Effects of changing land ownership on the landscapes of the small islands of Estonia

L'impact des mutations foncières sur les paysages des petites îles d'Estonie

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Abstract: The course of political development, and the form of land ownership it produces, determine the evolution of the landscape on small islands. The main factors that have affected the landscapes of the small Estonian islands during the last 50 years are large-scale depopulation and the abandonment of traditional agricultural use, long-term traditions of nature protection, and the military activities on small islands. Currently, ongoing changes in ownership including land privatization are bringing problems in regard to the use and protection of the islands. The islands gain in importance as areas for recreation and ecotourism.

Keywords: Estonia - Small islands - Landscape changes - Land-use - Nature protection

Résumé: L'évolution politique et celle des structures foncières qu'elle induit influence l'évolution du paysage des petites îles. Durant les 50 dernières années, les principaux changements qui ont affecté les paysages des petites îles estoniennes sont liés à la dépopulation accompagnée d'un abandon des formes de l'agriculture traditionnelle, à une longue tradition de protection de nature et à l'activité militaire sur les petites îles. Les changements en cours dans la propriété privée, y compris la privatisation des terres, posent des problèmes au regard de l'utilisation et de la protection des îles qui deviennent de plus en plus des espaces de loisir et d'écotourisme.

Mots-clés: Estonie - Petites îles - Mutations des paysages - Utilisation des terres - Protection de la nature

Estonia is a small country at the Baltic Sea, its coastline stretches for about 3 780 km. Estonia has many islands (ab. 1 500), that make up approximately 9 % of the territory of Estonia. Only three of them have the area greater than 100 sq. km. Large islands are surrounded by numerous small ones. Small islands are defined here as those with the area of 20 sq. km or less. Small islands are varied in terms of nature conditions and development stage and make our coastal sea unique.

The landscape is a result of dynamic interaction between various elements, which may be abiotic or biotic including the influence of man (Konigsson, 1987). Human settlement has greatly changed the Estonian small islands and it is difficult to find a location where natural environment has remained entirely unaffected by human activity. Land use possibilities on these islands depend on their size and landscape diversity. Isolation has been less important land-use factor because the majority of the small islands lie near the mainland or larger islands.

Due to its geographical location on the seacoast between the Eastern and Western countries of Europe, the territory of Estonia has been under the power of different countries for centuries, and this has made its mark on the history of the islands. The tremendous economic and sociological changes that have taken place on these islands have had a great impact on their environment. The course of political development and the history of land ownership have determined the course of landscape development.

At present situation working out development concepts of areas is an acute problem for Estonia, and it is essential to look at the past levels of land use and landscape pattern.

I · TRADITIONAL LAND USE: AGRICULTURE

Many of the small islands were used primarily for hay-making already before they were populated. Some of the islands have been populated since the 13th century. On the majority of the populated islands there have been one to three households, on many islands even small villages. The number of inhabitants on the small islands has varied over time. The settlement on some islands has been motivated by their proximity to sailing and transportation routes. The main traditional economic activities that have supported human life on these islands have been fishing,
seal hunting and agriculture. Keeping livestock played an important role in the economy of these farms, also crops were grown on some islands.

The most intensive land use of the small islands took place between the middle of the 19th century and 1940 (Ratas, Puurmann, 1994). Land uses have been, on the whole, environmentally sound. This period of human activity altered the landscape structure of small islands towards diversity and variability. Arable lands were interspersed with woods, wooded (park-) meadows, and meadows. The landscape pattern was mosaic, farms, windmills and stone fences added to the diversity of the landscape.

II - SOVIET PERIOD : ABOLISHING OF SETTLEMENT

Prior to the Soviet occupation most land in Estonia was privately owned. In the summer of 1940, the Soviet Army occupied the territory of Estonia and the country was incorporated into the Soviet Union. The World War II and the new socialist order altered the way of life that had evolved on the small islands over the centuries. Many islanders escaped to the West during the World War II. Several of the small islands were populated during the centuries by Swedish people whose communities had their own language, customs and traditions different from other coastal people. Most of these Estonian Swedes left to the country of their ancestors by the 1944. The long history of original Swedish settlement in Estonia was over.

After the World War II the islands become a strictly controlled Soviet border zone. The strategic location of some islets has made them particularly suitable as military staging posts, and sites of military facilities. Sailing was severely restricted for the islanders and this made living on the islands difficult. Estonian small islands became more or less unpopulated. All this lead to the disappearing of traditional life on most of the small islands, where man has been shaping the landscape for hundreds of years. After the World War II, inhabitants have remained only on some small islands and very often the settlement is connected with lighthouse services only. Notably, on the island of Kihnu (12 sq. km), inhabitants have maintained the local ethnographical features.

Under Soviet administration land was entirely state owned and traditional farming was replaced by collective farming that completely changed the system of land distribution and land use. The land on several of the West-Estonian small islands was only used by collective farms for livestock grazing, without regard for what the environment could tolerate. The result was that the landscape structure of islands became impoverished. Typical cultural and semi-natural landscapes such as wooded meadows and fields were rapidly disappearing. The villages on many small islands are in ruins by now, and the fields and meadows are overgrown with bushes.

III - MILITARY USE

During the last 50 years the appearance of most of the Estonian small islands changed because they remained out of land use and that of some islands because of the active military use. Specific problems are connected with islands, that have been used for intensive military actions by Soviet army. There was practically no information about military activities and environmental state there because it was strictly concealed from any civilian as entirely closed territories. Now we know that a rocket base and a store of explosives were located on the island of Naissaar (area 18 sq. km). According to the official data, there were substantial quantities of explosive on the island in the form of about 30 000 sea mines. The islands of Pakri (Väike Pakri 12,9 sq. km and Suur Pakri 11,6 sq. km) were used as the targets to train military pilots. According to official data, nearly 1 000 ha of land has been disturbed by bomb craters on the large artillery ranges. Large areas have been destroyed in fires caused by shooting or bombing practices.

The environmental impact of the Soviet military presence on Estonian islands includes: mechanical damage to soil and landscape at the military training areas, pollution of the ground and water with petroleum products and hazardous chemicals, debris from destroyed buildings and negative impact on flora and bird fauna.

In some cases land restrictions for military security have provided the basis for natural landscape preservation. For example on the island of Naissaar, that is not totally devoid of environmental problems, its unique landscapes and natural features – forests and sandy beaches – have well preserved and have not yet been adversely affected by urban pressures.
Middle of 1930s

Middle of 1990s

Settlement, nature protection and military use of Estonian small islands

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NATURE CONSERVATION

Estonia is a country with considerable traditions concerning nature protection and the history of nature conservation in Estonia is connected with the islands. The first known state act enforcing a relatively wide area of nature conservation in Estonia dates back to 1297. Danish king Eric Menved (North Estonia was under Danish rule at that time) gave a firm command that ordered not to cut trees on several North-Estonian small islands. In 1910 the first nature reserve in the Baltic Vilsandi Bird Kingdom (area about 55 ha), was established on Vaika Islands, west of Saaremaa. The first Nature Protection Act came into force in 1935. The World War II interrupted the long-term traditions of nature protection for years. Since 1957, a great number of the West-Estonian small islands have been brought under nature protection: Matsalu State Nature Reserve (1957) and Hiiumaa Islets' Landscape Reserve (1971) were founded.

This protection has saved ecosystems of many islands from overgrazing, but has not preserved the traditional forms of human influence on the landscape and semi-natural landscapes which are relics of earlier types of land use. At that time legislation on nature protection gave partial protection but was not proactive in conservation management. The problem of how to protect the rich and varied natural and seminatural plant communities which used to characterize the islands, has arisen.

On March 1990, the West-Estonian Archipelago Biosphere Reserve was founded. Its area is about 1.5 million ha, 404 000 ha of which are four biggest Estonian islands together with hundreds of small ones. The main aim of the Biosphere Reserve is to create effective links between conservation and development, where fitting the needs of society into the potential of nature is essential. It has three main functions: a conservation function, a scientific function and a development function to provide regional planning, resource management and ecological education (Kokovkin, 1993).

In North Estonia several islands have been recently included into natural reserves: the Kolga Bay Islets' Reserve was formed in 1991 and the Naissaar Reserve in the beginning 1995. The future of the Pakri Islands is under discussion yet.

PRESENT PROBLEMS

As Estonia regained independence in 1991, it is facing the problems connected with changing ownership. Real owners have proclaimed to get their land back. Decollectivization of agriculture, reprivatization and currently, ongoing changes in land ownership are of cardinal importance and have brought problems regarding land use and protection of islands. Land reform is underway and results can be rather unpredictable to the landscape pattern.


Although the laws exist, problems occur when putting protection into practice, therefore protection schemes and management plans are needed. To avoid the conflicts between private ownership and conservation, the land must be assessed for environmental and conservation values, dialogue between all interested parties occur and necessary protection schemes must be enacted before land is given back juridically. Owners have to agree with restricted activity on their land and receive compensation from the state. Practically due to the lack of economical resources, the only possible compensation for the economic loss caused by environmental restrictions on privately owned land is the exemption of lands from land tax, according to the Law on Land Tax (1993).

In the new situation we can not assume that islands’ landscapes will be managed in traditional way (for agricultural purposes). The social and economical conditions are not the same today as they were when traditional practices were followed. A majority of landowners do not live on islands, but in other areas, very often abroad. Only some of the real landowners are interested in continuing traditional land-use practices. Although, the revival of coastal fishing would be an essential part of...
traditional nature use pattern on small islands. Several islands along the coast will become summer resorts.

VI - FUTURE : RECREATION

Estonian islands have always exerted a strong attraction and they are popular destination for recreational activities. Their appeal is based partly on the positive image of islands in general and partly on some of their specific characteristics: historical and cultural heritage or landscape scenic values. Considering the landscape type of the Estonian small islands the most suitable for recreational purposes are those with shrubbies and tree groves or forests, where landscape diversity is high (Ratas, 1983). The beautiful and varied shoreline — beaches and cliffs — can be of the islands' main assets.

The potential of tourism on these islands is related to day-trips and overnight visits during the summer season. The limited time for water and outdoor activities (June, July, August) is the main restriction for the development of tourism. Sea offers possibilities for sea trips, yachting, fishing and watersport, in these cases the suitable shore for landing is very important.

Tourism is a rapidly expanding activity on islands of former protected-nature zones of the Soviet frontier and there have been growing pressures on its capacity. Producing a plan for sustainable tourism is an effective way to keep recreation oriented development nature and to determine what balance must be between conservation and tourism. As tourism causes specific problems (water supply, waste disposal, transport etc.) this plan must be a part of the management plan for an area. On protected areas the principal objective is to channel the flow of tourists outside the strictly protected core zones.

Specific problems are connected with the previous military islands of Pakri and Naissaar. Their close proximity to the mainland and the capital city Tallinn make these islands the ideal escape for city dwellers. Initially, the day use demand is expected to be high, as there is a certain degree of mystery about these islands due to the fact that they have been closed territories to Estonians for the past 50 years. Since the restoration of the independent Republic of Estonia in 1991, the Russian military has been withdrawn and the islands are open to visitors. At first, the safety of the people must be guaranteed. The cleaning-up of heavily degraded ecosystems from dangerous military pollution, and works to demine the islands are underway.

Conclusion

Estonian islands have undergone profound environmental, economic and ecological changes that raise many questions about their future. The main factors that have affected small Estonian islands' landscapes during the last 50 years are large-scale depopulation and the abandonment of traditional land use, long-term traditions of nature protection, and the military activities on small islands.

In the present situation, sustainable development of small islands includes foremost: nature conservation to protect both unique and typical ecosystems, recreation and regulated tourism, most important ecotourism on the subjects of nature and the history of the islets. Small islands are favourable areas for carrying out studies on dynamic interrelations between man and nature and research involving environmental monitoring. The main objectives for protection is the preservation of the islands' landscape in order to sustain the variability and specificity of the insular and coastal landscapes as well as the cultural heritage of the area. Great attention should be paid on the conservation of the cultural landscapes that are defined as "inherited" landscapes shaped by previous generations of people. Conservation of the small islands' landscape involves not solely natural conservation but also preservation of traditional land use practices and traditional ways of life.

Small islands in Estonia are within the jurisdiction of the communities, but the successful and intelligent management of the islands landscapes can only be achieved by adequate land use planning based at a regional level.
References


