FINLAND'S COASTAL STRATEGY

Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

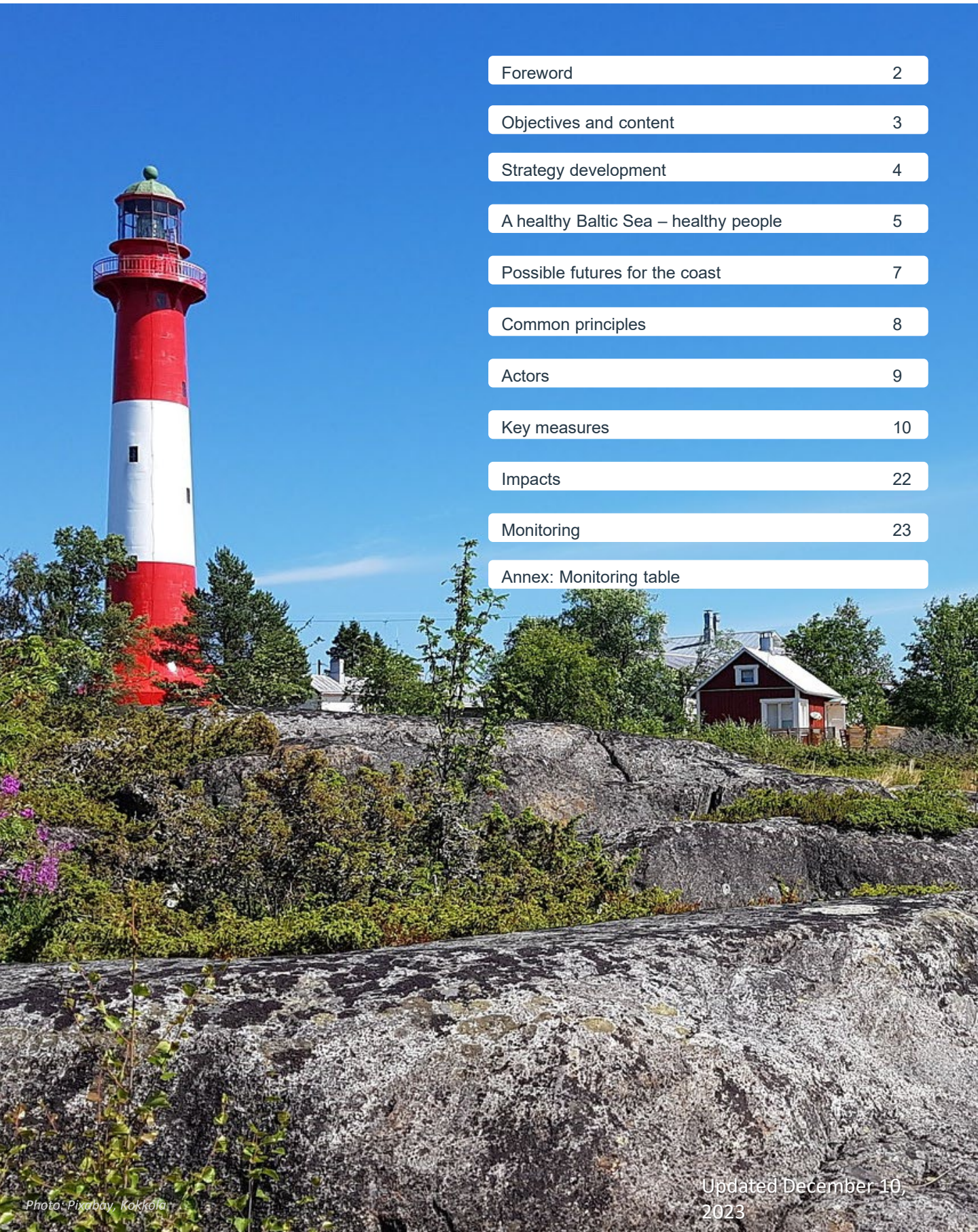


Photo: Pixabay, Kokkola

Updated December 10, 2023

FOREWORD

The Coastal Strategy refines the vision and measures for the coast set out in Finland's Maritime Spatial Plan 2030. In the strategy work, instead of setting strategic goals, stakeholders have worked together to find common principles and operating models to promote the sustainable use of the coast and to preserve nature's ability to renew itself. Human activities and livelihoods as well as natural ecosystems are seen as an interdependent system, the sustainability of which can be increased through cooperation between different actors and the identification of opportunities for such cooperation.

The ten measures selected by the relevant stakeholders are presented in the form of action cards. Each measure is accompanied by an assessment of how it is seen to promote the common principles of the strategy and also the broader goals of the UN 2030 Agenda for Sustainable Development.

The Coastal Strategy is timely. Major ecological threats, such as climate change, biodiversity loss, pollution, and eutrophication, particularly affect the coast, which is diverse in terms of natural conditions and widely used for many human activities.

Already in 2002, the European Commission's Directorate-General for Environment recommended that Member States develop a strategy for the sustainable use and management of coastal zones. Finland's coastal strategy, "Kestävästi rannikolla", was completed in 2006 and reported to the EU Commission. There is no reporting obligation for this new strategy.

The 2014 Maritime Spatial Planning (MSP) Directive of the European Commission's Directorate-General for Maritime Affairs and Fisheries (DG MARE) requires that land-sea interactions are taken into account in planning processes, which is very much in line with the objectives of the Coastal Strategy recommendations. During the preparation of Finland's Maritime Spatial Plan 2030, the interaction between the land and the sea was extensively investigated, and the preparation of a new coastal strategy was seen as timely.

The Ministry of the Environment warmly thanks the stakeholders and the steering group for their active participation in the development of the Coastal Strategy. We hope that this cooperation will continue for many years to come.

Helsinki, February 2024

Juhani Damski
Permanent Secretary
Ministry of the Environment

Photo: kuviasuomesta.fi

OBJECTIVES AND CONTENT

Objective and role of the Coastal Strategy

The Coastal Strategy guides coastal action, development, and planning. The aim is to promote the sustainable use of the coast in response to biodiversity loss, climate change, and pollution, and to improve the state of the marine environment.

The strategy focuses on a common approach: identifying key stakeholders and points of interaction, opportunities for collaboration and information sharing, and policy instruments. The content of these common measures are specified in action cards.

This is based on a systems approach, which sees the coast as a system resulting from the interaction between man and nature. The social factors of the whole cannot be understood and managed without taking into account the ecological factors, and vice versa. The role of the Coastal Strategy work is to steer the system, the interaction between humans and nature, in a certain direction rather than to define a static target state.

The Coastal Strategy refines the vision and measures for the coast set out in Finland's Maritime Spatial Plan 2030. The UN and EU Sustainable Development Goals and biodiversity strategies as well as the Baltic Sea Strategy, the national land use guidelines, and, among others, Finland's Energy and Climate Strategy guide the Coastal Strategy and the approach of the Coastal Strategy.

The Coastal Strategy sets targets for 2050. The measures associated with the strategy will be implemented until 2030. The Coastal Strategy is intended to be used by stakeholders and to help them work together with each other.

Content of the strategy

The framework for the common approach is highlighted through the Maritime Spatial Plan's vision *"A healthy Baltic Sea – healthy people"* and by describing the interaction between land and sea and between people and nature and systems thinking.

The section on "*Possible futures for the coast*" highlights the potential impact of the scenarios developed in the MSP, which must be taken into account in order to enhance coastal sustainability and design common measures.

The strategy then describes a set of *common principles* for sustainable coastal management that will guide development and measures to increase the sustainability of the coast.

In order to promote cooperation and facilitate the joint planning and development of coastal measures, the section on *"Actors"* presents the key network of actors in the coastal zone and their interconnections.

The core of the Coastal Strategy lies in the comprehensive set of action cards that describe the measures to be implemented. Each measure is described on its own page.

At the end of the strategy, there is also a sustainability *impact assessment* and a description of how the strategy will be *monitored* and updated.

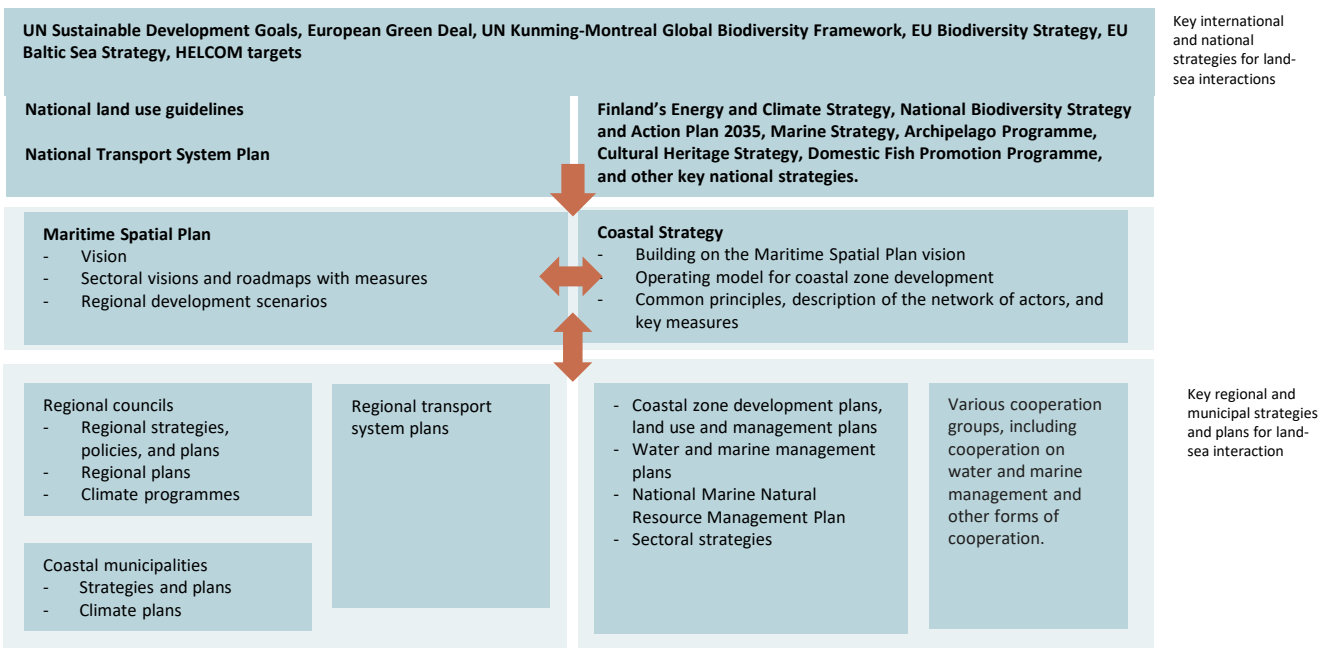


Photo: The relationship between the Coastal Strategy and other key strategies and plans.

STRATEGY DEVELOPMENT

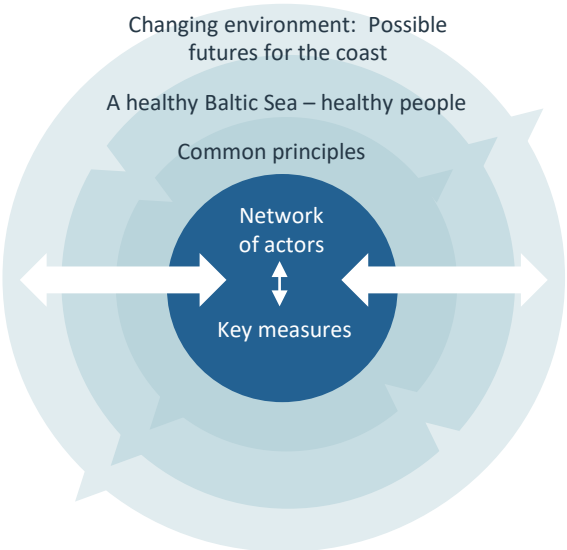
Process description

The Coastal Strategy was developed through extensive stakeholder collaboration. The sectoral visions and roadmaps of the Maritime Spatial Plan and the land-sea interaction considerations were a central starting point in the Coastal Strategy work. The strategy process included an expert survey (65 responses), scenario work, two expert workshops (around 50 experts each), four expert group interviews, and active steering group and working group work. The common development principles and key measures are the result of the collective work and input of the stakeholders.

The changing coastal environment was analysed by using future scenarios developed in maritime spatial planning, looking for signs of their realisation and analysing their impact on the coast. Based on the impacts, the main measures for all sectors were outlined through co-development to prevent risks and uncover opportunities arising from the scenarios.

The common principles were established based on the results of the first expert workshop and group interviews. The key measures were identified based on an expert survey, interviews with experts, an expert workshop, and steering group work. In addition, the identification of measures has taken into account the sector-specific measures in the Maritime Spatial Plan roadmaps and the key measures of the previous coastal zone strategy (2006).

Photo: A summary of the content of the Coastal Strategy. At the centre of the operating model are the actors and the key measures. A shared vision and common principles of action provide a framework for the strategy. The outermost ring represents the changing environment, against which the measures must be evaluated.



A total of 191 proposals for action were received. In order to prioritise the measures, their importance was assessed from the perspective of the Coastal Strategy, evaluating their importance at national level, taking into account in particular the scale of the Coastal Strategy and the feasibility of implementing the measure.

Based on the assessment of the relevance of the measures, the main sets of measures were identified, which include sub-measures identified at sectoral level. Action cards have been drawn up for these key measures. Expert interviews were also conducted to gather the perspectives of businesses, municipalities, researchers, and regional authorities. The Coastal Strategy draft elicited 65 opinions, and the views expressed were taken into account in finalising the strategy.

The Coastal Strategy has been drafted in 2022–2023 under the responsibility of the Ministry of the Environment. The strategy work was guided and developed by a broad steering group with WSP Finland Oy and Capful Oy as consultants, who were responsible for the scenario work.

Members of the steering group:

Olli Rönkä and Paula Qvick, Regional Council of Lapland

Rauno Malinen and Mari Kuukasjärvi, Council of Oulu Region

Reijo Kiviniemi, Regional Council of Central Ostrobothnia

Ann Holm and Christine Bonn, Regional Council of Ostrobothnia

Anne Savola and Anne Nummela, Regional Council of Satakunta

Timo Juvonen, Heikki Saarento and Roosa Mikkola, Regional Council of Southwest Finland

Kaarina Rautio and Suvi Silvennoinen, Helsinki-Uusimaa Regional Council

Lotta Vuorinen and Frank Hering, Regional Council of Kymenlaakso

Mari Pohja-Mykrä, Coordinator of Maritime Spatial Planning Cooperation

Tiina Tihlman (chair) and Maaret Stenström, Ministry of the Environment

Susanna Harvio, Tiina Falck and Riikka Söyrinki, WSP Finland Oy

Elisa Lähde, Aalto University

Kimmo Kivinen, Capful Oy

Paul Hermansson, Capful Oy

A HEALTHY BALTIC SEA – HEALTHY PEOPLE

The Coastal Strategy has been informed by Finland's Maritime Spatial Plan 2030 and in particular its visioning work. This vision for sustainable use and the associated regional targets and sectoral roadmaps were developed during autumn 2019 and early 2020 through extensive stakeholder work in Maritime Spatial Planning. The resulting vision, "A healthy Baltic Sea – healthy People" (link), has been focused and concretised for the coastal zone in this strategy work.

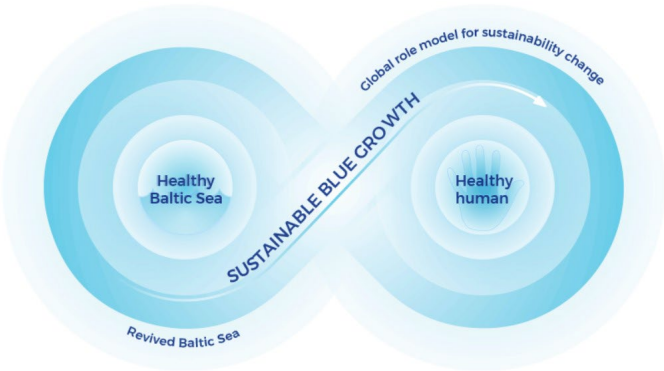


Photo: A vision for Finland's marine areas 2050.

The definition of the coast varies depending on the issue under consideration and it is challenging to draw a precise geographical boundary for the coast. Instead, a coastal zone can be defined as an area where land and sea interact. Land-sea interactions involve a wide range of human activities and also other processes, such as monitoring the nutrient load and eutrophication of catchment areas, the laying of cables or the transmission of energy to the national energy grid, the links between sea and land transport, ports and urban and coastal recreational uses, the spawning grounds of migratory fish in rivers flowing into the Baltic Sea, and bird migration and mainland-to-sea flights for feeding and roosting.

In the Baltic Sea, land-sea interactions are also significantly influenced by its characteristics, such as shallowness, small water volume, and slow water turnover. These factors make the Baltic Sea ecologically fragile and currently one of the most polluted seas in the world. In recent years, pollution has decreased, but the state of the sea has not yet improved.

Because of its small volume, the Baltic Sea and its coastal area are also vulnerable to the effects of climate change. The air and water warm up in both summer and winter and the ice cover is reduced. Precipitation and river run-off into the Baltic Sea is increasing, and with it the amount of nutrients.

Warm water also brings in invasive species. These changes will affect the ecosystems and species in the Baltic Sea, but also, for example, shipping, fisheries, and other human activities in the marine and coastal areas. Mitigating climate change, adapting to it, and combating biodiversity loss all require urgent action.

Today, we recognise that environmental problems and social sustainability challenges are interlinked. Social and ecological processes interact and overlap at different scales. In an area like Finland's coastal region, people and nature are interdependent and evolve together through a series of feedback loops. Improving the ecological status of the Baltic Sea and preserving biodiversity requires a societal-wide sustainability transformation and a shift to a circular economy, supported by the management of the coastal zone as a systemic whole, rather than solving individual environmental problems.

Photo: The UN Sustainable Development Goals (SDGs) are an effective way to guide sustainability efforts also in the coastal zone. These goals will also guide the development and implementation of the Coastal Strategy.

The socio-ecological system of the coastal zone is formed by nature and its ecological structures and processes, and by man and the structures and processes associated with human activities. There is constant interaction between man and nature. People enjoy a range of ecosystem services, or benefits provided by nature. Ecosystem services include fishing and recreation, but also nutrient recycling, water purification, and erosion control, which may be more difficult to identify. Ecosystem services are based on a healthy and thriving marine and coastal environment.

A HEALTHY BALTIC SEA – HEALTHY PEOPLE

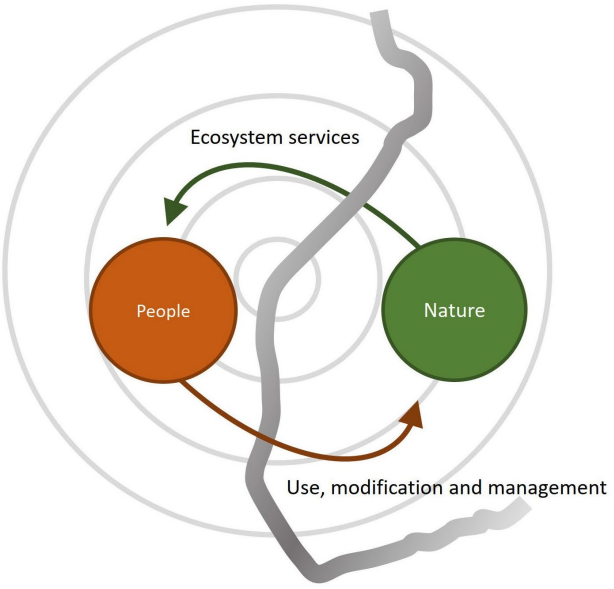


Photo: Sustainable coastal zone management requires a holistic systems approach. People enjoy a range of ecosystem services, or benefits provided by nature. On the other hand, they influence coastal nature through their use and management activities at local, regional, and systemic level.

Humans directly and indirectly affect the marine and coastal environment through their activities, such as construction, transport, and conservation. This impact is reflected in the supply of ecosystem services and, further, in the conditions and constraints for human activity. The coastal zone can therefore be seen as a system in which social factors cannot be understood and managed without taking ecological factors into account, and vice versa.

The interaction between humans and nature takes place within the system at different scales. The Baltic Sea is significantly affected by high nitrogen and phosphorus loads from a catchment area around four times its surface area, causing eutrophication.

In addition, small-scale activities such as dredging and beach construction, when implemented at multiple sites along the coast, create a significant overall impact.

Achieving the desired sustainability transition requires adapting housing, energy production, transport, and food chain systems to the limits of the environment's carrying capacity. The starting point is to identify and understand the carrying capacity limits.

Systems thinking brings a change in the way we see how planning can influence complex and non-linear causal relationships. The role of planning, and in this case strategy work, is to steer the system in a particular direction rather than to define a static target state.

A concrete measure is to enable cooperation between different actors. It contributes to a common understanding of the coastal zone as a whole, its desired state, and the limits of sustainable action. Effective collaboration and systems thinking also provide a platform for continuous mutual learning. Cooperation can involve various actors with diverse perspectives, values, and interests. As opposed to working in silos, joint planning and negotiation between sectors will help us build a better overall picture, facilitate the sustainability transition, and increase system resilience.

The current Coastal Strategy is based on an operating model that promotes cooperation. The operating model has sought to identify the common principles of action, the relevant stakeholders in the coastal zone and their interactions, and the most relevant measures. In terms of principles and measures, places and channels for working together and sharing information have been identified in particular.

Photo: Port of Hanko

POSSIBLE FUTURES FOR THE COAST

In the Coastal Strategy work, the analysis of the operating environment was based on the Scenarios for Maritime Areas 2050, developed in 2019. The scenarios identified in the Scenarios for Maritime Areas 2050 project, namely *Dancing with big businesses, Profitability under the environment's terms,* and *Baltic Sea of restrictions and tensions,* were compiled into a report that explored the recent progress of the scenarios and possible future developments. The report was further developed with stakeholders. The report is presented in Annex 1.

The impacts of the developments identified in the scenarios are seen from the perspective of the interaction between the sea and the coast, especially through the increasing pressure on the Baltic Sea from a security of supply perspective and the clash of uses (for example, between environmental and recreational use):

- With the geopolitical crisis, energy and food production are at a tipping point in terms of self-sufficiency and strengthening security of supply, and the effects will be reflected in the future, particularly on environmental and economic aspects through declining biodiversity and attractiveness. Security considerations may override other considerations for the use of the Baltic Sea.
- The level of ambition of environmental regulation may be too low if the EU decides to compromise on sustainability issues in order to improve its competitiveness. This development could have a negative impact on coastal habitats and the wellbeing of the Baltic Sea.
- With the importance of energy self-sufficiency rapidly increasing in the future, there may also be an emphasis on rapidly increasing offshore wind capacity, which in turn may have a significant impact on the natural and cultural environment of the coast.
- As self-sufficiency in food production increases, fish farming will increase and activities may shift more to the sea and the coast, with higher energy costs on land.
- Increasing pressures on the Baltic Sea coastline (e.g. energy, industry, housing), combined with increased security concerns, will in future increasingly conflict with the protection of the Baltic Sea's biodiversity, tourism and recreational uses, and the preservation of the cultural landscape.

Necessary measures were identified to mitigate the risks and take advantage of the opportunities identified in the scenario work. Regardless of the scenario, the following actions will be highlighted in the near future for the interaction between the Baltic Sea and the coast:

- In addition to the geopolitical tensions, the number of issues and interests in the Baltic Sea to be coordinated in security, environmental and economic issues will continue to grow. Environmental issues, techno-economic issues, the adequacy of electricity, national defence, food production, tourism, leisure and amenities must be coordinated at national level.
- Maintaining a shared situation picture of the coast requires continuous cooperation and transparency between different users and activities. There must be a dedicated platform for this development work at a sufficiently high level of cooperation.
- A national overview of offshore wind is needed, as EEZ projects are moving fast and the energy sector has become overheated. Cross-border cooperation on impact assessment is also important.
- In the face of threats and crises, people often seek refuge close to home, which may lead to a greater sense of self-sufficiency and rural living. We need to ensure that such developments do not create a backlash on environmental and sustainability issues, for example by supporting municipalities through sharing resources and information on circular economy solutions and best practices.
- As the self-sufficiency economy grows, we must also be prepared for an increase in teleworking, and the promotion of infrastructure and island transport that support location-independent work.
- Coastal development should favour sectoral diversity and geographical dispersion.
- In order to maintain the resilience of the coast and the archipelago, the decentralisation of economic, energy and infrastructure activities must be carried out in a way that meets the basic needs of the inhabitants.

COMMON PRINCIPLES

The aim of the common principles is to make visible the shared vision and ambition. Together with the *UN Sustainable Development Goals* (p. 5), they guide measures to improve the sustainability of coastal use. The common principles provide guidance for coastal zone operators. They concretise the objectives of holistic shared understanding, systems thinking, identifying the limits of sustainable action, knowledge management, and continuous learning.

All development activities, projects or plans concerning the coastal zone should be examined against the common principles to see whether they promote these principles. The common principles are set out in connection with the key measures, with the role of each measure in implementing the principles identified.

SMOOTH COOPERATION AND COMMUNICATION FOR TRANSPARENT DECISION-MAKING

Working together to promote sustainable coastal use and management.

Taking account of **the objectives of different stakeholders** and **reconciling them through participation and cooperation.**

Proactively and openly generating, sharing and **using information** among different stakeholders.

Learning from others and **sharing experiences and lessons learned** along the way.

CLIMATE CHANGE MITIGATION, ADAPTATION, AND COMBATING BIODIVERSITY LOSS

Prioritising sustainability and environmental responsibility in the coastal area.

Preserving the **social, cultural and ecological** prosperity of our **unique coastline and archipelago**.

Recognising and respecting **regional** and **local specificities**, both in terms of the natural environment and cultural heritage.

Taking account of natural values and conservation networks in the development of coastal areas.

UNDERSTANDING FROM THE LOCAL LEVEL TO THE NATIONAL AND GLOBAL CONTEXT

Taking account of a wide range of **overall impacts.**

Ensuring the **accessibility of coastal areas.**

Maintaining and improving the conditions for economic activities, taking into account their **multi-sectoral nature**. Strengthening the economic sustainability of the coast.

Considering **overall coastal security and security of supply.**

EFFECTIVE COASTAL DEVELOPMENT MEASURES, ACTIVE IMPLEMENTATION AND MONITORING

Implementing **effective measures** to improve the state of the coast.

Using common **models, practices and monitoring** to achieve the strategy objectives and implement the measures.

Ensuring **adequate funding** to promote the objectives and measures. **Sharing information** on possible financial instruments to promote the measures.

Photo: Common principles of the Coastal Strategy.

ACTORS

The interaction between land and sea involves many actors. The key actors and enablers of sustainable development are outlined in the network of actors below. The network includes residents and users of the area, entrepreneurs, as well as actors from the research and development sector, communities and organisations, and a network of public authorities. In addition, EU and international actors are important partners that complement the national network.

In line with the first principle of the Coastal Strategy, "*Smooth cooperation and communication for transparent decision-making*", the development of the coastal zone is based on open cooperation. The network of actors described helps to outline the network of cooperation and to plan communication.

The actors in dark blue are the key stakeholders in the development of the coastal zone. Those in light blue represent actors related to the key stakeholders.

Photo: The Coastal Strategy actor network.

KEY MEASURES

The key measures of the Coastal Strategy refer to the main actions to be taken in the coming years, which have emerged from stakeholder consultations. The measures will improve the environmental, cultural, social and economic sustainability of coastal use.

The measures are presented as a set of 10 action cards. The cards provide an overview of the measures to be implemented and an assessment of how they promote the common principles of the Coastal Strategy as a whole.

For each set of measures, an assessment is also provided of how it will help implement the UN Sustainable Development Goals (UN 2015, p. 5). The key targets have been highlighted on the cards.

The cards have identified initial measures and, where possible, sectoral sub-measures and needs. This information is updated annually.

The key actors involved in the implementation of the measure are specified at the end of the card. The measures are implemented in collaboration with several different actors. The action cards function as a "handbook", which is hoped to inspire and guide action on the key challenges identified at national level.

Key measures of the Coastal Strategy

- **A thriving coastal environment:** A thriving natural environment and functioning ecological processes are the basis for social and economic wellbeing.
- **A thriving coastal community:** Local industries provide jobs and livelihoods, which are a key basis for prosperity. Implementing a systems approach and jointly developed measures will improve the social sustainability and equity of the coastal zone.
- **Ensuring energy sufficiency:** The changed geopolitical situation has created high expectations for domestic energy production. Energy plays a key role in security of supply and overall security.
- **Ensuring food sufficiency:** The changed geopolitical situation has created high expectations for domestic food production. The functioning of ecosystems is an essential part of ensuring food security.
- **Sustainable land use and construction:** The potential for and restrictions on development in the coastal zone must be identified at a sufficiently broad level, taking into account the overall impact of individual and fragmented measures and the national target state of sustainable use of the coastal zone.
- **Improving accessibility:** Improving accessibility to the coastal zone by developing land, sea, and telecommunications links.
- **Preparing for exceptional situations:** Coastal zones are prepared for the impacts of climate change, environmental disasters, and exceptional situations.
- **Developing the overall impact assessment:** Developing methods for identifying and assessing the combined effects of projects.
- **An up-to-date situation picture:** Producing an up-to-date situation picture of the coastal zone, taking into account and defining local specificities in an evidence-based way.
- **A forum for sharing best practices:** Establishing a forum that serves as an interactive channel for sharing best practices and knowledge concerning the coastal zone.

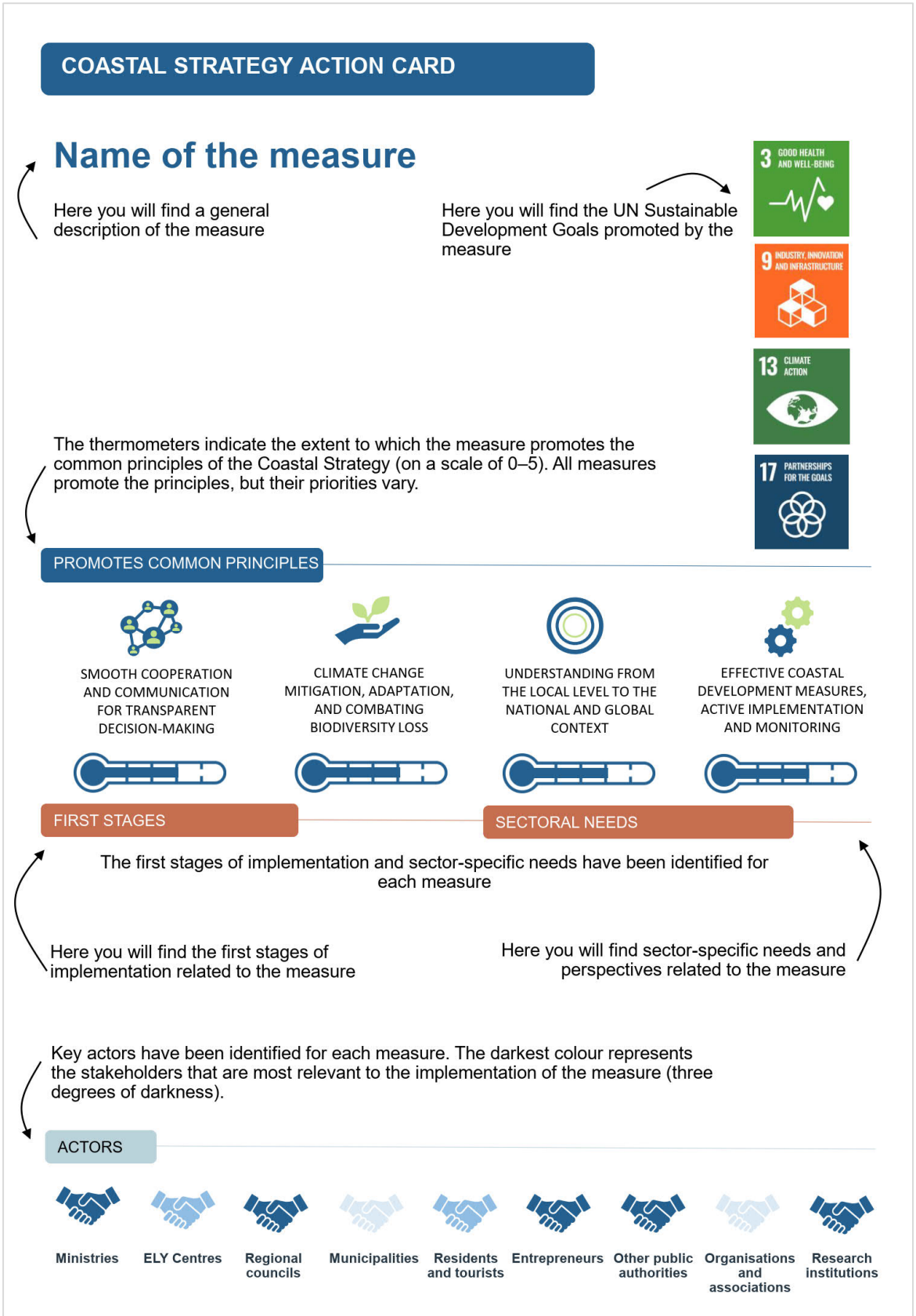


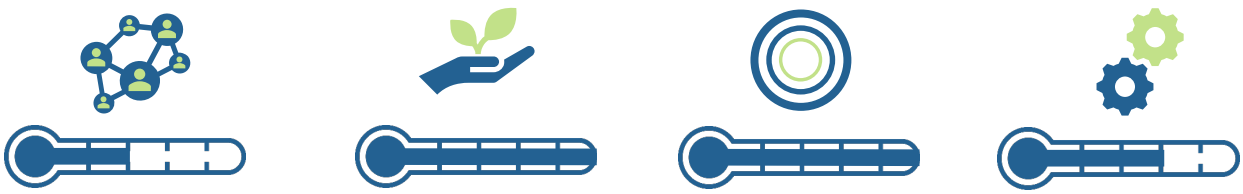
Photo: How to read the action cards.

A thriving coastal environment

The underlying premise is that a thriving natural environment and **functioning ecosystems** are the basis for social and economic wellbeing. Changes in land use, overexploitation of natural resources, climate change, invasive and alien species, eutrophication, and pollution of air, water and soil are the main factors affecting **biodiversity** and loss of nature. Disruptions to ecosystem functioning can have unpredictable consequences.

A thriving coastal environment requires **the application of the precautionary principle.** Promoting the wellbeing of the coastal environment is strongly linked to the other measures, namely the establishment and updating of a situation picture, a best practices forum, and an overall impact assessment. Preserving and nurturing existing natural processes is always cheaper than repairing the damage. The damage caused to nature or the environment should be compensated for as close as possible to the site and in a similar habitat. For example, the amount of undeveloped coastline will not increase without challenging and costly restoration measures.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- The first stages are linked to the first stages of the overall impact assessment and the creation of an up-to-date situation picture and a best practices forum. These all contribute to a thriving coastal environment.
- Actively promoting the status of coastal habitats and species through targeted monitoring, protection, and management. Securing funding for comprehensive species surveys. Ensuring the conservation of traditional coastal biotopes.
- Piloting ecological compensation and promoting the 30% protection and restoration targets and 10% strict protection targets of the EU Biodiversity Strategy and securing funding for these actions.

SECTORAL NEEDS

- Assessing the overall impacts on the marine and coastal environment, which are significant at sectoral level.
- Studying the effects of climate change on coastal ecosystems. The Ministry of the Environment and the Ministry of Agriculture and Forestry, together with municipalities and other actors, will identify climate change adaptation needs in coastal areas, define measures to address them, and monitor climate change research.
- The network of coastal protected areas will be extended and restoration activities will be carried out in line with international biodiversity agreements and the National Biodiversity Strategy and Action Plan.

ACTORS

A thriving coastal community

Community wellbeing is determined by the quality of life, satisfaction, and happiness of the people in the community. Local industries provide **jobs and livelihoods**, which are a key basis for prosperity. Fishing and fisheries will continue to be vital coastal industries in the future.

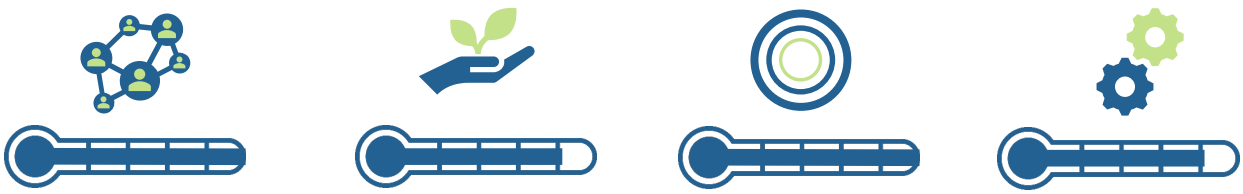
The implementation of the systemic approach of the Coastal Strategy and the jointly developed measures will improve the **social sustainability and equity** of the coastal zone through, inter alia, the development of **vitality**, the preservation of tangible and intangible **cultural heritage**, the improvement of **recreational opportunities**, and the participation of local communities in **decision-making**.

A comfortable environment with nature and cultural heritage is a key source of wellbeing. The archipelago and coastal areas offer a very special setting to **connect with nature and embrace the health benefits it offers.** Over the centuries, these areas have developed a strong identity based on a strong relationship with nature and local tangible and intangible cultural heritage. Increasing tourism and recreation require successful coordination with the coastal areas' natural and cultural heritage carrying capacity.

Local networks of actors strengthen the vibrant **island culture and identity** through events and cultural experiences, which also increase the attractiveness of the area and support the tourism industry, among other things.

The aim is to ensure that coastal areas provide the conditions for the wellbeing and good life of their inhabitants and for a competitive economy.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- The developers of the area actively interact with the local community, including by sharing up-to-date information on development activities and opportunities for participation and influence.
- Developing co-development practices to promote the sustainability of the coastal zone.
- Piloting co-development practices in different projects. Sharing experiences and best practices in the best practices forum.
- The potential of coastal nature and local culture will be utilised and promoted, for example through marketing, events, and participation in theme days.

SECTORAL NEEDS

- Safeguarding the capacity of fisheries, tourism and other economic activities, and supporting decision-making at local and regional level. Leader Groups are one of the key actors.
- Activating local communities to preserve cultural heritage, maintain their own environment, and combat invasive species, for example.
- Providing a wide range of leisure activities for both permanent residents and summer visitors.
- Using and developing island policies to highlight the strengths and local specificities of island regions.

ACTORS

Ensuring energy sufficiency

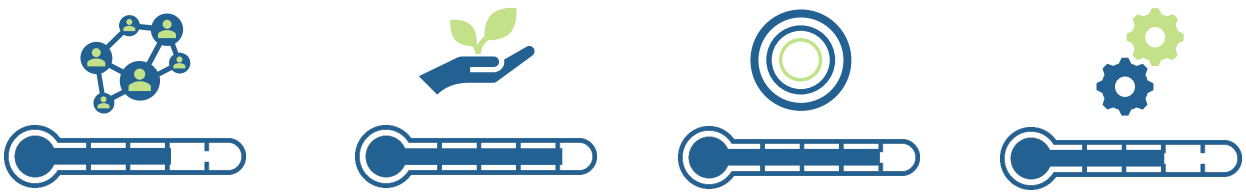
The changed geopolitical situation and the requirements to promote clean energy production have created high expectations for **domestic energy production.** Energy plays a key role in security of supply and overall security. It is therefore also intrinsically linked to the adequacy of food production.

Energy security is linked to various aspects of **production, storage, and transmission.** Security of supply is enhanced by **decentralised energy production**, diverse energy sources, and a reliable transmission and distribution system. Energy transmission capacity will be increased to meet the growing demand for energy, much of which will be produced in coastal and maritime areas.

Fossil fuels will be phased out and replaced by **new energy sources** such as offshore wind energy, solar energy, wave energy, ocean thermal energy, and bioenergy. The production and use of renewable hydrogen and ammonia will also be promoted. Emerging circular economy practices are also key in the coastal zone.

A national target level for wind power production will be set, taking into account the environmental impact. Spatial planning will include preparing for large-scale offshore wind construction. Coordinated cooperation will be promoted in building the electricity transmission infrastructure. In addition, cooperation with the Baltic Sea countries will be carried out to define the objectives and overall impacts of offshore wind energy in the Baltic Sea, taking into account impacts on shipping, ports, nature, landscapes, and underwater noise, etc.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Defining a national target level and boundary conditions for energy transmission capacity, taking into account new energy sources.
- Setting a national target level for wind power production, taking into account the environmental impact.
- Identifying the needs of offshore wind farms as a whole (e.g. in terms of the port network, maintenance, and logistics).
- Identifying opportunities for the development of energy multi-use areas, taking account of natural and cultural heritage in planning, life-cycle models, and administrative and permit procedures.

SECTORAL NEEDS

- Maintaining and developing the port network, taking into account the potential locations of hydrogen production plants.
- Identifying synergies and interfaces with energy security in relation to accessibility and food security.
- Promoting and piloting the creation of local, partially or fully self-sufficient energy joint-stock companies and energy cooperatives.
- The next step will be to identify opportunities for building networked entities based on joint-stock companies and cooperatives.

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

Ensuring food security

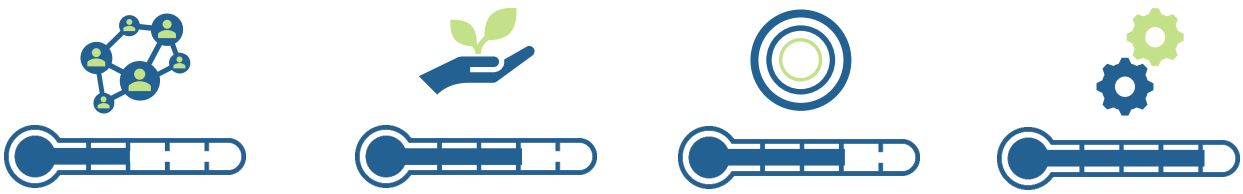
The changed geopolitical situation has created high expectations for **domestic food production.** We also need enough nutritious food during various exceptional situations. The functioning of ecosystems is an essential part of ensuring food security. Nutrient self-sufficiency and organic, recycled fertilisers are also an essential part of domestic food security.

Food security is related to various aspects of **food production, storage, and distribution.** Sustainable agricultural and fisheries production conditions are secured, bringing jobs and livelihoods to the coast. EU and national agricultural and fisheries policies play a key role in this.

The operating environment for fisheries enables sustainable growth in the sector's value chain. The use of local fish and vegetarian food will be promoted, taking into account the sustainability of fish stocks and encouraging carbon farming methods. Game farming also plays a key role in local food production.

In terms of food supply, primary production, the food industry, trade, and logistics should **work closely together**. The skills and talent in fisheries, maritime transport and logistics will be increased to secure food production and transport.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Identifying opportunities for the development of multi-use areas for marine food production, taking account of nature in planning, life-cycle models, and administrative and permit procedures.
- Streamlining and harmonising permit procedures for fisheries.
- Considering and safeguarding the fishing environment when developing maritime industries, including ensuring sufficient fish farming sites.
- Promoting aquaculture where possible, taking into account regional specificities, in particular water quality.
- Managing and reducing nutrient emissions from primary production, including through new innovations.

SECTORAL NEEDS

- Safeguarding food production conditions on the coast.
- Developing an operational model to integrate chains linked to local food production.
- Strengthening natural fish stocks and promoting the use of domestic fish (e.g. through food programmes and retail).
- Piloting and introducing new technologies (algae farming, mussel farming) and considering their synergies, for example to reduce nutrient loads from fish farming.
- Identifying synergies and interfaces with food security in relation to accessibility and energy security.

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

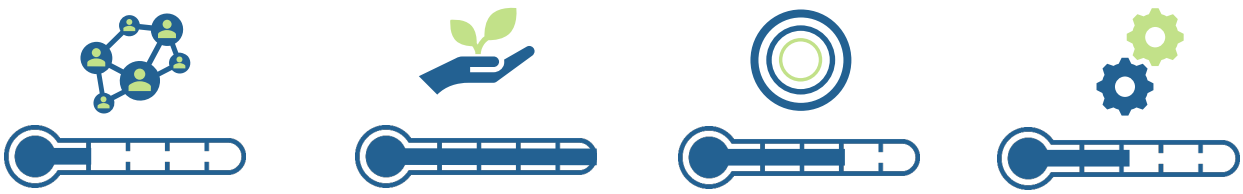
Sustainable land use and construction

The **potential for and restrictions on development** in the coastal zone must be identified at a sufficiently broad level, taking into account the overall impact of individual and fragmented measures and the national target state of sustainable use of the coastal zone. The coastal zone is particularly rich in biodiversity, but at the same time fragile. Local specificities are also assets for many coastal industries, which is why conducting a comprehensive impact assessment is an essential part of sustainable land use.

Coastal municipalities and provinces should be at the forefront of land use and building practices in **reconciling human activities, climate change impacts, and ecological processes.**

Sustainable land use should also be socially and culturally sustainable: taking into account the views of residents and other stakeholders, as well as different communities, is an important part of sustainable development.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Land use and construction planning in coastal communities aims to identify and anticipate the impacts of climate change and ensure that communities vulnerable to climate change can function in all situations.
- Identifying synergies and interfaces of sustainable construction in relation to the overall impact assessment, the situation picture, and the best practices forum. Development of a comprehensive impact assessment, in particular in relation to cultural heritage, including underwater heritage, natural values, and landscape.
- Identifying funding channels for local experimentation and piloting.

SECTORAL NEEDS

- Evaluating and revising building regulations. Considering the need for undeveloped coastal areas.
- Taking into account the challenges posed by acid sulphate soils in land use and construction.
- Sharing best practices and examples on conservation and repair construction. This is also important for cultural and historical reasons.
- Updating and improving coastal flood maps to support flood risk management. Developing flood forecasting and coastal flood forecasting methods. Ensuring the implementation of measures in flood risk management plans.
- Sharing information between regions on sustainable land use and building practices.

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

Improving accessibility

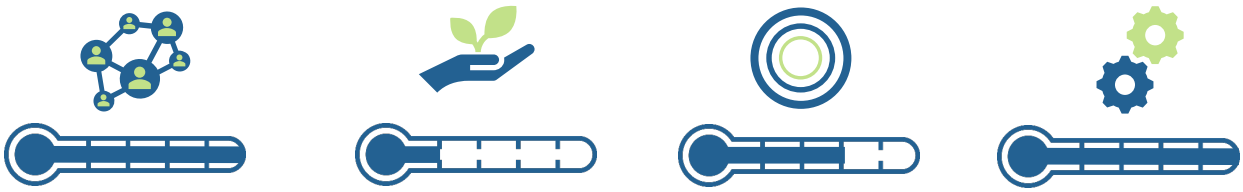
Improving accessibility to the coastal zone by developing land, sea, and telecommunications links. Good accessibility supports the coastal zone's residential and leisure activities and promotes location-independent work and diverse economic activity. Preserving vacant and undeveloped coastal areas is also an important element of accessibility.

Transport links will be developed in harmony with the coastal environment, taking into account the **current and future needs of residents and businesses**. The development of island transport will take into account both physical and experiential accessibility. The development of waterways will also take into account the needs of recreational boating.

Good accessibility is a key **element of overall security, business competitiveness, and the wellbeing of residents.** In addition, the development of transport links will take into account the **special uses of coastal areas**, including the **operating conditions** for national defence and fire and rescue services. Coastal accessibility will be considered as part of regional integrated coastal zone management strategies and operational programmes.

Ensuring **effective and affordable telecommunications connections** to the coastal and archipelago areas to facilitate the everyday life of residents and businesses.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Maintaining and developing existing transport networks and infrastructure until more sustainable solutions are available and more mainstream even in sparsely populated and inaccessible islands.
- Piloting and promoting sustainable modes of transport such as taxi boats, boat sharing, water buses, solar-powered electric boats, etc.
- Using and supporting transport and logistics innovations to secure services and housing in the archipelago and the coast, and preparing for year-round accessibility.
- Developing links to improve the fluidity of everyday life and the conditions for business, thus strengthening the vitality of coastal areas.

SECTORAL NEEDS

- Making coastal tourism and special cultural heritage sites accessible, both physically and in terms of information and communication.
- Creating integrated experiential travel chains.
- Ensuring the operational capacity of shipyards and port networks (transport and telecommunications links), taking into account the electrification of maritime transport and land connections.
- The regional councils, municipalities, and the ELY Centres will contribute to the development of telecommunications connections in accordance with regional and municipal strategies.
- Piloting the use of zero-emission (battery/hydrogen-powered) vessels on selected routes in the archipelago.

ACTORS

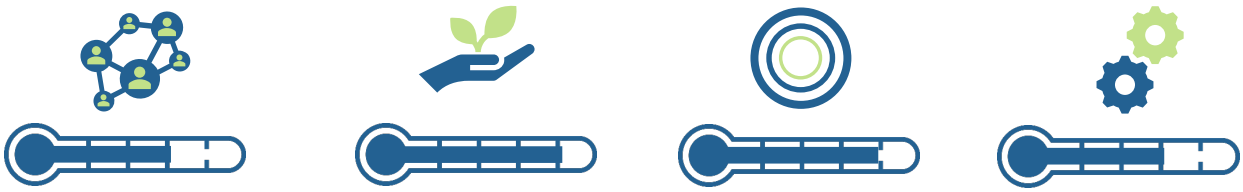
Preparing for exceptional situations

Coastal zones are prepared for the **impacts of climate change, environmental disasters**, and exceptional situations. The development of coastal zones must take greater account of and anticipate geopolitical **risks** and ensure adequate regional capabilities in the context of overall national security. There is also a risk that the growth of industries will threaten good water status and the achievement of water and marine management objectives.

Improving the status of the Baltic Sea and its coastal environment requires not only national actions but also commonly agreed objectives and measures by the Baltic Sea countries.

The Baltic Sea coastal areas are affected by many **common risks** such as eutrophication, litter, invasive and alien species, climate change, natural disasters, and oil and chemical accidents. The risk of emergencies will be reduced by harmonising measures relating to transport and shipping accidents, and by developing cooperation with other Baltic Sea countries in the fight against oil and chemical spills. The risk of accidents can be reduced and maritime safety increased by actively influencing regulations and measures in these areas within the EU and international organisations.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Anticipation: increasing coastal regions' own preparedness in the event of, for example, energy or water supply disruptions.
- Developing methods and practices for identifying and reporting anomalies.
- Establishing a policy for exceptional circumstances: identifying safeguards.

SECTORAL NEEDS

- Ports are prepared for accidents and invasive species and effectively manage the reception and handling of ship-generated waste within the port area.
- In coastal, island and offshore areas, adequate oil and chemical spill response resources will be provided, ensuring the quality of technical capabilities and the rapid availability of equipment and personnel. The adequacy of waste management and the functioning of the whole chain in the event of an environmental incident is ensured through advance planning.
- Flood risk management and climate change preparedness will be given special attention in municipal land use.
- Flood risk management for industrial and power plants in coastal areas will be supported, also with regard to nuclear safety.

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

Developing an overall impact assessment

Developing methods for identifying and assessing the combined effects of projects. The aim is to carry out impact assessments from the perspective of the **coastal areas' specificities and stakeholders**, to identify **synergies between the sea and land use** (in terms of cultural heritage, for example), and to take a **systemic approach**, assessing impacts on ecological processes and the provision of ecosystem services in addition to traditional sectoral perspectives. In addition to ecological impacts, economic and socio-cultural impacts are also assessed. The main process for assessing the overall impact is currently the Environmental Impact Assessment (EIA) procedure.

In addition to regional assessments, the development of global and combined impact assessments is important to provide an up-to-date situation picture of the whole coastal zone, for example in relation to offshore wind projects, maritime transport, dredging, excavation and industry (including the battery industry).

For renewable energy, a holistic assessment is needed. The assessment should focus on the production, transmission and storage of energy in the form of, for example, hydrogen and hydrogen-derived electrofuels, such as ammonia, methanol or methane.

The development and implementation of the overall impact assessment should also be supported by cross-border cooperation.

PROMOTES COMMON PRINCIPLES

FIRST STAGES

- Exploring the possibilities of developing a more comprehensive impact assessment for major projects.
- Piloting of an overall impact assessment, for example on offshore wind, as a joint process between ministries and with Sweden and other key stakeholders. This will include developing tools for impact assessment and overall management, taking into account the overall impacts not only on the natural environment and landscape, but also on ports, maritime transport, radar systems, etc.
- Developing impact monitoring and using monitoring data in evaluation work.

SECTORAL NEEDS

- Identifying opportunities to improve the overall impact assessment process for projects in different sectors.
- Exploring the possibility of compiling public project data into a digital map-based project interface for the coastal zone, by sector (for example, as part of the coastal forum's digital network).
- Specifying the sector-specific needs and objectives for developing the impact assessment. Identifying funding channels for experimentation and piloting.
- Renewable energy review.

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

An up-to-date situation picture

Producing an up-to-date situation picture of the coastal zone, taking into account and defining **local specificities in an evidence-based way**. The aim of the situation picture is to increase understanding of the challenges and potential of the coastal zone and the carrying capacity of the environment. A situation picture is needed of the themes relating to the above measures (coastal nature, coastal community, etc.).

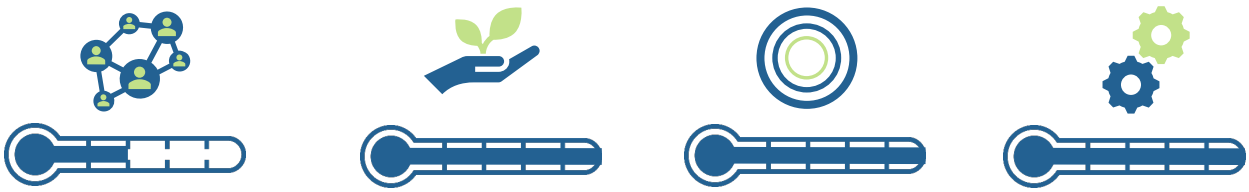
It also aims to create a **comprehensive picture** of the state of the coastal zone across provincial boundaries and to **highlight development and research needs.** The data can also be used to monitor the implementation of national and regional strategies.

When preparing the situation picture, the possibility of regular **updates** will be taken into account. The situation picture will make extensive use of **existing data, spatial data sets and information portals**, and identify **data gaps**. It will also draw on information from existing cooperation networks (e.g. the cooperation network for maritime spatial planning and regional flood risk management groups). To create a situation picture, it is necessary to develop methods for collecting and presenting data. Producing an up-to-date picture of the situation in all coastal zones also requires investment in research.

International cooperation networks play a key role in providing a broader picture of the situation and in bench-marking and international comparison. The situation picture will also take into account the Baltic Sea context.

The material will be produced and processed in an **open** and accessible manner.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Defining the structure and functionalities of the situation picture, as well as the related responsible parties and funding opportunities.
- Planning a classification system for comparison and monitoring. Exploring the functionality of the regional division of the maritime spatial plan and the classification of archipelagos.
- Identifying synergies and interfaces of the situation picture, including with international interfaces and in relation to the best practices forum.
- Updating the situation picture and establishing monitoring procedures.

SECTORAL NEEDS

The themes are those laid down in the action cards:

- Accessibility (e.g. logistics, ports, maritime transport, boating, coastal routes, freight and passenger transport including tourists, telecommunications)
- Energy (overall picture and needs of production and transmission, including wind power, hydrogen, bioenergy)
- Food (fisheries, agriculture)
- Coastal communities (coastal culture and livelihoods, cultural heritage, recreational and tourism needs, the potential of cultural heritage, e.g. in tourism)
- Coastal nature (including water status, nutrient loading in catchments, adequacy of the nature protection network, ecological connectivity and networks, rivers, adequacy of nature reserves, and mapping of quiet areas, species and habitats)
- Other themes identified include a situation picture and needs of the industry

ACTORS

Ministries | **ELY Centres** | **Regional councils** | **Municipalities** | **Residents and tourists** | **Entrepreneurs** | **Other public authorities** | **Organisations and associations** | **Research institutions**

A forum for sharing best practices

Establishing a forum that serves as an **interactive channel for sharing best practices and knowledge concerning the coastal zone**. Based on implemented solutions, the forum will bring together and share **reliable information and best practices** for coastal development, such as climate change adaptation, combating biodiversity loss, construction management, and the circular economy. The forum will promote **peer learning** and the dissemination of good practices based on experience.

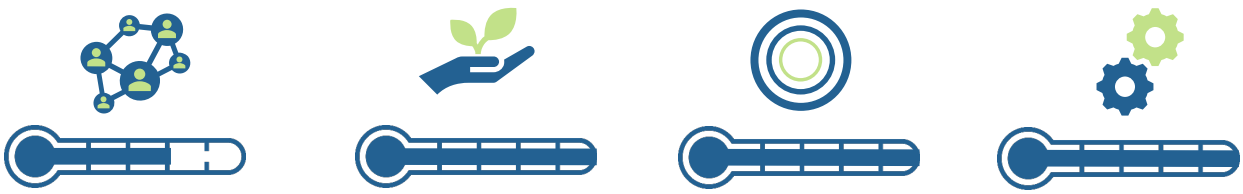
The forum is also responsible for **monitoring** the Coastal Strategy. The forum will be built using existing cooperation groups and networks.

A common, up-to-date knowledge base is essential for all cooperation, both between different sectors and between residents and economic operators. Effective use of information requires easy access to it.

It is important that **the knowledge base is actively used** in practical activities such as natural resource management, coastal zone management planning, and coastal management projects. Clear and illustrative information on **the state of the coastal zone and the impacts of activities** will also increase the overall environmental awareness and **understanding** of coastal residents and stakeholders.

The forum will be set up as both **a physical and a digital network**. For example, the development forum meets around 2 times a year to share information on good practices in sustainable coastal management. The forum is primarily intended **for experts.** The interactive digital platform (website) will also provide low-threshold information on, for example, project results and practices, situation pictures of different thematic areas, and facilitate discussion within and between sectors.

PROMOTES COMMON PRINCIPLES



FIRST STAGES

- Defining the structure of the forum, as well as the related responsible parties and funding opportunities. The forum must have a host organisation, which may also change from year to year.
- Identifying synergies and interfaces between the forum and the situation picture and other working groups.
- Setting up and publicising the forum (the network, a digital site and database of network and coastal data).
- Identifying funding channels for experimentation and piloting.
- The application and effectiveness of knowledge will be promoted by developing activities to make the latest information and partners easily accessible to the different sectors.

SECTORAL NEEDS

- Sharing practices on sustainable construction and land use management between municipalities and provinces.
- Contributing to the reform of environmental impact assessment practices (e.g. overall assessment).
- Sharing practices between maritime transport, ports and port operators on sustainable solutions, practices and policies to develop ports and minimise environmental damage.

ACTORS

IMPACTS

The impacts of the implementation of the strategy have been assessed in terms of ecological, social, cultural and economic sustainability in Finland's coastal areas. In summary, the Coastal Strategy aims to create an approach to sustainable development that takes into account the ecological, social, cultural and economic aspects of coastal zones. The strategy's approach will help reduce the vulnerability of coastal zones to environmental change, while promoting long-term prosperity and sustainable use of resources.

Ecological sustainability: The Coastal Strategy aims to promote the ecological sustainability of the coast by addressing the threats of loss of nature, climate change and pollution.

- Climate change mitigation and adaptation: The strategy recognises the impacts of climate change on the coast, such as warming, increased rainfall and rising sea levels. The measures aim to mitigate and help adapt to these impacts.
- Ecosystem services: The strategy recognises the ecosystem services provided by nature, such as fish catches, recreational opportunities, water purification and erosion control. Maintaining these services requires the preservation of healthy and prosperous marine and coastal habitats and the reduction and prevention of pollution.
- Nature and human interaction: The strategy emphasises the interaction between man and nature in the coastal zone. Human activities have direct and indirect impacts on ecosystems, and the strategy seeks to balance these impacts to promote sustainability and combat biodiversity loss.

Social and cultural sustainability: The strategy emphasises the importance of social and cultural sustainability as part of nature conservation and traditional and newer livelihoods.

- Cooperation and interaction: The Coastal Strategy stresses the importance of cooperation between different stakeholders. Joint planning processes and consultations can help build common understanding and reduce conflicts.
- Cultural heritage: Coastal regions often have a strong cultural heritage and the strategy seeks to protect and promote this heritage while promoting sustainable use.
- Systems thinking: The strategy introduces a systems approach to help understand how social and ecological factors interact and how they affect the sustainability of the coastal zone. A systemic approach is particularly important in the fight against biodiversity loss.
- Comfort: The measures in the strategy aim to improve people's wellbeing and the conditions for a good life, for example by improving accessibility, reducing and preventing pollution and providing a wide range of opportunities for living, leisure and work in towns, villages and rural areas.

Economic sustainability: Although the strategy does not deal directly with the economy, it contains principles and policies that can affect financial sustainability.

- Cooperation and information sharing: Promoting cooperation and sharing information can improve the use of resources and reduce duplication of effort, which can improve economic efficiency.
- Coastal development: The strategy guides development and planning on the coast. Good practices and solutions can contribute to local economic development, for example by enabling nature tourism and the development of an attractive port network.
- Business and industry: The strategy aims to strengthen the competitiveness and development of the coastal economy, including by improving accessibility.

Failure to implement the Coastal Strategy could have negative ecological, social and economic impacts. Potential adverse effects may include:

- The impacts of climate change: Impacts such as sea level rise, eutrophication and extreme weather events may have a greater impact on coastal areas without adaptation and mitigation measures.
- Conflicts and disputes: Conflicts and disputes over resource use and land use can arise in coastal areas as different stakeholders compete for resources without promoting cooperation.
- Loss of cultural heritage: Preservation of cultural heritage and maintenance of cultural practices can be hampered if the interactions between culture, nature and business/economy are not taken into account.
- Social inequality: Without strategic guidance, environmental problems can have an unequal impact on different population groups and undermine the wellbeing of communities.
- Environmental disasters: Without climate change mitigation and preparedness, coastal areas may be more vulnerable to environmental disasters such as floods, which can cause major economic damage.
- Missed opportunities: Without a strategic approach, coastal zones may miss out on the opportunities to develop sustainable economic activities such as ecotourism, fisheries and renewable energy.
- Lost values: without active measures to combat biodiversity loss and pollution, many existing coastal ecosystems and the ecological values and ecosystem services they provide will be lost.

MONITORING

Monitoring plan

The implementation of the Coastal Strategy will be monitored on an annual basis. Monitoring should focus on tracking the implementation of the measures. Each year, the measures are listed and evaluated based on their status (e.g. ongoing, to be implemented in 1–2 years, not ongoing), and the extent to which they have implemented the common principles is assessed.

The effectiveness of the strategy will be assessed in terms of the objectives in relation to the common principles and other key national and international strategic objectives (e.g. significant progress, some progress, no progress). As regards the effectiveness of the strategy, monitoring will be carried out every 1–2 years. A monitoring table is attached to the strategy.

The monitoring and evaluation of effectiveness will also make use of the evaluation questionnaire of the network of actors, which can be used to ask them about their own actions and ideas for the coming years.

The annual monitoring report will be annexed to the Coastal Strategy. The results of the monitoring will be communicated and shared with the network of actors.

Updates

For the measures, the third section of the action card, i.e. the first stages of implementation and sectoral needs, will be updated every 1–2 years. For these, possible project funding opportunities can be highlighted, as well as more detailed information on the responsible party.

The Coastal Strategy aims for 2030, but the common principles and the network of actors need to be updated to reflect changes in the environment at least every five years. The Coastal Strategy is a dynamic approach that must reflect the systemic environment in which it operates.

Responsibility for monitoring and updating

The coastal development forum will monitor the implementation of the measures at the beginning of each year. The forum is led by the Ministry of the Environment and supported by the Coordination Group for Maritime Spatial Planning. The updating of the Coastal Strategy and the stakeholder network assessment survey are the responsibility of the Ministry of the Environment. The practical implementation will be carried out by a network of actors working together in the forum.

 Photo: City of Vaasa

ANNEXES

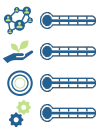
Annex: Monitoring table

24 *Source: Pixabay Kalajoki*

Monitoring table

Below are examples of tools for monitoring the Coastal Strategy. The tools will be refined during the monitoring phase. The following table can be used to monitor the measures.

The table below can be used to assess the effectiveness of the strategy and its measures in terms of objectives.

Monitoring the implementation of the measures **Measure**	**Stage of implementation** Ongoing To be implemented in 1–2 years Not ongoing	**Measures taken**	**Implementation of common principles** 	**Considerations for the next 1–2 years**
A thriving coastal environment				
A thriving coastal community				
Ensuring energy sufficiency				
Ensuring food security				
Sustainable land use and construction				
Improving accessibility				
Preparing for exceptional situations				
Developing an overall impact assessment				
An up-to-date situation picture				
A forum for sharing best practices				

Monitoring the effectiveness of the strategy **The set of objectives against which the implementation of the measure is evaluated (examples)**	**--/-/0/+/++ evaluation**	**Verbal description** (how the Coastal Strategy has implemented its objectives / overall assessment)
Common principles of the Coastal Strategy		
UN Sustainable Development Goals		
European Green Deal, UN Kunming-Montreal Global Biodiversity Framework, EU Biodiversity Strategy, EU Baltic Sea Strategy, HELCOM targets		
National land use guidelines National Transport System Plan		
Finland's Energy and Climate Strategy, Marine Strategy, National Biodiversity Strategy and Action Plan 2035, Archipelago Programme, Cultural Heritage Strategy, Domestic Fish Promotion Programme, and other key national strategies		