Maritime and Coastal Smart Specialization Strategy for Riga Planning Region

SUMMARY

Riga, 01.10.2018.

Content

Abbreviations

RES – renewable energy sources
Blue Growth or sea and coastal smart specialization – economic development of the site using marine and coastal natural resources, infrastructure, and other advantages that comes from its location on the coast
BSR – Baltic Sea region
EU – European Union
Maritime economy – all economic activity dependent on the sea[1]
Mariculture – the cultivation of plants and animals in the sea or in the process of sea water
MCSSP or MCSS plan – Maritime and Coastal Smart Specialization Plan for Riga Planning Region
MoEP&RD – Ministry of Environmental Protection and Regional Development of the Republic of Latvia
Pieriga – suburban area of the Riga, including Jurmala, Engure, Carnikava, Saulkrasti municipalities situating at the coast of the Riga Gulf
R&I – research and innovation
RPR – Riga planning region
SBR project – Interreg Baltic Sea Region transnational programme 2014 - 2020 project "Smart Blue Regions: smart specialization, maritime and coastal resources for Baltic Sea Region economic development"
Smart specialization (RIS3) – A strategic approach to economic development through targeted support for research and innovation

[1] Within the meaning of the "Blue Growth - opportunities for marine and maritime sustainable growth", Brussels, 13.9.2012. COM(2012) 494 final

INTRODUCTION

To contribute to the objectives of the Europe 2020 strategy for smart, sustainable and inclusive growth, The European Commission's Maritime and Maritime Initiative - Blue Growth has been set up.

Blue growth is defined as the economic development of marine and coastal natural resources, infrastructure, and so on the advantages that the development of the site provides its location on the coast.

The Riga Planning Region has a 187 km long coastal area, and the target area "Coast" (Piekraste) is defined in the regional planning documents. The Maritime and Coastal Smart Specialization Strategy (hereafter - MCSSS or MCSS strategy) is a further planning step for this target area, to purposefully take into account the Blue Growth Initiative, national institutional plans and the needs of coastal municipalities and create a project framework for the next programming period.

The MCSS Strategy looks at the coastal municipalities – resort Jurmala and capital Riga, rural municipalities of Engure, Carnikava, Saulkrasti, Limbaži and Salacgrīva – and the part of the Gulf of Riga bordered by the Riga Planning Region.

The vision, strategic directions and measures of the MCSS Strategy are defined on the basis of national development planning documents, as well as using their data (where possible, updating them) and the studies on the conditions of the environment, natural values and economic activities in the Gulf of Riga and the coast. The MCSSS takes into account ecologically important and sensitive areas identified at national level and does not envisage projects that could harm or even destroy ecosystems and potentially cause damage to the sea or coast.

MCSS Strategy has been prepared within the project "Smart coastal regions: the smart specialization, marine and coastal resources for economic growth in the Baltic Sea Region / Blue Smart Region" (hereinafter - the Project). The goal of the project is to enhance blue growth opportunities based on increased capacity of Baltic Sea Regions to implement Research and Innovation Strategies for Smart Specialization. The project is funded by the Interreg Baltic Sea Region Transnational Program 2014-2020. Implementation of the project - from March 1, 2016 to February 28, 2019. Project partners: Schleswig-Holstein Ministry of Economics (Germany, Lead Partner), Finland Southwest Council (Finland), Ida-Viru municipality (Estonia), Maritime institute and Association Pomorskie in the European Union (Poland), Skane region (Sweden), Riga Planning Region and Institute of Hydroecology (Latvia) (www.smartblueregions.eu, www.rpr.gov.lv).

The implementation of the MCSSS will be ensured by Riga Planning Region in co-operation with local governments in the form of projects.

The JPVS plan was developed during the period from April 12, 2018 to October 12, within the agreement between Riga Planning Region and SIA "Grupa93", which concluded the procurement of "Expert Services for the Development of the Thematic Plan for the Development of the Sea and the Coast" for the Riga Planning Region (Identification No RPR / 2018/1 / SBR-1).

1. POTENTIAL FOR BLUE GROWTH IN RIGA PLANNING REGION

The Riga Planning Region has a sea border of 187 km.

The Riga Planning Region is located at the Riga Gulf of the Baltic Sea, and the MCSS Strategy also covers the water area in front of RPR.

On the coast of RPR there are seven municipalities - the capital city Riga, Jurmala resort town and Engure, Carnikava, Saulkrasti, Limbazi and Salacgriva rural municipalities with smaller towns. There are 0.7 million inhabitants or 38% of Latvia's population live in coastal municipalities at the beginning of 2018.

Figure 1 Latvia, the capital city of Riga and the resort town of Jurmala in the Baltic Sea region

The coast as a tourist and recreational destination attracts a significant part of the total annual flow of tourists in Latvia. Jurmala, Riga and its surroundings and Saulkrasti are among the most intensely visited beaches.[2] The average number of beach visits per year is estimated at around 3.5 million, incl. 129 thousand on the beach of Carnikava municipality, 263 thousand on the beach of Saulkrasti, 51 thousand on the beach of Limbaži, 198 thousand on the beach of the Salacgrīva, 242 thousand on the beach of Engure, 609 thousand on the beach of Riga and 2 million and 59 thousand visits per year on Jurmala beach (incl. visitors of the largest events).[3]

The advantages of maritime and coastal smart specialization in RPR are:

- Long coast with white sand beaches, wooded dunes (rare natural habitat in Europe. Wooded dunes of the Atlantic, Continental and Boreal region 2180, NATURA 2000);
- Rare ice in the waters of the Riga Gulf, lots of waterfront, especially if take into account waterfronts of Riga Gulf and waterfronts of the rivers flowing into the Riga Gulf;
- Advantageous geographic location - central coast of the Baltic States, the proximity of the Scandinavian market;
- Riga – the metropolis of Northern Europe, the international cultural, scientific, business center, transport hub;
- Advantages of the Freeport of Riga and small ports (transport connections, ports' technical parameters, administrative structures, ports' enterprises, ferry connections);
- One of the fastest internet services in the world[4] and wide use of information technologies in society;
- Good reach of the coast of Pieriga: electric railway, main state roads, regular public transport
- The resort town of Jurmala (sanatoriums and hotels, large number of accommodation, historical resort traditions, native inhabitants with knowledge of several foreign languages);
- Recognized and widely visited international, national and local cultural and sporting events (Riga, Jurmala Culture Program, Positivus Festival etc.).

[2] MEP&RD, National long-term thematic plan for the coastal area of the Baltic Sea, 2015
[3] 2015 summer survey. Elaboration of the National long-term thematic plan for the coastal area of the Baltic Sea
[4] Latvia takes 17th place in the world in terms of speed of the Internet. Akamai State of Internet 2017,Q1

2. VISION AND SUMMARY OF THE STRATEGY

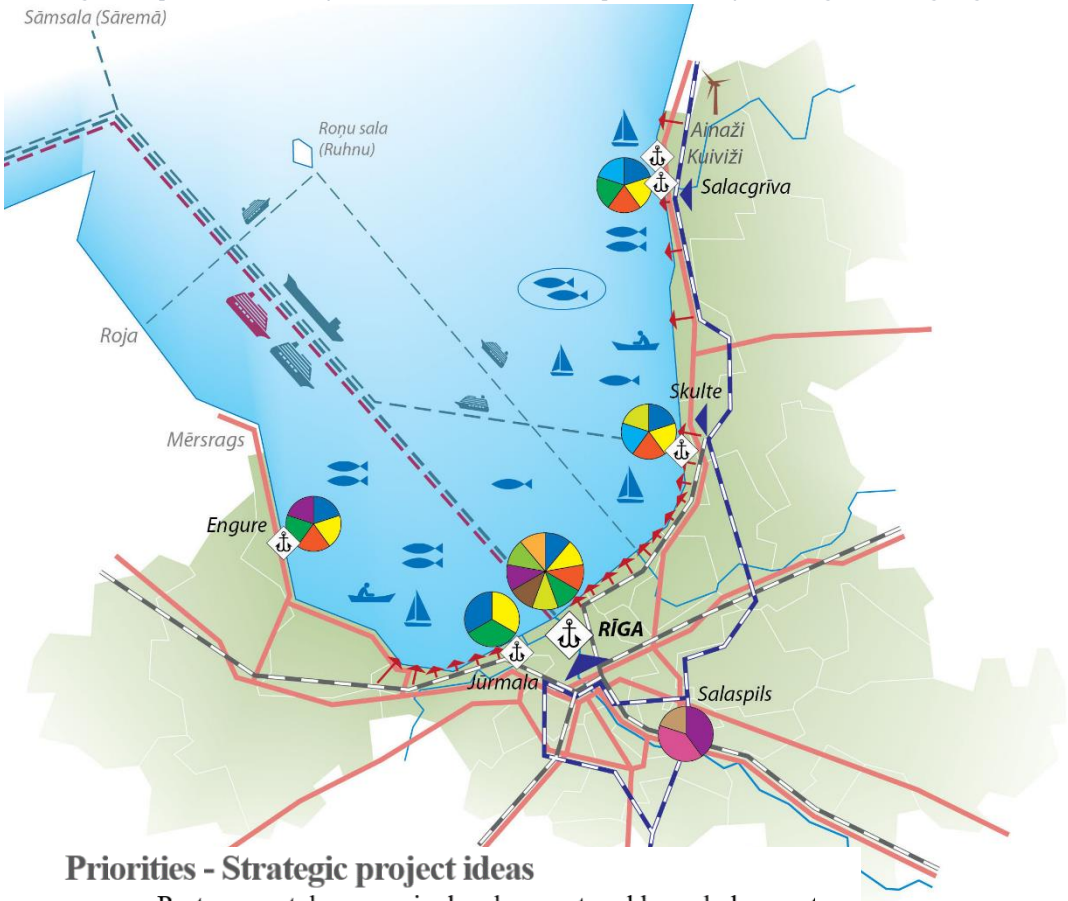
Vision

Development of the maritime economic sectors in the Riga Gulf of the Baltic Sea Riga planning region's coastal population welfare,
Strengthening the role of Riga as a Baltic Sea metropolis and Jurmala as a resort and contribution to the sustainable development of the Baltic Sea Region states

Thematic directions

Marine transport and shipbuilding
Fishing and Mariculture
Multifunctional and smart use of coastal areas
Use of RES in the coast
Resort and health tourism

Figure 2 Spatial structure of the sea and coastal Smart specialization for the Riga Planning Region



Priorities - Strategic project ideas

Ports - coastal economic development and knowledge centers
Network of marinas and boats embarkation points
Basic public infrastructure in coastal areas
Scientists for the blue growth

Measures

Marine transport and shipbuilding

1. Investments in infrastructure and knowledge of maritime enterprises
2. Engineering (metal processing, communications, etc.) product development and applied research program
3. Development of urban environment and services around yacht ports
4. The use of Rail Baltica railway potential for coastal development
5. Port start-up program for the promotion and diversification of entrepreneurship in the coastal areas
6. Local passenger ferry traffic
7. Riga Gulf coast and the Old Riga water connections for tourists, construction of the marinas and boat berths
8. New international shipping routes

Fishing and Mariculture

9. Support for the introduction of environmental requirements in fisheries
10. Preservation of coastal historic activities and cultural heritage
11. Integrated mariculture (fish, algae and mollusks) growing pilot projects
12. Research to develop new pharmaceutical products and medical therapies

Multifunctional and smart use of coastal areas

13. Mobility points
14. Improving access to the coast
15. Introduction of new principles in coastal transport and tourism services
16. Smart promenades
17. Magnet objects on the coast
18. Improvement of beaches and diversification of leisure facilities
19. Water sports and water activities centers
20. Development of Eurovelo 13 and its links with the surrounding coastal area bicycle network
21. Program "Marine Studies"

Use of RES in the coast

22. Tracking wave energy development
23. Pilot projects on the use of wind potential and research
24. Use of solar energy

Resort and health tourism

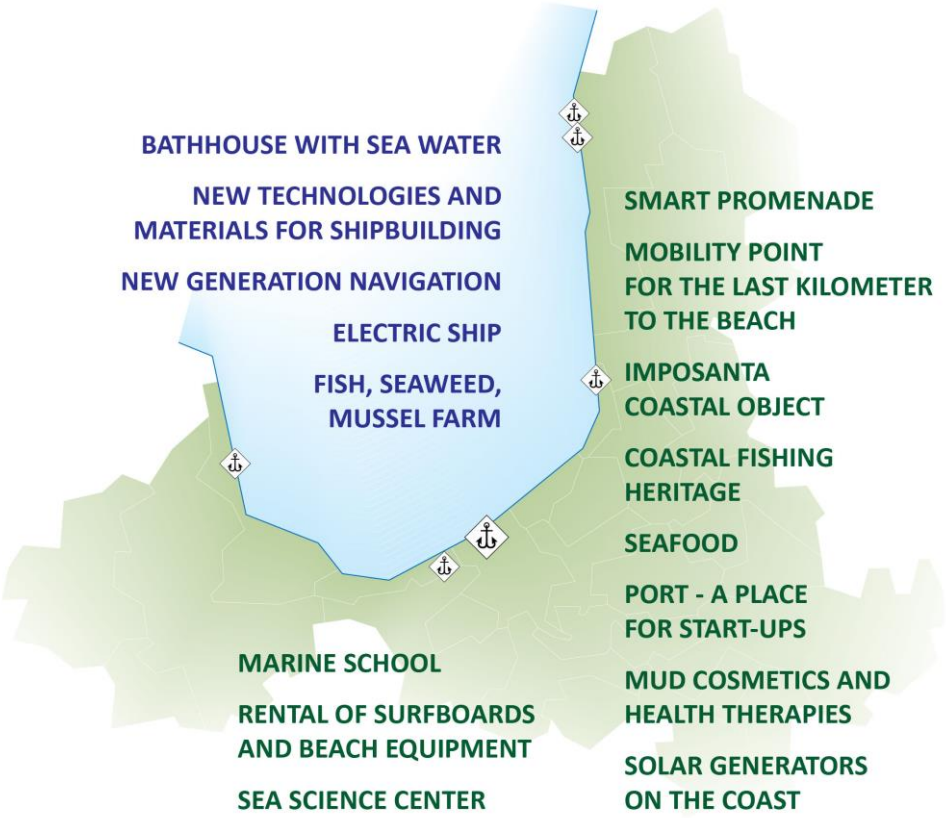
25. Hospitality schools

3. MEASURES

Long coast, mild climate, four seasons change, coastal city and port infrastructure, wooded dunes, landscape, mostly non-freezing Riga Gulf – is the blue growth resource for the Riga Planning Region for enterprises, local population groups and local governments.

The ideas developed with the parties involved in the work show which measures are preferable in the next EU programming period, while recognizing that the support measures will develop creatively together with development of the technologies and processes.

Figure 3 Infographic of the preferred support measures for marine and coastal smart specialization in Riga planning region



3.1. Marine transport and shipbuilding

1. Investments in infrastructure and knowledge of the maritime enterprises

To promote blue growth in the Riga planning region, it is necessary to provide support to ports, companies involved in the maritime economy. Support should be provided to companies located further away from the coast, as well, if their activities are linked to the use of sea resources.

Important measures regarding to shipbuilding in the Riga planning region are like measures to the Baltic Sea Region:

- new materials and methods that reduce shipbuilding and maintenance costs:
  laser welding;
  development of energy storage facilities;
  alternative drive technology, electric propeller production, etc., which reduces carbon footprint;
  improving the energy efficiency of ships (for example, by improving the shape of the hull, propeller shape, fuselage);
  ship maintenance equipment and environmentally friendly materials (oil purification from ships, re-extraction of petroleum products), etc;
- IT solutions for shipbuilding, fishing, maritime transport and related equipment construction;
- development of ship dismantling technology used;
- design, manufacture and installation of floating structures;
- modernizing the construction and maintenance of port infrastructure;
- electric ship, unmanned vehicle, etc. new generation shipbuilding;
- construction of new specialized types of ships and equipment, depending on their use (for seabed intervention works, extraction of mineral resources, production of artificial substrates at various depths, service stations on the water, etc.);
- promotion of shipbuilding clusters;
- development of marine research and monitoring technologies.[5]

Listed below are the interests of municipalities in the Riga Planning Region:

- *Reconstruction of the hydro-technical structures and berths of the port of Salacgriva, maintenance of the ship roads, deposit of exhausted land at sea;*
- *Development of Ainaži port infrastructure;*
- *Improvement of infrastructure of Kuivizu port;*
- *Establishment of a yacht berth and marinas infrastructure in Tuja, Limbaži and Dunte, Gauja, Lake Lilaste, Ragaciems (pontoon), Lielupe,*
- *Development of Skulte port infrastructure and reconstruction of access roads;*
- *Development of Engure port infrastructure and reconstruction of access roads;*
- *Maintenance of Jurmala harbor ship's roads, development of infrastructure, including navigation;*
- *Improvement of maritime safety at the Riga Freeport - modernization of the vessel traffic control center, modernization of navigational means, ships' routing system programs, etc.*
- *Modernization of Riga Freeport's port information system and customs procedures;*
- *Development of Riga Freeport's land access infrastructure and extension of the shipping routes;*
- *Development of Riga Freeport's terminals;*
- *Modernization of Riga Freeport's pilots and tug ship.*

2. Engineering (metal processing, communications, etc.) product development and applied research program

To promote blue growth in the Riga planning region, it is necessary to provide support to scientists in the natural sciences sector who can contribute to increasing the efficiency of shipbuilding companies and shipping companies, equipment and product development, sustainable use of local resources and the creation of innovative products. Research projects should cover a wide range of natural science disciplines.

[5] Project Smart Blue Regions partners (Ida-Viru (Estonia), Pomorske (Poland), etc.) needs summary from Barbara Weig, Main output report. GoA 4.1: Elaboration of a BSR-wide study identifying Blue Growth cooperation opportunities

Support should be given to research projects that promote the emergence of new technologies, prototype production, testing, demonstration, testing, upgrading, development of applications, etc., as well as indirect support for their introduction into production (commercialization phase).

Support should also be given to cooperation partners - companies, municipalities, ports that provide a testing environment, and educational and scientific organizations that provide the academic side of innovation.

3. Development of urban environment and services around yacht ports

The yacht tourist group is specific. They use port services and mostly prefer to stay on the yacht mooring time. If there are no tourism objects near the port, there is a risk that investments in marinas infrastructure will not provide economic returns for the local economic. For example, in the vicinity of Skulte Harbor there is a residential area without infrastructure suitable for holidaymakers.

Municipalities and the state, in order to support ports, can make public infrastructure around them, for example:
- walking routes - pedestrian and bicycle paths, waterfront promenades, pontoons, constructive pedestrian routes above the water,
- cafes, etc. service objects,
- "Magnet objects" (water activity centers, such imposing culture, and educational objects as a seal-quarium, a marine museum, etc.);
- panoramic viewing platforms and constructions;
- boat rental, bicycle rental.

Besides the ports, there will be companies that will develop production and service enterprises near the ports.

Welcomed measures, which
- develops the public part of the ports - the territories and buildings that are used for yachting services, thus creating modern and attractive harbors for tourists
- and promotes the integration of the Riga Planning Region ports into the network of Baltic Sea marina ports.

4. The use of Rail Baltica railway potential for coastal development

Rail Baltica will ensure the accessibility of European cities at a much shorter time, will promote a new type of common business, living and recreation space of the Baltic States, as well as open up huge opportunities for cooperation across the entire transport corridor from Scandinavia to Europe.

In the long run, applying the Rail Baltica railway line via Salacgrīva, Limbazi and Riga to regional train traffic, there are possibility for new regional passenger stations (Salacgrīva, Vitrupe, Tuja, Stiene, Skulte, as well as Riga) and freight racks on the Skulte and Salacgriva ports.

- In support of ports and port enterprises, it is necessary to build Rail Baltica and port connecting roads and logistics infrastructure.

- The infrastructure of pedestrians and cyclists needs to be developed so that the new railway line does not affect coastal accessibility.
- In cooperation with transport companies, integrated mobility services should be developed, incl. integrated ferry traffic.

5. Port start-up program for the promotion and diversification of entrepreneurship in the coastal areas

Small ports - the centers of economic development and knowledge at the coast, because they have infrastructure, unused territories, structures, possibilities to provide technical support.

The ports are already "major players" on the coast of the Riga Gulf, which manages significant funds, makes significant investments in port infrastructure; they have the capacity to manage resources. It's possible that the port is the place where new businesses can form. Coastal start-ups can operate in the development of materials and technology for shipbuilding, development of human resources for sailing, coastal, port, hospitality and shipping management, and training for new marine specialties.

The establishment of a coastal support program, the managers of which are port authorities, are supported. The Coastal Support Program may include funding for start-ups, facilities, infrastructure, support for researchers and maritime experts.

In the future, areas around ports should be suitable for both business and tourism.

6. Local passenger ferry traffic

At scale of the Riga Planning Region, passenger transport by sea / river transport (as a public transport service) is appropriate, if the time spent on the road on the water does not exceed the time on the motorway.

Such projects are welcomed, which encourages the creation of ferry traffic between:
- the banks of the Lielupe, because there are only two bridges in Jurmala, among which on the right bank of the Lielupe, using A10 is 12 km, and using the street network in Jurmala city - an even longer distance;
- the banks of the Daugava or between Vecmilgravis to Bolderaja in Riga, because it is possible to get from one part of the city to the other only by reaching the Vansu bridge, in addition, considering that the bridge is traffic-congested.
- Bolderaja and Mangalsala in Riga, which links the sights of the cultural heritage (the Daugavgriva fortress, Kometfort, the fortifications of the fortress building in Mangalsala, as well as the visits of the two Daugava moles.

7. Riga Gulf coast and Old Riga water connections for tourists, construction of the marinas and boat berth

One-day trips are welcome being developed as tourist offers from the berths in the Daugava (opposite to the Old Riga) to the small ports at the coast or newly established marinas of the Riga Gulf, including inland waters (Lielupe, Gauja, Vecdaugava, Bullupe). Unfortunately, it is not possible to extend the route on the City Canal in Riga because it is shallow, with an uneven bearing and can damage the ship's body, propeller.

At the same time, the measure will promote inland waterway connections with the Riga Gulf. In order to develop water activities in Riga's planning region, with the time the water connection Daugava-Gauja rivers can be restored.

To expand the tourism offer, the small-scale maritime infrastructure – construction of a new berth infrastructure and the creation of slipways in Salacgriva, Ainazi, Kuivizi, Zvejniekciems, Carnikava (Gauja), Riga (Bullupe, Vecdaugava), and Jurmala (Lielupe) in Ragaciems – are needed.

Listed below are the interests of municipalities in the Riga Planning Region:

- *Boat berths as the final stop of sailors along the Gauja River in Carnikava;*
- *Modernization of fishing boat berth in Carnikava county;*
- *Strengthen the Gauja coast and set up a quay at Porto Resort Hotel in Carnikava;*
- *Creation of a pontoon yacht marina on Ragaciems Beach in Engure Region;*
- *Construction of Jurmala harbor quay in Lielupe, Jurmala;*
- *Reconstruction and construction of boat berths and slopes in Lielupe at Sloka, at Krasta street, at Druvciems near Ezera Street, in Lielupe at O.Kalpaka Avenue, at Valtera Avenue, at Tīklu Street in Jurmala;*
- *Establishment of the yacht and boats berth infrastructure at Tūja, Limbaži and Dunte in the Salacgrīva municipality,*
- *Development of Skulte port infrastructure and reconstruction of the access roads;*
- *Development of the infrastructure of Engure harbor and reconstruction of the access roads;*
- *Maintenance of the shipping routes of Jurmala port, incl. development of navigation infrastructure, in Jurmala;*
- *Modernization of berths and boats (slipways) in Buļļupe and Daugava at Vecdaugava, Riga.*

8. New international shipping routes

From Riga passenger port ferry service to Stockholm is offered, as well 70 - 80 cruise ships arrive in the passenger port of Riga each year (in 2017 - 85), representing more than 20 different cruise operators.

New international ferry routes in the Baltic Sea, for example, to the Scandinavian countries, can also be developed from small ports, to which there is convenient public transport. Justification - small ports may offer lower port dues and more flexible conditions for operators.

Priority should be given to ferry traffic infrastructure at small ports and mobility services to the port.

3.2. Fishing and Mariculture

9. Support for the introduction of environmental requirements in fisheries

Environmental requirements for fishing are increasing. There is a regulation on annual fish stocks and fishing quotas. By 2017, the International Convention for the Control and Management of Ships' Ballast Water and Sediments will enter into force. Compliance with the requirements for fitting out ports and floating equipment requires knowledge and significant investment, so that only large players can meet the requirements. It is beyond capacity of small coastal companies, which are the basis of coastal employment and economic viability.

Support for fishing vessels and ports will also strengthen small and medium-sized enterprises and the fisheries sector in general on the coast of the Riga Gulf. Types of support see in measures "Investments in infrastructure and knowledge of maritime enterprises".

10. Preservation of coastal historic activities and cultural heritage

Small fishing companies and fishermen's future role in the marine economy, unfortunately will decrease (due to quota, sur labor, lack of means, modest, close to survival living conditions). Coastal fishing will keep the cultural and historical significance.

It is necessary to inherit coastal occupation skills, lifestyle testimonies, tools, food, etc. historical heritage and landscape, provide support for coastal property maintenance (beach cleanliness, access roads, fishing tool, etc.), and promote inclusion in the local tourism offer as "fishing tourism".

Related products need to be developed - marine food, taste and maritime sense tourism based on coastal fishing traditions combined with current safety requirements. It is important to promote the understanding and interest of the younger generation in preserving and continuing this heritage

11. Integrated mariculture (fish, algae and mollusks) growing pilot projects

Research on the environmental conditions suitability of different mariculture species (fish, shellfish, algae) cultivation

The possibilities of growing mariculture on the coast of Latvia are limited by natural conditions - low water salinity, wave and wind effects, fluctuating temperature and oxygen concentration regimes. Theoretically, salmon, tares, fish species, bivalve mollusks (*except the southern part of the Riga Gulf, where the water salinity is low for these species)* and algae (*for which the most suitable salinity concentration and temperature regime is on the west coast of the Gulf north of Engure and on the east coast of Tuja to the north*) can be grown in the Riga Gulf.

Restrictions must be taken into account in marine protected areas so as not to damage rocky reefs. Fish breeding should keep track of the amount and effects of nutrients on the rest of the marine environment.

In order to promote the development of mariculture in the Riga Gulf, support should be given to natural science scientists:
- In order to study the fish species suitable for mariculture in the specific environmental conditions,
- To develop maricultural species breeding techniques that do not dispose of marine resources, do not harm ecosystems, preserve biodiversity and coastal recreation functions;
- In order to realize integrated fish, algae and bivalve mollusks cultivation in the enclosed coastal waters of the bay, where bivalve mollusks and algae absorbs nutrients from the fish breading process, and shellfish and algae are used as biomass in fish feed, thus reducing the need for wildlife stocks;
- to study the use of mariculture in food, feed, agricultural fertilizers or otherwise;
- to launch the commercial cultivation of mariculture.

Integrated mariculture growing and research projects can also be local tourism objects.

12. Research to develop new pharmaceutical products and medical therapies

Riga Planning Region lacks experience in using the sea potential for pharmaceutical products and medical therapy (currently only medical mud treatment experience is in Jurmala sanatoriums).

In the future, it is recommended to develop and approbate therapeutic cosmetics and health therapies based on mud and algae resources available in the Riga Gulf. It is also necessary to study the legal aspects in the healthcare and spa sector, marketing, clustering, benchmarking and taking over of successful experiences.

3.3. Multifunctional and smart use of coastal areas

Investing in basic infrastructure will allow visitors to get to the coast, but smart streamlining of visitor flows, offering activities and organizing services will maximize the economic benefits and bring prosperity to the coastal population.

13. Mobility points

The purpose of the mobility point is to facilitate the transition from one mode of transport to another, to provide a convenient connection between travel destinations and to provide a varied support infrastructure for the "*last mile*".

In a coastal area, which depends on the seasonality, where public infrastructure is over-loaded in summer, but winter brings only losses, it is necessary to look for new rational solutions for the provision of public infrastructure.

The coastal areas of the Riga Planning Region are conveniently reachable by train, bus or private car. Mobility points can be made at the railway and bus stops, as well as near the beach next to the main streets and roads. Mobility solutions may include:
- Bicycle rental and bicycle storage;
- A mobile app that aggregates routes, modes of transport, transport services and services available in the neighborhood (for example, by upgrading the existing "vidzemecoast" app);
- charge car parking in areas away from the coastal zones where is possibility to rent a bike or a taxi, or a shared use of a car, bicycle, flywheel, etc. thus getting to the coast, and where is possibility to charge electric vehicles;
- water sports centers can be included: "car - bicycle - foot - boat".

Mobility points would also ensure links and more effective synergies between infrastructures at the coast, created within the EU funded projects[6].

14. Improving access to the coast

There is a need for renovation of the state and municipal roads leading to the coast to connect public transport stops with the coast (railway stations and bus stops, as well as potential Rail Baltica regional stop).

Access roads are the basic infrastructure without which the blue growth measures can not be implemented. It is advisable to use smart methods in building roads, streets, cycles and pedestrians, thus promoting intelligent specialization at the coast.

Streets and roads are one of the key elements in creating a pleasant and safe coastal area. The main goals at the most sought-after stages of the coast are to reduce the flow of private cars, to calm traffic near the beach, making the coastal area attractive to pedestrians. Traffic calming would also reduce sound and air pollution at the coast, and residents and guests would be more pleased to stay in the public space - streets, squares, outdoor cafes.

Measures and principles of smart use:
- The design of streets, roads, bicycle paths, narrowing the car lanes to make room for pedestrians and cyclists, to create a separate bicycle infrastructure;
- Light etc. installation of smart alarms, enclosures, bicycles and pedestrian crossings and traffic lights, as well as pedestrian crossings (more pedestrian crossings in towns and the installation of wide crossings for the main flow of visitors to the beach);
- Traffic organization measures by giving part of the driving area for pedestrians or by setting equal priority pedestrian-transport streets with speed restrictions adequate for residential areas;
- Where possible, the diversion of transit traffic off the coast, the construction of rotary circles at junctions (two-level crossings as an exception), the development of a smart alert system before the exit from the beach to the transit roads (A1 VIA Baltica, P131 Engure Region);
- Treatment of gravel road surface with bitumen emulsion in coastal rural areas (providing dust prevention, lowering the cost of application and maintenance of black surfacing), the use of new methods for pavement laying;
- Improvements of car parks and pedestrian walkways and way to the sea, applying the principles of universal design for the convenience of all groups of the population and supplementing and

[6] In the period 2007-2013, activity 3.5.1.3 "Development of Infrastructure in NATURA 2000 territories" was carried out on the coast of Latvia, and in the period 2014-2020 the objective of specific support is introduced 5.5.1 "To preserve, protect and develop a significant cultural and natural heritage as well as to develop related services "

improving minimal facilities, incl. drinking water taps, mobile phone charging points, interactive information stands and energy-saving lighting elements;
- Cars, bikes, skateboards, etc. rented or shared use of driving equipment.

Listed below are the interests of municipalities in the Riga Planning Region:
- *Improvement of access to the Kalngale beach in Carnikava municipality: reconstruction of Vanagu street, extension of the car park and improvement at Kalngale railway station, reconstruction of the pedestrian path from the railway station to the sea; Restoration of a closed railway crossing of Latvijas Dzelzceļš in order to provide transport access in the 10 km long part of the beach from Vecāķi to Garciems.*
- *Improvement of access to the Garciems beach in Carnikava municipality: reconstruction of Garciema Mezciems street, development of the path leading to the beach, extension of the parking lot in the Garciema railway station, restoration of the access road to the parking lot in the Dangu forest, reconstruction of the streets, the construction of a pedestrian and cycling trail from the Celaji to the Gauja estuary (wooden path);*
- *Improvement of access to the Carnikavas beach in Carnikava municipality: extension and improvement of the parking lot at Laivu street;*
- *Improvement of access to the Gauja village beach in Carnikava municipality: reconstruction of Skautu street, development of the paths leading to sea, extension and improvement of the parking lot in Skautu street Gauja;*
- *Improvement of access to the Lilaste village beach in Carnikava district: reconstruction of Lilastes street, establishment of a rescue station, cafe and a rental point at the parking lot at Ziemeļu street in Lilaste for the implementation of the Blue Flag standards, the construction of a parking lot near the Lilaste railway station;*
- *Creation of a cycling and walking route around the Gauja flood protection dam;*
- *Reconstruction of the P128 road section from Ragaciems to Klapkalnciems to improve the reach of the Gara Judze (Calm Mile Beach) in Engure municipality;*
- *Construction of 8 parking grounds with gravel pavement in P128 road section in Engure municipality, creation of pedestrian paths from parking lots and beach;*
- *Expansion of the "Aizrags" parking lot; creation of a pedestrian walkway to the beach in Engure municipality;*
- *Improvement of "Kuplās Priedes" beach, creation of pedestrian tracks on the beach in Engure municipality;*
- *Road for operational transport to Klapkalnciems, Apšuciems, Engure and Plienciems beach in Engure municipality;*
- *Construction and improvement of a new gravel car park in Kesterciems near the state motorway; installation of a wooden path to the beach in Engure district;*
- *Construction of a new gravel car parking lots in the plot of road P128 at Klapkalnciems and Bērzciems and paths to the beach in Engure municipality;*
- *Establishment of access roads to the beach for operational transport in 11 streets of Jurmala city;*
- *Construction of pavement trails, improvement of stairs and exits to the beach with the highest attendance intensity in Jurmala;*
- *Creation of 38 pedestrian wooden to the beach in Jurmala;*
- *Establishment of 22 paths made from osier for persons with functional disorders in Jurmala;*
- *Construction of new parking lots and expansion of existing car parks in Jurmala;*
- *Improvement of the accessibility of pedestrians and cyclists to the beach in the Limbaži district, installing new wooden footbridges to the beach;*
- *Improvement of access to the beach in the village of Vārza in Limbazi municipality, by reconstructing Ziemeļu street and East street in the Vārza and constructing a new parking lot;*
- *Improvement of access to Lauči stone beach, reconstructing the municipal road Rupes - Lauči in Limbazi municipality;*
- *Improvement of access to the beach in the Ziemeļblāzma village in Limbazi municipality, reconstructing Spilve Prospect, Vidzeme Prospect;*
- *Establishment of the pedestrian and bicycle connection between Skulte railway station and beach, which is located on the former Riga-Valka railway embankment railway, which is part of the network of Greenways in the Limbaži municipality. Planning new connections in context of the upcoming Rail Baltica.*
- *Improvement of access to the coast in Salacgriva municipality, by reconstructing the state road P11 Kocēni-Limbaži and the sections of the Via Baltica / road A1 Rīga (Baltezers) -Estonian border (Ainaži) and the municipal road B57 Lielurgas-Oltuži;*
- *Reconstruction and improvement railway stations (Lilaste, Inčupe, Pabaži, Saulkrasti, Ķīšupe) and the beach connecting streets in Saulkrasti municipality;*

- *Park & Ride at railway stations in Saulkrasti;*
- *Construction of the Raiņa street connection with the beach park "Centrs" in Saulkrasti municipality;*
- *Improvement of the accessibility of the beach in Zvejniekciems village in Saulkrasti municipality, reconstruction of the street and pedestrian paths, including a pedestrian bridge over the River Aģe;*
- *Installation of boat roads to the beach and purchase of rescue service and water sports equipment in Saulkrasti municipality;*
- *Improvement of access to the beach of the right bank of the river Daugava, incl. to Mangalu pier (reconstruction of Mangaļsalas Street, provision of parking lots);*
- *Improvement of the access of the beach for operational transport between Mangalu pier and Vecāķi in Riga;*
- *Construction of the second bridge over river Buļļupe (at the continuation of Kleistu street) to improve access to the beaches of Daugavgriva (on the left bank of river Daugava) in Riga.*

15. Introduction of new principles in coastal transport and tourism services

The maritime and coastal smart specialization involves the development of new products that have not been possible so far (because the technology continues to develop) and the improvement of existing services and products by applying, for example, the following criteria:

- Project introduces a sharing service:
  - in transport and tourism (*share cars, share bikes*);
  - in water tourism (*share yachts, share-boats*);
  - in provision of accommodation (Airbnb as an alternative to regular hotels):
- Project introduces the use of solar or other RES;
- Project encourages walking, cycling or other active means of moving around (skateboards, etc.);
- Project introduces mobile applications, support platforms, gadgets and devices in scope of maritime issues.

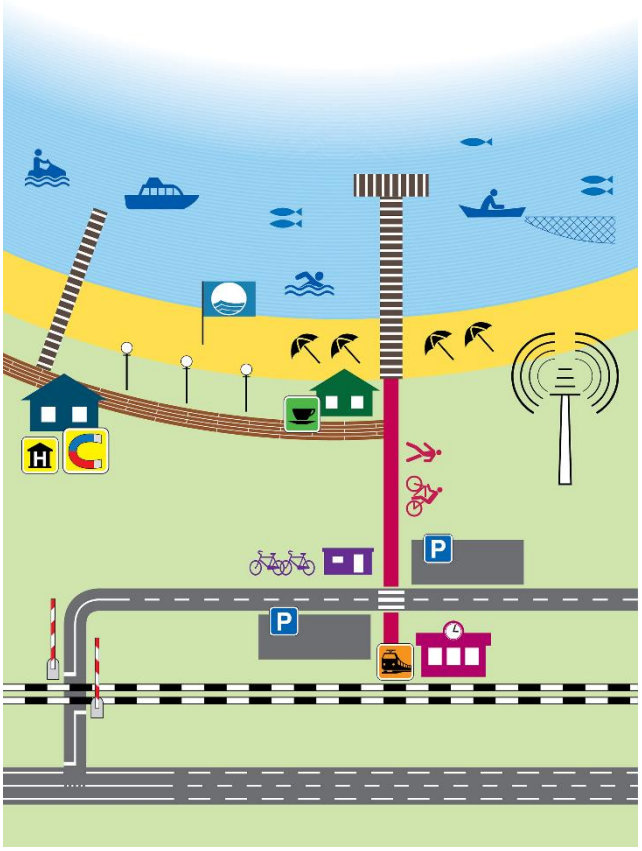
16. Smart promenades

The smart promenade connects in whole route a pedestrian paths along the coast, a trail in dunes, a construction of the pedestrian path on piles above water (Figure 4), a walking pier, the city's streets, a path to the beach and a route on natural beach.

Figure 4 Pedestrian path on piles above water pie Palangas (photo, 2018.g.)

There are cafes, exhibitions, sights, design, activities and informative objects, a mobile phone charging station, sun umbrella or raincoat hire, public toilet, bike, scooter and the like rent etc. on the edges of the urbanized promenade's section. At the Promenade's section, laying along the beach or through natural areas, there is minimal improvement (pointers, garbage dumps).

Figure 5 Elements of the smart promenades



Also in these stages, or in their direct vicinity, a technology-enabled infrastructure is installed - solar powered and with motion sensors equipped lighting, device and phone charging point, environment devices with interactive inquiries, playgrounds and sports, etc.

The smart promenade promotes walking and active leisure in coastal areas. It arouses interest in active leisure even in passive social groups which used to traditional way to spend time on the beach.

In each municipality, there are already trails of NATURA 2000, streets and pedestrian paths, accesses to the beach, strengthened waterfront (dams), which together can form a longer targeted route. By developing smart promenades as tourism products, elaborate a single public space design, mobile phone app, point the destinations, etc.

Smart promenades are ought to be linked with public transport and road infrastructure, creating mobility points (see measure 13..Mobility points and Figure 5 Elements of the smart promenades).

New forms are recommended at coast: dams adjusted for pedestrian footpath, pedestrian bridges in the sea on piles (only piles to have free movement of water under the construction to prevent coastal erosion), floating platforms, and trails elevated in relief or other interesting structures – all kind of ideas which promotes interest in walking.

17. Magnet objects on the coast

Despite the long history of the resort, there are few SPA[7] hotels on the coast of the Riga Gulf (in comparison to Lithuania and Estonia). During the cold seasons, the coast loses its importance as a tourist destination, and it affects coastal hotel and leisure services, as well municipalities.

In order to attract tourists, coastal municipalities need to develop new interesting objects or refurbish and repair existing objects that serve as their destination. Good examples are in neighbours' countries – Lithuania's Palanga and Estonia's Tartu AHA Hall and others successful examples. Businesses, for their part, will provide hotels, SPAs and various services.

Ideas for new magnet objects based on local resources and tourism development trends (**exploratory, active, sense-based tourism, based on new mobility and economic habits and technologies**).

The list can be creatively developed:

[7] "Sanus by Aquam" or "Health through Water"

- Swimming pool with warm sea water throughout the year;
- Fenced, separated swimming pool for a special target or leisure group;
- "Seal-quarium" - a center for cultivating, training, caring and demonstrating seals and entertaining and educating visitors;
- Maritime Museum, Fishing Museum;
- Nature Education Center (similar to Kemeri);
- Diving Center or diving services at existing water activities centers;
- Smart beach (see "Smart Promenades");
- Ice and sand sculpture, rustic tree beach design;
- Accommodation in the sea, sauna in the sea with the possibility to jump into sea water;
- Rental of equipment for watercraft and various water activities;
- Floating structures, piers and tracks in the water;
- Sunrise observation place in Engure and sunset observation places in Jurmala (Jurmala White Dune) and Saulkrasti.

Listed below are the interests of municipalities in the Riga Planning Region:

- *Improvement of Klapkalnciems park and construction of a parking lot in Engure municipalities;*
- *Improvement of access to old networks (sedums) in Engure municipalities;*
- *Renovation, restoration or redevelopment of parts of the Castle of Slokenbeka in Engure municipalities*[8]*;*
- *Information point in Ķemeri water tower, in Jurmala;*
- *Improvement of access to the historical building of the village Varza (fishermen's homes), by reconstructing of the municipal road Sidrabini - Sēklīši in Limbazi municipality;*
- *Restoration of Ainaži lighthouse, Kurmraga lighthouse and Ainaži Harbor pier in Salacgrīva municipality;*
- *Promenade development along the Salaca in Salacgriva - improvement of the territory along the Salacas shores and strengthening the coast (According to the vision of Salacgrīva municipality in 2038 "Salaca River is managed successfully, it is inhabited by salmon, lamprey, it is an interesting recreational object for tourists);*
- *Improvement of the historical centers of Salacgriva and Ainaži;*
- *Ensuring the availability of fortifications and military heritage structures in Mangaļsala, Riga.*

18. Improvement of beaches and diversification of leisure facilities

Public space improvement is one of the main preconditions in developing attractive coastal area. Main task – to offer active and passive leisure opportunities on beach as well in water for various holidaymakers' interest and age groups.

It is preferably to use new, innovative materials, solar and wind powered equipment, ergonomic beach furniture and, over time, to supplement the level of comfort powered by new technologies.

Measures and principles of smart use:

- provision of basic amenities infrastructure - toilets and showers, dressing cabins, benches, garbage cans, signs - using simple rational, seasonal constructions;
- the use of innovative methods and vehicles in beach cleaning and maintenance;
- developing games and playgrounds for children of different age groups;
- Active leisure areas for seniors (umbrellas, access to the wooden tracks, outdoor gymnastics);
- Rent of equipment for beach and active recreation;

[8] The works will also be started within the financing from the objective of specific support 5.5.1. in 2014.-2020.gadam

- mobile phone charging points, operated with solar cells, at the same time they can be as small items storage points, SOS points, digital information tables on water and air temperature and water quality referring bathing requirement, etc.
- seasonal service facilities on the beach or on water with a limited level of amenities (for example, sleeping cabin, a warm seawater swimming pool, a creative workshop, a cafe, a stage, a sauna with seawater);
- tent places in dunes or on the special section of the beach;
- camping grounds using renewable electricity;
- SUP boards, shooters, runners, etc. infrastructure for active holidaymakers (showers, dressing rooms).

Listed below are the interests of municipalities in the Riga Planning Region:

- *Improvement of Kalngale, Garciems, Carnikava, Gauja village, and Lilaste village beach, as well places at river Gauja in Carnikava municipality;*
- *Setting up places for tents next to parking place at Gara Judze, parking place Aizrags and parking place "Kupla Priede" in Engure municipality;*
- *Improvement of "Aizrags" beach, "Kupla Priede", Klapkalnciems village, Apšuciems village, Plienciems village, Kesterciems village, Engure village in Engure municipality;*
- *Improvement of 11 sections of Jurmala resort beach under swimming regulations (container type of sanitation): (Lielupe, Bulduri, Dzintari, Majori, Dubulti, Pumpuri, Melluži, Asari, Vaivari, Kauguri, Jaunķemeri) and of swimming places in river Lielupe (next to Ezera street);*
- *Establishing of 11 rescue posts at the section of the Jurmala resort and a rescue post at beach of the river Lielupe;*
- *Establishing of the swimming place at Varzu village and improvement of the beach in Limbažu municipality;*
- *Establishing of the swimming place at Salacgriva and Ainaži villages in Salacgriva municipality;*
- *Improvement of the swimming places at Kuiviži, Tuja, Svetciems (at estuary of river Vitrupe) in Salacgriva municipality;*
- *Improvement of the swimming places at Zvejniekciems village, "Centrs" at Saulkrasti village, restoration of the swimming place at White Dune in Saulkrasti municipality;*
- *Establishing pedestrian trails along the dunes and down to the beach, seasonal wooden constructions, pontoons above sea in Saulkrasti municipality;*
- *Establishment of tourism infrastructure in Nature park "Piejūra", Riga;*
- *Improvement of Mangaļsala beach, Riga.*

19. Water sports and water activities centers

Water centers can be developed at beach places with access to engineering facilities, near rescue services, and at marina ports. Use of water for active recreation and sports activities: wakening, kiting, skim boarding, sky skiing, using bathing mattress, air bladder, water motors and various types of boats.

The water center at the same time can offer training and relaxation services (activity rooms, sauna, barbecue, beach volleyball and beach football), thus providing a multifunctional resting place.

See in relevance with measure 18.Improvement of beaches and diversification of leisure facilities and measure 7. Riga Gulf coast and the Old Riga water connections for tourists, construction of the marinas and boat berth. *For example, it is planned to develop a water tourism center at Majori, in river Lielupe. At the same time it is possible to construct a ferry berth for the transfer of passengers to the other bank of the river Lielupe.*

20. Development of Eurovelo 13 and its links with the surrounding coastal area bicycle network

Biking becomes one of the most popular types of active recreation in Latvia. There are two international bicycle routes along the coast - EuroVelo 10 and EuroVelo 13. Only the route Eiro Velo 13 is marked in nature. Bicycle infrastructure is best developed in coastal town's and village's areas. On the cycling routes, mainly from Ainaži to Riga, the route runs on intensive motorways, and public transport is recommended at these sections of the bicycle route. It is planned to build and develop the cycling infrastructure for another 140 km by 2020. But still it is insufficient for safe and relaxing bike tour and discovering the coastal area by bike.

It is necessary to construct and improve the critical EuroVelo-13 sections in the coastal municipalities, as well to create the cycling infrastructure to the nearest points of interest to be linked with the international route of Eurovelo.

According to the needs identified by the local authorities, there are need for the construction of the following EiroVelo13 sections and of local bicycle routs:
• Construction of the EuroVelo13 motorway from Kalngale to Lilaste in Carnikava municipality: Construction of an asphalted cycling track with lighting, road signs, services (benches, bicycle parking);
• Establishment of a safe crossing of the Via Baltica motorway (A1) in Lilaste between the hotel Porto Resort and Lilaste train station in Carnikava municipality;
• Development of the EuroVelo13 section from Ragaciems to Apšuciems in the Engure municipality;
• Construction of bicycle paths and pedestrian ways to cultural heritage and nature objects in the Ķemeri - Jaunķemeri coastal area, Jurmala;
• Construction of a pendant bike-bridge at the railway bridge in order to form a connection for cyclists and pedestrians from Priedaine - Lielupe part of Jurmala resort;
• Reconstruction of the bicycle path Vaivari post - Skautu street (Asaru prospect), Jurmala;
• Reconstruction and improvement of the bicycle paths: at Strēlnieku prospect and link to municipality council building, 36th line - Smiltene Street, Jurmala;
• Construction of a bicycle road from the Priedaine railway station crossing – Buļļuciems - Majori (Turaida street) in Jurmala;
• Construction of a bicycle road Upes street - Vaivari (Skautu street) in Jurmala;
• Development of EV13 in the Limbaži municipality;
• Creation of new tourism cycling trails to coastal service enterprises in Limbazi municipality;
• Construction of a new bicycle path with asphalt pavement from Saulkrasti (White dune) to Skulte, Lauči, Dunte in cooperation with Limbazi, Saulkrasti and Salacgriva municipalities;
• Construction of the Eirovelo 13 path from the Estonian border to Neste DUS along Valdemara Street in Ainaži, Salacgriva municipality;
• Construction of the Eirovelo 13 path and improvement of the existing bicycle path along the A1 motorway A1 / Via Baltica in the Salacgriva municipality;
• Construction of the connection for the EuroVelo-13 cycling path on Mazā Valdemara street in Ainaži, Salacgriva municipality;
• Construction of the bike rout connection with EuroVelo 13 from Salacgriva Primary School, incl. crossing of road Via Baltica (A1) in Salacgriva municipality;
• Construction of the bike rout connection with EuroVelo 13 from Pärnu street, the Bocmanes square, and the bridge over Salaca and Riga street in Salacgriva;
• Construction of a bicycle road in Priedaine - "Jurmala White Dune", Jurmala.

21. Program "Marine Studies"

Riga Planning Region with the longest coastline, ports and human resources should position itself as a "sea-aware, sea-known" region.

There are many questions that are important to help businesses, municipalities and ports work and which can be combined under one research program - 'Studies on the Sea'. Studies like:

- what is the optimal type and configuration of the port's external hydrotechnical structures with less impact on shore processes, sediment flow at sea, etc.;
- what is the impact of climate change on the coastal areas of the Riga Gulf (flood, erosion, ecosystem change risks);
- what are the regional tourism trends (various tourism research);
- best practices for the use of sludge in healing, etc. natural resources research.

Existing offer of educational institutions in the field of maritime topics includes the programs of the Latvian Maritime Academy, the materials science and chemistry programs of the Riga Technical University (algae, various materials in the shipping industry), communications and navigation programs, the courses of the University of Latvia for geography masters on the sea.

The study program 'Studies at Sea' should develop new courses that complement the existing offer of secondary vocational and higher education institutions and new interdisciplinary programs.

3.4. Use of RES in the coast

Security of energy supply on the western coast of the Riga Gulf will be significantly improved after the construction of the high voltage line "Kurzemes loks", thus solving most of the problems associated with stable receiving electricity in the coastal zone, where the distribution network is more exposed to wind and weather conditions. Issues of great interest to businesses, farms and municipalities remain about the high costs of installing electricity infrastructure and the high prices of services. Alternative types of electricity are being sought.

Currently, 475 issued and valid licenses for renewable energy sources 122 have been issued at the coast of Riga planning region - 17 permits for a wind power plant (legal address of merchants in Riga) and 105 solar power plants (including 3 Limbazi, 1 Saulkrasti, 3 Carnikava and 5 Engure municipalities, 76 in Riga and 15 in Jurmala)[9]. Most of the permit was issued to a power plant with a capacity of 1 MW or less and for self-consumption.

The RES facilities are also installed by local authorities, for example, Salacgriva municipality installed solar-wind-powered street lighting systems in 2009, and Jurmala City installed solar-wind-powered lighting systems at the end of four streets near to beach in 2017. Solar batteries become more affordable each year (cheaper, easier to install), while wind turbines must comply with a range of regulatory restrictions (which refers to protection zones, height of wings, placement in protected areas).

[9] Information from the Ministry of Economics, 16.07.2018.

22. Tracking wave energy development

In Latvia, up to now, scientists have carried out laboratory character experiments about the possible use of wave energy, also have obtained patents for their inventions[10]. Operating experimental wave energy equipment was also produced by Riga shipyard (JSC "Rīgas kuģu būvētava") - in cooperation with Finnish company “Wello” a 0,5 MW “Penguin” type wave energy converter[11]. An industrial prototype that defines the performance of a wave-energy converter has not yet been developed.

Preferable is to support international co-operation in the wave energy research projects and to continue to follow global research results (for example, in Uppsala University, Sweden, where a wave-energy transformer has been created and solutions are being sought for the transition from the pilot level to the production level).

23. Pilot projects on the use of wind potential and research

Capital investments (bearing preparation, wind turbines and installation of other construction at sea base, their maintaining, access by crew vessels during ice) are disproportionately high against the expected efficiency of wind parks in Riga Gulf. There is much more potential for using the wind potential on the coast - the installation of wind turbines on the land, especially on the eastern coast of the Riga Gulf, where annual average wind rates are close to wind energy efficient projects.

Considering that 16% of Europe's energy comes from offshore wind, projects of experience and research will continue to be important, to follow the latest trends in the development of wind farms in the world - design, planning and multifunctional use of wind farm structures (mariculture, biomass, wave energy, etc.).

Such projects are also needed to follow the development trends of wind farms installed on coast.

24. Use of solar energy

The use of solar cells for building heating, equipment operating, and facilities improvement (lighting, swimming pools, information tables, etc.) – these are some of the practical examples of the use of solar energy in the coastal zone of the Riga Planning Region.

Solar battery technology evolves, and they are easier to apply to specific needs, starting with the placement of solar panels in the coastal meadows tilt they are placed on the roofs of the buildings or on separate pillars.

One of the solar energy pilot projects is planned to be implemented within the framework of this SBR project by installing a mobile phone charging unit on the beach, which can simultaneously serve other purposes and leisure facilities.

[10] Patent Office of the Republic of Latvia. Inventions, Trademarks and Designs. Patent "WATER TANK ENERGY PERFORMANCE EQUIPMENT", 456 pp.
[11] http://www.riga-shipyard.com/lv/project/penguin/

3.5. Resort and health tourism

25. Hospitality Schools

Hospitality schools are a symbolic representation for the complex of measures concerning *resortology*, as *hospitality* is the key of the quality of the service-offer in the industry.

Resortology is a science that studies natural healing factors (climatic, balneological, etc.) and their effects on the human body and explores the content and organization of healing tourism.

Health tourism - improving the general condition and well-being of the body, prevention, treatment and rehabilitation through the use of natural healing resources.

Resortology and health tourism activities are especially relevant to Jurmala, Saulkrasti and Riga in Riga Planning Region. The rest of the coast is part of health tourism and provides cooperation and support points.

The support measures must be broad and cover the needs of companies and workers in the health tourism and hospitality sectors:
- Re-foundation of Jurmala resort polyclinic;
- development of resort infrastructure, rebirth of resort healing services;
- introduction of new technologies in clinics and treatment institutions, approbation of new treatment approaches;
- training of the resort specialists, hospitality industry staff;
- resort marketing activities.

4. IMPLEMENTATION PROCESS

MCSS Strategy for the Riga Planning Region target space "Coast" sets up a project framework for the planning period after 2020.

MCSS Strategy is prepared for the objectives of the project "Smart Sea Regions: Smart Specialization, Marine and Coastal Resources for the Growth of the Baltic Sea Region / Smart Blue Regions", and will be implemented by the Riga Planning Region in cooperation with local municipalities, research institutions and private and non-governmental sector in the form of projects.

Figure 6 Overall policy implementation structure of the MCSS Strategy

The next step is the development of priority projects - justification, identification of cooperation partners and planning of specific activities.

Priorities - Strategic project ideas

Ports - coastal economic development and knowledge centers
Network of marinas and boats embarkation points
Basic public infrastructure in coastal areas
Scientists for the blue growth

"Ports - coastal economic development and knowledge centers"

The main direction of operation of small ports is the export of timber cargo, to lesser extent – exports of minerals, fishing, fish processing and, a little – also tourism. The ports are already "major players" at the coast of the Riga Gulf, which manages considerable amount of money, makes significant investments in port infrastructure; they have the capacity to manage resources.

In the future, small ports may be developed as centers of economic development and knowledge of the coast, as they have infrastructure, can find free areas and buildings that can be used by scientists, new businesses, yachting and water tourism providers. Ports can offer technical support and specialists.

The establishment of a supportive coastal support program, the owners of which are port authorities.

Project encourages the establishment of a coastal support program, whose managers are the port authorities.

Start-ups activities can be related to the development of materials and technology for shipbuilding, human resource development for sailing, coastal, port, hospitality and shipping management, and training for new specialties.

Coastal support program may include the financing of:
- start up new businesses,
- technical support for research and pilot activities,
- port facilities, infrastructure, transport, technology and recruitment of experts,
- the development of public infrastructures in the port,
- the improvement of public infrastructure around the ports, making them suitable for business and tourism in the future.

Relevant measures: all

"Network of marinas and boats embarkation points"

The marinas and boats embarkation points' network in the Riga Planning Region will consist of:
- Freeport of Riga;
- small ports with renewed and newly built infrastructure for the ferries and yachts;
- marinas outside ports, boat berths, which will serve as infrastructure for water activities, boat launchers (slipways), etc. infrastructure for the coastal fishing heritage.

Accompanying measures for berth network are navigational and maritime safety measures, as well as the development of tourism products (apps, routes, etc.), development of the water activities centers and maritime education activities.

Berths: in the Daugava (opposite to the Old Riga), in small ports, newly established marinas in Salacgriva, Ainaži, Kuivizhi, Zvejniekciems, Carnikava (Gauja), Riga (Buļļupe, Daugava, Vecdaugava), Jurmala (Lielupe) in Ragaciems.

Relevant measures: 3, 7, 8, 10, 13, 16, 19, 21.

"Basic public infrastructure in coastal areas"

On the coast, where the transport and pedestrian flow depends on the seasonality, it is necessary to look for unconventional, rational solutions for the provision of infrastructure and services.

If the coast serving infrastructure - parking lots, cafes, accommodations, etc. - is overloaded in summers, it is practically not used in winters, and its maintenance (staff, operating expenditure) only generates costs.

Without the basic infrastructure at the coast, blue growth measures can not be implemented. The "basic" needs of municipalities and enterprises can be addressed by applying smart methods to promote smart specialization.

The project may focus on the improvement of the following coastal infrastructure:
- network of coastal roads and streets, parking lots, railway crossings, paths to beach, beach improvement, public service infrastructure, communications and engineering supply, solar and wind energy installations also in the areas where communication construction is limited;
- mobility points and mobility services to use public transport services effectively;
- Eurovelo and the local bicycle network;
- Public outdoor space, smart promenades, active recreation infrastructure.

Relevant measures: 14., 15., 16., 18., 20., 24.

"Scientists for the blue growth"

The Riga Planning Region with its long coastline, ports and human resources should position itself as a "sea-aware," sea-aware region.

Priority includes support for research and pilot projects covering a wide range of natural science industries to promote:
- increasing the efficiency of shipbuilding companies and shipping companies, the development of shipping equipment and products, the sustainable use of indigenous resources and the creation of innovative products;
- the cultivation of mariculture (fish, shellfish, algae) in the specific environmental conditions of the Riga Gulf;
- collaboration of scientists with ports and port enterprises providing a testing environment (production, testing, demonstration and adaptation of prototypes in production (in the first stage of commercialization)).
- collaboration of scientists with educational institutions and municipalities in the development of educational programs and new knowledge centers, which may also be local tourism objects.
- researching the impact of climate change on the coastal areas of the Riga Gulf (flood, erosion, ecosystem change risks reduction);
- coastal tourism, in particular water tourism, resort tourism and the use of Riga Gulf coastal healing resources in tourism.

Projects should encourage blue growth smart specialization clusters, elaboration of the interdisciplinary curriculum for universities in cooperation with Latvian Maritime academy, as well elaboration of the training modules and implementation into secondary and professional education schools.

Relevant measures: 2., 5., 11., 12., 21., 22., 23., 25.

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