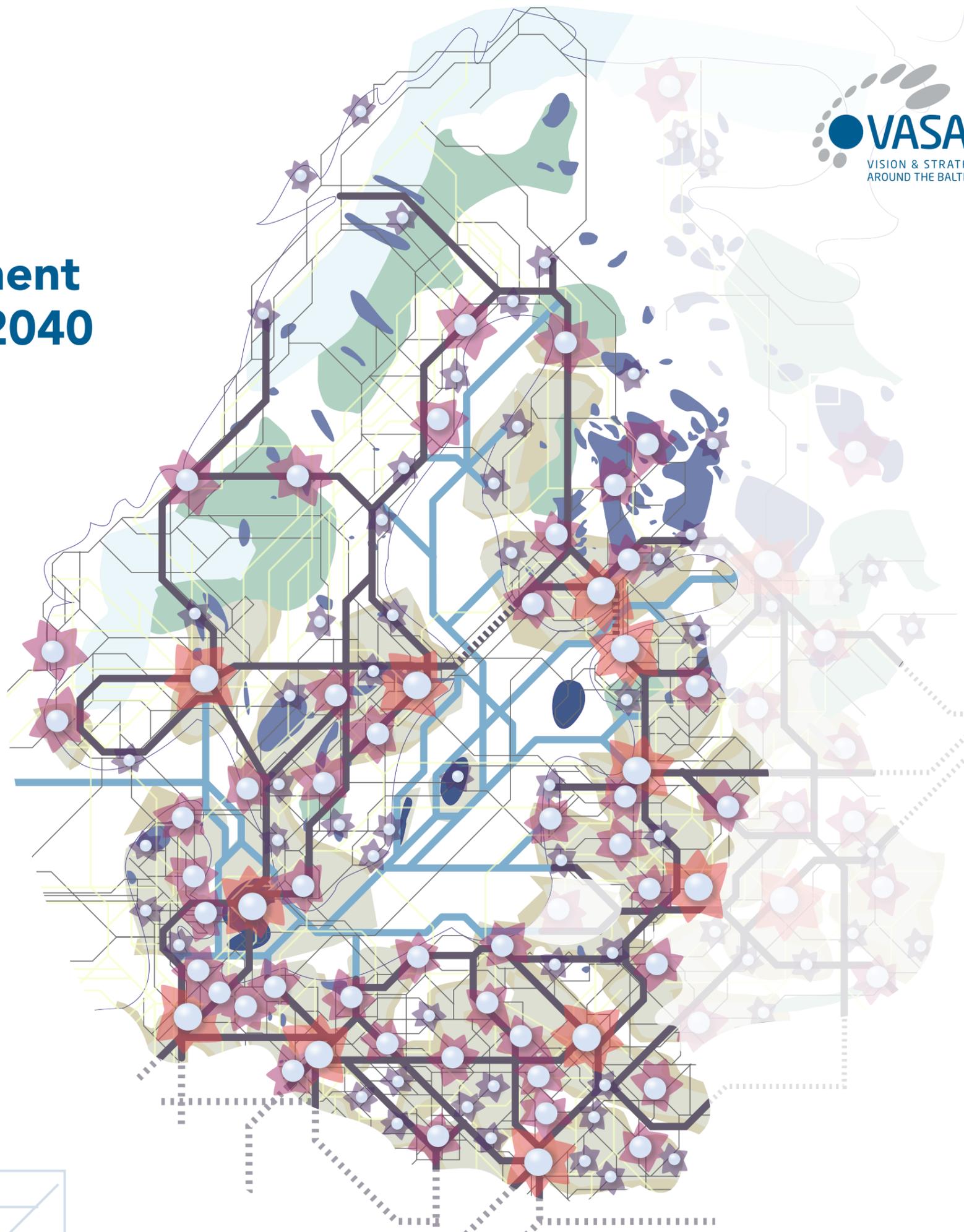


VASAB Vision for the Territorial Development of the Baltic Sea Region in 2040

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VASAB Vision for the Territorial Development of the Baltic Sea Region in 2040

This publication has been prepared on the basis of the Report prepared by Spatial Foresight GmbH and Nordregio in 2021-2022. Vision 2040 was adopted by VASAB Committee on Spatial Planning and Development of the Baltic Sea Region on its 88th meeting on 13 December 2022. Vision 2040 was endorsed by 9th VASAB Ministerial Conference in Wismar on 2 June 2023. Suggested citation: VASAB. (2022). VASAB Vision for the Territorial Development of the Baltic Sea Region in 2040. Explore more on the visioning process at <https://vasab.org/vision2040/>

Layout and design: SIA DUE, Latvia

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Disclaimer

Statement of the Member States of the European Union participating in the VASAB Committee on Spatial Planning and Development of the Baltic Sea Region

VASAB (Vision and Strategies around the Baltic Sea) is a cooperation of ministers responsible for spatial planning and development of the Baltic Sea Region countries, established in 1992.

The main VASAB mission is to prepare policy options for the territorial development of the Baltic Sea Region, to provide forum for exchange of knowledge, promote and participate in cooperation projects which provide added value to achieve well-integrated and coherent Region, as well as collaborate with other pan-Baltic, macro-regional, European and other international organisations and initiatives. VASAB also coordinates Policy area ‘Spatial Planning’ of the EU Strategy for the Baltic Sea Region (EUSBSR) in two action fields: land-based and maritime spatial planning aiming to increase the territorial cohesion in the Baltic Sea Region.

The Member States of the European Union participating in VASAB – Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden – are deeply concerned and strongly condemn the military aggression to Ukraine by the Russian Federation, supported by Belarus. This unprovoked and illegal military attack breaks international laws and violates the fundamental principles and aims of peace, cohesion and democracy. Due to these circumstances, we have decided to suspend Russia and Belarus from the VASAB Committee on Spatial Planning and Development of the Baltic Sea Region and Steering Groups of the EUSBSR Policy area ‘Spatial Planning’ for land-based and maritime spatial planning and participation in related activities. Our countries are at the same time also founding members of the Council of the Baltic Sea States where a similar decision on suspension of participation by Russia and Belarus has been made and is in effect.

The current decision may be reassessed when cooperation under the fundamental principles of international law has become possible again.

Decision

Due to the armed aggression by the Russian Federation with support of Belarus against the sovereign state Ukraine, the Member States of the European Union participating in VASAB decide to suspend Russia and Belarus from the VASAB Committee on Spatial Planning and Development of the Baltic Sea Region and Steering Groups of the EUSBSR Policy area ‘Spatial Planning’ for land-based and maritime spatial planning and participation in related activities.

4th March 2022



Introduction

How would a desired Baltic Sea Region look like by 2040? How do we envision its urban networks and settlement structure, its physical and digital connectivity, the management of its 'commons' that ensure a good quality of life, and its maritime and spatial planning by 2040? What do we wish to look different from today?

Visions are a powerful approach to imagine desirable futures. VASAB has been one of the pioneers in developing visions, dating back to the first VASAB vision "VASAB 2010. Towards a Framework for Spatial Development in the Baltic Sea Region" in 1994. This vision is the update of the VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region in 2030, also referred to as VASAB Vision 2040, going through the four metaphors, i.e., the Pearls, the Strings, the Patches and the Systems of the Baltic Sea Region. The four metaphors are not to be seen as single elements, but rather complementary to each other. The vision is accompanied by future sketches of the Baltic Sea Region for 2040 serving only for illustrative purpose and showing the key messages of each metaphor by 2040 in an alternative and illustrative way.

WHAT IS A VISION?

Vision defines a **desirable picture** of the future. This picture is based on a core set of **ideas, values and principles**. Another term to describe similar long-term pictures of desirable futures is 'perspectives'. Visions need committed players who share common values. Clear actions and a timeframe help to realise a vision in the long run, as visions without actions may end up being daydreams, while actions without visions risk to become nightmares (Japanese proverb).

The vision builds up on the research carried out for the background report of the vision, which follows the same structure of the vision, i.e., going through the four metaphors. This background report presents the state of play and current challenges, giving examples for the different metaphors, as well as presenting a number of future trends relevant for the vision and is published as a separate online document. The background report is a supporting document and gives a good overview of what has been taken into account in this vision.

The future of the Baltic Sea Region is shaped by the people living and the enterprises active in the Region. At the same time, the high level of connections and interdependencies between places, means that also wider development trends contribute to the future of the Baltic Sea Region. Indeed, changes take place constantly, influencing people and places in different ways, shaping the economy, policies and global power balances. Over the next decades demographic changes including aging and migration, the impacts of climate change and the loss of biodiversity, changing societal behaviour and values, technological innovations, changes in energy supply and demand, macro-economic developments and geopolitical situations will contribute to shaping the Baltic Sea Region. This may imply new forms of globalisation, new approaches to security and (geo-) political stability, more focus on sustainable solutions for the production and consumption of goods, not at least related to energy and transport, more emphasis on people's work life balance and on the non-negotiable value of green and blue ecosystems and biodiversity, periods of economic stagnation or even downturns. These trends will mean different things for different types of places.

How will areas with highly globalised economies and societies react to changing globalisation and geopolitical trends? Which places will benefit, and which will be challenged in a society where people put more emphasis on sustainable lifestyles, circular economy and better work life balance? What will future innovations of which we hardly have any premonition today affect the development of our places? How do we want the Baltic Sea Region to develop and navigate towards a desirable future in the sea of uncertainties?

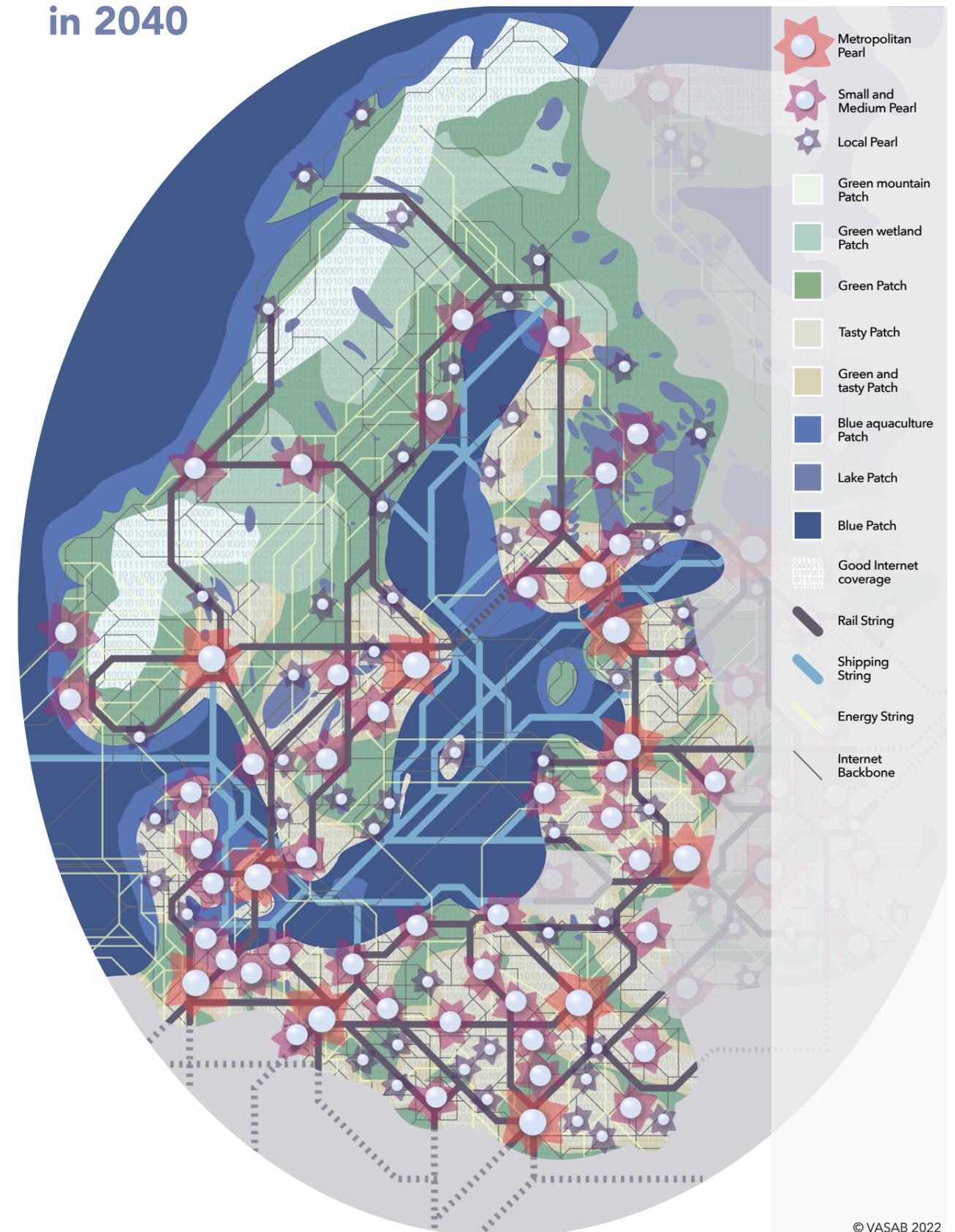
Acknowledging the current challenges, development and trends and the need for strong coordinated policies and experience exchange across the Baltic Sea Region and beyond, the updated VASAB vision is developed through a co-creation process involving the VASAB Committee on Spatial Planning and Development of the Baltic Sea Region (CSPD/BSR) and a wider audience through workshops and a survey. The VASAB vision is a forward-looking document presenting the desirable future for the Baltic Sea Region as a whole, comprising the land-based and maritime spatial elements of the Region, respecting its diversities and specificities, and embracing sustainability and integration throughout. Vision serves as a main reference framework for future VASAB work.



1 Vision – a Baltic Sea Region for the next generations

- (1) The Baltic Sea Region in 2040 is one of the first regions that has achieved the sustainable, digital and just transition utilising its territorial specificities. It is a spatially balanced and interconnected Region where a healthy Baltic Sea is the central asset around which the Region prospers. In 2040, we envision to hand over to the next generations:
- (2) **A DIVERSIFIED AND FRESH BALTIC SEA REGION.** The diversity of places, nature and people in all corners of the Region co-exist and stimulate each other.
- (3) **VIBRANT PEARLS OF ALL SIZES.** Rural areas, the functional areas of small and medium-sized towns, cities and metropolitan areas in the Baltic Sea Region offer high quality of life and are well networked with Pearls building on their own comparative advantages, capabilities and complementarities between them.
- (4) **WELL-CONNECTED STRINGS BETWEEN PEOPLE AND PLACES.** Physical and virtual connectivity for goods, people and their knowledge is green, secure, efficient, reliable and affordable all over the Baltic Sea Region, linking the Region to the rest of the world, as well as small and big places in the Region with each other. Energy production is carbon neutral, secure, decentralised and well-connected throughout the Baltic Sea Region.
- (5) **RESILIENT PATCHES OF ECOSYSTEMS AND UNIQUE AREAS AT SEA AND LAND.** Sea and land environments of the Baltic Sea Region have high levels of biodiversity, intact, continuous and unbreakable ecosystems and overall a healthy nature securing the livelihood, production and good quality of life in all parts of the Region.
- (6) **COOPERATIVE SEA AND LAND PLANNING SYSTEMS.** Advanced and transnationally coordinated land-use and maritime planning systems across sectors, borders, and levels of administration in the Baltic Sea Region make the Region a pioneer in the sea and land planning, improving the resilience and security.
- (7) We envision a Baltic Sea Region where the next generations will enjoy a high quality of life based on our mindset shift towards sustainability in all aspects of life, on more cohesion, integration, solidarity and macro-regional cooperation, and on a wiser use of technology for the common good of places and people. Adequate policies and joint actions help in coping with challenges across various levels, sectors and borders.

The Baltic Sea Region in 2040





2 Pearls

- (8) (Definition) Pearls describe the urban and rural network and settlement structure of the Baltic Sea Region. The Pearls are the anchor points of spatial development and by clustering people and ideas they are important drivers of change towards a green and digital transition. Pearls are urban centres and their functional areas. They all are characterised by mutual interdependencies; they are linked and depend on each other, regardless of whether they are in sparsely populated areas, coastal regions or the mainland of the Baltic Sea Region, forming an integrated network and overall resilience. Whether a Pearl is perceived as local, small and medium-sized or metropolitan depends on its spatial context and function in the wider regional, national or transnational territory. As population density and settlement structures differ widely in the Baltic Sea Region, the function of place is more important than its number of inhabitants. For instance, a comparably small place in Northern Finland or Sweden can have a much higher importance for the development of the area and the provision of services than a place of the same size in the shadows of Berlin, Hamburg or Warsaw.
- (9) **BY 2040 ALL PLACES, RURAL AREAS, SMALL AND MEDIUM-SIZED TOWNS, CITIES AND METROPOLITAN AREAS OFFER HIGH QUALITY OF LIFE BUILDING ON THEIR OWN COMPARATIVE ADVANTAGES AND COMPLEMENTARITIES AND BEING WELL NETWORKED WITH AND ACROSS EACH OTHER.**

Possible future actions:

- (10) **Carbon neutral Baltic Pearls**
 Pearls in the Baltic Sea Region are drivers and hubs of green and digital transition, by implementing approaches and strategies that adapt and mitigate climate change consequences, improves resilience and sustainable well-being, as well as identifies unique strengths of Pearls in the context of the Smart Specialisation Strategies. Digital developments support this transition. Examples that can lead to that direction are the implementation of smart and resilient city concepts, compact cities, or the 15-minute cities concepts, public-private partnerships optimising the efficiency of city operations. Further examples are the integration of UN Sustainable Development Goals in the local agendas to contribute to the transition to a green and just society and economy, as well as circular economy approaches in all Pearls and develop adaptation strategies to address climate change effects and other challenges to increase quality of life in Pearls of all sizes.

2.1 Local Pearls

- (11) **RURAL AREAS ARE THE LOCAL PEARLS OF THE BALTIC SEA REGION.**
- (12) Rural areas, including villages and smaller settlements, are attractive places in their own rights. They are the local pearls of the Baltic Sea Region. The view that rural areas are satellites of urban centres is obsolete by 2040.
- (13) (Diversity) There is a huge diversity of rural areas, as each comes with its own particular characteristics. Given the different territorial specificities, for example, islands, e.g. Hiiumaa, coastal rural areas, e.g. Pärnu or places in North Jutland, differ from inland rural areas, e.g., in Daugavpils, or mountainous rural areas, e.g., in Jämtland. Rural areas in the North of the Baltic Sea Region, e.g., in Finnish and Swedish Lapland, differ from those in the South, e.g., in Subcarpathian. Some rural areas are rather sparsely populated and remote, especially in the North, whereas others are home to dense networks of vibrant villages, e.g., in Demmin. Some of them are also more easily accessible than others.
- (14) (Rich local economies) This geographical diversity comes also with a multitude of economic and social activities in rural areas. Rural areas play an important role in a wide range of economic activities and the provision of services of general interest. Local Pearls go beyond activities on agricultural production and range from sustainable tourism, recreation, social innovation entrepreneurship and renewable energy production to social and technological innovations. Rural areas also go beyond activities linked to their natural habitat. Local rural economies are also home to service sector activities, with rural co-working spaces and small consultancies and research centres occupying people from their region or surroundings. Others have a rather manufacturing or industrial economic profile, such as Småland, while bioeconomy plays a key role in the transition from fossil fuels to sustainable solutions. In many cases prosperous rural areas combine tradition, local assets and creativity. Communities are empowered and form a strong community engagement, and shared common values shape an active rural life. People are involved in various organisations, such as cooperatives, associations or social enterprises.
- (15) (Attractive places of economic activities) Even if many local Pearls face ageing and population decline, it does not necessarily mean economic decline or decline in the quality of life. By applying smart shrinking approaches vicious downward circles could be avoided. Local Pearls are also attractive territories for investment and public-private partnerships. In many cases they are suitable places to attract green industrial sites of big well-established companies or be hotspots of start-ups. Rural areas are areas of dynamism going beyond ecosystem services and food production. They are prosperous with a high diversification of economic activities. The Baltic Sea Region has a huge diversity of rural areas, each of which having its

own economic profile and sphere of activity. Some being highly specialised in certain industrial segments, research and social innovation or tourism, or be places for industrial facilities, such as data centres, also attracting employees from their surroundings. With the reduction of digital divides, rural areas have become stronger, more resilient and connected, getting better access to services. A common feature, however, is that they are embedded in a healthy regional environment.

- (16) (Nature) They are the green gears of intact natural habitat and ecosystem services in the Region. Rural areas are characterised by a large share of nature. They focus on environmental resilience and climate action. Increasingly the value of intact ecosystems is recognised. Maintaining and further developing the natural values and ecosystems is becoming an important element of rural economies. Being close to nature, surrounded by beautiful landscapes, fresh air and water contributes high quality of life and attractiveness of rural areas.
- (17) (Rural-urban partnership) Rural and urban areas rely on each other. Rural areas also provide manufacturing, innovation, services in a wide range of sectors. On the other side, rural areas also rely on urban areas for the provision of services of general interest, for cultural events and labour market services. Food production, ecosystem services, recreation services in the rural areas are essential for urban areas. This concerns among others circular economy, local food production, access to natural resources, fresh air and water, and recreational areas. All this makes them essential to urban areas in terms of economic activities, quality of life, overall livelihood and ecosystem services. Urban areas are dependent on rural areas. In other words, the local Pearls are the essential backbone for the Baltic Sea Region, having mutual interdependencies with the metropolitan and small and medium-sized Pearls.
- (18) (Quality of life) Being close to nature is a good life enabler and one of the key conditions contributing to people's quality of life. Rural areas are resilient places, fostering well-being through environmental resilience and strong social cohesion, including access to public services. It encompasses both human and all living beings in harmony. Natural and living environment and the activities related to it are prerequisites for a good life of the people in the Baltic Sea Region.

Possible future actions:

- (19) **Community-led cooperative economies for local Pearls**
Reaping the benefits of digitalisation and building along remote working opportunities, local Pearls can accommodate co-working places attracting people from their vicinity. With the future of work being transformed after the pandemic outbreak, local Pearls can offer a combination of an increased quality of life with flexible co-working spaces, linking the communities to collaborative networks. They can also support other local Pearls activities, such as solar and wind energy production, local food and handcraft production, different services in local level which are with market failure, services for tourists, and adapt climate risk reduction strategies reducing the negative effects of climate change etc.
- (20) **Innovative digital services of general interest to serve local Pearls**
Improving the access to services of general interest through digital tools and providing digital solutions to be applied for improving the access to public service of general interest in local Pearls.

2.2 Small and medium Pearls

- (21) **SMALL AND MEDIUM-SIZED TOWNS ARE THE GEARS OF THE BALTIC SEA REGION.**
- (22) Small and medium-sized towns – including their functional areas – are home to the majority of people living in the Baltic Sea Region in 2040. They are prosperous centres of activities, connected to the world, and cooperate in various national and cross-border networks and twin cities projects. Most importantly they offer a good quality of life to people, support the community development opportunities and stand for cohesion, resilience and integration in the Baltic Sea Region.



- (23) (Activity centres) In the Baltic Sea Region, small and medium-sized towns represent a rich and diverse number of activities. They are at the forefront of developments which require a certain critical mass, community feeling and compact settlement structures with short distances. For example, they are leading the way in exploring new solutions and drive behavioural consumption and production changes in areas such as circular economy, sharing economy, decentralised additive manufacturing, food production, sustainable tourism, culture, social innovation and creative industries. Sustainable solutions and initiatives have been in place for greener small and medium-sized Pearls. Following a place-based and functional approach, each of them builds on its unique characteristics, environments, communities and development potential. As a result, the Baltic Sea Region is covered by a colourful multitude of small and medium-sized towns. Prosperous, attractive and vibrant in their own way, they build on its place-based characteristics and specific advantages. Taken together, they are the backbone of social integration, resilience and cohesion.
- (24) (Connected to world) Bridging the digital divide, small and medium-sized cities and towns are connected with each other, with the local Pearls, with larger urban areas, as well as internationally. Mesh networks have facilitated the digital connections, communication, direct and dynamic connections between citizens and players in small and medium-sized Pearls. These advancements have led to a reduced relevance of physical distance and made small and medium-sized cities and towns the nodes for remote working and decentralised production. In small and medium-sized Pearls not only the traditional office environment is changing, but also local production processes. This allows for increasing opportunities and improving the work-life balance of their citizens.
- (25) (Small town networks) Cooperation between small and medium-sized towns allows them to reinforce their strength and benefit from complementarities. Various networks of players in small and medium-sized towns across the Baltic Sea Region get these places out of the shadow of the metropolitan areas. Networks of small and medium-sized towns across the Baltic Sea Region work together on policy related activities, specific economic endeavours and new opportunities. This can be in the fields of business networks or related to pushing policy agendas particularly relevant for small and medium-sized towns. Local networks of small and medium-sized towns in close vicinity coordinate on sharing economy offers and possibilities and in getting critical mass for the provision of services of general interest. This can be in the fields of healthcare, education and local transport. Cooperation between small and medium-sized towns and their nearby metropolitan area can help addressing the integration of labour markets, (affordable) housing, public transport, climate change adaptation, recreation etc.
- (26) (Key service providers) Small and medium-sized Pearls are key service providers in their vicinity and beyond – particularly for labour markets, services of general interest, education, health, and local transport.
- (27) (Smart shrinking) Small and medium-sized towns, although having lost in population, have gained in quality of life. By applying smart shrinking approaches, strong social infrastructures have been built. Such small and medium-sized Pearls have adapted to population changes early, changing their profiles and implementing

strategies to tempt their citizens stay, such as by offering co-working places to develop critical mass and attract educated and young people, investing in silver economy, nature tourism, by offering closed local services, short distance commuting and improving a work/life balance approach to increase quality of life. Shrinking small and medium-sized Pearls are not seen as places of a vicious downward spiral but can be seen through positive lenses beyond the demographic changes outlook, by focusing on alternative uses of existing infrastructure and more efficient and environmentally friendly use of available resources adjusting to lower population numbers, such as more compact land-use planning, innovative solutions and public-private partnerships in service provision. Brownfield and greenfield approaches have also been tested and implemented to regenerate places and rebuild focusing on new trends and developments.

- (28) (People-centred) Small and medium-sized towns are the microcosmos of our society. They contain the manifold facets of society, economy and culture in an integrated way. The different societal facets blend into local communities, which support social integration and equality. In many regards quality of life is higher in small and medium sized towns than in larger metropolitan areas, not the least due to a stronger sense of community and belonging nurturing the wellbeing of their citizens.

Possible future actions:

- (29) **Small Pearls academy network**
Development of a network or thematic cluster of small and medium-sized Pearls and support of existing networks as a platform to exchange on different topics of interest, create common visions and initiatives to address common challenges, reinforce their strengths and learn from complementarities, spreading at the same time the strong community feeling through expanded cooperation. These can include networks across Pearls in the mainland, across sparsely populated areas in the Baltic Sea Region, as well as coastal belt of Pearls bringing together coastal areas.
- (30) **Adaptation policies for demographic changes (including ageing)**
Keep small and medium-sized towns competitive – even in times of demographic decline – building on their place-based niche activities and potential and ensuring they are attractive economic and social centres. Increasing the attractiveness of small and medium-sized Pearls for young people to stay and / or move there for education, work and leisure, strengthening social hubs, as well as offering incentives to attract and integrate international migrants for compensating demographic decline.
- (31) **Sustainable tourism initiatives**
Develop sustainable tourism offers in local Pearls, small and medium-sized towns to broaden the economic activities and strengthen sustainable – often regional or domestic – tourism and recreation. Sustainable tourism and tourism routes and infrastructure contribute to the green transition of the areas making places more attractive and economically diversified. Offering for instance, Baltic bike routes across the Pearls of the Baltic Sea Region, connecting different places across borders, developing cross-border ecotourism in the green and blue Patches through cross-border coordinated actions, to support the regional economy without putting the natural assets at risk.

2.3 Metropolitan Pearls

- (32) **GREEN, BLUE AND VIBRANT METROPOLITAN AREAS CHARACTERISE THE BALTIC SEA REGION INTERNATIONALLY BY 2040.**
- (33) In 2040, metropolitan areas and their functional areas are hubs of spatial integration in the Baltic Sea Region, at least at three different levels. These are Baltic, global and peri-urban.
- (34) (Integrated network) Metropolitan areas across the Baltic Sea Region form a well-integrated network. This network stretches across national and EU borders. It involves on equal footing major metropolitan areas such



as Øresundregion, Berlin, Warsaw, Stockholm and Hamburg, as well as smaller metropolitan areas such as Gothenburg, Helsinki, Tallinn, Vilnius, Riga and Gdansk. The network is characterised by an intensive exchange and flows of ideas, creativity, innovation, capital, goods, services and people. Players in metropolitan areas cooperate and compete in various fields of economy, innovation, green and blue technologies, arts and culture. People living and working in these areas are at the forefront of progress and development. Barriers to integration and cooperation between the Pearls have successively been removed by 2040. This has been done across the Baltic Sea Region, stretching beyond the European Union (EU). In 2040, the network of Pearls as well as its individual Pearls are strong, diverse and prosperous focal points of progress towards a sustainable future. As all parts evolve and mutually benefit from the strong networking, former barriers decrease.

- (35) (International hubs) Metropolitan areas in the Baltic Sea Region also play a role in a wider international context, being hubs of innovation, services, business development, education, culture and connectivity. Some of them are international hubs themselves. Others cooperate to position themselves internationally, as e.g. the cross-border functional areas of Øresundregion or Helsinki-Tallinn, or the functional region of Tricity (Sopot, Gdansk, Gdynia). In the international context, the metropolitan areas – or cooperations thereof – of the Baltic Sea Region have different profiles as regards thematic focus or geographical orientation.
- (36) (Profile) Some of them are leaders in fields such as green and blue technology and economy, sustainable innovation, carbon neutrality, digitalisation, artificial intelligence, banking, ship building, nanotechnology or steel production. Some host international headquarters and others host global leading research or innovation centres. Others are international gateways to specific parts of the world. This may include profiles targeting particular parts of the world.
- (37) (Peri-urban) Metropolitan areas in the Baltic Sea Region are also important centres for their vicinity. They are prosperous centres of development, progress and resilience. As such they host functions which are relevant for a wider territory. This may include labour market, services of general interest, social, cultural, creative and entrepreneurial milieus. They are frontrunners in developing sustainable solutions for improving their citizens' wellbeing, e.g., following the New European Bauhaus wave and initiating energy saving renovations in buildings. They are leading the way towards a green society and economy, exploring more sustainable solutions, changing lifestyles, moral economies towards a social and not only economic lens, carbon neutral technologies, circular economy, digitalisation and artificial intelligence. They are a mosaic of diverse cultures, making the Pearls – the hearts of vibrant communities and innovative ideas, supporting further social integration.
- (38) (Metropolitan responsibility) Increasing social and cultural inequalities between metropolitan and non-metropolitan areas called for new forms of collaboration and more responsibility to be taken by metropolitan areas to minimize the divides. New forms of cooperation, governance and spatial planning within urban areas and their vicinities (including suburb areas as well as hinterland rural areas) are developed and tested

taking into account wider functional geographies. This ensures that prosperity is shared, divides between places are reduced and there is a balanced development beyond the metropolitan areas.

- (39) (Local communities) Metropolitan Pearls have increasingly become the ‘places for all’ for all kinds of communities and age groups, enabling local societies to thrive. Citizens’ wellbeing is in the centre of attention of inclusion and integration policies. With the metropolitan Pearls becoming greener and more sustainable, the quality of life and of the living environment increases.
- (40) (Green wellbeing) People in metropolitan areas also enjoy a good quality of life, particularly in relation to the green transition efforts and strengthened local communities and eco-friendly public spaces. This includes a shift to no net-land take and net gains of urban green spaces. The elaboration and implementation of carbon negative city visions, following the example of Helsinki, have widely taken up in the Baltic Sea Region. Smaller green areas in the metropolitan Pearls contribute to that, providing important ecosystem services and physical and mental benefits to the people, raising more awareness towards the environmental protection and preservation and reducing its negative effects of climate change.
- (41) (‘Diplomacy’) Metropolitan areas are continuing to set agendas in their vicinity and in wider decision-making processes. Increasingly metropolitan areas have become ‘diplomatic players’, resulting in an upgraded future role for urban areas. Pearls have increased their decision-making power, influencing national, EU and international policies. They assume environmental responsibility, they break mental barriers for the flow of ideas and innovations. Pearls are game changers leading by example, testing and upscaling new solutions in the green and digital transition sphere. This way they influence national, international and global development. Citizen participation in the decision making, especially through digital platforms has increased as regards decisions relevant for the development of the metropolitan Pearls.

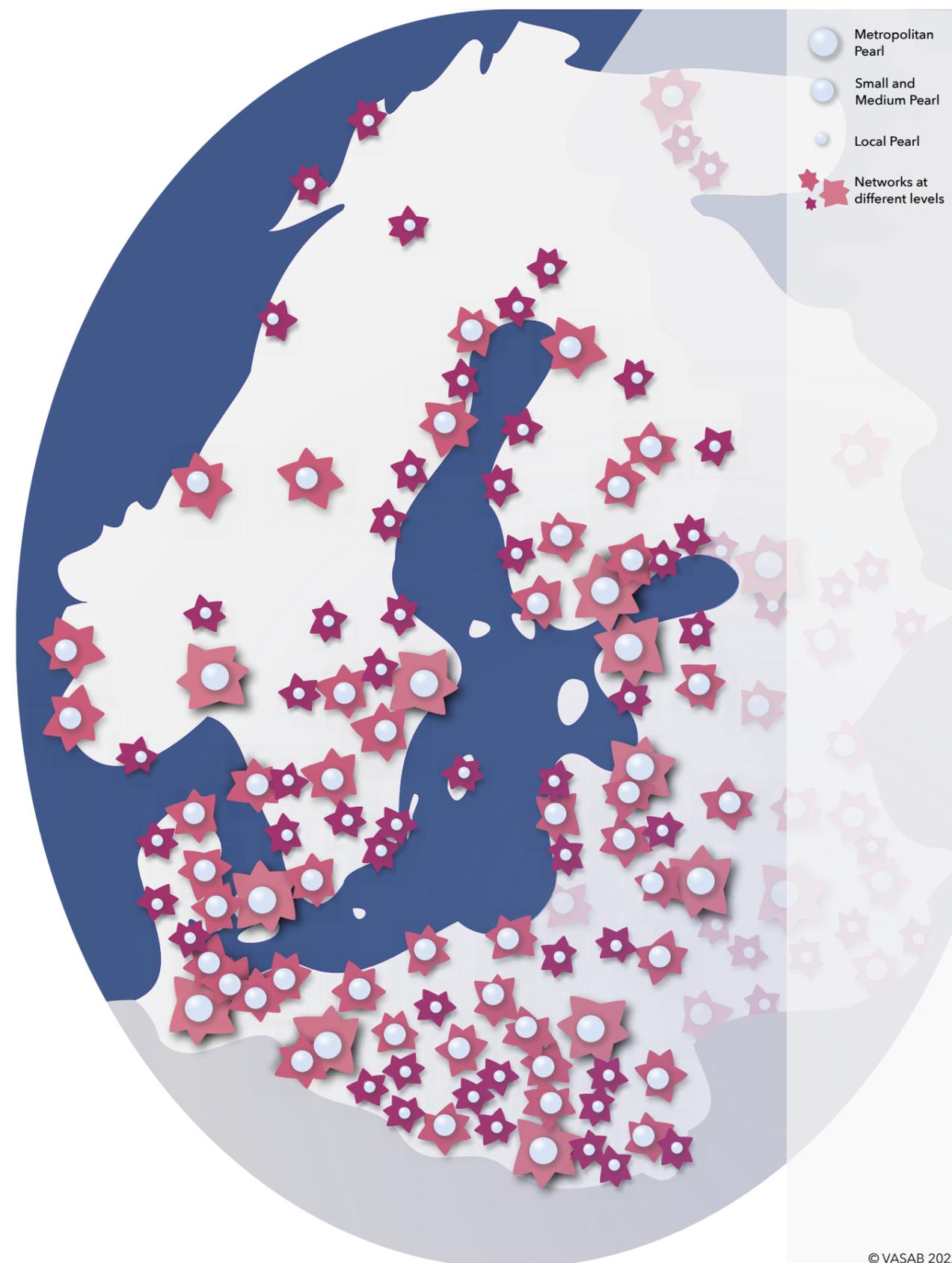
Possible future actions:

- (42) **The Baltic necklace**
Increase the dialogue and cooperation among metropolitan Pearls on best practices and learning, to develop joint actions. Strengthening cooperation with networks such as METREX will build an even stronger and well-integrated network of urban areas across the land and sea.
- (43) **Urban Pearls and their growth functional geography**
Developing urban-rural partnerships with the help of spatial planning, to increase integration and complement the assets of urban and rural places in the Baltic Sea Region, and to support the sustainable development of all Pearls in the Region.
- (44) **Metropolitan visions**
Development of overarching metropolitan visions and priorities and actions, focusing on different territories, based on the experience of the ESPON METRO project to strengthen the dimension of the metropolitan and functional urban areas.

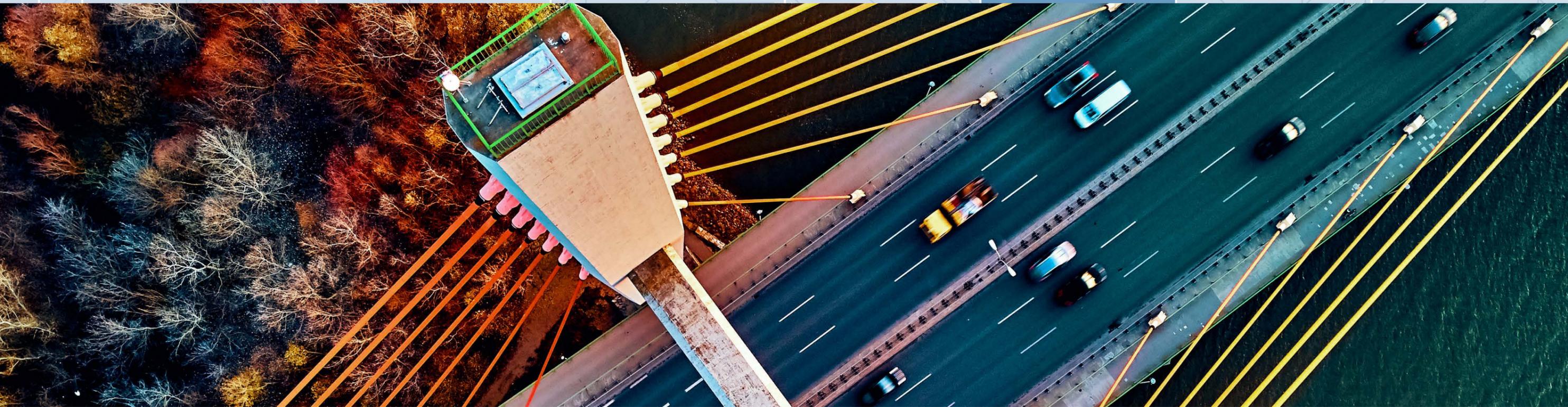
Possible key stakeholders for Pearls could be identified as follows:

(PAN-) EUROPEAN LEVEL	DG REGIO, ESPON, EUROCITIES, Interact, Interreg, METREX , URBACT
BALTIC SEA REGION LEVEL	EUSBSR thematic coordinators (e.g., PA Innovation, PA Culture, PA Tourism, PA Secure, PA Education etc.), Baltic Sea States Subregional Cooperation (BSSSC), CPMR Baltic Sea Commission , Council of the Baltic Sea States (CBSS), Nordic Council of Ministers, Nordic-Baltic Network within METREX, Union of the Baltic Cities (UBC)
NATIONAL/REGIONAL/ LOCAL	Academia, business sector representatives, local authorities and leaders, national ministries responsible for spatial planning and development, planners’ associations, regional authorities

Pearls in 2040



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3 Strings

- (45) (Definition) Strings describe secure physical and virtual connectivity and energy networks across and within the Baltic Sea Region. They support interaction and cooperation between people and businesses, including knowledge sharing. Strings connect regions across border and territorial specificities, cover sea connections, and overcome place accessibility difficulties through digital Strings, making connections faster and more direct. Strings are well-designed, resilient and implemented with respect to and in co-existence with the unique physical environment of the Baltic Sea Region. Strings are characterised by a sustainability, digitalisation and innovation shift together with responsible consumption and connect different places and people in the Baltic Sea Region. This includes also viable investments which ensure military mobility, e.g. via the dual use of infrastructure, and the necessary measures for resilient transport and the protection of critical infrastructure for road, rail, maritime, energy and virtual infrastructure networks and hubs.
- (46) **BY 2040 THE PHYSICAL AND VIRTUAL CONNECTIVITY FOR BOTH GOODS AND PEOPLE IS GREEN, EFFICIENT, SAFE, RELIABLE AND AFFORDABLE ALL OVER THE BALTIC SEA REGION. BY 2040 ENERGY PRODUCTION IS CARBON NEUTRAL, SECURE, DECENTRALISED AND WELL-CONNECTED THROUGHOUT THE BALTIC SEA REGION.**

3.1 Regional to global Strings

- (47) **THE BALTIC SEA REGION OFFERS SUSTAINABLE, SECURE AND BALANCED PHYSICAL AND VIRTUAL CONNECTIVITY FROM THE REGIONAL TO THE GLOBAL LEVEL BY 2040.**
- (48) Physical and digital connectivity in the Baltic Sea Region has shifted towards more sustainable, secure, climate resilient and balanced means of greener transport and virtual connectivity within and across the Baltic Sea Region. Cross-border transport issues and digital divides have been bridged.
- (49) (Sustainable) Connectivity undergoes various changes to become climate neutral. This includes behavioural changes, shifts towards more virtual connectivity and conscious traveling, shifts towards more climate neutral modes of air, maritime, rail and road transport, and new sustainable transport technologies.
- (50) (Service) Increasingly the focus is on mobility as a service. Various forms of transport services are integrated into a single mobility service accessible on demand. The European Green Deal and a coordinated and action-

oriented transition strategy for the Baltic Sea Region were important drivers for the shift in mobility. Personally owned vehicles are gradually reduced and replaced by public and private transportation services, connecting the land and the sea and offering tailor-made travel solutions to travellers. This improves mobility for citizens, business and tourists alike in all part of the Baltic Sea Region. Every aspect of travel becomes effortless, and travellers can enjoy a bespoke experience from local and regional to international travel.

- (51) (Regional) All over the Baltic Sea Region, regional and local Strings offer multi-modal and resilient transport services, reducing the environmental footprint and congestion and improving people's lives. Regional Strings are important for peoples' mobility and commuting to nearest labour markets. How regional mobility is provided differs across different types of territories, depending on their geographic specificities. For instance, mobility in different types of Pearls and their functional areas has a strong focus on public transport, biking, urban mobility platforms, as well as micro-mobility schemes for short distance travelling. In other areas, more climate-friendly means of individual transport, such as electric cars, and car sharing schemes are widespread, and their use is facilitated by a reliable network of service infrastructure and intelligent transport systems. For some areas new technologies and public-private partnerships to ensure mobility and connectivity are needed. All over the Baltic Sea Region, virtual coverage allows for faster and more extensive connectivity of people. The regional networks link also to important hubs to large national and international transport networks.
- (52) (Intra BSR) Efficient transnational and cross-border connections allow for smooth intra Baltic Sea Region flows of goods, people and ideas. There are high-capacity multimodal connections between the metropolises of the Baltic Sea Region. Local and cross-border local transport has been improved thanks to smart infrastructure and routes. The focus is on sustainable and resilient transport solutions with increased focus on rail, green maritime and virtual connections. This includes e.g. improvements in the high-speed rail and night-train networks, and well connected broadband networks. Altogether the digital divide has been overcome and disparities in physical accessibility have been reduced.
- (53) (Global) The Baltic Sea Region is also well connected to European partners as well as the global economy. International hubs and Strings for rail and maritime transport gain importance. Major airport hubs focus on more sustainable solutions to serve international and regional connections, where there are no suitable alternatives. The Baltic Sea Region has positioned itself as global hub for green virtual mobility solutions and services.

Possible future actions:

- (54) **Joint offers on mobility as a service**
Take further steps into transforming mobility to a service offering tailor-made and interoperable travel solutions to travellers. This can be supported by technical solutions and resilient infrastructure development, better connections services development, pricing systems and ticketing. For instance, a harmonised ticketing system across different means in the Baltic Sea Region can improve multimodality and sustainable transport concepts.
- (55) **Multimodal systems to connect places**
Securing multimodal nodes connecting different types of territories in the Baltic Sea Region in a sustainable way, linking better the sea and land transport, developing also peripheral road and energy networks that also connect remote and deep-rural areas. This includes the facilitation of the shift away from excess private vehicle ownership to incentives for sustainable encouragement of other means, development of new transport technologies.
- (56) **Transport and energy networks**
Building along the example of the STRING Megaregion and the corridor governance mechanisms in places, such as the Scandria alliance, to strengthen cooperation further and focus on issues and topics of high relevance connecting different places and their functional areas across the Baltic Sea Region.
- (57) **Integrated mobility plans**
Initiate dialogues for developing transnational integrated mobility plans to connect different places across the Baltic Sea Region.

3.2 Physical Strings

- (58) **BOTH GOODS AND PEOPLE TRANSPORT BENEFIT FROM EFFICIENT, RESILIENT AND SUSTAINABLE TRANSPORT NETWORKS CONNECTING THE BALTIC SEA REGION WITHIN AND BEYOND BY 2040.**
- (59) Rail networks form the backbone for the macro-regional physical connectivity. They are aligned throughout the Region, upgraded and improved offering efficient, reliable and interoperational connections within regions, across the Baltic Sea Region and beyond. This includes night trains and regional cross-border mobility.
- (60) (Goods transport) Green transport corridors across the Baltic Sea Region allow for transferring larger cargo volumes from road to rail and sea. To achieve this, intermodality in goods transport has been improved. The improvement of transport services builds on upgraded rail infrastructure and electrification, first and last mile transportation, intermodal terminals and double-track lines, as well as on intensified cooperation between transport operators, both across transport modes and countries.
- (61) (High-speed) Building on the success of the Rail Baltica, the rail network across the Baltic Sea Region has been improved, including the Helsinki-Tallinn tunnel. It links all major urban areas and many small and medium-sized cities with reliable and efficient high-speed rail services.
- (62) (Night trains) Efficient, reliable and well-connected night train services provide sustainable alternatives to air transport within the Baltic Sea Region and to neighbouring areas.
- (63) (Regional) Efficient regional transport (e.g., rail and road) connections enhance cross-border mobility, as well as mobility within regions, serving labour market policies and local and domestic tourism.

**Possible future actions:**

- (64) **Sustainable Baltic train network**
Extend and further develop the high-speed rail network in the Baltic Sea Region towards a full coverage of the area, across the borders of the Region, with a particular focus on extensions of Trans-European Transport Network. Further development of hyperloops and infrastructures as the Helsinki-Tallinn tunnel are examples that contribute to that direction.
- (65) **Elaboration of regional 'first mile' and 'last mile' concepts**
Elaboration of the regional potential in the "last mile concept" related to public transport, for increasing the interest and attractiveness for a modal shift in travel patterns. Also, elaborating on the "first mile" areas that are outside the daily commuting distance of corridor hubs and urban nodes (i.e. areas within the daily commuting distance from the corridor are considered "on the corridor").
- (66) **Programmes to better tie-in places close to EU external borders**
Develop programmes and policies for strengthening the functional integration in the EU – especially of regions along EU external borders – to overcome fragmentation and reduce risks and social-economic decline in these regions. Transfer Interreg programmes and cooperations which have been discontinued following Russia's war on Ukraine to incentives strengthening the functional integration of places adjacent to external borders.

3.3 Maritime Strings

- (67) **SUSTAINABLE MARITIME TRANSPORT SUPPORTS THE INTEGRATION ACROSS THE BALTIC SEA REGION BY 2040.**
- (68) Maritime transport has become a sustainable and well-connected way for the transport of people and goods, reducing congestion and pollution. This has been facilitated by the healthy harbour cooperation towards greener solutions, such as using renewable energies and offering incentives for sustainable port charges. Gradually it has become an alternative to air transport for short distance travels across the Baltic Sea. Increased maritime safety is also in place with support of digital solutions.
- (69) (Green maritime) Maritime transport corridors between the northern and southern part of the Baltic Sea Region are important in serving the transport flows within the Region. They also help mitigate future congestions in the Baltic Sea shipping lines and move forward to more climate neutral transport solutions. This goes hand in hand with a substantial upgrade of the maritime infrastructure at sea and land to reduce pollution and environmental burdens. This concerns seaborne cargo, maritime passenger transport, as well as cruise ships.

- (70) (Motorways of the Sea) Intelligent and green Motorways of the Sea are an important backbone of the transport network in the Baltic Sea Region. They link major ports across the Baltic Sea. They are also essential for the transfer of goods between the Baltic Sea Region and neighbouring areas as well as globally.
- (71) (Alternative to air) Air and maritime transport complement each other in transferring goods and connecting people. Maritime transport is gradually becoming an alternative to air facilitating short connections in a more sustainable way.
- (72) (Short distance) The Baltic Sea as a physical obstacle for land transport networks has been overcome. Short distance maritime transport offers a connectivity bridge between land connections across the Baltic Sea where the construction of bridges or tunnels is too expensive and air travel too short.
- (73) (Safe & Secure) Increasing maritime transport also involves more efficient coordination and sea-basin cooperation to ensure maritime safety and safety in ports. For example, rapidly increasing seaborne cargo volumes, including the transport of dangerous goods, an introduction of intelligent sea transport corridors in the Baltic Sea Region allow for digital monitoring of specially designated sea traffic lanes in order to prevent ship accidents and take appropriate actions in case of such incidents. Autonomous shipping has increased, contributing to eliminating human error and increased safety.

Possible future actions:

- (74) **'Green' maritime transport networking for the Baltic Sea**
Solutions to make maritime transport an innovative and sustainable transport option, e.g. by exploring possibilities of using wind energy for shipping and the use of small boat tourism and yachting for leisure transport, as well as sustainable solutions at harbours for environmental friendly shipping. This can contribute to a green maritime transport which also offers alternatives to air travel.
- (75) **Short distance shipping as the Baltic way to transport**
Integrate the short distance shipping into the public transport system to increase interoperability and intermodality in the Region. Functioning as an alternative to air, a more climate neutral transport solution is integrated to a more mainstream use. In the context of short sea shipping, a network of a small and medium-sized ports (SMSPs) should be developed. Despite high competition among big Baltic ports, acting as Core Ports in the Trans-European Transport Core and Comprehensive Network (TEN-T). SMSPs can better realize the sustainability leading to lower transportation costs and environmental impacts. Additionally, SMSPs can effectively act as feeder ports for large sea hubs on the Baltic.
- (76) **Navigation of traditional and autonomous ships**
Shared project on future navigation of traditional and autonomous ships, regarding the need for a "safe haven" around a ship to guarantee the safety of navigation.



3.4 Virtual Strings

- (77) **RELIABLE, AFFORDABLE, GREEN AND SECURE VIRTUAL CONNECTIVITY IS THRIVING IN ALL PARTS OF THE BALTIC SEA REGION BY 2040.**
- (78) The network coverage spans across all places of the Baltic Sea Region, with digital divides being minimised. This supports the digitalisation of several services ranging from health, governance, education to commerce, with greening these virtual services becoming a priority. In addition, the Baltic Sea Region hosts a number of strategically connected data routes. Coordinated efforts for controlling cyber-attacks are in place. Virtual connectivity has replaced physical connectivity where possible.
- (79) (Coverage) All parts of the Baltic Sea Region benefit from increased digitalisation. To overcome the digital divide, improved network coverage has been essential. Disparities in mobile phone network coverage – increasingly also relevant for the Internet of Things – and broadband network coverage between rural and urban areas or between different countries have been reduced. This includes also a steady integration of networks and allows people, households and business in all parts of the Baltic Sea Region to actively participate in the digitalisation of our societies and economies.
- (80) (Services) Besides the access to digital networks also the provision of e-services defines how people and business benefit from digitalisation and their increasing education and skills. All across the Baltic Sea Region digital services have been improved and, wherever needed, integrated across borders. E-services in the fields of governance, education, health and commerce allow people to benefit from good access to services regardless of where in the Baltic Sea Region they are. The Baltic Sea Region is also a global competence centre for the development of digital solutions and offers.
- (81) (Security) The increased digitalisation comes with increasing cyber resilience and cyber security issues as private data attacks, phishing, critical infrastructure, malware or cloud computing vulnerabilities. Increasing and continuous cooperation to address cyber threats and attacks is in place and ensures that people, businesses and governments all around the Baltic Sea Region benefit from secure digital services and reliability.
- (82) (Nodes) Mesh-networks linking users rather than building on central connection points offer alternative ways to access the digital world. Still, the backbone of digitalisation are global data routes and server centres functioning as nodes of the internet. The Baltic Sea Region hosts a number of strategically connected data routes and data centres of the highest standards. A constant increase of capacities and security allows people and business in the Baltic Sea Region to benefit from the best possible, reliable and updated access to the internet.
- (83) (Green virtual) The environmental impact of information technology and virtual solutions has decreased. Powering data centres from renewable energy sources, smart cooling solutions and the re-use of heat generated by data centres are examples of technological solutions for the green transformation of information technology.
- (84) (Virtual inclusion) Virtual connectivity has gradually replaced unnecessary physical transport. Through virtual networks people connect constantly and form networks of different kinds. This has increased social inclusion, as in 2040 people of different age and backgrounds connect through online networks.

Possible future actions:

- (85) **Digital services for all**
Ensuring digital accessibility for all places in the Baltic Sea Region to allow better connectivity, the development of e-services and reduction of disparities. Building along the newest connectivity solutions, mesh networks that link users open new ways to the digital world and connect people and places, also across borders in the Baltic Sea Region.

3.5 Energy Strings

- (86) **CARBON NEUTRAL, DECENTRALISED, SECURE AND INDEPENDENT ENERGY IN THE BALTIC SEA REGION BY 2040.**
- (87) Renewable energies and green electricity are the key energy supply in the Baltic Sea Region refraining from fossil fuels. As this has built upon the territorial capital of the Region, a decentralised energy pattern helps to cope with the increased energy demand. Green and sustainable electricity networks have also been integrated. However, energy poverty may remain a challenge due to price increase and unavailability of green energy when demanded.
- (88) (Renewable energies) The Baltic Sea Region is an early achiever of carbon neutral goals set for 2050. Based on the vast possibilities in hydropower in the northern parts, renewable energies are the key energy. Throughout the Baltic Sea Region, particularly offshore wind energy and floating wind technologies, as well as electricity storage technologies have been considered. This was possible through further exploring and assessing the territorial capital of the Baltic Sea Region. In addition, solar panels have been installed on buildings resulting in a more decentralised pattern of energy consumption and production. Energy consumers and energy producers merge into a 'prosumer', leading to a 'democratisation of energy' where households can produce their own energy and sell their surplus, covering parts of the demand needs.
- (89) (Growing demand) The demand for green energy – in particular electricity – is constantly growing that leads to increasing need for human and technological resources. As our economy became increasingly climate neutral, fossil fuels have been replaced by electricity in many fields. A prime example is the success story of electric cars. At the same time also increased digitalisation drove up the demand for electricity. Therefore, the energy networks as well as the production of renewable energy have been gradually expanded in all parts of the Baltic Sea Region.
- (90) (Grid) The integration of electricity networks across the Baltic Sea Region has been essential. This has been accompanied by a wide roll out of smart grids allowing people to both extract electricity from the network and to feed electricity they produce locally into the network. Prosumers are an important backbone of the energy grid alongside with new large scale production sites for renewable energy. Energy production and consumption has over the years become socially and environmentally sustainable, considering the environmental, as well as the communities' needs and local values for the production of energy. Overall, the energy network of the Baltic Sea Region is decentralised and well-integrated. For some parts even a joint energy market has been established underlining the regions potential to become energy independent if needed.

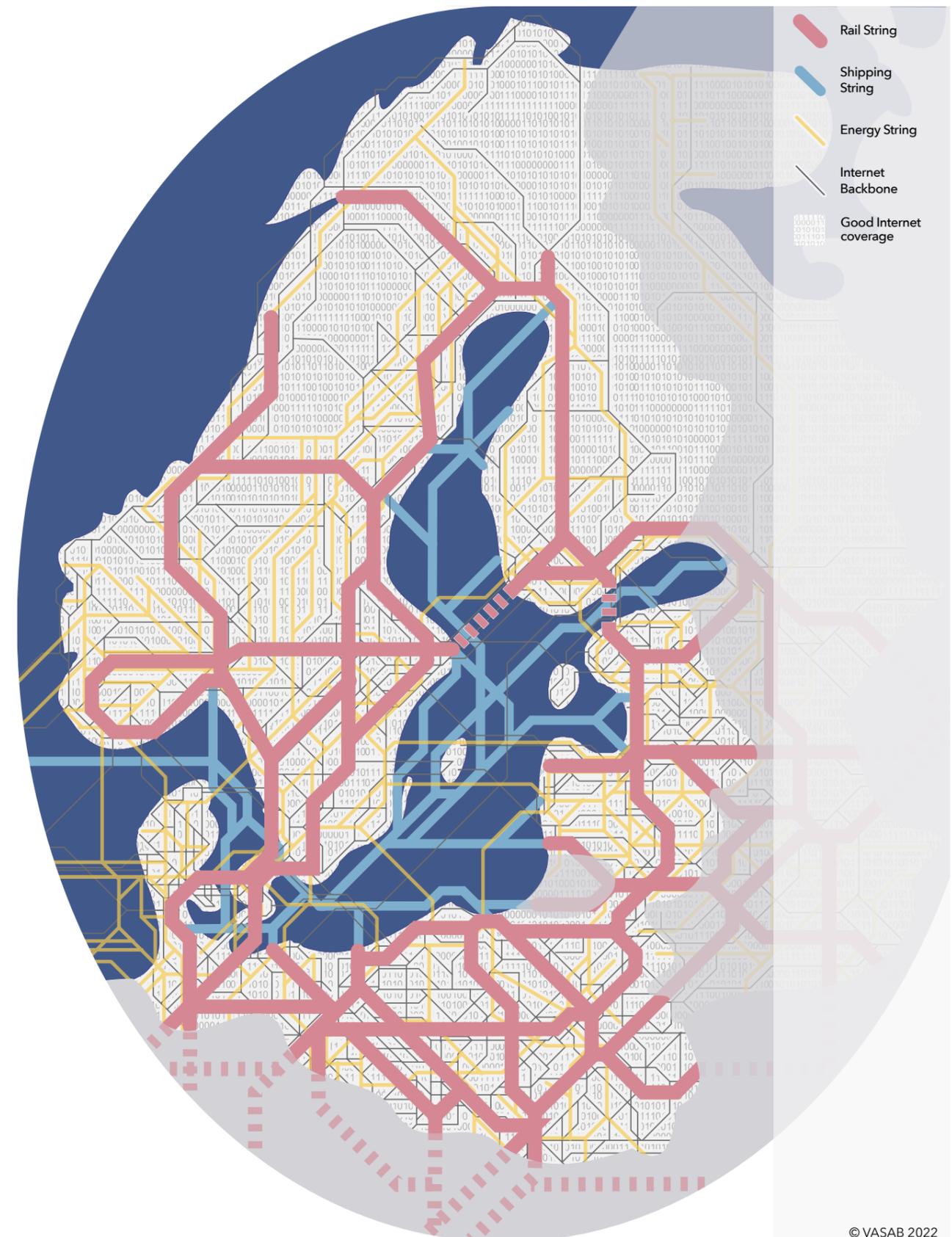
Possible future actions:

- (91) **Baltic energy network of decentralised systems**
Move towards the development of secure and decentralised energy systems and develop climate proofing energy systems across the Baltic Sea Region. Assessing the robustness of energy systems and their possible climate impacts, develop new and safer energy systems in the future, invest in renewable energies are some examples towards this direction.

Possible key stakeholders for Strings could be identified as follows:

(PAN-) EUROPEAN LEVEL	DG MARE, DG MOVE, DG REGIO, METREX
BALTIC SEA REGION LEVEL	EUSBSR thematic coordinators (e.g., PA Transport, PA Energy, PA Ship, PA Safe, PA Secure etc.), Baltic Sea States Subregional Cooperation (BSSSC), CPMR Baltic Sea Commission, Nordic Council of Ministers, Nordic-Baltic Network within METREX, Union of the Baltic Cities (UBC)
NATIONAL/REGIONAL/ LOCAL	Academia, business sector, ICT community, local authorities / leaders, national line ministries on transport, energy, railway carriers, regional authorities

Strings in 2040





4 Patches

- (92) (Definition) Patches represent a sustainable management of the commons where natural resources are in balance with human activities. They are understood as the blue and green commons of the Baltic Sea Region. They describe larger geographical areas which are important for ensuring a good quality of life, ecological livelihoods, sustainable production and resilient supplies in the Baltic Sea Region. Patches offer ecosystem services in the Baltic Sea Region and are mutually interdependent to one another, often sharing similar characteristics or being closely linked. Patches form the mosaic of the Baltic Sea Region comprised by the blue and green ecosystems and also representing the natural and cultural heritage of the Baltic Sea Region and its people.
- (93) **BY 2040 THE TERRESTRIAL AND MARITIME ENVIRONMENT HAS HIGH LEVELS OF BIODIVERSITY, RESILIENT ECOSYSTEMS AND OVERALL, A HEALTHY NATURE ALL OVER THE BALTIC SEA REGION.**

Possible future actions:

- (94) **Branding the Baltic Sea Region quality of life**
Promoting the Baltic Sea Region cultural heritage assets through stricter rules on the preservation of the natural habitat and cultural landscape and their promotion as transnational cultural heritage assets, included in international organisation listings like UNESCO. Further examples regard the development of transnational eco-certifications for organic products produced in the Region.
- (95) **Mapping the cultural heritage in the Baltic Sea Region**
Continue to map cultural heritage in the BSR and to find the best methods for the sustainable blue and green tourism and for the recreation.
- (96) **Baltic renewable energy booster**
Focus on secure and renewable energies and support the transition to a carbon free Baltic Sea Region through a further integration of energy networks connecting renewable energy production sites and energy storage sites across the Baltic Sea Region to a fully integrated transmission grid.
- (97) **Baltic lighthouses**
Collection of cluster examples that elevate the importance of Patches and make them well-known globally to the rest of the world, such as for example is the 'Nordic Battery Belt'.

4.1 Blue Patches

- (98) **BLUE PATCHES ARE AT THE HEART OF THE BALTIC SEA REGION. A CLEAN BALTIC SEA REGION IS THE REWARD OF COOPERATION.**
- (99) The Baltic Sea is at the centre of the Region. As pointed out by HELCOM, a healthy Baltic Sea environment with diverse biological components functioning in balance is essential to the entire Region. The blue Patches also represent the undersea richness of the Baltic Sea Region, the blue ecosystem services, the blue corridors of ecosystems which are essential for the protection of the sea biodiversity and the achievement of good water status.
- (100) (Baltic Sea) By 2040 the Baltic Sea is a clean and healthy maritime environment with a rich fauna and flora. The levels of eutrophication and hazardous substances have been reduced so that their cumulative impacts no longer threaten the livelihood and biodiversity of the sea. The good ecological status of the Baltic Sea is closely interlinked with a wide range of sustainable economic and social activities. Various activities at sea and land have become more sustainable so that they no longer endanger our shared maritime environment.
- (101) (Energy) Offshore renewable energy production is an important source for energy in the Baltic Sea Region and a result of efficient coordination in the Region. Over time offshore windmills got substantially bigger and powerful. This includes mainly wind power but also more innovative approaches, e.g., energy from algae. Maritime energy production activities are well coordinated in the context of maritime spatial planning. Energy activities are organised in balance with other maritime activities, ecosystem services and nature protection interests, the communities' needs and local values, as well as the blue environment without putting at risk the improved maritime ecosystem.
- (102) (Islands) Islands are at the heart of the Baltic Sea Region. They have the tradition of being nodes of transport, trade and communication with the Region and beyond. Due to their isolated location, islands offer particular opportunities to promote concepts relying on local initiative such as transitions to a circular economy and solutions for renewable energy.
- (103) (Costal zones) Coastal zones and archipelagos play a vital role in bringing together land and sea activities. They are important for the sound management of our tangible and intangible natural and cultural heritage. They are valuable natural areas and landscapes with great biological diversity including habitats of highly specialised and often endangered species of wild fauna and flora as well as large populations of breeding and migratory birds. At the same time, they are also important areas of human settlements and human activities hosting many economic and also recreational centres in the Baltic Sea Region, co-existing by 2040 in balance with the environmental needs.

Possible future actions:

- (104) **New tools for evaluating dynamics and processes at the sea**
Support actions towards protecting the sea and monitoring its environmental situation, mapping blue Patches, develop 'green' infrastructure concepts for the blue Patches of the Baltic Sea Region, through a network of multi-functional blue spaces, connecting different blue Patches, addressing their needs and increase therefore the environmental benefits for communities and deliver quality of life. This includes also mitigation of risk and need of necessary adaptations related to coastal flooding and erosion as a consequence of sea level rising at an increasing rate.
- (105) **Sustainable blue economy and ecosystem-based living on coastal areas and in archipelagos of BSR**
Promote sustainable blue economy activities that provide social and economic benefits for current and future generations and restores, protects and maintains the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems, and is based on clean technologies, renewable energy and circular material flows.

4.2 Green Patches

- (106) **GREEN PATCHES ARE THE LUNGS OF THE BALTIC SEA REGION. THEIR RICH AND HEALTHY ECOSYSTEM ENSURE THE LONGEVITY AND LIVELIHOOD OF THE REGION.**
- (107) (Biodiversity and ecosystem services) The small and large green areas around the Baltic Sea Region are the lungs of the Region. They are important places for Region's biodiversity and provide ecosystem services and resources which are important for the livelihood of their local areas but also wider geographical areas. Green Patches also represent the underground richness of the Baltic Sea Region.
- (108) (Unique Patches) Unique Patches, be that mountain areas, coastal areas, islands, lake districts, wetlands, border regions, large forest areas, all having different characteristics but being unique in their diversity, be that due to their natural environment, their specificities and opportunities they offer. Mountain regions, forests and islands are hotspots for recreation, energy, renewable raw materials and wellbeing. Integration of border regions has been enhanced, with the importance of borders and cross-border obstacles being reduced, opening up new cross-border business and public-services opportunities. Especially EU regions along external borders strengthened their functional integration within the EU to overcome fragmentation and social-economic decline.
- (109) (Small green Patches) Green Patches also regard smaller green areas in different types of territories and Pearls also offer ecosystem services. They contribute to temperature regulation, reconnect with the larger green Patches and allow citizens to come closer to nature in a closer vicinity, appreciating nature more, raising awareness for the benefits of green areas and support the preservation of green Patches.
- (110) (Green belts) Green belts or green corridors are larger areas characterised by their rich nature. In many cases they even stretch beyond national borders, e.g. the 'Green Lungs of Poland' actually extend to neighbouring areas towards a large green Patch of European importance, or the Fennoscandia green belt. They are important for tackling issues such as air pollution, slowing and reducing the impacts of climate change and providing essential habitats for wildlife. Often they also contain agricultural or recreational areas. In some cases, they involve nature protection areas but often they contain both rich nature and human activities including small towns and economic activities. The acknowledgment of the importance of ecosystem services allows more and more people living in the green belts to find jobs related to the maintenances and further development of particular ecosystem services which are of importance for the wider society. Places with high biodiversity or generating significant ecosystem services (e.g., clean air or clean water) develop these into an economic specialisation, retaining a healthy living environment for citizens in all places.
- (111) (Biotope networks) In case where the green areas or biotopes are smaller in size, they are increasingly connected and form various sorts of biotope networks. They connect valuable natural and cultural landscapes, landscapes with a high proportion of valuable forests or wetland biotopes, or nature protection areas.

- (112) (Rewilding) With the aim to increase the biodiversity in the Region many areas allow for nature to grow back. This often goes hand in hand with regions that due to demographic shrinkage turned into green Patches or attempts in an area to develop its rich biodiversity into an economic specialisation. Rewilding allows nature to reinstate to the level that species again shape the landscape and the habitats. Rewilding encourages a balance between people and the rest of nature and provides opportunities for communities to diversify and create nature-based economies. Natura 2000 sites and especially large natural areas such as the remaining primeval forest in Poland (Białowieża Forest) or European Wilderness Network areas, e.g. the Teiči Nature Reserve in Latvia, the Dzūkija National Park and Čepkeliai Nature Reserve in Lithuania, the Oulanka National Park in Finland are widely concerned. Investments in systems which ensure that large natural areas which are important for the ecosystem can turn their contribution to the ecosystem into a source of income which could potentially help counterbalance spatial inequalities. Experience from the Common Agricultural Policy can be taken into account, as well as experience from investing in natural habitats to offset urban investments which damage biodiversity.
- (113) (Energy) The production of renewable energy is an essential activity in the green Patches. This involves various forms of wind, solar and geothermal energy installations, as well as the production of crops (e.g., for biodiesel) used for the renewable energy production and other innovative means of energy production. The coordination of renewable energy production activities with other land use interests, ecosystem services and nature protection interests is well coordinated in the context of spatial planning.
- (114) (New Patches after shrinkage) Areas whose shrinking could not be reversed have been 'given back to nature' and turned gradually into green Patches. This approach results in environmental benefits and positive impacts, as the preservation of green Patches is vital for dealing with the climate change challenges. This contributes to a territorial quality of life where different valuable landscapes are balanced with different location economies in the Region.
- (115) (Co-benefits for humans) Overall, strengthening green Patches allowed for a better balance or symbiosis between ecosystems and human activities. This concerns land use, pollution, nature protection but also economic activities including those in the fields of tourism or agriculture. People enjoy their freedom to reconnect with nature and the rich natural and cultural heritage of the Region, following their preferred lifestyle. The new balance contributes to a better ecological livelihood and higher quality of life.

Possible future actions:

- (116) **Baltic green infrastructure network for the green Patches**
Development of a Baltic Sea Region green concept and a green infrastructure network, i.e. a network of green places. This network will be represented also by the Patches, Strings and Pearls that all together will coordinate on spatial exchange of possible gaps or needs in the network. With the support of the Systems, planning and actions for closing these gaps could take place. Further examples are the monitoring and mapping the development of green corridors and networks in the Region, supporting sustainable and climate resilient management of natural areas and forests and implementing objectives for biodiversity protection.
- (117) **Connecting cultural heritage paths**
Develop touristic and recreation offers connecting the sites of the rich natural, tangible and intangible cultural heritage in the Region, through thematic paths linking different parts of the Region.

4.3 Tasty Patches

- (118) **TASTY PATCHES ARE THE 'BREADBASKET' OF THE BALTIC SEA REGION. SUSTAINABLE RURAL AREAS AND REGIONAL FOOD PRODUCTION ARE ESSENTIAL FOR ALL PEOPLE IN THE REGION.**
- (119) The green areas of the Baltic Sea Region often also contain rural areas which are essential for agriculture and food production. They shape the taste of the Baltic Sea Region.
- (120) (Rural) Essentially tasty Patches of the Baltic Sea Region are mainly rural areas. As aforementioned, rural areas are attractive places in their own rights which serve an important function for the Baltic Sea Region.

This involves the provision of ecosystem service, as well as a wide range of economic activities also linked to the use and processing of natural resources e.g., in the food sector.

- (121) (Agriculture) Sustainable forms of climate resilient agriculture avoiding unnecessary pollution of soil, water and air are standard by 2040 in the Region. Often this implies more extensive forms of land use and supports efforts to local food production. In the context of climate change and changing vegetation zones, agriculture adjusts to new conditions and sustainable ways of producing vegetables, including also the use of sustainably heated greenhouses help to increase the diversity of agriculture products produced in the Region. Such shift to more ecological agriculture reduces also the pressure to the green and blue Patches. Increasingly, new innovative ways for aquaculture play an important role.
- (122) (Food production) Going beyond pure agriculture in many rural areas a wider range of agricultural processing and food production takes places. Rural areas contribute in improving the added value of farming and agri-food activities and keep up with new forms of agricultural production, following also policies such as 'from farm to fork'. This includes the production of regional specialties, e.g., Västerbotten cheese in Sweden or smoked ham from Holstein. This also regards sustainable fisheries and aquaculture, sea food production and initiatives related to 'from sea to fork' with sustainable sea food farming and low ecological footprint. By 2040 it encourages new innovations e.g., related to aquaculture products or vegan alternatives to meat, diversification of economic activities in rural and marine areas and more regional production.
- (123) (In balance) Tasty Patches shall function in balance with the green and blue Patches. Agricultural and industry processes take into account the preservation of the green and blue Patches without putting them at risk. This ensures a balance between human activities and nature protection at land and sea.

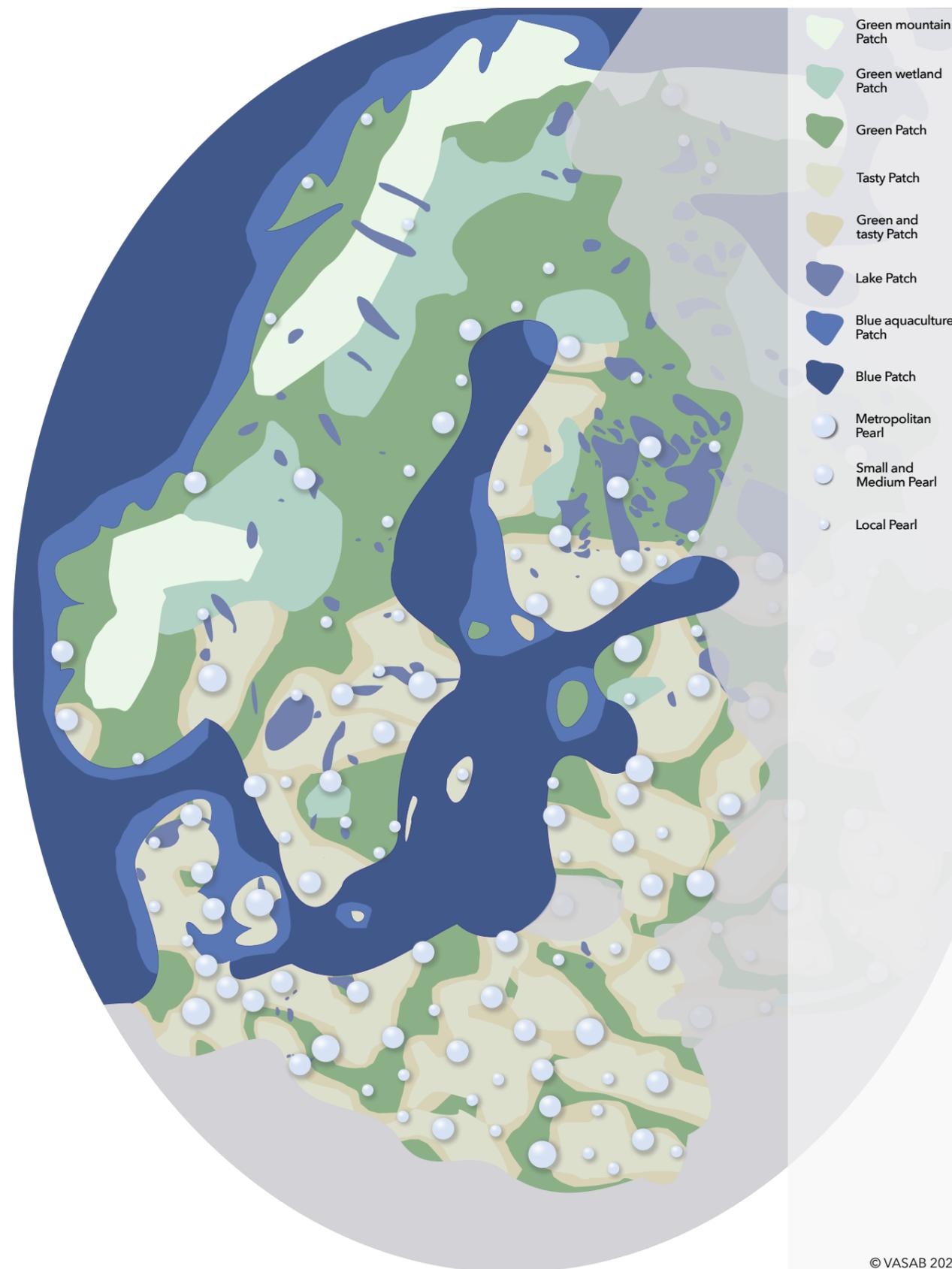
Possible future actions:

- (124) **Baltic eco-villages and kitchens**
Develop pilot actions on eco-village kitchens around the Region promoting cooking with local products and sustainable energy and water consumption. Towards this, circular agricultural approaches can support processes to address regional food cycles in tasty Patches of the Region. Circular economy approaches in this field may have wider impacts on the sustainability and land saving development of the tasty Patches.
- (125) **Adjusting Baltic Sea Region agriculture to climate change**
Actions supporting agriculture adjustment to global warming consequences, by looking at the development of new crops or vegetables to be cultivated in the Region by 2040. Coupled with sustainable production of tasty Patches, more environmental-friendly agriculture and organic farming approaches may increase their attractiveness and open new markets of new products.
- (126) **Strengthen local production and supply chains**
Upscale existing pilot actions which strengthen local or regional production and supply chains to accelerate the move towards a circular economy and increase resilience in the case of international supply chain disruptions. This concerns the fields of food production but also any other industrial activities.

Possible key stakeholders for Patches could be identified as follows:

(PAN-) EUROPEAN LEVEL	DG AGRI, DG ENVI, DG MARE
BALTIC SEA REGION LEVEL	EUSBSR thematic coordinators (e.g., PA Bioeconomy, PA Culture, PA Tourism, PA Energy etc.) , Baltic Sea States Subregional Cooperation (BSSSC), HELCOM, Stockholm Environment Institute (SEI)
NATIONAL/REGIONAL/ LOCAL	Academia, national ministries, local leaders / local authorities, natural heritage authorities, regional authorities

Patches in 2040



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5 Systems

(127) (Definition) Planning Systems are essential for putting the long-term perspective into practice. Terrestrial and maritime spatial planning comes with different scopes, tasks, rights, responsibilities and obligations. These are defined in various laws and differ between countries. Furthermore, there are planning practices and tools (e.g., in the field of digitalisation) which shape the various planning Systems.

(128) **BY 2040 THE VARIOUS RELEVANT PLANNING SYSTEMS COMMUNICATE SMOOTHLY ACROSS COUNTRIES, SECTORS AND LEVELS OF GOVERNANCE.**

5.1 Cooperating Systems

(129) **BY 2040, PLANNING SYSTEMS ARE EFFICIENT, INTEROPERABLE AND COMMUNICATE SMOOTHLY ACROSS SYSTEMS ON RELEVANT DEVELOPMENTS, OBSERVATIONS, MEASURES AND OBJECTIVES.**

(130) (Land & Sea) At land and sea various spatial planning Systems, climate resilience policies and tools, and data platforms exist. Besides spatial/terrestrial (land-use planning) and maritime spatial planning, there is e.g., also the integrated coastal zone management and other relevant tools. By 2040, all of them are communicating smoothly with each other to ensure a proper management, territorial monitoring, climate resilience and planning. This involves e.g., also digital solutions and interoperability to exchange on analytical information, objectives and measures and have a better understanding of potential conflicts and synergies among various uses and interests, increasing overall resilience and security of the Region.

(131) (Sector plans) To the possible extent the smooth communication, digital solutions and interoperability do also involve sector policies which are relevant for putting the long-term perspective into practice. Among these are e.g., transport, digitalisation, energy, rural development, fisheries, education. Digitalisation of spatial and maritime planning and also using territorial and environmental impact assessments are crucial for implementing the vision and bringing territoriality to sectors. By developing a better understanding of the policies' effects on territories, better policies are being designed which are place sensitive and address more precisely the needs of the citizens.

(132) (Macroregional) Thriving for putting a shared vision for the entire Baltic Sea Region in practice, the communication across land-use and maritime spatial planning also needs to stretch across all countries. By 2040, building on the experience and work of the EU INSPIRE Directive and the Basemaps maps service and taking them a step further, digital platforms allow to easily obtain information on the relevant planning processes, documents and instruments from all countries. A shared Baltic Sea Region digital platform allows for multilingual information on analysis, objectives and measures from the various plans. In most cases it even highlights possible fields of synergies and conflicts including relevant contact details on whom to address in the other countries to discuss these. By 2040 a joint Baltic Sea Region platform functions as a connected puzzle of the different individual spatial and maritime plans brought together.

(133) (Cross-border functional areas) Cross-border integration has taken big leaps for different kinds of borders, especially for EU internal borders. By 2040, cross-border mobility is increasingly seamless, contributing to cross-border functional areas, strengthening cross-border communities and social integration. Thinking across borders is important for spatial and maritime planning to achieve different goals, such as renewables and biodiversity goals, transport goals etc.

(134) (Cross-levels) Planning tasks are shared across multiple tiers of governance and the division of responsibilities differ by country. By 2040 VASAB's work of putting the Vision into practice involves players from all levels of governance in the various countries. In particular, local and regional players are highly engaged as their planning actions have direct impact on land use and maritime development, but also as they realise the benefits of better collaboration on key issues across the Region and the EU. Strong capacity building is in this case crucial for all players. Important players may also come from the sub-regional level, such as the STRING Megaregion, putting forward regional initiatives on key planning issues.

(135) (Civil society and business sector) Planning involves public bodies and also other players. Civil society players are particularly important to ensure that planning keeps pace with evolving value changes in society and that plans and future visions are carried by the citizens. By 2040, there are various pan-Baltic civil society organisations actively debating the future of the Region and carrying out joint actions. Citizen participation and involvement are important for taking on board planning decisions. Among others the Baltic Sea Youth Platform has grown into multiple civil society platforms concerning the future of the Region. In addition, the business sector is equally important to ensure that planning is in pace with business developments, respecting citizens and the environment in the Region.

(136) (Cooperation) Cooperation by 2040 remains an important element for putting different plans in place and has further increased and widened. This regards agile cooperation and communication among different sectors, different levels of governance, as well as countries to achieve and carry on plans. In that respect, cross-border and 'cross-sea' cooperation are vital for the implementation of different plans.

(137) (Baltic) Various pan-Baltic organisations and initiatives are carrying the long-term perspective for the Region. They make sure that it covers a wide range of perspectives, is communicated widely and that many different players contribute to putting it into practice. Among the most important are HELCOM, CBSS, UBC and the EUSBSR community. The Interreg programmes in the area continue in their role as important catalysts for change across borders. They collaborate in various networks and platforms with the VASAB community and contribute to joint capacity building on the macro-regional dimension in land use and maritime planning.

Possible future actions:

(138) **VASAB planners forum**

Increase the capacity planning for planners and players from different sectors working with land and maritime spatial planning across the Region and identifying missing gaps in the regional and marine development. Enhancing joint efforts on maritime and land spatial planning will also enhance its coherence all across the Region. Knowledge exchange among them will support smoother communication and enable institutions to integrate transnational cooperation into own strategic development. An example would be an informal planner's platform, bringing together the experience and knowledge of different existing networks on maritime and land spatial planning to bridge differences in the Systems, find joint solutions and smooth communication across players of different levels.

(139) **Multi-level governance in spatial planning**

Develop an integrated approach and cross-sectoral collaboration for maritime and terrestrial spatial planning to better capture land-sea interactions focusing on a functional area approach. Such networks as EUSBSR helps reaching out various stakeholders and policy developers. In this regard VASAB continues its prominent role as main coordinator for Policy area 'Spatial Planning' in cooperation with HELCOM within the framework of the EUSBSR.

(140) **Functional coherence throughout the Baltic Sea**

Strengthen the functional coherence in areas across borders through cross-border spatial planning including land-sea interactions. Developing and testing such an approach contributes to making land and sea planning more interoperational. At the same time, developing multi-use concept shifting from single exclusive area reservations towards co-existence of different uses through pilot actions, knowledge exchange, legislative support.

(141) Integrated land & sea observations and assessments

Bring together and strengthen different tools, such as monitoring networks, Territorial and Environmental Impact Assessments and risk management, extending also the availability of data at lower territorial levels, such as NUTS3 for further evidence base and improved territorial monitoring options. Further examples regard developing a cumulative impact assessment covering impacts on land and sea and various types of impact assessments, e.g. building upon the EU Territorial Agenda Pilot Action on understanding how sector policies shape spatial (im)balances. Furthermore, ensuring that land use changes contribute to improving the environmental status of territorial and maritime ecosystems, e.g. through the development of maritime impact assessment of land use changes.

(142) Digital Baltic Sea Region planning sharing platform

Digitalising planning information and data exchange and developing a common language and definitions for planning terms, by sharing data and knowledge across different topics and across different countries on a common platform with reliable, comparable and synchronised data, with the support of digital solutions. Interlinked digital spatial planning platforms can support links between spatial planning Systems in the Baltic Sea Region. Also, the increased level of e-governance and digitalisation in the field of land and maritime spatial planning can better integrate services and information to exchange knowledge. Furthermore, digital platforms can support new technologies including remote sensing. Information systems drawing on insights from various countries and artificial intelligence, can increase the reliability and performance of (environmental) risk management system, within and between countries. In this framework, approaches towards a common language and definition for planning terms can be encouraged.

(143) Baltic Sea Region citizen involvement

Bringing citizens together to exchange and find solutions on joint challenges and topics of interest, relevant to the local Pearls. This brings together the shared common values of people and develop bottom-up solutions. More citizen involvement will be supportive in carrying on the actions of the Systems and receiving feedback by a larger audience.

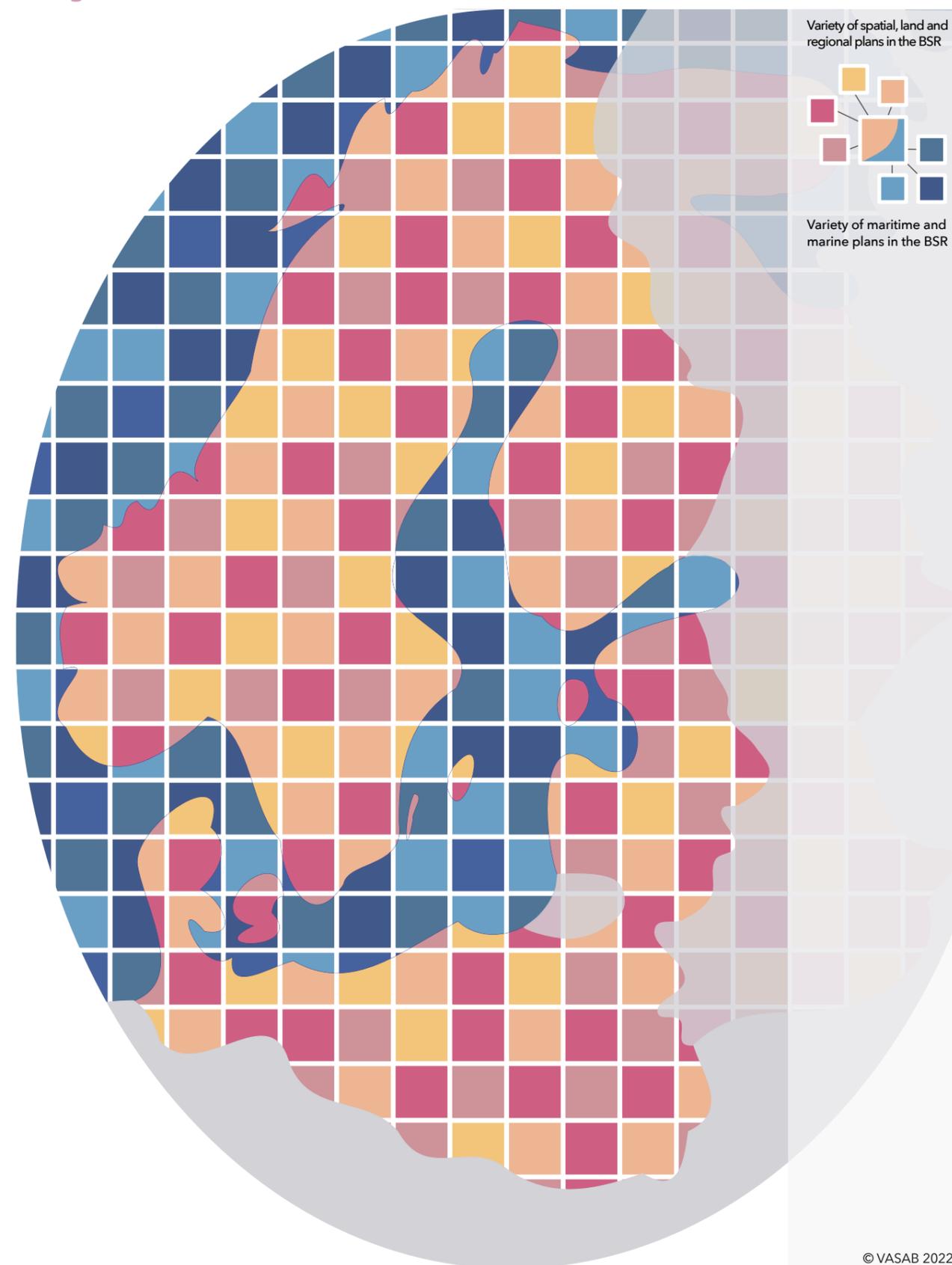
(144) Young planners academy

Initiatives bringing together young professionals and students to jointly develop ideas on sustainable futures in the Baltic Sea Region and engaging them into pan-Baltic cooperation, for example, VASAB Young planners summer school. Also establishing of links with relevant scientific frameworks and knowledge, development educational curricula and training opportunities support these efforts.

(145) Communication and dissemination

Actions on communication and dissemination of the vision and advocating the vision elements. Examples can be events, forums, workshops, publications, studies. A further example can be the publication of a 'VASAB area vision passport', a short document which includes key elements from the vision document and is shared across the Baltic Sea Region and VASAB area to increase awareness on the vision.

Systems in 2040



Possible key stakeholders for Systems could be identified as follows:

(PAN-) EUROPEAN LEVEL	DG REGIO, Directors-General on Territorial Cohesion (DGTC), European Committee of the Regions, CEMAT, European Council of Spatial Planners (ECTP-CEU), ESPON, URBACT, European Commission's Joint Research Centre (JRC), OECD, Network of Territorial Cohesion Contact Points (NTCCP)
BALTIC SEA REGION LEVEL	EUSBSR PA Spatial Planning and other relevant PAs, HELCOM VASAB MSP working group, Interreg programmes, Nordregio
NATIONAL/REGIONAL/ LOCAL	Academia, national ministries responsible for spatial planning, local / regional governments / leaders, national line ministries, regional authorities, spatial planners' groups



Vision and Strategies around the Baltic Sea (VASAB) is an intergovernmental co-operation of ministers responsible for spatial planning and development of the Baltic Sea Region.

VASAB is part of the network of the Council of the Baltic Sea States, as well as coordinates the Policy area 'Spatial Planning' within the EU Strategy for the Baltic Sea Region.

VASAB prepares policy options for the territorial development of the Baltic Sea Region and provides a forum for exchange of knowledge on spatial planning and development between the Baltic Sea countries. VASAB recommends transnational policy measures, promotes methodology development and co-operation projects, co-operates with other pan-Baltic initiatives and promotes a dialogue with sector institutions. For fulfilling those tasks, VASAB takes into account also strategies and policies on global, European, European Union, pan-Baltic and national levels, and provides input into these.

