

SustainBaltic
ICZM Plans for Sustaining Coastal and
Marine Human-ecological Networks in the Baltic Region

SPATIAL DEVELOPMENT PLAN FOR THE COASTAL AREA BETWEEN HARA PENINSULA AND RISTININA

ICZM PLAN FOR THE LÄÄNEMAA CASE AREA

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and Marine Human-ecological Networks in the
Baltic

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Regional Council of Satakunta.

Project SustainBaltic is funded by the
European Regional Development Fund
(ERDF) under the Central Baltic Programme
2014-2020.





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1. INTRODUCTION

SustainBaltic i.e. *ICZM Plans for Sustaining Coastal and Marine Human-ecological Networks in the Baltic Region* project is implemented for 27 months during 2016–2018. SustainBaltic (CB354) is funded by the European Regional Development Fund (ERDF) under the Central Baltic Programme 2014–2020. SustainBaltic is a cooperation project of the University of Turku, the Estonian University of Life Sciences, the Finnish Environment Institute, the Regional Council of Satakunta, and Tallinn University.

The project aims to improve the share of the managed coastal networks in the Central Baltic area by the cross-border preparation of the ICZM plans for a total of four case areas with their public assessment in Estonia and Finland. This was planned to be achieved by 1) integrating multidisciplinary human-ecological data on the whole project area: in Finland – the regions of Satakunta and Southwest Finland and in Estonia – the areas of Lääne, Harju, and Lääne-Viru county with their land-sea interfaces; 2) selecting the themes of ICZMs and case study areas which are located along the coast of Lääne and Lääne-Viru county in Estonia and in the region of Satakunta in Finland; 3) making four digital ICZM plans, which were first tested with the current regional land use of the project

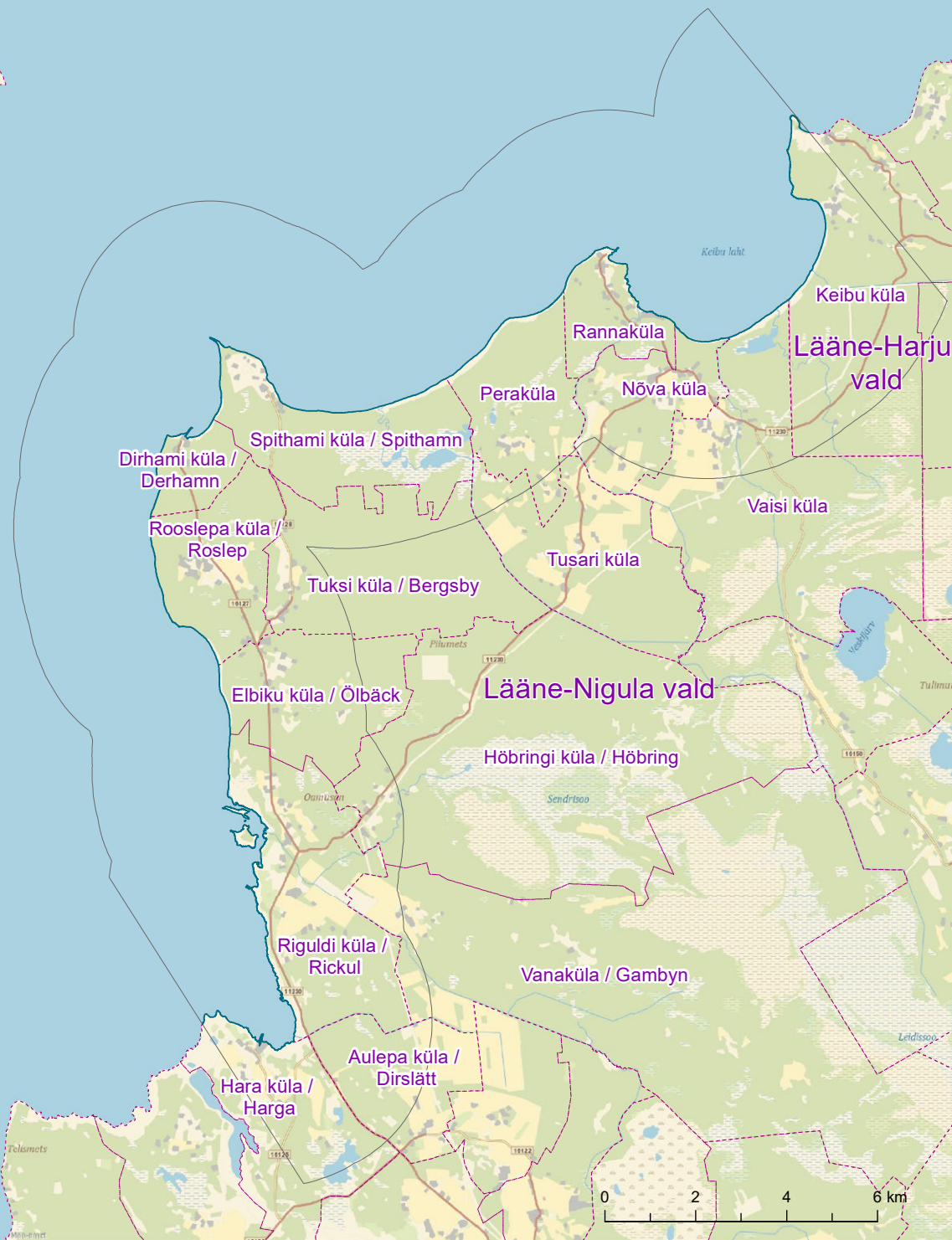
area; 4) public assessment of the plans using both e-platforms and arranging working groups with the stakeholders and end-users directed by the project members; and 5) as the final results of SustainBaltic, the updated completed ICZM plans can be downloaded from the websites of the partner organisations and at <http://www.utu.fi/SustainBaltic>, also beyond the life span of the project. In addition, the interim results and the other activity phases of the preparation of the first ICZM drafts are found at <https://blogit.utu.fi/sustainbaltic/>.

This ICZM plan covers the spatial development plan and land use zoning for the Läänemaa case area (from Ristinina peninsula in Keibu bay to Hara peninsula in Hara bay). This ICZM plan is an indicative document that municipalities can use in the preparations of general plans or other local development documents (development plans, projects), as well as in the preparation of national-level marine spatial plans.

SELECTING THE CASE AREA

The Läänemaa case area was selected based on four criteria: 1. high nature value (high biodiversity, the habitats of endangered species etc); 2. diverse and coastal-specific economic activities (recreation, fishing, use of wind energy, and land use of agricultural lands with high

Figure 1. The location of the Läänemaa case area



2. DESCRIPTION OF THE CASE AREA

nature value); 3. marginalisation problems (low number of inhabitants in working age, few enterprises etc), and 4. diverse cultural heritage (valuable landscapes, national and cultural heritage objects etc). Map analysis was used to combine all four topics where the map layers were created to reflect these criteria, and the area with the highest score was selected as the case area.

The Läänemaa case area extends from Hara peninsula in the south to Ristinina in the north, the total length of the coastline is 48 km (Figure 1). At the time of the case area selection, the southern part of the case area belongs administratively to Noarootsi and the northern part to Nõva rural municipality. After the administrative reform in October 2018, Noarootsi and Nõva will be partial municipalities of the Lääne-Nigula rural municipality. Läänemaa also involves a small part of Harjumaa, as Keibu village is part of Lääne-Harju rural municipality. The area of the ICZM case site (marine and coastal zone combined) is 218 km².

The Läänemaa case area belongs to the West-Estonian lowland. The area is generally flat, absolute heights in coastal area are usually less than 10–15 m above sea level. The terrain in north-western Estonia has risen by approximately 100 m since the last ice age and the annual uplift rate is currently 3 mm. As a result of the neo-tectonic uplift, the coastal zone expands and hydrological networks with coastal landforms develop. The West-Estonian lowland forms on limestone bedrock, the calcareous soils with calciphilous plant communities are common, including alvars. Large sandy shores with sand dunes are characteristic of landscapes in Keibu, Nõva, Dirhami, and Roosta districts. In the areas of Hara and Riguldi, silt and till shores with reed-covered coastal meadows are found. The climate of the western coast of Estonia is milder and more humid than in the inland.

The biggest settlements in the case area of Läänemaa are Nõva (113 inhabitants in 2017) and Rannaküla (79); bigger villages include Keibu (52), Vaisi (34), Hara (40), and Elbiku (32). In the last 50 years, the population in the villages of the case area has decreased from nearly 1,000 inhabitants to 400 people in 2017. More than 29% of the inhabitants living in the case area are more than 65 years old.

Most young people do not live in the area permanently, only during the summers. Majority of the people work outside the case area, 10% work in Tallinn. The biggest employers in the case area are holiday resorts and the local harbour, but the work and need for employees is season-based. In high seasons, the tourism sector employs many people outside the area (including Tallinn and Haapsalu). Only less than 10% of people living in the Läänemaa case area are employed in the primary sector, e.g. fishery and animal husbandry; 19% of people are employed in the secondary sector. Most people are employed in the tertiary sector – mostly in recreation-related services.

1.1. CULTURAL HERITAGE

The cultural heritage of the case area is closely linked to the settlement of the Coastal Swedes, which was interrupted by the emigration of Coastal Swedes during the Second World War in 1944. The activities of the Coastal Swedes were related to the sea – the main sources of income were coastal fishing, seafaring, and seal fishing. In terms of agriculture, they were mostly involved in cattle breeding, including sheep farming. In addition to sea, locals have depended on the forest for earning a living, as well. Coastal Swedes typically lived in bunched villages. To an extent, the old village structure

and appearance have survived to this day. Old threshing barns can be seen in the villages, as well as small houses, granaries, and other farm buildings built at the beginning of the 20th century. Swedish place names have been preserved.

The western part of the case area belonged to Rooslepa Manor, the eastern part to Nõva Manor, and Keibu belonged to Vihterpalu Manor. Nõva and Riguldi manorhouses are located on the case area. The manor complex of the latter dates back to the 19th century, has been well preserved, and is under heritage protection.

Due to the location, there are several military installations from different times in the region. A part of the sea fortress of Peter the Great on the front line of the marine protection of St. Petersburg (Tahkuna peninsula–Dirham peninsula–Hanko peninsula) was located in the region.

1.2. NATURE CONSERVATION

Most of the coastal area of the case area is covered by protected areas, the largest of which are the Nõva nature conservation areas, the Keibu-Ristna special conservation area in the eastern part of the case area, and the Nõva-Osmussaare special conservation area covering a large part of the marine area of the case area.

The Nõva nature conservation forms a part of the Nõva-Osmussaare bird and nature area of the Natura 2000 network. The Nõva-Osmussaare bird area is located on the migration route of arctic waterfowl and shorebirds (Charadriiformes). The area is also an important wintering area for birds and nutrition area for pochards (Neugrund crater and Krassi lowland), because the sea area is mostly ice-free in winter there.

1.3. ECONOMIC ACTIVITY

The main activities are fishing and processing, timber industry, processing of agricultural products, and tourism. The main sea uses are shipping, fishing, nature conservation, national defence, and tourism. The maritime position and ports are one of the important assets of the case area. The main business areas are concentrated around the ports. The most important dockyards on the case area are the ports of Spithami, Hara, Dirhami, and Nõva. The port of Dirhami is in good order – it offers dockage, landing of fish, maintenance and repair of ships, as well as consumer services. In the summer months, it is an attractive marina. In winter, it operates mainly as a fishing and cargo port. Electricity production by wind is also characteristic for the coastal area – two wind farms are located on the case area. The Nõva rural municipality includes

the sea-oriented practise areas of the Estonian National Defence on land (Nõva Liivase Beach) and at sea (near Ristinina).

Coastal fishery is important in the case area, but the number of fishermen that make a living only from fishing is small – a lot of them seek additional activities to ensure their income. The large-scale processing of fish is handled by Derhamn OÜ.

Tourism in the area is a developing industry with high potential. The case area with its diverse nature is a popular and promising domestic tourism area. Approximately 12,000 domestic and foreign tourists visit the Nõva region during the summer season. The ports of Dirhami and Nõva offer dockage and port services. The case area includes campfire sites, rest areas, and hiking trails in the Nõva Recreation Area. The Nõva Visitor Centre of the State Forest Management Centre (RMK) with an information point is located in the centre of Peraküla. The largest recreational complex in the case area is Roosta Holiday Village. Several non-profit organisations are engaged in organising tours and trips. Thanks to its attractive coastline, beautiful forest landscapes, and the fact that it is located close to Tallinn, the region is an attractive real estate development area. The newest developments are located in the village of Spithami, Dirham, Elbiku, and Nõva. The most popular developments are summer homes.

Agricultural production is a traditional activity on the case area, but due to the low site class of the soil, a large part of arable land is used as grassland. Most of the case area's forests belong to the state and a large part of the forests is protected and subject to economic constraints.

2. METHODOLOGY AND MATERIAL FOR THE LAND USE ZONING

The land use zoning was based on the Recommendation of the European Parliament and of the Council concerning the implementation of Integrated Coastal Zone Management in Europe (2002/413/EC of 30 May 2002). The methodology for the land use zoning was prepared on the analyses on the land use zonings and plans on coastal areas prepared thus far.

The goals were set which were to be achieved with the land use zoning. Depending on the goals to be achieved, the regional development visions were created. Considering that the residents and economy of a much larger area than the case area depend on the coast, the development vision for the whole region was first formulated and then, it was worded

more precisely for the case area. Then, the principles that the land use zoning must follow were formulated:

- » Public roads to beaches and coastal areas must remain accessible to the public.
- » The interests of the local population and holidaymakers must be in balance.
- » The proposed activities must take into account the region's long-term traditions, the nature of the coast, and natural, cultural, and milieu values, and be useful for both locals and vacationers.
- » The most suitable locations for activities or objects related to the economic exploitation of the coast are found, taking into account the impacts on economy, society, and the natural environment.
- » Principles of sustainability and environmental friendliness are followed and the long-term perspective and the potential impacts of climate change are taken into account.

The objectives, vision, and principles were coordinated with members of the project steering group and representatives of local governments. During the preparation of the land use zoning, the stakeholders connected to the case area and the problems that need to be solved in the area were mapped.

Based on an analysis of the current situation, the objectives and vision of the land use zoning, and the problems and interests mapped in the area, the main ways of use and needs of use of the case area were identified and the respective zones were distinguished. The land use zoning of the marine zone was based on the marine spatial planning methodology from 2009¹.

The following map materials were used in the land use zoning:

- » Land Board, 2018 (Estonian Topographic Database, basic map, cadastral map, soil map, historical maps (verst map (1894–1922), Estonian topographic map (1923–1935), USSR topographic maps 1960–1989))
- » Forest register, 2018 (forest stands, forests with increased public interest)
- » Agricultural Registers and Information Board, 2018 (applied fields)
- » Statistics Estonia, 2018 (population data, enterprise data)
- » Estonian Nature Information System, 2018 (protected areas, special conservation areas, international protected areas (Ramsar, IBA, Helcom), Natura nature and bird areas and habitats, habitats or species in categories I, II, and III, objects of cultural heritage and heritage conservation)

- » Maritime Administration, 2018 (fairways, dumping areas, military areas)
- » Maps prepared at the Marine Area Planning Workshop in 2017
- » Comprehensive plan for Noarootsi rural municipality, 2003
- » Comprehensive plan for Nõva rural municipality, 2011
- » Comprehensive plan for Padise rural municipality, 2003
- » Thematic plan for Aulepa wind farm, 2007
- » Thematic plan for areas of milieu value in Noarootsi rural municipality, 2007
- » Thematic plan of residential areas in Noarootsi rural municipality, 2009
- » Thematic plan of coastal areas in Noarootsi rural municipality, 2006

The land use zoning draft was introduced to local governments and representatives of stakeholders at meetings and a public hearing was held. Proposals for the land use zoning could also be made in writing, using the web-based [map application](#) created within the framework of the project. The proposals collected during the public hearing were analysed and the land use zoning was complemented on the basis of proposals consistent with the principles of the land use zoning.

1 Hendrikson & Ko. 2009. Merealade ruumilise planeerimise metoodika. http://hendrikson.ee/wp-content/uploads/2016/03/Merealade_planeerimise_metoodika.pdf

3. MAPPING PROBLEMS AND STAKEHOLDERS

Before preparing the land use zoning, the problems that need to be solved in the area were mapped. The land use zoning must contribute to solving these problems. Different databases, existing plans, and development plans of local authorities were used in the mapping of problems and interests. The list of problems and interests was supplemented at the meetings with representatives of local authorities, agencies, and stakeholders; during discussions with the local people; and at the events of publication.

Because of the criteria for selecting the case area, socio-economic problems characteristic to peripheral areas occur there, such as low employment, lack of on-the-spot jobs, and the seasonality of work. Local authorities consider the high proportion of protected areas (mainly in the Nõva rural municipality) and nature conservation constraints to be the main inhibitors of development – mainly because there is little unrestricted land suitable for housing construction. The decline in the permanent population and the aging population are also worrisome because the building is primarily related to the construction of summer homes. People want their summer homes to be

as close to the sea as possible.

Thanks to the beautiful beaches and the coastal forest area, tourism is important for the economy in the region. The problem, however, is that most tourists come here only during the summer season. The high share of homeowners who are summer visitors increases the seasonality of the services needed by holidaymakers.

Important problems in the case area include ensuring access to the sea (by foot, by car, by boats), accessibility of access roads for operational vehicles, the increasing use of sandy beaches, and the incompatibility between different uses of beaches. For example, beaches are often used to go to the sea with water sports equipment; water sports enthusiasts may ruin fishing nets; and fishhooks are left in the beach when fishing with a rod, which can injure holidaymakers.

During the summer season, the interests of different users clash in one of the major spots in the region – Peraküla beach. Peraküla beach is popular among holidaymakers despite the fact that the sea gets deep relatively suddenly, the waves are sometimes high, and the water can be cold. Peraküla beach is often so full of people that the existing narrow access road may not be sufficient to ensure the safety of the visitors in an emergency. Major events in Peraküla beach can also cause conflicts between nature conservationists, local people, holidaymakers,

and representatives of authorities. Lately, the visiting objects prepared by the State Forest Management Centre are under a lot of pressure due to the organisation of folk events (including the flounder festival, which takes place every summer).

Stakeholders were involved to identify different interests. The main stakeholders in the case area who can be influenced by the plan in one way or another are the following:

- » **Undertakers in the Nõva and Noarootsi area** – improving the business environment.
- » **Environment Agency** – ensuring nature protection.
- » **State Forest Management Centre** – carrying out practical conservation works in state lands and organising visits to the area to introduce the values of the protected area and to maintain a favourable state.
- » **Locals and surrounding communities** – recreational use of the area, forest management, use of forest by-products, agriculture, and animal husbandry.
- » **Holidaymakers** – recreational use of the area, use of forest by-products.
- » **Lääne-Nigula and Lääne-Harju rural municipality government** – economic development in the region, boosting the tourism sector, increasing the number of permanent residents.
- » **Tourism companies and organisations (Läänemaa Turism MTÜ,**

MTÜ Lääne-Eesti Turism, etc.) – development of the necessary infrastructure for holidaymakers, organisation of events, introducing the region, and improving its image.

- » **Hunters and hunting associations** – hunting and hunting management in Nõva and Riguldi hunting areas.
- » **Fishermen, fishers, and fishing associations (MTÜ Läänemaa Rannakalanduse Selts, etc.)** – preservation of fishing places, preservation and improvement of boat launching places and access to them, increasing the possibilities of fish storage and first processing, marketing of fishery products, developing maritime tourism.
- » **Museum of the Coastal Swedes** – exploring, preserving, and promoting the Coastal Swedish heritage.
- » **Local associations and NGOs (village societies of Hara and Dirhami, Noarootsi-Riguldi Kodukandiühing, MTÜ NordEstNõva, etc.)** – introducing the area and using it for events, providing services to visitors, preserving and developing local culture, and studying the local history.
- » **Orienteering enthusiasts and orienteering clubs (Läänemaa Orienteerumisklubi OKAS)** – use of orienteering areas (Dirhami, Tuksi, Peraküla, Rannaküla) once a year for organising orienteering events.
- » **Sports clubs** – organising international sports and health camps in Nõva, introducing an active and

- healthy lifestyle, and helping local pensioners with volunteering.
- » **Surfers and surf clubs** (Roosta Surfiklubi SurFar, etc.) – using the beach and the sea for trainings, organising surf camps, organising coast guard, and keeping the café in Roosta open.
 - » **Ministry of Defence** – shooting practice in the area between Nõva-Osmussaare and in Ristinina.
 - » **Environmental Inspectorate** – supervision in protected areas, prevention of environmental violations.

4. LAND USE ZONING

This land use zoning focuses primarily on the greater integration of coastal sea and land and creating opportunities to use them in a diverse manner. As a result of the land use zoning, the local authority will have recommendations for the further development of the region.

4.1. OBJECTIVE AND VISION OF LAND USE ZONING

To prepare the land use zoning, the objectives and development visions were first formulated for the broader area using the Hara-Ristinina coastal area and then, for

the case area.

The objective of the land use zoning is to create opportunities for the development of the case area, which results in:

- » the creation of a high-quality living environment;
- » coastal natural resources being used economically;
- » a balance between the interests of the local community and holidaymakers;
- » human activities not having a significant or irreversible negative effect on the coast;
- » the value of the coast being maintained or increased.

Vision for the development of the western part of the Lääne-Nigula municipality and the southwestern part of the Lääne-Harju municipality:

In 2025, the region has developed a balanced and eco-friendly tourism and recreation industry. The number of people living in the region all year has grown. The proportion of young people in the population is increasing. The necessary services and good infrastructure are available on site. Local small-scale industries and environment-friendly agriculture are developing. People enjoy living and relaxing in the area, and people find enough opportunities to earn a livelihood in the immediate vicinity. The heritage of the Coastal Swedes is valued.

Vision for the development of the case area:

In 2025, the area has preserved its regional peculiarity and a good natural state. Construction takes place outside the areas at risk of flooding while maintaining public access to the beach and saving coastal communities. There are enough landing places and marked land locations in good condition in public use. Small harbours operate that service coastal fisherman, sea tourists, and holidaymakers, bringing revenue to the area.

4.2. ZONES

In the case area, zones were distinguished for the **coastal zone** and the **marine zone**. The coastal zone is defined as the area that lies 3 km from the coastline inland and 300 m towards the sea (Figure 2). The use of coastal zone is often similar and closely linked on land and water; land use effects also extend to the sea. For example, ports consist of buildings located in land and on water; in recreation areas, both beach sand and bathing water are used; in terms of landscape, the view from land to sea and vice versa is important, etc. Marine zone was defined as the water area that extends from the coastal zone (i.e. 300 m from the coastline) up to 3 km towards the open sea.

The following zones were distinguished in the coastal zone: 1) recreation zone, 2)

recreation development zone, 3) port and industrial zone, 4) traditional settlement zone, 5) residential development zone, 6) agricultural zone, 7) nature zone. The following zones were distinguished in the marine zone: 1) general marine use zone, 2) targeted marine management zones: targeted marine management zone for Natura 2000 habitats, targeted water transport zone, targeted marine management zone for water sports, targeted marine management zone for dumping, and targeted marine management zone for military use.

The zones are distinguished on the map (Figure 3) in as compact and comprehensive areas as possible and the stipulated use of the zone is based on the primary usage of the zone. Other activities are also allowed in the zone in addition to the targeted use of the zone if these activities do not contradict the targeted use of the zone. For example, if the main purpose of a nature area zone is maintaining the good natural environment, this principle must be followed in all activities carried out in the nature area. Separate fishing zones are not differentiated, as the entire sea is a fishing area – other than areas where fishing is not recommended.

Figure 2. The boundaries of the case area in Läänemaa. Within the case area, a distinction is made between the marine area (300 m to 3 km from the coastline towards the sea) and the coastal area (300 m from the coastline to the sea and 3 km inland).

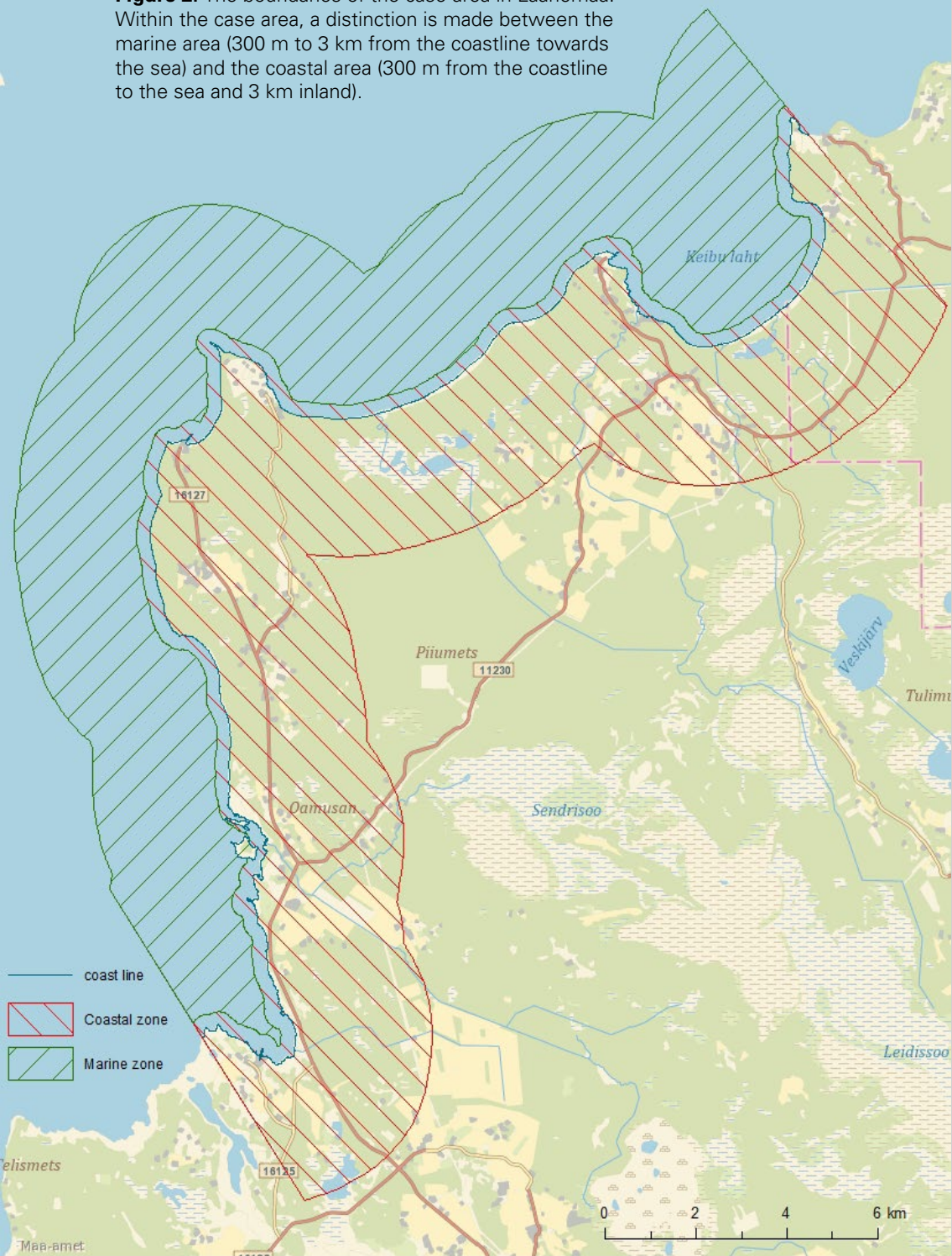
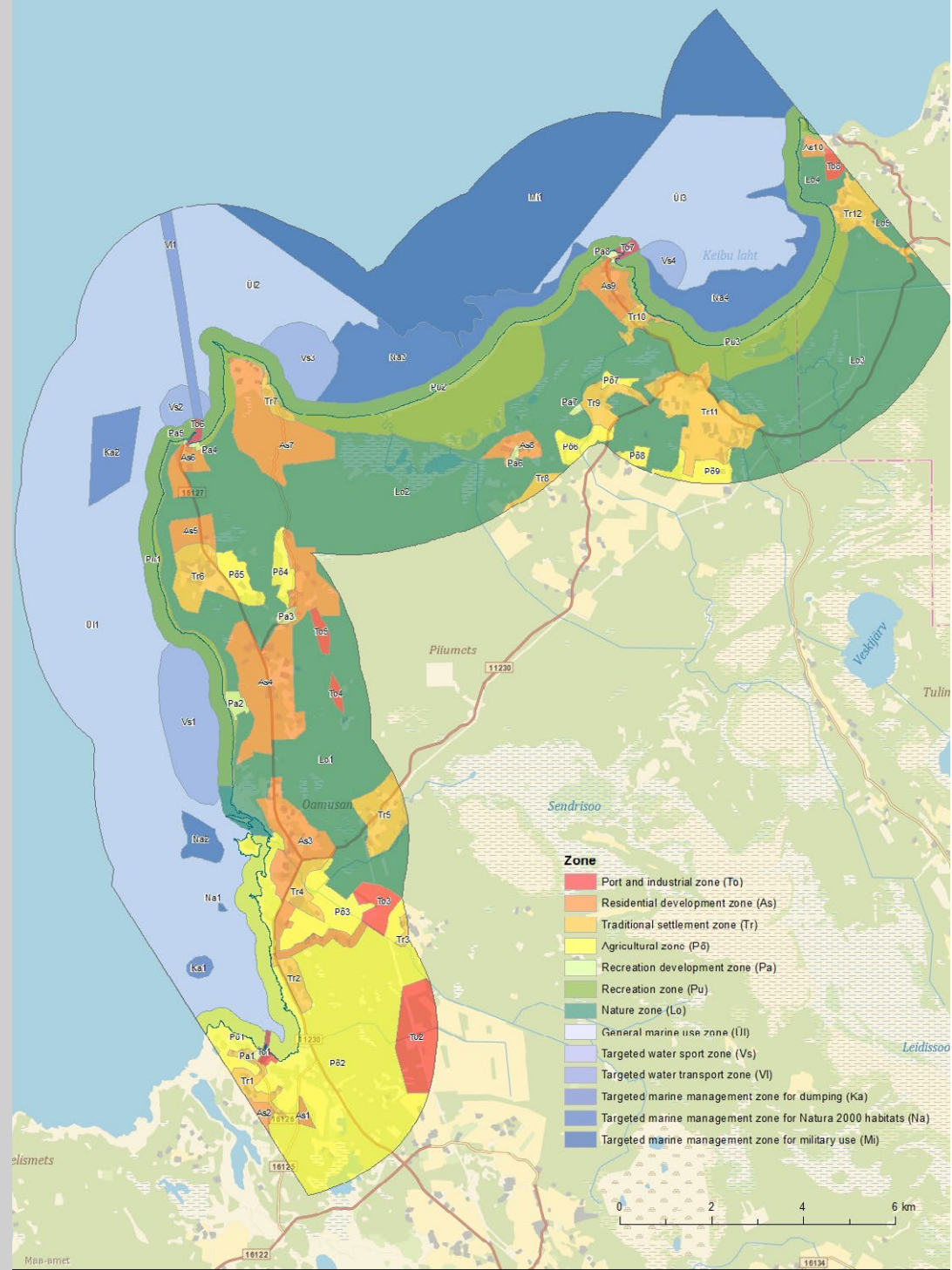


Figure 3. Land use zoning map (the map is available on the website <https://goo.gl/5dNC5F>)



4.3. ZONE DESCRIPTIONS AND RECOMMENDATIONS

The land use zoning is of a recommendatory nature and is implemented through more specific plans. Land use zoning shows the main indicative use of certain areas, without excluding any other small-scale use of the area.

4.3.1. RECREATION ZONE

The purpose of the zone is to preserve the recreational value of the areas, increase the recreational value, and to use the areas sustainably while taking into account the interests of the public and the local community.

The recreation zone consists of natural areas suitable for recreation. Recreation zone are beaches with the coastal area in the direction of the sea and the coastal landscape (recreationally used forests with recreational and camping sites, hiking trails, and recreational facilities, forests of increased public interest, such as the Nõva-Treppoja forest). Sandy shores are the most attractive and most used areas in this zone. There may be individual

dwellings in the zone.

General recommendations for recreation zone:

- » The use of recreation zone must preserve natural and cultural values.
- » It is advisable to develop a concept and a comprehensive infrastructure for the whole recreation zone (establishing an optimal visiting infrastructure that meets the actual situation: access roads, car parks, campsites and campfire sites, etc.), which ensures the servicing of the holidaymakers and helps to preserve nature, allowing access to visited areas so that the environmental burden is as small as possible (the burden is dispersed or, if it proves necessary, concentrated in certain places to save the rest of the area).
- » Instead of advertising individual recreation zone areas, it is advisable to introduce the various recreational opportunities in the coastal region as a whole and direct the visitors depending on their interests.
- » It is recommended to ensure the continuous maintenance of the existing visiting infrastructure during the recreation period, repair the depreciated details, and, if necessary, replace them.
- » Entrepreneurship is developed in the recreation zone in line with the

nature conservation principle and the region's cultural and natural values.

- » The construction of recreation areas, camping grounds, and car parks in protected areas must take into account the restrictions imposed by the conservation rules and the Nature Conservation Act.
- » It is recommended to name all state forests in recreation zone as forests of increased public interest². As an alternative, in forest areas outside protected areas and the coastal and shore boundary zone, the recommended size of the cutting area of clear cutting is up to two hectares and the width is up to 30 metres. The recommended size of the cutting area of shelterwood cutting is up to five hectares.
- » It is recommended to avoid building large-scale buildings and facilities.
- » It is recommended to ban motorised watercraft traffic closer than 200 m to the coastline in public beaches and disturbing the holidaymakers.

The following types of recreational beaches were distinguished in the coastal zone of the recreation zone: bathing beaches (public beach, potential public beach, local beach, community beach) and recreational beaches for other use. In determining the type of the recreational beach, the following was taken into consideration:

natural preconditions, potential conflicts in the use of the site, the intensity of use of the beach, and the target groups. All beaches suitable for bathing are located in the sandy shore; recreational beaches for other use are moraine shores and gravel-pebble shores (Figure 4). Taking into account the shore type and the recreational beach type will help to balance the interests of local people and holidaymakers. For example, it is possible to disperse the use load of beaches between holidaymakers with different interests and needs. It is also possible to better plan beach maintenance depending on their function.

4.3.1.1. PUBLIC BEACH

According to the data of the Health Board, the Roosta bathing site is listed as a public bathing site in the case area. In public bathing sites, the local authority monitors the bathing water and checks the compliance of the beach with the requirements of Regulation No. 74 'Requirements for bathing water and bathing beaches'. Data about the water quality of public bathing sites is available on the Health Board's website.

Roosta beach is suitable for families, people in wheelchairs, holidaymakers who

² Areas located mostly near settlements and managed by the State Forest Management Centre. Work done there is accompanied by increased public interest. To find balance between different interests, the work planned by the State Forest Management Centre in these areas must be introduced to the stakeholders related to the areas of increased public interest.

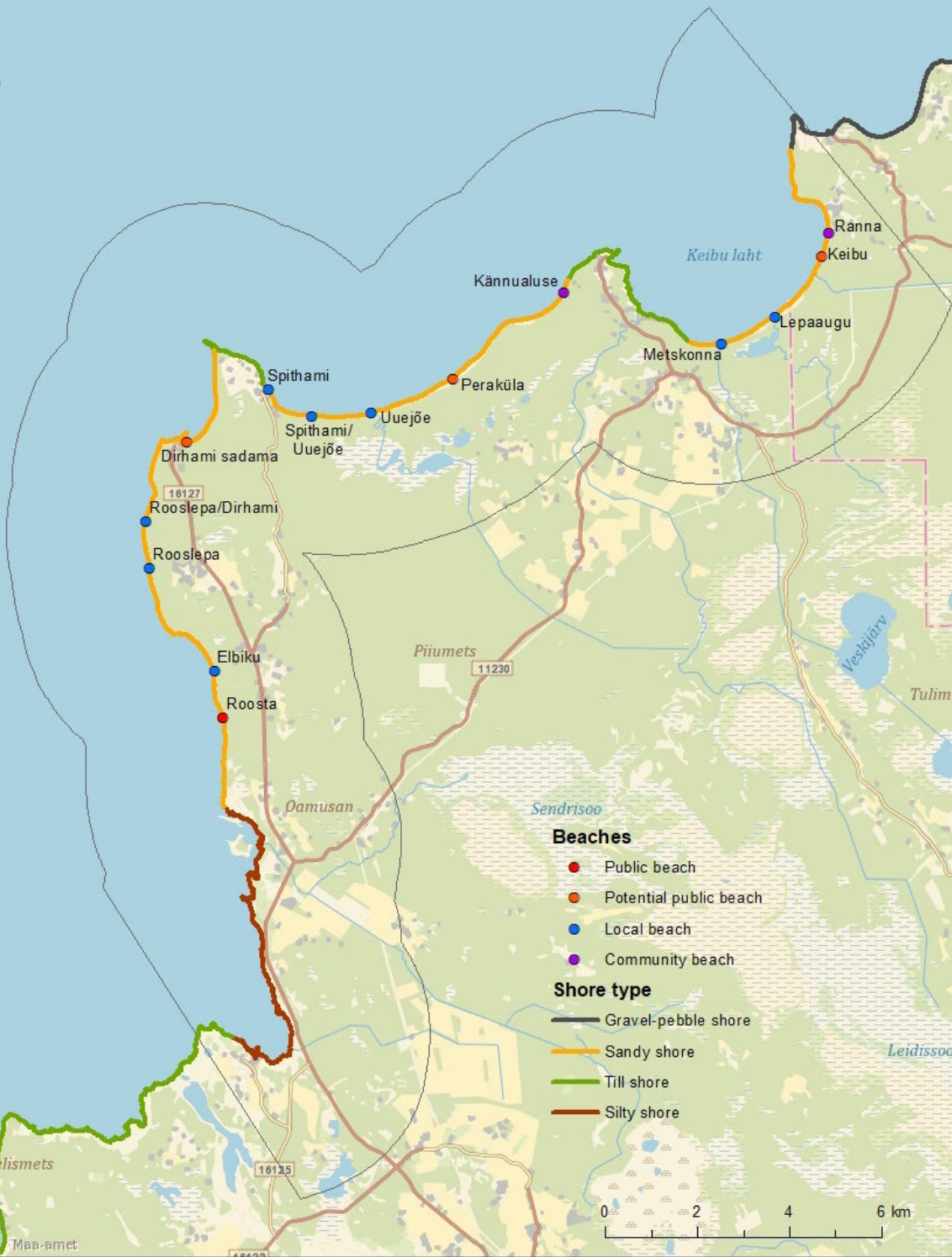


Figure 4 Map of shore types and bathing beaches.

love comfort, and visitors on an active holiday. During the summer season, people can participate in kitesurfing, windsurfing, rowboat, and SUP board trainings. There is a café on Roosta beach, which sells snacks and drinks. Roosta Holiday Village, which is located right next to the parking lot, also provides services.

makers and work together with local service providers.

4.3.1.2. POTENTIAL PUBLIC BEACH

Potential public beaches are bathing beaches for which it is likely that more people will go there in the future and it may be necessary to categorise them as a public bathing site. In comprehensive plans, the areas of potential public beaches are reserved for the territory of bathing sites; built and maintained visiting sites (camping sites, campfire sites, recreational areas, study halls, parking lots) are located near these beaches. Potential public beaches are the beaches in Peraküla, Keibu, and - Dirhami.

Recommendations for using a public beach:

- » Prior to opening the bathing season, the bathing site must be maintained and organised, equipped with a sufficient number of changing rooms, toilets or dry toilets, and trash cans.
- » The bathing water must be properly monitored. There must be information about the quality of the bathing water and the owner of the bathing site in a place visible to the bathers in the bathing site.
- » It must be ensured that the bathing site is safe – lifeguard towers is recommended.
- » It is recommended to clearly specify the parts of the beach and sea with different functions (various activities on land, bathing areas, surf areas, water motorsport, fishing etc.).
- » It is recommended to indicate the access roads to the beach.
- » It is recommended to pay attention to the promotion of mobility opportunities for people with reduced mobility.
- » In planning visiting arrangements, it is recommended to take into account the desired services of the holiday-

Peraküla beach is suitable for adults (the sea gets deep relatively suddenly, the waves are sometimes high, and the water can be cold). The RMK Peraküla camping area, which has campfire sites, shelters, and dry toilets, is located on Peraküla beach. The parking lot of the Peraküla camping area has room for 200 cars. Additional services at Peraküla beach are not offered or they are offered chaotically (sale of firewood and garbage bags, catering). The construction of communication and service facilities and buildings is prohibited in the areas of the Peraküla beach.

Keibu beach is well suited for families

with children, as the sea gets deep slowly and the water warms up more quickly. Keibu I and Keibu II, RMK campfire sites with camping areas, are located near the Keibu beach. The campfire sites have roofs. There are also tables, dry toilets, and information boards. Both campfire sites have a small parking lot. There is a boardwalk to the sea from the Keibu I campfire site.

The beach next to the port of Dirhami has not been developed yet, but due to the planned development of the hotel and 'Meritäht', a water park with an aquarium, this beach also has potential to become a public beach.

Recommendations for the use of potential public beaches:

- » It is recommended that a potential public beach be made a public beach in the future. When a site is categorised as a public bathing site, it is subject to the conditions of a public bathing site.
- » It is recommended to install a sufficient number of toilets, changing rooms, and bins to the beach. Additionally, access roads and car parks should be maintained and the area of the bathing site should be marked.
- » In the case of Peraküla beach, it is recommended to define and mark the eastern part of the coastal area (deeper) as an area suitable for fishing and the western part (less deep) as an area suitable for bathing.

- » In a potential public beach, the bathing water is not monitored – people can swim there on their own responsibility.
- » It is recommended to indicate the access roads to the beach. The bathing site is advertised with a specification of the specific bathing site (access by car / on foot, depth of the sea, availability of services, playful activities on the sand, etc.).
- » It is recommended to clearly specify the parts of the beach and sea with different functions (various activities on land, bathing areas, surf areas, water motorsport etc.).

4.3.1.3. LOCAL BEACH

In this land use zoning, local beaches are bathing beaches that are mainly used by locals. Local beaches are suitable for short-term beach holidays (swimming, bathing, and sunbathing) because there are no campfire sites and camping areas near the local beaches (except for Uuejõe and Lepaaugu). In this land use zoning, local beaches are Elbiku, Rooslepa, Rooslepa/Dirhami, Spithami, Spithami/Uuejõe, Uuejõe, Metskonna, and Lepaaugu beaches.

The Metskonna beach is very accessible. There is a boardwalk to the beach. There is a parking area, a toilet, a bench, and

an information board at the beach. Lepaaugu is a beautiful sandy beach that is less popular. The RMK parking lot and the Lepaaugu campfire site are located nearby. There are roofed campfire sites, a toilet, table benches, a driven well, and an information board. The Uuejõe beach is preferred thanks to its privacy and the fact that it is made unique thanks to the 'travelling' river mouth of Uuejõe River. Near the beach, there are two RMK campfire sites with a camping area. The renovated Uuejõe campfire site has a roofed bench table, a roofed campfire site, an information board, a gazebo, and parking spaces. The Uuejõe sauna campfire site has roofed campfire sites, a bench table, an information board, and a car park.

Suggestions for using local beaches:

- » It is recommended to install toilets, changing rooms, and bins. Additionally, the access roads and car parks should be maintained and the area of the bathing site should be marked.
- » The bathing water is not monitored – people can swim there on their own responsibility.
- » Access to the beach does not have to be marked and the beaches do not have to be advertised as bathing sites.
- » It is advisable to regulate the use of off-road vehicles.
- » It is recommended to clearly specify the parts of the beach and sea with different functions (various activities

on land, bathing areas, surf areas, water motorsport, fishing etc.).

4.3.1.4. COMMUNITY BEACH

In this land use zoning, community beaches are bathing beaches that are primarily used by the community of the immediate vicinity. These bathing sites do not require much infrastructure – the main thing is that the community maintains them. In this land use zoning, community beaches are Kännualuse and Ranna beaches.

Suggestions for using community beaches:

- » It is recommended that the community itself maintains the beaches and, if necessary, installs toilets, changing rooms, bins, and lifeguard towers there.
- » The bathing water is not monitored – people can swim there on their own responsibility.
- » Access to the beach does not have to be marked and the beaches do not have to be advertised as bathing sites.
- » The use of the coastal area for other purposes should be avoided.
- » It is recommended to ensure access to the beach by foot from a reasonable distance.

4.3.1.5. RECREATIONAL BEACH FOR OTHER USES

In this land use zoning, recreational beaches for other uses are till shore, gravel-pebble shore, or the rocky sections of sandy shores that are less suitable for bathing. Beaches for other uses are suitable for exploring nature, geotourism and military tourism, bird watching, etc. In Toomanina, it is possible to see rare Neugrund breccia boulders, which are related to the Neugrund meteor crater, among the glacial drift. In Dirhami several military objects are located which were interconnected during the Soviet era with a maintained borderline mostly behind the first beachfront.

Recommendations for use of recreational beaches for other uses:

- » The recreational use of these beaches is mainly nature tourism and general recreation.
- » Depending on the region's potential, it is recommended to plan the facilities necessary for the use of recreational value of the beach – car parks, toilets, access roads, information boards, etc.
- » It is not advisable to set restrictions on watercrafts due to bathing, but the restrictions can be imposed for the protection of nature of due to other interests.

- » The most important bird-watching sites are recommended to be marked and equipped with information boards.

4.3.2. RECREATION DEVELOPMENT ZONE

The zone aims to establish the core areas for the development of recreational economy in the region, which support the recreational development of the entire region, promote the use of recreational areas, and improve employment.

Recreation development zone is zone where the buildings and facilities necessary for recreation, as well as the other servicing infrastructure, are established in a concentrated way. Individual dwellings can be located in the recreation development zone. There are eight areas in recreation development zone: Roosta Holiday Village, the Kibuvitsa Camp and Retreat Centre, the RMK Visitor Centre and the surroundings of Põlluotsa Farm Museum in Peraküla Centre, the surroundings of Tuksi Sports Vase, Hara, Dirhami and Nõva ports.

Recommendations for recreation development zone:

- » It is recommended to categorise recreation development zone as areas subject to the obligations of detailed plans.

- » The planning of buildings must take into account the risk of flooding.
- » Buildings should be built if they suit in the milieu and the views from the sea should also be taken into account. The planning of large-scale (tall) individual buildings should be avoided.
- » If necessary, recreational landing places, wharfs, and boat landings can be built in the zone. To build them, authorisation should be asked for reducing the building exclusion zone, changing the coastline, and for dredging operations in accordance with the current legislation. However, it is advisable not to significantly change the coastline – the creation of artificial shores will reduce the recreational value of the area.
- » Fishing is not recommended.
- » It is advisable to plan landscape management and, if necessary, limit the spread of reed.
- » To develop maritime tourism, it is necessary to develop local businesses and ensure cooperation between different sectors (fishing and maritime tourism, nature tourism, preservation and display of nature and cultural values, etc.).
- » It is recommended to organise major public events in recreation development zone.

4.3.3. PORT AND INDUSTRIAL ZONE

The aim of the zone is to use local natural resources and improve employment and, with as little an environmental load as possible, develop local production.

The zone includes the areas intended for the construction of industries, ports, wind farms, mineral extraction industries, and other production areas, their infrastructures, and their zones. Port areas include artificial shores and their immediate surroundings. The zone includes existing and suitable areas for the development of production. There are eight areas in the port and industrial zone: Hara port, the centre part of the port of Dirham, Nõva port, Aulepa wind farm, Vanaküla wind farm, the former Ristinina quarry, and two blocks of the active reserve stock of the Tuksi sandpit.

Recommendations for port and industrial zone:

- » Small-scale industry characteristic of coast is preferred; it is recommended to use, as much as possible, the existing buildings – if necessary, by reconstructing and further developing them.
- » It is recommended to categorise port and industrial zone areas as areas subject to the obligations of detailed plans.

- » It is recommended to take into account the risk of flooding when building in the port and industrial zone.
- » In the development of ports, it is recommended to take into account the needs of coastal fishing and maritime tourism as well as provide the necessary infrastructure to different port users.
- » If necessary, the waterline can be changed and dredging operations can be carried out in accordance with the law.
- » The development of the areas should take into account the effects on neighbouring areas, so as not to damage the use and natural values of adjacent areas.
- » Fishing and bathing are not recommended in the port and industrial zone.
- » It is advisable to increase the role of ports in the organisation of events, fishing fairs, sea festivals, etc.

4.3.4. TRADITIONAL SETTLEMENT ZONE

The zone aims to preserve the local milieu and cultural heritage, raise the value of the local living environment and recreation area, and support the heritage of the Coastal Swedes.

Traditional settlement zone consist of areas of well-preserved settlement struc-

ture, where households are mainly located in old farmhouses, are surrounded by smaller agricultural and semi-natural areas, and form compact communities. Larger open fields are located in the agricultural zone. Villages in traditional settlement zone are Hara, Rooslepa, Rannaküla, Keibu, Riguldi, Vanaküla, Spithami, Peraküla, and Nõva.

Recommendations for traditional settlement zone:

- » It is recommended that the planning of new dwellings be based on the historical settlement structure. Local building materials are preferred. Additionally, the regional tradition should be followed in the proportions and location of buildings.
- » It is recommended to maintain and renovate the historic buildings as close to the original as possible. Additionally, the exterior of the building should bring out the characteristics of Coastal Swedes.
- » It is recommended to consider the risk of flooding when designing new housing areas.
- » It is recommended to maintain the open agricultural holdings and plan landscape management for areas not used. If necessary, reed should be cut.
- » It is not recommended to set up wind turbines and other large-scale buildings in traditional settlement zone. Additionally, dredging and dumping should be avoided. The waterline

should also not be changed (except for the maintenance of landing places foreseen in plans).

- » It is not advisable to restrict fishing.
- » Villages in traditional settlement zone that is adjacent to the coastline should have a publicly used and accessible landing place.

4.3.5. RESIDENTIAL DEVELOPMENT ZONE

The zone aims to create additional opportunities for residential construction for the local community and use the recreational potential of the region through the development of summer recreational areas.

Residential development zone areas are intended for the construction of dwellings and their infrastructure provided for in the comprehensive plans. The residential development zone has been categorised by taking into account the risk of flooding. The most important areas of residential development zone are located near Dirham and in Elbiku, Spithami, and Riguldi. Smaller areas are also located in Rooslepa, Rannaküla, Ristinina, and Hara.

Recommendations for residential development zone:

- » It is recommended to categorise residential development zone areas as subject to the obligations of detailed

plans. The residential development zone areas should be planned with the infrastructure.

- » The planning of residential development zone should be based on the landscape and the existing buildings. Excessive orderliness should be avoided and the construction of buildings on agricultural and forest areas should be limited.
- » The recommended minimum lot size is 1.5 ha (smaller in existing densely populated areas) – the size of the plot must be specified by the detailed plan.

4.3.6. AGRICULTURAL ZONE

The goal of the zone is to promote environmentally friendly agricultural production, which helps to preserve the landscapes and communities characteristic to coastal areas and ensure employment.

The zone consists of production farms and areas for agricultural activity (large fields, meadows, pastures) with the necessary buildings, facilities, and infrastructure. There are individual dwellings in the zone. In addition to fields and cultural grasslands, agricultural zone also consist of coastal semi-natural grasslands. The agricultural zone also consist of silty shores with low reed-filled sea parts that

are exposed in wind set-down. The cattle on the coastal pastures moves in the water and keeps both the waterline and low pools open (with low vegetation). The largest coastal semi-natural grasslands are located near Riguldi and in Hara.

Recommendations for agricultural zone:

- » It is recommended to maintain drainage facilities regularly.
- » It is recommended not parcel the fields into plots; the forestation of fields and grasslands should be avoided.
- » It is recommended to restore and maintain semi-natural communities; reed should be stored and the landscapes should be maintained.
- » It is not recommended to set up wind turbines and other large-scale buildings (except for buildings related to agricultural production) in agricultural zone. Additionally, dumping should be avoided. The waterline should also not be changed (except for the maintenance of landing places foreseen in plans).
- » It is not advisable to restrict fishing.
- » For dwellings in the zone, it is recommended to follow the recommendations for areas of traditional settlement, with the exception of buildings related to agricultural production.

4.3.7. NATURE ZONE

The zone is aimed at preserving the natural values of the area and using it in an environmentally friendly manner.

The nature zone consists of protected areas (except areas with recreational facilities, which are within the recreation zone), habitat types set out in Annex I of the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992), and other naturally preserved areas (forests, wetlands, etc.). The nature zone consists of compact areas, where individual dwellings can be located in the forest.

Recommendations for nature zone:

- » Activities that contribute to the preservation of nature values in the area should be preferred in the nature zone. The protected areas are governed by the protection rules of the area, the area's management plan, and the Nature Conservation Act.
- » The management of forests located outside the protected areas should not be detrimental to the value of neighbouring recreational areas, areas of traditional settlement, and other natural areas. Forests should be managed using selective cuttings instead of regeneration cutting. In the case of forests that are not of increased public interest, the plots of clear-cutting should be small (up to

2 ha) and have natural boundaries.

- » The creation of new drainage systems, the parcelling of land into plots, and mineral extraction should be avoided in nature zone.
- » The semi-natural habitats in the area can be restored.
- » For dwellings in the zone, it is recommended to follow the recommendations for areas of traditional settlement. It is advisable not to plan new dwellings in the area.
- » It is not recommended to set up wind turbines and other large-scale buildings in nature zone. Additionally, dredging should be avoided. The waterline should also not be changed (except for the maintenance of landing places foreseen in plans).

4.3.8. GENERAL MARINE USE ZONE

General marine use zone are marine areas where all human activities are allowed, except for those that are prohibited by law or for which the person does not have the necessary permission.

Recommendations for the use of general marine use zone:

- » All human activities are allowed, except for those that are prohibited by law or for which the person does not have the necessary permission.

4.3.9. TARGETED MARINE MANAGEMENT ZONE

Targeted marine management zone is a marine area that is designed to achieve a specific goal. Other uses are limited for the achievement of this purpose. Restrictions on different activities are greater than in the general marine use zone.

4.3.9.1. TARGETED MARINE MANAGEMENT ZONE FOR NATURA 2000 HABITATS

The aim of the zone is to ensure the conservation of marine habitat types listed in Annex I to the Habitats Directive.

The zone is formed to protect the marine habitat types listed in Annex I and the habitats of species listed in Annex II of the Habitats Directive and the species and migratory species listed in Annex I of the Birds Directive in the marine area if the protection of these habitats does not require a total ban on other uses of the sea (including, for example, navigation).

Recommendations for the use of targeted marine management zone for Natura 2000 habitats

- » Dumping, dredging, and building are forbidden.
- » For some habitats, the cutting of reed should be encouraged.

4.3.9.2. TARGETED WATER TRANSPORT ZONE

The objective of the zone is to ensure the safe navigation of watercraft and the development of ports.

Water transport zone areas are located near ports and the preferred activity is water transport. Water traffic zone is a continuation of port and industrial zone. The Maritime Administration has designated a fairway at the port of Dirhami. There are no designated fairways near the other ports.

Recommendations for the use of targeted water transport zone:

- » Watercraft are allowed.
- » Where necessary and in accordance with the law, dredging operations are required.
- » Fishing by means of professional fishing, dumping, aquaculture, and water sports are not recommended.

4.3.9.3. TARGETED WATER SPORT ZONE

The purpose of the zone is to create safe areas for water sports.

The zone consists of areas reserved for water sports near Roosta, Spithami, Dirhami, and Nõva ports.

Recommendations for the use of targeted water sport zone:

- » It is not advisable to erect structures or to create aquaculture areas.
- » Damaging of properly marked fishing gear must be avoided.

4.3.9.4. TARGETED MARINE MANAGEMENT ZONE FOR DUMPING

The purpose of the zone is to make it possible to move the seabed material from the dredging of the sea.

In the case area, the targeted marine management zone for dumping includes the dumping area of the Dirhami port and the dumping area of the Hara port. In the future, it may be necessary to plan a dumping area for the port of Nõva, as well.

Recommendations for the use of targeted marine management zone for dumping:

- » The dumping must be done in accordance with the legislation in force.
- » It is advisable to avoid construction, aquaculture, and dredging in the dumping areas.

4.3.9.5. TARGETED MARINE MANAGEMENT ZONE FOR MILITARY USE

The purpose of determining the zone is to reserve an area for shooting trainings taking place during a limited time.

In the case area, the targeted marine management zone for military use is a safety area for the shooting training related to national defence. During a shooting drill, access is prohibited there. The zone includes the training areas of Ristinina and Liivase.

Recommendations for the use of targeted water military zone:

- » During shooting training, the danger zone of the shooting training is prohibited.
- » It is recommended not to establish wind turbines and aquaculture areas to the targeted water military zone.

4.3.10. ACCESS TO THE COAST AND THE SEA

Access to the coast and sea means publicly used roads (which must remain publicly used); forest trails and hiking trails in recreational areas; walking and cycling trails; access to landing places; and access of the maritime rescue.

Recommendations for access:

- » Publicly used roads must remain publicly used. If necessary, the terms of use of access must be agreed upon with the landowners.
- » The landing places should be publicly used.
- » It is recommended to ensure that access roads leading to public landing places are accessible and passable.
- » It is recommended to indicate the exact location of the landing places on the coastline
- » It is recommended to designate and indicate the places where motorised watercraft can be taken to the sea. In addition to ports (Dirhami, Nõva), landing places which are accessible by car could be used as access roads.
- » It is recommended to maintain public paths and roads in forest areas and create cycle and pedestrian tracks leading to recreation areas.
- » It is advisable to start negotiations with landowners about the access to

the landing places to which the access is closed – for example, Luksi and Riguldi.

- » It is advisable to create another access road (using the existing fire barriers for the location) and access to the maritime rescue to Peraküla beach, and a slip for the maritime rescue to the dockyard in Vaisi.

5. SUMMARY

This land use zoning has been prepared to promote the development of the coastal area between Hara and Ristinina. Due to the large proportion of sandy beaches in the area, recreation areas are important in the region and the development of recreation economy, including marine tourism, is the major economic opportunity for the region. The share of nature areas is also high because the unfavourable soils that formed after the tectonic uplift in the northern part of the region have historically remained a forest area. Considering that the case area only covers coastal areas, it makes sense to focus in particular in the forest management on the maintenance of the recreational value of the areas, not intensive management. There are more agricultural areas in the southern part of the area. The land use zoning has tried to find a balance between the developmental possibilities and the recreational values of the area. Therefore,

recreation zone, recreation development zone, the traditional settlement zone and the residential development zone are distinguished. Development is also promoted in the port and industrial zone.

In zoning the sea area, there was no need to significantly limit the use of the sea. The sea in the region is an important area for coastal fishing and therefore, it is not advisable to impose significant restrictions on fishing, except in areas related to ports, where there may be conflict with water transport.

The principles and methodology used in the land use zoning are also suitable for other coastal areas.

