

## Summary

# CAPITALIZING ON THE FOREST. USE, USERS AND CHANGE IN THE FOREST IN THE WILDERNESS ECONOMY ON THE EDGE OF THE TAIGA IN EASTERN FINLAND THROUGH THE YEAR 2000.

This study investigates the utilization of the forest and the change in this use as well as the effects on forest nature from a long-term millennial perspective. The research approaches its subject from the local point of view. It focuses on the easternmost corner of both Finland and the European Union, the present North Karelian Biosphere Reserve. The central concepts are form of economy, local and supralocal (or supranational). The key concept is resource. Conceptions of what a resource is change according to time and culture. Resources can be created and destroyed by technical development and the conceptional ability of each period. Forest utilization is periodized in a given area by each prevailing central form of economy. The concept form of economy combines narrative (history) and analysis (regional structure). The use of the concepts local and supralocal is problematic since in practice they rarely appear in a pure form. Local people are involved in change and in the intensification of the utilization of the forest. The study seeks delineate the main points in the processes of change and the differences between different forms of economy in the utilization and alteration of the forest. It continues the tradition of periodizing the progressive stages of environmental history. The methodology employed in the work is reminiscent of the temporal cross-section examination used in historical geography. But here the key forms of forest utilization have been selected as the approach rather than the temporal cross-section. They have been applied to Alexander S. Mather's three-stage model (pre-industrial, industrial, post-industrial), which serves as a theoretical framework. The purpose of the research can be explained briefly as an attempt to write an analytical narrative about the forest and the changes it has undergone.

The environmental history of the North Karelian Biosphere Reserve can be told as a narrative of more efficient forest utilization and formation. The story also describes the reduced local decision-making power over nature and the intensification and increased complexity of the supralocal decision-making external to the region. The supralocal and local perspectives seldom coincide in assessments made of the benefits gained from the forests.

The North Karelian Biosphere Reserve, located in the easternmost corner of the municipality of Ilomantsi and town of Lieksa, is extremely well-suited to a

study of forest use. The environmental history of this remote area dominated by intensive private forestry clearly reflects the forestry policies and culture which have transformed the character of the Finnish forest. The effects of each of the forest utilization forms and policies are evident in their most aggravated form in peripheral regions like the research area. In the discussions which have taken place about the reserve's forests and their utilization, the interest groups demanding a fundamental change in forestry are immediately evident. The massive changes in forestry were introduced rapidly and directly on a broad scale. The reserve is also very comparable to northern intensive forestry areas in Russian and Canada, if not always with private forestry in southern Finland and the other Nordic countries. The data collected in the research area can in this respect also be generalized to cover other intensive forestry countries. The interface between intensive forestry and the local, which appears in the research area, also recurs as a corresponding event in other large intensive forestry countries such as Canada and Indonesia.

During the period of pre-industrial forest utilization the forest was exploited collectively, but its local use was limited by various norms and responsibilities. The local hunter and gatherer society was able to capitalize on timber for home use, other gathered items and wild game. Supralocal interest was focused on furs, which Novgorod, the Valamo monastery and other similar quarters controlled as tax revenue. When the forests were cleared to produce grain, it was in the interests of the state, then the Swedish Crown, to produce a surplus of it.

With the depletion of suitable slash-and-burn forests the areas were divided among the farm-owners, the Crown believing that as a result it could best control the profit generated by the forest. By means of the Great Division, land ownership became the basis of rank. Work done in the forests, such as hunting or slashing-and-burning, was replaced by forest ownership. Social status was defined by birth. The number of landowners was not high but they had land, capital, which differentiated them from the landless. The Swedish law also linked hunting and fishing to land ownership. As control increased, they became even more clearly regulated, which led to contradictions between local practices and administration.

Gathering and slash-and-burn cultivation increased biodiversity locally. Through agriculture the pressure on the flora and surrounding nature intensified. The plant layer was stripped away and the surface was broken by both man and animal. To insure the success of the harvest new genetically different plant species were introduced to agriculture. The establishment of settlement, the birth of villages, had a still more decisive effect on the location of land and meadows for cultivation.

Significant changes occurred in the exploitation of the forest during the historical period when lake ore was processed. The charcoal necessary for smelting the iron ore proved to be a more important commodity than the grain produced in burned-off clearings or in the cattle grazing in forests. Importation of foodstuffs from outside the area became common. It became possible to break the food chain between people and the forest. They were then able to

satisfy their material needs with products they in no way produced. The supralocal effect on forest utilization increased. A portion of the forests served as energy sources for foundries. Peasant-like forest use was challenged by industrial forest use.

As a result of the rise of the sawmill and wood processing industry the most important commodity of the forest became timber, initially heavy logs. The forests were transformed to suit the needs of industry. Because of its weak agricultural possibilities, the reserve developed very favorably as a raw material supply center for the wood processing industry; this attracted new inhabitants. People set off for the difficult conditions of remote rural areas in search of money. The region's forests gave birth to a network of small farms. The residents of these farms were recruited to work in the forests and along log floating routes. Workers were needed since the entire process was based on manual labor and the energy provided by flowing rivers.

The income of the smallholder-lumberman families living amid the forests was in part based on an economy of self-sufficiency, a combination of cultivation for home consumption, livestock raising, hunting, fishing, gathering, exploiting their own forests, external forest work and other occasional labor. Forestry and float work was fused with the most diverse occupations. The same individual was engaged in all sorts of work during his lifetime. The economy of self-sufficiency had to satisfy a variety of needs, produce food, fuel and building materials. Complexity was a buffer against stark environmental change. Risks were to be kept at a minimum.

Through a network of logging camps it was possible to extend forest cuttings to remote regions where transportation links precluded travelling to work. The logging camps represented the optimum in temporary accommodation. Workers gathered there from a wide area for seasonal labor. Forestry work provided money. In this way the conditions were created for markets in food and other necessities. Local farmers obtained additional income from the sale of butter, meat, potatoes, hay and straw to satisfy the needs of the forest workers. Shops were founded in villages and service networks were created. The association structure was conclusively related to the village consciousness.

In a peasant society based on crop cultivation land ownership determined the social status of each villager. The landless were at the bottom of the social hierarchy. In the forests, however, they were their own men. People were valued according to their work in the forest, not the land they owned. The rise in the industrial significance of the forest altered the internal social division of the villages.

The demand for logs finally coupled the region to the world economy. The development of villages was thereafter largely dependent on international economic trends. Corporate land ownership achieved a considerable position in the study area. The control of the forests by the companies changed the way in which they were used. The supralocal effect on the management of nature escalated. For the forest companies timber was the only or primary forest product. Since forest utilization, for example hunting rights, was chiefly related

to ownership of land, following their land purchases the supralocals also controlled the other uses of the forest.

The rise in the value of timber reduced the rights of the occupants, the company's tenants. Local power over the use of nature diminished. During the period of industrial forest use the forests were privately owned and utilized according to the laws governing private property. More efficient regulation prevented unlawful use. The Crown, the state, was involved in the changes from the outset. The state protected its share by molding its land to the needs of industry. Functioning according to terms dictated by industry, state forest policy was left with the task of resolving the contradictions between peasant and industrial (read: local and supralocal) use. State-directed settlement policy brought additional rural inhabitants to the forests as a labor force for the forest industry. After the Second World War settlement was also directed to marshlands, which were considered suitable for the production of fodder for dairy cattle. Using marshy lowland fields for the cultivation of cereals were thought to be too risky.

In the economy of self-sufficiency forest work adapted to the natural cycle. Forestry, field work, haying, hunting, cattle grazing and other activities overlapped through the year. Tar burning (-making) was particularly suitable to the annual cycle. Timber supply was also organized in a manner similar to the tar trade. There was always plenty of work for children and the elderly as well. There was no differentiation between work and free time. Information about the surrounding area necessary for its utilization was transmitted by practical experience to succeeding generations. People did not look for security simply through tradition, but also looked to the future. Various income strategies were employed to avoid future uncertainties. Local inhabitants were a part of the change.

Industrial use of the forest meant the professionalization of forestry; experience and knowledge based on tradition were supplanted by external, written forestry data. The advent of foremen in the logging camps in the late 19th century reflected the professionalization of stamping work and thinking. Vocationally trained stampers decided which trees to cut. The lumberjacks just cut them down. Only with improved forestry training and the professionalization of lumberjacks was it possible to eliminate separate stampers.

Though state and privately-owned forests can in principle be distinguished from one another, the prevailing forestry policy also affected private forests. Privately-owned forests were directed and controlled by means of taxation, counselling, subsidy and control. The state was considered to be the best practitioner of forestry and its forest companies superior to the private. This view was passed on to a generation of forestry professionals who were suspicious of the ability of private individuals as forest owners.

The concrete change in the forest was in practice dependent on the existing technology. Its lack of development placed obstacles in the path of change, in spite of the aspirations. Naturally, major changes were brought about by simple techniques. For example, fire left a clear imprint on the forest. Forest fires as

such were a natural part of its development stages. Fires occurring after forests were cut were different, they destroyed larger areas than was previously the case and it took longer for the forest to recover from such damage. During the period of industrial utilization, the forest was constructed according to industrial needs. Industry sought to “banish” fire.

After the felling of logs a substantial amount of unused wood was left in the forests. With the coming of chemical forestry, what had previously been categorized as waste wood was then turned into a resource. A portion of the logging camps were transformed into stock goods or props areas, when evergreens, smaller trees and props began to be cut along with tall pines. Cordwood and props were also made in the summer, and thus also offered work to the landless. The importance of props (mine prop and pitwood) in the late 1930s made it possible to take advantage of old fixed measure logging areas. It was imperative to change the model for logging since uncut forests were only available in sufficient quantities in inaccessible regions. Because of the paper industry a use was found for deciduous trees too. An even greater part of the forest was transformed into a resource which could be exploited and preferred. The utilization of smallwood, which floated poorly, demanded changes in transportation technology.

The objective of industrial forestry was to stretch timber production to its limits. It desired to convert natural forests to industrial ones. The human influence on nature increased. Forests were cultivated. For reasons of efficiency vast monocultures were sought. This represented a narrow specialization in each region to generate maximum profit from timber production. Forestation required a single tree species, all others were to be eliminated. The areas of clear cuttings were expanded in the name of economic gain. The forested area was to be enlarged and so-called undercapacity areas were to be brought up to standard. Unproductive land was useless to society. Bogland was categorized as languishing land since trees did not grow there rapidly enough. Waste land did not produce trees at all. It was incumbent that it do so. This led to forest draining. Drainage had of course been carried out by hand for decades but machines substantially increased the drained area. Bogland was to be transformed into forest by means of drainage plows and later by excavators. There was a rise in economic efficiency. For nature this meant the simplification and standardization of living environments. The enhanced subsidies favoring forest improvement in developing areas increased pressure on the reserve’s forests.

The model for the mechanization of the forest industry was brought from North America, where forestry was based on intensive logging work performed at one time in vast forests rather than in lumberman-smallholder villages. The natural cycle, annual and daily changes, was to be ignored. The forest machine tractor driver’s year was markedly different from that of the gatherer, the slash-and-burner or the smallholder. Tractors were brought in and horses removed from the forests. It was painful for many to sell their horse for slaughter while resigning themselves to regular and defined working hours. Their ancestors had

one hundred years earlier gone into the forest to earn themselves a horse. The horse at that time represented wealth and well-being; now they had to give it up, if the inhabitants intended to work in forestry. Agricultural tractors replaced horses in the fields, but they were not replaced in the forests until the advent of specialized forest tractors.

Local timber transportation was based on the snow layer and its subsequent thaw. All the region's rivers and streams were made into float routes. The period of mechanization founded on the use of agricultural tractors was the final stage in stream floating. Float routes were dredged and adjusted by tractor more in a few years than in the previous hundred combined. At the same time a second organization began to construct roads for forest vehicles. The different organizations were, like automation, independent of one another despite the changing conditions.

Transporting timber to the markets had in the past only succeeded along the float routes. Following the initial incursion of the logging companies uncut forests were the dividing factor in the region. Only with the change in transportation technology was the shift from water to road transport accomplished; this made it possible to cut these forests as well. Vehicular traffic permitted the shipping of poorly floating smallwood and birch. Demand for these commodities increased in the 1960s, when new factories processing birch pulp were established. In shifting to mechanical road transportation snow became an obstacle. Stream floating was eliminated totally and floating was only used on large rivers and lakes. The floating of individual logs was replaced by timber bundles pulled by diesel-powered tugboats. As a result of the development of floating technology the need for labor decreased radically. Mechanical transportation favored clear cutting. Forest tractors required multi-purpose vehicles and timber trailers, which in turn needed forest roads.

By the 1970s it became possible to cut all the forests in the reserve. Some of the forests remained unspoiled but total control over them occurred when the remaining undeveloped forests were employed as tourism and recreation products.

The lumberjack with his chain saw replaced the tree-chopper and floatman; the truck replaced the horse and float stream. The new situation boxed the smallholders into a corner. The socially organized form of timber harvesting was altered and the labor force professionalized. Exploiting resources no longer required settlement in lumberman-smallholder villages, forest resource communities, not even necessarily in the same location. Settlement and going to work took on new forms. Technological development made it possible to sever the bond between workplace and home. Forest vehicle contractors from all parts of Finland appeared in the forests of the reserve. With the improvement in transportation the selection of a place of residence was influenced more non-economic factors. This permitted the birth of the so-called residential countryside.

After the bond between timber harvesting and settlement was severed the smallholders' fields were parcelled up and used for growing timber. Nature in

the areas surrounding the villages changed. The change in the cultural landscape, more thickets and healing over in forests, threatened cultural species precisely in the same way the virgin forest was threatened when the wilderness was transformed into industrial forest. The flourishing atmosphere of the villages in the study area in the 1940s and 1950s is still evident in the landscapes of the houses and yards. The landscapes of this period reflect a turning point in the structural change. The small farms of the reserve were unable to adapt to agricultural development demanding investment and enlargement of farm size. The farms began to empty and a large number remained as they were in the 1940s and 1950s. Some became leisure-time dwellings and production facilities were turned into storage space. The structural change brought about by the mechanization of timber harvesting was manifested in the landscape as a change in houses and production facilities.

The local effects of the same social process varied. The change did not affect all the villages in the same way. Each individual village lived its own economic, cultural and social life. The peasant farming villages retained their functional capabilities as a result of the basic settlement structure. Finland's decision to join the EU saw the integration of the nation's agriculture into international, European agronomy. In practice this meant the internationalization and increased control of agricultural decision-making. The agricultural villages spared from the depopulation caused by the change in timber harvesting faced serious difficulties. The so-called settlement population was mobilized and situated in forest villages according to the needs of the forest industry. Farmers who had earned their livelihood from agriculture and timber sales and survived on their farms in spite of forest industry trends were confronted with a choice. The alternatives were discontinuing their operations, expanding, or diversifying their sources of income.

The history of the villages in the reserve is stamped by constant or recurring change. Village communities experienced numerous crises which led to a profound change. This was accompanied by a period of uncertainty followed by the establishment of new structures. Life in the village was easier if its infrastructure was suited to several uses.

The reductions in cuttings which followed the massive changes in the 1960s caused by the mechanization of forestry did not affect peripheral areas as dramatically as they did earlier. There are even opportunities for success hidden in periods of economic recession. The rise in the cost of imported energy focused attention on the unutilized bogs, and they became a resource. The peat harvested from the bogs was expected to provide employment and income to remote area inhabitants. Municipalities in the region veered away from their tourism-based, nature-oriented line and shifted towards a program of industrialization in accordance with the notions of developing area policy.

Each form of forest utilization applied its own concept of nature. As these forms changed the old traditions of using nature were either consciously or unconsciously preserved, and this allowed the retention of a certain cultural tradition in the region. When the forest was used industrially and was privately

owned, the individual's right, Everyman's right, to pick berries and mushrooms was guaranteed. The benefit was local. As transport connections improved Everyman's right was extended to a broader area. It appears that in the study area in the 1990s the majority of hunters live outside the reserve. The change has not only been quantitative but qualitative as well. Hunting clubs and fishing associations organize free-time activities related to the reserve's forests and waterways. Hunting clubs received certain operational privileges in the forest. At the same time they brought a new hobby-based, supralocal model to the use of nature. When unemployment plagued the forest villages, the value of firewood gathered in the forest again rose, and sport fishing and hunting took on new significance in satisfying domestic needs. But, for example, when the forest companies rented their lands to hunting clubs the local residents were forced to join these clubs as well as adopt their practices and ways of thinking in order to hunt on this land. The result was the forced introduction of a supralocal affinity to nature and nature-use model to local farms. The human being, who still in pre-historic times could be characterized, like a wolf or osprey, as a predator, was transformed into an urban predator more clearly separated from the local nature.

The human effect on nature is in part conscious, in part unintentional. During the period of the wilderness economy there were plants which benefitted from human activity and spread along with it. Slash-and-burn cultivation changed the composition of the forest. Initially clearings were burn-beaten in fresh moors, and as a result the proportion of spruce diminished while the relative amount of pine grew. When dry moors were included in the slashing-and-burning, the percentage of pine decreased and that of alder, birch and juniper increased. This type of cultivation transformed spruce into birch forests. More intensively burned areas in the vicinity of settlements became pastures and burn-beaten meadows became plains supporting grey alder and juniper. This area was surrounded by a zone in which birch grew. Further away were pine-dominated coniferous forests. Spruce stands only remained in unburned areas. Slash-and-burn cultivation brought with it additional newcomers to the indigenous environment, culture spread new species. Many of these are flowering plants in burn-beaten meadows and along edges.

The appearance of animals and plants in the reserve is based more on human fancies and technology. Man has brought such animals and plants into the area that would not naturally belong there. Some species would not survive without human care. Some organisms benefitted from human activity better than others and increased despite human desires to the contrary. In manipulating nature people adopted and were forced to take on new tasks. They were eventually forced to maintain the ecosystems they had created in forests and lakes. Almost all endangered animal species have been preserved solely on the basis of the supplementary stock arriving from the east. In particular, large predators have been dependent on the forests of Russian Karelia.

During pre-industrial forest utilization the pioneers of the new culture survived by adopting the forest models of previous cultures and introducing

their own technology. Following the acceptance of the new forest use culture, the new utilization form altered the environment so quickly and efficiently that the old culture was not able to acclimate itself, but yielded to it. The rules of the old culture were no longer valid. The community caught in the throes of change, where the old structures crumbled, was unable to defend itself and was then forced to accept the changes and adapt to the new conditions.

The collision between two forms of forest utilization did not in all cases necessarily result in the complete acquiescence or fusing, assimilation, of one. People were still able to retain customs related to the earlier one. The dominant culture could otherwise alter the customs of the minority culture and sever their connections to others, for example, tourism purposes. Adaptation to the changed conditions did not occur on any given terms or unilaterally. Certain culturally bound frameworks were provided in the altered conditions as alternatives for villagers. Leaving the area to earn a living was one solution. Destinations included Russia in the late 19th century, southern Finland and Sweden in the 1960s, later on nearby centers, Joensuu and southern Finland. An alternative adaptation strategy was the attempt to alter the income model by either seeking a broader income network or by concentrating on a single sub-area, for instance, as a forest vehicle contractor, or changing one's occupation completely. In the changed situation both active as well as passive resistance arose. At its height it appeared as open protest, in the form of demonstrations and popular movements.

## The forest as nature

The human effect on the taiga has been long, but the actual upheaval in forest nature occurred over an extremely short period of time. Cuttings and changes occurring in other uses of the forest were accomplished systematically and efficiently at the same time throughout the country. The signs of intensive forestry appeared clearly in the landscape, but a seemingly minor change could also lead to irrevocable ecological changes, when it uniformly covered broad areas. The elimination of decayed wood from forests was one such change, and the consequences could hardly be noticed in one forest, but done consistently throughout the country it led to the impoverishment of the ecological diversity of the forest.

The aggravated change in forest nature led to a counter-reaction in the 1960s. The chief headache facing forest professionals promoting the benefits of the broad-based forest economy has since the 1960s been the hikers and conservationists advocating a diversified use of the forests. An ever-increasing group of leisure-time users stated demands for utilizing the forest for hunting and recreational purposes. Local inhabitants and politicians demanded work. The conservation program sought to protect the original environment. The practical operational view favored the establishment of national and natural parks and the preservation of plant and animal species as well as natural

monuments. The number of preserved areas also increased in the study area, but their position was unstable. The manner of use, which was seen to be economically more important, led to pressure to change the status of conservation areas. Diversified use of the forest became a topic for public orations, but the demands were never implemented.

The idea of diversified use of the forest did not make a dent in the forest sector in the 1970-1980s. The forests were cut until the 1990s without any consideration given to other interests. A powerful masculine culture presided over forestry methods, but the rise of environmental consciousness was no passing fad. In addition to domestic pressure, a strengthened foreign demand for change in forest utilization also arose. International markets required “green products”. This determined the attitude of the forest industry. The environment became a fundamental value which had to be considered in the planning and implementation of forest policy. The forest companies, which had determined forest utilization, were forced to take into account foreign buyers of forest products. Forest policy became international environmental policy, where decision-making was not controlled solely in the national arena. The shift had been made to post-industrial forest use.

Forest nature has increasingly become an investment and commercial medium which can be purchased like any other shares of stock. The local inhabitants no longer necessarily know who or which company owns any particular piece of the forest. Although all forest owners resort to the prevailing forest economy model in their forest, due to the changed character of the forest it is also possible to make use of solutions which differ from this norm. At corporate headquarters the distant forest may be used, for example, in PR-functions as an elk-hunting region or as a sign of the company’s environmental friendliness. The eastern border and, on the other hand, the proximity of conservation areas have stamped their own special features on the corporate forests of the study area.

Figure 1. The bounty of the forest.

TIME	LOCAL	SUPRALOCAL
Stone age, Iron age	game, firewood, wood for domestic needs, berries, mushrooms	-
1000 -	game, firewood, wood for domestic needs, berries, mushrooms	furs
1650 -	grain, game firewood, wood for domestic needs, berries, mushrooms	grain

1900 -	pasture, firewood, wood for domestic needs, berries, mushrooms	timber
1950 -	timber, firewood, wood for domestic needs, pasture, berries, mushrooms	raw timber (wood products)
2000 -	timber, game, berries, mushrooms, firewood nature,	raw timber (wood products), nature, experiences, game, berries, mushrooms

The dependence of villages and the environment on external social change has grown. The share of the local inhabitants in changing their environment has diminished. The majority of the inhabitants of the study area no longer in the 1990s have a direct connection to the natural resources supplied by the reserve. At the same time the modern concept of conservation has strengthened and the control of natural resources has shifted to supralocal quarters. The geographic and social distance to the concrete utilization of nature has increased and become more complicated. Increasingly more often, the North Karelian Biosphere Reserve is being required to provide timber as well as uncut forest and unharnessed rivers. They have become resources that supralocals are prepared to pay for. This indicates that nature will have to be restored. The state has filled in the drains that were dug in conservation areas and the forest companies have started to restore some of the bogs that in the 1960-1970s were drained and fertilized to produce wood.

Supralocal values and valuations were founded on a new interpretation of nature which emerged as a locally alien forest language with its key biotopes and old forests and species. The local resistance to the conservation programs can be interpreted on the basis of this framework. The directives concerning the forests and the use of nature in general were more commonly handed down outside the reserve and also in regard to such areas of environmental use which the local inhabitants had considered their own. The local population believed, for example, that various conservation measures limited their own utilization of nature and were external control mechanisms.

One method of relating the environmental history of the reserve would be to describe it as a narrative about an external threat. This could be presented as a series of regulations handed down by authorities about what is prohibited in the forest. The power to define the use of the forest was taken further out of the hands of the local people. They no longer have a concrete interaction with the decision-makers. That the external, faceless threat was characterized specifically as a Helsinki conservationist explains not only the contradiction between unfamiliar values and a more concrete local affinity with the forest, but

a protest against a more far-reaching social change. Characterizing the conservationists as Helsinki people, or Other, made them a suitable group to blame for all undesirable phenomena. The reasons for the poor conditions in the rural areas were not or could not be laid at the doorstep of mechanization or society and the change in its values.

Discussions concerning the forest, for instance, about destroying thickets with poisons, conservation programs, National Forest and Park Service labor policy, conservation of virgin forests and the Natura program, indicate that the study area remained at the center of things despite its constantly decreasing population. The arena for the power politics directed at state forests was transformed into an arena for contradictions in supralocal interests. The change in the active role of the local population remained secondary despite their strong positions. They became witnesses to the change and spectators in the forest policy drama. The opinions of the local population were heard, if they were seen to support the promotion of various supralocal interests.

The utilization of the forests in the form of conservation was opposed in the reserve. The traditional forms of forest use offered benefits which are easier to gauge than conservation. The supporters of industrial use tried to manipulate this to their advantage. By emphasizing environmental values contradictions arose between local and supralocal actors, as well as inside these groups. At the same time, the right to use the environment shifted even more clearly from the local to the non-local; new actors became involved in decision-making. The role of local administration, that is the municipality and regional administration, expanded. The discussion concerning the forests was internationalized in the 1990s. The easternmost section of North Karelia specialized as a part of the international biosphere network in 1992. Forest policy, which had directed the development of the area, was transformed into international environmental policy, and decision-making was no longer solely in Finnish hands. Decision-making pertaining to the reserve was being transferred beyond the national borders. At the same time locality took on new meanings. Converting the region from a resource-based rural area into a residential and recreational one set new demands on the use of the forest as well as the environment.