well as people's own interpretations of the "way things are moving", i.e. the local interpretation of the institutional dynamics in the governing institutions.

On this background there are a number of common elements in the coast governing institutions of Western Ireland and Northern Norway. They both boast memories of an ancient past with self governing institutions and have both more or less codified customary law reflecting this heritage. The Celtic customs placed more emphasis on the rights connected to the joint family, the regional chieftain (Ri) and the monastic culture, while the North Norwegian Norse customs placed more emphasis on rights connected to the territorial unit and the circle of users belonging to one or more coastal commons. In both areas we find high acceptance of individual ownership to erected structures in seas that need monitoring and maintenance, like weirs, nets and cages. They are also both similar in a high level of political consciousness, where written sources are consulted and ancient perceptions of rights are made relevant in current political discourse.

If we move to newer layers of institutions, the differences are greater, with conquest of Viking and Anglo-Norman invaders as important elements in the Western Ireland Institutions. While the North Norwegian institutions, apart from the effects of the Protestant reformation, were protected - or forgotten - "behind the 1000 miles" for hundreds of years. But it is worth noting that as time went by, both the Anglo-Norman settlers of Western Ireland and the steady trickle of Southerners setting in Northern Norway adopted the native laws and institutions.

But Western Ireland and Northern Norway are quite similar in that no fundamental changes really took place regarding their self-governing capacity until the 17th century, when the entrenchment

of the English and the Danish colonization really took place. The Cromwellian plantation and replacement policies and the adoption of "Sovereign Rule" by the Nordic Kings crushed the self-governing institutions of these coasts and paved the way for state ownership and state governance.

At the eve of the industrial age we also find striking similarities between these two coasts. They do both show a bewildering and complicated sectoral governing system for the coast, with an exceptionally high number of state and local government agencies involved. For coastal resource users the system appear both expensive, inefficient and lacks legitimacy. In both countries the present governing institutions are the result of a long process of rational bureaucratic development in separate sectors of the 19th and 20th century nation-state.

In both Western Ireland and in Northern Norway we find a number of emerging coastal activities that transcend the institutions "in force" at present:

- The growth of cage aquaculture, with an increased need for sea areas in order to allow «shifting cultivation)), prevent pollution and contamination and be environmentally sustainable.
- The growth of shellfish and mussels farming requiring substantial areas of undisturbed sea bottom, protection of seed investments and binding deals with pelagic fishermen in the area.
- The growth of lobster farming which require large areas for territory-forming stable lobster husbandry, protection during a lengthy juvenile period and binding deals with pelagic fishermen in the area.
- The development of sea-ranching enterprises for anadromous fish (salmon, sea-trout and arctic char) with river-release and re-catch along the homing channel - which require socially accepted private property rights to free-swimming fish in the sea.
- The increase in stock enhancement effort for anadromous fish (salmon, sea-trout and arctic char) with river-release and re-catch on the coast and along homing channel - which require institutional designs where the release organization also include all the potential benefactors from the enhanced stock.
- The increase in sea-environment enhancement with artificial reefs, acoustic juvenile feeders etc., and stock enhancement of marine fish through local restocking programs - which require institutional designs where the enhancing organization also include all the potential benefactor from the enhanced stock.

Both in Western Ireland and in Northern Norway the present institutions for governing coastal resources are under pressure from these kinds of new integrative activities which cut across conventional administrative boundaries. Especially biological production that transcends the borderline between the «wild)> and the «tame» is extremely difficult for sector-based agencies for fisheries or environment to deal with. But for most coastal communities, new forms of harvesting from nature is not difficult, and old notions of local rights to common sea fields are invoked from ancient institutional layers in intensified discourse between local and state level. As the development of numerous new forms of using and enhancing coastal resources accelerates, a postmodern greening of the coastal commons is therefore a development path with a high probability.

Bibliography:

Arrow, K. 1996
Foreword in Hanna, S.S., Folke, C. and Mäler K. 1996.
Rights to nature - Ecological, Economic, Cultural and Political Principles of Institutions for the Environment, Island Press, Washington 1996

Aarset,B. 1995
Herding the Coastal Commons. On how to Manage Cod as Livestock.
Paper presented at the IASCP Vth International Common Property Conference: Reinventing the Commons", May 1995, Bod0, Norway.

Alegret, J.L., Cabruja, T., Casadevall, M., & Llobet, O. 1996
The importance of Local Perceptions of Fisheries Resources in Catalan Fisheries. Paper presented at MARE Workshop /EAFE- Conference in San Feliú de Guixols/Barcelona 25 March-3 April 1996.

Bailey, C, Jentoft, S. and Sinclair, P. (eds.) 1996
Aquacultural development, Social Dimensions of an Emerging Industry, Westview Press.

Bennet R.G. & Skjerdal, T. 1996
Regional Kystsoneplan for Helgeland, Ekstern evaluering, Institutt for Geografi, Univeresitetet i Bergen

Board Iascaigh Mara, 1981,
The Story of Sea Fishing, BIM, Dublin,

Cambrensis, G., 1982
The History and Topography of Ireland [A.D. 1185], translated by O'Meara, J.J., Penguin, London,

Central Fisheries Board, 1986, Inland Fisheries, *Strategies for management and development,* CFB,

De Courcey Ireland, J. 1981,
A history of Irish Sea Fisheries, Glendale Press, Dublin

Department of the Marine, 1994, *Operational Programme 1994/1999 for Fisheries,* Government Publications, Dublin

Dillon. M., 1994,
Early Irish Literature, Four Courts Press, Dublin.

Dudley Edwards, R.,1981,
An Atlas of Irish H istory, Routledge, London

Estyn Evans, E., 1981,
The Personality of Ireland, Blackstaff Press, Dublin

European Commission, 1994, *The European Community and the Fishing Industry,* European Commission, Luxemburg.

European Commission, 1994, *The New Common Fisheries Policy,* European Commission, Luxemburg.

Fingleton,P. & Whelan, B J., 1993, The Economic Consequences of phasing out the Irish drift net salmon fishery, unpublished, Dublin.

Fritidsfiskeutvalget 1994

Utredning om Fritidsfiske i sj0en. (Norwegian Leisure Fishing Commission), Oslo, October 1994

Holm, P. 1996
Kan torsken temmes ? Moderniseringsprosesser i fiskerinaeringa 1935-1995 i Eriksen Erik O. (ed.) Det nye Nord-Norge, Avhengighet og Modernisering i Nord, Fagbokforlaget, Bergen 1996.

Holm,P., Råånes S.A.
Political Attributes of Rights-based Management and Hersoug, B.systems: The case of Individual Vessel Quotas in the 1996 Norwegian Coastal Cod Fishery. Seville 5-7 sept. 1996

Hore,H.F., 1850,
An Inquiry into the legislation, control and improvement of the Salmon and Sea fisheries of Ireland, Hodges and Smith, Dublin.

Jentoft, S. og Kristoffersen, T, 1989
Fishermen's Co-management: the case of the Lofoten Fishery. *Human organization* Vol.48, No.4.

Kelly, F., 1988,
A guide to Early Irish Law, Dublin Institute of Advanced Studies, Dublin.

Luhmann,N. 1985
A sociological theory of law, Routledge and Kegan Paul, London

Martin, R. 1994
Economic justice: contractarianism and Rawl's difference principle, in Boucher, D. and Kelly, P. (eds.) *The social contract from Hobbes to Rawls,* Routledge, London 1994

North, D. 1990
Institutions, Institutional Change and Economic Performance. Cambridge University Press, N. Y.

NOU 1997:4
Naturgrunnlaget for samisk kultur.(Final report on the Rights to Land and Water from the Sami Rights Commission, Oslo 1997.

Meldon, J.(Ed.), 1993,
Aquaculture in Ireland - Towards Sustainability, An Taisce, Dublin

Mitchell, F., 1976,
The Irish Landscape, Collins, London.

Moody, T.W.& Martin F.X., 1967,
The Course of Irish History, Mercier Press, Cork.

O'Connor, R. & al., 1992,
Rewiev of the Irish Aquaculture Sector (and Recommendations for its Development), ESRI, Dublin.

O'Croinin, D., 1995,
Early Medieval Ireland, Longman, Essex.

O'Neill, T., 1987,
Merchants and Mariners in Medieval Ireland, Irish Academic Press, Dublin.

O'Sullivan, A., 19...,

Medieval Fishweirs on the Deel Estuary, Co. Limerick, Archeology Ireland, Vol. No. pp 15-17.

O'Sullivan, A.,
Harvesting the Waters,, Archeology Ireland, Vol. 8., No. 1, pp 10-12.

Ostrom E. and Schlager, E., 1996
The formation of property rights, in Hanna, S.S., Folke, C. and Mäler K. 1996. *Rights to nature - Ecological, Economic, Cultural and Political Principles of Institutions for the Environment,* Island Press, Washington 1996

Pálson, G. and Helgason, A. 1995
Ocean and coastal management - Figuring fish and measuring men: the quota system in the Icelandic cod fishery. Paper presented at the IASCP Vth International Common Property Conference, Reinventing the Commons", May 1995, Bodo, Norway.

Picard, J.M.(ed-), 1995,
Ireland and Aquitane in the Middle Ages, Four Courts Press, Dublin.

PUSH, 1998
Sluttrapport fra det Norske Havbeiteprogrammet, Bergen

Raadschelders, Jos C. N. (1992)
Between Ecology and Economy: From Rigid to Flexible Water Defense Systems in the Netherlands. Paper presented at "Inequality and the Commons," the third annual conference of the International Association for the Study of Common Property, Washington, September 17-20,1992.

Robinson, T., 1990,
Connemara, Folding Landscapes, Roundstone, Co. Galway.

Ruddle, K. & Zhong, G. 1988
Integrated agriculture-aquaculture in South China. The dike-pond system of the Zhujiang Delta. Cambridge University Press, Cambr. 1988

Salmon Review Group, 1987, *Framework for the development of Ireland's Salmon Fishery,* The stationary Office, Dublin.

Sandberg,A. 1991
Fish for All - CPR-Problems in North Atlantic Environments
NF-Notat no. 1104/91, Bodo

Sandberg,A. 1994
All our Eggs in one Basket - on egg-sharing institutions on the North-Norwegian Coast. Paper presented at the **"Workshop on the Workshop"** Interpreting Social Experiments 16 June 1994, Bloomington, Indiana University

Sandersen, H.T. & Buanes, A.
Lokal miljo- og ressursforvaltning i kystsonen - nye roller for kystkommunene, Milkom-Notat 8/95

Schwach,V. 1996
Marin akvakultur mellom politikk og vitenskap.
Forskningspolitikk nr. 1/96

Schiefloe, A. 1952
Kritiske bemerkninger til norsk almenningsrett, Trondheim

Tretvik, A.M. 1996

"...med mig tiltagne 2de edsvorne Lagrettemaend..." Om boenders deltakelse i lokalforvaltningen paa 1700-tallet, Heimen bd. 33 1996.

Tretvik, A.M. 1996,

"Om eksklusiv bruk av allmenning" i Haarstad og tretvik (red.): Boender, jord og rettigheter, Nr. 16 i skriftserie fra Historisk Institutt, NTNU.

van der Schans, J.W., 1996,

Colonizing the Coastal frontier: Governing Marine salmon Farming in Scotland, in Bailey, C, Jentoft, S. and Sinclair, P. (eds.) 1996, *Aquacultural development, Social Dimensions of an Emerging Industry,* Westview Press.

Wild Salmon Support Group, 1995,

Submission to to Working Group on management and conservation strategies for salmon, unpublished, Ireland.

Whelan,K.,1995,

«Manage the Catchment and leave the Fish alone», NARA News

Whelan,K.,1995,

The role of peatlands in the management of freshwater fisheries, paper presented at «Seeking a partnership towards managing Ireland's uplands» - seminar at University College, Galway, Oktober 1995.

Whilde, T., 1995, The Natural History of Connemara, Immel, London.

Oerebch,P.T. 1991,

Om allemannsrettigheter, Saerlig med henblikk paa rettsvemet for fiske ved igangsetting og utoeving av petroleumsvirksomhet, Osmundson Forl, Oslo.