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**THE ANALYTICAL IMPORTANCE OF
PROPERTY RIGHTS TO NORTHERN RESOURCES**

by

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The North.

In contrast to the southern Arctic regions of the earth (Antarctica), the north has not been set aside as a "global commons" under some sort of fragile International Regime (Keohane, McGinnis & Ostrom 1993). For thousands of years opportunistic harvesting of the seemingly unlimited riches of these northern areas has been carried out by seasonally migrating groups of humans, in much the same way as migratory birds or moving packs of wolves have utilised the same area in periods of temporary retreat of the Great Ice. At a low level of harvesting technology the north thus has functioned as a true global commons where humans of different tribes could go out and harvest for their needs and then retreat - to small farms in the subarctic regions or to inhabitable coves within the Arctic itself. The great advantage to resource management in the north, its sparse population relative to its richness in natural resources, was also its great disadvantage: the scarcity of defenders and the vulnerability against all kinds of intruders - from the trickle of poor migrants to plundering armies and state settlement programmes.

At the height of the Viking-age, around year 1000 -1250 A.D., the sea between Norway, Spitsbergen, Greenland, Iceland and Scotland/Ireland was a Norse "Inland sea" and numerous Norse "northern settlements" were established along the northernmost coast of Norway, along the northern river valleys of Sweden, on Iceland, Greenland and even on Labrador. This expansion was halted by the Black Plague, after which we no longer find Norse colonies in Greenland and Labrador. After the rediscovery of America there was again new European expansion towards the north. The first known "biocide" of the north was in the 16th century, when Dutch Whalers and Walrus-hunters adhering to the newly won "freedom of the seas" doctrine, depleted the huge herds of fatbearing sea-mammals and extinguished the fat "Geir-fowl".

The Norwegian, the Finnish and the Russian expansion towards the north was to some extent a result of a northbound trickle of migrating people - hunter/fisher/farmers and traders. But mainly the Danish "rediscovery" of Greenland and the Swedish/Danish/Russian colonising of the "Top of Europe" was the result of the power struggles among the European kings, queens and tsar. This was the same kind of processes that led to the British, French and Russian colonisation of the northern areas of America: of the Northwest Territories, of Yukon, of Labrador, of northern Quebec and of Alaska. By the 17th century, the European nation states, including Russia, had each carved out their sections of the entire northern commons and "colonised" them with their governing systems, their culture and in many instances also with their peoples and their welfare institutions. On the European and Asian continent, the distinction between the "aboriginal" peoples of the north and the "natives" of the colonising states is today often blurred, in many instances they have been living in the same geographical areas for several thousand years. However, their different adaptations to ecological and man-made niches, and their different cultures have existed side by side for hundreds of years, despite frequent intermarriages and heavy pressure from the "majority cultures" to "go Russian", to "go Finnish" or to "go Norwegian". In the northern areas of America, the distinction between aboriginal people and colonising people (or "native peoples" and

"immigrant peoples", Sproule-Jones 1993), is easier to draw and is also much more an integral part of "Northern Politics". However, the vivid, but long-drawn political processes of aboriginal land- and water-claims in Canada and Alaska have to a large extent influenced the public debate on aboriginal and local land rights and water rights in Northern Europe. There are also signs that such a debate gradually is in the coming in both the European and Asian part of Russia. Both the recommendations of UNCED's Agenda 21 and the emphasis on "subsidiarity" within the European Community contribute to this.

In this respect the political situation of the whole of the circumpolar region has become more similar in the last 20 years.

In the final analysis the question of Northern Politics boils down to very simple questions of who has the rights to the resources of the North. These questions can however be made more complicated by rephrasing them somewhat:

- Do we find elements of social contracts in Northern Politics, where the Nation States have legitimate rights and access to the northern resources, while the northerners have access to the state Treasury?
- What happens to such social contracts when the welfare benefits to northerners diminish or when the state loses or give away centralised power to local communities or to institutions based on aboriginal identity?

We shall here mainly use Northern Norway as a case to try out some preliminary hypotheses about such relationships, but the reader should bear in mind that these questions can be raised at a generalised level in all the northern circumpolar areas - and that comparative studies in two or three areas with different nation-state supremacy could bring new insights which a one-shot approach does not give.

The Puzzle

In a modern "welfare state" like Norway, one should think that questions of rights to resources were of minor importance, that a benign state catered for the livelihood and happiness of all its subjects irrespective of their inherited or achieved rights. It is a puzzle that this is not the case and that resource rights again enter the public realm. In fact the questions of both individual, local and regional rights to resources even seem to increase in importance as the question of the relation of the nation state to the greater European Community moves up on the political agenda.

The welfare of northerners has always depended on their relations to the natural resources, on their command of access to resources and on their ability to exclude others from extracting these resources (Dacks 1981). These kinds of relations between individuals, groups of individuals, communities and states with respect to resources are commonly coined **property rights**. These spans from the most modest user rights to the most potent ownership rights. Such rights are fundamental elements in all resource management or in the governing of resources by collectives. In the political sphere such

rights also carry heavy symbolic values. One basic argument in this paper is that the concepts of property rights are useful tools for analysing the interdependence between human and economic enterprise and the governing of resources. Further, it is argued, the full potentials of property rights concepts has not been realised due to lack of definitional clarity, ideological bias in Scandinavian social sciences and sloppy operationalisations by scientists.

The fundamental importance of rights-based relationships to resources is demonstrated by their tendency to survive numerous attempts to "modernise" the northern societies:

- Industrialisation in the north has traditionally been largely resource-based and heavily dependent on the rights of access to minerals, sea- and land areas, fish resources, hydropower, timber etc. An overall attempt to shift the industrial base to market based, knowledge-based or "competence-industries" that can be established independent of a resource base, has not been successful. In spite of heavy public investment in higher education and research in the North, there has been few off-springs from research, thus the "R&D-strategy" of the early 80ies has to a large extent failed (Andersen & Sandersen 1992). The surviving "alternative industry" is mainly computer based branches of public corporations which are decentralised by political decisions. The most feasible strategy for co-operation between industry and higher education therefore seems to be increased emphasis on competence in the resource based industries and closer networks within the processing industries. Recently there has been a liberalisation of the hydro-power market, removing the competitive advantage to metal industries of proximity and privilege to waterfalls. However, there are strong forces working for a reversal of these policies and we might witness a development where those enterprises that have most secure and clearly defined property rights to their resource base will have a tendency to invest more in their processing and marketing skills and thus gain a competitive advantage over industries with no privileges.
- Transfer payments have for 11 1/2 generations defined the level of welfare for large groups of northerners. The "welfare state" has to a large extent modernised the north. Faced with uncertain "Arctic agriculture", the risky grazing of sheep and reindeer and chance fishing on widely fluctuating stocks, the stability of transfer payments from the central government to social security and public services is comforting. Some communities contribute more to the national treasury than they receive in transfer payments, some contribute far less, the overall effect is an equalisation of welfare between communities, regardless of natural endowments and the distribution of rights to these. During the years of construction for the social-democratic welfare-state, the importance of property rights were thus played down. Everyone was believed to have a universal right to a certain level of welfare, irrespective of residence, mobility or rights to natural resources. With the gradual deconstruction of the Scandinavian welfare state model in the 1980 is and 90 is, the importance of property rights and the "fruits of own labour" are likely to reappear. The positive image of the nation state in the north is closely connected to the benefits of the welfare state (Eriksen 1993). If these dries up, the negative image of the state,

that of the coloniser and exploiter, will surface. Interesting enough, it seems like the symbolic value (and political value) of rights to resources increases in times when the national welfare state is in doubt, and is in no way related to the economic importance of such resources (Gaski 1993).

- In a mixed economy like the Norwegian economy, markets have usually been governed by legal frameworks initiated by political bodies or by institutional arrangements agreed upon by way of negotiations between organised interests. The high transaction costs and loss of efficiency from cumbersome market governing structures have in recent years set in motion a prolonged process of deregulation of markets, where the explicit aim of government economic experts has been to allow the market mechanism work wherever this is more efficient than other means of aggregating decisions. With less government interference in the commodity markets, the product markets and the labour markets, the underlying structures of property rights will resume some of their importance and again bear influence on the distribution of income - and benefit-streams and the overall distribution of welfare. One of the reasons for the renewed academic interest in the study of origin and maintenance of property rights is the fear that deregulation might thus lead to increasing inequalities, to social misery and political unrest. Through refinements on the art of crafting institutions for property rights based management regimes, such unwanted side effects of deregulation can hopefully be avoided.

Northern areas are basically resource based regions and the number of resources in northern areas is large. Both non-renewable resources and biological renewable resources are backbones of northern economies and societies. It is therefore impossible in one study alone to analyse all the changes in resource relations that results from greater northern self consciousness and from changes in the role of the nation state. It is necessary to select a few typical resources and carry through an analysis with a scope that is wide enough to encompass both the individual and household level, the local community level, the intermediate level/ the nation state level and the international or "regional" level. In this respect, some resource governing systems give a higher "analytical payoff" than others as they reveal more of the underlying social processes in contemporary society. In using Northern Norway as a case, six different kinds of resources stand out as having a rich analytical potential:

Birds' Eggs are analytically important in spite of their negligible economic importance. The eggs of sea-gulls and certain wild ducks have for thousands of years been collected during the spring by fisher households and farmer households as subsistence food. Later in spring also the downs of certain ducks, notably eider ducks were collected and treated for the use in downs and pillows. At this time food stores were usually run down after a long winter and fresh eggs were an important source of protein for all members of the household. The eggs were only collected from those kinds of birds that have the capacity to lay additional eggs if some are lost or stolen. For obvious reasons collection took place while the eggs were still fresh, thus giving the birds a chance to add new eggs. Strict rules of how many eggs can be removed from the various kinds of nests and at

what times by which households, have maintained this as a sustainable resource management system. The only threat to this kind of viable egg collecting systems seems to be external factors like the overfishing of certain key species of fish which are crucial food for the new-born chicks and International Regimes (notably E.C. regimes) which indiscriminately bans all collecting of eggs from wild birds in order to protect some endangered species of birds.

Because of their minimal economic importance, the egg-collecting institutions of Northern Norway have in most places been untouched by interventions from government or big business. Thus we here find design principles that have evolved gradually and have been continuously refined since the Viking age. In most respects these can serve as a baseline for comparison with the design principles of newer and more messy resource governing systems.

Wild fish is economically the most important renewable resource in northern areas - which in fact is mainly northern waters. Because of this, sea fisheries and ocean fisheries are entangled in state regulations, international regulations and the continuous games played by organised interest of fishers, fish industries and fish exporters. These are not only games played against the nation states or weak international supervising bodies, but to a large extent games where one group of organised interest uses the apparatus of the state or the "community" in its gameplay against another group of organised interest. Thus the potential "analytical payoff" to the body of knowledge of design principles for "naturally evolved" resource management systems is negligible. However, the analytical importance of wild fish governing regimes is significant in dealing with the role of the nation state and the role of provinces/counties in resource management and in dealing with the workings of international governmental organisations (IGOs) and international non-governmental organisations (INGOs) (McGinnis and Ostrom 1993).

Recently there has been several moves, both by politicians and academics within the northern areas, to dismantle the extremely complex and illegitimate government and international regulatory systems of harvesting wild fish. The idea has been to replace them with simpler systems of fisher's comanagement regimes or territorially based management regimes that utilises the capacity of the northerners to exercise self discipline and self control. The convergence of folk knowledge and modern multispecies management tools has made these ideas even more feasible.

Recent experience has shown that neither national, nor regional (e.g. European) management regimes can manage or control the highly efficient and highly mobile international fishing fleet that belong in the big fishing nations, but increasingly fish on the high seas under various flags of convenience - where they are not bound by quota agreements between the "responsible fisheries nations". This might result in a total closure of the global commons called the "high seas", a preliminary test of this is the current work of United Nations on the management rights - and responsibilities - of coastal states regarding "straddling stocks offish". With such an enclosure, there would only be one type of salt-water fishers in the world - the coastal fisher.

Recent studies have also shown that when attempting to streamline and simplify government regimes, coastal fishers increasingly design their own supplementary rules to avoid gear collision and secure a reasonable harvest for all participants (Bjcrnaa 1993).

In line with this kind of thinking and with these findings, the whole fisheries management could be handed over to the coastal fishers themselves or their fishing communities in the form of "producer organisations" (POs), coastal territorial "boxes" (an EC term), fjord basin "management boards", or to native councils or local government. What primarily carries analytical importance here are the actions of the nation states and the interest-groups connected to the various proposals and the reactions to these of the different parts of national governments and international governmental organisations, notably of the environmental sections as against the fisheries and export sections of these.

Coastal Ecosystems are the basic resource in the development of aquaculture along the northern coasts. The gill-net-"ponds" that are the basis for salmon farming, interacts directly with the flowing sea-water and the health and the rapid growth of the farmed salmon is highly dependant on a pure and healthy coastal ecosystem. This is important even at the level of the individual aquaculturalist; the externalities (pollutants and contaminating agents) produced by one firm is not likely to affect only neighbouring aquaculturalist, but also the firm itself when the tide turns. Thus there should be very strong incentives in aquaculture firms to either be far away from each other, or if that is not possible, to internalise all or most of the externalities, the effect of both strategies is in effect to treat the clean and healthy coastal environment as the crucial production factor that deserves some cost in order to be maintained. The psychology of selling fish also place heavy emphasis on the mental connections made by the potential customer between the quality of environment where the fish was grown and the quality of the product. These kinds of considerations should also be valid for the "new" kinds of farming the seas: sea ranching, marine transhumance and more open range systems of point feeding and fjord basin enhancements. In theory therefore, everyone in the aquaculture sector - and in the aquaculture dependent communities - should strive as hard as they can to maintain and improve the public good that a clean and healthy coastal ecosystem represents.

In reality the world is different: Apart from the ecological hazards of oil drilling, tankers and nuclear submarines to the Arctic waters, aquaculturalists have the same tendency to be free riders on the resource base as do other enterprises. The time horizon is often short (- "this crop of salmon - while the price is good"), and the fisherman's cultural paradigm of chance luck is prevailing. Also the government licensing system with size limits for each firm gives adverse incentives to stock too much fish in a small volume, thus exceeding the environmental carrying capacity of a certain location. In addition to this, the aquaculturalists' demand for clean and healthy coastal environments and their subsequent consumption of these, has to compete with all sorts of needs and use of

coastal ecosystems for sewage disposal, recreation, sport fishing, spawning areas and fry feeding areas for wild fish.

When the national government is administering the licensing system, while the local government has the responsibility for sewage and recreation, the end result has often been a "right" of the aquaculturalists to pollute the local coastal ecosystem - by "central government authorisation". At the same time as this "right" to pollute is contrary to the objective interests of the aquaculturalists, it also renders the central government vulnerable. As far as poor quality fish on the international market is a result of the government licensing system, the government is morally obliged to support the fish farmers, both with transfer payments and diplomatic muscles in the event of "trade wars". This awkward position of a central government comes as a result of political ambitions to "manage" the growth of a new trade so as to avoid "boom and burst" situations. Experience has shown that this is virtually impossible to achieve, the enterprising aquaculturalists will always outsmart the government while the government's attempted governance will eliminate any self-discipline and self-restraint that the aquaculturalists might have had. It therefore seems necessary to replace management of the aquaculture sector with governing of the aquaculture resource itself; the clean and healthy coastal ecosystem.

The future governing of coastal ecosystems of the North needs to take into consideration all the different uses of coastal ecosystems and to place the co-ordinating authority at one level of governance. Coastal zone management by local government, with mandatory adherence to strict environmental standards, would make the health of the coastal ecosystems the prime objective, thus benefiting also the aquaculturalists in the longer run (Sandberg 1993).

Property rights have a tendency to assume importance when decisions on multipurpose use of fragile ecosystems are taken to the local government level. Depending on the particular history of a community, a fjord or an archipelago, few or many will have rights to islands, sounds and shores, to river mouths or to traditionally good fishing places. The whole coastal community will usually voice the right to nonpolluted seawaters and the preservation of good spawning areas and fry feeding areas for various species of fish. The analysis can take as a safe point of departure that this kind of property rights will be made relevant in a different way when the permission to farm fish and the conditions for doing this is no longer given by a distant central government office, but by the community who is going to experience the effects of this.

Wild, migrating salmon is a very special kind of resource and maybe one of the most valued resources among northerners. In a resource management context it is special as the anadrome fish moves between the open ocean, the coastal waters and up the numerous rivers surrounding the northern waters. Along its route, the salmon encounters widely different property rights systems which are as difficult to traverse as the waterfalls of the most rapid rivers. On the high seas no one owns the salmon, but it roams widely and is hard to get. As it moves closer to the coast, coastal fishermen with traditional rights and government licences put up a virtual fence of drift nets across the path of the salmon. As it enters the sounds and fjords, shore owners have their

traditional net-set places - some of which date back to medieval ages. Here the sport fishers also trolley for salmon and put out a single net when nobody watches. In the fjords the salmon also encounters runaway distant relatives from numerous fish farms and the smell of excrement from young salmon fry in fry farms in river mouths, incidents that can upset the process of finding a suitable mate and disturb the homing instinct. When the remaining salmon finally reaches the river of its own childhood, both the shores and the river channel are someones private property, usually the property of the farmstead bordering upon the river. Fishing is here usually by rod and can only be done with a specific permission from the owner. In some rivers of the north, farmers still practice traditional salmon "harvesting" with traps or nets, in others "exclusive salmon fishing" have developed to cater for English lords or American businessmen. In still other, and less famous rivers, the river owners have pooled their property rights together and sell fishing permits to the general public at a reasonable price. With reasonable secure property rights to salmon rivers, the owners are usually eager to enhance the river environment to achieve a greater spawning success, to supplement the fish stock or to restock the rivers after attacks of the *gyrodactylus* parasite. Most of these activities are undertaken as co-operative effort between the owners, often with co-operation from the local government or from the local Sport-Fishers' Association. Apart from all the upstream dangers to the migrating salmon, the greatest hazard to the river environment is the extensive regulation of rivers for hydropower, which disturbs the flooding season, and the construction of highways on river banks, which destroys the gravel flats used for natural spawning.

The analytically challenging aspects of wild, migrating salmon is the relative importance the different kinds of property rights take on when something has to be done do the dwindling stocks of river salmon. At first the coastal fishers right to fish ocean salmon with drift-nets was "suspended", causing a battle over traditional fishing rights that is still alive in the public realm.

A more difficult debate is a current discussion over the rights of river-owners to have "their salmon" and their rivers protected from genetic contamination of runaway farm salmon and to have the runway of their salmon - from ocean to river - protected from "foreign pheromones" (the smell substance that is the basis for the homing instinct). The "protection zones" necessary to give optimal runways to all the salmon rivers of Northern Norway would render large areas out of bounds for aquaculture and significantly hamper the commercial development of new forms of farming the seas, notably sea ranching and marine transhumance (LENKA 1990). The traditional property rights of river owners to "their" genetic brand of salmon are reasonably strong when confronted with the newly acquired rights of aquaculturalists to farm salmon in certain locations or the more diffuse rights of sports-fishers to troll in the fjords. Adding to this is the division of authority on both central government level and at the local level, where a Directorate of Wildlife becomes the agent of the river owners and sport-fishers, while a Directorate of Fisheries becomes the agent of the aquaculturalists and ocean fishers.

There is a number of other conflicts of rights connected to wild, migrating salmon in the framework of a resource that moves from "upstream" to "downstream", such as the

century old conflict between net-site owners in the fjords and river-owners, and between river rod fishers and fjord-trollers.

All of these property rights have a significant analytical potential in explaining what kind of social processes are set in motion when there arises a need to enhance a resource which everyone in the community values highly.

Forests, berries and pastures represent as a resource the whole of the uninhabited lands and mountains of the North. Although nobody lives in these areas, that does not mean that they are not used by anyone or that they are useless. In Norwegian these areas are traditionally called "*utmark*" i.e. the outer fields, which means that they were used by the nearby farms or villages as additional fields in order to make a living in a harsh environment. Wood and timber was collected from the forests, wild berries were picked during the autumn season, cows and milk-goats were grazed in natural mountain pastures in the transhumance system and sheep and reindeer were left to roam freely in the mountains. In addition to these farm-related activities, hunting and fishing of fresh water fish have been a major source of food and cash. Although these areas look much like wilderness to the untrained observer, the entire uninhabited area of the north have been utilised by northerners for thousands of years - and there are thus rights of various kinds tied to these areas.

It is in the case of forests, berries and pastures that the role of the nation state as a holder of vital property rights in the north is most marked. Because of the special history of the north, its rich resources, its sparse and in many cases nomadic population, the nation states could in most cases colonise the north and make all uninhabited lands state property without much opposition from the indigenous population. For instance in Norway, the whole Northern part is exempted from the laws that govern the operations of commons in rural areas (*statsallmenning* and *bygdeallmenning*). In Northern Norway and Northern Sweden and to some extent also in Northern Finland, the state has been selling state owned land to induce people to move from the south to the north. The state has also guaranteed free access for all nationals to state owned land in the north and the public good that unrestricted hiking, berry-picking, fishing and hunting (against a licence fee) in the north represents, is considered a vital part of the welfare of the whole nation. Recently this free and indiscriminatory access to the "wilderness" has also attracted millions of tourists to the "top of Europe", thus providing a good income for northerners who have sufficient entrepreneurial initiative to make money from public resources. State corporations in the forest sector have also been made economically "independent" of the Treasury, which means they are all the more dependant on the continued property rights of the state to vast areas of forest.

In Norway this powerful coalition of the hikers, the hunters and sport-fishers, the tourist-industry, the state, the state corporations and the urban and southern "public" has been challenged by land claims from the Sami, claiming aboriginal rights to land, forests, rivers and lakes in the "core area" of the Sami. A Royal Court Commission (*Samerettsutvalget*) have been reviewing these claims for the last 15 years. The state

ownership has also been challenged by claims by northern farmers to have restored the old "common property rights" in the outer fields that the state has "stolen" from the local villages - in the same way as local fishing communities are filing complaints against the state for theft of traditional fishing rights in connection with the introduction of a quota system. A Royal Court commission (*Utmarkskommisjonern*) has for the last 10 years been reviewing the rights of various northern villages to forest products, to unrestricted pasture, to commercial berries (cloudberries), to fish and to game. This has reached several verdicts, some of them confirmed by the Norwegian supreme court, that give politicians a legal base for the introduction of the laws governing commons also in Northern Norway - if they want to.

The property rights questions involved in these kind of legal and political battles points to their fundamental importance in analysing also the role of the state in a resource endowed region.

Water Power is maybe the most important resource in explaining the transition of the Northern societies from traditional farming/herding and fishing societies to modern industrial and subsequently to "welfare" societies. Access to cheap hydro-energy was a significant comparative advantage to any town or region in the north, whether its primary resource was fish, iron ore, timber, imported bauxite or the nitrogen in the air. The entire industrialisation process of the north and a number of the urban conglomerations of the north are products of proximity to abundant hydro-power resources.

The property rights of waterfalls were bought by industrialists, municipalities and the state at an early stage of hydropower development. In most cases they were bought cheaply as the farmers who owned the rivers saw no immediate value in the masses of falling water - it was the salmon that was the real value of the river and for their own mills they would rather use the smaller and more manageable streams. Thus the property rights of the water-power was separated from the other property rights in most communities at an early stage.

After almost 50 years of hydro-power development and production in the fragile northern environments, experience has shown that water-energy is not a totally renewable resource. The massive multi-year water storage changes the local climate and the vegetation of the area deteriorates, processes which again affects wildlife, game and tourism.. The fisheries of regulated lakes and rivers gradually deteriorate, the disappearance of the spring flushing gradually affects the ecology of the fjords and near coast. While the holders of northern waterfalls rights earn good incomes from their property rights, the holders of other property rights, and the local population of northern communities experience a significant environmental deterioration, particularly in their mountain areas.

Until recently, the deal has been somewhat fair, in return for some lowering of environmental quality, the northern communities have had secure jobs guaranteed by cheap - and "clean" hydropower. However, with a recent liberalisation of the European energy market, the most efficient use of scarce "clean" energy can only be achieved by a free flow of energy to those customers who can pay the best price. This is also in the interest of the owner of the hydro-power plant. If outside interests, or the state owns the power plant, the proximity to the waterfall is no advantage any more and only the disadvantageous side of the energy/environment deal is left to the local community.

With water-power, the property right aspects are particularly interesting, as they in many cases are designed to facilitate development of a particular hydropower project - often with participation of local interests and public bodies. If the local developmental and job-creating effects of a hydropower project is not achieved, local initiatives to attempt to redesign the property right arrangements are likely to take place. Provided that political action to deliberalise the European energy market fails, such local coalitions of industrialists, local authorities and holders of water rights are likely to invent institutional arrangements aimed at offsetting the full effects of the marked forces.

Developmental strategies.

Our societies are not governed merely by tangible resources, harvest technology and the more or less appropriate institutions we design to organise the social and economic life in a resource based region. They are also governed by the ideas we nourish about the correct and incorrect path towards a future which in modern age has come to be viewed as an "open future". It is therefore customary that the debates and the formation of "schools" relating to development strategies occur in institutions of higher learning and research.

In the brief history of North-Norwegian academic institutions, dating back to the 1960ies, there has already been numerous schools of thoughts relating to development strategies. Especially in relation to rights to natural resources and in relation to ways of organising resource users, these have differed substantially over a short period of time:

- The idea that traditional northern societies contained special qualities of peasant economy and regional self reliance that made them robust in relation to fluctuating resource basis and to changing markets. The flexibility of northern households with regard to means of livelihood and sources of income was the backbone of this "robustness". These qualities were being eroded by the attempts by the national government to "modernise" the north after World War II (Brox 1966).
- The idea that local resource dependencies were to a large extent overcome by "regional integration". This meant that improved communications, commuting, enlarged labour markets, growth in public sector investments and employment together with improved education to a large extent had modernised the north (Brox 1984).

- The idea that Northern Norway has lost control over its own resources and that the correct development path lies in regaining control over resources and the generation of knowledge. Therefore it is necessary to initiate a total reconstruction of the north, where local solutions to resource control and development strategies are emphasised. A grand scientific programme, "The Project New Northern Norway" (PRONOR) was considered essential to provide Northern Norway with the scientific base for this reconstruction (NAVF 1990).
- The idea that the "tragedy of the commons" was the main obstacle to development in the resource-based north and that privatisation was the only way to achieve accelerated economic development and responsible resource maintenance. In fisheries this meant that transferable quotas should be introduced in order to create a favourable "incentive structure" (Hannesson 1990). In reindeer herding areas, fencing and privatising range management techniques were also introduced.
- The idea that resources held as "common property" were not doomed to tragedies, but were both traditionally and in the future the most efficient, just and legitimate way to govern resources. The theories of co-management advocated a reduced role in resource management for the nation state and an increased role for local communities (Jentoft 1991).
- The idea that in the new European post-industrial era there will be the industrial regions with a potential for "flexible specialisation" that will do well. This means that the resource endowed North with its traditional cultures of flexible resource users will have a competitive advantage. This would call for a halt to the customary government attempts to modernise the North and destruction of the inherent robustness (Nilsen 1992). It would also need a smallholder greening instead of the gradual withering away of smallholder culture (Netting 1993)
- The idea that greater regions with similarities in resource base and strategic market position can benefit from concerted action in research, production and marketing. Recent European experience has shown that "the industrial regions" of Toscana, Rhone-Alps and Westfalen have achieved a high degree of competitiveness based on certain structural and cultural characteristics of those regions together with active networking among small and mid sized enterprises. In the north, the creation of a "Barents region" including areas of Norway, Sweden, Finland and Russia, can be seen as an attempt to create - by political action - such a successful industrial region.

Neither of these ideas or strategies were "right" or "wrong", but some worked better and some worked more poorly in the discourse of the time when they were formulated. This means that to some extent these various ideas have influenced the course of developments in the north - some to a great extent - some to a lesser extent. Some of the ideas has contributed to an opening of the "public realm" - some have contributed to a narrowing down of the relevant "models of a future society". By discussing development strategies in the universities and administrations of a particular region - and by teaching

them to students, this also means that the ideological heritage is present among those who remember - and can be mobilised for or against any solution at any point, which is amply shown by the current debate on whether Norway, Sweden and Finland should join the European Community or remain outside it.

Downstream from the generation of development ideas lies the professional management of northern societies and the teaching and training of new professionals in universities and colleges. The problem with young academic institutions is that one set of theories has a tendency to take precedence over all others in a certain period. The narrow academic communities does not contain sufficient critical potential to counter and sharpen the analysis. While in fashion, such theories therefore tend to suppress other theories and offer themselves as the ultimate solution to all development problems. This is also the case when academic communities are more occupied with construction and advocacy rather than analysis. It further adds to the temptation that the role of the scientific architect is more exciting and rewarding than the role of the scientific critic.

However, when such "final solutions" fall, their connected theories not only fall, they are crushed and removed from curricula and professional training programmes. Even the useful elements of such theories are lost to the grindstones of academic history, while they have a tendency to stick to the minds of ordinary members of the society. From this popular base they often raise their head and surprise the well trained, but ignorant young professional.

But one thing will all "dead" northern theories of development have in common, the relationship between the northerner and the natural resources of the north is the focal point. Even for resources with very small economic significance, like cloudberry and birds' eggs, their value as a symbol of a particular Northern culture tend to increase in times of insecurity about the exact role of the nation state.

In order to analyse a possible new role for the state and the prospects for private enterprises and collective action in the resource-favoured north, it is therefore necessary to sort out the fundamentals of resource relationships. What are we talking about when we argue for a need to manage or to govern a resource, be it whales or cloudberry, herring or mountain pastures for reindeer?

Property rights and other rights.

Through all times the human kind has been plagued with the problems of how to arrange ourselves in relation to natural resources, especially the biologically renewable ones. The main question has not been one person's relation to the physical fish or pasture, but one person's relationship to another person's relation to the resource and the other person's relationship to the first person's relation to the resource. Such relations can be direct and personal as in a face to face encounter. They can also be indirect and personal as in local resource governing collectives. Finally they can be indirect and impersonal as in the case of an intervening state. The governing of resources is therefore mainly about relations between humans and between humans and collective institutions (Bromley 1991). In

essence it is about the social contract between members of society and the state as the symbol of the society.

Many forms of governing human societies have been tried, with varying success in relation to sustainable resource management::

- The *feudal* period was lacking in individual freedom, but had advantages in relation to the governing of natural resources. There were many owners in relatively small populations and rapid accumulation of wealth was not easy (Daly & Cobb 1989). The feudal privileges contained not only property rights, but also duties and obligations towards investment and maintenance of the resource - *noblesse oblig  *. A number of "green economists" have argued that these feudal institutions produced more sustainable resource management than the more modern institutions of the 19th and 20th century - that they worked better "for the common good". Some analysts claim that there is at present a "refeudalisation" in the north, with the emergence of a separate class of licence- and quota-holders in fishing and of reindeer-barons among the Sami (Eriksen 1993). These do not, however, have any duties towards the resource and should more correctly be seen as cartellists within a capitalist system.
- The socialist period was in most former, "pure" socialist countries characterised by property rights vested in the state. Having full control of all natural resources, the state was assumed to implement the collective democratic preferences and apply the ultimate hierarchical rationality with particular concern for the generations to follow. The results, as we know them, were contrafinal to the stated objectives - with resource depletion, overindustrialisation, pollution and inefficiency in resource use.
- The capitalist period is still in most countries characterised by the individual freedoms from the French revolution, among these the freedom to own and accumulate wealth irrespective of breed or rank. Introduction of second and third generation human rights have modified the individual freedoms of the capitalist system somewhat, but individual property rights are still one of the foundations. Although this system has shown a high degree of adaptability to environmental challenges, it also has signs of contrafinal consequences such as individual freedoms which in a short time accumulates to become a collective straightjacket. Without counteractive measures by collectives, the result of most capitalist systems are overindustrialisation, pollution, resource depletion and unemployment.

To the planner - and the politician - it is depressing to find that there is no ultimate solution, that all human actions and designs have unintended and unwanted consequences (Weber 1968). The promise "that all will be well once we get this new reform implemented" is therefore basically false and the scientist's task is to voice critics of all "final solutions" and to look for ill effects of implemented reforms.

In relation to the opening question o the preconditions for the welfare of northerners, suffice here to state that there are elements in all major systems of governing resources

that under certain conditions can work towards some stated goals. The real problem is often to agree on such goals. The task of the scientist is to hunt for governing principles that works, assemble them and show their preconditions and limitations, and to compute their political and social cost in terms of inequality, misery and loss of individual freedom. Then it is the task of elected politicians to construct the systems of government - to be the architects and the advocates of certain solutions.

In this perspective the concepts - and instruments - of property rights can serve as useful analytical tools. By varying the form and degree of control, of exclusion, of benefit-rights and maintenance-duties connected to property rights, it is possible to design incentive structures that with some degree of probability can work towards specific goals. Other rights, like the right to food, shelter, education and cultural identity, can also be used to design incentive structures, but these are still difficult to identify and analyse at the individual level. The concepts of property rights have the advantage that they usually connect the right to a benefit stream from a resource to some specific duty towards that resource. This works for both individual property rights and the property rights of collectives. Social, economic and cultural rights have less specific ties between the rights of individuals as members and their duties towards some collective entity like the balance of the state budget or the maintenance of a minority culture.

There is thus nothing ideologically suspect tied to property rights, in one form or another you will find them as basic elements in any economic system (Weber 1968). Always present in most societies, their importance tend to increase when state control becomes too costly or is relaxed for other reasons, or when markets are deregulated.

When dealing with systems of governing natural resources, one can reasonably put forward the following five modest demands that must be met:

1. Secure the maintenance or ecologically sustainable use of the resource.
2. Avoid social misery among a resource dependent population.
3. Accepted as just in the society at large, also by those excluded from the resource.
4. Have a high legitimacy among resource users themselves.
5. Have reasonable public costs with relation to control and policing.

Provided there is agreement that all of these demands are equally necessary and that they taken together are sufficient to guarantee the ecologically sustainable use of a resource, it is possible to proceed in the analysis. Here it is important to see how the various property rights elements satisfy the demands listed above. If there is disagreement on which demands to pose to a resource governing system, one have to give relative weights to the demands or to rank them according to importance. For instance will some claim that avoidance of all inequality among resource users is the most important demand, others will claim that economic efficiency (fashionably termed "economic sustainability") must be given priority. In the present framework equality among resource users is not a criteria as long as misery is avoided, while economic efficiency always is subordinated the longer term ecological sustainability. The importance of the relative weight of the various demands on a resource governing system is shown by the current debate on the shortcomings of a multispecies fisheries management regime for

the North-Atlantic. This is as much a debate on the missing objectives of the proposed regime as a debate on the shortcomings of the biological modelling (Eikeland 1993/ Multispec-1993).

There are numerous examples that indicates that the greatest limitations to workable systems of governing resources lies within the academic communities and in government departments. Imprecise and blunt concepts and frequent abuse of these by fashionable academics and "experts", seriously limits the effects of resource governing systems, constrain the modification of existing systems and precludes the design of new and more workable systems. Some examples will make this clear:

The Brundtland Commission makes a cardinal point of the need to govern "our common resources" - even our common future - without specifying to who these are common and who has rights and duties in relation to them. Thus - as was amply demonstrated during the UNCED conference (Rio) - the recommendations of the commission are extremely difficult to implement. Thus only the uninhabitable Antarctica is managed as a "global commons", and only for a limited period and as an exemption to the sovereign powers of the nation state.

Another example is the confusion in the Norwegian resource management debate on the issue of "common resources". The term common has here been used to define fundamentally different kinds of property relations:

- Resources owned by no one (*res nullius*) which has completely open access (*allemannsrett*), have been termed common resources.
- Resources owned by the state (*res publica*) in Northern Norway, where the state alone has all rights connected with ownership (*statsgrunn*) have been termed common resources.
- Resources owned by the state, but where the local community has clearly defined commons rights - user rights and governance rights at the exclusion of others (*statsallmenning*) have been termed common resources.
- Resources owned in common by a local group of holders of certain rights - a true commons (*res communes*) - have also been termed common resources (*bygdeallmenning*).

When the concepts used in science and in public debate are blunt, so is the analysis based on these concepts and both science and politics loose their ability to be analytically precise and to work out suitable institutions for specified tasks. Norwegian academics and government economists have thus uncritically imported the term "the tragedy of the commons" and used it indiscriminately on all these very different Norwegian forms of property rights systems.

When the logic of the tragedy of open access is sloppy (Brox 1989), it gives the economist the best possible argument against **all forms** of common ownership, and privatisation becomes the only salvation from the "tragedy of the commons". Quotas in fisheries (semi-transferable) were introduced specifically to avoid further tragedy in the

"common fish resource". For many coastal communities it is the introduction of quotas and the "enclosure" of the common fishing resource to young entrants without private property rights that is the real tragedy of the coast. The same kind of enclosures has also led to unnecessary extensification of resource use in the reindeer grazing areas.

Around the world there are abundant examples of such self-fulfilling tragedies resulting partly from sloppy analysis, partly from abuse by power holders of blunt academic concepts paraphrased as slogans. Both predatory and benevolent states tend to take over the responsibility from complex, untransparent, but well functioning local common property governing systems (grazing systems, local fishing systems, forests or irrigation schemes) because they foresee a "tragedy" dynamics. But what most often happens is that the state - and its advisers - have limited capacity to think of all the necessary institutional arrangements for governing a resource properly. If these are not in place in time, the resource degenerates into an "open access" resource and the tragedy becomes a reality. The state's desire to govern is usually far greater than its ability. In panic the benevolent state then privatises the resource to get rid of the problem, in many cases enclosure and privatisation is offered as solution to a problem that does not even exist. More often than not, this leads only to even larger problems of landlessness, unemployment, social misery and political unrest.

In order to avoid further tragedies like these, it is necessary to develop more precise concepts regarding different kinds of property rights, especially concepts that can better distinguish between what is private or corporate, what is common to a more or less defined group and what is public, state or global. This is because the concepts of property rights seems to be fundamental in any system of governing resources and their design thus decisive for the level and distribution of welfare of large groups in resource-dependent or resource-endowed regions. With lesser state intervention and continued deregulation of markets, also for fish and agricultural products, the property rights will assume new importance. The remaining potential for nation-states or international government organisations (IGOs) to govern the welfare of people in resource dependent regions will then most probably rest in the design of property rights and cultural or legal rights-based structures.

In spite of the initial usage of the concept in this article, property rights are not clear-cut measures of relationships, various schools of thoughts have through centuries loaded such rights with highly different ideological contents. To simplify matters, let us limit the discussion here to the two major antagonists: John Locke and Immanuel Kant.

John Locke argued that possession and ownership comes first, with mans entry into virgin land, and that such ownership is both a necessary and a sufficient condition for a market to function. The philosophical basis for this is derived from the theories of natural rights, every man has a need to secure his or her basis of existence and a God-given right to enjoy the fruits of his or her own labour. We find traces of such thinking in some of the attitudes of Norwegian traditional landlords.

Immanuel Kant on the other hand, argued that *de facto* possession of a resource is not sufficient for it to become a *de jure* property right; in addition it must in some way or another become a socially accepted property right. Only socially acceptable property rights are real, i.e. they contain a bundle of rights and correlated duties: for me to enjoy the benefit stream from the resource, for you to respect my property and stay away (Bromley 1991). Even the traditional landlord has at some time had to register his title deed to secure its social acceptance. In the old Norse society this was even done (*tinglyst*) in public at the regional assemblies, and was not real property before its entry into the register of deeds was sanctioned by those present.

According to Kant, man has never lived in "natural conditions" as Hobbes could be believed to take as his point of departure. There has always been some sort of social contract which comes before real property rights. If we follow Kant's definition of property rights, it therefore follows that all property rights are derived from collectives and that all property rights are instrumental variables that are designed or organically evolved to suit particular needs of the collective. They are means to reach certain ends and can be changed if this is considered to be desirable for the collective or those with influence within the collective. Expropriation, nationalisation and privatisation are examples of the collective changing basic property rights in order to reach specific goals. Such changes usually takes place at the constitutive level of the society and usually after some crises or a lengthy political or legal process.

In this article we have followed a Kantian interpretation of property rights. In pursuance of this, a number of new avenues open up:

- Variations in forms of property rights can be analysed comparatively as solutions to different kinds of challenges posed to societies, communities or collectives.
- Property rights can be consciously designed in order to achieve specific objectives, i.e. to make appropriate institutions with built-in incentive systems that will work in more or less predictable ways in deregulated markets. In this respect property rights are useful concepts for various schools of "new institutionalists".

One example to this effect is the original, and now almost forgotten rationale behind the proposal of introducing transferable quotas in fishing. The transferability combined with the annual auction of the quota should utilise the incentive of self-interest to maintain the resource in the most efficient way (Gordon 1954).

A Possible Framework for Analysis.

In analysing property rights, or bundles of rights and duties connected to various systems of governing resources in the north, it is not sufficient to distinguish between owner and non-owners. The property rights correlates must be broken down to units that can be analysed in relation to empirical, real life situations. One way to do this is to define

bundles of property rights cumulatively so that only a full set of rights qualify as owner. This analytical framework has been developed by Edella Schlager and Elinor Ostrom, but has only been tested out for analytical power in the Maine lobster fishery (Schlager & Ostrom 1992).

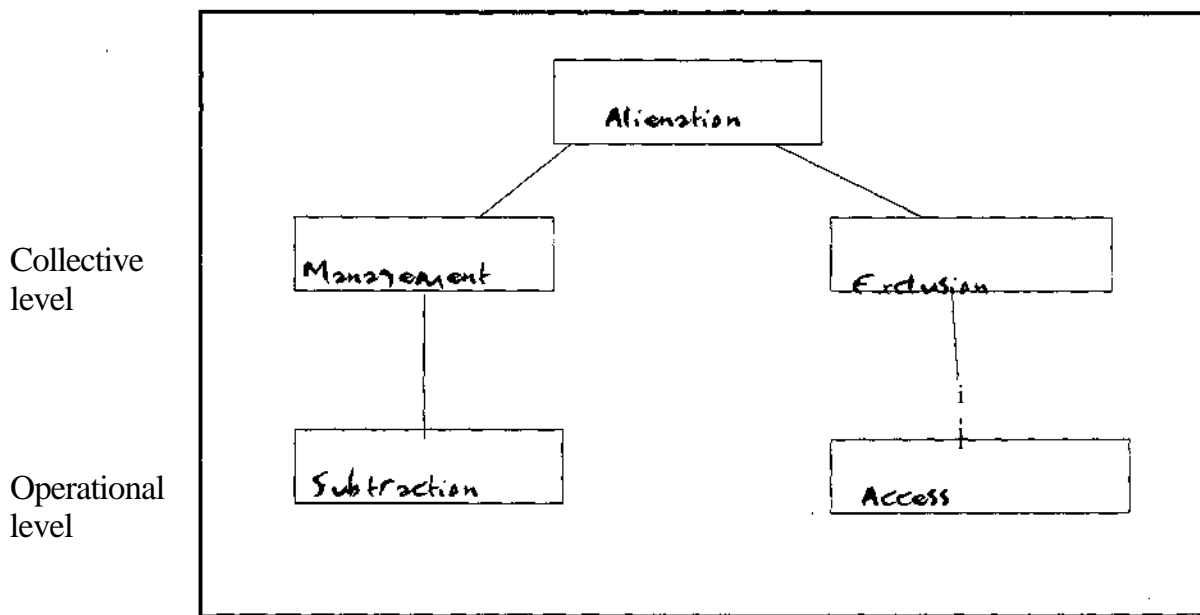
In such a framework it is useful to distinguish between property rights on an **operational level** - where things happen, and property rights on a **collective level** - where things are decided. A constitutive level, where the whole design of: property rights is laid down, can be added to the analysis later.

On the operational level we can distinguish between the **right of access**, to enter a defined, physical area, and the **right to subtract**, to take away or harvest the products of a particular resource.

Between these kinds of operational property rights, which for instance Norwegian fishers exercise in the waters of the Norwegian state, and the rights on the next level, there is a fundamental difference. It is this power to participate in the shaping of future possibilities, to craft future property rights on the operational level that makes property rights on the collective level so strong.

On the collective level we can distinguish between the **right to manage**, to regulate internal patterns of use and to transform the resource through improvements or negligence; the **right to exclude**, to decide who shall have rights of access and how these rights can be obtained, lost or transferred; and the **right to alienate**, to decide to sell or hire out one or both of the other property rights on the collective level.

These five property rights then make up a hierarchy of rights so that some rights are of a higher order and some rights are derived from these. As the termination of all relations to the resource is the most dramatic, the right to alienate is placed at the top of the hierarchy. Fig. 1. gives a brief sketch of how these different property rights are connected:

Fig.1 Hierarchy of rights

Source: Schlager & Ostrom 1992

From this one can easily see that the user's right to harvest on the operational level is derived from the owner's right to manage the resource on the collective level. Similarly is the right to access derived from the exclusion rights at the collective level.

These five different property rights also make up various bundles of rights that make it possible to distinguish analytically between different ownership positions. A full owner has all 5 rights, a mere user has only access and subtraction rights. In between these positions we can find all the known forms of property relations to resources. Compared to the analytical framework suggested by Schlager and Ostrom (Schlager and Ostrom 1992), this has here been expanded with one position, the unauthorised user with a only a right of access, because this is a category that is analytically useful in northern areas:

Fig. 2 Bundles of rights associated with ownership positions.

	Owner	Proprietor	Claimant	Authorised user	Unauthorised user
Access	X	X	X	X	X
Subtraction	X	X	X	X	
Management	X	X	X		
Exclusion	X	X			
Alienation	X				

Source: Schlager & Ostrom 1992

This kind of subdivision of property rights has great analytical advantages. At the same time as it keeps the concepts of various property relations away from being muddled up, it also enables the classification of specific resource management systems according to the empirical distribution of these 5 different kinds of property rights.

Also in real life these five different categories of ownership positions can easily be recognised in relation to northern resources like the 6 resource categories described above:

The **unauthorised user** is in Northern Norway and Northern Sweden given access to most wilderness resources under the legal categories of "everyone's rights" ("*allemannsretten*"), which has a correlated set of duties concerning proper conduct in protected nature or in landowners forests or mountain areas (Orebech 1991). Especially for the northern part of these countries, where the state is the main landowner, the freedom of access for all nationals is deep-rooted. This kind of right of access gives the public a general protection from charges of trespassing, although for the protection of nesting birds and breeding animals, temporary limitations to the right of access can be introduced. If an unauthorised user starts to harvest from the resource other products than those granted in the "tourist laws" (mainly non-commercial species of wild berries), he or she is a thief. There are, however, numerous border cases, like cloudbberries, where there is legal confusion (Nesheim & Rystad 1990).

The implicit "harvest" contained in this kind of modest property right is the recreational values, the improved health and the mental balance of the public resulting from experiencing untouched nature. So far this has been viewed as a genuine public good where one person's "harvest" does not represent a real subtraction from the resource.

The **authorised user** has both right of access to the resource and is granted the right to subtract from the resource - given by the owner or the holder of management rights over the resource. For instance have North-Norwegian coastal fishers no more than this kind of user rights to the state's fishing grounds, the state's position on this is recently confirmed by the ruling Social Democratic party. This fundamental character of the property rights of North-Norwegian fishers explains to a large extent the amount of energy spent on obtaining - and keeping for themselves - the state authorisation as bona fide fishers.

The **claimant** does in addition to rights at the operational level also have rights in relation to management of the resource. These kind of rights at the collective level enables the claimant real participation in the formulation of rules for harvesting or subtracting from the resource, but not in exclusion decisions. Norwegian fishers have for a long time wanted to have such rights, and are given imitated management rights through participation in the Fisheries Regulatory Council. This does however not make the final decisions on management questions. The best Norwegian example of genuine management rights for fishers is the old Lofoten management system (Jentoft & Kristoffersen 1989).

Proprietors have de facto property rights and participate fully in management and exclusion decisions. Most members of genuine "Common Property Regimes" should be classified as Proprietors as they cannot sell out the resource, neither individually nor collectively. Analytically they have all the property rights except the right to alienate the resource. This means that they in most cases are protected against themselves through legal binding as in the case of the Laws for the traditional South-Norwegian commons (*bygdeallmenning*) (cf. Innst. O. nr. 67).

It is in many empirical cases an open question whether these rights are *de jure* rights as well, whether the surrounding society accepts the sovereign ownership rights of the members of the common property regime. In the case of aboriginal rights, for instance fishing rights for coastal Sami in some of the fjords of Finnmark, it is not feasible to expect the nation state to give the Sami the full set of rights, including the right to alienate - to sell out - the aboriginal rights. But usually the proprietors four property rights are socially accepted as long as the resource is managed in an ecologically sustainable way.

A full owner has a full set of all 5 property rights and is *de jure* owner - usually justified by a title-deed. He or she is the only one who can alienate the resource and the only one who can become landless. For instance "The State Office for Selling State Ground in Finnmark" thus becomes more landless for every piece of land it sells to individual landowners. But also the 5 owner's rights are socially derived rights, granted by and sanctioned by the collective and can be nullified if the resource is severely mismanaged or neglected.

Equipped with this analytical framework, it would be possible to look more closely at some of the crucial resources in the North in a way that connects all the questions raised above. The central question here is what effects varying composition of property rights to these resources have on the level of welfare among Northerners. Important resources in this respect are the above mentioned resources: birds' eggs, wild sea-fish, wild salmon, forests and grazing land, water-power and coastal marine environments for aquaculture, protection and recreation. As the state is such an important agent in most Northern Areas, both as a welfare guarantor and as resource owner/coloniser, it is also important to link this kind of analysis to other analysis the role of the modern state in the Northern areas.

Through this kind of analysis it should also be possible to come somewhat closer to an answer to some of the fundamental questions of the long debate on development strategies for the North.

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