CONFINED AND SUSTAINABLE? A CRITIQUE OF RECENT PASTORAL POLICY FOR REINDEER HERDING IN FINNMARK, NORTHERN NORWAY

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Abstract

Recently, an increasing number of development plans and strategies for pastoral communities have failed to ensure the sought sustainability, especially in ecosystems characterised by fluctuating environmental conditions. Many of these strategies are centred on a policy of confining, controlling and settling the nomadic herders. This article illustrates some of the principles and pitfalls of this approach with the case of semi-nomadic reindeer herding in Northern Norway. It juxtaposes the management views advocated by the herders with those expressed and implied by the recent state policies for reindeer herding. The focus is placed on the changes in land tenure and resource access. On the one hand, the state policy is founded on the assumptions of the tragedy-of-the-commons theory and argues for a formalised individual tenure regime as the only arrangement able to prevent/redress the alleged environmental degradation. On the other hand, the herders argue for a complex, and at times paradoxical, tenure and management regime, one that ensures both tenure security and flexibility, an adaptation of customary principles to the present situation. Our conclusion supports increasing evidence from elsewhere that gaps between the policy prescriptions and the pastoral management strategies have often resulted in negative social and environmental consequences. We argue for the need to include the experience and expectations of the herders in the design of legitimate and enduring co-management regimes as the only sustainable alternative.
Keywords: pastoralism, reindeer, land tenure, commons, institutions, Finnmark, Norway, rationalisation

Introduction

The last decade has seen the emergence of increased movements aimed at harnessing science and technology in the quest for a transition towards sustainability. While the intentions are salutary, the premises and approaches of the development plans and strategies for pastoral communities have, more often than not, failed to ensure the sought sustainability. This situation has reached a dramatic level in ecosystems characterised by fluctuating environmental conditions combined with poverty and the lack of alternative sources of income. In many of these settings, the central administration has embraced a policy of confining, controlling and settling the nomadic herders (Adams 2001) in an attitude often criticised as stemming from an 'intellectual tradition of anti-nomadism' (Horowitz and Little 1987).

doi:10.3167/np.2006.100212 ISSN 0822-7942 (Print), ISSN 1752-2366 (Online)

State intervention has often sought legitimacy in concerns about environmental degradation (e.g. desertification) and used stereotyped and flawed ecological evidence to back up its attempts to make nomads settle. State development strategies have relied on the control of livestock numbers (through destocking and commercial off-take) and of grazing pressure (through fencing and padlocking), advocating changes toward sedentarisation, formal land tenure and capitalist production (Adams 2001). Various groups of outsiders (e.g. conservationists and farmers) often became stakeholders within the pastoral systems by adhering to this discourse through either political or scientific pathways, thus re-producing and supporting it at a larger scale (Roe 1999).

The herders, though, present the realities of mobile pastoralism in spatially and temporally variable environments as very different from these prescriptions; these realities may determine potentially conflicting needs for secure resource tenure and (socially and spatially) flexible patterns of resource use (Fernández-Giménez 2002).

The gaps between the policy prescriptions and the pastoral management strategies have often resulted in disruption of local norms and rules of managing the resources, destitution of the communities and the degradation of resources (Ostrom 2000). While this scenario has local variations, it has come to represent one of the few constants in the world of nomadic pastoralism. This situation is not only threatening to the welfare of pastoral communities as a whole, but also to the environment these processes take place in, making the sustainability goal seem both illusionary and hypocritical.

The present article illustrates this conflict of discourses with the case of the semi-nomadic reindeer pastoralism in the county of Finnmark, Northern Norway.[1]

Reindeer Pastoralism in Finnmark

Pastoralism in Finnmark relies on semi-domesticated reindeer (*Rangifer tarandus*), a ruminant adapted to the arctic/sub-arctic environment, surviving the long winters by feeding mainly on mat-forming lichens. The semi-nomadic reindeer herders in the study area are a part of the Saami minority that spreads over north-central Fennoscandia and part of the Kola Peninsula.

The county of Finnmark is divided into three zones (Western, Middle and Eastern) (see Figure 1). Finnmark's climate shows two gradients: the coast is affected by the Gulf Stream bringing warm and moist air from the south, leading to cool summers and mild winters, while the central part of Finnmark is an inland plateau (Finnmarksvidda), defined by a continental climate, with cold winters and hot and moist summers (Johansen and Karlsen, 1998). These conditions are reflected in the migration of the reindeer herds during the year: from the winter pastures of the inland, with little snow and lichen beds provid-

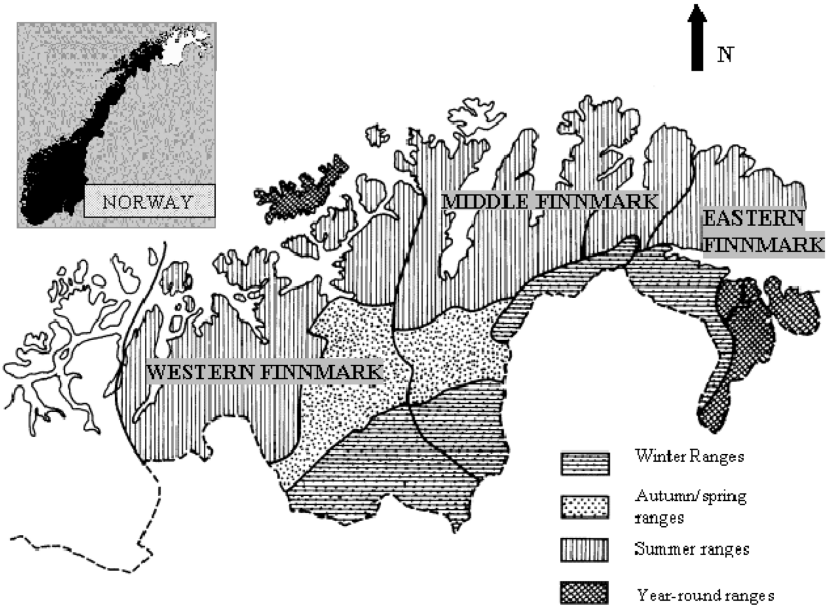

Figure 1: Finnmark's reindeer ranges (redrawn after Aarseth 1985)

ing food, to the summer pastures on the coast providing cool temperatures, lush grass vegetation and shelter from insects.

At the landscape level, the range is divided into eight specific seasonal types of pastures used by herders to meet the detailed requirements of the herds during one year (for rutting, breeding, calf marking, grazing, slaughtering, etc.) (Sara 2001). In this context, the topography of the range is important for providing these specific conditions. At the macro level, a flat landscape promotes longer migrations requiring a greater energy and a longer time; at a medium level the presence of borders between different grazing areas is important for the working strategies and movement patterns.[2] Finally, at a micro level, high variation in altitude provides a valuable large spectrum of ecological conditions per unit area, and thus specific conditions fit for different seasons (Riseth 2000).

In Western Finnmark, reindeer grazing pastures are divided into summer ranges (on the coast and islands), spring/autumn ranges (farther inland) and winter ranges (farthest inland on the plateau). The summer ranges are administratively divided into 26 'private' districts while the autumn/spring ranges are managed as commons and represent key resources for the migration patterns of the herds and calving grounds in the spring. The winter ranges of Western Finnmark, also managed as commons, are the critical food resource for the

reindeer as they allow survival through the long winters and the development of the calves to be born the following spring.

The patterns of resource exploitation and management of the pasture ecosystems in Finnmark have undergone significant changes during the last few centuries. The use of reindeer shifted from an initial hunting exploitation to a subsistence nomadic or semi-nomadic herding of semi-domesticated reindeer, and more recently to the market-oriented approach.

With increasing herd sizes in the eighteenth century came the need for larger grazing areas and well-defined, flexible territorial agreements (Beach 1981), allowing herds to opportunistically use the most favourable ecological conditions. These territorial patterns were perpetuated until recently within the traditional herding system. This system, called *johtolat*,[3] consists of migration routes (*johtingeaidnu*) and grazing areas within a delimited zone (called *orohat: geasseorohat* – summer range and *dálveorohat* – winter range) used by the groups of herds belonging to one zone. In Western Finnmark, there are three *johtolat*: Oar'jebealli ('Western'), Nour'tabealli ('Eastern'), Gow'dojotellit ('Middle') (Sara 2001) (Figure 2).

The territorial system is further particularised as individual herds, belonging to each household (*báiki*), group and regroup during the year to form unions (*siida*[4]) in order to meet the requirements of each season. The structure of a *siida* at any given moment is thus a consequence of both ecological requirements and the configuration of social interactions. During summer,

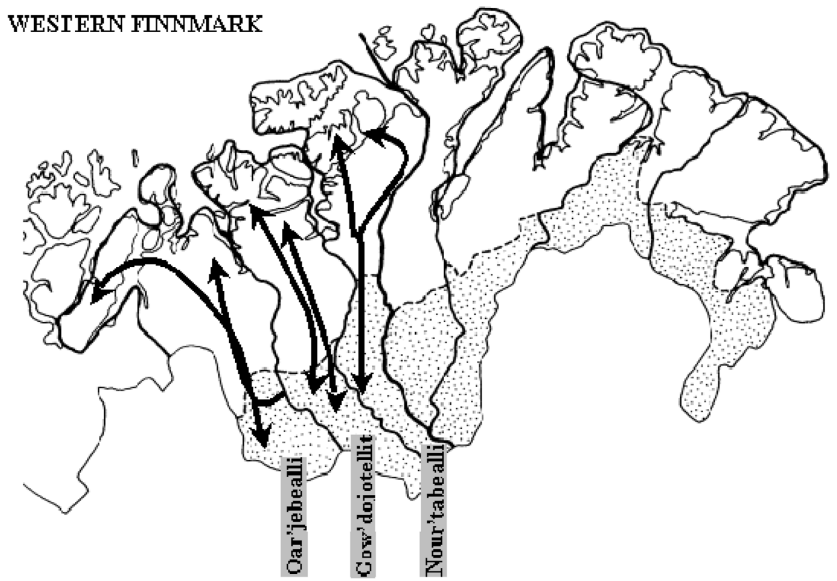

Figure 2: Western, Middle and Eastern reindeer ranges in Western Finnmark

when the animals graze on islands and peninsulas on the coast, the working units should be large enough to exploit the individual landscapes. By comparison, during winter, the food available is distributed in patches and the herds have to move more without trampling the snow and 'locking' the pasture on too large an area. In spring (the calving season) each *siida* has to provide patches of good pastures for the does, preferably snow-free and nutritious (Paine 1994).

The unions of herds acquired in time collective usufruct rights for pastures in a given area. Thus, whenever the composition of one *siida* changed, by adding a new herd or by losing one, its grazing rights remained connected to the same core areas (*orohat*), but changed to match the size of the pasture allocated with the size of the herd. This led to the overlapping of the borders of the neighbouring *siidas* and a reciprocal use of resources. For example, if during a certain year one of the *siidas* does not have enough animals to use all of its rightful range, one of the neighbouring *siida* may use the grazing resources surplus without the need for formal agreement. At the same time, the migration system (*johtolat*) traditionally provided detailed regulations to avoid mixing of herds and trampling of pastures (Sara 2001: 45).

However, as a result of both technological developments and altered political environment and power relations in the Saami lands, this managerial system has suffered important setbacks in recent years.

Policy Rationalisation

In the early 1700s, as a result of the Inter-Nordic war, Denmark/Norway and Sweden decided on the establishment of a border, yet they recognised that nomadic herding across the border was essential for the existence of the Saami people. This recognition took the form of an agreement, commonly known as *Lappekodisillen* (Aarseth 1985:78).

The closing of the border between Norway and Finland (under Russian rule) in 1852, limited the access of the northernmost Saami from Norway to their traditional Finnish winter grazing areas. The protests of the herders resulted in a special law for the northernmost area, called The Reindeer Law for Finnmark, enacted in 1854. It delineated reindeer herding districts and separated summer and winter areas with the goal of controlling the number of animals pasturing in specific areas at any given time, to protect the vegetation (Aarseth 1985).

In this context, the Common Lapp Law of 1883 came into play mainly to protect farmers against damage caused by reindeer (Bull 1997). The law relied on three basic principles: (a) *District division*: established in areas where there was a right to herd; (b) *Reporting requirements*: the herder moving into a new district (even if just seasonally) had to inform the local authority; and (c)

Common responsibility: if a particular herder caused damage to the crops in one area, all the herders in the respective area had to compensate for the losses (Berg 1994).

This law moved responsibility from the practitioners to the administrative system and to the government. The regulations concerning reindeer herding in Finnmark became more defined, and by the end of the century, reindeer herding had come to be seen as an inferior, transitory development stage towards sedentary farming (Bull 1997; Berg 1994).

In the context of an ideological conflict between farmers and herders, a new law was passed in 1933 reinforcing the previous principles (i.e. district division, reporting requirements and common responsibility). It gave more power to the central administration to decide the borders between the spring, summer, autumn and winter pastures, and the schedule of movement between them. Moreover, it decided the number of animals a herder could own, limited the number of reindeer in a given district and retained the power to ban herding in certain areas upon proof of it damaging the agriculture, livestock, forestry or fodder resources (Severinsen 1979).

The Reindeer Management Act of 1978 is the main legislative framework for reindeer herding in Norway today. It introduced three administrative levels: (1) the local District Boards (*Distriktstyret*) (2) Regional Boards (*Områdestyret*), and (3) the Reindeer Herding Board at the national level (*Reindriftstyret*) (Bull 1997; Jentoft 1998). The Regional Boards and the Reindeer Herding Board are appointed both by the Ministry of Agriculture and the Saami Parliament, yet the herders are a minority in this apparatus reinforcing the managerial provisions in practice.

The main goals of the 1978 Act included: increase meat production, maintain the Saami culture, help the herders have a stable economic situation, and maintain a settled presence in the northernmost areas of Norway. It also regulated who was allowed to own reindeer.

Fundamentally, the Act was aimed at reducing the numbers of herders and herding units in the area assuming that a more equal distribution of the animals between a smaller number of herders could provide the desired economic and ecological sustainability. To this end, the Administration introduced the Herding Unit as the main administrative entity for the industry (Riseth 2000) and stipulated that all the reindeer in Norway should belong to individual herding units. In order to be a recognised reindeer herder, one has to prove descent from a Saami family that had herding as main livelihood.

This situation has been in effect to the present day and is often considered an attempt at superimposing an agriculturalist management system upon the traditional one (Paine 1994). The Saami own the herds, while their rangelands are Crown Lands, administered for reindeer herding purposes by the Ministry of Agriculture through the Reindeer Herding Administration (RHA) that plans and regulates distribution of herds and the grazing time schedule. Thus, the

Act created a decision-making system based on economic and ecological data but without many links to the cultural identity of the Saami pastoralists, enforcing the management way of the State and accepting that the Saami can be a part of it (Kalstad 1997; Paine 1994).

The Problem

With the introduction of snow scooters in Finnmark at the end of the 1960s, and the policy of subsidies embraced by the Norwegian State, reindeer herding suffered an intense mechanisation. This development, on the one hand, allowed control over much larger herds, by using a smaller workforce and less time to herd. On the other hand, the bigger herds needed larger pasture areas. In order to have access to these pastures some of the bigger herd owners ignored the traditional borders of the ranges especially for the autumn/spring and winter ranges, stipulated in the 1978 Act as 'common' (Anonymous 1978). As the provisions fail to mention what regulations are to be followed for the management of these resources, they led to the exclusion of the customary tenure system and, in the absence of a functional alternative regime, created *de facto* a situation of open access to resources.

In Western Finnmark, between 1800 and 1970 the stocking levels fluctuated between 40,000 and 60,000 head. The size of the herds constantly increased during the 1980s, culminating around 1990 with at least 100,000 animals. However, in the 1990s, the numbers of animals began to decrease, giving the State the opportunity to link degradation of the lichen mats (documented by satellite pictures and field studies) to the increased reindeer population (Ims and Kosmo 2001) and legitimising stock reductions as a solution to the degradation of the lichen ranges.

The situation has been portrayed as an archetype of the 'tragedy of the commons', stating that whenever the pasture resources are commonly owned and the animals are private property, each herder would act in order to maximise profits at the expense of all the others, thus 'bringing ruin to all' (Hardin 1968). This stance, adopted by the State (Reindriftforvaltningen 2002) and reproduced by the media in dramatic tones like 'environmental catastrophe' or 'irresponsible management', has provided the needed legitimacy for a stricter control of the reindeer herding industry as a whole.

In order to achieve the desired sustainability, the State established ceilings on the numbers of animals allowed for each summer district in Finnmark. In addition, it implemented a system that relies on a geographical division of today's commons (the autumn/spring and winter ranges) between *siidas*, and the distribution of exclusive usufruct rights connected to a well defined group of herders and a registered patch of land.

Extensive evidence concerning mobile pastoralists in general (Ellis and Swift 1988; Niamir-Fuller 1999) suggests that mobility is one of the key elements in ensuring sustainability of pastoral systems in fluctuating environments. This experience from other nomadic societies also suggests that a formalisation and confinement of the social and spatial patterns and boundaries is detrimental to systems that rely on flexibility and opportunism for survival.

In Finnmark, the Saami reindeer herders rely on patterns of resource use governed by variable productivity and access to resources as a result of geology, topography, and fluctuating climatic parameters such as snow depth and rainfall. Moreover, semi-domestic reindeer management is an institutional landscape governed by social relations that produce flexible tenure and appropriation regimes. This gap between the two management visions has established a conflictual and unproductive situation in the Finnmark reindeer herding system.

The purpose of the present article is to juxtapose and interrogate the arguments presented by the Administration in order to acknowledge as a viable alternative the complex system of socio-cultural relationships that govern *de facto* the present pastoral system in Finnmark.

Social Arrangements and Their Erosion

> 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. (Bjørklund 1990: 76)

Robert Paine (1994) described the Saami reindeer herders of the 1960s, as migrating simultaneously within a social landscape as well as in a geographical one. The importance of social relations among the herders today has been affirmed on many occasions. Yet, the profound changes undergone by the industry during the last 40 years have affected the role these relations play within the reindeer herding system. The narratives of the herders define two dimensions of the social landscape for reindeer herding. On the one hand they portray the social interactions as a detailed response to the manifold variability faced by herding; on the other hand they relate these interactions to the limitations imposed by the administrative regulations.

Mixing of herds is a conflictual situation the herders try to avoid as it can lead to the loss of an important number of animals (especially if they are unmarked). The argument of conflicts (i.e. theft) is a defining point of the official 'crisis' narrative and the need for stronger regulation. Yet, the herders question the legitimacy of the Administration's use of the increase in conflicts as an argument towards a formal rigid distribution of pastureland. They

maintain that the mixing of herds can be either a conflict-generating situation or perceived as a normal occurrence, depending on its circumstances. Furthermore, mixing of herds is always related to climatic conditions:

> When the pastures are bad, then there is a lot of mixing. There's been a lot of those lately but during the last two years pastures have been very good. When it happens, one just has to ask for separations – we plan it usually at least once every winter, together. We get the reindeer in the fence and sort them out. (Herder 4)

The number of conflicts can be influenced by the number of reindeer on one range at a given time, and more importantly, by their distribution in herds. More animals lead to increased density and more interaction between herds. If these animals are distributed in more herds, each with different interests and strategies, more conflicts can arise:

> We haven't had many conflicts lately, and the reason is that there are not so many animals. Had there been more animals, there would be more mixing because the density is much higher in Inner Finnmark in winter. That's one of the reasons why we don't have much mixing. [Q: Do you think there are more conflicts now than in the past?] Eh … there are more people now. We have never had so many herders in West Finnmark before. More people … more things that can go wrong. And it's like that everywhere in the world: more people, more problems, both among them and with the outside society. (Herder 1)

The number of persons involved in the industry in Western Finnmark has constantly increased since the 1980s, together with the number of registered units (Ims and Kosmo 2001). At first, this increase can be interpreted as the result of more young people joining their families, but the increased number of units must be related to more significant changes like the need for complying with the administrative provisions as to who is allowed to practise reindeer herding. During the period with the most reindeer (1988–1992), the number of officially registered herding units increased disproportionally in relation to the number of persons involved in herding in Finnmark (Riseth 2000). This increase could be interpreted as both a manifestation and a cause of the fragmentation of the herders' interests. Thus, having individual legal permits for using the common ranges, the herders did not need the approval of the herding community at large anymore and could pursue their own interests:

> There are no sanctioning possibilities. It is the law that says something quite different than the old Saami customs, so then one has to manage not against the law, but with the law; and the law says that this is common pasture. So we manage it like a common pasture. (…) (Herder 1)

The argued need for formalised exclusive tenure of pasturelands appears in this context as a source of further fragmentation of interests and increased social friction.

The herders argue that it is normal to have some conflicts, as a part of herding and a part of life in any society, and such conflicts are influenced by various circumstances. As Paine explains, the differences in perception can have unsettling consequences: for an outsider, the 'system of an anarchic society (without any coordinating and binding authority)' is likely to be puzzling, and the practice of reindeer rustling is condemned as unacceptable, while for the herders it might be a source of sanction among themselves. In addition, among the herders, there are winners and losers, and those that are more prone to losing are the larger herders and even more so those who do not have enough control over their herd. To this end, rustling is a detailed mechanism of redistribution of resources, through an 'informal economic system' (Paine 1994: 175), contributing to an adjustment of the power relations among pastoralists.

With modernisation of the industry, the herders needed less information about the status of their herds and of the neighbouring ones. A more individualistic behaviour emerged. At the same time, the traditional system of dividing the ranges was being changed by the provisions of the new laws. The pastures were termed 'common' and the old regime regulating their use was ignored by the legal provisions without being replaced by another regime. This in turn led to a situation closer to 'open competition', in which the rules have been removed. This competition was increased even more by the escalating need for cash (increased expenses connected to mechanisation, fuel, etc.) and the increased number of herders involved.

In this context the narratives of the herders are important. According to them, the conflicts are a result of the introduction of the new legal provisions:

> There is a bit of conflict. The number hasn't increased, but there are going to be conflicts as long as there is 'common pasture'. As for today, it's not common; they just call it that … The conflicts started in the 1980s and 1990s, when the concept of 'common pasture' was introduced: *since then it was common, so anybody could graze anywhere they wanted*. (Herder 2 – emphasis added)

The extent to which the 1933 Law and the 1978 Act contributed to change in institutional arrangements will be discussed shortly. Here, I mention only that the law of 1978, in effect today, stipulates the following regarding the common ranges: 'Furthermore, the Reindeer Herding Board can undertake division of the traditional common spring, autumn and winter ranges in Finnmark, where the exploitation has followed traditional patterns' (Article 1, §2). Nothing is mentioned, though, about the criteria on which these decisions (division of ranges, grazing schedules, etc.) are to be based.

In the same context, the mobility of herders and animals between different herding groups (*siidas*) is an important source of flexibility in management. This practice allows herders to adjust the size of a herd to the resources available in terms of pasture, workforce and knowledge at any given time. This was

reflected traditionally in the frequent regrouping of *siida* partners (*siidaguoibmi*) determining the number of *siidas* to fluctuate between different seasons and years (Sara 2001). At the same time the development in terms of size of herd and competent personnel is important in influencing regrouping: a broader choice of possible *siida* partners gives better opportunities in providing the best conditions for the animals. These flexible arrangements also give the opportunity to improve co-operation between the partners in each *siida*. No kinship tie is decisive in forming the groups: 'father and married son have contractual relations like those between any other two partners' (Paine 1970: 56).

Traditionally, being recognised as a reindeer herder is 'on the one side the outcome of long-term social negotiations and adaptive trials from the part of the herders. On the other hand, it is the result of reindeer managing to properly settle in during a long trial period' (Bjørklund and Brantenberg 1981: 35). The narratives of the herders reflect this stance: the formation of *siidas* and mobility between them is influenced by kinship but determined by other ecological and social factors. Moreover, these relations are flexible in time; there is no set duration for their survival:

> It is normal to think about it [shifting *siida*] especially if others have a bit better winter pastures. It has happened: three years ago we were in another siida, or they were in ours. It can be relevant if one gets married, then it can be normal to move. Or if some would use the pastures collectively and not necessarily based on kinship … This is decided by people, there are not some decided relationships 'forever'. (Herder 1)

This mobility is an important tool for attuning the social and economic requirements to the ecological opportunities and constraints: the range condition, the territoriality of the reindeer (if the territory is shifted often, one can totally lose control over the herd – Sara 2001: 98), etc. Thus, the balance between flexibility and territorial stability is traditionally carefully weighed and adjusted to the specific needs of the household.

In recent years, this intricate system of managing the workforce and knowledge has gradually been replaced by the management apparatus. First the State decides who is allowed to practise reindeer herding. While the Act of 1933 gave the right to be a 'full-time herder' in Finnmark exclusively to Saami, the Law of 1978 stipulated that only Saami who had herding as their main sustenance, or those descending from this kind of herder were allowed to practise herding here (§3). So, any herder who could not prove that his/her father or grandfather had been a full-time herder could not get access into the industry. This proof is hampered both by the technical difficulty (lack of written records or census) and by the ambiguity of the term 'full-time herder' (a more accurate translation would be 'which has had reindeer herding as main sustenance', but no other details were given as to how to decide this).

In addition, the Reindeer Herding Act from 1978 introduced the provision that every reindeer has to belong to a certain herding unit (*driftsenhet*). A

herding unit can consist of many herders but only one of them is considered the legal holder of the unit. According to the same Act, the establishment of new herding units has to be approved by the Area Board (Division of Reindeer Herding Administration). Neither this law nor its predecessor (from 1933) mentions any criteria for assessing an application for the establishment of a new herding unit, the decision being left to the free interpretation of the authorities (Anonymous 2001: (35) 6.2.7).

We see therefore that the decision as to who is allowed to own reindeer, the independence of the individual herders (now related to owning a herding unit) and how to organise themselves was to a large extent removed from the traditional system and replaced with a rigid system similar to other industries. The new system failed to acknowledge the need for flexibility in using the pastures (it is now more difficult to move across groups, at least for the majority of the herders) according to the highly variable sets of circumstances (climatic, social, etc.). At the same time, it limited entrance into the industry, conceding it to be based on subjective criteria (the herders are in minority in the Regional Boards, the body that grants access into the industry). Thus, the traditional system of trial-and-error, that assessed the ecological impact of a new herd in a given area over a long period, was discarded.

Finally, the herders explain more thoroughly the customary ways of defining and reinforcing territoriality on the winter ranges. According to their discourse, the customary borders on the winter range were very well defined and known, yet flexible. The herders define their traditional territory in relation to exogenous factors that reduce predictability and thus require a degree of flexibility in herding. The instability can be induced by climate (mild weather followed by frost, strong winds) or by herding practices (herds trampling and packing the snow). In this case, the borders are regarded as permissive rather that exclusive and one can take the animals on a neighbour's range for a short period, without previous agreements if the action is motivated by a critical situation – the more critical the circumstances, the more fluid the borders:

> If for instance I have pasture here and it's bad – 'locked' with ice and the animals don't manage to come down to it – then I can loan a bit of pasture from the neighbour if his siida has good pastures. And I use it until mine is good again. This is the way it has worked for hundreds of years. (Herder 3)

Herein is restated the importance of flexibility in herding, allowing the herders to cope with the vagaries of climate. At all times the budget of opportunities and constraints in which decisions are taken has to be relatively stable. The stricter the limits imposed by nature, the more permissive the limits imposed by territoriality need to be. Furthermore, the flexibility of the traditional borders is also dictated by the balance between the number of animals and the size of the range. Even if one feels he has lost some of his traditional ranges

to the neighbours, as long as he does not need it (i.e. he does not have enough reindeer to use all of it) for the time being, the case is not a source of tension:

> Yes, the customary borders are set. It was later, with the concept of 'common pasture' that the traditional borders were no longer important, then it was 'common', there was a possibility [to ignore them]. But these borders are set; they don't change. I have lost access to some of my winter range, and neighbours use it now; more than half of it. We have the least reindeer there so I guess it's ok [enough] for us for today, maybe a little too small and that's because it's common. (Herder 2)

This system often seems 'at odds' with a modern form of territoriality reinforced throughout the western world: the nation state, formed by 'territorially

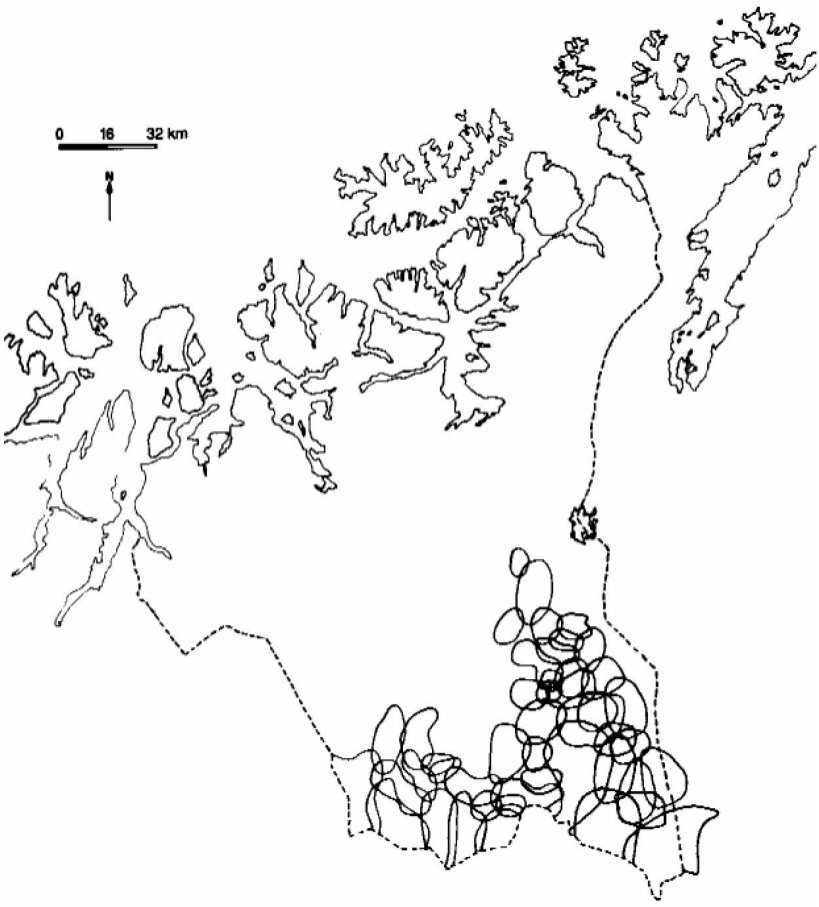

Figure 3: *Traditional borders of the winter* siidas *in the 1960s (after Paine, 1994)*

disjoint, mutually exclusive, functionally similar, sovereign states' (Forrest 1998: 15). In opposition, pre-modern territoriality is defined by rough divisions through frontier areas where there is not one territoriality but many, with a multitude of expressions, based on non-exclusivity, mobility and flexibility (see Figure 3).

For the Saami, this form of flexible territoriality is manifested in different aspects regarding resource use, rooted in the practice of nomadism, prior to the emergence of reindeer herding. This is also illustrated by the overlapping fishing rights for the lakes on Finnmarksvidda (timing, species and quantities allowed to be harvested by specific groups of Saami – Anonymous 2001: 35), or the existence of 'residual rights' (Saami that now live in Sweden still had the right to fish in the area without being considered trespassers) (Odner 1992: 91). In the same way, the pastoral *siida* system acts to regulate access to pasture among groups of herders. It reserves most of the pastures for its members (divided along a complex seasonal migration and allocated in relation to the size of individual herd), while at the same time allows access to herds from neighbouring *siidas* when their pasture is insufficient:

> We don't have any agreements. It is automatic; one can use others' areas. It can happen that one tries to keep his borders fixed – it doesn't work. You have to accept that other herders come into your area, but that's just for a few days or like overnight. This is the custom. (Herder 4)

We see herein that the position of the herders runs counter to exclusive borders advocated by the State as part of the sustainability solution. However, since an increasing number of herders express today the need for predictability in access to ranges, some even arguing for a formalised private tenure of the common ranges, this situation needs to be explained.

Institutional Provisions

In many pastoral systems (Fernández-Giménez 2002) herders' request for a formal, exclusive tenure regime based on private property is motivated by the corrosion of the customary system and the consequent insecurity. Extensive literature has documented customary rules and informal institutional arrangements for the management of the ranges in the north of Fennoscandia (Beach 1981; Bjørklund 1990; Paine 1970, 1994). In Finnmark these traditional rules and norms were translated into sophisticated tenure arrangements.

First, the traditional customs rely heavily on respecting the traditional borders and the interests of all the herders that use a common range:

> One has to respect the neighbouring [*siidas*] and the others. And we have the borders that have been set up through generations – you have to have respect for those. If you don't, then you break the borders and this leads to problems. (Herder 2)

Moreover, well-defined rules regarding the migration across these territorial borders have been in place: one was allowed to migrate along a certain route in a specified interval and rest one's herd in specific points for a limited interval. Hence the degradation of lichen by trampling, the reduction of resource availability by 'locking' the pasture under hard packed snow and the danger of mixing herds were avoided. Moreover, it was the responsibility of the herders to avoid a harmful impact upon the ranges of another herder:

> For example if you move early on the autumn ranges, you can graze along the rivers or on lake shores so that the animals don't take too much from the area and those that come later on can use the lichens. This way there are not so many conflicts. (Herder 3)

Failure to abide by these rules was always regarded as a conscious act and interpreted accordingly in a complex web of social relations, leading to a chain of strategic decisions to counteract the cause (meetings among herders, change of migration schedules, retaliation through raiding, etc.) (Paine 1994). Herein is reiterated the needed balance between the secure resource tenure (delineated by borders) and the flexible patterns of resource allocation. The necessary flexibility is translated into permeability and overlapping of borders, inclusive usufruct rights and intricate rules tailored to various situations (e.g. the event of 'bad winters' with pastures locked under ice):

> For instance in 1997, we could graze in others' areas. Nobody opposed it. Every siida moved where they could find pastures in the neighbouring areas and just used it. But this only happens in the worst years, with 'locked' pastures. (Herder 5)

Secondly, the narratives of the herders point to the fact that the model used by the Administration fails to encompass their life modes and their paradoxical tenure system that requires both security and flexibility. The body of rules and regulations that has assured the security in using the reindeer ranges in Finnmark holds today little practical relevance and power as the regime managing the ranges *de facto* as well as *de jure* ignores these customs, leading to a situation where the pastures are 'free':

> We try to use the customary rules, but I can't say they work. There are no possibilities for sanction at all [Q: What do you think decides the management?] Today there is no management, really. This area [common ranges] it's like a 'free' area. (Herder 2)

This situation is widespread among pastoral systems, often explained as a consequence of communal lands passing under the property of the State:

> The institutional arrangements that local users had devised to limit entry and use lost their legal standing, but the national governments lacked monetary resources and personnel to monitor the use of these resources effectively. Thus, resources that had been under a de facto common

> property regime enforced by local users, were converted to a de jure government-property regime, but reverted to a de facto open-access regime. When resources that were previously controlled by local participants have been nationalised, state control has usually proved to be less effective and efficient than control by those directly affected, if not disastrous in its consequences. (Ostrom 2000)

In Norway, even if the State limited entry into the livelihood to the Saami, it removed both the decision of who from among the Saami was allowed to join and of how the ranges were to be used. Herein lies the explanation for the ubiquitous statement that the ranges are not common ('they just call it common, but it's not'), but rather 'free'. Here anybody 'can pasture wherever they want', and this situation is unmistakably connected by the herders to the introduction of the 'common range' concept, alien to them.

In the traditional system the physical boundaries of each *siida*'s seasonal range were clearly defined, inherited and perpetuated through tradition. The borders did not fluctuate *de jure*, they allowed temporary, circumstantial access to a well-defined group of users (the neighbours) according to climatic variability. The rights to use any given range derived from being a part of the *siida* (the group), access into the group was decided by the herders alone upon a detailed evaluation, in a prolonged trial-and-error fashion. The allocation of resources was constantly reassessed in order to fit the requirements of the group as a whole (one *siida* could not keep the traditional range unused). The monitoring of the use of the ranges was constantly done and interpreted among herders, with a detailed way of construing the actions (the meaning of trespassing, its circumstances, its perpetrators, etc.). The sanctions ranged from ridicule in public gatherings to full-force retaliation through rustling (Paine 1970). The legitimacy of the system was conferred by its internal representation and the fact that it was customary and gradual: all the herders knew the borders and could appreciate if a trespasser was forced to use somebody else's range by circumstance, or was just making a power statement.

As the actors repeat 'the game' (i.e. the decisions taken are also pieces of information that shape the perceptions the herders have about each other and, in consequence, their future actions), the margins of error tend to diminish. Thus, a herder who was regarded as an illegal trespasser in a specific circumstance could redeem herself by acting differently in a similar situation. In other words, it is the long-term strategy that shapes the reputation of a herder, the way he behaves in repeated instances. As Paine (1970) shows, the reputation of each herder was an important asset in establishing the networks of herding partners.

The present regulations have evidently overruled the local decision system, without providing a functional alternative. The borders refer only to the seasonal ranges as a whole: between the winter and autumn/spring (while the summer ranges are divided among groups into districts), without allocation of

resources for groups (be it *siidas*, districts or herding units). The membership is not connected to a clear distribution of the rights to use specific parts of the range (the most recent developments in Finnmark have seen the move towards distributing the user rights of common ranges to specific *siidas*, as discussed later). Furthermore, the monitoring of the herders, costly and ineffective, is faced with a cumbersome and quasi-legitimate sanctioning system.

Even if some of the customs and norms that formed the rules of the older pastoralism are still in place, they lack power and are entangled in a system of provisions that does not recognise them; more often it undermines them. On the one hand the present management system lacks regulating mechanisms, legitimacy among herders and insight into the detailed problems. On the other hand, the discourse of the State seeks legitimacy from two sources: it is the right and the moral duty of the State to protect the lichen ranges from ecological degradation. Secondly, as the State has to ensure the happiness and welfare of all its citizens, it is its duty to ensure the sustainability (economic this time) of the livelihood and of the culture of the Saami population.

The Tragedy in Finnmark

The 'tragedy of the commons' (Hardin 1968) theory is another argument for central regulation in Finnmark. The narrative underlines that individual interests of the herders (owning as many animals as possible) and the collective interest of the group (having 'sustainable' resources) do not coincide, and no internal institution has the power to ensure that they do. Consequently, the situation will lead to the degradation of the common resource.

Thus, efficient use of the resources requires a limitation on the herd size and a careful distribution of the pastures. However, as individual herders will not altruistically limit the size of their herd unless all the others do, the situation will only be stabilised under an enforced optimal distribution of resources in the best interests of both individuals and the group.

This paradigm has received strong support and shaped policy-making regarding pastoralism all over the world. Its thesis fits perfectly with the ideological framework of the Norwegian welfare state. Its advocacy for privatisation of common-pool resources as the best way of managing the resources has been perpetuated in recent years in the paradigms of the mainstream sustainable development approach (Adams 2001: 103). In Finnmark, it forms the crux of the regulation mechanism implemented by the State, not only manifested in the concepts and models used but also stated explicitly in order to justify the need for intervention:

> Such is the situation today, that large parts of pasture resources in Finnmark are managed in principle as a common resource with open access for a larger number of herders. This brings about a 'game' between

> common and individual interests, which is conflicting. If the 'game' doesn't come under control, it will sooner or latter end up in a resource crisis for everyone. For large areas of the common ranges in Inner Finnmark this resource crisis is now a fact. (Reindriftforvaltningen 2002: 34 – my translation)

Recent research on reindeer herding in Finnmark argues that the Administration played an important role in producing the tragedy (viz. the resource degradation) in Finnmark. First, the profound changes in the society (sedentarisation, permanent schools for children, etc.) increased the need of mobility for the herders: in order to spend more time with the sedentary family they needed faster transport than that provided by reindeer. This motivated the need for snow-scooters, four-wheel drive vehicles, etc. This increased the need for a monetary economy, and the expenses related to herding (fuel, maintenance, etc.) (Berg 1994). Thus, the households had to increase the size of their herds in order to survive. Furthermore, as the traditional rules of use were abolished by the new laws, the use of common ranges became a 'race' from the summer (secure, assured) to the autumn and winter ranges, in order to secure access to resources. Thus the scooter became indispensable for any herder, not only the larger ones. While this claim may seem deterministic at first, and that 'the-hungry-snow-scooter' argument is only a manifestation of the change of lifestyle in Finnmark, attuned to the transformation of the Norwegian economy and welfare state at large, one point is warranted.

Even though the newer generation of herders might want to obtain more from their work, the technological changes in herding have been and often are met with scepticism. Thus, many of the herders were not eager to embrace the changes brought about by the scooter, and perceived this as an 'alien' way of herding. Consequently, they resisted (proudly) taking scooters in use: 'I was one of the last to start using a scooter. I used a sledge in the seventies' (Herder 6). This pride in conforming to the 'old ways' is widespread, and it often influences the way decisions are taken and strategies formed (Ulvevadet 2000). It is therefore more probable that the technological changes of the industry were not embraced light-heartedly by many of the herders, but rather as a circumstantial constraint.

This is the position argued by Ottar Brox (1998) regarding the use of the tragedy of the commons paradigm: 'Most tragedies start to develop and are attended to when the commons are no longer accessible to the commoner, but only to the select minority that has been able to stay in the rat race for what remains of the free natural resources'. Thus, the present resource problems have not come about through horizontal (population) growth but through vertical growth (the transformation of exploiting units into expansive economic actors as a result of the government policy stimulating expansion).

Cultural and strategic differences of values in the two discourses also come into play. Even if new subsidies might decrease the need for money, the herders

were still inclinced to increase their herds. Large herds act as an insurance against the fluctuating environment and provide improved economy, but there are also cultural reasons behind herd increase. Traditionally, prestige was derived from having a 'properly acquired' large herd, that is, from having the knowledge and stamina to maintain control over it (Paine 1994).

Impressive amounts of public money being spent in order to induce owners of small herds to leave the industry, thus providing a better economic environment for the fewer 'larger' herders, created an unprecedented fracture within the livelihood. It promoted, explicitly and implicitly, the interests of owners of larger herds at the expense of the others, and as the larger herders gained political momentum, they tried to influence decision making and secure individual access rights to resources:

> Yes, I think there is a connection between size of a herd and respecting customary borders. When one has many animals, one has to keep away from the moral, old Saami customs. One has too many reindeer to be able to keep within one's traditional area. So one has to use the area of somebody else. That's the consequence. When it's the reindeer who must have the best conditions, one doesn't care about morals and customs, when the goal is producing reindeer meat. (Herder 1)

As Brox (1998) explains, armed with the 'tragedy of the commons' theory, leaders of the largest reindeer owners have argued for privatisation of pastures and formed a coalition with strong market-liberalist forces of the Norwegian political centre. They have managed to influence the building of reindeer fences between the summer districts and into the commons (autumn/spring range), thus providing a material infrastructure for privatisation. This course of action was possible, since it was in harmony with the policy to induce as many owners of smaller herds to leave the industry, thus leaving the bigger herders better off: 'if the institutional matrix rewards piracy (or more generally redistributive activities) more than productive activity then learning will take the form of learning to be better pirates' (North 2000).

Herein is to be found the source of discontent and resignation the herders have in regard to the present institutions at work on the ranges of Finnmark. As their interests are not properly represented and their rights are not enforceable, most of them are weak actors in managing the resources.

The narratives regarding the new laws and regulations[5] converge toward a central theme: the need for stronger rights over the ranges, for a system of property rights that puts the traditional ways of management on the legal map. The herders stress the need to have private rights for the territory of each *siida* but resent the idea of exclusivity per se, they argue instead for excludability. In other words, the regime should provide legal recognition for the collective rights each *siida* has to their own traditional ranges but, *equally important*, it should introduce a system of 'management borders' adjustable to the size of the herds of each group at any given time:

> Privatisation … when you look at the siida level, the siida as legal subject is a private unit. So the privatisation has to be based on that, but not so that one can have very large, private areas and a number of animals that would never match the ranges, so that one uses only 20% of range within one's rightful siida borders. It should be so that that one can set management borders within the private siida borders. (Herder 1)

As a consequence, each group would have clearly recognised traditional borders and, inside these, fluid management borders that would allow neighbouring *siidas* to use the remaining pasture on the ranges of neighbours:

> Yes; I think it has to be more like private, more rights. Not so that one keeps others away, it has to be a use (usufruct) right. I think that's the only way to get a better system. It has to come from the traditions, and people have to agree on the borders that come from the traditions, not with the use of fences. It has to be just the herders who plan it and decide together. (Herder 4)

The proposed regime is basically an expression of the traditional herding system and the herders' own interpretation of the dangers of privatisation for the interests of different groups of actors involved in managing the ranges. The new law gives a central role to the *siida* and asks for the distribution of power at a local level on the common ranges. Yet, it still maintains the old assumptions regarding the tragedy of the commons and the need for regulation and the ecological model arguing for a density-dependent relation between pastures and reindeer. On the other hand, the herders' counter-narrative argues for the devolution of power and the creation of a forum that can mediate between herders, where they can solve their problems internally and which has decision-making power.

This devolution of power, involving the herders in decision making and using their knowledge can provide the conditions for using the resources in a sustainable way by the herder community at large. The commons 'should be kept open in the sense that people in districts traditionally dependent upon common resources must not be denied access to them' (Brox 1998). Basically, this is a reflection of the traditional system that allowed for swift and accurate decision making in the face of continuous change, a well-informed opportunistic behaviour, trying to make the best out of the constant hazards at work on these ranges.

This system can still provide a great empirical foundation for designing a sustainable use of resources, with important cultural implications for the herding community and the Saami minority at large. The task of the Administration is to recognise this potential, accept the challenge of a different perception of sustainability and include it in designing enduring, legitimate management regimes, with local significance.

Conclusion

The present article draws attention to the general situation of today's pastoralism worldwide, while referring to a specific group: the Saami reindeer herders of Northern Norway. The situation presented here is, alas, not unique: across latitudes, pastoralists are confronted with challenges in the form of poverty, insecurity, marginalisation or segregation.

In Finnmark, the herders point out their need for secure access to resources, more than a formalised tenure system. They argue for a system that allows flexibility in using the resources according to variability and that at the same time provides a swift and efficient way of regulating access to the resource. This system is a detailed response to the various sources of hazards that govern the use of resources and presents the relation between reindeer and pastures as protean, defined by extreme events. It divided the seasonal ranges into well-defined and connected areas regarded as home-ranges rather than territories per se, that is the *siidas* had access rights to the area, and the power to exclude outsiders, not exclusivity nor ownership, even if the access right to the area was inheritable. In other words, the tenants of the access rights had primacy in using the resources, which were managed by a system of 'use-it-or-lose-it' (Paine 1970, 1994; Sara 2001).

As evidence is mounting to suggest that flexibility and security form the crux of sustainability of livestock production in variable environments (Ellis and Swift 1988, Fernández-Giménez 2002, Niamir-Fuller 1999), my conclusion presents the arguments of the herders as a counter-narrative to the present managerial system.

Since perceptions and representation of the environment and of the forces that regulate its use are translated into management strategies, they are more than a benign reflection in the eye of the beholder; they affect real people, with real lives, sometimes for generations to come. The present article argues for the need to address the hard choices of sustainable resource utilisation from a different perspective, one that tries to bring together the assets and expectations of both the State and the herders as equal partners in the design of a legitimate and enduring co-management system. The past distance between their two discourses has a dismal history. The future might escape this dreary scenario if the counter-narratives presented above find a way towards mainstream scientific recognition and then policy making. Failure to do so can only leave the State and the herding community in a no-win situation and add to the long list of 'white elephants' of pastoralism worldwide.

Notes

1. The article relies on data collected during my fieldwork in Finnmark in the winter of 2001–2002. Interviews were conducted in Norwegian with *siida* representatives from

the three regions of Western Finnmark, herein designated as Herder 1, 2, etc,. in order to respect their privacy. The quotes presented herein represent my translation from Norwegian into English.

2. For example, the term *njarga* (peninsula) is commonly used to describe a grazing area surrounded by natural borders on three sides; this kind of landscape is considered to have a funnel effect upon the herds.
3. System of seasonal migration formed of migration routes (*johtingeaidnu*) and seasonal ranges (*orohat*) within a delimited area (e.g. *Nuor'tabealli*) (Sara, 2001).
4. Basic herding unit (the animals and their herders); hence *sii'da guoibme*: 'herding partner' (Sara 2001).
5. The discussions were recorded in February 2002, before the new regulations that divide the common ranges into districts were implemented in the summer of 2003.

References

Adams, W. 2001. *Green Development Environmental and Sustainability in the Third World*. London: Routledge.

Anonymous 1978. 'Finnmarksvidda: Natur-Kultur'. In NOU (Norges Offentlige Utredninger), (18 A), Oslo.

— 2001. 'Forslag til Endringer i Reindriftsloven'. In NOU (Norges Offentlige Utredninger) (35), Oslo.

Aarseth, B. 1985. *Grenser i Sameland*. Norsk Folkemuseum, Bygdøy, Oslo.

Beach, H. 1981. *Reindeer-Herd Management in Transition: The Case of Tuorpon Saameby in Northern Sweden*. Uppsala Studies in Cultural Anthropology 3. Uppsala: Acta Universitas Uppsalensis.

Berg, B. A. 1994. *Reindriftsloven av 1933: Om den først Reindriftsloven som omfattet hele Norge*. Gouvdageaidnu: Nordic Saami Institute.

Bjørklund, I. 1990. 'Saami Reindeer Pastoralism as an Indigenous Resource', *Development and Change* 21(1): 75–86.

Bjørklund, I. and T. Brantenberg 1981. *Samisk Reindrift – Norske Inngrep*. Tromsø: Universitetsforlaget.

Brox, O. 1998. 'The Politics of Common Resource Management'. In *Commons in a Cold Climate. Coastal Fisheries and Reindeer Pastoralism in North Norway – the Co-Management Approach*, ed. S. Jentoft. Paris: UNESCO.

Bull, K. S. 1997. *Studier i Reindrigtsrett*. Oslo: Tano Aschenhoug.

Ellis, J. E. and D. M. Swift 1988. 'Stability of African Pastoral Ecosystems: Alternate Paradigms and Implications for Development', *Journal of Range Management* 41: 450–9.

Fernández-Giménez, M. E. 2002. 'Spatial and Social Boundaries and the Paradox of Pastoral Land Tenure: A Case Study from Postsocialist Mongolia', *Human Ecology* 30(1): 49–77.

Forrest, S. 1998. 'Do Fences make good Neighbours? The Influence of Territoriality in State- Saami Relationships'. MA Thesis. University of Northern British Columbia.

Hardin, G. 1968. 'The Tragedy of the Commons', *Science* 162: 1243–8.

Horowitz, M. M. and P. D. Little. 1987. 'African Pastoralism and Poverty: some Implications for Drought and Famine'. In *Drought and Hunger in Africa: Denying Famine a Future*, ed. M. Glantz, pp. 59–82. Cambridge: Cambridge University Press.

Ims, A. and A. J. Kosmo. 2001. *Høyeste Reintall for Distriktene i Vest-Finnmark-Høringsdokument*. Reindriftsforvaltningen.

Jentoft, S. 1998. *Allmenningens Komedie: Medforvaltning i Fiskeri og Reindrift*. Oslo: Ad Notam.

Johansen, B. and S. R. Karlsen 1998. 'Endringer i Lavdekket på Finnmarksvidda basert på Landsat 5/TM data'. NORUT IT Rapport, IT475/1-98.

Karlstad, J. K. H. 1997. *Reindriftspolitikk og Samisk Kultur – En Uløselig Konflikt?*, Tromso: University of Tromsø.

Niamir-Fuller, M., ed. 1999. *Proceedings of the First International Technical Consultations on Pastoral Development*. Paris, New York: UNSO.

North, D. C. 2000. 'Revolution in Economics'. In *Institutions, Contracts and Organisations: Perspectives from New Institutional Economics*, ed. C. Menard. Cheltenham: Edward Elgar.

Odner, K. 1992. *The Varanger Saami. Habitation and Economy AD 1200–1900*. Olso: Scandinavian University Press.

Ostrom, E. 2000. 'Private and Common Property Rights', http://allserv.rug.ac.be/~gdegeest/2000book.pdf (accessed March 2004).

Paine, R. 1970. 'Lappish Decisions, Partnerships, Information Management and Sanctions – A Nomadic Pastoral Adaptation', *Ethnology* 9(1): 52–67.

— 1994. *Herds of the Tundra: A Portrait of Saami Reindeer Pastoralism*. Washington, DC: Smithsonian Institution Press.

Reindriftforvaltningen. 2002. 'Ressursregnskap for Reindriftnæringen. For Reindriftsåret 1 april 2000–31 mars 2001', Alta. http://www.reindrift.no/filarkiv/ressursregnskap 00-01/ress1.htm (accessed March 2004).

Riseth, J. Å. 2000. 'Saami Reindeer Management under Technological Change 1960–1990. Implications for Common-pool Resource Use under Various Natural and Institutional Conditions'. PhD Thesis – IØS/NLH, Aas.

Roe, E. 1999. *Except-Africa: Remaking Development, Rethinking Power*. New Brunswick, NJ: Transaction Publishers.

Sara, M. N. 1993. 'Reindriftnæringens Tilpasning og Reindriftspolitikk', *Dieðut* 2.

— 2001. *Reinen- et Gode fra Vinden. Reindrifttilpasnings former i 'Kautokeino*. Karasjok: Davvi Girji.

Severinsen, A. 1979. 'Oppretelse av Reinbeitedistrikt i Sør-Norge – Overgrep eller Tilrettelegging?', *Ottar* 116–17: 38–54. Tromsø.

Ulvevadet, B. 2000. *Penger Teller, Kultur avgjør. Analyse av Statens Virkemiddelbruk for å Oppnå en Bærekraftig Reindriftsnæring i Vest-Finnmark, og Reindrifts- Samenes Reaksjoner på denne Politikk*. Oslo: University of Oslo/SUM.

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