



## **Comprehensive study of Estonia's coastal zone protection and conservation**

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### **Abstract**

Taking into account natural and cultural values are the Estonian coastal areas in a better condition compared to many other European countries. Despite that, the pressure on coastal areas has increased step by step in Estonia as well. This article describes the current problems related to the protection and conservation of Estonian coastal areas and their possible solutions. In order to obtain information about the natural and cultural heritage objects located on Estonian coast, a methodology for inventorying coastal areas was developed and a thorough inventory of cultural heritage objects in the Estonian green belt was conducted (an overview of the inventory methodology, the results of the inventory, the inventoried objects, their condition and risk factors). Protection of valuable objects and areas outside protected areas depend largely of spatial planning measures. Thus, the best practices of the protection and conservation of coastal areas in spatial planning were studied and reasoned recommendations were given on how to supplement them and make their implementation more successful. Based on the best practices and the inventory results, a methodology for the zoning of coastal areas was developed and the sample zoning of a pilot area was prepared. Estonian coastal areas include many military objects – displaying them as tourist objects may significantly influence the condition of coastal areas. Thus, the possibilities of military tourism in Estonia and its reflection in the media were studied. Since many different interest groups are related to the subject of coastal areas, this article also gives an overview of the methods of distributing study results.

### **1 Background**

Estonia has a coastline of some 3,800 km and more than 1,500 islands. Historically, before World War II, Estonia's coastline was neither heavily populated nor a recreational area for wealthy elites. The main economic activities occurred at trading ports (Tallinn, Narva and Pärnu) and the local fishing industry. The Soviet occupation of Estonia in 1944 brought about major changes (Vollmer et al. 2010).

In 1946, the Council of Ministers of the Estonian Soviet Socialist Republic issued the secret regulation No. 058 "About the restricted border coastal belt in the Estonian SSR and the regime within it". This regulation established a restricted coastal border zone, which included with few exceptions most of the coastal area in North and North-West Estonia, all the Estonian sea islands and the town of Paldiski (Figure 1). People were allowed to move and operate in the border zone only on the basis of special permits, which were demanded even from those working in the border zone (e.g. in fishing kolkhoz). Local residents had to have a respective notation in their passport. It was difficult to get a permit to visit the islands, as not all applications were satisfied. Mostly, it was only possible to get a permit to the islands for the purpose of visiting close relatives.

All the activities of the local people of the coastal areas were largely controlled by Soviet border guards. It may be difficult to imagine, that swimming in the sea was allowed only during daytime and no one was permitted access to the waterfront after 10 P.M. The reason for all these measures was not to protect the Soviet Union from invasion, but to prevent its own people from escaping (Sepp 2011).



Figure 1: Security zones of the Estonian Soviet Socialist Republic 1945-1991.

These harsh restrictions were accompanied by drastic changes in the former way of life – many residents were forced to leave, traditional ways of land use dwindled and a number of manmade objects and values were left to face the forces of nature. But, as is often the case, this also had some positive impacts. Not considering the border guard, ports, and fishing kolkhozes, almost no development or construction activities took place on Estonian coastal areas. Partly thanks to that, these areas are still well preserved and in a relatively untouched state.

Compared to many other European countries, the Estonian coastal areas are in a better condition (taking into account natural and cultural values), which is why among other things these areas have also great tourism potential. However, Estonian coastal areas are endangered by several factors and thus, all measures must be taken to ensure their continued good condition. However, the issues with chaotic and in a way illegal construction activity, the lack of public accesses to the shore path or the closing of the accesses in conjunction with development activities, the pressure of real estate development on the coastal forests and the pollution accompanying the visiting of beaches (Sinijärv 2005) still remain. Construction pressure on the coastal areas increased just after the restoration of independence in Estonia, when the closed coastal areas were re-opened and the land reform started. To avoid the perishing of natural biotic communities, restrict the unfavourable influence of human activity and direct and maintain the inhabitation structure and public accesses characteristic to the shore, the Nature Conservation Act provides for zones restricting the land use on the coast. These are the limited management zone, the building exclusion zone and the water protection zone. Unfortunately the National Audit Office found during the audit in 2007 that the natural values of shores and banks are insufficiently protected from private interests and illegal construction and the shore and bank values may be damaged to the extent that may be later expensive or impossible to restore.

Construction and development activities on the coast endanger not only natural values, but also landscapes and objects of cultural heritage found there. In Estonia, one of the important criteria for

assessing the cultural-historical value of landscapes is the wealth and condition of cultural monuments and traditional landscape elements, and the wealth and character of elements/structures originating from various historical periods (Hellström 2001).

In order to preserve the valuable natural and cultural heritage, leaving at the same time the people the chance to enjoy the wonderful nature of Estonian coast, these objects and areas must be managed rationally and economically. That cannot be done, having no idea about the values hidden in the coastal area.

## 2 Objectives

The predominant approach applied to studying cultural heritage in Estonia has been object-based. A great part of Estonian mainland has been surveyed by now under the leadership of State Forest Management Centre (RMK). As of January 2012, 34,649 objects of cultural heritage (OCH) from all of the counties of Estonia had been recorded in the database of the Estonian Nature Information System (EELIS 2012). However, the military and cultural heritage objects on coastal areas have not been studied and described in sufficient detail as of yet. In the framework of the Baltic Green Belt project, the Estonian University of Life Sciences decided to approach the issue of the protection and conservation of coastal areas in a complex manner:

1. In order to obtain information about the natural and cultural heritage objects on coastal areas, a thorough **inventory of objects of cultural heritage on the entire length of the Estonian green belt** was carried out on a 200 m wide coastal strip, where many restrictions are applied to construction and development activities.
2. In order to protect natural and cultural values, several protected areas have been created, but it is neither possible nor reasonable to take the whole coast under protection and therefore, a large part of the values will always be located outside the borders of protected areas. So that the entire coastal area of Estonia would be managed rationally and its good condition would be preserved, **the good practices of the protection and conservation of coastal areas and the application thereof in spatial planning was studied**. The spatial plans related to coastal areas were analysed and the best practices currently implemented and suitable for the conditions of Estonia determined. In addition, reasoned recommendations on their further development and better implementation were given.
3. The protection of cultural heritage objects, but also the protection of the nature and the environment often cause conflicts between the people living and operating in the areas under protection, and the people organising the protection. The protection of values and the everyday life of people must go hand in hand in a way that would enable the normal existence of both. However, achieving the wellbeing and satisfaction of all parties is a very complicated task, as frequently, people are unclear about their rights and obligations. In order to prevent and solve conflicts and find the best uses for specific areas, **a methodology for zoning coastal areas was developed on the basis of the coastal zone protection and conservation best practices and results of the inventory. Sample zoning for a pilot area (Lahemaa National Park) was compiled**.
4. Many cultural and natural values have been taken under national protection (nature protection, heritage conservation etc.) either as single objects or as entire areas. Compared to other objects of cultural heritage, relatively few valuable military objects have been taken under protection. Their wellbeing is often dependent on private initiative. One of the options of valuing and conserving the objects is military tourism. The possibility of it largely relies on the specific area and circumstances (different legislation, general economic situation etc.) and thus, the experiences and knowledge of other countries cannot be adopted without making certain adjustments – in addition, local circumstances must be studied. **Thus, the study “Reflection of military tourism in the media and its possibilities in the Estonian green belt” was conducted**.

5. As research results hold no value unless used, **the research results and general information about the project's activities were distributed** by means of several awareness events, the Estonian Green Belt book and film, a bilingual travelling exposition, and various articles, press tours, leaflets etc.

### 3 Cultural heritage inventory in the Estonian Green Belt

Estonian University of Life Sciences conducted the inventory of coastal areas in the Estonian Green Belt in the period August 2009–December 2010. The inventory was based on the Coastal Areas Inventory Methodology (CAIM), devised in 2009 and complemented in 2010 (Sepp & Lõhmus 2010).

The inventory covered the entire Northern and North-Western coast of Estonia, the offshore coasts of Hiiumaa and Saaremaa and the entire coast of Vormsi island (Figure 1). Information was gathered about the objects in 27 municipalities located in the Estonian Green Belt. The inventory area was 200 metres from the mean tidal position. The inventory area was determined based on Estonian Nature Conservation Act, pursuant to which the width of limited management zones of sea coast is 200 metres. Thus, the use of land in the area in question has restrictions arising from law. Development work must be under strict supervision in the restriction zone and supposedly, objects of natural and cultural heritage are protected more effectively there than in the areas with no restrictions.

The inventory area was covered on foot in order to check that OCH marked on the pre-selection map did exist and to map all the newly-found OCH. Details of every OCH were recorded, such as name, type code, location data, the extent of the object and the land parcel where the object was located. The object's condition was photographically recorded and the human impact that had affected or may potentially affect the object were examined and a wealth of other relevant information was collected and recorded (Sepp 2011).

Geographic information system (GIS) software, which is used by most state agencies in Estonia, was used to compile the database of OCH. GIS facilitates the use of data by officials and other stakeholders.

#### Inventory results

During the inventory the total of 1,529 objects were investigated, out of which 1,268 were the objects of cultural heritage and 261 the instances of current human pressure (IHP – mainly buildings in the building exclusion zone). CAIM enabled the mapping of human pressure in coastal areas and to evaluate, which threat and to which extent human activity has posed to natural and cultural heritage during the last twenty years. For the areas with strongest IHP see figure 1.

Estonian OCHs consist of 139 types (e.g. function, material, era, cultural source). The inventory identified 1268 OCHs consisting of 72 types, which for ease to display were amalgamated to form 21 types (Figure 2).

The largest group of OCHs in the inventory area (25%) are from the Soviet occupation, most of which were border-guard constructions. Observation posts and towers were built at regular intervals along the mainland and island coasts, most of which still exists in various conditions. The inventory identified 117 historical homesteads and 74 manor farmhouses. A vast majority of the homesteads and manor farmhouses are still in use and in an excellent condition. A small number of farmhouses on recently abandoned farms are in a more dilapidated condition.

Estonian coastal areas are rich in boulders, these huge and interestingly shaped rocks have always been an inspiration for folklore. The inventory recorded at least 96 rocks, most of which were used for sacrifices or other religious purposes and connected with legends. Naturally, many seamarks were also recorded, of which the majority were lighthouses. The oldest lighthouses included in the survey were the Pakri old lighthouse built in 1760 and the smaller Suurupi wooden lighthouse built in 1859.

Unsurprisingly, the dominant OCHs in the coastal inventory concerned landing spots, harbours and fishing-related locations (Lõhmus et al. 2011).

OCHs that are not so numerous should not be ignored. The site types that consist of only a small number of preserved examples are even more valuable.

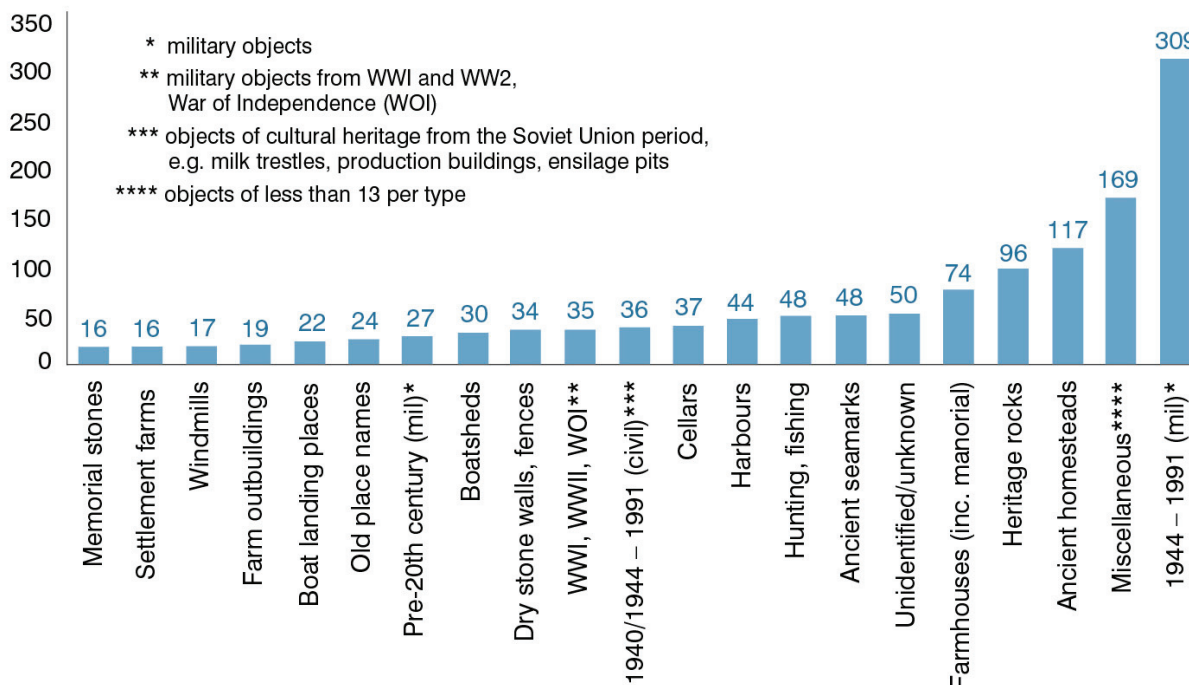


Figure 2: Objects of cultural heritage (n=1268) by type within the Estonian Green Belt area.

The condition of each surveyed OCH was evaluated against a six-level scale. The results were promising with 40% being 'well preserved' or 'very well preserved'. This means that, in the context of buildings or complexes, such as homesteads, they are still in use or could be easily reconstructed or restored to a usable condition. The high proportion of 'well' and 'very well preserved' OCHs is partly due to the infinitesimally low rate of degradation of natural objects, such as boulders and geological places.

The condition of the OCH is mostly affected by various human impacts. Semi-natural communities (coastal meadows, flood-meadows, wooded meadows, alvars, wooded pastures), which have formed over centuries as a result of human activities, and which are characterised by an especially great richness of species/biodiversity and an abundance of objects of cultural heritage, play an important role in Estonian traditional landscapes. In relation with the displacement of people and the collectivisation of agriculture, many of these valuable areas were left out of use and turned into scrublands. For example, in the 1950s, the area under alvars took up 44,000 hectares, while at the end of the 1990s, the area was only 5,000 hectares (Estonian Seminatural Community Conservation 2012).

The results of the inventory proved the same: most often, about 40% of the cases, it was found that the object had been affected by a decrease in human activity. Other important impacts were: traces of demolition and damage (~27%), littering and dumping of waste (11%), construction works, which had damaged the original object (~5%).

The inventory also specified the human impact, which could affect the objects in the future. Most often, by 24% of cases, it was found that the object might be damaged or demolished in the future. The risk of littering was highlighted by 17% of cases. The risk of a decrease in human activity was described by 12% of cases and construction works by 11% of cases (Lõhmus et al. 2011).

Over 80% of the objects surveyed in Estonian Green Belt had not previously been surveyed as objects of cultural heritage (OCHs). While 13% of the OCHs had previously been surveyed and included in the database of Estonian Nature Infosystem (EELIS), these objects are not subject to national protection and consequently their protection depends on the landowners' free will. Currently, only 5% of the OCHs surveyed in the coastal areas are subject to heritage protection.

### **Importance of the inventory**

The Green Belt inventory showed although Estonia's coastline is very rich in heritage, the majority of the OCHs are from recent historical periods (i.e. the Soviet occupation). Finding traces in the landscape from earlier periods becomes harder and harder and therefore every effort should be made to record OCHs. Primarily, the inventory of cultural heritage is important for several reasons: cultural education would benefit; compiling cultural heritage databases, helping with further research, and helping to design hiking trails, etc. Cultural heritage should also form the basis for settling land-use issues (i.e. where to construct recreational areas; which areas should be kept intact etc.) (Sepp 2011).

## **4 The best practices of coastal zone protection and conservation in spatial planning**

Maintaining the good condition of coastal areas depends not only on direct restrictions and the monitoring whether or not these restrictions are followed, but also on a great number of other aspects. In addition to orders and restrictions, one of the methods of protecting and conserving coastal zones is spatial planning. As many parties as possible should be involved in the planning process, and as many various factors as possible should be considered with. This should lead to a situation where the final result is the best for all parties. Alas, this is not always the case. The results of the planning process often depend on the priorities of the local government and the way it has conducted the planning process (has legislation alone guided the process or has traditional land use been taken into account as well; are some people's interests more important than others; have there been enough activities to make the matter known to the public and make the public more aware of it etc.).

Several good practices for the protection and conservation of coastal areas have been developed and implemented in Europe. Europe's coastal areas are extremely variable because of a great variety of natural, social, economic and cultural factors that have shaped them. The importance of solutions that would fit local environment is increasingly stressed as a means of enabling application of integrated coastal zone management in practice. In order to determine the solutions suitable for the conditions of Estonia, the experiences of both Europe as well as Estonia gained from the good practices of the protection and conservation of coastal zones were studied.

In order to determine the best practices developed and recognised in Europe, the most important coastal zone regulations and cooperation projects in Europe and in the Baltic Sea region, which, in the broadest sense, could be considered the best practice (as they focus on a special strategy or a series of projects that can be regarded as a whole), were studied. A selection of examples on integrated coastal zone management programmes (primarily experience gained from projects after 2000, which are offered as the best practice) were discussed (Veersalu et al. 2011).

In addition to mapping European experience, an overview of protection and conservation practices in spatial planning in Estonia (as laid down in legislation and existing as recognised best practices) was compiled. To identify opportunities that the local authorities see in the coastal zone and to determine whether the objectives listed in the plans are in line with the coastal management/governance principles, spatial plans related to coastal areas (prepared in the past 11 years in Estonia) were analysed. The analysis also revealed the most serious conflicts in the coastal zone

### **General remarks based on the analysis of spatial plans.**

The structure and essential approach mirror the variable (unsteady) conditions of the past 11 years (2000-2011) that have had an effect on the area of spatial planning. At the official level, the

understanding of the so-called “plan in accordance with requirements” has varied and been inconsistent in counties. The persons who have prepared, consulted or harmonised the plans have grasped the subject differently. The essence of the planner’s work has gone through some changes: expert and carrier of know-how has become negotiator and mediator.

Rapid changes in the society have led to rapid amendments in laws and other legal acts as well as increased their volume and provisions; however, the practice is often outpaced by the legislative procedure. Since 2004, Estonia has been a member of the European Union. Hence, several legal acts have been amended. For example, the Planning and Building Act has been divided into two separate acts and the former environmental expertise has been replaced by environmental impact assessment.

The understanding of the purpose of coastal planning has changed; for example, in the early 2000s, coastal planning mainly stood for building on coastal areas (summer houses/private houses) and the regulation of the building activity. The period under review includes also the intensive construction boom (especially on the coast) and, as a response to this, highlighting of issues relating to nature conservation.

### **Good practice in the present-day spatial planning in Estonia**

On the basis of the plans analysed it can be stated that the plans, where the solutions go beyond the requirements for such plans set forth in the legislation, could be ranked among the most successful ones in terms of protection and conservation of coastal areas. This means that additional opportunities, methods, solutions, strategies/principles not explicitly required by the law, are been used while preparing the plans. It can be concluded that the current legislation does not ensure the best planning solution in the coastal zone. On the basis of the plans studied, the *good practices* in the present-day spatial planning in Estonia were highlighted (Veersalu et al. 2011).

Opportunities and planning methods arising from the law:

- Pursuant to the Planning Act, the selection of the area of the planned territory is flexible, it is possible to delimit the planning area on the basis of landscape-related considerations, and through several municipalities;
- A comprehensive plan can be prepared as a thematic plan or a comprehensive plan for a part of the rural municipality (eg thematic plan for coastal areas) that allows addressing one theme or selected themes or a definite part of the rural municipality in more depth.

Strategies / principles:

- Following the recognised principles of integrated coastal zone management in Europe; integrating nature conservation and socio-economic interests (not contrasting them);
- Common strategy for the coastal area = land areas + water areas (all-inclusiveness); zoning;
- The coast is the largest natural resource in Estonia that must be regarded as a non-renewable natural resource and not to be used at the expense of future generations;
- Setting public interests above private interests on the coast; orienting to enlarging the share of the land areas owned by municipalities; being guided by the principle that the building right is an ownership right provided by the municipality, not an absolute ownership right provided by law;
- Being guided by the specific character of the region (nature, socio-economic conditions) and the historically developed "tried and tested" tradition;
- Using all the existing best relevant and available data (GIS, studies, monitoring data, earlier plans, examples of good practices in foreign countries, etc) and experience in preparing plans;
- Being guided by the existing recognised good practices (good agricultural practice); defining, acknowledging and developing the local good practice;
- Preserving landscapes – green network, valuable landscapes, landscape maintenance;

- Cooperation (in parallel with the simultaneous projects; long-standing cooperation partners in Estonia and abroad), orienting to joint activities;
- Actual preparation of the plans (not just recording the pre-determined outcome);
- In the case of conflicts, an active discussion oriented to finding solutions;
- Training, raising awareness, informing and counselling;
- Defining and unifying notions;
- Long-term perspective;

The application of good practice can be influenced by two principles, first, the “negative way” – by monitoring and responding to non-adherence to or violation of practices (general public, media, professional circles, stakeholders, etc). Second, the positive way - to notice and acknowledge the adherence to standards of good practice. Estonian University of Life Sciences chose second approach and in addition to recognition, decided to give recommendations on how to improve coastal management based on *best practice* and how to develop and improve the application of best practices in spatial planning in Estonia.

The following proposals were made (Veersalu et al. 2011):

- To devise and develop for local authorities methods for planning Estonia's coastal zone that are recognised, easy to understand and that define the coastal zone and harmonise the notions relating to the coastal zone.
- One must be guided by the following strategies: 1) the coast is the biggest natural resource in Estonia that must be regarded as a non-renewable natural resource and not to use it at the expense of future generations; 2) on the coast, public interests must be set above private interests.
- The existing good practices should be of higher priority.
- To formulate recognised good practices for coastal zones that take into account the local specificity.
- To devise and develop recognised methods for assessing the projects and plans of coastal areas.
- To participate with examples of Estonian projects/plans (proceeding from the structure of the examples of European *good practice*) in compiling databases of good practice projects
- To consolidate, in an uncomplicated wording, the simpler/most commonly used indicators for coastal areas that are relevant and used, first and foremost, in spatial planning.
- To create a webpage that incorporates the datasets about Estonia's coastal zone, plans of coastal zones and coastal area management as a whole
- In cooperation with the webpage, to establish a consultation service for Estonian coastal zone

## **5 Implementation of the coastal zone protection and conservation best practices in spatial planning: zoning of the Lahemaa National Park coastal area.**

The largest and oldest national park of Estonia – Lahemaa - was established in 1971. Lahemaa is known for the great number of landscapes characteristic to Estonia (Saaber 1996). In the National Park, two main landscape units could be distinguished: cultivated and natural landscapes. In the cultivated landscapes, limited economic activities and organized recreational activities are allowed. The natural landscapes comprise on the one hand the areas, which have preserved their natural condition (nearly 70 %) and where human activities are prohibited, and on the other hand natural landscapes of regulated use, where such human activities not causing irreversible changes in the nature, are allowed.



## Problems in management

Lahemaa National Park is located in the territory of two local governments – Kuusalu municipality and Vihula municipality. Both municipalities have a valid comprehensive plan (Vihula Municipality 2003) which treats the national park as a recreational and tourist area with distinct local holiday sites converging near popular sandy beaches. The local governments aim to develop environmentally friendly tourism. Realising the tourist potential is only possible in collaboration with the national park and its administration.

Upon drafting their comprehensive plans (at the beginning of 2000-s), the local governments on the territory of which the national park is located, have come across several disagreements and dissatisfaction resulting from strict restrictions subject to the (somewhat outdated) protection rules of the national park and the concurrent bureaucracy. Problems are rooted in conflicts between Estonian laws of that time. It has yet been impossible to solve such problems within the planning process (AS Entec 2003). One specific example are strict and for owners quite costly architectural requirements. In Lahemaa most of such problems are caused by requirements to protect rural architecture considered with high cultural value. At the moment 447 buildings all over the Lahemaa National Park territory are protected as National Heritage objects. (Estonian Government regulation 2010) The inhabitants have expressed the feeling of living in the national park as museum exhibits.

## Objectives and approach

Traditionally, internal zoning of a protected area aims at determining zones under different protection rules in order to preserve the values of nature. The zones may include e.g. strict nature reserves, natural and maintainable conservation zones and limited management zones (Nature Conservation Act).

The purpose of present zoning of Lahemaa National Park was somewhat different than usual: the zoning of the coastal area (Helsinki Commission 1994) was laid out to incorporate not only protection but also planning principles. The aim was to focus on cultural landscapes by studying land use consistency and allocation of protected objects including cultural heritage objects and semi-natural communities. Three different types of areas were distinguished: (1) areas which meet the economic and social needs of modern men, (2) areas where it is possible to practice a so called traditional ways of living (i.e. fishing, farming) and (3) areas where it is possible to combine both (i.e. tourism farms).

The final goal is to give recommendations for terms of development (use) by zones in a way, which enables to maintain cultural heritage in a more complex manner and more integrated with spatial planning and conservation.

## Activities and outcomes: Zoning

The zoning follows the traces of consistency in land use. The output of the zoning is an explanatory report and digital map layers (Figure 3)

Upon zoning, three conceptual zones have been regarded:

- The **coastal water zone's** baseline is the regular water line and it extends seawards up to the imaginary line connecting the utmost points of the islands, islets and peninsulas, measured from the coast.
- The **coastal sea zone** (not displayed in figure 3) relates to fishing; it extends seawards from the coastal waters.
- The **coastal land zone** extends from the regular water line to the inland border of the zoned area (3 kilometres from the regular water line) (Palginõmm & Veersalu 2009).

**Within the coastal land zone**, smaller subzones were distinguished:

1. Natural landscape zone
2. Secondary forest zone (formerly cultivated landscapes)
3. Farmland zone (cultivated landscapes)
4. Coastal zone (cultivated landscapes)
5. Dispersed settlement zone (cultivated landscapes)
6. Concentrated settlement zone (cultivated landscapes)
7. Compact settlement zone

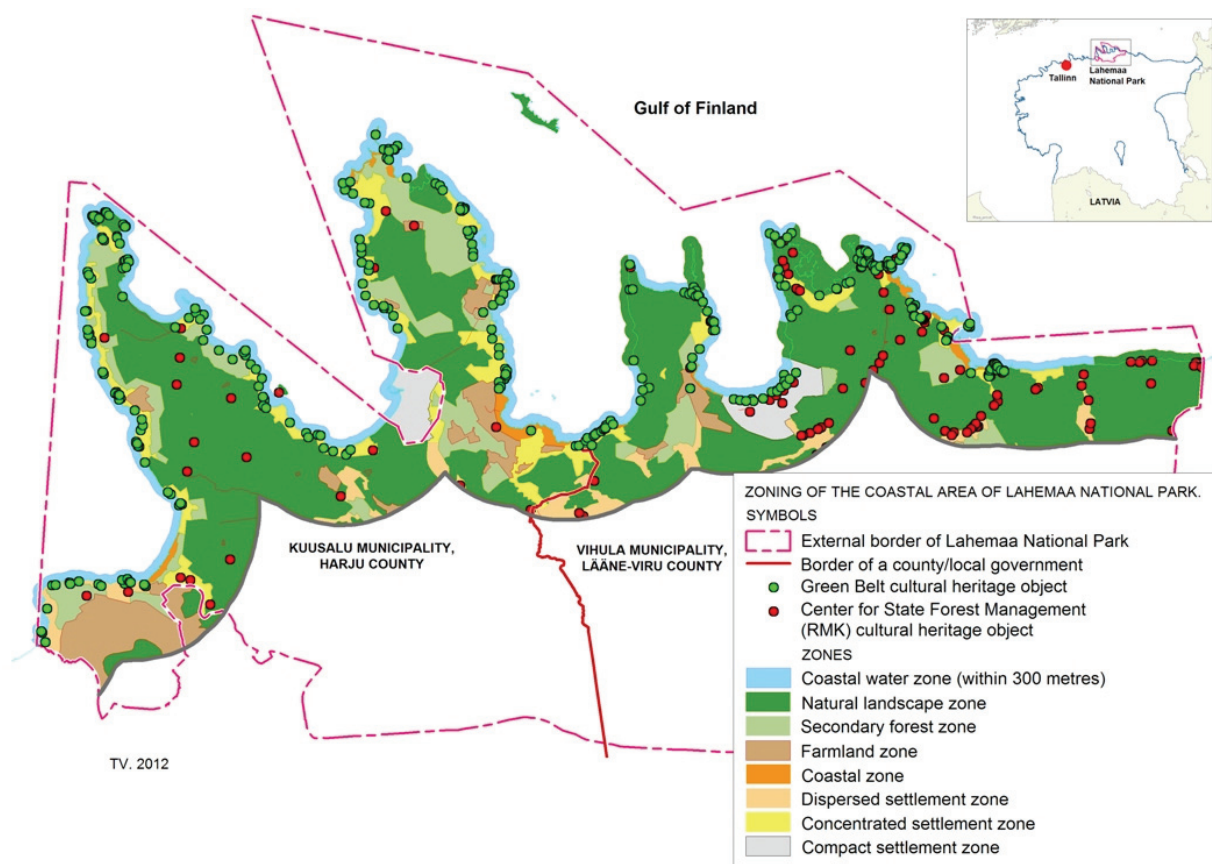


Figure 3: Zoning of the coastal area of Lahemaa National Park (Veersalu et al. 2012).

For the subzones specific use recommendations were formulated. There are two main criteria for determining the distinguished zones: 1) the land use of the determined zone is as homogeneous as possible and enables to set the terms of use, which would be accepted by the protection rules in the given location, characteristic to the landscape and support the consistency and sustainable use of the latter; 2) the borders of the determined zones are based on as natural and noticeable borders in the landscape as possible, such as rivers, forest division lines, ditches, field edges, but if necessary also roads, power lines, etc. It was also kept in mind that the zoning would support the protection of public interest and local interests, e.g. by guaranteeing the access to the coast, including the shore path would be guaranteed. Presently the protection rules of the national park are under review, which will bring along changes in the zoning as well.

## **6 Reflection of military tourism in the media and its possibilities in the Estonian green belt**

There are numerous examples of military facilities and buildings on the shores and islands of Estonia that have both historical and cultural value. Military objects are generally regarded in a negative light and their conservation is not thought of until many of them have already been destroyed. Compared to other cultural heritage objects, only a few valuable military objects have been taken under protection in Estonia, and their wellbeing has generally relied on private initiative. The value of historical heritage is the sum of both the good and the bad (the positive and the negative aspects), and therefore no nation should have the right to delete a profoundly negative aspect of their historical past. Furthermore, objects that seem disagreeable to the current generations may for future generations become an interesting and precious study tool. One of the possibilities of conserving military objects is to develop military tourism.

### **Tourism trends in Estonia**

In Estonia, tourism accounts for an essential part of the gross domestic product (about 8% of the GDP) and employment. In recent years, the number of tourists visiting Estonia, incl. the number of tourists who travel beyond Tallinn, has exhibited a growing trend (excluding the temporary decline due to the economic recession in 2009). A major part of the tourists who visit Estonia come from Finland, Sweden, Russia, Norway, Germany and Latvia. About 60% of the people, who visited Estonia in 2011, were holidaymakers who travelled in order to use local holiday and entertainment services, to visit cultural events, and to explore Estonia's nature and cultural objects (Statistics Estonia 2012).

The existing sights alone are not sufficient for the sustainable development of the tourism industry. So as to remain competitive, it is necessary to develop the sector continuously; to increase its efficiency and quality, while also developing new tourism products. As a result of several studies, it has become clear that Estonia has potential as a destination for military tourism. For example, the survey conducted by Etverk in 2000 among local tourists revealed that there is interest in military tourism, with Estonia's beautiful and pristine nature cited as one of the reasons. The respondents would be glad to visit military objects if they were presented safely, were tidied up as places to have an adventure in, or as museums for educational purposes. In addition, a large part of the respondents would participate in activities imitating the Soviet military, play war games etc. A third found that visiting a reconditioned military object/museum could be included in schools' history programmes. Elsewhere in Europe, it has been proved that the precondition to visiting military objects is their reconditioning and safety (BICC 1997). Thus, the providers of military tourism must ensure the safety of tourists and to some extent, the aesthetic appearance of the object/area, thus promoting the preservation of military objects and improving their condition.

### **Military tourism/objects coverage in virtual media**

Studies have shown that a large part of foreign tourists and the majority of domestic tourists travel in Estonia without a travel package, that is, they put their routes together themselves. According to overviews of the development of tourism, for foreign tourists, the most popular source of information about Estonia is the Internet, followed by personal experience from previous travels. Thus, the Baltic Green Belt project entailed a survey that looked into the coverage of the possibilities of regional military tourism in virtual media.

The homepages of local governments are the most widespread source of information relied on in finding tourist objects. Among the 78 homepages of local authorities under survey, only 17 homepages contained a reference of any kind to any object of military tourism in the region. The survey also examined the options provided by Estonian tourism portals, and whether and how search engines enable to find adequate information about military tourism in Estonia.

Although there are many good examples, unfortunately, the marketing activities related to military tourism, especially those targeted to foreign tourists have been inadequate. Informative materials in foreign languages are generally deficient or are available in one or two foreign languages only. Merely four homepages of local authorities provided some military-themed information in foreign languages. To improve the situation, the more important recommendations for the Internet marketing of military tourism were summarised and presented in the course of the study (Lõhmus et al. 2012).

Generally, the scarce coverage of military tourism can be linked to the fact that locals still associate military zones with negative memories and, hence, are not able to view them as tourist objects – that may be sources of interest, knowledge and experience for someone – and combine military tourism with other types of tourism. Many endeavours get stuck due to ownership issues, needs for large investments and doubts about potential profitability; people are afraid of the so-called bad surprises, i.e. discovering that the object is dangerous or contaminated.

### **Baltic Green Belt input to military tourism**

The Baltic Green Belt project has enabled to draw attention to the military heritage and development of military tourism in Estonia. This was identified also by key word searches that repeatedly retrieved articles or blogs about the green belt in Estonia. The project shows the situation and potential of military tourism in Estonia, encourages tourism organisations to engage in this sphere and provides marketing guidelines. In order to contribute to military tourism, a map application was prepared on the Soviet-time military objects studied during the inventory conducted in the Estonian green belt (Military heritage map application). The application displays the photograph and name of the object as well as a short description. In the future, it will be possible to add the oral history and information collected to the application (a more thorough description of the object, its history and condition). So as to determine which of these objects/areas have tourism potential, an assessment process must be carried out. However, it is already possible to visit the objects now – interactively or on one's own responsibility.

## **7 Distribution of research results**

In order to implement the study results, it is important to distribute them as widely as possible. The Estonian University of Life Sciences has distributed the results of the Baltic Green Belt project and increased the environmental awareness of people in many different ways (Baltic Green Belt).

More than ten awareness events with hundreds of participants have been conducted all over Estonia. In addition, the more significant events related to nature and environmental protection, as well as tourism, have been visited on the local and regional level. At certain intervals, people's awareness of the European and Baltic Green Belt projects and their results has been studied in the course of awareness-raising events. The results indicate that the number of people who are aware of the project has been increasing continuously and rapidly: less than 10% of the participants in the events organised in the first half of 2009 were aware of the projects, while in 2010, the number of aware people had reached approximately 60%, and by the end of 2011, the corresponding percentage was 75–80. The growth in the project's popularity was also reflected in media publications.

Since nature protection in itself is quite a popular subject at the moment and there are many projects, supported by European Union, going on in the field, then involving the press is initially difficult. But interesting subjects cause a so-called snowball effect – the circle of journalists is relatively small and information spreads fast; after the first positive experiences, they themselves try to establish contact. That is what happened to the Baltic Green Belt project in Estonia. However, this does not mean that press releases should not be prepared for more important occasions or events or that information should not be spread about in some other way. Involving the press is vital, as the stories published in the media and the views expressed therein largely determine the possibilities for future cooperation, as well as the general attitude towards the activities (an assessment is given to the usefulness of the

project). Popular science radio shows play an especially important role. By many occasions the organisers of the project were contacted after a radio show with offers regarding cooperation or materials (which are usually difficult to find) needed to carry out the activities of the project.

The database compiled on the basis of the inventory results and presented to the visitors of the tourism fair Tourest 2011 (which was visited by 20,853 people) has proven to be a great means by which to reach both domestic and foreign tourists, as has the bilingual (English and Estonian) travelling exposition, displayed in coastal museums and in ports. In addition, the recognition of the project and the Estonian green belt has been significantly increased by the book and the film *The Estonian Green Belt*. Since both are directed at a very wide range of readers and viewers, then they have achieved great popularity in different circles during a short period of time.

Important information does not always reach interest groups in a sufficient form. Therefore, various publications (leaflets, information sheets, project overviews etc.), which give people the chance to focus on the subject later in a suitable environment and gain the necessary information, have been prepared. The organisation of all events and the preparation of all information materials have been guided by the principle that they have to be informative enough, i.e. reflect the results of the studies conducted and include the information gathered, but at the same time be understandable to a great number of people.

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