
Sámi Reindeer Pastoralism as an Indigenous Resource Management System in Northern Norway: A Contribution to the Common Property Debate

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ABSTRACT

Pastoralism is defined here as a system in which humanity mediates the relation between land and animals. The paper argues that the conventional idea of pastoralism as a pure relation between animals and land obscures indigenous resource management systems such as that of the Sámi, with its seasonal variations in both labour and pasture. This management is exercised through flexible social groupings which mediate the relation between the size of the herd and the capacity of the pasture. The fact that there is no historical evidence of overgrazing in a general sense in Sámi areas must be seen in connection with this management system.

It is commonly believed that pastoral management systems necessarily imply periods of ecological breakdown and loss of animals through famine. According to conventional knowledge, the reason for this development is to be found in the combination of individual ownership of animals and common ownership of land which characterizes a pastoral economy. A possible implication of such a situation is stressed, in the 'tragedy of the commons' (Hardin, 1968). Every single herder will try to maximize individual gain by putting more animals on the pasture, and this ultimately leads to overgrazing, diminishing herds and economic loss for all herders.

This view, which was presented as an abstract model of human behaviour and adopted as an unconditional paradigm by many wildlife biologists and civil administrators (Freeman, 1985) has

recently met criticism from different scholars interested in common property resource management (Berkes and Farvar, in press; McCay and Ackeson, 1987; National Research Council, 1986). In particular, in Canada there is a growing literature on the ethno-specific character of native management systems (Freeman, 1985; Usher, 1987; Usher and Banks, 1986) with regard to resources such as fish (Berkes, 1977, 1979; Berkes and Farvar, in press), beaver and moose (Feit, 1973, 1984, in press). These case studies—mainly among subarctic Indian groups—focus upon the cosmology and organization among the people exploiting the resources, and thereby stress the fact that people are mediating their relationship with nature through social arrangements. This dimension—human being as mediator—is more or less absent in the perspectives on humans as predator, maximizing profits regardless of the social fabric of which they are part.

Pastoralism is often presented as the classical illustration of this predator form for human behaviour, and the core of the problem is believed to be in the existence of *common* ownership to land. Although it has been shown that privatization of pasture is not the only solution available to prevent overgrazing and that people are capable of acting collectively to protect common pastures (Gilles and Jamtgaard, 1981), there are few studies of how pastoralists actually manage their pastures in relation to the interests of the collective. There seems to be an underlying assumption in the literature that pastoralism is the very condition under which the 'tragedy of the commons' is likely to occur.

Now, as this paper will try to demonstrate, this understanding of the commons has to be modified also when it comes to pastoralism. This is because pastoralism is by its very definition a situation where humanity *is* mediating the relation between land and animals, while the paradigm adopted by conventional quantitative-oriented science presupposes a social vacuum where the only relation of interest is the one between animals and pasture.

The domestication of reindeer is at least a thousand years old among the Sámi of middle and northern Fennoscandia (see Figure 1), and as a pastoral adaptation reindeer herding is known back as far as the sixteenth century (Anderson, 1958; Ingold, 1980). Ownership of the animals is individual, and the main production unit is the household. The owners keep their animals together in herds, the size and composition of which reflects strategies of both herding and husbandry (Paine, 1964, 1972). Commonly, the herders move around with the herd in a yearly cycle between inland (winter) and

coast (summer), according to the seasonal pasture conditions. Legally speaking, pasture is a common resource for all herders. The pastoral production reflects the consumption needs of the production unit (meat, sinew and skins) and conversion through a constant market for meat has provided the unit with the necessary cash.

The viability of this pastoral ecosystem therefore depends upon the relations between the three factors of production: personnel, herd and pasture. These relations have until recently been mediated exclusively by the herders themselves, and thus within a Sámi cultural framework. Culturally speaking, reindeer pastoralism has been a very autonomous system of production. None of the Scandinavian countries has, until today, tried to interfere much with these

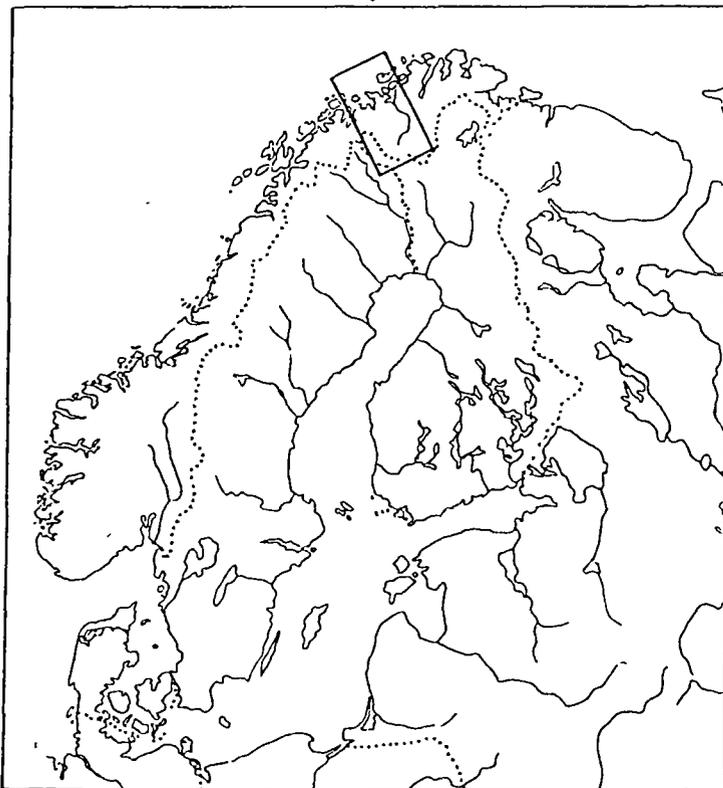


Figure 1. *The Pastoral area of Guovdageaidnu, Finnmark*

ecological relations. The only exceptions are reducing pasture areas through regulations and land encroachments. The size and management of the herds, access to herding and pasture—these are all decisions which have been more or less left to the Sámi pastoralists themselves. In recent decades, however, the pastoral ecosystem has been gradually integrated into governmental institutions, as the relations between the different factors of production became controlled by national laws and regulations. This development took place in Sweden in the 1970s (Beach, 1981) and is today on the governmental agenda in Norway.¹

This administrative integration was to a large extent justified by the authorities, using economic and biological arguments. Being social democracies, well embedded in the ideology of the welfare state, the governments in both countries argued that reindeer herding was a very anachronistic undertaking in its traditional form, because of its uneven distribution of animal wealth among the reindeer-owners. Statistics were presented to prove this pastoral matter of course, and regulations were introduced to equalize these differences in animal wealth.

Even more important were the biological considerations; according to the biologically trained experts in the governmental administration it was of the utmost importance to regulate the number of reindeer before overgrazing and an 'ecological catastrophe' became a reality. In Norway, for instance, departmental economists and agriculturalists² would stress what they regarded as a classical situation of the 'tragedy of the commons': grazing is a 'free' resource, and 'unrestricted' access will inevitably lead to overgrazing and poverty for all reindeer pastoralists (Odelstingprop, 1976-7; Government of Norway, 1985). The authorities have therefore, in the past decade, introduced a law and a set of regulations which are intended to stop 'overgrazing' and make herding more 'profitable' by reducing (a) the number of animals and (b) the number of pastoralists, in the hope of increasing the weight of the animals and consequently the income of the remaining reindeer-owners.

Now, presupposing the non-existence of any system of resource management among the Sámi pastoralists, this governmental approach is a good example of conventional wisdom when it comes to pastoralism. Individual herders, unrestricted by restraints or responsibility, are each pursuing their own interests, regardless of the fact that it brings ruin to all. Let us therefore examine more

closely the traditional pastoral ecosystem of the Sámi, in view of resource management. By 'traditional' I mean the way the pastoral system of production was—and to a certain extent still is—organized before the above-mentioned integration policy of the Norwegian authorities started to gain effect in the early 1980s. As a starting point we can go straight for the crucial question—paraphrased by both biologists and bureaucrats—and ask whether pasture is a free resource and, if so, does this (inevitably) result in overgrazing and mass starvation of reindeer?

The first and very important answer is given by historical sources. There is no historical evidence of overgrazing in a general sense in Sámi pastoral areas. In fact, if overgrazing is to be understood as the destruction of pastures, consequently reducing the number of animals being able to exist, this has not been a general characteristic or pastoral conditions at any time in Sámi history. Overgrazing in such terms seems to be a more apt description of the tragic development among Sahelian pastoralists in Africa (Swift, 1977). The abrupt breakdowns in reindeer populations often cited by biologists (Kosmo and Lenvik, 1984) are all examples referring to wild reindeer—cases when man is not mediating their relationship to pasture.

The relatively few disaster-like breakdowns (Sámi *nealgidalvi*) of which we know in Sámi pastoral history, seem to be of quite another kind. The climate of the winter pastures in northern Fennoscandia—especially in the mountain plateau of northernmost Sweden, Norway and Finland (Sámi *duoddar*)—is extremely stable. The winters are dry and cold, and the relatively small amount of precipitation (compared to the coast) makes it possible for reindeer to graze the lichen through the snow without great effort. Twice this century (1917/18 and 1967/8) quite irregular weather badly affected the grazing conditions in the winter pastures of Guovdageaidnu, the most important pastoral area in Norway. Rainfall early in the winter was followed by a series of frosts and thaws. The reindeer were consequently not able to break through the ice cover for food. Mass starvation was the result and in 1918, for instance, this reduced the reindeer population in Guovdageaidnu by a third.

But events such as these did not reduce the lichen as such—as for instance drought in Sahel would do with the plant production—and could accordingly not lead to overgrazing.³ The problems following such winters were not related to grazing conditions, but to the rebuilding of the herds.

The fact that there are no recorded cases of breakdowns of the

reindeer population due to overgrazing undermines the pessimistic prophecies put forward by biologists and economists, and begs some questions about the nature of Sámi pasture management. One way to answer these questions is to focus upon what actually seems to be the basis of the matter, namely the concept of *carrying capacity*.

For the biologist this concept is a question of the relationship between animals and pasture. For the pastoralists, however, this concept puts them in the middle of this relation. For them, the carrying capacity of the given pasture is a reflection of their capacity to mediate the relation between herd and pasture. Because of the climatic and biological variations which characterize the yearly cycle of the reindeer, it makes little sense to the herder to define the question of carrying capacity in relation to a certain type of pasture at a certain time of the year. Abundant grazing by the coast in the summer is, for instance, of less interest if there are insufficient lichen pastures to keep the herd alive through the winter. Or one might have access to large winter pastures, but this might be of less value if the area available in the calving season does not have the corresponding capacity.

The main challenge for any pastoralist, then, is to manage the herd in such a way as to overcome these seasonal variations (and maybe also fluctuations) in pasture capacity. The Sámi perform this mediation by dividing and combining their herds throughout the year to obtain the optimum relation between size of herd and capacity of given pasture at any time (Paine, 1964, 1970). To exercise this mediation the herder must possess a certain amount of *control* and *knowledge* of these two factors of production—an intimate knowledge of animal behaviour in relation to climate and pasture, and the ability to control the reindeer *and* the pasture in correspondence with this knowledge.

This knowledge and control is organized and exercised by Sámi pastoralists through the cultural institution called *siida*. This is a form of co-operation between reindeer-owners organized through kith relations (Blehr, 1964), the sibling group being most important (Pehrson, 1957; Paine, 1970). The term refers to a group of reindeer-owners who live and migrate together and to the herd of reindeer owned and herded by them. As the herds differ in size through the year according to the varying grazing conditions, so also does the demand for herding tasks and labour. Consequently, the *siida* changes size and composition through the year, as the pastoralists

divide and regroup their herds. Today in Finnmark, this may take place up to three times a year, the implication being that the pastoralists constitute three different seasonal sets of organization: winter, spring and summer/fall (see Figure 2). The *siida* is in other words an alliance recruited through cognatic and affinal kinship relations, based upon mutual herding strategies among its members. This principle of organization provides each reindeer-owner with potential access to pasture and herding partners over a large area.⁴

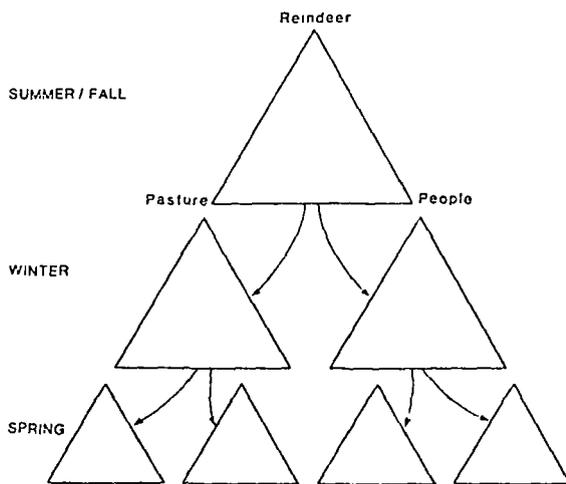


Figure 2. *The Principles of siida Constitution Through the Year*

One consequence of this form of resource management seems to be that overgrazing has not occurred as a general characteristic in the Sámi pastoral area. As a general principle the size of any herd (i.e. *siida*) will not exceed the carrying capacity of the corresponding seasonal grazing area. The strategy underlying the composition of the *siida* as a pastoral management system is never to be in a position where the herd is out of proportion to the pastures. If such a situation is approaching, individual owners will withdraw their animals from the common herd and join other herding units according to kinship relations and available pastures. The often harsh competition which might be involved in such regrouping, must not overshadow the basic point that the pastoral system, as such, is a genuine system of indigenous resource management—striving towards a

balance between the number of animals and the carrying capacity of the pastures as a whole.⁵

Not surprisingly, a characteristic effect of this pastoral ecosystem is its permanent centrifugal dynamics. The occupation with dividing and regrouping, in order to keep the production units viable, tends over time to propel people and animals into any area where grazing is available. This effect is, of course, at its strongest in periods when the growth of the herds is at its peak. Sámi pastoralists from Guovdageaidnu have, for instance, over the centuries migrated to Russia, northern Finland, northern and central parts of Sweden and Norway, Greenland, Alaska and the Northwest Territories in Canada.⁶

Another effect—traceable through the past three or four centuries—is the shedding of non-viable units. If the number of animals is below the level necessary to keep the production unit viable, the owners settle down by the coast or in one of the inland villages for a sedentary life, farming, fishing or in some kind of paid occupation.⁷

The underlying condition for this kind of management is, of course, a favourable animal-land ratio as a whole, and maintaining this ratio against competing (and more intensive) land-use opportunities. This has been the case so far in the history of reindeer pastoralism, but fundamental changes are now taking place. Administrative borders, regulations and competing land-use in the form of agriculture, tourism, mining, etc., are now actually reducing the land available.

So far, reindeer pastoralism has not led to any known case of the 'tragedy of the commons'. The two cases this century of abrupt decreases in the number of animals seem to be due to climatic fluctuations over a large area temporarily causing grazing conditions to diverge seriously from the otherwise extremely regular seasonal cycles. Any other case of disproportion between herds and pasture—for whatever reason—seems to have been solved in the sense that it did not lead to overgrazing, destruction of pasture or large loss of animals.

The reason for this lack of ecological breakdown is to be found in the management of relations between herds and pasture. Sámi pastoralism presupposes the individual control of animals, expressed through the seasonal dividing and combining of herds and organized through the social organization of the *siida*. Exactly *how* this control is exercised—degree of domestication, use of fences,

mechanical facilities etc.—is of less interest.⁸ It is in the social organization of herding that pastoralism differs from the conventional idea of a common pasture where everyone has free access. There is thus no 'free access' to reindeer grazing, as the biologists postulate. The access is precisely regulated through a culturally designed distributive institution, thereby regulating the carrying capacity of the pastures.

The conventional view recognizes only the herder's capacity as harvester, and not as mediator. But herders constitute management units which mediate the relation between herds and pasture within a cultural framework implying strategies, negotiations, rules and sanctions (Paine, 1970). The idea of the 'tragedy of the commons' does not seem to take into consideration the social arrangements designed by the pastoralists to manage their relations to animals and pasture. As a paradigm, it reduces human beings to predators, unrestricted by collective strategies and responsibilities. Not surprisingly, the examples cited to demonstrate this view are all from the biological literature on wildlife populations. But pastoralism implies human control, as the case of the Sámi pastoralists exemplifies, and thereby also the possibility of mediating the animal-pasture relation in the interest of the social group—and not only for the maximization of individual profit.

The fact that the Sámi pastoral system of resource management is today heavily affected by political and economic intervention from Norwegian national authorities, makes it even more important for us to understand its ecological and social constitution. External regulations are now transferring the control of establishing new production units from the *sida* to governmental institutions—one now needs an official permit to commence reindeer herding. As a vehicle for resource management, Norwegian law and authority does not recognize the *sida*, and has set up specific administrative institutions to perform these tasks. This will probably make the pastoralists economically and politically dependent upon the national authorities and their views of how herding and husbanding are to be done. The conflicting interests of traditional pastoral institutions and their Norwegian counterparts are nowadays generating a 'hot' of turbulence, but the issue here has been to outline traditional Sámi pastoralism as an indigenous resource management system, in contrast to the conventional idea of pastoralism as the classical case of 'tragedy of the commons'.

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