JANUARY 2014
INTERREG BALTIC SEA REGION PROGRAMME SECRETARIAT

Strategic Environmental Assessment of the Baltic Sea Region Programme 2014-2020

DRAFT ENVIRONMENTAL REPORT

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PROJECT NO. A024886
DOCUMENT NO.
VERSION 1
DATE OF ISSUE 27012014
PREPARED bim
CHECKED bera
APPROVED bera

CONTENTS

APPENDICES

1 Non-technical summary

The Baltic Sea Region (BSR) has presented a draft programme for the transnational co-operation in the "Baltic Sea Region Interreg Programme 2014-2020" (the BSR Programme). This report is an environmental assessment of the draft BSR Programme as presented in the draft programme document of 15 January 2014.

The overall objective of the programme under elaboration is 'to strengthen the territorial integration for a more innovative, better accessible and sustainable Baltic Sea Region'. The programme includes four priority axes:

1. Capacity for innovation
2. Efficient management of natural resources
3. Sustainable transport
4. Institutional capacity for macro-regional cooperation'

The environmental assessment is based on the requirements in the SEA Directive requiring that national and interregional plans and programmes are assessed prior to their adoption. The methodology of the assessment was described in a scoping report, which went through a hearing procedure involving the environmental authorities in the eleven countries in the Baltic Sea Region.

The environmental situation in the BSR as well as the environmental policy framework is briefly described in this report. The aim of the report is provide an assessment of the likely significant environmental impacts of the Baltic Sea Programme 2014-2020 and to provide recommendations for the further development of the programme.

The report provides an assessment at two levels: 1) The level of overall objectives and horizontal principles of the programme and, 2) The level of activities supported by the programme.

The assessment at the level of overall objectives and horizontal principles shows that the objectives and horizontal principles of the programme emphasise sustainable development as an intrinsic part of the programmes objectives. This indicates that the programme in principle is drafted under due consideration to the possible environmental impacts flowing from the proposed programme initiatives.

The assessment at the level of individual activities shows that two main characteristics of the BSR Programme have important implications for the environmental assessment.

First, the programme is focused on building the capacities of key actors and thereby, achieving higher-level objectives, such as environmentally friendly urban mobility or resource-efficient blue growth. Capacity building is to be achieved through types of support such as development of strategies or plans, training, networking, etc. These types of support, which can be characterised as 'process designs', do not in themselves have a significant direct environmental impact. However, if successful, they can lead to activities later on, which can potentially have significant environmental impacts. Therefore, the assessment recommends that selection criteria to ensure that capacity building activities build on principles of sustainable development and resource-efficiency are included in the programme.

Secondly, the BSR Programme is characterised by providing general objectives and directions for support, which will subsequently be financed based on application procedures. This means that the precise nature of the activities implemented under the programme will depend on the projects approved for financing. The detailed criteria for selection of projects are not included in the programme, but will be developed after programme adoption in the operations manual for the programme. This means that, for those types of activities which could potentially have a more direct impact, the environmental assessment is uncertain and very qualitative at this stage. The report therefore recommends guidelines for the environmental assessment of project applications.

2 Introduction

Purpose of this report

This is the draft environment report from the Strategic Environmental Assessment (SEA) of the Baltic Sea Region Programme 2014-2020 (hereafter referred to as BSR Programme). The SEA is carried out in line with the requirement of Directive 2001/42/EC and the purpose is to 'provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development'[1].

The report thus includes an environmental assessment of the likely significant impact of the BSR Programme, and, on that basis, provides recommendations for the further development of the programme. The report is drafted on the basis of the version of the programme dated 15 January 2013.

Public consultation

This draft environmental report will be subject to a public consultation, and the main comments received during this process, will be summarised in the final version of the environmental report, which will also explain how the comments have been taken into account in the finalisation of the environmental report.

Scoping report

The environmental report follows the methodology outlined in the scoping report, which was issued in a draft version in November 2013. The scoping report was submitted to the national authorities in the countries under the BSR Programme for comments. A revised scoping report was provided to the Interreg Baltic Sea Region Secretariat in January 2014.

Structure of the report

The report is structured as follows:

- Chapter 3 provides an overview of the BSR programme and the environmental policy framework.
- Chapter 4 summarises the approach and methodology (based on the scoping report)
- Chapter 5 provides an overview of the current environmental situation
- Chapter 6 provides the results of the environmental assessment

[1] Ref SEA Directive 2001/42/EC, Article 1

- Chapter 7 elaborates on the recommendations for the programme arising from the SEA

- There are two appendices. Appendix A provides an overview of relevant environmental policy objectives. Appendix B provides suggestions for environmental assessment guidelines to applicants, which can be included in the programme.

3 Programme and environmental policy framework

This chapter provides a summary of the contents of the BSR programme as well as the environmental policy framework in the context of which the environmental assessment has been developed.

3.1 Summary of the BSR Programme 2014-2020

The overall objective of the programme under elaboration is 'to strengthen the territorial integration for a more innovative, better accessible and sustainable Baltic Sea Region'. The programme includes four priority axes:

1. Capacity for innovation
2. Efficient management of natural resources
3. Sustainable transport
4. Institutional capacity for macro-regional cooperation'

The diagramme below provides an overview of the four priority axes.

Figure 1 Overview of programme

Priority axis	1	2	3	4
Purpose	Strengthening the ability of the BSR to create and commercialise innovation	Reduction of pollution in the waters of the BSR and strengthening resource-efficienct growth	Better connecting the secondary and tertiary transport networks and nodes in the BSR to core transport networks as defined by the TEN-T and Northern Dimension Partnership on Transport and Logistics	Strengthening the EU Strategy for the BSR as well as implementing common priorities with neighbouring countries.
Specific objectives	1.1 Research and innovation infrastructures 1.2 Smart specialisation 1.3 Non-technical innovation	2.1 Clear waters 2.2 Renewable energy 2.3 Energy efficiency 2.4 Resource-efficient blue growth	3.1 Interoperability of transport modes 3.2 Accessibility of remote areas and areas affected by demographic change 3.3 Maritime safety 3.4 Environmental friendly shipping 3.5 Environmentally friendly urban mobility	4.1 Seed money 4.2 Coordination of macro-regional coordination

The programme is characterised by providing general objectives and directions for support, which will subsequently be financed based on application procedures. This means that the precise nature of the activities implemented under the programme will depend on the projects approved for financing. The detailed criteria for selection of projects are not included in the programme, but will be developed after programme adoption in the operations manual for the programme.

3.2 Summary of the Environmental policy framework

The environmental policy framework in the region is obviously diverse, as the region covers eleven countries, of which eight are EU Member States. Hence, EU environmental policy plays an important role, as well as the regional (HELCOM) and national policies (in particular in the three non-EU Member States). With reference to the scoping report, it is assessed that for the environmental assessment, the point of departure should be taken in the following three documents, which correspond to those used for the BSR programme preparation and reflect the regional character of the programme.

- HELCOM Baltic Sea Action Plan (BSAP, 2007)
- The European Union Strategy for the Baltic Sea Region

› Strategy of Social and Economic Development of the North-West Federal District of Russia until 2020

Appendix A indicates the relevant environmental objectives in these documents.

In respect to the BSAP, this document is regarded as the key reference document in relation to the SEA as it encompasses the environmental objectives agreed by all countries in the Baltic Sea Region, except Belarus.

In respect to the European Union Strategy for the Baltic Sea Region, this document refers to the main EU environmental policy documents (e.g. the Environmental Action Programme) and associated objectives and therefore, these individual documents have not been included separately in the overview of key objectives in Appendix A.

In respect to the Strategy of Social and Economic Development of the North-West Federal District of Russia until 2020, the identification of the relevant objectives has been done on the basis of the following documents as a full translation to English of the strategy has not been available:

› The RF NORTHWEST FEDERAL DISTRICT DEVELOPMENT STRATEGY UNTIL 2020, Main Facts[2]

› Comparative table of the Strategy of social and economic development of the North-West Federal District and the European Union Strategy for the Baltic Sea Region[3]

› Action plan on the strategy implementation of socio-economic development of the North-West Federal District for the period until 2020, unofficial translation[4]. Action numbers in Appendix A refer to action numbers in this document. Only the numbers are mentioned as the actions are not really objectives (but actions). However, they do provide an indication of directions of the programme.

[2] PPT Presentation by Elena Rozhkova, Ministry for Regional Development of the RF
[3] www.bdforum.org/russia-and-the-strategy-for-the-baltic-sea-region
[4] http://www.cbss.org/wp-content/uploads/2013/04/strategy.pdf

4 Approach and methodology for the environmental assessment

Scoping report

The methodology was established in the scoping report. In accordance with this report, the following environmental issues are included in the assessment.

- Biodiversity, flora and fauna;
- Population and human health;
- Soil;
- Water;
- Air;
- Climatic factors;
- Cultural heritage, including architectural and archaeological heritage;
- Landscape;
- Energy efficiency;
- Use of renewable and non-renewable resources;
- Adaptation to climate change.

In addition to the individual environmental issues, the SEA also includes cumulative effects arising from the interplay between various issues.

Evaluation criteria and indicators

The evaluation criteria guide the assessment of the likely environmental impact for each of the environmental issues. The indicators establish – for each criterion – how the impact may be measured.

Table 1 Evaluation criteria and indicators

Environmental issue	Evaluation criteria	Indicators
Biodiversity, flora and fauna	Degree of impact on extent, conservation status and connectivity of protected areas (land and marine) Degree of impact on protected species Degree of impact on ability to generate ecosystem services	Developments in number and size of protected areas (land and marine) Developments in conservation status of protected areas (land and marine) Developments in share of protected areas covered by a management plan (land and marine) Developments in coherence and connectivity of protected areas (land

Environmental issue	Evaluation criteria	Indicators
		and marine) Developments in indicators on protected species Developments in generated ecosystem service benefits
Population and human health	Degree of impact on concentrations of hazardous substances in fish / drinking water Degree of impact on quality of drinking water / surface water / bathing water	Developments in concentrations of hazardous substances Development in water quality indicators
Soil	Degree of impact on soil quality	Developments in soil quality indicators
Water	Degree of impact on water quality of marine and inland waters	Developments in water quality indicators
Air	Degree of impact on air quality	Developments in air quality indicators
Climatic factors	Degree of change in CO2 emissions	Developments in CO2 emissions
Cultural heritage	Degree of impact on cultural heritage sites (on land or under water) or events	Numbers of cultural heritage sites Developments in state of conservation of heritage sites
Landscape	Degree of impact on land form, land use and land cover	Developments in indicators on land form, land use and land cover
Energy efficiency	Degree of impact on energy efficiency (energy consumption relative to GDP)	Energy consumption relative to GDP
Use of renewable and non-renewable resources	Degree of impact on resource use Degree of impact on consumption patterns towards increased use of environmentally friendly and renewable resources	Developments in resource use and consumption patterns
Adaptation to climate change	Degree of impact on adaptive capacity Degree of impact on delivering adaptation actions Degree of impact on climate resilience	Progress in implementing adaptation measures (process-based indicators) Progress in implementing adaptation policies and activities in general (outcome-based indicators) Developments in vulnerability indicators

Assessment method and data

The assessment of the likely significant environmental impact is conducted as a qualitative assessment where the potential impact is indicated according to the following categories:

- significant positive impact
- neutral or insignificant impact
- significant negative impact
- uncertain impact

Nature of the programme and implications for assessment

The scoping report stated that nature of the programme is such that for many specific objectives / types of actions, the environmental assessment is associated with a high degree of uncertainty or not be possible to provide. This is for two main reasons:

1) Programme based on process designs

A substantial part of the programme includes activities to support or change processes or working modes (e.g. institutional processes, organisational development, strategy development, etc.). I.e. the **direct** environmental impact of these activities is limited but they may lead to other activities further down the line. For example, a strategy document may lead to an investment pipeline, which again can lead to the implementation of specific investment (e.g. infrastructure) projects with, potentially, significant environmental impacts.

The assessment first and foremost considers the direct environmental impacts. However, it will also, in so far as possible, point to areas where a significant downstream environmental impact could occur and consider the extent to which the draft programme (e.g. in the formulation of selection criteria) takes this into account and seeks to counteract any potential negative effects.

2) Programme based general directions and application procedures

The programme sets out general directions for possible activities which can be supported under each priority axis. The actual activities which will be implemented depend on: a) the specific selection criteria which will be developed after adoption of the programme in the 'programme operational manual', and b) the actual project applications which will be submitted by the various stakeholders involved. This creates a significant level of uncertainty about the nature of the activities supported and hence also the environmental impacts. It is important to emphasise that this is not taken as a failure in programming but it is an inherent part of how such programmes are and should be developed.

When performing the environmental assessment, it became clear that, in fact, all the specific objectives or types of activities mentioned in the draft programme document falls under one or both of the two categories above. This means that emphasis in the assessment and the recommendations arising from the assessment has been put on making explicit the requirements for environmental assessment of the individual project applications to be included in the programme and in the operational manual.

Considering the above situation, the environmental assessment has not been made as a comparison between scenarios with and without the programme as originally envisaged. Given the very general character of the specific objectives and types of activities described, it is not possible to generate a 'with the programme scenario' and hence, not relevant either to generate a 'without programme scenario' ('do nothing scenario'). However, a chapter on the current environmental situation has been included in the report to serve as a reference frame for the assessments made. Also, some general observations with regard to the situation with and without the programme are included in Chapter 7.

Article 6(3) assessment under the Habitats Directive

Referring to the Guidance Document from the Commission regarding ex-ante evaluation (Annex 1 on SEA), an Article 6(3) assessment is likely to be required when it is possible to identify the probability of significant effects on Natura 2000 sites (i.e. when a programme includes precisely located infrastructure (see page 27)). According to the guidance, Article 6(3) assessment may form part of the SEA process but should be reported separately. Article 6(3) assessment is not performed as part of this SEA for two main reasons: 1) The programme is not sufficiently specific to identify specific effects on specific Natura 2000 sites, 2) The assessment is not included in the scope of work of the SEA.

5 Current environmental situation

This chapter provides an overview of the current situation for each environmental issue deemed as relevant for the assessment. Sources of data are indicates in footnotes and quality of data is discussed in the text where relevant. The point of departure is the scoping report and the indicators and assessment criteria listed there.

5.1 Biodiversity, flora and fauna

Biodiversity assessments

According to HELCOM's initial assessment of the ecosystem health of the Baltic Sea[5], the status of biodiversity appears to be unsatisfactory in most parts of the Baltic Sea. According to the preliminary results of the biodiversity assessment, 82% of the coastal areas assessed exhibit an unfavourable status. Environmentally alarming shifts and unbalances appear in many habitats and at all levels of the food chain, particularly at the level of large fish. Promising signs of successful remediation measures include an improvement in the status of top predators such as grey seals and white-tailed eagles during recent decades.

The fourth report on Europe's environment[6] (providing an overview for the pan-European area – thus not specific to the Baltic region) concluded that biodiversity loss in the pan-European region (particularly in farmland, mountain regions, forests and coastal zones) is occurring as a result of land use changes, urban sprawl, infrastructure development, acidification, eutrophication, desertification, resource overexploitation, both intensification and abandonment of agriculture, as well as climate change. More than 700 species are currently under threat in the pan-European region, while the number of invasive alien species in the pan-European region continues to increase.

[5] Baltic Sea Environmental Proceedings No. 122, HELCOM 2010.
[6] Europe's Environment, the Fourth Assessment, European Environment Agency, 10 October 2007

The European Environment Agency's report on assessing biodiversity in Europe[7] concluded that Europe will not achieve its target of halting biodiversity loss by 2010. In recent decades, growing public and political awareness of biodiversity decline has led to improved commitments, policies and practices for the conservation and sustainable use of biodiversity throughout much of Europe, and there are indications that some aspects of biodiversity are improving in some areas. Despite such efforts, biodiversity loss continues in many parts of Europe. Major threats include habitat destruction and fragmentation, the establishment and spread of invasive alien species, pollution from agricultural runoff in many countries, increasing water abstraction and use, over-exploitation, and the increasing impact of climatic change.

Protected areas

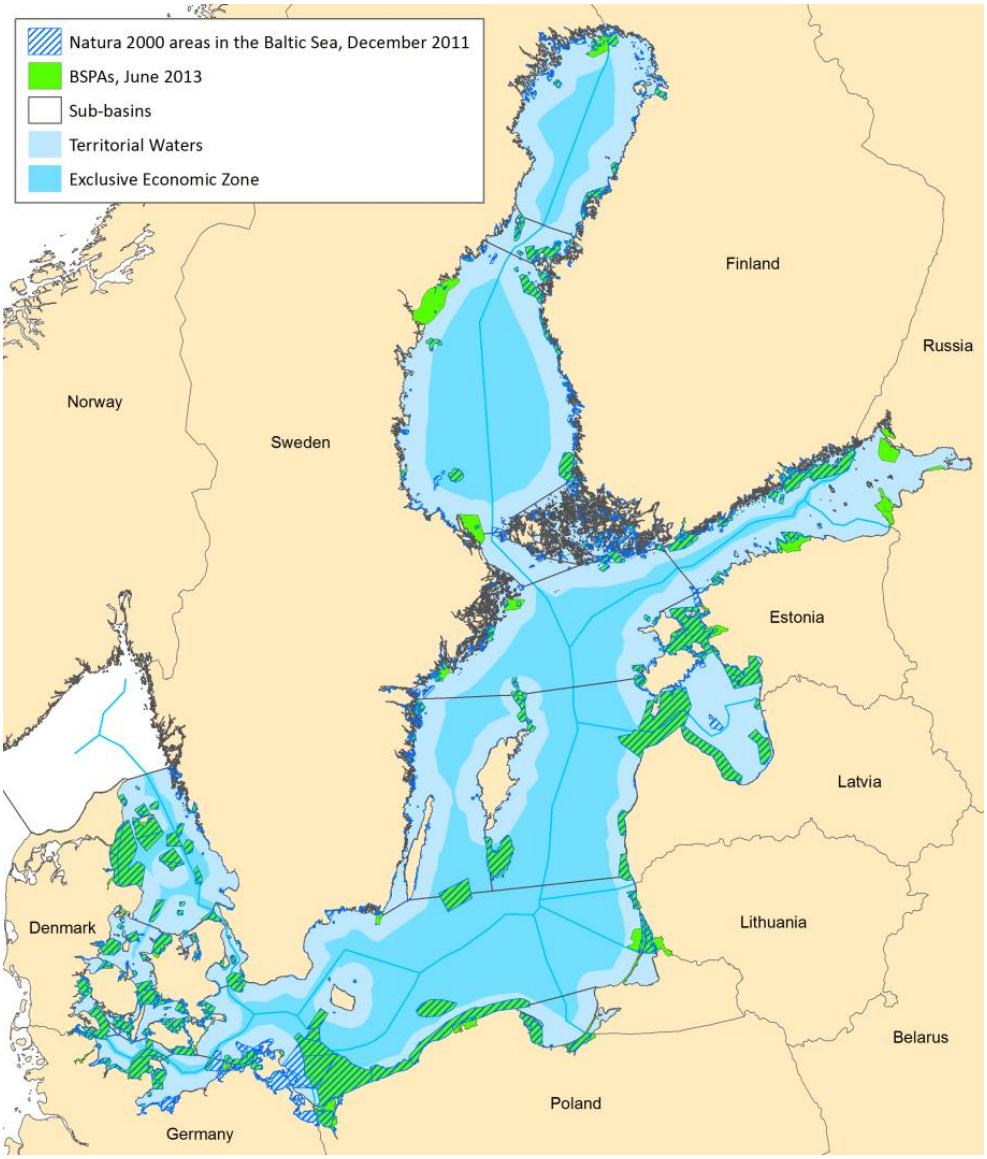
Baltic Sea Protected Areas (BSPAs) and marine Natura 2000 sites[8]:
In the past ten years progress has been made in enlarging the network of BSPAs: between 2004 and 2013 the protected marine area has increased from 3.9 to 11.7%. The network of Baltic Sea marine protected areas continued its growth also between 2010 and 2013. Five new areas were established as BSPAs since 2010: three in Latvia and two in Lithuania. For some areas the borders were redefined, resulting in a change of coverage area. The network of BSPAs currently covers 11.7% of the total marine area of the Baltic Sea. The 10% target of the UN CBD for the whole Baltic was attained in 2010.

The HELCOM 2010 Ministerial Meeting set a 10% target for each sub-basin, when scientifically justified. This target has now also been reached in all other sub-basins except the Baltic Proper and the Gulf of Bothnia. In the Baltic Proper 8.7% of the total area was covered by BSPAs and in the Gulf of Bothnia 4.8%. The Contracting Parties ought to consider strengthening the network also in these two sub-basins.

The HELCOM 2010 target to include more off-shore areas under the protection regime by the end of 2011 had not been reached between 2010 and 2013. Despite the overall increase in protected areas the fraction of protected areas in the Exclusive Economic Zone (EEZ) had not increased. The only new protection of the Exclusive Economic Zone resulted from an expansion of a Latvian BSPA, which now also encompasses 156 km^2 of EEZ. In comparison, the increase of protected Territorial Waters since 2010 was 5 421 km^2.

The Baltic Sea Action Plan published in 2007 encouraged those Contracting Parties that are also EU Member States to designate Natura 2000 areas as BSPAs. According to the 2011 data on Natura 2000 areas and the 2013 data on BSPAs, 64% of Natura 2000 sites had been nominated also as BSPAs. This implies a decline from 83% reported in 2010. By 2013, the total area of Natura 2000 sites had increased by 23 864 km^2, while the total area of BSPAs had increased only by 4 858 km^2, resulting in the decline of the fraction.

[7] Assessing biodiversity in Europe – the 2010 report, European Environment Agency, 2010.
[8] Data from: Overview of the status of the network of Baltic Sea marine protected areas, 2013, HELCOM.



The previous report on the status of the BSPA network[9] included an assessment on the ecological coherence of the network. It concluded that despite positive development in previous years the ecological coherence of the network had not been reached and still needed to be improved. The main problems were a lack of connectivity between different BSPAs and uneven distribution of the protected areas, in particular a lack of protected areas in the EEZ. Stemming from this, the HELCOM 2010 Ministerial Meeting agreed:

- to secure the establishment of a network of BSPAs that fulfils the criteria of ecological coherence (representativeness, replication, adequacy and connectivity) and thereby contributes to the protection of the entire ecosystem;
- that additional BSPAs would be nominated by the end of 2011, especially with the following purposes: ○ to protect threatened and/or declining species

[9] Baltic Sea Environmental Proceedings No. 124A, HELCOM 2010

and habitats and to include off-shore areas also in the Exclusive Economic Zone

- that the BSPAs not only cover a total of at least 10% of the Baltic Sea Area as a whole, but also, when scientifically justified, cover at least 10% of all its sub-basins.

- to develop and apply by 2015, management plans and/or measures for already existing BSPAs.

- that every new BSPA designation should within five years be followed by the establishment of a management plan and/or measures.

Management plans for protected areas have increased in number since 2010: 70 new management plans have been developed and implemented and the share of sites with a management plan in force increased from 40 to 65% between 2010 and 2013. Today, 106 BSPAs (65% of the total) have a management plan in force and in 42 (26%) sites a plan is in preparation. Of all 163 BSPAs 15 still lack a management plan. The Ministerial meeting in 2010 set a target to have a management plan in place for all the old sites by 2015.

Natura 2000 areas on land[10]: By 2011, the EU Member States have designated 13,855 Natura 2000 sites as shown in the status table below.

Country	Natura 2000 sites	Total terrestrial N2000 area (km^2)	% of national area
Denmark	350	3,849	8.9%
Estonia	561	8,037	17.8%
Finland	1,833	48,758	14.4%
Germany	5,266	55,061	15.4%
Latvia	325	7,305	11.3%
Lithuania	488	7,879	12.1%
Poland	958	60,782	19.4%
Sweden	4,074	57,124	13.8%
Total	**13,855**	**248,795**	

The first assessment of the conservation status of habitats and species protected under the Habitats Directive[11] showed that a large proportion of the habitats and

[10] Data from: Natura 2000 barometer: http://ec.europa.eu/environment/nature/natura2000/barometer/docs/n2000.pdf

species of Community interest have an unfavourable or unknown conservation status. The report concluded that the overall status of grassland, wetland and coastal habitat types is particularly poor. Grassland habitat types are predominantly associated with traditional patterns of agriculture, which are disappearing throughout the EU. In general, the conservation status of all habitat types associated with agriculture is significantly worse than other types of habitat. While in parts of the EU the explanation is related to shifts towards more intensive agriculture, in other areas abandonment of the land and the absence of management is the underlying reason for the decline. Wetland habitats continue to be converted for other types of land use as well as suffering from the effects of climate change. Coastal habitats are under increasing pressure from urban developments.

European countries also have their own national and regional systems of protected areas. The 2012 EEA report on protected areas[12] concluded that Natura 2000 covers about 70 % of the total surface area of protected areas in the EU. In some countries, there is a strong overlap between these nationally designated protected areas and Natura 2000, whereas in other countries, there are large areas with protected status that are not Natura 2000 sites.

5.2 Water quality and human health

With reference to the scoping report, the environmental issues of water quality and human health both relate to the same water quality indicators and have therefore been merged into one section.

Water quality of the Baltic Sea

The HELCOM report on Ecosystem Health of the Baltic Sea[13] provided key insights into this area. The report shows that the environmental status of the Baltic Sea is generally impaired. None of the open basins of the Baltic Sea has an acceptable environmental status at present. The integrated assessment of the ‘ecosystem health’ has revealed that only very few coastal areas along the Gulf of Bothnia can be considered healthy. To reach the commonly agreed aim of a healthy Baltic Sea in 2021 at the latest, the Baltic Sea Action Plan urgently needs to be implemented to its full extent.

Eutrophication, caused by nutrient pollution, is a major concern in most areas of the Baltic Sea. The Bothnian Bay and the northeastern parts of the Kattegat are the only open areas of the Baltic Sea not affected. The only coastal areas not affected by eutrophication are confi ned to the Gulf of Bothnia. Despite signifi cant reductions of the nutrient inputs over the past, all other open basins and coastal waters are classifi ed as ‘areas affected by eutrophication’. HELCOM has been very successful in reducing the inputs of nitrogen and especially phosphorus to the Baltic Sea. During the decade from 1990 to 2000, the direct point-source inputs of phosphorus and nitrogen decreased by 68% and 60%, respectively. From 1990-

[11] COM(2009) 358 final
[12] Protected areas in Europe – An Overview. EEA Report No. 5/2012
[13] Baltic Sea Environment Proceeding No. 122

2006, the total inputs to the Baltic Sea were reduced by 45% for phosphorus, but only 30% for nitrogen. For atmospheric nitrogen deposition, the picture is different: There was a much smaller decrease since the mid-1990s and an increase in the period from 2003 to 2007. Shipping in the Baltic Sea is an important contributor to the atmospheric nitrogen deposition, and will signifi cantly increase in the future.

Living organisms and bottom sediments are affected by hazardous substances in all parts of the Baltic Sea. Despite targeted abatement strategies, measures, and also signifi cant reductions of inputs of hazardous substances, only very few coastal sites presently seem undisturbed by hazardous substances. At present, the key substances of concern include PCBs, heavy metals, TBT, dioxins, DDT/DDE, PAHs and alkylphenols. However, several management actions have proved to be successful, for example, reducing atmospheric inputs of mercury, lead, and cadmium, and reducing the inputs of certain persistent organic pollutants, such as DDT, PCBs and TBT, by banning their use in the Baltic Sea region. Concentrations of radioactive substances originating from the Chernobyl fallout are still high in the northern, eastern, and central parts of the Baltic Sea, but the concentrations of the radionuclide cesium-137 are decreasing in all areas of the Baltic Sea.

Pressures causing eutrophication are mainly related to inputs of nutrients from external sources, whether via water or air, and to a lesser extent internal sources such as sediments that have retained anthropogenic inputs from the past. Pressures causing contamination and pollution effects by hazardous substances are either related to the inputs of synthetic or natural compounds from external sources, whether via water or air, or to inputs from contaminated bottom sediments caused by physical disturbance of the seabed following, for example, construction activities, dredging or disposal of dredged material. Releases of oil to the marine environment represent a continuous pressure on the Baltic Sea. Underwater noise and marine litter are forms of physical disturbance which also have the potential to disturb life in the Baltic Sea, but with effects that are less well known.

Water quality of inland waters

The fourth assessment of the European Environment[14] shows that, some countries experienced a significant decline in the monitoring of water quality during the 1990s. Since then, improvements have been observed but in several countries water monitoring is still inadequate if a clear picture of the status and trend in water resources is to be obtained. The available data suggests an improvement of water quality in rivers in recent years, but some large rivers and many smaller watercourses remain severely polluted. Most of the urban population's housing in the region is now connected to sewers, but wastewater in some countries is still discharged directly to the environment.

More than 100 million people in the pan‐European region still do not have access to safe drinking water and adequate sanitation. Unsafe water, sanitation and

[14] Europe's Environment, the Fourth Assessment, European Environment Agency, 10 October 2007

hygiene results in 18 000 premature deaths, mostly of children, each year in the pan‑European region.

One-third of the pan-European population lives in countries where water resources are under substantial pressure (water stress).

The EEA synthesis report European waters — current status and future challenges[15] concluded that some improvements in water quality have been made in the past two decades with e.g. the implementation of the urban waste water treatment directive. Nevertheless at present, the ecological status of water ecosystems is not good enough. Under the Water Framework Directive, countries were obliged to publish so-called River Basin Management Plans, which detailed the status of the water bodies in their countries. The results of the first round of these River Basin Management Plans show that more than half of Europe's surface water bodies are in less than good ecological status. These findings corroborate the reporting under the Habitats Directive, which details the conservation status of habitats and species dependent on water in Europe. Over two thirds of all river and lake habitats and inland water species are in unfavourable conservation status.

Chemical status is another cause for concern. About 25 % of all groundwater bodies across Europe are in poor chemical status. High levels of different chemicals, e.g. nitrate in groundwater bodies, are the most frequent cause of bad status. This poor status is the consequence of a range of pressures driven by human activities in different economic sectors. EEA data for the last decade show that water quality has improved as the concentration levels of oxygen‑consuming substances and ammonium in water has declined. These pollutants are closely related to the treatment of urban waste water, and the downward trend is a sign of improved treatment following the implementation of the Urban Waste Water Treatment Directive. If this trend continues, and if the Urban Waste Water Treatment Directive is fully implemented, it is likely that water quality levels usually associated with good ecological status will be achieved at least within the next 10 to 15 years.

However, other pollution pressures are on a less positive trend. Pressures from 'diffuse' sources in particular are continuously high. These diffuse pressures are largely driven by nitrates, applied with agricultural fertilisers, which run off into water bodies. If the current trend continues, concentrations of nitrates in water are unlikely to meet good status concentrations within the next 10 to 15 years.

Hydromorphology is another important pressure causing problems for Europe's water bodies. Hydromorphology describes the changes made to the natural shape and flow of water bodies by river straightening, dredging, dams, dikes, barriers and water abstraction. These changes destroy habitats for water plants and animals, making it difficult for them to thrive, feed and breed, and it prevents migratory species from moving along the rivers.

[15] EEA Report No. 9/2012

The third and equally important problem area is the 'quantitative' status of the water ecosystems. Quantitative status refers to the volume of water present in a water body at any given time. Problems in quantitative status can include phenomena like droughts, floods and water scarcity. A number of sub-surface groundwater bodies are in less than good quantitative status, for example because of a drop in the groundwater table. Climate change is an important driving force for both floods and droughts. On top of the increasing drought risk over-abstraction of water has led to water scarcity becoming a widespread problem for many river basins in Europe, in particular around the Mediterranean.

5.3 Soil

The 2010 state of the environment assessment by the European Environment Agency contained a thematic report on soil. This report showed that the soil resources of Europe are diverse, reflecting a combination of geology, climate, topography and land use developed over thousands of years. Northern European soils tend to have higher organic matter content than those in the south. The slow rates of soil formation mean that soil must be regarded as essentially non-renewable. The unsustainable human use and management of land is leading to increased soil degradation and a loss of a key resource that is fundamental to life on the planet. The report contained the following key conclusions in respect to soil:

- Erosion: 105 million ha, or 16 % of Europe's total land area (excluding Russia), were estimated to be affected by water erosion in the 1990s. 42 million ha are affected by wind erosion.

- Organic matter decline: the soils of EU-27 Member States store about 79 billion tonnes of carbon. The storage capacity of soil is sensitive to climatic conditions and there is a high risk that global warming will turn soils into a major source of greenhouse gases. Some 45 % of soils in Europe have a low or very low organic matter content (meaning 0–2 % organic carbon) and 45 % have a medium content (meaning 2–6 % organic carbon). This issue is found especially in southern European countries, as well as in parts of France, the United Kingdom, Germany, Norway and Belgium.

- Compaction: the use of heavy machinery in agriculture can induce soil compaction. It reduces the capacity of soil to store and conduct water, makes it less permeable for plant roots and increases the risk of soil loss by water erosion. Estimates of areas at risk of soil compaction vary. Some authors estimate 36 % of European subsoils as having high or very high susceptibility to compaction. Other sources report 32 % of soils being highly vulnerable and 18 % moderately affected.

- Salinisation stands for the accumulation of salts and other substances from irrigation water and fertilizers which makes soils unsuitable for plant growth. It affects approximately 3.8 million ha in Europe. The main driver is the inappropriate management of irrigated agricultural land.

- Landslides occur more frequently in areas with: highly erodible soils or clay-based sub-soils; steep slopes; intense and abundant precipitation; or abandoned terraces, such as the Alpine and Mediterranean regions. Until now there are no data on the total area affected in the EU.

- Contamination: due to more than 200 years of industrialisation, soil contamination is a wide-spread problem in Europe. The most frequent contaminants are heavy metals and mineral oil. The number of sites where potentially polluting activities have taken place now stands at approximately 3 million.

- Sealing occurs when agricultural or other non-developed land is built on. It normally includes the removal of top soil layers and leads to the loss of important soil functions, such as food production or water storage. On average, built-up and other man-made areas take up around 4 % of the total area in EEA countries (data exclude Greece, Switzerland and the United Kingdom), but not all of this is actually sealed. In the decade 1990–2000 the sealed area in the EU-15 increased by 6 %, and productive soil continues to be lost to urban sprawl and transport infrastructures.

- Biodiversity decline: soil biodiversity is built on a great variety of soil organisms from bacteria to mammals that shape the metabolic capacity of the ecosystem and many other functions of soils. Soil biodiversity is affected by all of the degradation processes listed above, and all driving forces mentioned apply (equally) to the loss of soil biodiversity.

5.4 Air

The 2010 report on the State of the European environment included a thematic report on air quality[16]. The main conclusions were that emissions of the main air pollutants in Europe have declined significantly in recent decades, greatly reducing exposure to substances such as sulphur dioxide (SO2) and lead (Pb). However, complex links between emissions and ambient air quality means that lower emissions have not always produced a corresponding drop in atmospheric concentrations. Many EU Member States do not comply with legally binding air quality limits protecting human health. Exposure of crops and other vegetation to ground-level ozone (O3) will continue to exceed long-term EU objectives. In terms of controlling emissions, only 14 European countries expect to comply with all four pollutant-specific emission ceilings set under EU and international legislation for 2010. The upper limit for nitrogen oxides (NOX) is the most challenging — 12 countries expect to exceed it, some by as much as 50 %.

Presently, airborne particulate matter (PM), ground-level ozone (O3) and nitrogen dioxide (NO2) are Europe's most problematic pollutants in terms of harm to health.

[16] The European Environment, State and Outook 2010, Thematic Report: Air Pollution, European Environment Agency, 2010.

Effects can range from minor respiratory irritation to cardiovascular diseases and premature death. An estimated 5 million years of lost life per year are due to fine particles (PM2.5) alone in the EEA-32.

Strictly speaking, the EU has not reached its interim environmental objective that was set to protect sensitive ecosystems from acidification. However, the ecosystem area in the EEA-32 countries affected by excess acidification from air pollution was reduced considerably between 1990 and 2010. This is mainly due to past SO2 mitigation measures. Nitrogen (N) compounds, emitted as NOX and ammonia (NH3), are now the principal acidifying components in our air. In addition to its acidifying effects, N also contributes to nutrient oversupply in terrestrial and aquatic ecosystems, leading to changes in biodiversity. The area of sensitive ecosystems affected by excessive atmospheric nitrogen in the EEA-32 diminished only slightly between 1990 and 2010. Europe's ambient O3 concentrations still reduce vegetation growth and crop yields.

The energy sector remains a large source of air pollution, accounting for around 70 % of Europe's sulphur oxides (SOX) emissions and 21 % of NOX output despite significant reductions since 1990. Road transport is another important source of pollution. Heavy-duty vehicles are an important emitter of NOX, while passenger cars are among the top sources of carbon monoxide (CO), NOX, PM2.5 and non-methane volatile organic compounds (NMVOCs). Meanwhile, energy use by households — burning fuels such as wood and coal — is an important source of directly emitted PM2.5 (primary PM2.5). 94 % of Europe's NH3 emissions come from agriculture.

Air pollutant emissions in the EEA-32 and Western Balkans have fallen since 1990. In 2008, SOX emissions were 72 % below 1990 levels. Emissions of the main pollutants that cause ground-level O3 also declined and emissions of primary PM2.5 and PM10 have both decreased by 13 % since 2000. Nevertheless, Europe still contributes significantly to global emissions of air pollutants.

Under a current policy scenario, the EEA-32 and western Balkan emissions of the main air pollutants, except NH3, are projected to decline by 2020. Compared with 2008 levels, the largest proportional decreases are projected for emissions of NOX and SO2 — a reduction of some 45 % by 2020 in the absence of additional measures. EU-27 emissions of primary PM2.5 and NH3 are projected to be similar or even slightly higher than in 2008, although substantial reductions are technically possible.

The 2013 report on air quality in Europe[17] concluded that Emissions of the main air pollutants in Europe declined in the period 2002–2011. This resulted in improved air quality across the region — at least with respect to certain pollutants. Certain individual sectors have seen emissions of some pollutants increase during this period. For example, PM emissions from fuel combustion in the commercial,

[17] Air quality in Europe - 2013 report, EEA report No. 9/2013, European Environment Agency, 2013.

institutional and household sector, has increased by around 7 % since 2002. This sector is now the most important contributor to total European Union PM emissions.

In addition, in 2011 eight Member States exceed (based on provisional reporting of emissions) one or more ceilings (limits) set under EU legislation, when these ceilings should have been reached in all countries by 2010. The emission reductions resulted in a notable reduction of ambient concentrations of SO2, CO, and Pb. However, due to the complex links between emissions and air quality (which include emission heights, chemical transformations, reactions to sunlight, additional natural and hemispheric contributions and the impact of weather and topography), emission reductions do not always produce a corresponding drop in atmospheric concentrations, especially for PM and O3. For example, while reductions of O3 forming substances (O3 precursor gases) have been substantial in Europe, ozone concentrations (in relation to the target value for the protection of health) have generally decreased slowly but have increased in places between 2002 and 2011.

5.5 Climatic factors and climate change

The Trends and Porjections report from 2013[18] concluded that almost all European countries with an individual GHG limitation or reduction target under the Kyoto Protocol (26 EU Member States, Iceland, Liechtenstein, Norway and Switzerland) are on track towards achieving their respective targets. This compares favourably to assessments in previous years.

Despite this positive development climate change (increases in temperature, changes in precipitation and decreases in ice and snow) is occurring globally and in Europe as established in the 2012 report on climate change, impacts and vulnerability in Europe 2012[19]. The report further concludes that observed climate change has already led to a wide range of impacts on environmental systems and society; further climate change impacts are projected for the future. The following impacts of climate change have been observed:

- Coasts and European seas: overall rise in sea levels globally and across most of Europe's coasts (with variations due to local land movement and other factors); increase in ocean acidification; increase in sea surface temperature and ocean heat content; earlier seasonal appearance of various marine species; northward expansion of some fish and plankton species.

- Freshwater systems: decrease in river flows in southern and eastern Europe (in particular in summer) and increase in other regions (in particular in winter); increases in the reported number of flood events (mainly due to land-use

[18] Trends and projections, Tracking progress towards Europe's climate and energy targets until 2020, EEA report No. 10/2013, European Environment Agency
[19] EEA Report, No. 12/2012

changes and better reporting); increase in the frequency and intensity of droughts (in particular in southern Europe); increase in water temperature in rivers and lakes; northwards movement of cold-water species; earlier seasonal appearance of phytoplankton and zooplankton blooms.

- Terrestrial biodiversity and ecosystems: earlier occurrence of spring seasonal events and later occurrence of autumn seasonal events in plants and animals; lengthening of breeding seasons; northwards and uphill movement of many plant and animal species, but the migration rate of many species is insufficient to keep pace with the speed of climate change; establishment of warm-adapted alien plant species; many habitats of European interest (EU Habitats Directive) are potentially threatened by climate change over their natural range in Europe.

- Agriculture: northward expansion of areas suitable for several crops; earlier flowering and harvest dates in cereals; reduced yield of some crops due to heat waves and droughts (mostly in central and southern Europe), but increased yields of other crops (mostly in northern Europe); increased water demand for irrigation (in southern and south-western Europe).

- Forests and forestry: reduction in forest growth due to storms, pests and diseases in some central and western areas of Europe; increase in the number of forest fires in the Mediterranean region between 1980 and 2000 and a decrease thereafter.

- Energy: reduced demand for heating (particularly in northern and north-western Europe) but increased demand for cooling (particularly in southern Europe).

- Human health: tens of thousands of premature deaths due to the extreme 2003 summer heat-wave; thousands of premature deaths per year due to tropospheric ozone (but the contribution of climate change is difficult to quantify); increased number of people affected by river and coastal flooding; northward and upward movement of tick species and related increased risk of transmission of vector-borne diseases.

HELCOM issued a thematic assessment of climate change in the Baltic Sea in 2013[20]. However, the report emphasised the many different uncertainties and did not provide any firm conclusions on the effects of climate change in the Baltic Sea. The report did raise a concern that precipitation, runoff and loads could be higher due to climate change. Hence, according to the report nutrient loads will need be reduced further to reach eutrophication status targets that in the past were reached with smaller reductions.

[20] Baltic Sea Environmental proceedings No. 137.

5.6 Cultural heritage

The World Heritage List includes 981 properties forming part of the cultural and natural heritage which the World Heritage Committee considers as having outstanding universal value.UNESCO World heritage sites[21] in the Baltic Region comprise:

Belarus: 4
Denmark: 4
Estonia: 2
Finland: 7
Germany: 38
Latvia: 2
Lithuania: 4
Norway: 7
Poland: 14
Russian Federation: 25
Sweden: 15

Cultural heritage Baltic States

An intergovernmental working group (monitoring group) of the Council of the Baltic Sea States (CBSS) on cultural heritage exists[22]. The appointed MG members represent national agencies of cultural heritage in all 11 BSS-countries. This has given rise to many activities and reports relating to Baltic Sea Region cultural identity and heritage, but only in the field of underwater heritage has cultural site identification and recording taken place.

Underwater heritage

The regional Working group on Underwater Cultural Heritage (under the above mentioned monitoring group), composed of decision-makers, scientists and cultural managers, discusses current problems of protection, education, exploration and management of underwater heritage such as wrecks, the sunken parts of harbours and settlements from the Stone Age to modern times. As a result of these roundtable discussions special projects have been developed. The Rutilus project, which was an effort to get a grip on the whole underwater heritage sector resulted in a list of the 100 most valuable underwater sites.

5.7 Landscape

Land use

EEA analysis of land-cover change[23] across 36 European countries shows a change in land-cover type for 1.3 % of the total land stock (68 353 km2 of 5.42 million km2) from 2000–2006. The annual rate of these changes has slowed compared to the period 1990–2000. However, land-use specialisation (urbanisation, agricultural intensification and abandonment plus natural afforestation) is still a very strong

[21] http://whc.unesco.org/en/list/stat#s2
[22] http://mg.kpd.lt/LT.html
[23] The European Environment, State and Outlook 2010, Thematic assessment. landuse, European Environment Agency 2010.

trend and is expected to continue in the future, depending on many interacting drivers.

While the overall land-change rate has slowed since the 1990s, there were considerable differences between countries: the highest density of land-cover change took place in Portugal, Cyprus, Hungary, the Czech Republic and Ireland, but also in Finland and Sweden (forest conversions) and Spain (agricultural transitions). There were also differences between land-use categories. Artificial surfaces increased most in terms of percentage change from 2000 to 2006 (3.4 %), but this masked a deceleration in conversions for residential purposes and an increase in conversions for the purposes of economic sites and infrastructures. The formation of new artificial surfaces was greater than the formation of new agricultural land.

Forest creation and management was the largest land‑cover change in absolute terms, due mainly to internal conversions (i.e. forest felling and regeneration) in the boundaries of forest areas. However, total forest area increased only slightly (by 0.1 %). Arable land and permanent crops decreased by 0.2 % and pastures and mosaics by 0.3 %. Semi-natural vegetation, open spaces and wetlands continued the downward trend observed from 1990–2000. Water surfaces increased due to new artificial lakes and reservoirs taking more land than the consumption of water bodies by other economic activities.

5.8 Energy efficiency

The 2012 Energy Efficiency Directive (EED) focuses on a 20 % increase of the EU's energy efficiency. The trends and projections report 2013[24] found that only four EU Member States considered to be making good progress towards this objective.

All EU Member States except Croatia and Slovenia have set energy efficiency targets for 2020. EU Member States are moving towards the level of ambition required by the EED. Their collective primary energy consumption in 2020 is expected to be close to the level required by the EU political objective of 1 483 Mtoe but will remain insufficient to achieve the 20 % energy efficiency target.

Four EU Member States (Bulgaria, Denmark, France and Germany) are making good progress in reducing energy consumption and primary energy intensity through well-balanced policy packages across relevant sectors. For most EU Member States, however, the current policies are not sufficiently developed or implemented across the relevant sectors. This is due to insufficient enforcement as well as impacts arising from the economic crisis.

[24] Trends and projections, Tracking progress towards Europe's climate and energy targets until 2020, EEA report No. 10/2013, European Environment Agency

5.9 Use of renewable and non-renewable resources

Renewable energy

The 2013 Trends and projections report[25] showed that the EU is currently on track towards its target of 20 % of renewable energy consumption in 2020. In 2011, fourteen Member States (Bulgaria, Germany, Estonia, Finland, Greece, Hungary, Italy, Lithuania, Luxembourg, Romania, Slovakia, Slovenia, Spain and Sweden), as well as Norway, had met or exceeded their indicative and expected 2011–2012 trajectories from both the Renewable Energy Directive (RED) and their National Action Plans (NREAP). Estonia had already reached its legally binding target for 2020.

Seven Member States (Austria, Cyprus, the Czech Republic, Denmark, Ireland, Poland and Portugal) had reached or exceeded their average 2011–2012 indicative trajectory from the RED, but not the one from their NREAP.

EU Member States need to double their use of renewable energy by 2020 compared to the 2005–2011 period to reach the legally binding renewable energy target.

Materials and waste

The 2012 update to the 2010 thematic assessment of material resources and waste[26] concluded that Europe has become more efficient in managing material resources. Yet in the long term, our consumption of materials continues to increase in absolute terms. Furthermore, despite long-term improvements, growth in the productivity of materials in the EU has been significantly slower than growth in the productivity of labour.

The overall trend in waste generation, including hazardous waste, is upwards albeit most recent figures show a decline that is probably connected to the economic downturn in Europe. On the other hand, waste management has improved. For example, 38 % of municipal waste in 2010 was recycled or composted compared to 17 % in 1995 in the EU plus Norway and Switzerland. Some 60 % of packaging waste is now recycled, and 12 out of 19 countries recycle or recover more than half of their construction and demolition waste. Nevertheless, for total waste, as of 2008 in the EU-27, Croatia, the Former Yugoslav Republic of Macedonia, Norway and Turkey together, disposal was still dominant (50 %) over recycling (45 %), whereas 5 % was sent to incineration.

[25] Trends and projections, Tracking progress towards Europe's climate and energy targets until 2020, EEA report No. 10/2013, European Environment Agency

[26] Thematic assessment, material resources and waste – update 2012, European Environment Agency, 2012

6 Findings of the environmental assessment

Below, the findings of the environmental assessment are provided. First, an assessment of the overall objectives of the programme is provided. Next, each specific objective under the four priority axes is assessed according to the relevant issues, criteria and indicators.

6.1 Overall objectives and horizontal principles

The aim and the objectives of the programme emphasise sustainable development as an intrinsic part of the programmes objectives. This indicates that the programme in principle is drafted under due consideration to the possible environmental impacts flowing from the proposed programme initiatives.

The second priority on efficient management of natural resources focus on environmental management explicitly and this indicates that projects supported under this priority are supposed to be designed as having a positive environmental impact or at least that environmental issues should be considered carefully.

The third priority on sustainable transport focuses on sustainability according to its title and thus, again, indicates that environmental issues should be considered during implementation.

As described in more detail below, the descriptions of the priorities (and their specific objectives) in general puts emphasis on sustainability and that due consideration of environmental issues need to be made. The same can be said about the horizontal principles which are described in section 8 of the draft programme document. Here, there is also an emphasis on sustainable development and it is stated that this horizontal principle will be an integral part of the programme. This indicates that a positive (or at least neutral) environmental impact of the programme should be expected. However, the activities to be supported under the programme are typically only described in very general terms, which means that a detailed environmental assessment cannot be made. The sections below describe the assessment of each specific objective.

6.2 Priority axis 1: Capacity for innovation

6.2.1 Specific objective 1.1: Research and innovation infrastructures

This specific objective aims to 'enhance market uptake of innovation based on improved capacity of research and innovation infrastructure and their users'.

Large focus on process designs

As outlined in the draft programme document, this SO is based to a large extent on process designs (i.e. governance structures, incentive and funding schemes, networking arrangements). The direct environmental effects of such designs are assessed as insignificant. However, it should be kept in mind that enhancing research infrastructures in certain areas could potentially lead to concrete research activities (as a wider effect – further to the programme), which could potentially have significant environmental effects (both positive and negative). It would therefore be advantageous if the programme (or the selection criteria to be developed in the operations manual) already included criteria to seek to ensure that supported research activities are conducive to future environmentally beneficial activities.

Concrete activities

The SO also includes examples of more concrete activities, which can be supported and which can have a more direct environmental impact (e.g. conducting tests, piloting solutions). These activities are described in a general way, which does not allow an environmental assessment to be performed – it is not possible to determine which environmental issues could be impacted or how. Hence, the environmental impact is assessed as uncertain. It is considered that for such activities, proper assessment and selection criteria for assessing project applications need to be developed in the programme.

Table 2 Summary – SO 1.1.

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain for concrete activities	Not possible to determine

6.2.2 Specific objective 1.2: Smart specialisation

This SO aims to enhance growth opportunities based on increased capacity of innovation actors to apply smart specialisation approach.

Sole focus on process designs

This SO as described in the draft Programming Document involves solely process designs through its focus on capacity building, forming alliances, building cooperation structures, establishing platforms, exchanging experiences, etc. The direct environmental effect is therefore assessed as insignificant. However, it should be kept in mind that enhancing the capacity of innovation actors in certain areas could potentially lead to concrete innovation activities (as a wider effect –

further to the programme), which could potentially have significant environmental effects (both positive and negative). It would therefore be advantageous if the programme (or the selection criteria to be developed in the operations manual) already included criteria to seek to ensure that supported activities are conducive to future environmentally beneficial activities.

Table 3 Summary – SO 1.2

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Only process designs	Neutral	

6.2.3 Specific objective 1.3: Non-technological innovation

This SO aims to advance the Baltic Sea Region performance in non-technological innovation based on increased capacity of innovation actors.

Strong focus on process designs

As outlined in the draft programme document, this SO is based to a large extent on process designs with its focus on increasing the capacity of innovation actors to generate non-technological innovation. The direct environmental effects of such designs are assessed as insignificant. However, it should be kept in mind that this could potentially lead to concrete activities and economic growth (as a wider effect – further to the programme), which could potentially have significant environmental effects (both positive and negative). It would therefore be advantageous if the programme (or the selection criteria to be developed in the operations manual) already included criteria to seek to ensure that supported activities are conducive to future environmentally beneficial activities.

Concrete activities

The SO also includes examples of more concrete activities, which can be supported and which can have a more direct environmental impact (e.g. piloting actions, actions aimed at renewing public services, actions supporting promotion and utilisation of business opportunities). These activities are described in a general way, which does not allow an environmental assessment to be performed – it is not possible to determine which environmental issues could be impacted or how. Hence, the environmental impact is assessed as uncertain. It is considered that for such activities, proper assessment and selection criteria for assessing project applications need to be developed in the programme.

Table 4 Summary – SO 1.3

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain for concrete activities	Not possible to determine

6.3 Priority axis 2: Efficient management of natural resources

6.3.1 Specific objective 2.1: Clear waters

This SO aims to improve the environmental state of the Baltic Sea and the regional waters based on increased efficiency of water management for reduced nutrient inflows and decreased discharges of hazardous substances.

Strong focus on process designs

As outlined in the draft programme document, this SO is based to a large extent on process designs (e.g. integrated action plans, regional strategies, policy dialogue structures, management systems, planning instruments, training, etc.). The direct environmental impact of these is assessed as insignificant. However, the objective of supporting such activities is clearly stated to be an improvement in the environmental state of the Baltic Sea and the regional waters. The wider intended effect on the environment and the environmental issues listed above is therefore assessed as positive. Due to general character of the types of actions as described in the SO, it is not possible to analyse this wider effect any further at this stage in the process. The effect can only be assessed as part of the monitoring of programme implementation.

Concrete activities

Among the activities or actions listed as examples of actions, the SO mentions a few which are more concrete and which may therefore also have a more direct environmental impact. These include: pilot investments that will prevent nutrient loads and hazardous substances, help remove and recycle them; developing and testing sector-based management models addressing biodiversity protection along water systems to meet both environmental and economic needs; and developing and piloting models to monitoring, prevention and mitigation of marine litter. As these activities are of a pilot nature and thus NOT envisaged to be implemented at a full scale (under the programme), the environmental effect is assessed as potentially significantly positive in the pilot areas concerned but insignificant when looking at the Baltic Sea Region as a whole. A full-scale implementation occurring as a wider effect of the programme can have significant positive environmental effects.

Table 5 Summary – SO 2.1

Mix of process designs and concrete activities	**Assessment of direct environmental impact**	**Environmental issues which seem most likely to be impacted**
Mostly process designs	Neutral for process designs Positive in local area for concrete activities (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Population and human health, Soil, Water, Cultural heritage, Adaptation to climate change

6.3.2 Specific objective 2.2: Renewable energy

This SO aims to increase production and use of renewable energy based on enhanced capacity of public and private actors involved in energy planning and supply.

Some focus on process designs

The SO as described in the programme document is a mix between process designs and demonstration/testing activities for various technologies and solutions. The process designs encompass activities such as developing policy incentives and improving capacity for regional energy planning. The direct environmental effect of such activities is assessed as insignificant. Potentially, these activities can lead to increased use of renewable energy as a wider effect of the programme. This would have a positive impact in terms of reducing CO2 emissions and also, potentially, in terms of use of resources (considering waste-to-energy solutions). There are also potential negative consequences to the environment. For example, installations to capture water, wind or solar energy, can have significant impacts on nature/biodiversity, landscape as well as cultural heritage. It is therefore important to emphasise that any future specific individual activities would be subject to an environmental assessment when relevant. It would also seem relevant to include in the selection criteria for activities to be supported that activities supported should focus on sustainable solutions (as already mentioned in the programme document).

Concrete activities

This SO mentions several types of activities of a more concrete nature, including testing innovative green solutions and alternative technologies and demonstrating and implementing innovative renewable energy storage technologies and distribution patterns. Such activities can have a positive effect on reducing CO2 emissions (as well as on use of resources), but can also have negative effects as mentioned above under process designs. As these activities are of a pilot nature and thus NOT envisaged to be implemented at a full scale (under the programme), the environmental effect is assessed as potentially significant in the pilot areas concerned but insignificant when looking at the Baltic Sea Region as a whole. As the activities are described in a general and unspecific way, it is not possible to assess them in detail and the environmental impact is assessed as uncertain. It is considered that for such activities, proper assessment and selection criteria for assessing project applications need to be developed in the programme.

Table 6 Summary – SO 2.2

Mix of process designs and concrete activities	**Assessment of direct environmental impact**	**Environmental issues which seem most likely to be impacted**
Mix of both types	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Soil, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources

6.3.3 Specific objective 2.3: Energy efficiency

This SO aims to increase energy efficiency based on enhanced capacity of public and private actors involved in energy planning.

Sole focus on process designs

As described in the programme document, this SO consists only on activities which can be characterised as process designs. This includes activities such as improving energy strategies, improving coordination of energy planning, developing policy incentives and financing models and promoting green entrepreneurship for energy efficiency. The direct environmental impact of these activities is assessed as insignificant as enhanced capacity in itself does not have an environmental effect.

As a wider effect, the enhancement of capacity achieved could potentially lead to a greater energy efficiency (as is the objective of the programme), which would be a positive 'downstream' environmental effect.

Table 7 Summary – SO 2.3

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Only process designs	Neutral	

6.3.4 Specific objective 2.4: Blue growth

This SO aims to advance sustainable and resource-efficient blue growth based on increased capacity of public authorities and practitioners within the blue economy sectors.

Strong focus on process designs

This SO includes a mix of process designs and concrete activities. The process designs encompass activities such as models for cross-sectoral cooperation and exchange of know-how on ecosystem services, developing transnational strategies to use cultural and natural heritage, developing integrated management plans for the marine environment, harmonisation of marine spatial plans. The direct environmental effect of these activities is assessed as insignificant. As a wider effect, the increased capacity in blue economy sectors, which is the potential result of the activities, can potentially lead to sustainable and resource-efficient blue growth as intended by the programme. This would constitute a positive environmental impact. However, is should be noted (as also mentioned in the programme document) that increased growth in the blue economy runs the risk of exacerbating the pressure on vulnerable sea resources. Therefore, project proposals should be based on a sustainable and resource-efficient approach. It is recommended that these considerations are strongly reflected in the selection criteria for project applications.

Concrete activities

The SO also mentions examples of more concrete activities, which can have a more direct environmental impact. These include: Piloting application of advanced marine technologies and implementing pilot investments, preparing the ground for future resource-efficient blue economy projects at a larger scale. If designed on the

basis of the principles of sustainability and resource-efficiency, such activities can have positive environmental effects, but there are also risks as described above under process designs.

As these activities are of a pilot nature and thus NOT envisaged to be implemented at a full scale (under the programme), the environmental effect is assessed as potentially significant in the pilot areas concerned but insignificant when looking at the Baltic Sea Region as a whole. As the activities are described in a general and unspecific way, it is not possible to assess them in detail and the environmental impact is assessed as uncertain. It is considered that for such activities, proper assessment and selection criteria for assessing project applications need to be developed in the programme.

Table 8 Summary – SO 2.4

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Water, Cultural heritage, Landscape, Use of renewable and non-renewable resources

6.4 Priority axis 3: Sustainable transport

6.4.1 Specific objective 3.1: Interoperability of transport modes

This SO aims to increase efficiency of transporting goods and persons in north-south and east-west connections through interoperability.

Strong focus on process designs

The SO as described in the programme document is based to a large extent on process designs, such as improving infrastructure planning, tackling fiscal and administrative barriers, upgrading organisational structures and IT systems, harmonisation of organisational, legal, safety and technical aspects of transport modes and networks as well as better management and governance of transport corridors. The direct environmental effect of these activities is assessed as insignificant. However, the expected wider effect according to the programme is to increase efficiency of transporting goods and persons in north-south and east-west connections. This could also lead to the building of new transport infrastructure and increased transport which can have negative environmental impacts. For example, transport infrastructure in protected (or sensitive) areas or the increased CO2 emissions arising from increased transport. It would therefore be beneficial if the selection criteria for the activities to be supported under the programme sought to ensure that these process design activities are carried out under due

consideration to environmental issues (in line with the overall theme for PA3 which is 'sustainable transport').

Concrete activities

The SO also includes some examples of more concrete activities which could have a more direct environmental impact, such as developing regional hubs, multi-modal transport nodes, port and intermodal terminal capacity and integrating them with hinterland networks, carry out demonstration actions on greening of transport, and developing better connections between airport and rail infrastructure. These types of activities are described in very general terms and it is therefore not possible to provide an environmental assessment at this stage. However, concrete project proposals concerning these types of activities would have to be assessed as part of the evaluation of project applications.

Table 9 Summary – SO 3.1

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain for concrete activities	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources

6.4.2 Specific objective 3.2: Accessibility of remote areas and areas effected by demographic change

This SO aims to improve the accessibility of the most remote areas and regions whose accessibility is affected by demographic change through economically efficient solutions.

This SO is characterised by focusing on process designs, but there is also a focus on implementation as the examples of activities supported include not only the development of strategies, but also their implementation. The SO also lists mobility management schemes and pilots/models which help to finance operation and maintenance of necessary transport infrastructure, which are activities of a more concrete nature, somewhat on the borderline between process designs and concrete activities.

Due to the general character of the activities as they are outlined in the programme document, it is not possible to provide an environmental assessment. The environmental impact is therefore assessed as uncertain. It is found though, that activities of this nature can potentially have significant environmental effects. For example, increased accessibility to remote areas may lead to increased human activity in these areas, which could encompass protected (or sensitive) areas or species – especially the Arctic region is highly controversial. Environmental assessment of the project applications is therefore important in relation to this SO.

Table 10 Summary – SO 3.2

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain (potentially negative) for concrete activities	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources

6.4.3 Specific objective 3.3: Maritime safety

This SO aims to increase maritime safety and security based on advanced capacity of maritime actors.

Strong focus on process designs

This SO as described in the draft programme document is dominated by process designs, such as harmonising interpretation of safety codes, standards and regulations, deploying advanced technologies for maritime safety and security, risk assessment systems, self-regulative systems, and training and education. The direct environmental impact of these activities is assessed as insignificant. Advanced capacity of the actors arising from these various activities is intended to lead to a higher level of maritime safety and security. This would also entail fewer accidents at sea and better responses in case of accidents, which would also have positive environmental effects as accidents at sea are a cause of pollution. The tentative assessment of the wider environmental impact is thus positive.

Table 11 Summary – SO 3.3

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Only process designs	Neutral	

6.4.4 Specific objective 3.4: Environmentally friendly shipping

This SO aims to enhance clean shipping based on increased capacity of maritime actors.

Process designs

The SO has a dual focus on process designs and concrete activities. The process designs encompass activities such as incentives, information sharing systems, evaluation of risks and best practises. The direct environmental effect of these activities is assessed as insignificant. However, the objective of implementing these activities (as stated in specific objective) is to enhance clean shipping. The potential wider environmental effect is therefore tentatively assessed as positive. For example, through reduced emissions from shipping, better management of ship waste, etc. It is recommended that the environmental monitoring of supported

activities should seek to establish whether such environmental effects are, in fact, achieved.

Concrete activities

The SO also mentions examples of more concrete types of activities, such as development of port waste reception facilities, piloting the use of alternative fuels for ships and piloting the use of new technologies to ensure safe, efficient and environmentally friendly transport. While the objective with these activities is to enhance clean shipping (which indicates a positive environmental effect), it should also be kept in mind that such activities could potentially also have negative environmental effects (for example building of port reception facilities can have effects on biodiversity and landscape, using LNG as ship fuel could entail increased explosion/accident risks). It is understood that these activities are of a pilot nature and thus NOT envisaged to be implemented at a full scale (under the programme). The environmental effect is assessed as potentially significant in the pilot areas concerned but insignificant when looking at the Baltic Sea Region as a whole. As the activities are described in a general and unspecific way, it is not possible to assess them in detail and the environmental impact is assessed as uncertain. It is considered that for such activities, proper assessment and selection criteria for assessing project applications need to be developed in the programme.

Table 12 Summary – SO 3.4

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mix of both types	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources

6.4.5 Specific objective 3.5: Environmentally friendly urban mobility

This SO aims to enhance environmentally friendly transport systems at urban areas based on increased capacity of urban actors.

Strong focus on process designs

This SO is dominated by process designs, such as development of mobility policies/plans and management systems, improving transport flow management, and mobility management in cities. The direct environmental impact is assessed as insignificant. The intention with these activities is to achieve environmentally friendly transport systems at urban areas as is stated in the SO. As such, the wider effect of these activities (outside the direct control of the programme) is tentatively assessed as positive as environmentally friendly transport systems would entail reduced CO2 emissions, better air quality, reduced noise, etc.

Concrete activities

The SO also includes a few examples of more concrete activities, which can have a more direct environmental impact, such as piloting the use of alternative,

environmentally friendly fuels and vehicle fleets with higher energy efficiency. The environmental impact of such activities is potentially positive in respect to achieving reduced emissions / improved air quality and better climate. It is understood that these activities are of a pilot nature and thus NOT envisaged to be implemented at a full scale (under the programme). The environmental effect is assessed as potentially significant in the pilot areas concerned but insignificant when looking at the Baltic Sea Region as a whole.

Table 13 Summary – SO 3.5

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Mostly process designs	Neutral for process designs Uncertain (potentially positive) for concrete activities	Air, Climatic factors, Use of renewable and non-renewable resources

6.5 Priority axis four

This priority axis contains two specific objectives: 4.1: Seed money and 4.2: Coordination of macro-regional cooperation. SO 4.1 aims to support the preparation of project proposals for the EU BSR Strategy. SO 4.2 aims to increase capacity for transnational coordination. Both these SOs are thus strongly characterised by process designs. The direct environmental impact is therefore assessed as insignificant.

Table 14 Summary – SO 4.1 and 4.2

Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
Only process designs	Neutral	

7 Conclusions and recommendations

7.1 Conclusions

7.1.1 Likely significant effects of adopting the programme

Impact on environmental issues

The draft programme document provides an overview of the types of activities which will be supported under the four priority axes of the programme. The analysis (as shown in chapter 6) of each priority axis and the associated specific objectives and activities shows that:

- A large share of the activities can be characterised as 'process designs' (i.e. institutional processes, organisational development, strategy development, etc.). For these activities the **direct** environmental impact is assessed as insignificant (neutral). At the same time, the assessment notes the need to be mindful that such process designs could potentially in the future (after the programme) lead to more concrete initiatives, which could have a direct environmental effect. Therefore, it is regarded as advantageous if the programme can seek to influence this 'meta-level' in a direction towards sustainability and resource-efficiency. This can be done through selection criteria for the activities to be supported. It should also be kept in mind that for those 'process designs' which are plans or programmes subject to preparation and/or adoption by an authority at national, regional or local level, a separate strategic environmental assessment process is required according to the SEA Directive. This is addressed below in section 7.3 where a screening and assessment procedure for the applications is proposed.

- Those activities which are of a more concrete nature and which could, hence, potentially have a more direct environmental impact, are described in very general terms in the draft programme document. This means that it is not possible to provide a detailed assessment of the significant environmental impacts which could be expected. A tentative, qualitative assessment is provided (and summarised in the table below). It is important to emphasise that this should not be taken as a criticism of the programme document. As also stated in the scoping report, this is to be expected given the nature of this type of programme where general directions are given and the actual

supported activities depend upon the applications received. However, it does mean that environmental assessment of the applications takes on an important role, and, therefore, specific recommendations on this are given below in section 7.3.

It should be noted that as the draft programme does not provide indications of how the funds will be split between specific objectives or between process designs and concrete activities, it is not possible to assess the relative importance of the specific objectives or activity types, which further adds to the uncertainty in the assessment. The table below indicates assumptions about this mix based on a qualitative assessment of the text in the draft programme document.

Table 15 Summary of environmental assessment

PA/SO	Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
PA1			
SO1.1	Mostly process designs	Neutral for process designs Uncertain for concrete activities	Not possible to determine
SO1.2	Only process designs	Neutral	
SO1.3	Mostly process designs	Neutral for process designs Uncertain for concrete activities	Not possible to determine
P2			
SO2.1	Mostly process designs	Neutral for process designs Positive in local area for concrete activities (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Population and human health, Soil, Water, Cultural heritage, Adaptation to climate change
SO2.2	Mix of both types	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Soil, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources
SO2.3	Only process designs	Neutral	
SO2.4	Mostly process designs	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Water, Cultural heritage, Landscape, Use of renewable and non-renewable resources
P3			
SO3.1	Mostly process designs	Neutral for process designs Uncertain for concrete activities	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources

PA/SO	Mix of process designs and concrete activities	Assessment of direct environmental impact	Environmental issues which seem most likely to be impacted
SO3.2	Mostly process designs	Neutral for process designs Uncertain (potentially negative) for concrete activities	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources
SO3.3	Only process designs	Neutral	
SO3.4	Mix of both types	Neutral for process designs Uncertain for concrete activities (can be both positive and negative). Potential significant impact in local area (neutral when considering the entire BSR)	Biodiversity, flora and fauna, Water, Air, Climatic factors, Cultural heritage, Landscape, Use of renewable and non-renewable resources
SO3.5	Mostly process designs	Neutral for process designs Uncertain (potentially positive) for concrete activities	Air, Climatic factors, Use of renewable and non-renewable resources
P4			
SO4.1 and 4.2	Only process designs	Neutral	

Effects on environmental policy objectives

The scoping report identified environmental policy objectives for all the examined environmental issues. It has not been meaningful to assess how each of the identified environmental protection objectives will be affected as no firm conclusions can be made on the likely environmental impact on the environmental issues. The effects on the relevant environmental protection objectives will have to be assessed for each project applying for support under the programme (ref. section 7.3).

At the level of objectives for the programme and the priority axes, it is assessed that there is generally a good correlation between the environmental policy objectives and programme objectives. It is also stated in the programme that it aims to support the implementation of the EUBSR and HELCOM BSAP and thereby also the environmental policy objectives.

7.1.2 Likely significant effects of not adopting the programme

Given the very overall nature of the likely significant environmental impacts identified and the vast degree of uncertainty in any possible prediction of these impacts the likely significant environmental impacts from not adopting the BSR Operational Programme are equally vague.

At the overall level, it is assessed that if the programme were not adopted, actions to seek the fulfilment of environmental policy objectives (HELCOM BSR, EU BSR, Russia Northwest Programme) would still be implemented. However, as the

programme aims to support and strengthen the implementation of these policies, it is likely that, without the programme, progress in this direction would be less than with the programme.

7.2 Recommendations for programme development

Two main recommendations arise from the assessment:

1) Environmental assessment of applications needs to be built into the procedures in the programme and the operations manual. Detailed suggestions for how this can be done are found below in section 7.3.

2) Selection criteria taking into account and operationalising the overall objectives regarding sustainability should be developed

The process design activities may not in themselves lead to a direct significant environmental impact. However, they may lead to activities further down the line, which could have environmental impacts. Therefore, it is important that the concepts of sustainability and resource-efficiency are integrated into the philosophy and schemes utilised for the process design activities. This should be a focus area for developing selection criteria.

At the more concrete level, the selection criteria should also set up the framework for selecting (or deselecting) activities for funding based on the environmental assessment of the individual activity (cf. section 7.3).

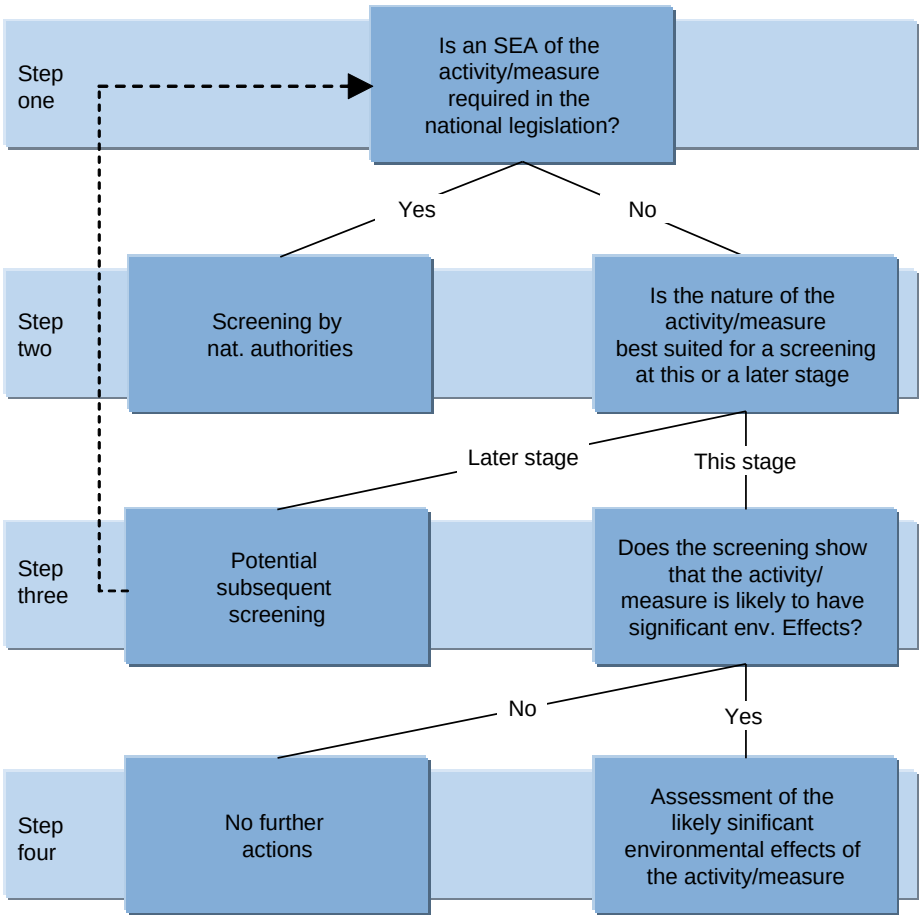
7.3 Recommendations regarding environmental assessments of project applications

As discussed above, it has only been possible to assess the likely environmental impacts of a limited part of the programme. Where an assessment has been possible it has only been possible to give an overall qualitative assessment indicating whether the effects on the identified environmental issues are likely to be positive, negative or neutral.

In order to ensure that the programme will not have any unintentional environmental effects, it is proposed that the likely environmental effects of all project applications are screened. If this screening shows that the proposed activity/measure is likely the have significant environmental effects, these should be assessed before support from the programme is granted.

As shown in Figure 7.1, the screening procedure including four steps is proposed.

Figure 7.1 Screening procedure



7.3.1 Step one

The SEA directive requires that an SEA is carried out by the national authorities for plans and programmes which are subject to a preparation and/or adoption by an authority at national, regional or local level, including those co-financed by the European Community. If an activity/measure to be implemented as an outcome of the Baltic Sea Programme is such a plan or a programme, the national authorities will be responsible for the screening of likely significant environmental effects. Plans and programmes to be implemented as an outcome of the Baltic Sea Programme, which are **not** subject to a preparation and/or adoption by an authority at national, regional or local level must also be screened for likely significant environmental effects. This will be the responsibility of the Implementation Authority of the BSR Programme.

Specific projects subject to the requirements in the EIA directive fall under the discretion of the national authorities.

7.3.2 Step two

Activities may be proposed aiming at setting the framework for development of subsequent activities/measures. This might e.g. be for support to collaboration between different stakeholders from different places in the Baltic Sea Region on project development within a specific area. In such cases the screening of likely significant environmental effects should be carried out for the specific projects. If support to the implementation of these projects is applied for under the Baltic Sea Programme they should be included in the overall procedure starting at step one.

7.3.3 Step three

At this step, the INTERREG Implementation Authority of the Baltic Sea Region Programme, in collaboration with the relevant environmental authorities, screen if the activity/measure is likely to have any significant environmental effects. In order to make this procedure workable it is proposed that the applicants as an integrated part of the application procedure provide information about their project and their assessment of likely significant environmental effects. We have proposed a standard format to be filled by the applicants (enclosed in appendix B).

The implementation Authority will on the basis of information provided by the applicant take a formal decision whether an environmental assessment will be required. The decision should ideally reflect the involvement of relevant National Environmental Authorities in step three and be based on their advice as to whether the applicants proposal is likely to have significant impacts on the environment.

7.3.4 Step four

Under this step, the environmental assessment will be conducted. The methodology for this should follow the general requirements for a SEA including:

- Identification of the key relevant environmental issues and concerns to be considered, based on the environmental issues listed in the SEA directive.
- Identification of the relevant environmental protection objectives, to be derived from current or forthcoming policy framework documents.
- Identification of relevant indicators and available data
- Assessment of significant environmental effects (comparison of with and without project scenarios)

7.4 Recommendations regarding monitoring of the environmental impacts of the programme

According to the SEA Directive Article 10, significant environmental effects of implementation of plans and programmes shall be monitored in order to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.

It is proposed that the Secretariat establish indicators for monitoring to be integrated in the general monitoring of the programme. The point of departure for establishing these indicators can be taken in the indicators proposed for this SEA (ref. chapter 4).

Interim and ex-post evaluations

The monitoring of the significant environmental impacts should also be an integrated part of the interim and ex post evaluation of the Baltic Sea Programme 2014-2020. It will be important when preparing the interim and ex post evaluations to include an explicit requirement on assessing the significant effects of activities and projects on the relevant environmental objectives. Also an explicit requirement should be included to the interim evaluation to propose corrective measures if the evaluation shows unexpected adverse environmental effects.

Appendix A Environmental policy objectives

Table 16 Environmental objectives

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
Biodiversity, flora and fauna	**Natural marine and coastal landscapes** - By 2010 to have an ecologically coherent and well-managed network of Baltic Sea Protected Areas (BSPAs), Natura 2000 areas and Emerald sites in the Baltic Sea, - By 2012 to have common broad-scale spatial planning principles for protecting the marine environment and reconciling various interests concerning sustainable use of coastal and offshore areas, including the Coastal Strip as defined in HELCOM Rec. 15/1, - By 2021 to ensure that "natural" and near-natural marine landscapes are adequately protected and the degraded areas will be restored. Thriving and balanced communities of plants and animals - By 2021, that the spatial distribution, abundance and quality of the characteristic habitat-forming species, specific for each Baltic Sea sub-region, extends close to its natural range, - By 2010 to halt the degradation of threatened and/or declining marine biotopes/habitats in the Baltic Sea, and by 2021 to ensure that threatened and/or declining marine biotopes/habitats in the Baltic Sea have largely recovered, - To prevent adverse alterations of the ecosystem by minimising, to the extent possible, new introductions of non-indigenous species. **Viable populations of species** - By 2021 all elements of the marine food webs, to the extend that they are known, occur at natural and robust abundance and diversity, - By 2015, improved conservation status of species included in the HELCOM lists of threatened and/or declining species and habitats of the Baltic Sea area, with the final target to reach and ensure favourable conservation status of all species,	Save the Sea: Favourable conservation status under Habitats Directives in accordance with the EU Biodiversity Strategy and related targets by 2021. Save the sea: Rich and healthy wildlife: Support the BSAP objectives on biodiversity and nature conservation as well as maritime traffic. Save the Sea, better cooperation: Accelerate implementation of the BSAP and put in place transboundary, maritime spatial plans applying the ecosystem approach.	Preservation and protection of environment (preservation of natural ecosystems, natural landscapes, natural complexes, sources of clean water, increasing bioproductivity, recovery of species biodiversity) Development and broadening of a network of specially protected natural territories of federal, regional and local significance, provision of biodiversity of flora and fauna under the conditions of increasing economic activity (actions 95, 106, 109)

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
	- By 2012 spatial/temporal and permanent closures of fisheries of sufficient size/duration are established thorough the Baltic Sea area, - By 2009, appropriate breeding and restocking activities for salmon and sea trout are developed and applied and therefore genetic variability of these species is ensured, - By 2009 illegal, unregulated and unreported fisheries are close to zero, - By 2008 successful eel migration from the Baltic Sea catchment area to the spawning grounds is ensured and national programmes for conservation of eel stocks are implemented, - By 2015, as the short-term goal, to reach production of wild salmon at least 80%, or 50% for some very weak salmon river populations, of the best estimate of potential production, and within safe genetic limits, based on an inventory and classification of Baltic salmon rivers, - By 2015, to achieve viable Baltic cod populations in their natural distribution area in Baltic proper, - By 2015, to have the re-introduction programme for Baltic sturgeon in place, and - as a long term goal, after their successful re-introduction has been attained - to have best natural reproduction, and populations within safe genetic limits in each potential river, - By 2015 by-catch of harbour porpoise, seals, water birds and non-target fish species has been significantly reduced with the aim to reach by-catch rates close to zero, - By 2015 discards of fish are close to zero (<1%). **Maritime activities:** - No introductions of alien species from ships		
Population and human health	**Baltic Sea undisturbed by hazardous substances** - Concentrations of hazardous substances close to natural levels	Clean and safe shipping: - reducing hazardous substances, illegal and accidental discharge of oil	

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
	- All fish safe to eat - Radio-activity at pre-Chernobyl level **Maritime activities:** - No illegal discharges - Safe traffic without accidental pollution - Efficient emergency and response capability - Zero discharges from offshore platforms - Minimum threats from offshore installations		
Soil	None	None	
Water	**Baltic Sea unaffected by eutrophication:** - Concentrations of nutrients close to natural levels - Clear water - Natural level of algal blooms - Natural distribution and occurrence of plants and animals - Natural oxygen levels **Maritime activities:** - No illegal discharges - Safe traffic without accidental pollution - Efficient emergency and response capability - Minimum sewage pollution from ships - Zero discharges from offshore platforms - Minimum threats from offshore installations	Save the Sea: Clear water in the sea (achieving targets set in MSFD, WFD, ND and UWWTD) Save the sea: Clean and safe shipping: Reducing discharge of untreated sewage, reducing illegal and accidental discharge of oil	Modernisation of the water and and sewage complex (Actions: 96, 102, 104)

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
Air	Maritime activities: Minimum air pollution from ships	Save the sea: Clean and safe shipping: - reducing environmental impact of ship air emissions Connect the region, reliable energy markets: contribute to overall reduction in greenhouse gas emissions through more efficient energy distribution, increased use of renewable energies and action to reduce energy demand.	(Action: 97)
Climatic factors	Maritime activities: Minimum air pollution from ships	Save the sea: Clean and safe shipping: - reducing environmental impact of ship air emissions Connect the region, reliable energy markets: contribute to overall reduction in greenhouse gas emissions through more efficient energy distribution, increased use of renewable energies and action to reduce energy demand.	(Action: 97)
Cultural heritage			Enhance the unique natural and cultural heritage[27]
Landscape	Ecological objective: Natural marine and coastal landscapes: By 2021 to ensure that "natural" and near-natural marine landscapes are adequately protected and the degraded areas will be restored.		Enhance the unique natural and cultural heritage[28]

[27] Mentioned as main direction in ppt: The RF Northwest federal district development strategy until 2020, main facts
[28] Mentioned as main direction in ppt: The RF Northwest federal district development strategy until 2020, main facts

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
Energy efficiency		Save the sea: Reaching sustainability objectives defined in Europe 2020 and its resource efficiency flagship. Connect the region, reliable energy markets: contribute to overall reduction in greenhouse gas emissions through more efficient energy distribution, increased use of renewable energies and action to reduce energy demand.	(Actions: 45, 48)
Use of renewable and non-renewable resources;		Save the sea/increase prosperity: Reaching sustainability objectives defined in Europe 2020 and its resource efficiency flagship.	Development of renewable energy for slowdown of growth of anthropogenic impact on environment and counteraction to climate change Construction of tide-mill power plants and wind-mill power plants Formation of efficient strategy and certain programmes in the field of renewable energy Targeted value of the relative volume of production and consumption of electricity using the renewable energy sources (excluding hydroelectric power plants with a capacity more than 25 Mv) on the level of 4.5% by 2020. Solution of the technogenic waste eradication (recycling of waste from industrial enterprises and agricultural production, utilisation and processing of domestic waste) (Actions: 98, 103)

Environmental issues	HELCOM Baltic Sea Action Plan (BSAP)	European Union Strategy for the Baltic Sea Region	North-West District Strategy 2020 (Russia)
Adaptation to climate change;		Increase prosperity: climate change adaptation, risk prevention and management: Developing understanding and responses through scientific frameworks.	Arrangement of conditions for integration of the warning and settlement system of the emergencies in the neighboring states aimed at increase of efficiency of the emergency response that possess cross-border consequences (Actions: 99, 101, 105, 107)
Transport demands, accessibility and mobility, etc.		Connect the region, good transport conditions: Reduce remoteness by improving links within the region and to the rest of the EU. Increasing efficiency and minimising environmental impact of transport systems.	

Appendix B Environmental assessment guidelines to applicants

Based on the strategic environmental assessment in this environmental report, it is suggested that as part of the application procedure applicants should document that they have performed a screening to check whether an environmental assessment needs to be performed. This appendix contains the suggested forms / guidelines to be followed.

Suggestion for guidelines / explanation to applicant:

An environmental assessment may be required for your project. If your project is already subject to a strategic environmental assessment (ref. the SEA Directive), no additional environmental assessment is necessary (if you are uncertain about this, you may contact the relevant national environmental authorities). If your project does not in itself give rise to any concrete physical changes but is mere institutional or policy-orientated, an environmental assessment is not required.

If the project does not fall into one of the two categories described above, you need to consider whether your project could have a significant impact on the environment. If you assess that the project could have a significant impact on any of the issues listed below, an environmental assessment should be carried out.

- Biodiversity, flora and fauna;
- Population and human health;
- Soil;
- Water;
- Air;
- Climatic factors;
- Cultural heritage, including architectural and archaeological heritage;
- Landscape;
- Energy efficiency;
- Use of renewable and non-renewable resources;
- Adaptation to climate change.

Suggestion for documentation in application form

It is suggested that the application form should include a section to document the screening. The section could read as follows.

Has a screening to establish whether an environmental assessment is necessary been performed? (yes/no)

If yes, what were the results of this screening (please tick):

☐ Yes, an environmental assessment needs to be carried out

☐ No, an environmental assessment needs not to be carried out

If no, on what grounds (please tick):

☐ SEA to be carried out by national authority

☐ Project only institutional / policy-orientated

☐ Screening showed that the project is not likely to have significant environmental effects on any of the environmental issues