JOURNAL OF NORTHERN STUDIES 2 • 2009, PP. 39–57

ÅSA NILSSON DAHLSTRÖM

The Two-Way Appropriation of Indigenous Knowledge

Environmental Management Policies and the Laponia Process

ABSTRACT In the face of climatic changes and environmental problems, indigenous knowledge is increasingly being accepted as an alternative to Western science in conservation policies. While indigenous knowledge may help indigenous empowerment, it is also placed under the control of the authorities whose science and structures it is meant to challenge. Indigenous knowledge is therefore the subject of a two-way appropriation by indigenous peoples as well as environmental authorities. This process is illustrated by the Sami reindeer herders in the World Heritage site of Laponia in Arctic Sweden, who are negotiating a new joint management scheme with Swedish authorities, including a Sami majority on the park board. Sami indigenous knowledge will form the basis for the new management policies, but with minimal changes to existing national legislation. While the Sami will gain some political control, Swedish authorities will also gain access to and control over Sami indigenous knowledge, hence a two-way appropriation.

KEYWORDS Sami, Laponia, reindeer herding, Sweden, indigenous knowledge, indigenous peoples, appropriation, sustainable development, environment, Arctic

Because conventional conservation methods have been relatively inefficient in dealing with climatic changes and environmental problems and securing a sustainable development,[1] conservation authorities worldwide are looking for alternative approaches. Of increasing interest is the use and usefulness of indigenous peoples' knowledge. The connection between indigenous knowledge and sustainable development has become increasingly accepted within the international environmental discourse, and is recognised in most conventions and national policy documents on environmental issues. In response to the interest in indigenous knowledge, many indigenous peoples have themselves actively promoted their knowledge as pivotal for sustainable development, and are now gaining more control over the management of their traditional areas and resources.

However, the appropriation of indigenous knowledge in conservation may be seen as a two-way process, in which the knowledge is promoted both by indigenous peoples as a better alternative to Western conservation methods, and as part of an indigenous empowerment process more generally. Environmental authorities are also gaining access to and more control over that knowledge through a process of incapacitation, in which indigenous knowledge is politically neutralised and incorporated into existing management structures. The promotion and use of indigenous knowledge in conservation is therefore a risky business for indigenous peoples, because it poses a potential threat to the integrity of the knowledge, and the way it is used. With the promotion of indigenous knowledge therefore follows a need for indigenous peoples to protect their knowledge by ensuring that there is sufficient indigenous influence on conservation boards and in joint management structures to avoid misuse of their knowledge.

In order to illustrate the global processes of involving indigenous peoples and their knowledge in environmental management, and why it is possible to talk about a two-way appropriation of indigenous knowledge, the article will discuss different views of what roles indigenous peoples and their knowledge have, or ought to have, in environmental management, and what consequences these views have for management policies and for the indigenous peoples involved, as illustrated by the Laponia Process in the Swedish Arctic.

This paper is based on extensive research carried out by the author about issues of indigenous peoples' participation in environmental management, and includes fieldwork among the Sami in Sweden, Maori in New Zealand, Aboriginal peoples in Australia and ni-Vanuatu in Vanuatu. This research has been sponsored by the Swedish Research Council (*Vetenskapsrådet*) for three consecutive projects, 2000–2003, 2004–2006 and 2007–2009.

The Promotion of Sami Knowledge

Up until recently, few governments have been willing to actually negotiate with indigenous peoples about using their knowledge and formalising their participation in environmental management, and authorities are often referring to lack of previous experience or supporting legislation for such a development. However, the Swedish government has recently endorsed a proposal to develop a local management model with formal indigenous Sami involvement in the management of Laponia.

The World Heritage site of Laponia covers a vast area of 9,400 square kilometres in the Swedish Arctic, including the national parks of Stora Sjöfallet, Sarek, Padjelanta and Muddus, the nature reserves of Sjaunja and Stubba and the areas of Sulidälbmáamassivet, Tjouldavágge and the Lájtávrre delta within the County of Norrbotten. Laponia has an alpine mountain area in the west, where the summer grazing areas for the reindeer are situated, and lowland forests, mires and bogs in the east, which the Sami use as winter grazing lands for their reindeer.

Laponia has been populated for at least 7,000 years, and the intensive form of Sami reindeer herding, including full nomadism, developed in the seventeenth century (Mulk 2000). Since the 1950s, there has been a gradual shift towards a more extensive form of reindeer herding with less regular tending to the reindeer, and with increasing use of modern technology, including motor vehicles, helicopters and GPS, in herding. However Sami traditional knowledge of the environment and of reindeer herding remains crucial. Only Sami people who are also members of a *sameby*[2] can herd reindeer in Sweden, which means that reindeer herding is a strong ethnic marker and an important component of Sami culture in Sweden (Nilsson Dahlström 2003: 31 f.).

The indigenous Sami in Norway, Sweden, Finland and Russia number around 50,000 to 70,000 individuals; out of these around 20,000 Sami live in Sweden. Only 10–15 percent of the Swedish Sami population is involved in reindeer herding, but despite the relatively small number of herders, reindeer herding is carried out in an area covering about 40 percent of the Swedish surface area in the north-west. Reindeer herding in Laponia, as elsewhere in the reindeer herding area in Sweden, is carried out on the basis of Sami immemorial rights, including the right to let their reindeer graze in the area. However, most of the land in Laponia is allegedly Swedish Crown land,[3] and in other parts of Sweden there are ongoing conflicts between private landowners and Sami reindeer herders over grazing rights (Nilsson Dahlström 2003).

The World Heritage site of Laponia has become increasingly important

as an ethno-political arena for negotiations between local Sami reindeer herders and Swedish authorities, and has become a pan-Sami symbol for Sami claims for greater influence over their traditional areas and resources. Because Laponia in the Swedish Arctic is a World Heritage site protected for its nature as well as its Sami reindeer herding culture, local herders have since the appointment of Laponia in 1996 insisted on joint management of the area, including the Sami as equal partners and with a majority representation in the management body (*Mijá ednam* 2000: 73). The *sameby*s in Laponia, that is Luokta-Mavas, Tuorpon, Jåhkågasska, Sirges, Unna Cearus, Báste, Udtjá, Sierri and Gällivare, organize around 300 Sami reindeer herding businesses and 60,000 reindeer and have become increasingly important as a party in the negotiations over Laponia. After the appointment of Laponia in 1996, the *sameby* members initiated an Agenda 21 process to discuss and present their own view of how Laponia should best be managed. The initiative resulted in the *Mijá ednam*[4] report (2000), which presented a Sami view of an appropriate management of Laponia, supported by a majority of *sameby* members. In the report, it is argued that the Sami have unique and important knowledge of Laponia, that this knowledge is largely undocumented and unknown outside of the local Sami context, but that it ought to be a great resource for the development of Laponia (*Mijá ednam* 2000: 66).

Despite long time historical Sami presence and immemorial rights in the area, Laponia has been managed by Swedish authorities for hundreds of years, while the local Sami have had virtually no say in its management. Swedish authorities have prioritized certain problems before others, and have for instance been able, by virtue of authorities' usual rights to interpretation, to target the area as suitable for hydroelectric power development, and to identify alleged problems with local over-grazing, the use of motor vehicles in herding and illegal poaching of predators, with few opportunities for local Sami reindeer herders to provide their own views of the situation (Nilsson Dahlström 2003). The local herders have expressed great frustration over their lack of control of their traditional lands and ventures and have therefore insisted on joint management between the Sami and Swedish authorities of the area. Laponia is perceived by the local Sami as an acknowledgement of the importance of Sami culture in the area and it is argued that Laponia may "be a step into a new era, into a time period when also their history, lives and ambitions are worth something" (*Mijá ednam* 2000: foreword).[5]

However, it was not until 2006 when the local municipality administrations, the county administration and national environmental and culture protection agencies together with the *sameby*s finally agreed to a Sami majority representation on a future management board, in order to meet

Sami demands for greater influence. The parties also agreed to integrate Sami indigenous knowledge in the management policies for Laponia, in line with the international conventions signed by the Swedish government. The "Laponia Process" was formed, including the *sameby*s and the local, regional and national administrative bodies, with official support and with an assignment to develop an entirely new management structure for Laponia to be launched in 2010.

Although the introduction of Sami indigenous knowledge as the basis for environmental management policies represents a paradigm shift in Sweden, it has been pointed out from the beginning of the negotiations by the *sameby*s that it

> is hardly revolutionary from an international perspective. Rather it reflects an existing trend. A solution that accommodates (Sami) viewpoints would place Sweden among the nations that lead the current development towards new and functional forms for nature and culture protection (*Mijá ednam* 2000: 76).

Indeed, the promotion of indigenous knowledge in conservation is very much a part of a global discourse about indigenous peoples and their roles in societies worldwide. The way "indigenous knowledge" is used in connection with environmental negotiations and sustainable development is also a modernist and highly political social construction, developed within the frameworks of postcolonial and indigenous empowerment processes. The postcolonial discourses also coincide with discourses about possible solutions of global environmental problems and create powerful connections between ideas of the usefulness of indigenous knowledge and a more sustainable development. Within the continuous worldwide decolonisation process, the focus on indigenous knowledge in connection with sustainable development has therefore become an important part of indigenous empowerment strategies.

The notion of indigenous knowledge as traditional and therefore essentially different from Western science is promoted by environmentalists as well as indigenous peoples themselves, but for different reasons, and with different expectations. For many indigenous peoples, including the Sami in Laponia, the concept of "indigenous knowledge" as a rhetorical asset has become a tool in important negotiations over rights to land and access to resources. Indigenous knowledge has been used by indigenous peoples in negotiating acceptable difference vis-à-vis representatives of Western science, that is by claiming traditionalism in order to be accepted in discussions about modernity. The acceptable difference between indigenous knowledge

and Western science must balance between "too different" with no hope of mutual integration, or "too similar" which would undermine indigenous claims for special treatment based on cultural difference. However, in the process of integrating indigenous knowledge with Western science in management policies and making indigenous knowledge "operational," there is also a risk of indigenous knowledge being transformed beyond recognition so that it loses its purpose as well as usefulness for indigenous empowerment, hence a two-way appropriation of indigenous knowledge.

I would argue that there are three major reasons for indigenous peoples to engage in the work of bringing indigenous knowledge into the official debate on sustainable development. Firstly, there is a need among indigenous peoples to save and record practices and traditions that risk disappearing. In line with several international documents and strategies for cultural diversity (the World Heritage Convention, Convention for the Safeguarding of the Intangible Cultural Heritage, Declaration on the Rights of Indigenous Peoples, Convention on the Protection and Promotion of the Diversity of Cultural Expressions, International Labour Organization Convention 169, etc.), non-indigenous peoples are also interested in documenting indigenous knowledge in an effort to secure that the knowledge (but not necessarily its holders) is not lost. In *Mijá ednam*, it is argued that:

> It is important that the existing traditional Sami knowledge of the area is valued more. It is unique, does mostly not exist in books or archives, but can only be transmitted by the people who have lived and worked in the area. It is therefore of particular importance that it is documented before it disappears with the generations that best can transmit it (*Mijá ednam* 2000: 70).

Secondly, there is a sincere belief among indigenous peoples that indigenous knowledge can help combat environmental degradation and create the preconditions for sustainable development. In Laponia, the local herders are positioning themselves as the best managers of their lands and resources, arguing that they "have managed Laponia for thousands of years" and have "the knowledge, tradition and motivation to continue to manage Laponia" (*Mijá ednam* 2000: 9).

And thirdly, indigenous knowledge may help improve the political position of indigenous peoples via greater management control over their traditional areas. The Sami are firmly determined to take their responsibility for the preservation of nature and biodiversity and argue that they are "particularly well suited to preserve the Sami culture in the area," but also "welcome equal co-operation with other parties" (*Mijá ednam* 2000: 9).

These three reasons, to save precious knowledge, to contribute to a

sustainable development and to engage in indigenous empowerment, are often interrelated and have become part and parcel of indigenous claims for greater control over traditional lands and resources.

By positioning themselves as the best (co-)managers of Laponia, the local Sami are joining the current trend among indigenous peoples worldwide to promote themselves and their knowledge as useful for environmental management and sustainable development. But because of the connection between the promotion of indigenous knowledge and indigenous peoples' political claims, environmental authorities have often been reluctant to formalise their participation in environmental management structures, for fear of opening a Pandora's box of indigenous claims for self-determination and control over traditional lands and resources. The current trend of including indigenous peoples in joint management schemes is however organized and administered in such a way as to minimise political issues while maximising the extraction of what is perceived as useful indigenous knowledge.

Towards Definitions of Knowledge

The academic community has been talking about indigenous/traditional/local knowledge since the mid-1960s, but up until the 1970s, development planning and conservation policies were usually based on very negative assumptions about traditional rural societies, and poor rural peoples were generally perceived as backward and unable to change. Many of their livelihood practices, including shifting cultivation, nomadism and small-scale agriculture were seen as inefficient at best, and at worst environmentally destructive (Dutfield 2000: 5; cf. Nilsson Dahlström 2003). Strategies under the parole of "development" were designed to remove traditional environmental practices in favour of scientifically based methods for increased agricultural production and poverty alleviation, in order to bring indigenous and local people from a disadvantageous and backward position into mainstream society. However, in the 1970s there was a shift among academics and environmentalists in the perception of how indigenous peoples interacted with the environment, towards a belief that these peoples often lived "in harmony with nature" and a realisation that their knowledge had been undervalued for too long. Instead, indigenous knowledge was now discussed in relation to social justice and sustainable development as an alternative to more centralised and technically oriented strategies for creating economic growth in poor areas (Ellen & Harris 2000: 12 f.).

With time, there has been an increasing institutionalisation of indigenous knowledge through conferences, in development plans and within development institutions, and the use of indigenous knowledge in sustain-

able development has become a kind of mantra that promises useful information and a feasible alternative to conventional development strategies (Briggs 2005: 99 f., Dutfield 2000: 5). However, despite its current popularity, there is no general agreement on what indigenous knowledge is, and what concepts should be used; *TK/TEK* (traditional/ecological knowledge), *IK* (indigenous knowledge), *indigenous science*, *local knowledge*, *local and traditional "wisdom"* and various permutations of these, and also terms specific to certain groups of people such as *Inuit qaujimajatuqangit* are used (Huntington 2005: 29 f.).

There have also been debates among scholars concerning indigenous peoples' rights and whether they are entitled to privileged and sometimes exclusive rights at all. Kuper (2003: 395) has argued that the indigenous peoples' movement rests on dubious ideas of true citizenship and rights as connected to blood and soil, that is an essentialisation of identity and culture in line with right-wing extremist politics of Western Europe. However, Kuper has been severely criticised for not making a distinction between global movements and discourses and the reality of indigenous peoples, thereby ignoring Western colonisation and expansion and the need to recognise past wrongs committed against indigenous peoples, including severe discrimination and dispossession (Kenrick & Lewis 2004: 4 f.). The failure to make the necessary distinction between indigenous peoples' movements and the everyday lives of specific peoples also accounts for the difficulties of integrating indigenous knowledge systems and management policies based on Western science.

There is however no standard definition of "indigenous peoples," but there is a general agreement internationally that the definition includes some or all of these elements: self-identification as indigenous; descent from the occupants of a territory prior to an act of conquest; possession of a common history; language and culture regulated by customary laws that are distinct from national cultures; possession of a common land; exclusion or marginalisation of political decision-making; and claims for collective and sovereign rights that are unrecognised by the dominating and governing groups of the state. The element of self-identification is socially and culturally important, but recognition by state governments is important in a political sense. Even though a group of people can claim an indigenous identity based on some or all of the widely accepted criteria, their access to negotiations over their rights and protection ultimately depends on official approval of their status as indigenous peoples by state authorities. Based on the political aspects of indigenous identity, it is also possible to make a distinction between "traditional" and "indigenous" knowledge, because "indigenous knowledge" belongs to peoples who have claims of prior ter-

ritorial occupancy, while holders of "traditional knowledge" do not necessarily have those claims. All indigenous knowledge is however also traditional knowledge. There is no official or agreed definition of "traditional knowledge," but the definition in the Convention on Biological Diversity is perhaps the best known:

> Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general.

This definition covers shorter definitions provided by for example Berkes (1999: 8), Huntington (1998: 237), and Pierotti & Wildcat (2000: 1335). There are objections to the use of the concept as well as its definition, and it has been argued that it would be a simplification to say that traditional knowledge has its roots only in tradition, when in fact it is not isolated from globalisation processes. In its essence, traditional knowledge is contemporary, because it is continually updated and revised in response to political, environmental and social processes (Fitzmaurice 2008: 256).

"Traditional knowledge" often serves as concept that provides a contrast to Western science but is less operationally useful because it defies any simple categorisation (Agrawal 1995a). The idea that there is such a unity as "traditional knowledge" reflects perspectives and interests from outside of these knowledge systems (Huntington 2005: 29, 32; Pierotti & Wildcat 2000: 1335), but it is used in international discussions as though there is consensus on its definition, and as though it can be immediately transferred and translated into knowledge systems among specific indigenous peoples. However, the way "traditional" or "indigenous knowledge" is perceived and used as part of global environmental discourse may in fact say very little about real situations in specific locations.

In Search of Differences

Western science and indigenous knowledge are often perceived as two different, opposite and competing knowledge systems, based on the epistemological foundations of the two systems. The systems are therefore often regarded as inhabiting different spaces, which leads to communication

problems (Mohan & Stokke 2000). Western views of indigenous knowledge include notions that it is diachronic, qualitative, spiritual, holistic, historical, oral, closed, subjective, unintellectual, primitive, emotional and intuitive, while Western knowledge is said to be synchronic, quantitative, mechanistic, reductionist, abstract, literate, open, systematic, rational, intelligent, objective and analytical (Agrawal 1995b; Dutfield 2000: 4; Ingold 2000; Nadasdy 1999: 2, 9; Schanche 2000). As a result, Western knowledge systems are associated with modernity, whereas indigenous knowledge is connected to a traditional and backward way of life, which nevertheless may correlate with current ideas of sustainable development. According to Briggs (2005: 102 f.), the introduction of the term "indigenous" before "knowledge" therefore invites us to an "us and them" scenario between the two knowledge systems.

Some scholars have warned against overemphasising the differences between Western science and indigenous knowledge and are questioning whether the dichotomy is real (Berkes *et al*. 2000: 1251). Often, the dichotomy between the two knowledge systems is brought forward by people who advocate more of indigenous knowledge and less of Western science when solving various environmental problems. The distinction has also been dismissed by several commentators on the basis that it is hardly possible to define a precise number of characteristics of the elements within each category to make that distinction. The attempt to do so will inevitably fail on substantive, methodological and contextual grounds because, according to Agrawal (1995a), there is no epistemological distinction between "traditional knowledge" and "Western scientific knowledge."

In the search for aspects that make indigenous knowledge different from Western science it has been argued that indigenous peoples have a particular conservation ethic; that they are "original ecologists" living in harmony with the environment and possessing valuable ecological wisdom, and that they therefore can serve as inspiration in the search for alternative ecological strategies (Nadasdy 2005: 292). However, there is no evidence that indigenous peoples everywhere have a particular conservation ethic (Kalland 2000; Ellen 1986, Redford & Stearman 1993; Schanche 2000), and the idea has placed unfair expectations on these peoples to behave accordingly. The idea also denies the realities and particular strategies of indigenous peoples and reduces their cultures to rather one-dimensional ecologically oriented entities (Banerjee & Linstead 2004; Kalland 2000; Nadasdy 2005: 293; Redford 1991).

An important question to ask, says Nadasdy (2005: 311 f.), is why some indigenous peoples themselves make use of the "ecologically noble savage" stereotype, if it is only a Western (and false) construction of them? Is it

because indigenous peoples passively engage in false consciousness, or is it because they are actively using their image as part of an opportunistic political strategy? Krech (1999: 26) argues that the image of the noble savage has been adopted by some indigenous peoples as an integrated part of their self-image, which has contributed to their own exploitation, while others argue that the image is useful and appealing, and can be used by indigenous peoples to gain wider support in political struggles for self-determination and land rights via references to sustainable development (Conklin & Graham 1995). Some have also argued that indigenous peoples are not using their symbolic capital as eco-saints to say something about themselves at all, but to say something (negative) about Western society (Beuge 1996; Krech 1999). For the same reasons as Western scientists may emphasize the perceived differences between "modern" and "traditional" knowledge in order to legitimize their own strategies for efficient environmental management, then, indigenous peoples are embracing that difference in order to legitimize theirs.

Critics of the promotion of the "noble savage stereotype" argue that even though it may be of short-term use, it is bound to backfire on indigenous peoples in a long-term perspective on the basis of "false marketing" and misrepresentation (Beuge 1996; Cruikshank 1998; Krech 1999). Environmentalists who subscribe to the image of the ecologically noble savage are often surprised and disappointed to find out that indigenous peoples do not live up to their ascribed standards, and frequently accuse them of engaging in hypocrisy, greed, or of having lost their "original character" through cultural assimilation (Beuge 1996; Conklin & Graham 1995; Cruikshank 1998; Nadasdy 1999: 3 f.). However, indigenous peoples are often "excused" for their alleged shortcomings, but these excuses say more about environmentalists' expectations of them than an actual "failure" on the part of indigenous peoples, who often may have other goals and standards (Nadasdy 2005: 317). Whether or not indigenous peoples have embraced their image as ecologically noble savages, then, this "permissible image" has often been imposed on them from outside. And regardless of how environmentalists categorize indigenous peoples, if and when indigenous peoples "fail," they are, depending on one's preferences, going to end up being perceived either as environmental villains unable to live up the standards for ecological nobility, or as inauthentic opportunists who are using positive images for their own political purposes (Nadasdy 2005: 322). Swedes unable to accept the modernization of Sami reindeer herding have also often been unwilling to grant them the rights that follow with their status as an indigenous people, with reference to how "primitive people of nature" like the Sami really should behave (Nilsson Dahlström 2003; Green, forthcoming).

Indigenous peoples are also not the only ones to be accused of political opportunism; many environmentalists are quite happy to exploit the image of ecologically noble savages for their own political purposes and in a way that fits their own agenda for environmental politics, that is indigenous peoples are placed close to themselves on a possible ecological spectrum. Indigenous peoples are however not necessarily concerned with placing themselves on an ecological spectrum or calling themselves "environmentalists" at all. In the *Mijá ednam* (2000: 36) report, it is stated that developing separate environmental programs is not a traditional Sami way of approaching sustainable environmental development. This does not mean that they disqualify themselves as environmentally friendly, it is just that the "environment" as a separate entity and the concept of being an "environmentalist" are not labels or ideals that they have chosen themselves, and therefore find difficult to relate to (Nadasdy 2005: 314 f., 322; *Mijá ednam* 2000: 36).

The use of the image of noble savages must be seen in a particular colonial context, where indigenous peoples have negotiated, often in vain, with environmental authorities and conservation managers over access to natural resources and land. In fact, Nadasdy (2005: 315) argues, with the new opportunities for claiming local stewardship that have presented themselves, indigenous peoples in these negotiations have no choice but to claim the position of ecologically noble savages, or else their claims for rights will be ignored, again.

The Depoliticising of Indigenous Knowledge

The holders of indigenous knowledge insist on not being treated as merely "stakeholders" in environmental management, but on taking part in negotiations on all levels of decision-making and management, including formal representation on steering committees and planning boards (Mauro & Hardison 2000: 1267; Nilsson Dahlström 2003; *Mijá ednam* 2000). However, the integration of indigenous knowledge, political dimensions and all, with Western science would challenge the hegemony of Western development discourses (Briggs 2005: 106; Coombes 2007: 189; Ellis 2005: 67; Huntington 2005: 29). Because Western science, like indigenous knowledge, is not just knowledge but an instrument of power, it is not likely that the holders of this knowledge will give up easily in favour of a knowledge system that they have no control over (Novellino 2003).

Indigenous thinkers have increasingly promoted the use of indigenous knowledge systems in environmental management as an important part of a decolonising strategy (Simpson 2004: 373). Indigenous peoples are hoping that the integration of their knowledge with Western science will not

only improve environmental management strategies but also help empower indigenous peoples and their knowledge more generally (Nadasdy 1999: 1; Nuttall 1998: 167; Simpson 2004: 374). Despite the importance placed by indigenous peoples on the connection among indigenous knowledge, self-determination, land rights and access to natural resources, this connection is absent from most academic literature on indigenous knowledge (Simpson 2004: 375). The connection is also often ignored by resource managers, because of the inconveniences it may cause for environmental agencies and state authorities (Simpson 2004: 377), who may neither have the mandate nor the political will to deal with issues outside of their immediate assignment.

Before the introduction of the Laponia Process in 2006, representatives of Swedish authorities were often puzzled about the way the local Sami insisted on perceiving Laponia as a "political" instead of merely a "cultural" issue, whereas for the Sami, Laponia was nothing but political (Green, forthcoming). The separation of indigenous knowledge from its holders and social and political context may however have serious implications for its usefulness as a tool for decolonisation. By "depoliticizing" and "sanitizing" indigenous knowledge from the "ugliness of colonisation and injustice" (Simpson 2004: 376), scientists can engage with the knowledge without having to bother about the indigenous peoples who own and live that knowledge, and who may have other hopes for its usage. The disconnection of knowledge from its holders also frees academics from their responsibilities to analyse the discourse on indigenous knowledge in its colonial and post-colonial context (Simpson 2004: 378).

Indigenous peoples are increasingly becoming aware of the dangers of disconnecting them from their knowledge in the integration process, and insist on remaining in control of their knowledge. The herders in Laponia argue that they themselves must be given the formal responsibility for the protection and development of Sami culture (*Mijá ednam* 2000: 71) and that "information and education about the Sami and Sami conditions should be transmitted by Sami people or in cooperation with Sami people" (*Mijá ednam* 2000: 66).

The Sami herders are talking about the need for sufficient control, but much more attention has usually been given to difficulties in getting access to and collecting Sami and other indigenous knowledge or to the problem of translating it into forms that are useful for resource managers. By reducing the integrating process to a technical problem, its political dimensions are however effectively ignored (cf. Nadasdy 1999: 2). The documentation or digitization of indigenous knowledge is a seemingly benign way of appearing to recover the knowledge (Simpson 2004: 380), but in fact, argues

Nadasdy (1999: 2), research into indigenous knowledge and the efforts to integrate it with Western science may reinforce, rather than break down, Western cultural perceptions and biases.

In Laponia, the local Sami herders have worked hard to gain acceptance by building and maintaining "credibility" in the eyes of Swedish authorities, that is by complying with the ascribed images of themselves as ecological nobility and investing in a terminology suitable for important negotiations about sustainable development (Nilsson Dahlström 2003: 285; *Mijá ednam* 2000). This is because indigenous knowledge, unless properly "translated," often is questioned as being too local and place-specific to be of any general and theoretical use for the advancement of development. Indigenous knowledge, in order to be "useful," must relate to Western science and must be formally tested in order to get acceptance (Briggs 2005: 101), or else it will be accused of being "methodologically weak or unproven" and "populist or politically naïve," or of including findings that are too complex or subjective to be of use to outsiders (Leach & Mearns eds. 1996: 32).

The reason for the current political dominance of Western science over indigenous knowledge is that Western knowledge rests on a foundation of reason as the only means of understanding the world, and presents particular cultural presuppositions that elevate it above other kinds of knowledge. Western knowledge has therefore placed itself in the privileged position of a fiduciary that has the authority to authenticate other knowledge systems (or not) (Doxtater 2004: 618 f.; Escobar 1995: 13) by being able not only to define the problems, but also to provide the solutions of them. Despite the recent challenge from non-Western knowledge systems, there is therefore a persistent belief among many people that Western scientific paradigms are intrinsically better and more effective than indigenous knowledge systems (Cox & Elmqvist 1997: 88). The privileged position of Western science as the basis for legitimate knowledge is also backed up by infrastructure and resources, in the form of a legal framework, available scientific expertise, technology and financial means to engage in large-scale development projects and targeted research.

In a process of integration (or rather assimilation), indigenous knowledge is first polarised against Western knowledge and is then "enrolled into the latter's domain" (Noble 2007: 342), but its scientization and professionalization do not occur without significant alterations of its cultural content and purpose (Agrawal 2002; Coombes 2007; Simpson 2004). The strength of indigenous knowledge lies in its relevance and applicability in the local contexts, and when indigenous knowledge becomes generalised and depersonalised it loses its source and meaning (Briggs 2005: 109; Simpson 2004: 380). When knowledge in oral traditions is made into a text and is trans-

lated from indigenous languages into dominating languages of the West, its interpretation is locked in a cognitive box that reflects the structure of ideas and language of the Western world (Simpson 2004: 380). And when indigenous knowledge is spoken through these foreign knowledge systems, its holders are often excluded from real participation in decision-making processes and scientific projects (Stevenson 2006). Through the integration processes, then, much of the richness in details and culture-specific indigenous knowledge is inevitably lost in translation and its usefulness as a means of political empowerment is effectively undermined. The Sami herders in Laponia are aware that their claims for greater Sami control "can seem drastic and foreign in a Swedish perspective," but argue, in order to avoid unnecessary provocations, that the suggestions "would most likely be doable within the frameworks of existing legislation" (*Mijá ednam* 2000: 76). So when the local Sami in Laponia say that, despite their new opportunities as equal partners in management, they will not be able to change existing legislation, they have not gained control but have been deprived of their most promising political tools.

Discussion

The positive connection between indigenous knowledge and sustainable development is recognised in most conventions and national policy documents on environmental issues, and many indigenous peoples have themselves actively promoted their knowledge as useful for the creation of a sustainable development. As a result of the recent interest in indigenous knowledge and its use, indigenous peoples are now gaining more control over the management of their traditional areas and resources and over indigenous societies more generally. The use and promotion of "eco-friendly" indigenous knowledge in environmental management systems comes, however, at a price. Whereas many indigenous peoples perceive the concept of 'ecological nobility' as a politically useful tool to enter important negotiations with and gain acceptance from environmental authorities, the concept may say more or less about the specific environmental agendas or knowledge systems of different indigenous peoples. However, the political and analytical fields of usage are often confused, which leads to misunderstandings or even conflicts between indigenous peoples and other actors.

Who is to blame: indigenous peoples for their populism or non-indigenous actors for their misconceptions? Or vice versa: indigenous peoples for their misconceptions and non-indigenous actors for their populism? But perhaps indigenous peoples' exploitation of their image as ecologically noble savages should not primarily be seen as populism, but as a rare opportunity to make a difference? If claiming ecological nobility is the only

acceptable niche from which to enter important negotiations over their future, who can blame indigenous peoples for at least trying? Instead of only criticising indigenous peoples for their involvement in the production and reproduction of ecological nobility on their part, there should be a critical analysis of the political framework for the image production and with whose permission and encouragement it is at all possible to make claims for ecological nobility.

Once indigenous knowledge is accepted as a potentially useful part of environmental management, new challenges appear. Despite their acceptance of indigenous knowledge as an alternative to Western science, few state authorities and NGOs would agree to let indigenous peoples develop whatever systems and strategies for environmental management that they would like. The inclusion of indigenous knowledge in environmental management policies often means an integration of this knowledge with Western science in a process of "picking the cherries out of the (indigenous) cake." In the process of integrating indigenous knowledge with environmental management systems based on Western science, environmental authorities often focus only on pieces of knowledge that are deemed useful for existing management systems. In this process, a lot of what makes indigenous knowledge useful for indigenous peoples is lost. In fact, much of what is perceived to make indigenous knowledge distinct from Western science is taken out of the process as too culture-specific to be of any use. In Laponia, Sami indigenous knowledge will be integrated with Swedish environmental management policies, but with minimal changes in existing legislation. By necessity, then, Sami indigenous knowledge will have to undergo significant changes in order to "fit" and become legitimate knowledge.

Despite the official proclamations of being interested in saving, using and protecting indigenous knowledge, state authorities may also be accused of setting narrow terms for the involvement of indigenous peoples and their knowledge in environmental management; so narrow that the opportunities for indigenous peoples to engage in their own empowerment processes are severely circumscribed. The contemporary process of integrating indigenous knowledge in Western scientific management systems may therefore be seen as just another form of colonialism, only less obvious.

It is possible to talk about a simultaneous empowerment and taming of indigenous knowledge, including that of the Sami, in the sense that it does help local indigenous peoples to gain some control over their lands, resources and societies, but that it also helps environmental authorities to put indigenous knowledge in a safe place, where it does minimal harm to existing structures. It is therefore also possible to talk about a two-way appropriation of indigenous knowledge in environmental management policies.

NOTES

[1] The short version of the definition by the Brundtland Commission says, "a development is sustainable, if it meets the needs of the present without compromising the ability of future generations to meet their own needs."

[2] Within Laponia, there are seven *samebys*, that is the economic corporations as well as geographical entities that organize Sami reindeer herding in Sweden.

[3] The alleged Crown ownership of Sami traditional lands is contested by many Sami, who argue that the lands have been illegally taken by the Swedish Crown, and without proper compensation.

[4] *Mijá ednam* means 'Our land.'

[5] All texts in Swedish have been translated by the author into English.

REFERENCES

Agrawal, A. (1995a). "Indigenous and scientific knowledge. Some critical comments," *Indigenous Knowledge and Development Monitor*, 3: 3, pp. 3–6.

— (1995b). "Dismantling the divide between indigenous and scientific knowledge," *Development and Change*, 26, pp. 413–439.

— (2002). "Indigenous knowledge and the politics of classification," *International Science Journal*, 54, pp. 287–297.

Banerjee, S. B. & Linstead, S. (2004). "Making subversion. Neocolonial embeddedness in anthropological accounts of indigenous management," *Human Relations*, 57, pp. 221–247.

Berkes, F. (1999). *Sacred Ecology. Traditional Ecological Knowledge and Resource Management*, Philadelphia: Taylor & Francis.

Berkes, F., Colding, J. & Folke, C. (2000). "Rediscovery of traditional ecological knowledge as adaptive management," *Ecological Applications*, 10: 5, pp. 1251–1262.

Beuge, D. (1996). "The ecologically noble savage revisited," *Environmental Ethics*, 18, pp. 71–88.

Briggs, J. (2005). "The use of indigenous knowledge in development. Problems and challenges," *Progress in Development Studies*, 5: 2, pp. 99–114.

Conklin, B. A. & Graham, L. (1995). "The shifting middle ground. Amazonian Indians and eco-politics," *American Anthropologist*, 97, pp. 695–710.

Coombes, B. (2007). "Postcolonial conservation and Kiekie harvests at Morere New Zeland. Abstracting indigenous knowledge from indigenous polities," *Geographical Research*, 45: 2, pp. 186–193.

Cox, P. A. & Elmqvist, T. (1997). "Ecocolonialism and indigenous-controlled rainforest preserves in Samoa," *Ambio*, 26: 2, pp. 84–89.

Cruikshank, J. (1998). *The Social life of Stories. Narratives and Knowledge in the Yukon Territory*, Lincoln: University of Nebraska Press.

Doxtater, M. G. (2004). "Indigenous knowledge in the decolonial era," *American Indian Quarterly*, 28: 3–4, pp. 618–633.

Dutfield, G. (2000). *Developing and Implementing National Systems for Protecting Traditional Knowledge. A Review of Experiences in Selected Developing Countries*. (Paper presented at UNCTAD expert meeting on systems and national experiences for

protecting traditional knowledge. Innovations and practices), Geneva: UNCTAD; http://r0.unctad.org/trade_env/docs/dutfield.pdf,.

Ellen, R. (1986). "What Black Elk left unsaid. On the illusory images of green primitivism," *Anthropology Today*, 2: 6, pp. 8–12.

Ellen, R. & Harris, H. (2000). "Introduction," in *Indigenous Environmental Knowledge and Its Transformations*, eds. R. Ellen, P. Parkes & A. Bicker, Amsterdam: Harwood Academic Publishers, pp. 1–33.

Ellis, S. (2005). "Meaningful consideration? A review of traditional knowledge in environmental decision making," *Arctic*, 58, pp. 66–77.

Escobar, A. (1995). *Encountering Development. The Making and Unmaking of the Third World*, Princeton, N. J.: Princeton University Press.

Fitzmaurice, M. (2008). "The dilemma of traditional knowledge. Indigenous peoples and traditional knowledge," *International Community Law Review*, 10, pp. 255–278.

Green, C. (forthcoming). *Managing Laponia. Sami Ethno-Politics and the World Heritage Site of Laponia*, diss., Department of Cultural Anthropology and Ethnology, Uppsala University.

Huntington, H. P. (1998). "Observations on the utility of the semi-directive interview for documenting traditional ecological knowledge," *Arctic*, 51: 3, pp. 237–242.

— (2005). "'We dance around in a ring and suppose.' Academic engagement with traditional knowledge," *Arctic Anthropology*, 42: 1, pp. 29–32.

Ingold, T. (2000). *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill*, London: Routledge.

Kalland, A. (2000). "Indigenous—local knowledge. Prospects and limitations," in *Indigenous Environmental Knowledge and Its Transformations*, eds. R. Ellen, P. Parkes & A. Bicker, Amsterdam: Harwood Academic Publishers, pp. 319–329.

Kenrick, J. & Lewis, J. (2004). "Indigenous peoples' rights and the politics of the term 'indigenous,'" *Anthropology Today*, 20: 2, pp. 4–9.

Krech, S. III (1999). *The Ecological Indian. Myth and History*, New York: W. W. Norton.

Kuper, A. (2003). "The return of the native," *Current Anthropology*, 44: 3, pp. 389–395.

Leach, M. & Mearns, R. (eds.) (1996). *The Lie of the Land. Challenging Received Wisdom of the African Environment*, London: International African Institute.

Mauro, F. & Hardison, P. D. (2000). "Traditional knowledge of indigenous and local communities. International debate and policy initiatives," *Ecological Applications*, 10: 5, pp. 1263–1269.

Mijá ednam. Samebyarnas Laponiaprogram ['The *Samebys*' Laponia Program'] (2000). Ed. K. Lindahl, Jokkmokk: Samebyarnas Kansli.

Mohan, G. & Stokke, K. (2000). "Participatory development and empowerment. The dangers of localism," *Third World Quarterly*, 21: 2, pp. 247–268.

Mulk, I.-M. (2000). *Laponia. Lapplands Världsarv. Ett natur- och kulturarv för framtiden* ['Laponia. Lapland's World Heritage site. A natural and cultural heritage for the future'] (Småskrifter från Ájtte 6), Jokkmokk: Ájtte Fjäll- och samemuseum.

Nadasdy, P. (1999). "The politics of TEK. Power and the 'integration' of knowledge," *Arctic Anthropology*, 36: 1–2, pp. 1–18.

— (2005). "Transcending the debate over the ecologically noble Indian. Indigenous peoples and environmentalism," *Ethnohistory*, 52: 2, pp. 291–331.

Nilsson Dahlström, Å. (2003). *Negotiating Wilderness in a Cultural Landscape. Predators and Saami Reindeer Herding in the Laponian World Heritage Area* (Uppsala Studies in Cultural Anthropology 32), Uppsala: Acta Universitatis Upsaliensis.

Noble, B. (2007). "Justice, transaction, translation. Blackfoot tipi transfers and WIPO's search for the facts of traditional knowledge exchange," *American Anthropologist*, 109: 2, pp. 338–349.

Novellino, D. (2003). "From seduction to miscommunication. The confession and presentation of local knowledge in 'participatory development,'" in *Negotiating Local Knowledge, Power and Identity in Development*, eds. J. Pottier, A. Bicker & P. Sillitoe, London: Pluto Press, pp. 273–297.

Nuttall, M. (1998). *Protecting the Arctic. Indigenous Peoples and Cultural Survival* (Studies in Environmental Anthropology 3), Amsterdam: Harwood Academic Publishers.

Pierotti, R. & Wildcat, D. (2000). "Traditional ecological knowledge. The third alternative (commentary)," *Ecological Applications*, 10: 5, pp. 1333–1340.

Redford, K. H. (1991). "The ecologically noble savage," *Cultural Survival Quarterly*, 15, pp. 46–48.

Redford, K. H. & Stearman, A. M. (1993). "Forest-dwelling native Amazonians and the conservation of biodiversity," *Conservation Biology*, 7, pp. 248–255.

Schanche, A. (2000). "Samerna och bevarandet av den biologiska mångfalden" ['The Sami and the conservation of biological diversity'], in *Samisk etnobiologi. Människor, djur och växter* ['Sami ethnobiology. Humans, animals and plants'], eds. I. Svanberg & H. Tunón, Nora: Nya Doxa, pp. 164–175.

Simpson, L. R. (2004). "Anticolonial strategies for the recovery and maintenance of indigenous knowledge," *American Indian Quarterly*, 28: 3–4, pp. 373–384.

Stevenson, M. G. (2006). "The possibility of difference. Rethinking co-management," *Human Organization*, 65, pp. 167–80.