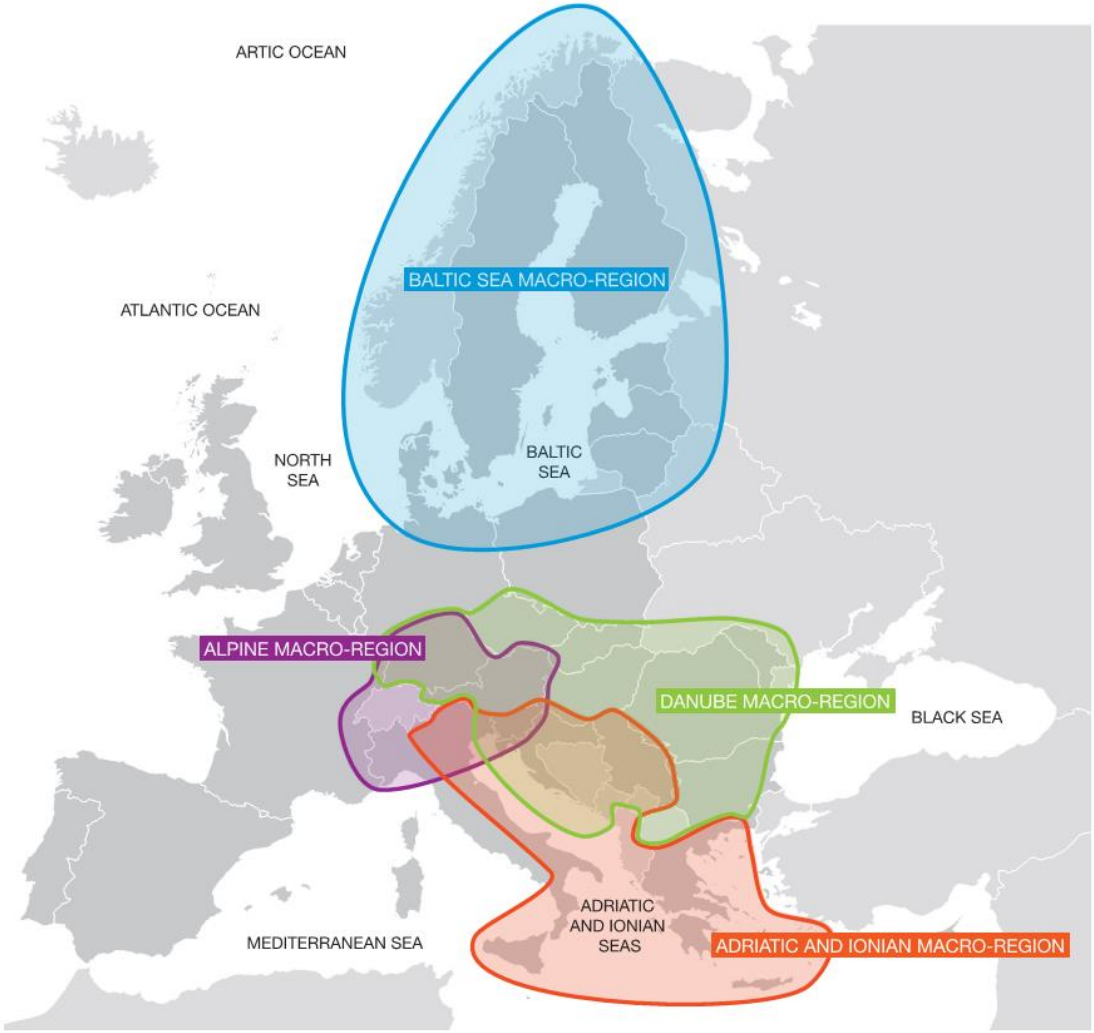
NOVEMBER 2017
EUROPEAN COMMISSION DIRECTORATE-GENERAL REGIONAL AND URBAN POLICY

STUDY ON MACROREGIONAL STRATEGIES AND THEIR LINKS WITH COHESION POLICY

DATA AND ANALYTICAL REPORT FOR THE EUSBSR



INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
Vienna
m&e factory
COWI

COWI

ADDRESS COWI A/S
Parallelvej 2
2800 Kongens Lyngby
Denmark

TEL +45 56 40 00 00
FAX +45 56 40 99 99
WWW cowi.com

NOVEMBER 2017
EUROPEAN COMMISSION DIRECTORATE-GENERAL REGIONAL AND URBAN POLICY

STUDY ON MACROREGIONAL STRATEGIES AND THEIR LINKS WITH COHESION POLICY

DATA AND ANALYTICAL REPORT FOR THE EUSBSR

CONTENTS

APPENDICES

List of Abbreviations

Abbreviation	Stands for
AG	Action Group
AP	Action Plan
BSAP	Baltic Sea Action Plan
BSLF	Baltic Sea Labour Forum
BSN	Baltic Science Network
BSR	Baltic Sea Region
BSR Stars	PA Innovation (EUSBSR) flagship
BUP	Baltic University Programme
CBC	Cross Border Cooperation
CBSS	The Council of the Baltic Sea States
CEF	Connecting Europe Facility
CF	Cohesion Fund
CISE	Common Information Sharing Environment
DG	Directorate-General
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
ECTS	European Credit Transfer System
ECVET	European Credit system for Vocational Education and Training
EFTA	European Free Trade Association
EMFF	European Maritime and Fisheries Fund
ERASMUS+	EU Programme for Education, Training and Sport
ERDF	European Regional Development Fund
ESF	European Social Fund
ESIF / ESI funds	European Structural and Investment Funds
ETC	European Territorial Cooperation
EU	European Union
EUSAIR	European Union Strategy for the Adriatic-Ionian Region
EUSALP	European Union Strategy for the Alpine Region
EUSBSR	European Union Strategy for the Baltic Sea Region
EUSDR	European Union Strategy for the Danube Region
EWTCA	East West Transport Corridor Association
HAC	Horizontal Action Coordinator (EUSBSR)
HELCOM	Baltic Marine Environment Protection Commission
HLG	High Level Group
IALA	Navigation in the IMO, International Association of Marine Aids to Navigation and Lighthouse Authorities

ICPDR	International Commission for the Protection of the Danube River
IHO	International Hydrographic Organisation
IMO	International Maritime Organisation
MA	Managing Authority
MRS	Macro-regional strategy/-ies
MS	European Union Member States
MSFD	Marine Strategy Framework Directive
NCs	National Coordinators
NCM	Nordic Council of Ministers
NDEP	Northern Dimension Environmental Partnership
NEFCO	Nordic Environment Finance Corporation
NGO	Non-governmental organisation
NUTS	Nomenclature of territorial units for statistics
OP	Operational Programme
OVI	Objectively Verifiable Indicators
PA	Policy Area / Priority Area / Pillar / Action area
PA Education	Policy Area Education (EUSBSR)
PA Innovation	Policy Area Innovation (EUSBSR)
PA Nutri	Policy Area Nutrition (EUSBSR)
PA Safe	Policy Area Safety (EUSBSR)
PA Transport	Policy Area Transport (EUSBSR)
PAC	Policy / Priority Area Coordinator
RDP	Rural Development Programme
S2W	School to Work (PA Education (EUSBSR) flagship)
SG	Steering Group
SME	Small and medium-sized enterprises
SWD	Commission Staff Working Document
TEN-T	The Trans-European Transport Networks
TO	Thematic objective
TNK	Transnational Component
TSG	Thematic Steering Group
VET	Vocational Education and Training
WFD	Water Framework Directive

1 Introduction to the Report

Data and analysis report for Task 1 and Task 2

The 'Study on macro-regional strategies and their links with cohesion policy' consists of four task, which are summarised and concluded upon in the Final Report. The first two tasks (**Task 1** and **Task 2**) have been reported on individually, and the present report contains the **data and analysis** for these two tasks for the European Union Strategy for the Baltic Sea Region (**EUSBSR**).

Structure of the report

This report begins with a brief section presenting the EUSBSR, followed by

- the first major part (section 2) of the report, which contains the data and analytical report for **Task 1**, i.e. a description and an analysis of the overall context of the Baltic Sea macroregion;
- thereafter, the second major part (section 3) contains the data and analytical report for **Task 2**, analysing the overall achievements of the EUSBSR and an evaluation of its contribution to strengthening the territorial cohesion objective of the EU. Task 2 is divided into the following four sub-tasks:
  - **Task 2a**: Review of the EUSBSR
  - **Task 2b**: Achievements of the EUSBSR
  - **Task 2c**: Comparison of objectives of the EUSBSR with achievements
  - **Task 2d**: EUSBSR and ESIF

1.1 The EUSBSR – Background

The European Union Strategy for the Baltic Sea Region (EUSBSR) is the first of the macro-regional strategies. It was developed by the European Commission in consultation with the Baltic Sea Region member states and stakeholders.

The cooperation in the EUSBSR focused on environmental challenges connected to the Baltic Sea, as well as two more objectives under the headings of "Connect the Region" and "Increase Prosperity". The EUSBSR aims at enhancing the regional integration of the involved EU Member States in the Baltic Sea Region. The EUSBSR also extends cooperation to neighbouring countries, specifically Belarus, Iceland, Norway, and Russia. It aims to strengthen the integration of the region through collaboration on its currently 13 policy areas and 4 horizontal actions[1]

The EUSBSR includes eight countries, all of them EU Member States, amongst which a relatively high level of cooperation existed prior to the strategy.

Table 1-1 Countries and key features of the EUSBSR

Countries and regions	Key features
• Estonia • Denmark • Finland • Germany (Berlin; Brandenburg; Hamburg; Mecklenburg-Vorpommern; Schleswig-Holstein) • Latvia • Lithuania • Poland • Sweden	• Representing 80 million inhabitants or nearly 16% of the EU population • EU Member States • Cooperation with non-EU members (Norway, Russia, Belarus, Iceland)

[1] https://www.balticsea-region-strategy.eu/ and COMMISSION STAFF WORKING DOCUMENT. European Union Strategy for the Baltic Sea Region. ACTION PLAN {COM(2009) 248}, SWD(2017) 118 final.

Figure 1-1 The EUSBSR by the nomenclature of territorial units for statistics (NUTS2) region

The EUSBSR strategy includes a number of objectives and sub-objectives which are implemented through 13 policy areas (hereafter PAs).

Table 1-2 EUSBSR: objective, policy areas and horizontal actions

Objectives	Policy Areas	Horizontal actions
Save the sea 1.Clear water in the sea 2.Rich and healthy wildlife 3.Clean and safe shipping 4.Better cooperation	**Nutri** Hazards Bio-economy Ship **Safe** Secure	Spatial planning Neighbours **Capacity** Climate
Connect the region 5.Good transport conditions 6.Reliable energy markets 7.Connecting people in the region 8.Better cooperation in fighting cross-border crime	Tourism Culture **Innovation** Health **Education**	
Increase prosperity 9.Baltic Sea region as a frontrunner for deepening and fulfilling the single market 10.EUSBSR contributing to the implementation of Europe 2020 Strategy 11.Improved global competitiveness of the Baltic Sea region 12.Climate change adaptation, risk prevention and management	**Transport** Energy	

Strategy and action plan

The strategy and first action plan was endorsed by the Council in October 2009. The action plan has been amended several time since then and the current action plan is from March 2017. The revisions of the actions plans has also resulted in a reduction of policy areas. The current action plan includes 13 policy areas[2].

Governance

Governance of the EUSBSR relies on a number of actors and institutions as listed in Table 2-1. The PA steering committees and the Policy Area Coordinator (PAC) and Horizontal Actions Coordinator (HAC) together with Flagship leaders are key implementers of the strategy.

[2] COMMISSION STAFF WORKING DOCUMENT. European Union Strategy for the Baltic Sea Region. ACTION PLAN {COM(2009) 248}. Brussels, 20.3.2017. SWD(2017) 118 final.

Table 1-3 Roles and responsibilities in the EUSBSR[3]

Actors/roles	Description
National Coordinators	overall coordination of EUSBSR and implementation in country
Coordinators of policy areas/horizontal actions (PAC and HAC)	key forces to drive implementation of relevant thematic areas forward
Steering Groups	National sector experts (check)
Flagship Leaders;	responsible for implementation of flagships
Managing Authorities	bodies in charge of implementation of programmes/financial instruments
European Commission, High level Group	strategic coordination

[3] Roles and responsibilities of the implementing stakeholders of the EUSBSR and a flagship project concept. Working document. January 2013. EUSBSR.

STATE OF THE MACRO-REGIONS

EUSBSR (TASK 1)

2 State of the Macro-Regions (Task 1)

2.1 Introduction to Task 1

This report presents the results of Task 1 of the 'Study on Macro-Regional Strategies and their links with cohesion policy' for Baltic Sea Macro-regional Strategy. Three other reports of the same structure cover the remaining three macro-regions: Adriatic and Ionian Sea, the Alpine and the Danube Strategy.

This report provides an '*indicator-based description and analysis of the overall context of [the] macro-regions*'[4]. This report aims further to provide a context that is detached from the Macro-regional Strategy concept and does not provide an evaluation of the Macro-regional strategies objectives; which is addressed in the Task 2 report. The description and analysis is structured along four specific headlines: macro-economic overview; macro-regional integration; competitiveness; and the political, institutional and governance context. There is a chapter on each of these dimensions, followed by a synthesised meta-analysis. Prior to these indicator-based chapters, the report provides a brief methodological overview.

For each indicator that is described, the report first provides a graphical illustration of the indicator values. This is followed by a description and analysis of the indicator values in question.

2.2 Methodological Framework for Task 1

2.2.1 Macro-regions

The Macro-Regional Framework

The concept of Macro-regions refers to a grouping of regions that principally share a common functional context, such mountains, sea-basins, or river-basins,

[4] The study Specifications

and '*in which the priorities and objectives set out in the corresponding strategy can be properly addressed*'[5]. While this grouping of territories into macro-regions thus follows a functional logic, it remains an artificial construct in terms of a governance or territorial unit. Therefore, contextual information for a macro-region as a whole is not readily available. This is reflected in the fact that no selection of relevant information is available on an aggregated level.

The family of reports under Task 1 aims at filling this gap. They seek to provide a set of relevant information that closes this gap and draws valid inferences on the overall context of the macro-region in question.

Indicators to provide an overall context of the Macro-regions

More specifically, the context of the macro-regions is described through a set of indicators on four dimensions (macroeconomic overview, integration, competitiveness and the institutional / governance context). The four types of indicators provide a research framework upon which the Task builds, and essentially reflect the EU's principal policy of Economic-, Social-, and Territorial Cohesion as follows:

- **Macroeconomic indicators** reflect the (socio) economic context of the individual economies as well as the macro-region as a whole. Further, they also serve as overview indicators on the overall social- and economic cohesion.

- **Macro-regional economic integration indicators** describe the intensity of cooperation, integration and (economic, cultural) exchange among the countries of a macro-region, and essentially reflect the state of territorial cohesion.

- **Competitiveness indicators** provide a more detailed insight into the (broadly defined) competitiveness of countries and macro-regions on various aspects. These indicators provide inference on factors that affect the three Cohesion objectives.

- **Political, institutional and governance indicators** mirror the political state of a macro-region in terms of governments' accountability or effectiveness of legislation. These indicators mirror the likely capacity to effectively pursue interventions on the economic, social as well as territorial cohesion.

The reports provide a picture of the status of the macro-region in question, of the developments inside the macro-regions and when possible (i.e. data allows) a comparison of the current results with the results of the past. The family of Task 1 reports thus explores and analyses the overall context of the four existing Macro-Regional Strategies (MRS), namely the EU Strategy for the Baltic Sea Region (EUSBSR), the EU Strategy for the Danube Region (EUSDR), the EU Strategy for the Alpine Region (EUSALP) and the EU Strategy for the Adriatic and Ionian Region (EUSAIR). The analysis is thus as such detached from the

[5] Study specifications

contents of each of the macro-regional strategies. Rather, it focuses on the comparable assessment of the socioeconomic and macro-regional integration status within the macro-regions, as well as on the comparable investigation of their performance regarding competition and efficient institutions and governance.

2.2.2 Indicator Analysis

Choosing macro-regionally relevant indicators

A first step of Task 1 focused on the construction of a set of indicators which are relevant to macro-regions on a macro-regional level. For this, indicators were first identified by the consultant, and the final selection was done in close cooperation with DG REGIO. Consultations with DG REGIO and members of the Steering Committee served to ensure an eventual comprehensive and relevant picture of the macro-regions.

Emphasis on regional indicators where possible

For the identification of indicators statistical units had to be considered. Given that the macro-regions in some cases consist of regions and not entire countries, the geographical level of the analysis is principally conducted at level 2 of the Nomenclature of territorial units for statistics (NUTS-2), as defined by the EU. However, in some cases data are not available at NUTS-2 level of aggregation but at NUTS-1 level or country level only. In these cases the missing information for the NUTS-2 level has been substituted by data from the first available aggregation level above it, i.e. if statistical information on a measure was available at NUTS-1 level, the same performance measure was assumed to apply at the NUTS-2 level. For some variables only country-specific information was available. This applies for example to the macro-regional integration indicators.

The statistical units for regions outside the EU were chosen according to the countries' own aggregation at NUTS-2 level (equivalent to SR3[6]) as defined by the EU. Only very few data were available at a level comparable with the NUTS-2 level of the EU. Furthermore, most analysed countries outside the EU are quite small, and most data for the regions outside the EU have therefore been chosen at country level of aggregation.

The main sources of data used in this report are the Eurostat-Database supplemented with data from the World Bank Database, OECD, UNCTAD, COMTRADE, EEAA, ESPON project. Most NUTS-2 data are published with a time lag of one or two years. In order to create a common basis across the macro-regions and the themes, the description and analysis are generally based on data available for the year 2015 or the latest available data for all considered regions. When possible, a comparison is provided between the latest available year data and the data for 2008 for the Baltic Sea and Danube macro-regions.

[6] The NUTS classification is defined only for the Member States of the EU. Eurostat, in agreement with the countries concerned, also defines a coding of statistical regions (SR) for countries that do not belong to the EU but are either candidate countries, potential candidate countries or countries belonging to the European Free Trade Association (EFTA). Eurostat and Serbia have not yet agreed on statistical regions for the country.

The year 2008 also is the year just before the creation of these two macro-regional strategies. For the two newer macro-regions, the Alpine and Adriatic Ionian macro-regions it is the year 2011 that is compared to 2015. The year 2011 is the year just before the creation of the Alpine and Adriatic Ionian macro-regions and it offers a timespan long enough in order for changes to become visible.

Each of the quantitative and qualitative indicators identified as best describing the socio- economic context, integration, as well as the competitiveness, institutional and governance situation of the four macro-regions was subject of an assessment against the RACER framework. RACER stands for "Relevant, Acceptable, Credible, Easy, Robust" and enables a judgement on each indicator's properties and qualities. Each RACER criterion has been assessed on a three-level scoring scale (green: criterion completely fulfilled; orange: criterion partly fulfilled; red: criterion not fulfilled). Based on the strengths and weaknesses of each of the quantitative and qualitative indicators across all the RACER criteria, a list of indicators was selected out of a pool of indicators considered.

The indicators which complied with all RACER criteria (green overall) have been definitely included into the set of selected indicators; those, which did not comply with all RACER criteria (a mix of green, red and yellow) and were not of high importance for the considered macro-region have been left outside.

2.2.3 Composite Benchmarks

As it is not possible to monitor all dimensions of a macro-region with one single indicator, a larger number of indicators has been selected. An additional challenge is that a macro-region's picture comprises the four dimensions (macro-economic, macro-regional integration, competitiveness and political-institutional- governance) but each dimension cannot be captured by one single quantitative indicator.

Composite Indices

In order to cope with this challenge, all indicators with a common theme have been aggregated into composite indices. Composite indices bundle separate (component) indicators into one index which allows the values of the whole bundle expressed as only one measure[7]; examples of such indices are the Human Development Index, Environmental Sustainability Index, and stock indices like the NASDAQ Index. In the course of gathering indicator data, the data have been grouped into sets of related indicators according to appropriately identified themes. Themes have been chosen so that the indicators together represent an "essential feature" of and within a macro-region. The individual indicators have been aggregated without any weights and each composite index hence represents the unweighted average of all indicators.

Composite Benchmarks

Different indicators generally apply different scales, such as percentages, currencies or categorical data (e.g. chemical status of waterbodies). The aggregation of such different scales only makes sense for comparable variables.

[7] See http://www.investopedia.com/terms/c/compositeindex.asp

Each indicator therefore needs to be normalised (to a common scale) before these can be combined into a composite index. For this aggregation, the proprietary '*emb*' model (*equilibrated medial benchmarking*) has been applied[8].

The benchmarking analysis focuses on the four macro-regions and the four dimensions inside each macro-region compares countries and/or NUTS-2 regions inside the individual macro-region based on a common reference framework of EU countries. The reference framework for each component indicator or composite index is delineated by the "top performer" of EU28 countries (benchmarked at 150), the "lowest performer" (50) and the median performer(s) at 100[9]. A high benchmarking score always reflects a more "desirable" situation. Taking unemployment rates as an example, higher scores reflect lower unemployment rates. In this way, the benchmarking results can always be read as showing whether – and to what extent – they are above or below the median in the EU at country level. This common framework enables observations to be made across different regions, even though the main focus remains within each macro-region.

The benchmark is always scaled on a country level against all EU28 Member States. The benchmarking score hence indicates a country's or region's relative position to all EU28 countries. This means in turn that one can observe values above 150 and below 50 in the cases summarised in the table below.

Table 2-1: Cases with benchmarking scores above 150 and below 50

Case	Explanation
Regional analyses (NUTS-2 level)	A NUTS-2 region may out-/underperform its country. Such as Stockholm (SE), performing higher than Sweden as a whole.
Non-EU countries	A non-EU country is not included in the benchmarking scale. Thus, a country like Ukraine may score above 150 or below 50, as they are not included in the scaling.
Macro-regional Integration analyses	Countries that are stronger/weaker integrated in a macro-region than the EU's 'top performing'/'bottom performing' country is integrated in the EU28 (see paragraphs below). For example, Germany's trade integration with countries in the Danube region comprises only a small share of its trade with all EU28 countries and is at the same time lower than that of the EU's 'bottom performer'.

[8] For the Proprietary Method of constructing indices from multiple indicators refer to: Fink, M. *et al.* (2011), *Measuring the impact of flexicurity policies on the EU labour market*, IHS Research Report, commissioned by DG EMPL (Employment, Social Affairs and Inclusion).

[9] The median is the point in a dataset in which a split of that dataset results in two sets with an equal number of data points. See http://www.investopedia.com/terms/m/median.asp for more details

Integration Indices

The chapter on integration includes new integration indices. These IHS-proprietary indices cover respectively Labour Integration (three indices plus a composite of these 3 components), Capital Integration (Foreign Direct Investment (FDI), Energy Integration, and Trade Integration. Each of these seven indices is constructed on a similar principle, which is outlined as follows.

When the amount or value of labour, capital etc. supplied by a country to another country (a 'partner'), or, equivalently, received from a partner, increases, it can be said that the level of integration between the two has increased. Considering a particular group of countries, the focus is on the bilateral flows between them. For the task of estimating integration within macro-regions, i.e. between individual countries belonging to the macro-region in question, the first step is the development of a "Bilateral Flow Matrix", as shown in the table below.

Table 2-2: Energy Integration Example (Baltic Sea), energy exports (kTOE)

Partner	Denmark	Germany	Estonia	Latvia	Lithuania	Poland	Finland	Sweden
Denmark	0.0	1,917.4	0.0	0.0	0.0	0.0	505.6	3,503.5
Germany	3.5	0.0	0.0	0.0	0.0	916.5	0.0	0.0
Estonia	0.0	0.0	0.0	522.7	0.0	0.0	25.6	0.0
Latvia	0.0	0.0	0.4	0.0	293.9	0.0	0.0	0.0
Lithuania	0.0	0.0	79.7	14.4	0.0	51.4	0.0	0.0
Poland	0.0	251.7	0.0	0.0	5.6	0.0	0.0	1.7
Finland	0.0	0.2	432.8	0.0	0.0	0.0	0.0	0.1
Sweden	477.6	168.3	0.0	0.0	0.0	302.0	1,484.4	0.0

Immediately, certain strong relationships between certain country-pairs are visible. What such a table of absolute values does not make clear is the 'importance' of a bilateral relationship for a specific country. A second step therefore converts the data to a relative share of all its exports (or foreign investments, migration flows, remittances) (in worldwide).

Table 2-3: Energy Integration Example, Share of total exports to partner country (in %)

Partner	Denmark	Germany	Estonia	Latvia	Lithuania	Poland	Finland	Sweden
Denmark	0.0	11.8	0.0	0.0	0.0	0.0	3.1	21.5
Germany	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Estonia	0.0	0.0	0.0	24.8	0.0	0.0	1.2	0.0
Latvia	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0
Lithuania	0.0	0.0	0.9	0.2	0.0	0.6	0.0	0.0
Poland	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Finland	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0
Sweden	2.6	0.9	0.0	0.0	0.0	1.6	8.1	0.0

The new integration index provides a common basis for measuring integration in each of the four macro-regions, just as the case for every other indicator considered in this study. Given that the number of countries in the macro-

regions vary, the total share of e.g. energy exports to the macro-region would grow with the number of member countries. Therefore, to provide a measure of integration that is not affected by the size of a macro-region, the chosen measure for each country's degree of integration within its macro-region is its per partner share (ppShare); i.e. the average flow to a destination country.

Table 2-4: Energy Integration Example, resulting per partner share

Partner	ppShare
Denmark	5.21
Germany	0.22
Estonia	3.72
Latvia	1.98
Lithuania	0.23
Poland	0.18
Finland	0.83
Sweden	1.90

Benchmarking Integration Indices

In the case of integration indices, the procedure to establish the benchmark is identical in formation as for the other indices, except that in this case the bilateral flow matrix is 28 x 28 for the EU28. Thus, the benchmark is defined by the average share that each Member State exports to the EU28 countries. This results in a per partner share of each Member State, but to the whole EU28, instead of a macro-region.

In other words, using the per partner share as a unit of measure enables the degree of integration within each macro-region to be benchmarked against the degree of integration in the EU as a whole. This provides a deep insight into the question of whether the common geographical basis (and more) for the macro-regions is actually, and to what extent, of particular relevance compared to the entire setting of all EU countries, which may in general cover a more or less contiguous area, but which course also comprise (even more) multiple regional contexts.

As mentioned in Table 3-52 above, there are many cases found to score well below 50 or well above 150. This is entirely consistent: The reason, expressed mathematically, is that the two-dimensional flow matrices gives rise to country index values in macro-regions that are not subsets of the EU index; for non-integration indices, in contrast the (EU) country indicator values form by definition a subset of the EU28.

Illustrative Maps

Each composite index is accompanied by a figure that consists of two maps and one bar chart. Both maps show the composite index values for each NUTS region in differing colour schemes. The first map provides a coloured illustration of the scores on a scale from 50-150 and reflects how a given region performs on the EU28-wide level (i.e. 100 reflects the EU28 median). Any regions scoring outside this defined range are displayed as 50 or 150.
The scale of the second map is in turn defined by the lowest and highest composite index scores found for the macro-region and seeks to highlight the

differences between the high and low performing regions of that macro-region more clearly. As a result, the range of this scale depends on the maximum and minimum scores for each individual composite index in a given macro-region. The bar chart identifies the two regions with the highest and lowest composite index scores in each country, accompanied by the (benchmarked) scores of the index's components. The colouring scale ranges from 50 to 150.

Digital Toolbox

Synchronous to this report, a digital toolbox has been developed. The digital toolbox comprises a set of data files for each of the four macro-regions. Each file contains data sheets for each indicator used to assess the context of the macro-regions. As mentioned above, data has been organised separately for the appropriate NUTS regions and countries in each of the four macro-regions, and each indicator, or composite, corresponds to an excel sheet for each macro-region. The excel sheets have been grouped according to the four dimensions (macro-economic, macro-regional integration, competitiveness and political-institutional- governance). Furthermore, within each dimension, sheets have been grouped according to agreed aggregated compositions i.e. as composite indices).

An index page (usually on the first data sheet of each file) will enable users to directly find the data sheet for a named indicator (by clicking on an excel hyperlink).

A second set of excel files has been established for documenting the results of the benchmarking process. There is a file for each individual macro-region. This contains datasheets corresponding to indicators, grouped according to the above-mentioned four dimensions. Within these, they are further grouped according to the agreed aggregated composition of composite indices.

2.3 Macroeconomic Overview

In this chapter the overall macroeconomic state of the macro-region is assessed through analyses focused on three major themes: economic performance, employment, and social equality. The macroeconomic indicators are used to reflect the (socio) economic context of the individual economies as well as of the macro-region as a whole.

The table below provides an overview of the indices that are presented in this chapter:

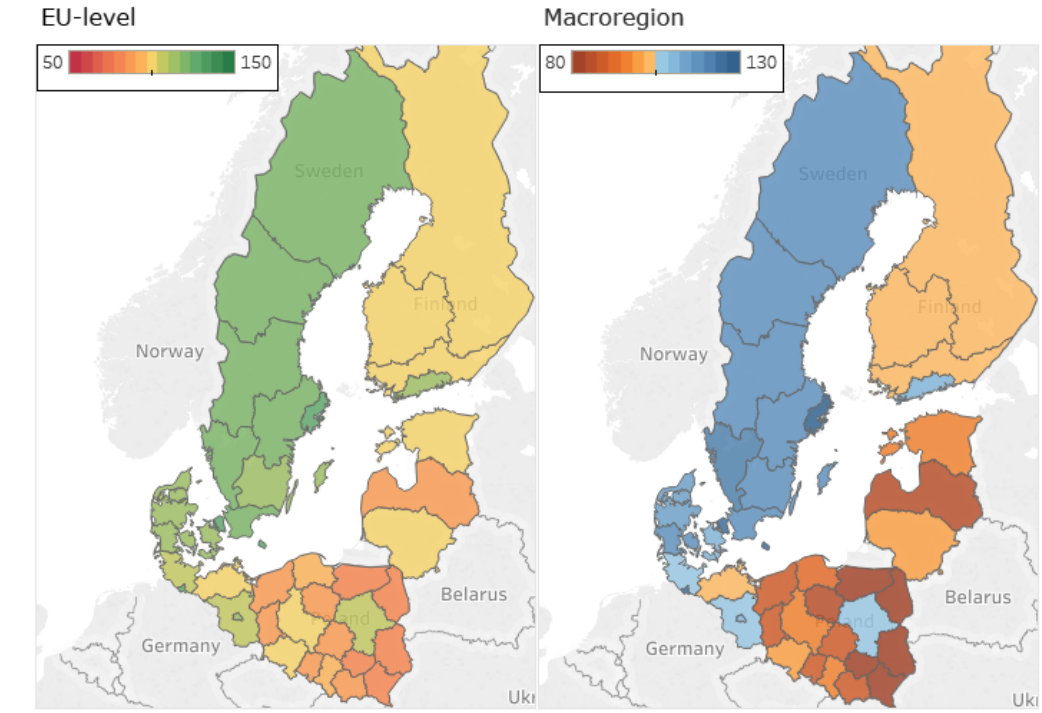
Table 2-5: Overview of macro-economic overview indicators

Composite	Economic performance indicators	Employment indicators	Social progress indicators
Components	GDP/capita	Employment index	Social progress index[10]
	GDP growth	Unemployment rate	
	Labour productivity	Youth unemployment	
		Long term unemployment	
		Economic activity rate	
		Employment rate	

[10] A composite index based on 53 indicators covering basic human needs, conditions for well-being and opportunity to progress

2.3.1 Economic Performance

Figure 2-1: Economic Performance by NUTS-2 in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Upper/Lower Regions of the Composite

C..	NUTS LABEL	Economic Performance Index	GDP per Capita (at Purchasing Power Parity)	GDP Growth	Labour Productivity
DE	Hamburg	124	134	111	127
	Mecklenburg-..	103	95	111	104
DK	Hovedstaden	123	121	113	137
	Sjælland	111	99	113	123
EE	Eesti	97	85	127	79
FI	Helsinki-Uusi..	111	116	90	128
	Pohjois- ja Itä-..	102	101	90	116
LT	Lietuva	98	84	137	73
LV	Latvija	87	71	118	71
PL	Lubelskie	80	51	134	56
	Mazowieckie	108	106	134	83
SE	Småland med ..	116	105	125	120
	Stockholm	130	124	125	141

0 50 100 150

Text Box 2-1: Explanation of indicators: 'Economic Performance'

To assess the economic performance on NUTS-2 regions inside the macro-region three indicators: regional Gross Domestic Product (GDP) per capita (at purchasing power parity), Real GDP growth rate and Labour Productivity have been bundled into one composite indicator: Economic performance index.

Regional gross domestic product (GDP) is used for the measurement and comparison of the economic activity of regions. It is the most important indicator used in the EU's regional policy for the selection of regions eligible for support under the investment for growth and jobs goal of the EU. GDP is the standard measure of the value of the production activity (goods and services) of resident producer units.[11] For this indicator regional data are available with a time lag of two years. Thus regional GDP data for the reference year 2015 have been released at the beginning of 2017. Real GDP is usually a proxy for economic prosperity. GDP per capita, however, does not reflect the equality of distribution of that prosperity, so it is not representative for many social issues.

The real percentage-growth rate of gross value added (i.e. Real GDP growth) allows the identification of the most and less dynamic regions in the EU and the non-EU regions inside the macro-region.

Labour Productivity has been calculated as Regional Gross Value Added (GVA) per employee. According to the OECD, Labour Productivity measures "how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output." Productivity is considered a major source of economic growth and competitiveness. It is used as a main indicator to assess a country's performance and to perform international comparisons. Over time a country's ability to raise its standard of living depends to a great extent on its ability to raise its output per worker. There are different measures of productivity.

An investigation of growth-generating economic activities on the regional level requires the availability of relevant regional indicators. Compared to data on the national level, the availability of regional data is much more limited. Moreover, regional data are published with sizable time lags which in the case of national accounts may amount to two years.

The analysis of the composite indicator Economic Performance in the macro-region shows a mixed picture regarding the economic development of its NUTS-2 regions. The highest performers in 2008 and 2014 were the regions in Sweden, Denmark and Germany (Berlin, Brandenburg, Hamburg). These regions show simultaneously a high GDP per capita and a high productivity. The highest GDP per capita and productivity is to be found in the NUTS-2 regions: Hovedstaden, Brandenburg, Hamburg, Stockholm, and Östra Mellansverige. These are urban centres with qualified workforce and high quality infrastructure. In the middle range Estonia, Lithuania, as well as NUTS-2 regions in Germany

[11] https://www.oenb.at/en/Statistics/Standardized-Tables/Economic-and-Industry-Indicators/Economic-Indicators/nominal-gpd-growth-expenditure-side.html

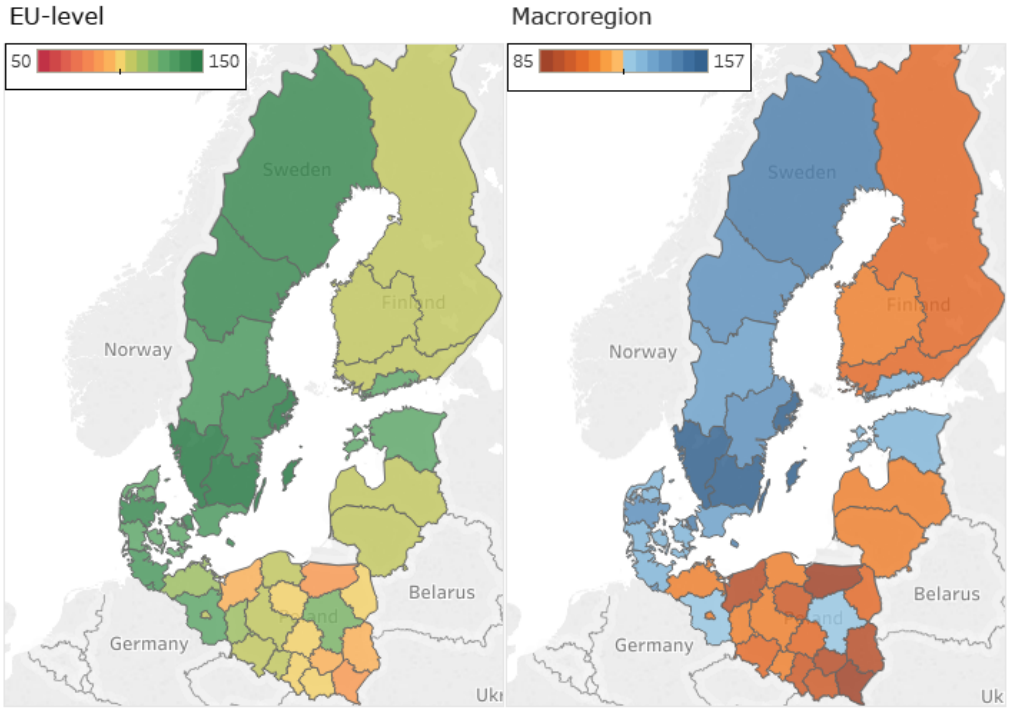
(Mecklenburg-Vorpommern, Schleswig-Holstein) and in Finland and about a third of the Polish regions. The lowest values for the indicator Economic performance exhibit Latvia and about two thirds of the NUTS-2 regions in Poland. The lower performing regions have a low GDP per capita and low productivity. However, all low performing regions except for the Finnish ones, where progress was only modest, reduced their gap to the EU-median regarding the considered indicators significantly in 2014 compared to 2008.

An important role in this process played the investment co-financed by the EU Structural and Investments Funds (of which particularly the Cohesion Fund), as well as strong inward Foreign Direct Investment (FDI) flows. Estonia, Latvia, and Lithuania recovered after the recession in the years 2008 and 2009 and recorded high growth rates during the period 2011 to 2013. However, the sanctions and countersanction imposed on and by Russia affected their growth performance since 2014. Poland was the only European country that did not record a recession during the crisis, due to successful policies supporting internal demand. After a moderate growth in 2012 and 2013 growth accelerated in Poland the following years, due to dynamic internal and external demand. Following the recovery in 2010, the Finnish regions were again confronted with a prolonged recession in the period 2012-2014. Finland's economy suffered from a lack of export demand from its main trade partners as the euro-area crisis prompted governments to cut budget spending, as well as austerity measures at home to keep debt low. The decline of Nokia (accounting for 4% of Finnish GDP, 21% of Finnish exports and 14% of corporate tax revenues by 2000[12]), the biggest taxpayer and job provider in the Finnish economy combined with the decline of the paper industry contributed significantly to the contraction of Finnish economy.

[12] http://www.wired.co.uk/article/finland-and-nokia

2.3.2 Employment

Figure 2-2: Employment by NUTS-2 in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Composites-Min/Max

C..	NUTS LABEL	Employment Ind..	Uemployment R..	Youth unemploy..	Long term unem..	Employment Ra..	Econ Activity Ra..
DE	Berlin	109	98	120	91	122	115
	Hamburg	137	154	149	102	148	130
DK	Hovedstaden	142	125	140	132	149	162
	Sjælland	127	134	135	131	137	98
EE	Eesti	126	131	128	113	134	127
FI	Helsinki-Uusi..	129	109	106	140	138	154
	Pohjois- ja Itä-..	104	95	92	145	105	82
LT	Lietuva	107	99	116	104	114	101
LV	Latvija	108	96	116	99	118	109
PL	Mazowieckie	122	128	108	132	121	119
	Podkarpackie	85	91	70	115	75	76
SE	Stockholm	157	121	105	148	160	250
	Norra Mellans..	134	110	95	154	138	173

0 100 200 | 0 100 200 | 0 100 200 | 0 100 200 | 0 100 200 | 0 100 200 300

Text Box 2-2: Explanation of the indicator: 'Employment'

Labour market statistics are crucial for many EU policies. There are significant labour market disparities within the EU territory as well as in candidate/neighbour countries. The first figure on the left shows the employment situation from the perspective of a composite index based on the following indicators. i) Economic activity rate, which describes an economy's ability to attract and develop a great share of human capital from its population; ii) Employment rate combined with Unemployment Rate, providing useful information about the ability to utilize available labour; iii) Youth unemployment rate, as an indicator showing the match between the existing skills within the young people and the employment opportunities offered by the regional economies; iv) and Long term unemployment rates, which indicate inefficient labour markets. More elaborate descriptions of the composite indicator can be found in the methodology.

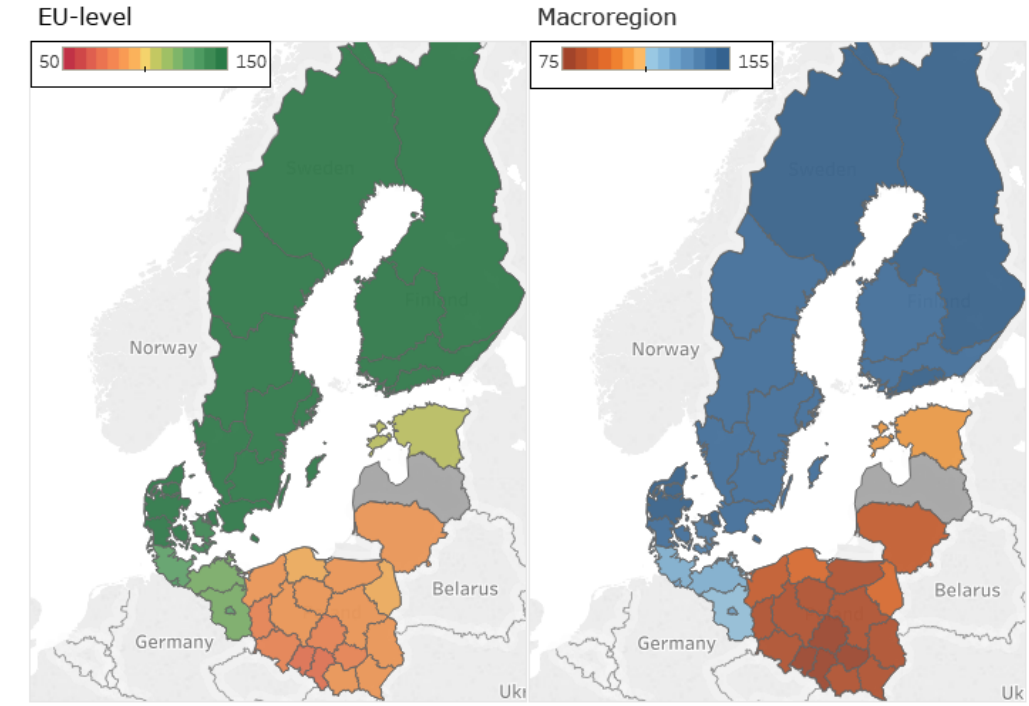
Four out of five NUTS-2 regions in the Baltic Sea region exhibit a more positive state than the EU-median (35 out of 43 NUTS-2 regions perform above the EU-median). The highest performing NUTS-2 regions are in Sweden followed by those in Denmark. The lowest performers were eight NUTS-2 regions in Poland. Compared to 2008, the regions in Denmark lost their leading position, which is taken over by the regions in Sweden (particularly Stockholm performing better than any EU country as a whole). This is because of the reduction in the activity and employment rates in Denmark since 2008. It should be noted though that the 2008 levels were very high in Denmark. Germany and Poland in turn improved their position considerably over the last seven years. Most NUTS-2 regions in Sweden, Germany and Poland thus increased their activity and employment rates significantly. The rise in the value of these indicators was in the case of the Polish and German regions quite substantial but starting also from relatively low levels.

High GDP growth rates in Poland since 2008, also due to the high absorption of EU cohesion funds, supported the catching up of the Polish economy to the EU-average. At the same time, high growth is reflected in many NUTS-2 regions in a rise of the activity and employment rates and - since 2014 - also in a gradual decrease of unemployment.

Except for the German regions, all regions experienced an increase in unemployment rates when comparing 2008 and 2015. The German regions even managed to reduce unemployment, youth unemployment and long-term unemployment rates. This can be attributed to successful labour market policies implemented during the first five years of the first decade of the millennium, and providing lasting results after a couple of years. Other factors contributing to the good performance of German regions are the successful vocational training schemes in Germany and the flexibility of German employees (60 % of employed persons are commuters). Dual vocational training thus provided for a strong decline of youth unemployment in Germany, while all other regions in the macro-region experienced significant increases in this.

2.3.3 Social Progress Index

Figure 2-3: Social Progress by NUTS-2 in 2016, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components.



Text Box 2-3: Explanation of the indicator: 'Social Progress Index' [13]

The Social Progress Index measures the extent to which countries provide for the social and environmental needs of their citizens.
The Social Progress Index from 2016 bases on fifty-three indicators that cover the fields of Basic Human Needs (Nutrition and Basic Medical Care, Water and Sanitation, Shelter, Personal Safety), Foundations of Well-Being (Access to Basic Knowledge, Access to Information and Communications, Health and Wellness, Environmental Quality), and Opportunity to Progress (Personal Rights, Personal Freedom and Choice, Tolerance and Inclusion, Access to Advanced Education). A ranking of the values of Social Progress Index shows the relative performance of the countries included. For the purpose of this Task, this index has been re-scaled this report's format.

There is a correlation between the level of economic development and social progress. Thus, the regions with the highest GDP per capita, such as NUTS-2 regions in Denmark, Finland and Sweden are also the highest performing regions, with the highest scores for the European Union Regional Social Progress Index (above 145 on the benchmark). These regions register the highest performance for the areas 'Basic Human needs' and 'Opportunity'. The highest performing NUTS-2 regions in the macro-region are: Övre Norrland in Sweden, Midtjylland, Hovedstaden and Nordjylland in Denmark, and HelsinkiUusimaa in Finland. German NUTS-2 regions Berlin, Hamburg, Brandenburg, Mecklenburg Vorpommern with scores exceeding 120 points show also a performance above the EU28-median. The lowest performers are found in Poland, with scores below 90 points. These are Slaskie, Opolskie, Lódzkie, Swietokrzyskie, Lubuskie, Dolnoslaskie, Kujawsko, and Pomorskie. Deciding for this result is their low performance in the area 'Foundation of Wellbeing' (environmental quality) and 'Opportunity' (personal rights). Also Latvia and Lithuania exhibit low values for the Social Progress Index, as a result of a poor performance on 'personal rights' and 'health and wellness'. A correlation between GDP per capita and performance on social progress can be noticed for these regions.

2.4 Macro-regional Integration

The emergence of the "new trade theory" (Krugman, 1979)[14] in late 1970 with its emphasis on economies of scale put economic integration in the centre of economic debate. According to this theory, companies in small countries tend to

[13] The index is published by the nonprofit organization Social Progress Imperative. A custom version for the EU regions has been developed in cooperation with the European Commission. See http://www.socialprogressimperative.org/custom-indexes/european-union/

[14] Krugman, Paul R. (1979): Increasing returns, monopolistic competition, and international trade, URL: http://www.sciencedirect.com/science/article/pii/0022-1996(79)90017-5.

exhibit relatively high average costs, while companies in large countries can profit from lower average costs due to size advantages. [15]

As a result, regional integration represents an important national policy alternative for small economies in order to overcome the small size handicap. By joining a regional integration agreement, companies from a small domestic economy may enlarge and be better prepared to face competition from countries with larger domestic economies.[16]

However, while regional integration gives rise to new opportunities, new challenges may appear. These may take the form of strong restructuring at microeconomic level, with some companies disappearing and other companies growing bigger and becoming successful in international competition.[17] In the restructuring process, relatively large and strong companies overtake their weaker competitors. An important role in this respect play mergers and acquisitions involving companies from different countries. Foreign direct investment (FDI) represents thus a channel in the integration process. Companies with foreign participation, which are usually involved in vertical production networks, are also responsible for a large share of exports and imports. Integration may also lead to trade diversion and erosion of sovereignty.[18]

In the context of the EU's long-term objectives, this chapter provides a context on the territorial cohesion of the macro-region, which is one of the three cornerstones of Cohesion Policy next to economic and social cohesion[19] , as well as the degree to which the Single Market[20] is fulfilled within the macro-region.

For this analysis, various indicators have been chosen to provide a context of integration. The table below lists the chosen indicators. The macro-regional economic integration indicators chosen describe the intensity of cooperation, integration and (economic, cultural) exchange among the countries of the macro-region.

[15] Gustavson, Patrick & Koko, Ari (2004): "Regional Integration, FDI and Regional Development. European Investment Bank". In: *Papers of EiB-Conferences*, Vol. 9, No. 1, pp. 122, Luxembourg.
[16] Gustavson, Patrick & Koko, Ari (2004): "Regional Integration, FDI and Regional Development. European Investment Bank". In: *Papers of EiB-Conferences*, Vol. 9, No. 1, pp. 122, Luxembourg.
[17] Gustavson, Patrick & Koko, Ari (2004): "Regional Integration, FDI and Regional Development. European Investment Bank". In: *Papers of EiB-Conferences*, Vol. 9, No. 1, pp. 122, Luxembourg.
[18] https://www.globalpolicy.org/nations-a-states/political-integration-and-national-sovereignty-3-22.html

[19] Territorial Cohesion, http://ec.europa.eu/regional_policy/en/policy/what/territorial-cohesion/

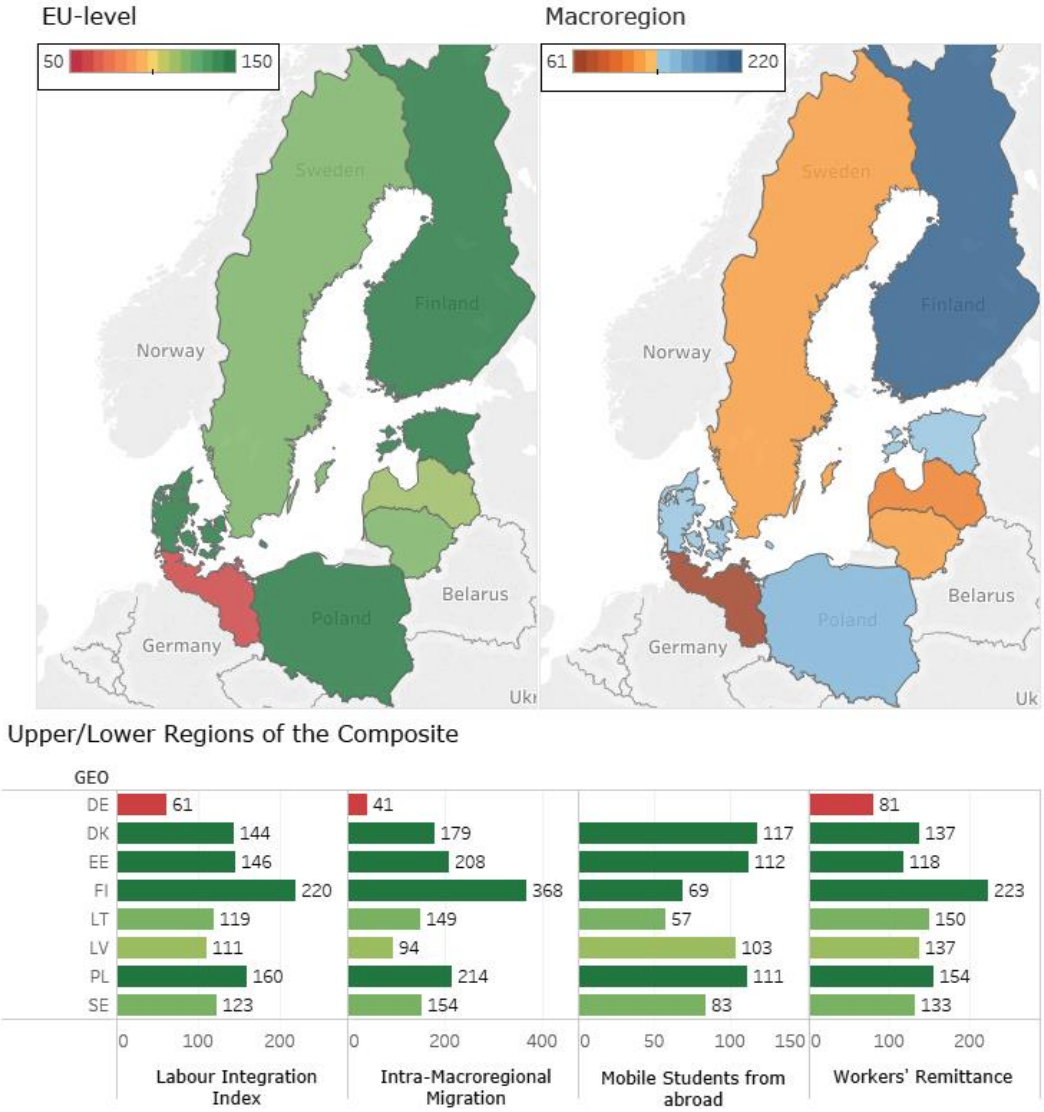
[20] The European Single Market, https://ec.europa.eu/growth/single-market_en

Table 2-6: Overview of Macro-regional economic Integration indicators

Composite	Components
Labour Integration	Intra macro-regional migration
	Mobile students from abroad
	Workers' Remittance
Trade Integration	Share of exports to macro-region out of total exports
Capital Integration	Inward FDI stocks
Energy Integration	Exports of energy
Accessibility	Multimodal
	Road
	Rail
	Air
Territorial Cooperation	Number of organisations participating in INTERREG-IVB

2.4.1 Labour Integration

Figure 2-4: Labour Integration by country, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-4: Explanation of the indicator: 'Labour Integration'

To get a picture on the status of labour integration in the macro-regions three indicators are selected: a) Bilateral estimates of migrant stocks in 2013, b) Bilateral Remittance Estimates for 2015 using Migrant Stocks, Host Country Incomes, and Origin Country Incomes (millions of US$) (October 2016 Version) both indicators provided by the World Bank and the c) Share of mobile students from abroad by education level, sex and country of origin, provided by Eurostat have been used to create a composite indicator.

Data on Migration and remittances are based on the Migration and Remittances Factbook 2016 published by the World Bank. It provides a comprehensive picture of emigration, immigration, and remittance flows for 214 countries and territories, and 15 country groups, drawing on authoritative, publicly available data. The data are collected from various sources, including national censuses, labour force surveys, and population registers.

According to the "Recommendations on Statistics of International Migration" by the United Nations Statistics Division (1998), "long-term migrants" are persons who move to a country other than that of their usual residence for a period of at least one year, so that the country of destination effectively becomes their new country of usual residence. "Short-term migrants" are persons who move to a country other than that of their usual residence for a period of at least three months but less than one year, except for the cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment, or religious pilgrimage (UN Statistics Division 1998).

A new notion of remittances introduced in the sixth edition of the IMF Balance of Payments and International Investment Position Manual (BPM6)[21] is starting to be used by many countries (IMF 2010a). According to the new definition, personal remittances are the sum of two main components: "compensation of employees" and "personal transfers". Personal remittances also include a third item: "capital transfers between households," but data on this item are difficult to obtain and hence reported as missing for almost all countries.

Compensation of employees[22], unchanged from BPM5, represents "remuneration in return for the labour input to the production process contributed by an individual in an employer-employee relationship with the enterprise." The definition of "personal transfers," however, is broader than the old "worker's remittances" – it comprises "all current transfers in cash or in kind made or received by resident households to or from non-resident households." Therefore, "personal transfers" include current transfers from migrants not only to family members but also to any recipient in their home country. If migrants live in a host country for one year or longer, they are considered residents, regardless of their immigration status. If the migrants have lived in the host country for

[21] IMF (2013): Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (*BPM6*). URL: https://www.imf.org/external/pubs/ft/bop/2007/pdf/appx5.pdf
[22] *See footnote above*

less than one year, their entire income in the host country should be classified as compensation of employees.[23]

Share of mobile students from abroad enrolled by education level, sex and field of education refers to students from abroad enrolled in tertiary education (level 5-8) in percentage of all students.

In the Baltic Sea macro-region, labour integration is higher than the EU-median in all countries except Germany. The highest degree of labour integration within the countries in the macro-region can be observed for Finland and Poland followed by Denmark and Estonia. Sweden, Lithuania and Latvia fall below the average of the macro-region, but still above the EU28-median[24].

A close look at the migration, remittances and students' mobility flows inside the macro-region, discloses some interesting integration patterns. Statistical evidence shows that geographical proximity, historical and cultural ties and language advantages play an important role for labour integration. Family and friends network that migrants already have in the destination country is another contributing factor (Taylor, 1986)[25]. Thus, there is a high degree of integration between Denmark and Sweden and to a lower extent between Denmark and Germany, and there is a high degree of labour integration between Estonia and Finland and to a lower extent between Estonia on one side and Germany and Sweden on the other side. Also, integration is highest between Finland and Sweden and to a lower extent between Finland and Germany, and labour integration is high between Germany on the one side and Poland, Sweden and Denmark on the other side. About 31% of the Polish migrants are located in Germany. A high degree of labour integration registers Poland also with Denmark and Sweden.

The data show that the flow of migrants takes place to a larger extent from East (Poland, Estonia, Latvia, and Lithuania) to West (Germany, Sweden, Finland, Denmark) or from the new EU Member States to the old EU Member States, the flow of remittances follows an opposite direction. For the Baltic countries, Estonia, Latvia, and Lithuania a high labour integration with the Russian Federation can be observed[24].

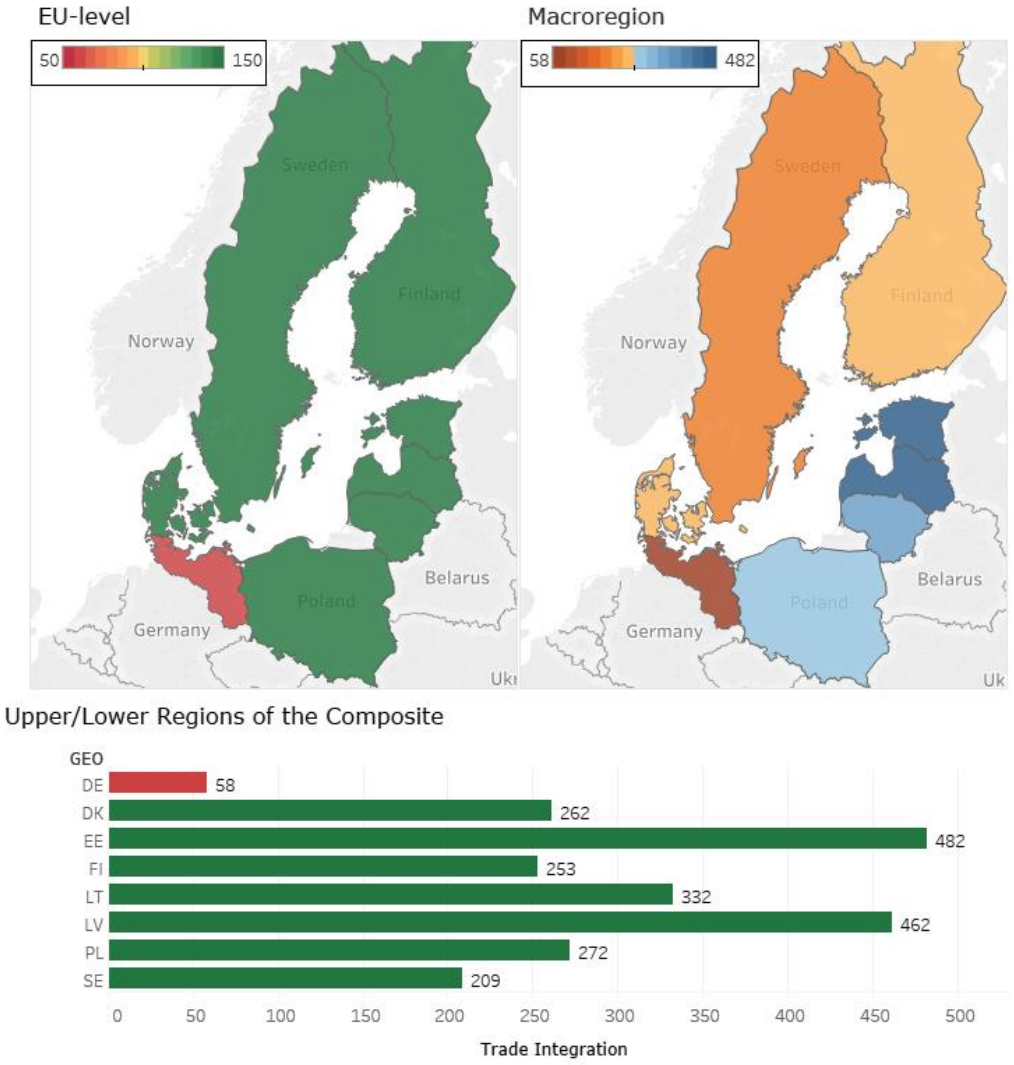
[23] IMF (2013): Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (*BPM6*). URL: https://www.imf.org/external/pubs/ft/bop/2007/pdf/appx5.pdf

[24] There were no data on students' mobility available for Germany

[25] Taylor, J. Edward, 1986. Differential migration, networks, information and risk. In: Stark, Oded (Ed.), Migration, Human Capital and Development. JAI Press, Greenwich, CT

2.4.2 Trade Integration

Figure 2-5: Trade Integration by country in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-5: Explanation of the indicator: 'Trade Integration'

To measure Trade Integration, the analysis benchmarks a country's share of exports to the macro-region out of its total exports. The result of the benchmark thus indicates the degree to which a country is able to sell its goods in the macro-region, and what importance the single market concept has on a macro-regional scale.

Next to the high economic importance of the macro-region associated with a high indicator score, the 'functional' definition of a macro-region through a common geographic feature is manifested through economic evidence.

The data was obtained from the COMTRADE Database of the United Nations, which provides comprehensive trade data.[26]

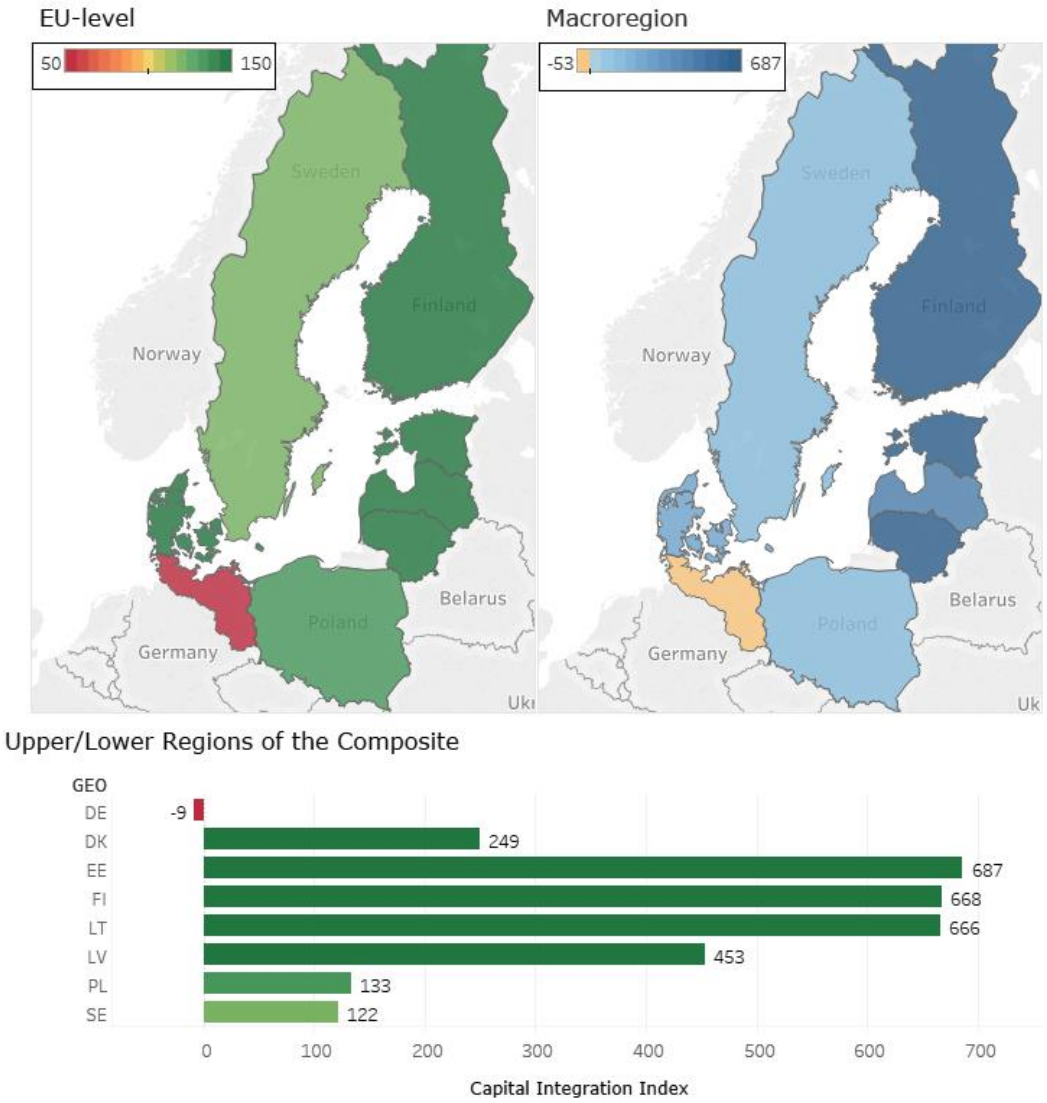
In the Baltic Sea macro-region, Latvia and Estonia present the highest trade integration within the countries in the macro-region. A share ranging between 50 and 60% of the exports of these countries are absorbed by the other countries in the macro-region. These shares increased in 2015 compared to 2008. Latvia's main trade partners in the macro-region are Estonia and Lithuania, Estonia's main trade partners are Finland, Sweden and Latvia. The lowest trade integration in the macro-region is seen in Germany. Only about 9% of the German exports go to the other members of the macro-region. This share decreased slightly in 2015 compared to 2008. Due to its large size, German economy has a more diversified pool of trade partners compared to the small countries. Lithuania, Denmark, Poland and Finland show a medium degree of trade integration in the macro-region, with shares of trade within the macro-region in 2015 between 33% in Finland and 41% in Lithuania. Trade inside the macro-region increased for all these countries since 2008. Sweden's trade share within the region accounts for 28%. However, this share did not change since 2008.

An interesting development showed by the data is the rise in the bilateral trade relation of the Baltic countries (Estonia, Latvia and Lithuania) following their EU accession in 2004. Foster et. al. (2011) attribute this development to the rising engagement of the foreign investors in the region and the increase in intra-company trade, while Hornok (2010) underlines the importance of the elimination of non-tariff barriers.

[26] UN COMTRADE, URL: https://comtrade.un.org/

2.4.3 Capital Integration

Figure 2-6: Capital Integration by country in 2012, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-6: Explanation of indicators: 'Capital Integration'[27] [28]

The Capital Integration among the countries of this macro-region is measured through foreign direct investment (FDI). The ability of a country to attract FDI indicates the economic attractiveness of a region (Grozea-Helmenstein et al, 2017). When using this concept, one has to differentiate between outward FDI (domestic companies investing in a foreign country) and inward FDI (foreign companies investing in the domestic country) as well as between flows (the annual stream of investments) and stocks (the aggregated volume of all past investments minus depreciation and repatriation) (Grozea-Helmenstein et al, 2017). For the underlying analysis inward FDI stocks of 2012 were therefore used, as these are in fact a moving, weighted average of flows that depreciate over time. The data have been provided by Eurostat.

Among various hypotheses aiming to explain the pattern of foreign direct investment, according to the classical theory of comparative advantage relative factor endowments and initial conditions are important factors in attracting FDI to some locations rather than others (Bhagwati, 1987)[1]. This is in line with the FDI pattern which can be observed in the macro-regions, with some countries being more attractive to foreign investors compared to others.

The Capital Integration is measured on a country level. When considering the integration of countries that are only partially in the macro-region, the inward FDI stock (and thus benchmarking) of only the applicable regions may be higher if one assumes that inward FDIs are higher in closer geographical proximity (Folfas, 2011).

The Baltic macro-region shows a high degree of Capital Integration: The average share of FDI inward stocks from countries of this macro-region out of the EU is 5.37 (i.e. per partner share), which is well-above the EU-average share of 3.09. Estonia, Finland and Lithuania account for the largest share of FDI stocks from the other partners in the macro-region and score 666-687 points on the benchmark (nearly 60% of total FDI stock in the country derives from this macro-region), followed by Latvia with a share of about 44% (score of 453). In the case of Finland, about 60% of the FDI stock originated in 2015 from Sweden, Denmark or Germany[29]. Germany has by far the lowest share of FDI from the other partners in the macro-region with only 4%, resulting in an even negative benchmark of (-9). This very low score is in parts explained by the small share of Germany that is part of the macro-region. Poland, Denmark and Sweden are placed in the middle, with shares ranging from 22 to 30% and score above the EU-median.

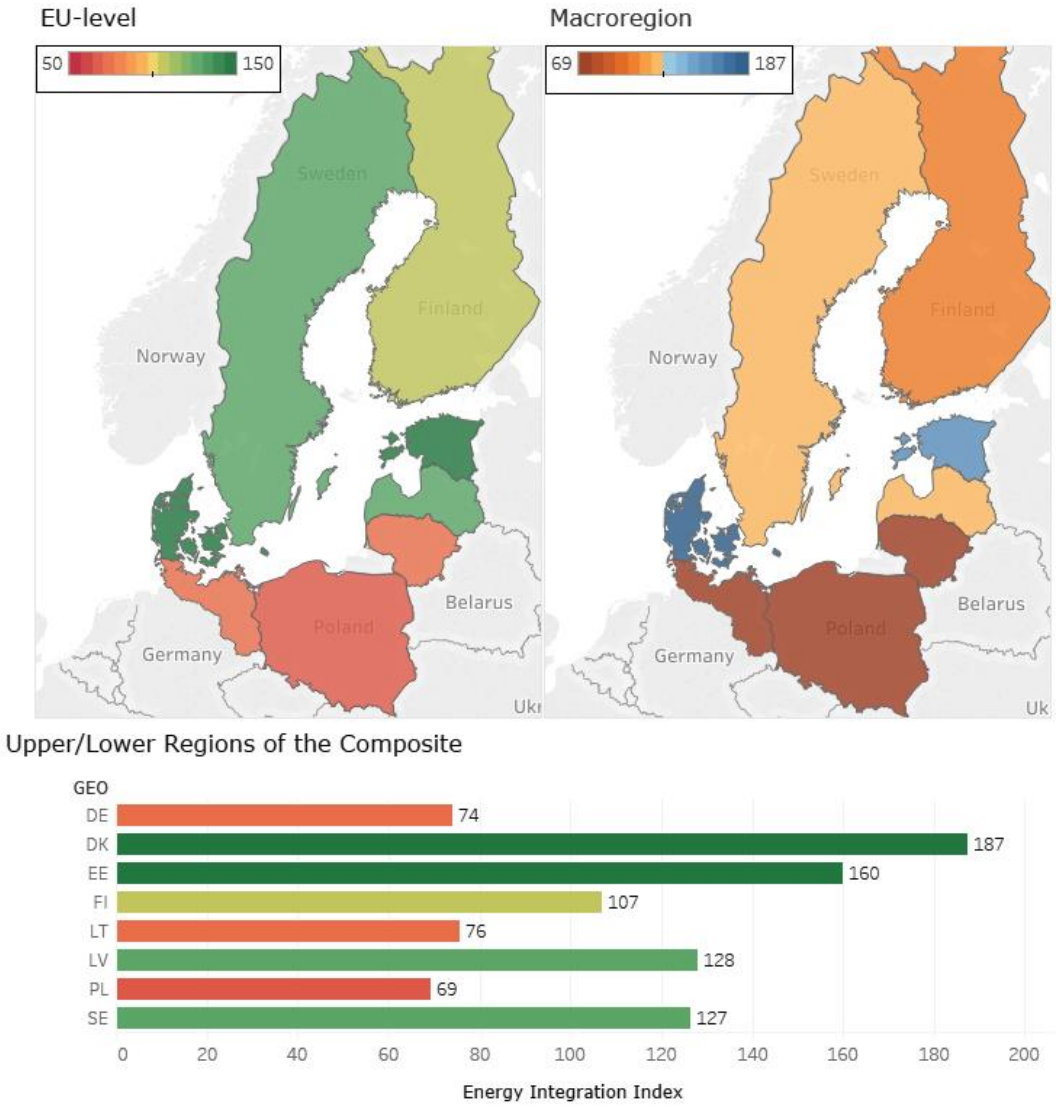
[27] Folfas, P. (2011): *FDI between EU Member States: Gravity models and Taxes*, http://www.etsg.org/ETSG2011/Papers/Folfas.pdf

[28] Grozea-Helmenstein, D., G. Grohall, C. Helmenstein (2017): Convergence and Structural Change in Romanian Regions, in Larisa Schippel, Julia Richter, Daniel Barbu (2017): Rumäniens "Rückkehr" nach Europa. Versuch einer Bilanz. - Wien: new academic press.

[29] https://www.stat.fi/til/ssij/2015/ssij_2015_2016-10-27_en.pdf

2.4.4 Energy Integration

Figure 2-7: Energy Integration by country. The top figure shows an EU-wide comparison, while the middle map illustrates the indicator on the macro-regional scale. The bottom figure shows the benchmarked indicator values for each country.



Text Box 2-7: Indicator description: 'Energy integration'

The energy integration indicator is defined as the energy export share that stays within the macro-region. Country-level data from Eurostat for the latest available year (2015) is used (Data table Exports - all products - annual data [nrg_131a]). Energy exports considered include all types of energy products: solid fuels, oil, gas, electricity and renewables.
The indicator for a specific country is constructed as follows:
1. Ratio between the macro-regional exports of the country and total energy exports is calculated.
Total exports = Energy export in tonnes of oil equivalent (toe) from the country to all trading partners
Macro-regional exports = energy products export in toe from the country to trading partners within the macro-region.
2. This ratio is divided by the number of partners in the macro-region, to obtain an average share of exports per partner in the macro-region.

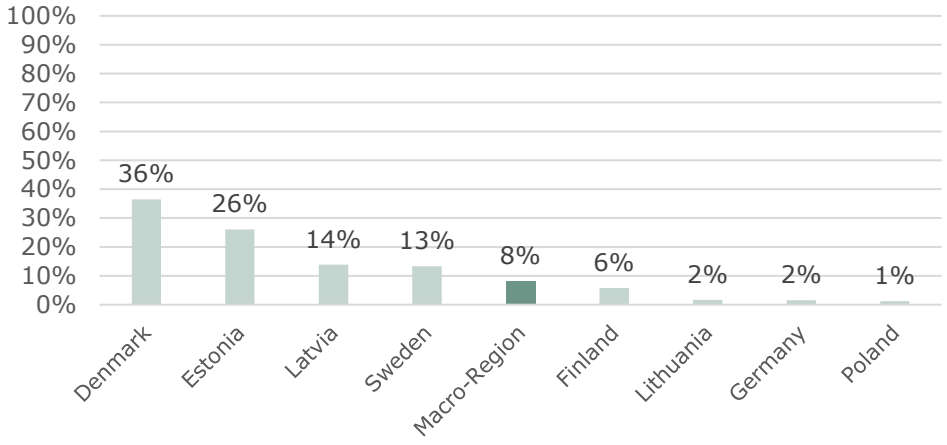
3. Benchmark values are set-up in the same way as the integration indicators for macro-regional level, for EU-level energy trade integration, defined as the (per partner) share of exports to other EU countries as compared to all exports to the world.

This allows the degree of integration within each macro-region to be benchmarked against the degree of integration in the EU as a whole.
NOTE: Since the indicator is defined at the country level, it is not known what exact

Another area reflecting the degree of macro-regional integration is energy trade. The indicator selected to represent energy trade is the share of energy exports that goes to the other countries in the region (as proportion of total energy exports). This reflects the preferred partners for energy trade. The higher proportion exported to nearby countries or regions can indicate closer ties between the areas. This indicator does not directly reflect energy independence of the region, but is rather intended to show the directions chosen for outgoing trade.

Overall, the macro-region has a relatively low level of intra-regional export flows. Just over 8% of the energy products exported by the macro-region countries stay within the region. Large exporters like Germany and Poland trade with partners within the macro-region least. Denmark trades within the region most, followed by Estonia. This means that some of the smaller countries are actually exporting relatively high amounts to other countries in the region, showing a degree of connectivity. For the larger exporters, other countries in the region may not present a large enough market to constitute a substantial share of their exports.

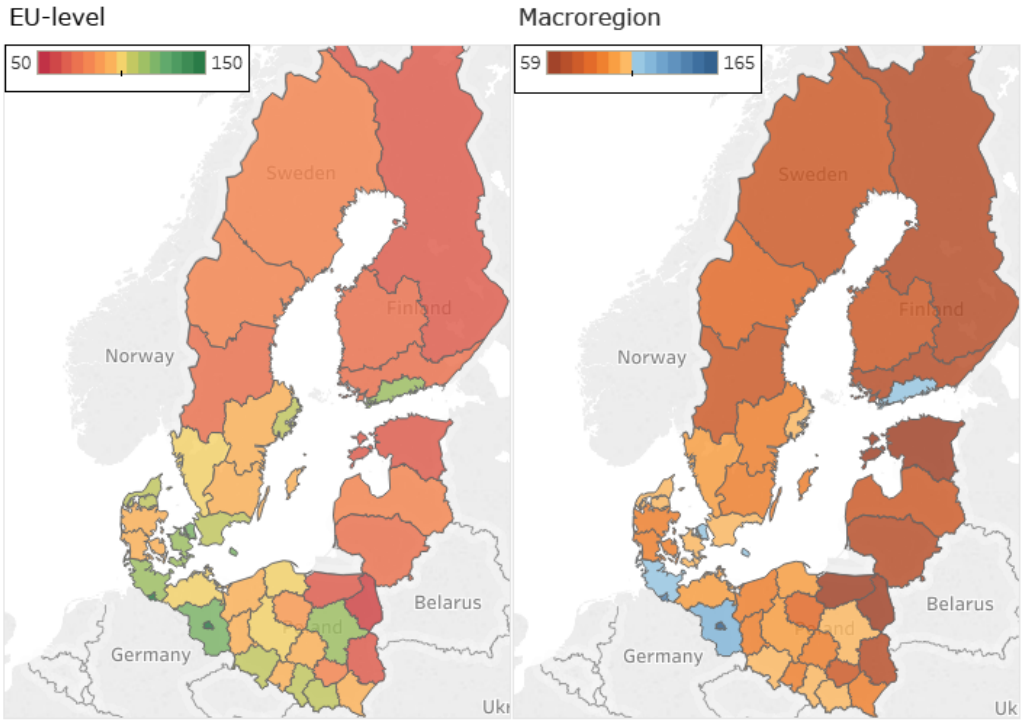
Figure 2-8: Share of energy products exported by Baltic Sea macro-region countries that are traded within the region



The benchmarked indicator shows that Denmark and Estonia perform not only higher than the EU-level median, but higher than the top-value on the EU level. Moreover Latvia and Sweden have values relatively high above the EU-median. This set of countries seem to show a positive sign in terms of cohesion. The "worst" performers in the macro-region, however, are below the EU-level median.

2.4.5 Accessibility Potential

Figure 2-9: Accessibility Potential by NUTS-2 in 2014, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Upper/Lower Regions of the Composite

C..	NUTS LABEL	Multimodal Accessibility (travel time)	Road Accessibility (travel time)	Rail Accessibility (travel time)	Air Accessibility (travel time)
DE	Berlin	165	128	132	150
	Mecklenburg-..	100	115	115	81
DK	Hovedstaden	118	82	94	125
	Midtjylland	96	88	95	102
EE	Eesti	65	59	57	70
FI	Helsinki-Uusi..	113	64	66	121
	Pohjois- ja Itä-..	70	52	57	76
LT	Lietuva	70	67	61	76
LV	Latvija	81	61	57	90
PL	Mazowieckie	111	99	102	114
	Podlaskie	59	78	76	55
SE	Stockholm	109	68	75	115
	Norra Mellans..	76	58	68	83

Axis ticks: 0, 100, 200 | 0, 50, 100, 150 | 0, 50, 100, 150 | 0, 50, 100, 150

Text Box 2-8: Explanation of the indicator: 'Accessibility Potential'

The concept of accessibility refers to the ease of getting around from place to place (Saleem and Hull, 2012)[30]. Hull (2011) identifies two fields of accessibility: the first refers to the ability to travel and is based on the classical location theory. This shows the direct correlation between changes in the transport system (e.g. transport costs) and journey length (Banister, 2002; Ney, 2001; Geurs and van Wee, 2006). The second focuses mainly on the "ease of reaching" a number of daily activities at different destinations. The first conceptualisation of accessibility has been more intensively studied by the academic literature. This conceptualisation of accessibility forms also the basis of the indicators which are investigated below.

These assess the accessibility potential measured as an index[31] related to the ESPON average for various transport modes such as road, rail, air, and multimodal transport. Multimodal transport refers to the transportation of goods under a single contract, but carried out with at least two different means of transport (e.g. rail, sea and road), where the carrier is liable (in a legal sense) for the entire carriage. In order to achieve a feasible number of regions, the NUTS-3 regions were aggregated to a NUTS-2 level, by averaging the values of the aggregated regions.

The transport infrastructure in the Baltic Sea is characterised by a diverse transport infrastructure. As section 2.5.3 in this report will show, the perceived quality of infrastructure as well as the completion of trans European transport networks is high in the old Member States, but low in the new ones. However, during the last years, progress has been made to extend the primary high capacity road network, expressways and motorways, mostly with co-financing from the EU Cohesion Funds.[32]

The best accessibility for all transport modes are found in Germany, with Berlin outperforming the Baltic Sea macro-region in all transport modes. Poland shows an overall strong accessibility as well, which however deteriorates from west to east, with the exception of the Warsaw region. Denmark and Sweden have comparably lower accessibility, particularly in Western Denmark and Northern Sweden. In the case of Sweden and Finland, which have some of the lowest accessibility scores in the north, the low accessibility can be explained by the low density of rail and road infrastructure, due to the low population density. This low accessibility is however compensated by comparably strong accessibility by air and multimodal forms. All the Baltic countries have some of the Baltic

[30] Saleem Karou, Angela Hull (2012): Accessibility Measures and Instruments, in Angela Hull, Cecília Silva and Luca Bertolini (Eds.) Accessibility Instruments for Planning Practice. COST Office, pp. 1-19. URL: http://www.accessibilityplanning.eu/wp-content/uploads/2013/01/Accessibility-Measures-and-Instruments-R.pdf

[31] For each NUTS-3 region the population in all destination regions is weighted by the travel time to go there. The weighted population is summed up to the indicator value for the accessibility potential of the origin region.

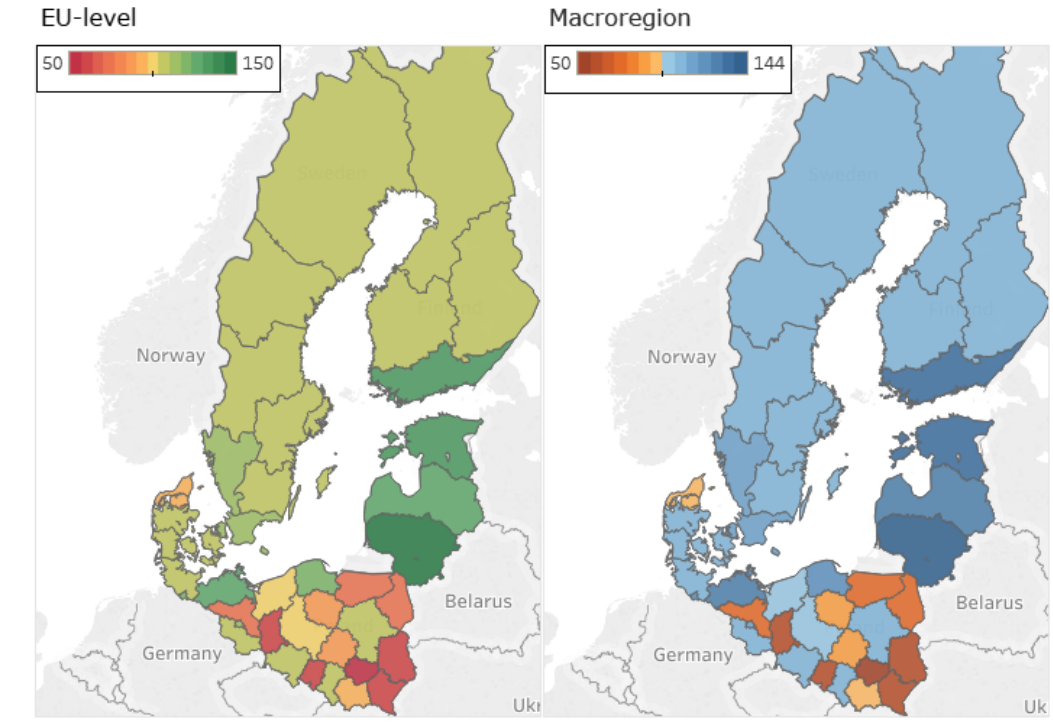
[32] http://www.europarl.europa.eu/cmsdata/116220/tent-issues-papers.pdf

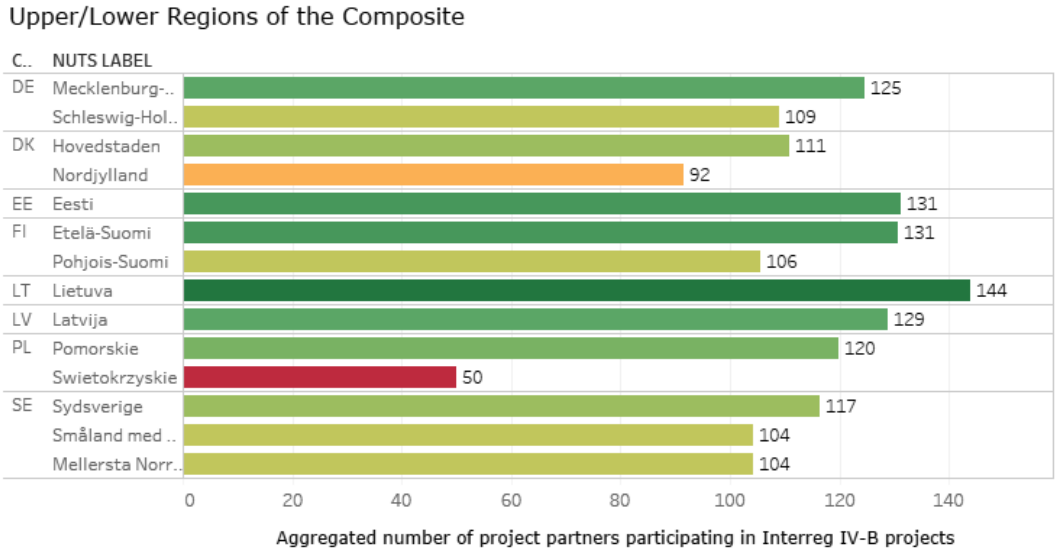
Sea's lowest accessibilities for all four modes, which is mainly explained by the small size of the countries.

The accessibility has slightly deteriorated between 2011 and 2014, especially for rail. This is due to modest investments in the aftermath of the economic crisis, as accessibility depends on infrastructure investments which need besides substantial financing a long time for planning and implementation. The accessibility by air increased in Germany and Estonia and decreased in all other countries of the macro-region. The accessibility by road decreased in Germany and Denmark and increased slightly in the other countries, due to an improvement in infrastructure. The multimodal accessibility increased in Germany and Estonia and decreased in the other countries.

2.4.6 Transnational Cooperation

Figure 2-10: Territorial Cooperation by NUTS-2 in 2011, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-9: Explanation of the indicator: 'Transnational Cooperation'

Transnational cooperation[33] is a major aspect of territorial cohesion, which is in turn one of the three cornerstones of the EU's Cohesion Policy as well as the EU's enlargement policy. A major tool for the EU to facilitate and promote cooperation is the INTERREG programme as part of the European Structural and Investment Funds, which is currently in its fifth generation (INTERREG V).
Transnational cooperation represents a tool to support economic development and competitiveness, territorial, economic, and social integration, and to foster good neighbourhood relations.[34] It is also a tool which contributes to the reduction of negative border effects between weaker and stronger regions, which promotes city networking, and supports the adoption of solutions to address environmental challenges.[35] Territorial cooperation takes place in the framework of projects, programmes, and regions. It has been steadily expanding over the last years including also many unsupported/spontaneous movements. These take the form of city networks, and non-EU-supported, macro-regional and country-specific types of co-operation.[36] However, territorial co-operation has still many weaknesses that need to be addressed.

The indicator on cooperation builds on the absolute number of organisations participating in INTERREG IVB projects as a proxy for macro-regional cooperation, which covers the time span of 2007-2013. INTERREG IVB projects occur under programmes which have a transnational geographic scope, such as the Alpine, Danube, or Central Europe. The data covers however only the time span between 2007 and January 2011.

The macro-region exhibits a cooperation among organisations that is on average the magnitude of the EU-median. However, most countries exhibit on average a level of cooperation above the EU-median. The top performers are found in the Baltic States as well as the Nordic countries. Germany and Poland have a notable diversity of high and low performing regions. Poland even has one of the EU's bottom-performing regions.

In the German NUTS-2 regions belonging to the Baltic Sea macro-region there was a total of 129 organisations, in Denmark 121 organisations, in Estonia 78 organisations, in Finland 161 organisations, in Lithuania 105, in Latvia 73, in Poland 219, and in Sweden 247 organisations which were participating in 2011 in INTERREG IV-B projects. The NUTS-2 regions with the highest number of organisations involved in IV-B projects were: Etelä-Suomi with 77 organisations, Mecklenburg-Vorpommern with 64 organisations, Hamburg with 54

[33] Collaboration between administrative bodies and/or political actors in Europe and beyond, representing their respective territories, which can also engage other stakeholders as long as their involvement is within the same institutionalized framework (2013, European Territorial Cooperation as a Factor of Growth, Jobs and Quality of Life, ESPON).

[34] https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/TERCO_Interim-Report-and-Annex_FINAL.pdf

[35] http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/Final_Report/TERCO_FR_ExecutiveSummary_Dec2012.pdf

[36] http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/Final_Report/TERCO_FR_ExecutiveSummary_Dec2012.pdf

organisations, Pomorskie with 54 organisations, and Sydsverige with 47 organisations.

In the case of the Baltic States and Southern Finland, the high scoring is interesting in the light of the fact that these regions were only covered by one transnational cooperation programme (Baltic Sea), and thus made a strong effort to capitalise on cooperation opportunities through the programme.

2.5 Competitiveness

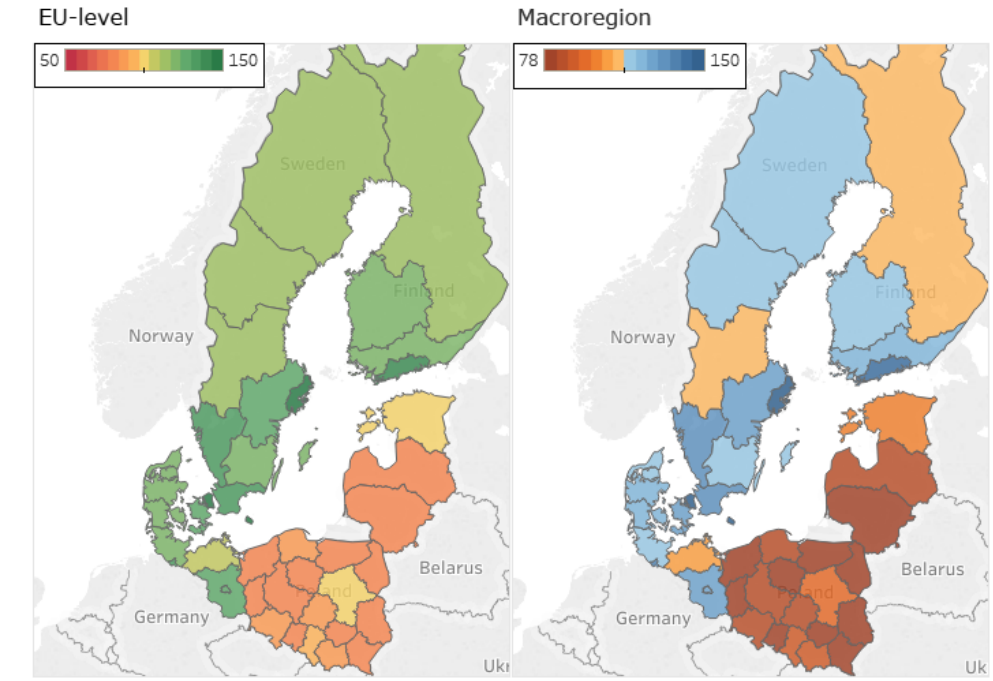
Availability of skilled workforce, capital and technological endowment as well as investment in research and infrastructure influence economic performance and competitiveness at regional level. But also other factors, such as the proximity to universities and quality of health services, the time it takes to start-up a business, the perception of the rule of law, environmental and safety considerations are, among others, important competitiveness factors. In many countries, there are significant region-to-region differences in some or all of these factors (Grozea-Helmenstein and Berrer, 2013).

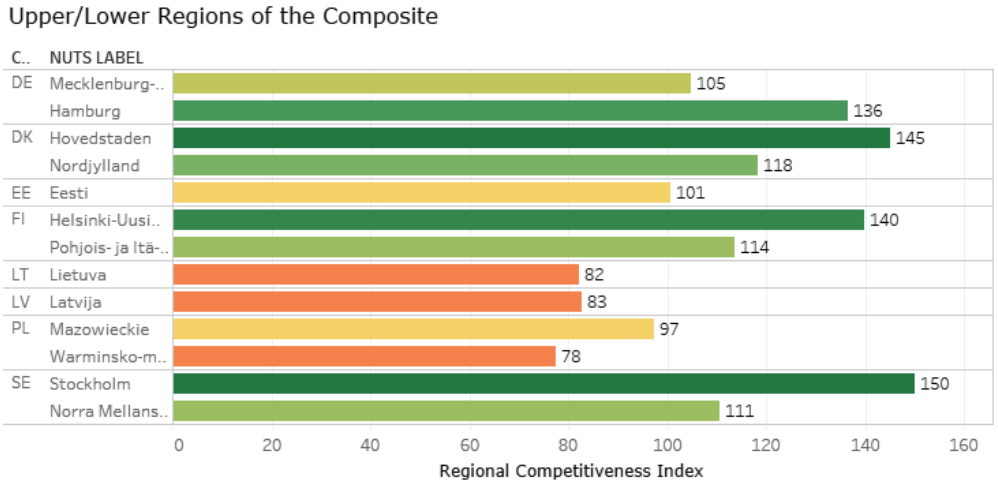
The competitiveness indicators which have been chosen provide a more detailed insight into the (broadly defined) competitiveness of countries and macro-region on various aspects. They focus on common factors throughout all macro-regions and factors that are specific for each macro-region. The purpose in this category is to identify the possible needs for interventions that add to smart, inclusive, and/or sustainable growth, and therewith to the cohesion of a macro-region.

2.5.1 Overall Competitiveness

EU Regional Competitiveness Index (RCI)

Figure 2-11: Regional Competitiveness by NUTS-2 in 2016, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-10: Explanation of the indicator: 'Regional Competitiveness'

Regional Competitiveness Index (RCI) measures various dimensions of competitiveness at the regional level. [37] It highlights the EU NUTS-2 regions' strengths and weaknesses, while giving useful insights into the fields that need improvement in order to rise regional competitiveness. In the framework of the Regional Competitiveness Index the overall competitiveness of a country is defined by all its regions and not only by its capital region. Countries such as Romania, Slovakia and France are characterised by strong disparities in the socio-economic development and competitiveness between the capital region and the rest of the regions in the country. Federal states, like Germany and Austria show a more homogeneous picture regarding competitiveness.
The Regional Competitiveness Index[38] is based on eleven pillars comprising inputs and outputs of territorial competitiveness. These basic pillars are grouped into three sets focusing on basic-, efficiency- and innovative- factors of competitiveness. They include:[39] (1) Quality of Institutions, (2) Macro-economic Stability, (3) Infrastructure, (4) Health and the (5) Quality of Primary and Secondary Education. These pillars are especially relevant for less developed regions.
The area efficiency includes the following pillars: (6) Higher Education and Lifelong Learning (7) Labour Market Efficiency and (8) Market Size. Innovation pillars are especially relevant for the most advanced regional economies. They comprise (9) Technological Readiness, (10) Business Sophistication and (11) Innovation. RCI aims at showing short and long-term capabilities of the regions.

In 2016, the best performing regions in the macro-region were Stockholm in Sweden, Hovedstaden in Denmark, Helsinki-Uusimaa in Finland, and Hamburg in Germany. All these regions except for Hamburg include the capital city of the respective country. These regions managed to maintain their competitiveness position in 2016 compared to 2013. Estonia, Latvia and Lithuania were ranked on average in 2016, with Latvia and Lithuania outperforming eight regions of Poland. These three countries managed to improve their competitiveness position in 2016 compared to 2013. The lowest performing regions in 2016 were all located in Poland. These were Warminsko-Mazurskie, Kujawsko-Pomorskie, and Podlaskie. However Warminsko-Mazurskie and Kujawsko-Pomorskie improved slightly their position in overall ranking in 2016. These low performing regions display low scores for all three sub-indices considered: 'basic', 'efficiency' and 'innovation'.

In 2013, Stockholm was ranked the best performing region in the Baltic Sea macro-region, followed by Hovedstaden, Hamburg in Germany, and Etelä-Suomi. The best performance regarding competitiveness could be found in 2013 in 23 NUTS-2 regions in four countries: Denmark, Finland, Germany, and Sweden. The region Mazowieckie in Poland (a region which includes the Polish capital city) came in on the 24th place (out of 43 NUTS-2 regions included in

[37] URL: http://ec.europa.eu/regional_policy/en/information/publications/studies/2013/eu-regional-competitiveness-index-rci-2013

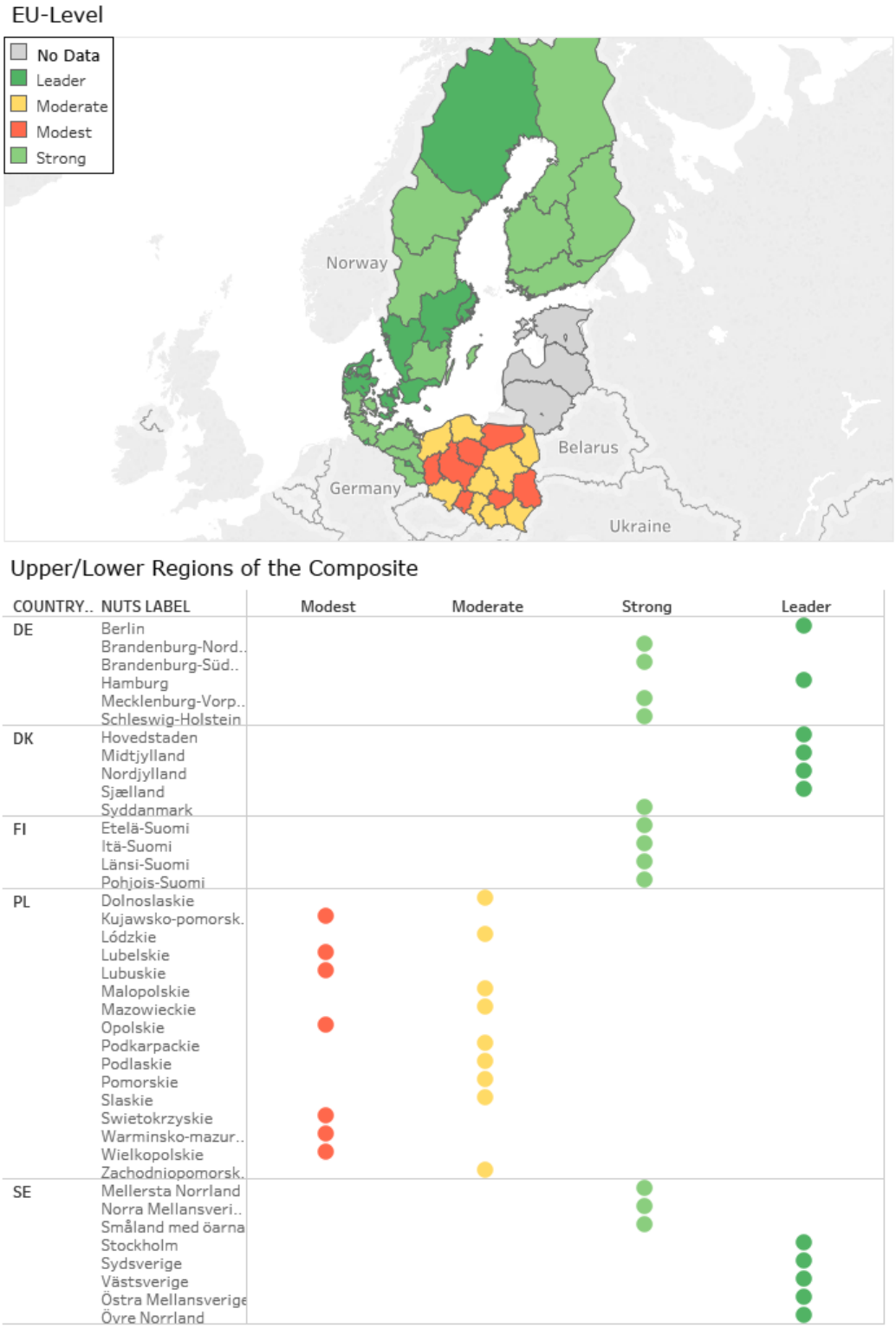
[38] *See footnote above*

[39] *See footnote above*

ranking) within the macro-region. Estonia followed. In 2013 the regions Warmińsko-Mazurskie, Latvia and Lithuania registered the lowest scores.

Regional Innovation Scoreboard (RIS)

Figure 2-12: Regional Innovation Scoreboard by NUTS-2 in 2016. The bottom figure shows the scoring of all Regions.



Text Box 2-11: Explanation of the indicator: 'Regional Innovation Scoreboard'

The Regional Innovation Scoreboard is a regional extension of the European Innovation Scoreboard, assessing the innovation performance of European regions on a limited number of indicators.[40]
The following analysis is based on the data of the Regional Innovation Scoreboard published by the European Commission. There have been used data on NUTS-2 regions of the European Union for the period from 2009 to 2016. Although data were not available for all NUTS-2 regions and countries in a macro-region, it gives a picture about the level of innovation in a macro-region.
The regions are ranked in the following four categories: Innovation leaders, strong innovators, moderate innovators and modest innovators.
Due to the underlying categorisation, this indicators has not been benchmarked, but has been left in its original format.

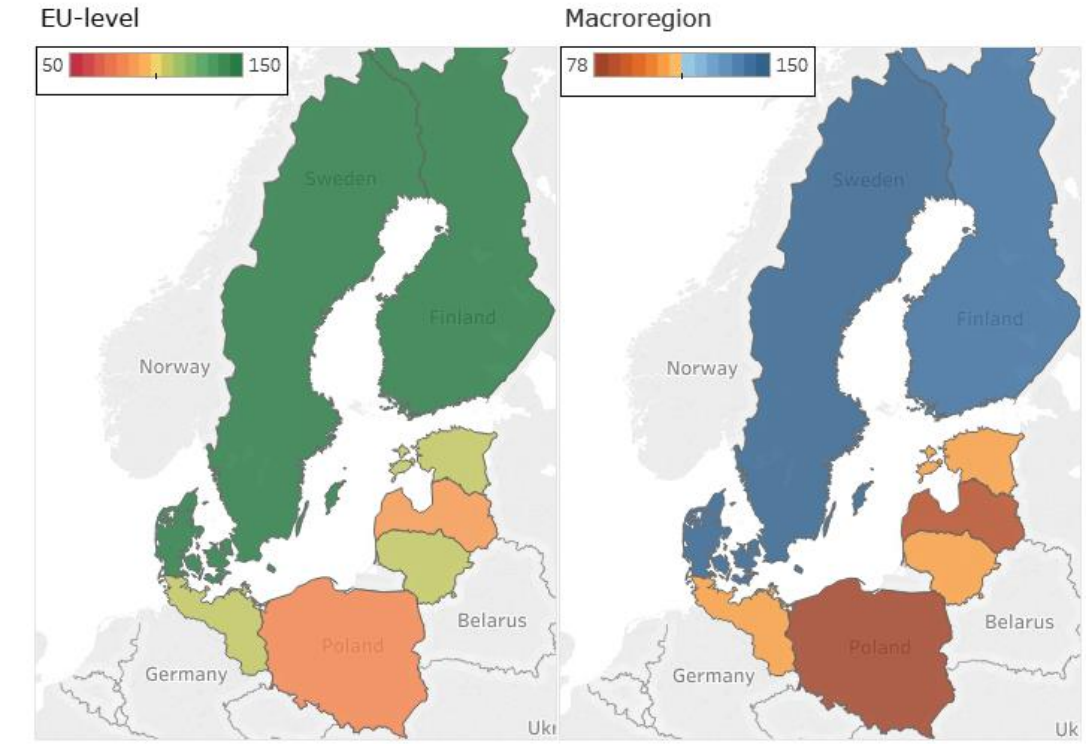
In 2008, only the NUTS-2 regions of Denmark, Finland and Sweden were 'Leaders' in innovation in the Baltic Sea macro-region. These regions have been: Denmark's Hovedstaden, Finland's Etelä-Suomi and Länsi-Suomi and Sweden's Stockholm, Östra Mellansverige, Sydsverige and Västsverige. The other NUTS-2 regions in these countries were all benchmarked as 'Strong' innovators. German regions of this macro-region also scored as 'Strong' innovators. Of the Baltic countries, Estonia was rated highest as 'Moderate' innovator. Latvia, Lithuania and three Polish regions (Zachodniopomorskie, Lubuskie and Warmińsko-Mazurskie) were rated as 'Modest' innovators, making them thus the poorest performers of this macro-region in 2008. The other 13 NUTS-2 regions in Poland joined the group of 'Moderate' innovators.

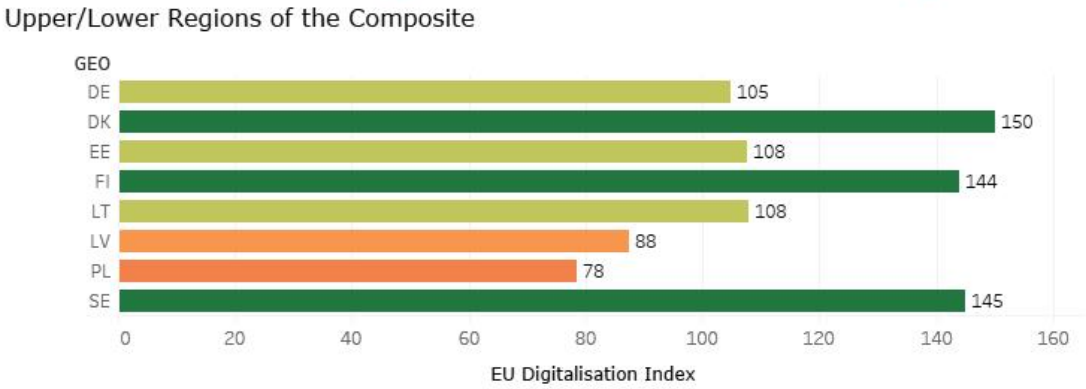
In 2016, Sjælland, Midtjylland, and Nordjylland in Denmark, as well as Berlin and Hamburg in Germany and Övre Norrland in Sweden were able to improve from 'Strong' innovators to innovation 'Leaders'. Latvia, Lithuania and Zachodniopomorskie in Poland stepped up to the level of 'Moderate' innovators. Estonia's position remained unchanged. At the same time Etelä-Suomi and Länsi-Suomi in Finland lost their status as innovation 'Leaders' and were rated as 'Strong' innovators in 2016. Seven NUTS-2 regions in Poland out of 16 were among the 'Modest' innovators in 2016, with many regions worsening their position compared to 2008. The modest innovators in Poland show relative weakness in 'SMEs with marketing or organisational innovations', 'Business R&D expenditures', and 'Sales of new product innovations'.

[40] http://ec.europa.eu/growth/industry/innovation/facts-figures/regional_de

EU Digitalisation Index (DESI)

Figure 2-13: EU Digitalisation by country in 2014, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-12: Explanation of the indicator: 'EU Digitalisation Index'

The Commission's Digital Single Market Strategy for Europe[41] emphasises Europe's potential to take a leading role in the global digital economy; with a potential of EUR 415 billion GDP growth for the EU.[42] However, fragmentations in the single market and barriers restrain the development in this field. The digital economy could create opportunities, expand markets, assure better services at better prices, and generate employment. Therefore, progress on improving access for consumers and businesses to online goods and services[43]; creating the proper environment for developing digital networks and services; and raising the growth potential of the European digital economy are crucial in order to take advantage of the opportunities created by the digital economy.

The Digital Economy and Society Index (DESI) assesses the Member States' status and progress towards the global digital economy. DESI is a composite index that combines "relevant indicators on Europe's digital performance and tracks the evolution of EU Member States in digital competitiveness."[44]
The overall DESI score is the result of five separate dimensions:[45]

1. Connectivity: The Connectivity dimension measures the quality and development of broadband internet services.
2. Human Capital: This dimension measures the computer skills of European citizens.
3. Use of Internet: The Use of Internet dimension reports which actions European citizens execute online.
4. Integration of Digital Technology by businesses: This dimension shows the digitisation of businesses.
5. Digital Public Services: This dimension informs about eGovernment and the digitisation of public services.

An analysis of the DESI index for the macro-region's countries gives useful information regarding their achievements regarding digital competitiveness. The data used for the analysis has been published by the European Commission. However, data were not available for every country in the macro-region. For this analysis, the combined score of the five individual dimensions has been used.

In 2014, in the Baltic Sea macro-region, Denmark was the top performer of the EU regarding the performance in digital competitiveness (thus scoring 150 on the benchmark). Sweden and Finland also performed very strong with 145 and 144 points respectively. Compared to Denmark, Sweden had a lower score on the 'Digital Public Services' dimension, while Finland scored lower on the 'Connectivity' dimension. These three countries had a significant advance to the median performing regions with 36 points on the benchmark, which were Estonia, Lithuania and Germany. This group in turn had an advance of at least 17 points to Latvia and Poland; the only countries performing below the EU-median.

[41] URL: http://www.ipex.eu/IPEXL-WEB/dossier/document/COM20150192.do.

[42] URL: http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_5.9.4.html

[43] URL: https://ec.europa.eu/digital-single-market/en/access-digital-single-market

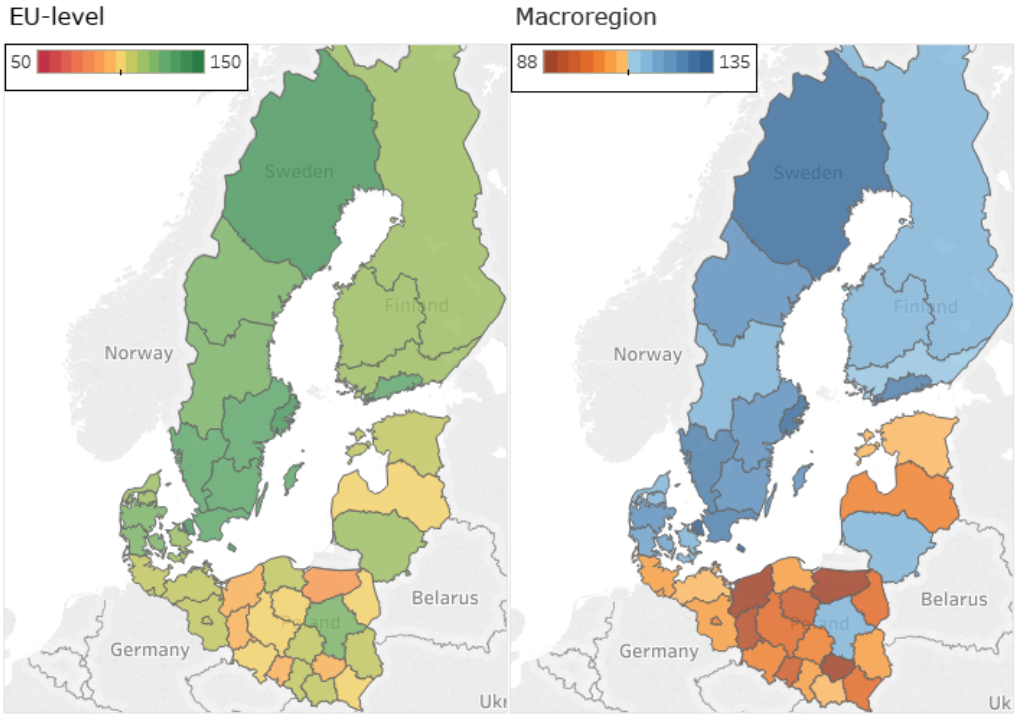
[44] URL: https://ec.europa.eu/digital-single-market/en/desi

[45] URL: https://ec.europa.eu/digital-single-market/en/desi

All countries made significant progress by 2017 and improved on the DESI index. Denmark retained its top EU position, while Finland's and Sweden's scores deteriorated despite actual improvements. Sweden lost its second place to Finland, outperforming it on the 'Human Capital' dimension. In the median group, Estonia outperformed Germany on the 'Digital Public Services' and 'Use of Internet' dimension. Germany's score even decreased slightly, which indicates that Germany is making less progress than most other Member States. Despite improvements in Latvia and Poland hold on to their last places. Compared to the other countries, Poland lags behind on the 'Use of Internet' and 'Integration of Digital Technology (digitisation of Polish businesses)'. 'Use of eCommerce by SMEs' is well below the EU average.

Education

Figure 2-14: Education by NUTS-2, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Upper/Lower Regions of the Composite

C..	NUTS LABEL	Education Index	Participation Rate (Educ. & Training)	Early Leavers (Education & Training)	Young People; NEET Rate	Secondary Education Attainment	Tertiary Education Attainment
DE	Mecklenburg-..	108	98	91	130	143	80
	Berlin	104	106	78	107	107	124
DK	Hovedstaden	135	158	119	144	79	174
	Sjælland	116	146	96	134	108	95
EE	Eesti	110	110	91	102	116	130
FI	Helsinki-Uusi..	127	145	102	121	82	186
	Etelä-Suomi	114	135	94	99	106	133
LT	Lietuva	116	85	129	115	119	132
LV	Latvija	103	84	97	104	126	102
PL	Mazowieckie	117	86	140	114	118	128
	Warminsko-m..	88	59	95	83	132	69
SE	Stockholm	131	150	109	134	85	175
	Norra Mellans..	118	139	116	122	113	98

Text Box 2-13: Explanation of the indicator: 'Education'

A well-educated labour force on medium and high attainment levels represents a critical input for the economic performance of a region. While school enrolment co-determines regional workforce skills, productivity, and economic performance, the employment and career prospects in a region also influence the rate of enrolment in education (Huggins and Izushi, 2009).
The Education Index seeks to reflect on this issue with five indicators:

According to Eurostat the Participation Rate in Education and Training indicates "the share of the population that participates in formal and non-formal education". The former is defined "as institutionalised, intentional and planned through public organizations and recognised private bodies and – in their totality – constitute the formal education system of a country. Non-formal are any organised and sustained learning activities outside the formal education system, and essentially those which complement formal education or are an alternative to those."

The indicator Early leavers from education and training is defined by Eurostat as the "percentage of the population aged 18 to 24 having attained at most lower secondary education and not being involved in further education or training". A high share of early leavers impacts the economy: As the demand for low qualified workforce continues to decrease as a result of structural change, a high share of persons who leave the education and training system too early influence negatively the socio-economic development. As part of the EU 2020 targets, the European Commission seeks to achieve a value below 10%.

According to Eurostat, the indicator Young people neither in employment nor in education and training (NEET) reflects "the percentage of the population of a given age group and sex who is not employed and not involved in further education or training (formal or non-formal)". A high NEET rate points to a difficulty of transition between school and work (OECD, 2015). This may be caused by the mismatch between acquired skills in the education and the skills needed on the labour market and also by the scarcity of jobs in some economies which have been strongly impacted by the economic crisis. Flexible school-work arrangements can positively influence the transition to employment. Also higher education achievements may help the transition from school to work.

The last two indicators are respectively the Secondary-, and Tertiary Education Attainment of the total population aged 25-64. Eurostat defines these as "the highest ISCED (International Standard Classification of Education) educational attainment successfully completed by an individual". The shares of the adult population with secondary and tertiary education in total population are used to picture a region's skills level. Generally highly educated individuals tend to be attracted by urban centres as these offer better employment opportunities with income opportunities above average.

The top performers on the composite indicator Education are regions in Denmark, Finland, and Sweden and exhibit the highest values on all five component indicators. The highest regions are Hovedstaden in Denmark, Stockholm and Övre Norrland in Sweden, and Helsinki-Uusimaa in Finland.

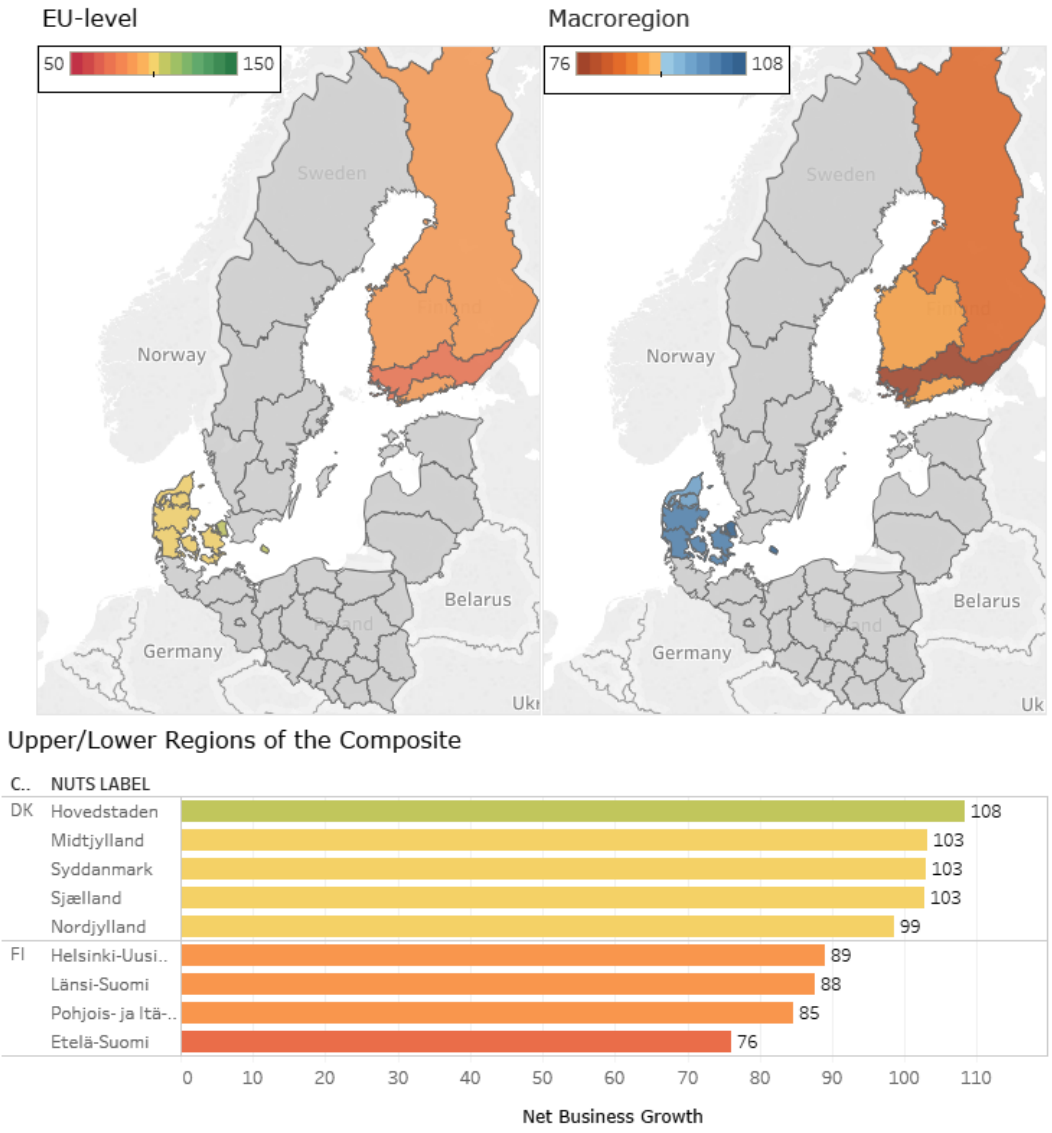
Compared to the year 2008, in 2015 all NUTS-2 regions in Denmark and Sweden and most of Finland show an improvement on this indicator. The strong performance of the Nordic countries can be explained by a qualitatively strong education system, characterised by a high tertiary education attainment, a low NEET rate as well as high participation rate in education and training. Notably, the quality of education is the same in a rural villages and university towns. The differences between weakest and strongest students are the smallest in the world, according to the most recent survey by the Organization for Economic Co-operation and Development (OECD, 2016).

Values well above the average show also Lithuania and the NUTS-2 region Mazowieckie in Poland. The lowest performing NUTS-2 regions are located in Poland: Warminsko-Mazurskie, Zachodniopomorskie, Swietokrzyskie, Lubuskie, Opolskie, Region Pólnocno-Zachodni, Kujawsko-Pomorskie and Region Pólnocny with values below the EU-median (100). In these regions the highest NEET rates of this macro-region are found. Compared to the old EU members the new EU Member States allocate lower funding for education and most of them are also strongly affected by brain drain. The NUTS-2 regions in Germany, Latvia and Estonia record values that are only slightly above the EU-median. The reason is that these regions have a high rate of 'Early leavers from education and training', resulting in low benchmarking scores. All the NUTS-2 regions in Poland, Estonia as well as Mecklenburg-Vorpommern, Brandenburg, and Berlin in Germany show a deterioration of the composite indicator Education between 2008 and 2015.

2.5.2 Business

Net business population growth

Figure 2-15: Net business population growth by NUTS-2 in 2014, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components.



Text Box 2-14: Explanation of the indicator: 'Net business population growth'

Eurostat defines an enterprise as "the smallest combination of legal units" that "produces goods or services, benefits from a certain degree of autonomy in decision-making, [and] carries out one or more activities at one or more locations."[46] The foundation of new enterprises and closure of unproductive businesses are main contributors to business dynamism, with a strong impact on employment. The indicator Net business population growth considers the yearly change in the difference between enterprise births and deaths.

Enterprise births are defined as enterprises beginning their activity from scratch[47].
An enterprise death refers, according to Eurostat, to the "closure of a combination of production factors with the restriction that no other enterprises are involved in the event."[48] Deaths do not include exits from the population due a change of activity. An enterprise is included in this category only if it is not reactivated within two years. At the same time, a reactivation within two years is not considered a birth.

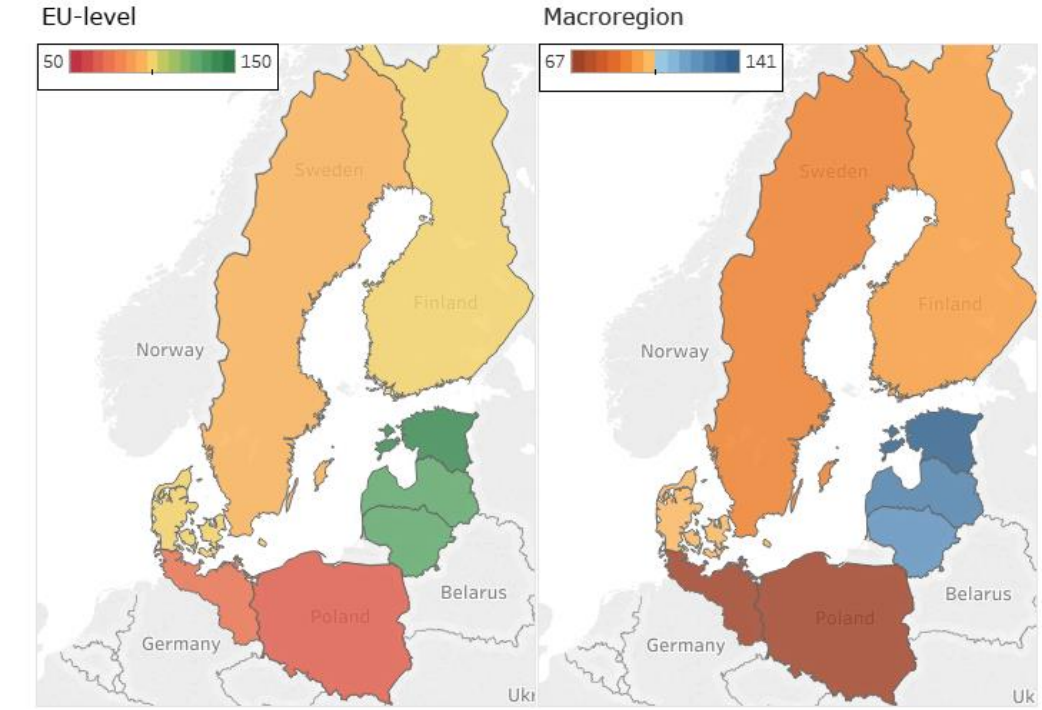
The indicator Net business population growth is based on data provided by the private sector economy. Eurostat has developed a methodology for the production of data on enterprise births (and deaths). The harmonised data collection follows the requirements for the indicators used for supporting the Europe 2020 Strategy.

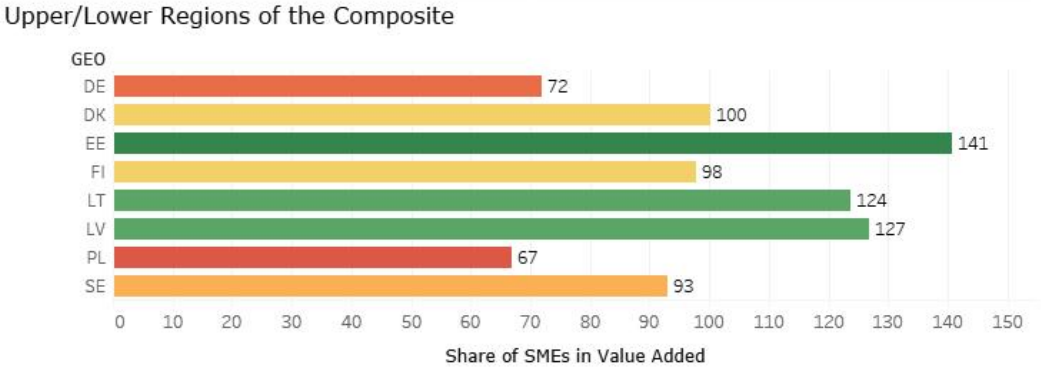
The indicator Net business population growth shows weakly positive enterprise dynamics in Denmark and Finland with growth rates ranging between -0.17% in Nordjylland and 0.97% in Hovedstaden and between 0.14% in Etelä-Suomi and 1.96% in Åland in Finland. In Lithuania, on the opposite, can be noticed a very strong enterprise growth (13.29%), which puts Lithuania at the top of the EU. No data are available for Germany, Sweden, Estonia, Latvia, and Poland. Generally, this indicator has a low data availability; the benchmarking scores should therefore not receive too much emphasis.

[46] URL: http://ec.europa.eu/eurostat/cache/metadata/de/bd_esms.htm
[47] The exact definition of a birth is "the creation of a combination of production factors, with the restriction that no other enterprises are involved in the event"; URL: http://ec.europa.eu/eurostat/cache/metadata/de/bd_esms.htm
[48] URL: http://ec.europa.eu/eurostat/cache/metadata/de/bd_esms.htm

Share of SMEs in industry, trade and services

Figure 2-16: Share of SMEs in Value Added by country in 2013, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-15: Explanation of the indicator: 'Share of SMEs in value added'

Small and medium-sized enterprises (SMEs) are important players in the local and regional communities, as creators of new jobs and source of economic growth. As such, they play an important role in Europe's 2020 strategy, in achieving smart, sustainable and inclusive growth. In June 2008, a Communication named the Small Business Act (SBA)[49] for Europe recognising the central role of SMEs in the EU economy was adopted. This Act aimed to strengthen the role played by SMEs and to foster their growth and job creating potential through addressing some problems which impeded their development, such as administrative burdens; access to finance etc.[50] A review of the SBA was released in February 2011 and formulated new actions to respond to challenges arising from the financial and economic crisis.

For the Share of SMEs in value added, data was used from DG GROWTH's SME Performance Review from 2016.[51] The data covers the NACE rev.2 sectors B-J, and L-N. For policy purposes, SMEs in the EU are defined, according to Eurostat, as enterprises with fewer than 250 employees, provided that they are independent (of other enterprises) and do not have sales that exceed EUR 50 million or an annual balance sheet that exceeds EUR 43 million. Micro (with less than 10 employees), small (with 10 to 49 employees) and medium-sized enterprises (with 50 to 249 employees) are collectively referred to as SMEs.[52]

The SMEs' share in the total value added is the highest in Estonia (75%), Latvia (70%) and Lithuania (70%), and are the only countries performing above the EU-median. These countries have fewer large enterprises compared to Germany and Poland, where the share of SME's in total value added is the lowest in the macro-region. The Nordic countries are close to the EU-median of about 62%. Compared to 2008 and 2013, the SME's share increased considerably in Finland (due to the reduction in activity of Nokia), Lithuania and Sweden. In Denmark on the contrary a reduction of this share can be observed.

When differentiating by industry types, the share of SMEs in industry (as a total of the number of enterprises) is the highest in Sweden, Latvia, Lithuania, Poland and Finland. On the other hand Denmark and Germany have more large industrial enterprises and consequently a smaller share of SMEs in industry. The largest share of SMEs in services can be found in Sweden, while the lowest in Germany and Denmark. In the trade industry, Lithuania and Poland have the highest shares of SMEs, while Finland, Germany, and Denmark are at the bottom end.

[49] URL: https://ec.europa.eu/growth/smes/business-friendly-environment/small-business-act_de

[50] *See footnote above*

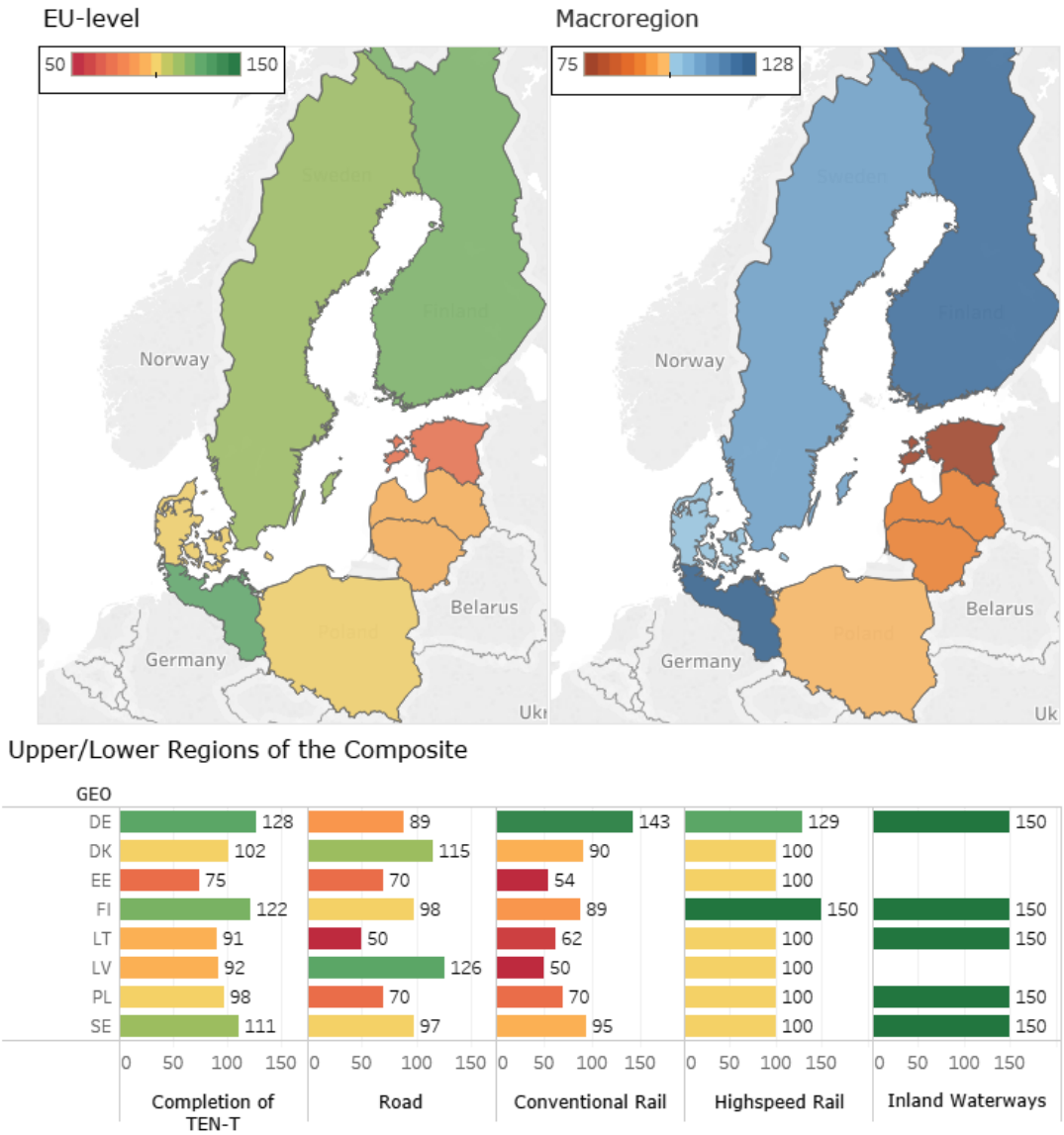
[51] URL: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review-2016_en

[52] URL: http://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme

2.5.3 Transport

Completion Composite TEN-T (road, rail, water)

Figure 2-17: TEN-T Completion by country in 2014, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components.



Text Box 2-16: Explanation of the indicator: 'Completion of TEN-T'

According to the European Commission, the TEN-T – the trans-European transport network - is the master plan for a comprehensive transport infrastructure development throughout the Union.[53] Availability of a well-developed infrastructure is essential for the functioning of the internal market and determines the pattern of citizens' mobility and goods' transport. On the other hand, the implementation of infrastructure projects (in the New Member States often with contributions from the Cohesion Funds) generate value-added, jobs and tax revenues in the domestic economies.[54] Thus, developing infrastructure is a key tool to foster economic growth in the EU Member States.

This chapter analysis three indicators: Completion of TEN-T Road Core Network, Completion of TEN-T Conventional Rail Core Network, Completion of TEN-T Inland Waterways Core Network. The indicators refer to the "share of the network for the three transport modes completed at the end of the respective year, compared to the total, including planned sections and sections to be upgraded."[55]

The statistics reflect the official maps contained in Annex I of Regulation (EU) No 1315/2013. According to DG MOVE TENtec "The term "completed" refers to "existing" infrastructure. This does not necessarily mean that infrastructure requirements, as stated in the regulation, are already implemented. The time horizon for the completion of the TEN-T Core Network is 2030. Therefore the categories "completed", "to be upgraded" and "planned" give a rather general overview as defined by Member States. There is no systematic definition of these categories at EU level. Due to the geographical position and size of the transport infrastructure network of the countries concerned, there may be data discrepancies across Member States."[56]

By the end of 2014 the more advanced countries in completing the TEN-T road core network were Latvia (88% of the total), Denmark (82%), Finland (72%), and Sweden (71%). Germany ranked on the average with 59%. The least advanced countries in this group were Lithuania (7%), Estonia (32%) and Poland (34%). However, Germany was very advanced in completing the TEN-T rail core network with a 94% level of completion. Sweden (51%), Denmark (46%) and Finland (44%) registered a much lower completion level. The least advanced countries were Latvia (0%) and Estonia (4%). Poland completed only 23% of the total railway core network by the end of 2014. The statistics on the completion of TEN-T inland waterways core network show a very good performance for Poland, Lithuania, Finland, Germany, and Sweden with 100% completion.

[53] http://www.europarl.europa.eu/cmsdata/116220/tent-issues-papers.pdf

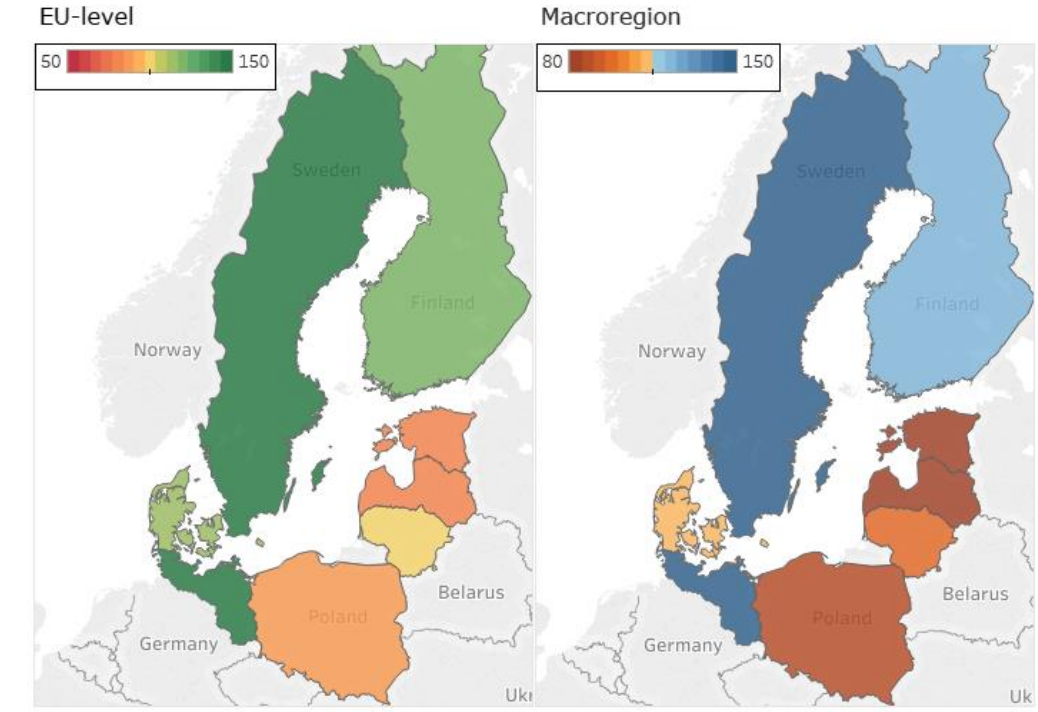
[54] Grozea-Helmenstein, D. And Helmenstein, C. And Kleissner, A. And Moser, B. (2008): Makroökonomische und sektorale Effekte der UEFA EURO 2008 in Österreich. *Wirtschaftspolitische Blätter, 2008 (1). pp. 7-20.*

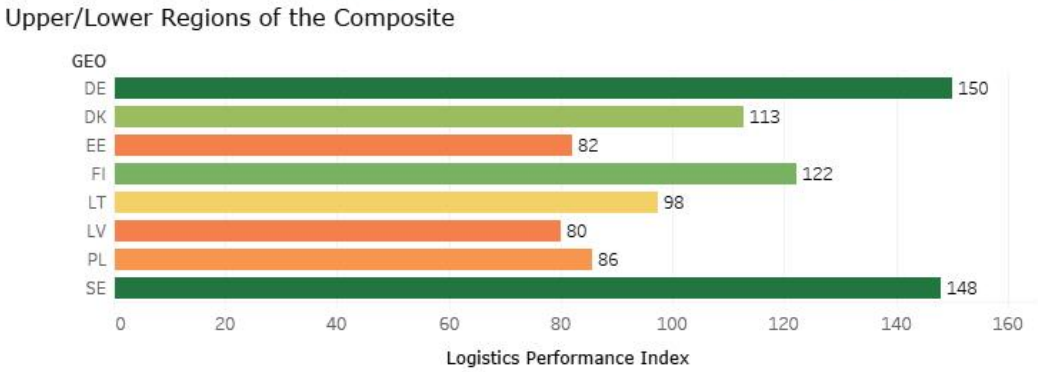
[55] URL: https://ec.europa.eu/transport/facts-fundings/scoreboard/compare/investments-infrastructure/ten-t-completion-rail-hs_en

[56] URL: https://ec.europa.eu/transport/facts-fundings/scoreboard/compare/investments-infrastructure/ten-t-completion-rail-hs_en

Logistics Performance Index (LPI)

Figure 2-18: Logistics Performance Index by country in 2016, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components.





Text Box 2-17: Explanation of the indicator: 'Logistics Performance Index'

The Logistics Performance Index (LPI) is the weighted average of a country's scores on six key dimensions. These six dimensions are: Efficiency of customs and border management clearance (Customs), Quality of trade and transport infrastructure (Infrastructure), Ease of arranging competitively priced shipments (Ease of arranging shipments), Competence and quality of logistics services—trucking, forwarding, and Customs brokerage (Quality of logistics services), Ability to track and trace consignments (Tracking and tracing), Frequency with which shipments reach consignees within scheduled or expected delivery times (Timeliness).[57] The LPI consists of both qualitative and quantitative measures.

The LPI is, according to the World Bank, an interactive benchmarking tool developed to support countries "to identify the challenges and opportunities they face in their performance on trade logistics."[58] It shows the strengths and weaknesses revealing possible fields for raising the performance. The LPI ranks 160 countries on the efficiency of international supply chain.

Germany and Sweden score the highest in the macro-region, of which Germany is even the world's top performer. Due to lower scores on 'Customs' and 'Timeliness' dimensions compared to Germany Sweden achieved a score of 148 points. Denmark and Finland are the only two other countries that perform above the EU-median. All new Member States perform below, although Lithuania does so only marginally.

Most countries of the macro-region show an improvement in 2016 compared to 2010. Countries with particularly lower scores are Denmark and Poland, losing both 15 points. Lithuania on the other hand demonstrates a strong improvement of 23 points, with the result of outperforming all other new Member State

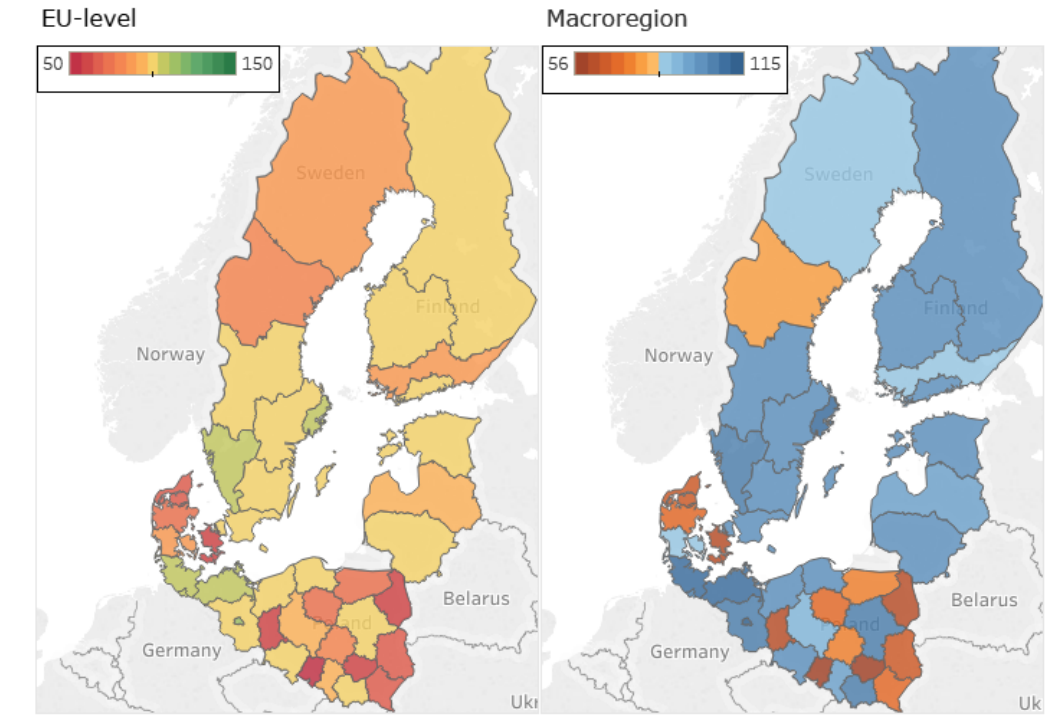
[57] URL: http://lpi.worldbank.org/international

[58] URL: http://lpi.worldbank.org/

2.5.4 Tourism

Arrivals at tourist accommodation establishments

Figure 2-19: Tourism arrivals by NUTS-2 in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-18: Explanation of the indicator: 'Tourism Arrivals'

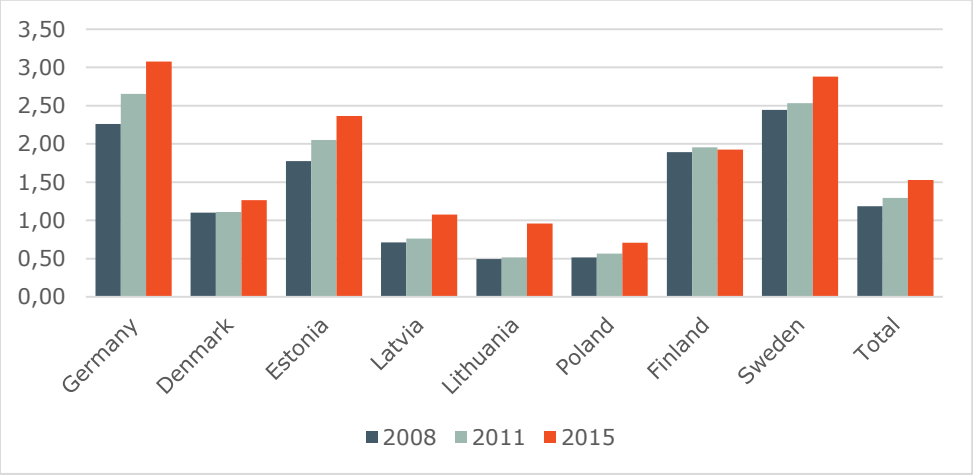
The indicator Arrivals at tourist accommodation establishments is available at Eurostat for NUTS-2 regions. Tourist accommodation establishments are defined as hotels, holiday (and short-stay) accommodations, camping grounds, recreational vehicle- as well as trailer parks.

The benchmarking analysis reveals that the Arrivals at tourist accommodation establishments in the Baltic Sea macro-region overall corresponds to the EU-median. Berlin is the only region that scores above 110, and separates itself from the second highest regions with 3 points on the benchmark. Overall, Germany's regions recorded the highest number of arrivals followed by Sweden and Poland.

Lithuania with one of the lowest number of arrivals recorded the highest growth (76%) between 2008 and 2015. The total number of arrivals in the region as a whole increased by 29%. The distribution of arrivals in the NUTS-2 region is most uneven in Germany with Berlin area registering the highest number of arrivals. The distribution in NUTS-2 region in Sweden shows a similar disparity with Stockholm area registering a maximum number.

Considering the fact that the number of arrivals in absolute terms does not indicate the intensity of tourist sector activity, a Defert's Tourism Function Index (Lohmann, G.; Panosso Netto, A., 2017)[59] that compares arrivals per inhabitant can describe the intensity of tourism activity better. In terms of arrivals per inhabitant, the highest recorded value is 3.07 in the NUTS-2 regions of Germany followed by Sweden and Estonia. The growth in terms of this index is also noteworthy in case of Latvia and Lithuania.

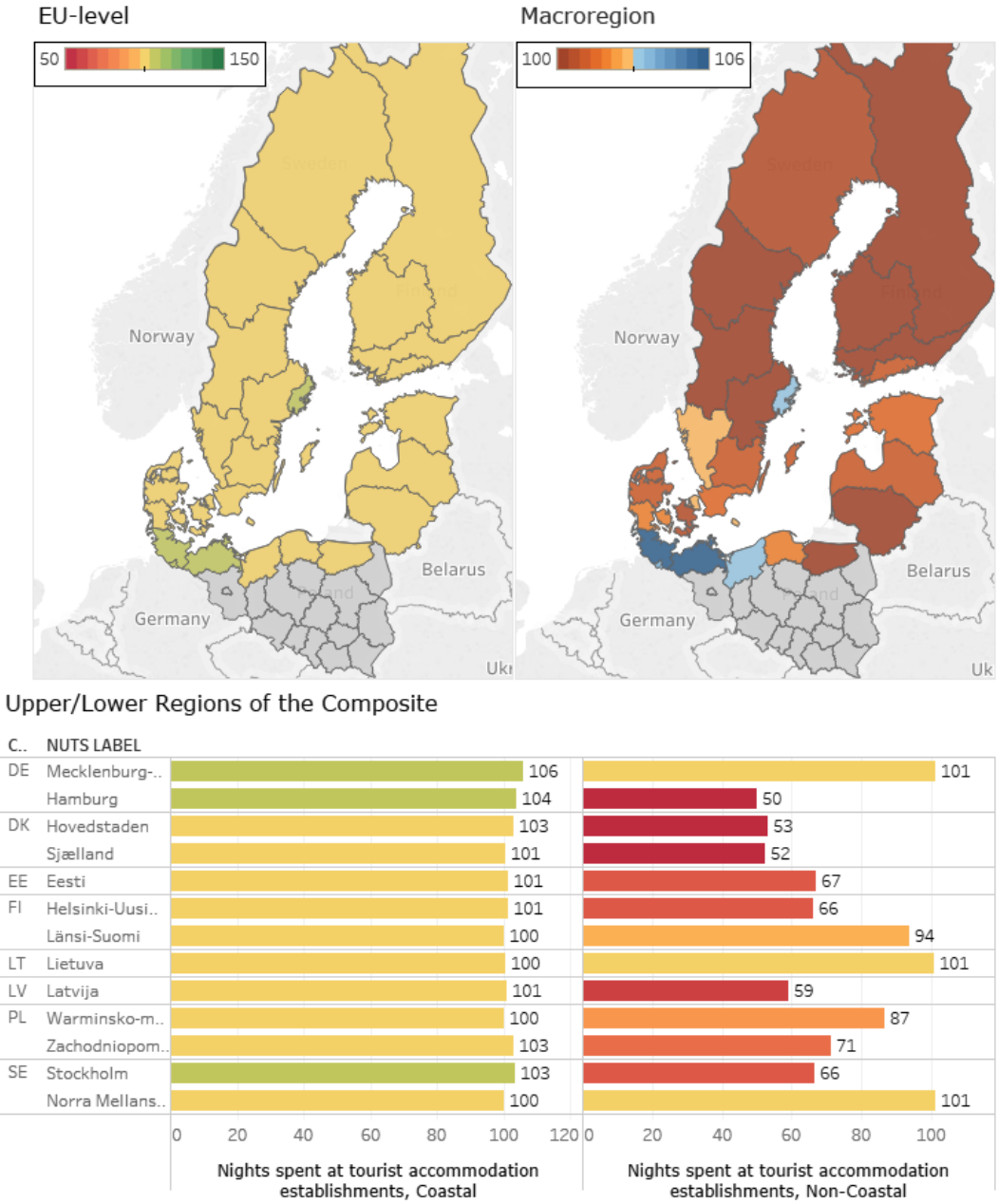
Figure 2-20: Arrivals in the macro-region per capita (million arrivals)



[59] Lohmann, G.; Panosso Netto, A. (2017): Tourism Theory: concepts, models and systems. ISBN 9781780647159; DOI 10.1079/9781780647159.0193

Number of nights spent at tourist accommodations

Figure 2-21: Nights spent at tourist accommodations (coastal/non-coastal) by NUTS-2 in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-19: Explanation of the indicator: 'Nights spent, coastal tourism'

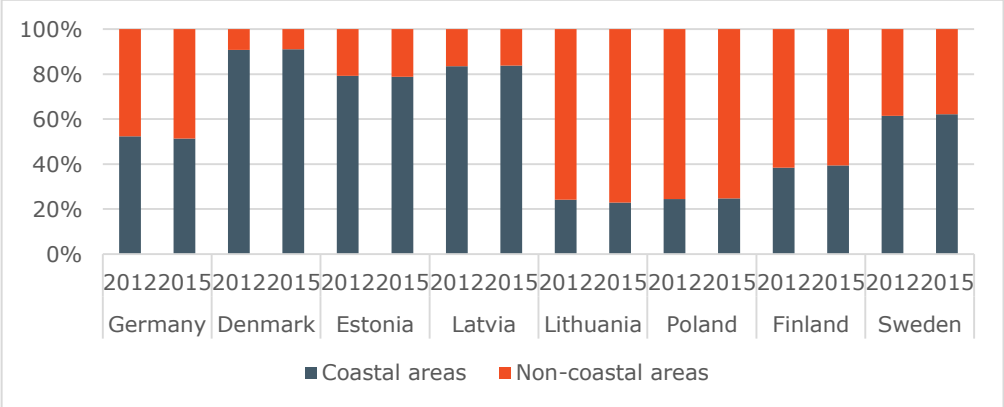
The Number of nights spent at tourist accommodations is available at Eurostat for NUTS-3 regions. Eurostat has an official definition of NUTS-3 regions that distinguishes between coastal and non-coastal regions. Due to the large number of NUTS-3 regions, the data is aggregated to the NUTS-2 level. In order to distinguish between coastal and non-coastal regions, a benchmark is defined for each type of region.
Tourist accommodation establishments are defined as hotels, holiday (and short-stay) accommodations, camping grounds, recreational vehicle- as well as trailer parks.

The average number of nights spent at tourist accommodations in the Baltic Sea coastal regions corresponds slightly above the EU-median. As is evident from the figure above, the scoring has a range of 100-106. Looking at the regions, Stockholm and the German Baltic Sea are the most popular. The non-coastal parts of the NUTS-2 regions perform on average with a score of 86, and thus below the EU-median. For some regions, particularly in Sweden and Germany, the non-coastal counterparts perform equally well. However, in Denmark and the Baltic States the discrepancy is high with up to 50 points on the benchmark.

In comparison to the benchmarking performance in 2012, the scores remained constant in almost all regions, which indicates that nothing changed in the EU comparison. In Poland, the region of Warminsko-Mazurskie improved its score by 36 points to 100, as the only region in the Baltic Sea.

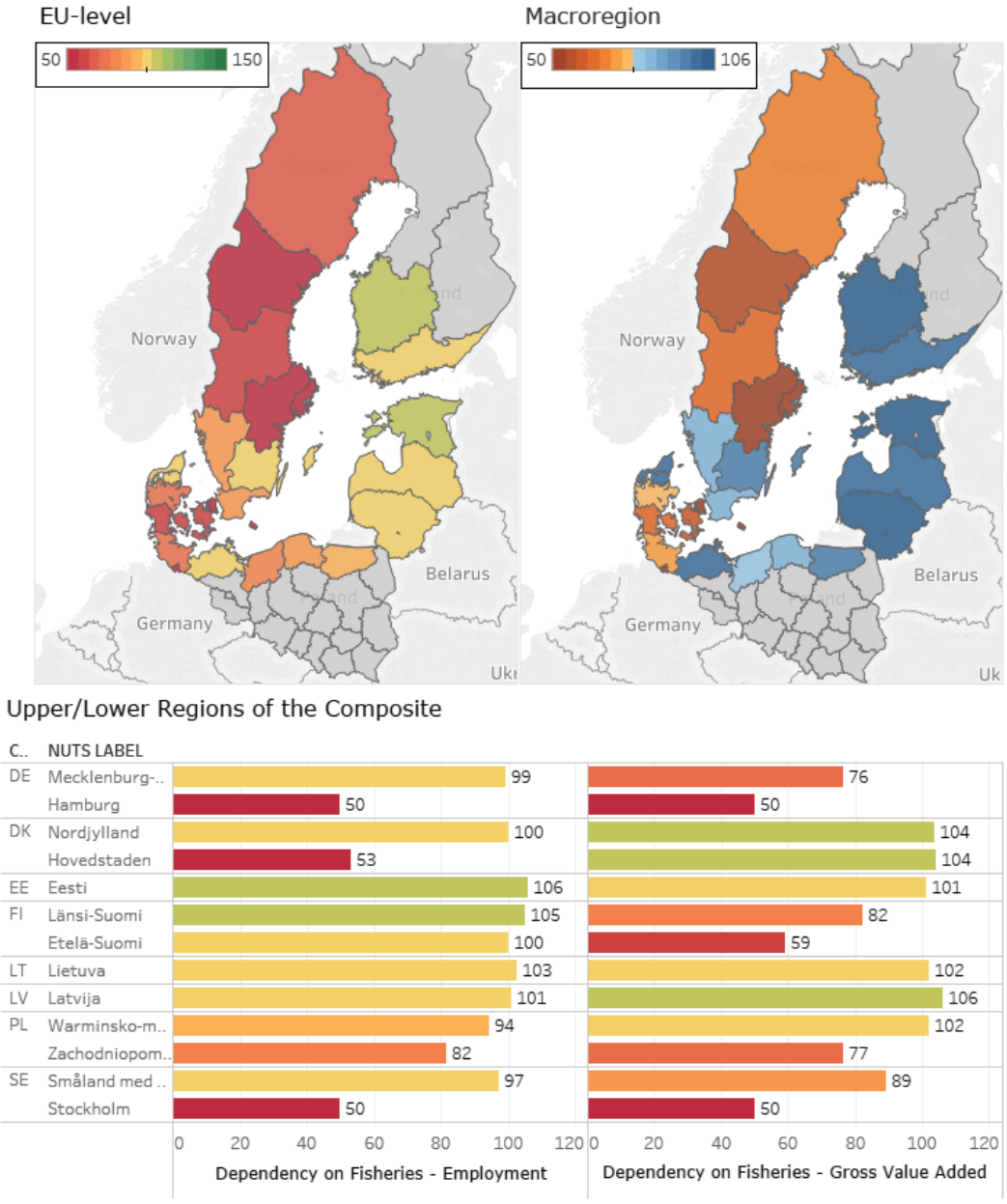
The distribution between coastal and non-coastal areas is shown in the following figure. It can be seen that apart from Germany, the tourism industry seems to tilt one way or other in each country and the pattern is constant between 2012 and 2015. The share of nights spent in coastal areas is highest in Denmark followed by Latvia, Estonia and Sweden. In Germany can be noticed an equilibrated distribution.

Figure 2-22: Split of coastal/non-coastal tourism in all NUTS-2 regions of the macro-region



2.5.5 Fisheries

Figure 2-23: Dependency on fisheries by NUTS-2 regions on an EU-wide (left) and Macro-regional (right) comparison for employment. The bottom figure shows the Upper/Lower Regions, including their components for both employment and GVA factors



Dependency on Fisheries (Gross value added)

A close examination of the gross value added (GVA) generated by the Fisheries sector as compared to the total gross value added caries widely between the NUTS-3 areas of the macro-regions. According to the available data for 2011, the share of GVA attributed to fisheries sector is relatively higher in the NUTS-3 areas of the Adriatic macro-region than in the NUTS 3 areas of the Baltic Sea macro-region. The data used for this analysis were generated by EEA.

In the NUTS-3 areas of the Baltic Sea macro-region, the contribution of the Fisheries sector in terms of percentage of the total GVA in the region was relatively low in 2011. The Fisheries sector's contribution towards the total GVA varies within the macro-region; the highest share was in Latvia where the sector accounted for 0.28% of the total GVA followed by Lithuania with 0.17%. The lowest recorded share was for Sweden with 0.03%. In Latvia, in the NUTS-3 region of Kurzeme the fisheries sector contributed 0.53% of the total GVA. However in Denmark, where the Fisheries account for 0.12% of the total GVA the NUTS-3 region of Bornholm registered the highest share of GVA generated by Fisheries with 0.63% of the total GVA. Germany with 0.064% of total GVA attributed to fisheries sector showed a wide variation between regions (0.29% to 0.01%) with respect to the share of total GVA. In Poland the Fisheries sector contributed 0.085% to the total GVA and in Finland and Sweden the share stood at 0.055% and 0.033% respectively.

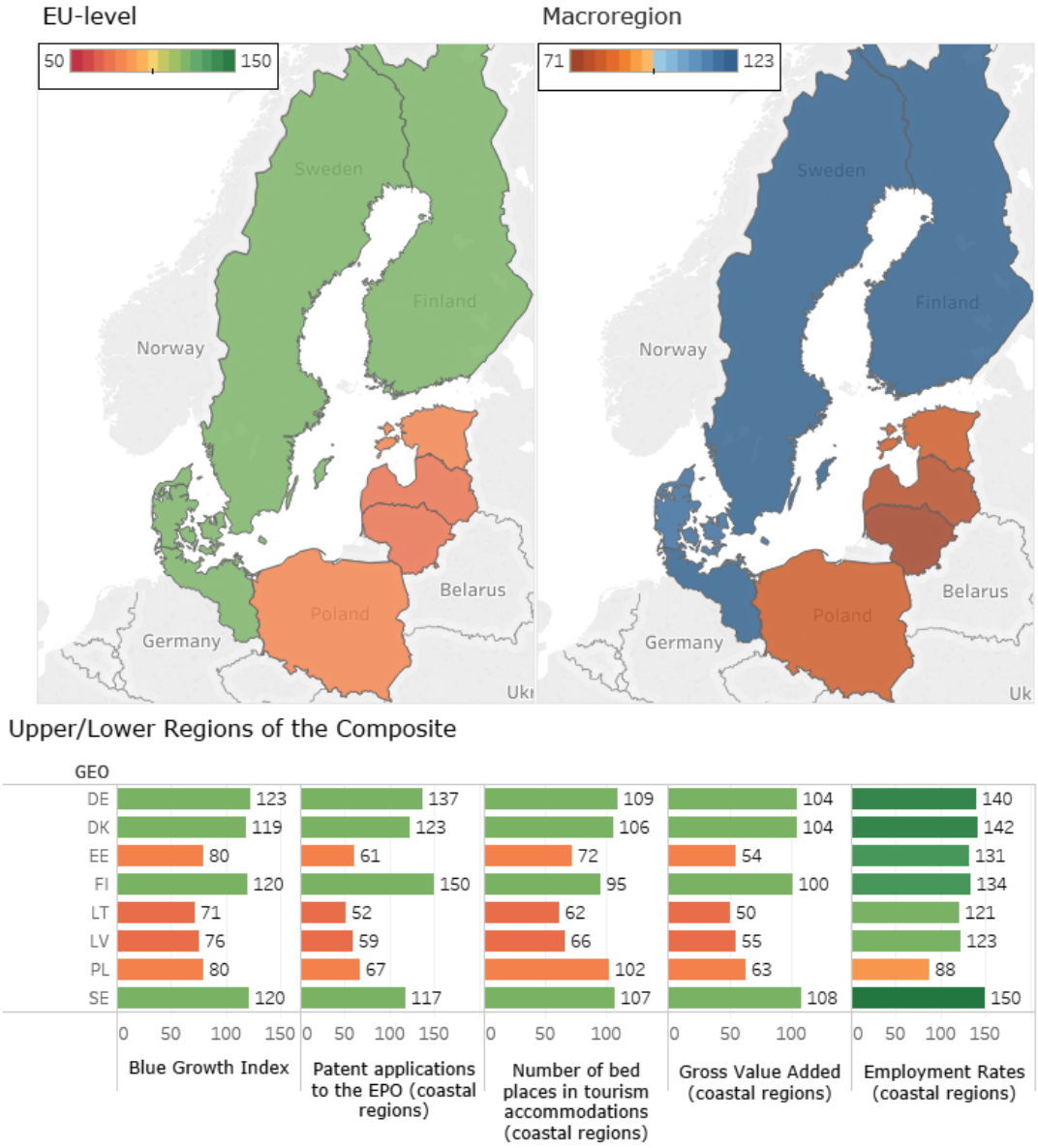
Dependency on Fisheries (Employment)

Another measure of dependency on a particular sector in an economy is the share of employment generated by the sector relative to the total employment. The share of employment in the Fisheries sector is more or less consistent with the share of GVA. In the NUTS-3 areas of the Adriatic macro-region, the share of employment in the Fisheries sector is relatively higher than that of the Baltic Sea macro-region. The data used for this analysis were generated by EEA.

In the Baltic Sea macro-region the distribution of country wise share of employment attributed to Fisheries sector is slightly different from the distribution of the GVA share. The Fisheries sector in Estonia accounts for 0.35% of total employment followed by that of Finland with 0.24%. The lowest recorded share was for Denmark with 0.027%. In Sweden the share was 0.034%. The share of employment in the fisheries sector in Lithuania and Latvia were 0.17% and 0.11% of the total employment respectively. In Germany, the sector in the NUTS-3 areas in the Baltic Sea macro-region accounted for 0.54% of the employment of the region and in Poland it was 0.55%.

2.5.6 Blue Growth

Figure 2-24: Blue Growth by country, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components. Due to incomplete data availability, the years of the individual indicators vary from 2012-2015.



Text Box 2-20: Explanation of the indicator: 'Blue Growth'

According to the European Commission, Blue Economy refers to the "set of economic activities that happen around Europe's oceans, seas and coasts.[60]" These activities include traditional sectors such as fishing, tourism and shipbuilding, as well as new sectors such as offshore wind energy or marine-based pharmaceuticals and cosmetics. They are responsible for a large share of employment and value added creation in the regions and countries located on or near Europe's coasts. As part of DG Mare's Integrated Maritime policy, a Blue Growth strategy was released, which seeks to contribute to the EU 2020 strategy; yet with a maritime focus.[61] Relevant themes are aquaculture, coastal tourism, marine biotechnology, maritime spatial planning and integrated maritime surveillance, to name a few. In order to provide inference on blue growth, a selection of Eurostat's Maritime Policy Indicators was made to reflect on the most prevalent themes.[62]

A composite indicator made up of three indicators: Number of establishments, bedrooms and bed-places, Gross-value added at basic prices and Employment rates, has been created to measure the potential of blue-growth in the coastal regions Adriatic-Ionian macro-region. Originally, the production from aquaculture was intended to be included, but due major data gaps, this indicator was excluded.

The highest potential for blue growth in the Baltic region can be found in Germany and Sweden followed by Finland and Denmark. The coastal regions of these countries are best using the resources to generate value added, have a high number of patent applications to the EPO and except for Finland also a well-established tourism infrastructure. Employment rates in the coastal regions of the Baltic macro-region are everywhere high. The potential of the coastal regions in Poland, Estonia, Latvia and Lithuania are far below the European median and the coastal regions in the other countries of the macro-region. This is mainly due to the relatively low value-added produced in these regions, low number of patent applications and the less developed tourism infrastructure.

[60] URL: https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/leaflet-blue-growth-2013_en.pdf

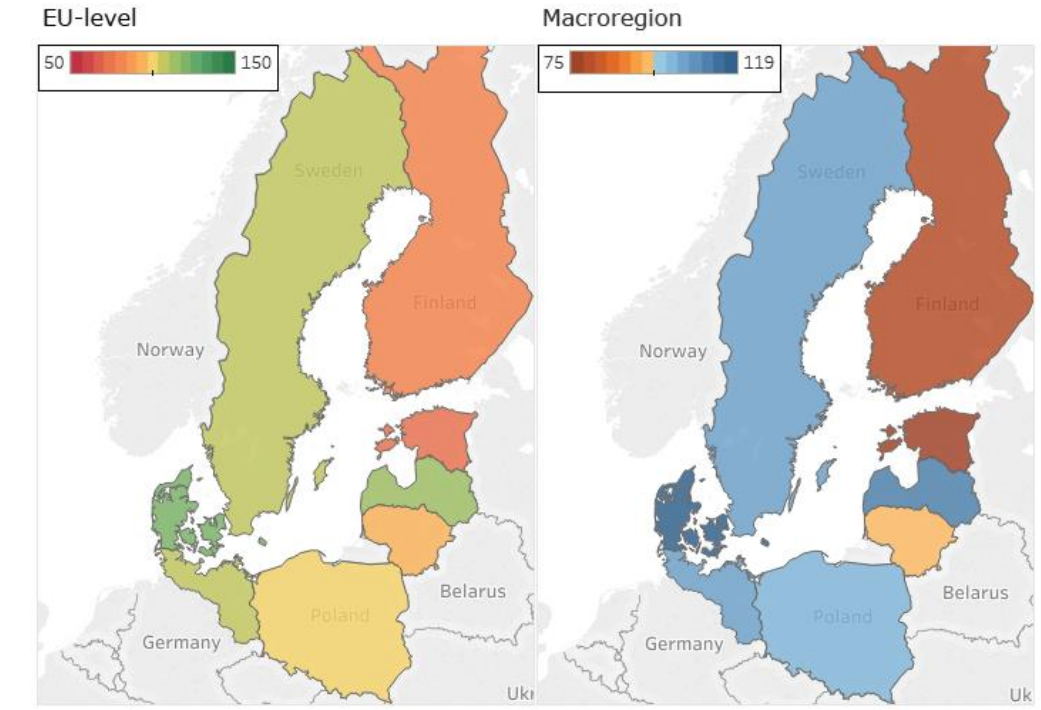
[61] https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en

[62] http://ec.europa.eu/eurostat/web/maritime-policy-indicators/data/database

2.5.7 Energy

Energy Efficiency

Figure 2-25: Energy Efficiency Index by country. The top figure shows an EU-wide comparison while the middle map illustrates the index on the macro-regional scale. The bottom figure shows the benchmarked index values for each country, along with component indicators



Text Box 2-21: Description of the index: 'Energy efficiency'

To assess the status on energy efficiency in the macro-region, a composite index consisting of two indicators was used. The first indicator is energy intensity of the economy, indicating to what extent economic activity is linked to energy consumption. The second indicator is energy efficiency gains. This indicator was selected to include a time dimension into the description of status in energy efficiency, showing the development of energy efficiency over time.

Energy intensity of the economy on a national level was obtained from Eurostat data. This indicator is measured in kg of oil equivalent per 1000 euros of GDP, or tonnes of oil equivalent per million euros GDP. According to Eurostat it is calculated as "a ratio of total primary energy consumption and a country's GDP" and shows how much energy is required to produce a unit of GDP. Lower values indicate higher economic outputs per unit of energy consumed. Although 2015 data is available, data for 2014 was used in the composite, in order to tally with the second component indicator.

Energy Efficiency gains indicator is based on Odysee-Mure database (http://www.indicators.odyssee-mure.eu/energy-efficiency-database.html). In the Odysee-Mure project, energy efficiency gains are calculated for separate sectors, as well as for the economy as a whole. The indicator for the whole economy is calculated as "a weighted average of sectoral energy consumption changes", hereby taking into account the structure of the economy. Odysee-Mure database contains values only for EU countries. Calculations are based on changes in energy intensity between 2000 and 2014. Data for Lithuania represents changes between 2000 and 2013.

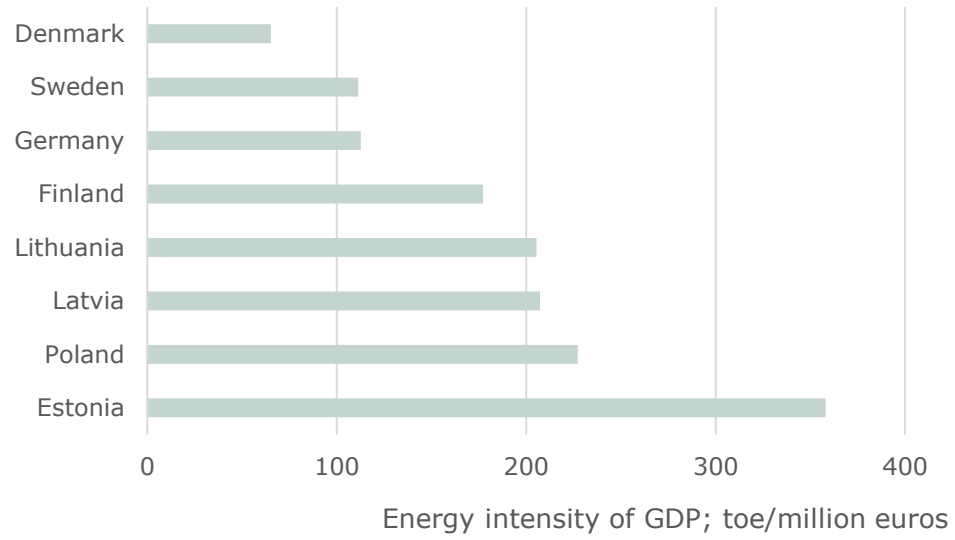
Both indicators are benchmarked using EU median as central value (100).
For the energy intensity, lower values indicate better performance. In the benchmarking process, the scale is inverted, so that top benchmarked value (150) matches the lowest energy intensity.

The composite energy efficiency index consists of benchmarked energy intensity and efficiency gain indicators, considered at equal weights.

Energy intensity

The macro-region is relatively heterogeneous in terms of energy intensity. As shown in Figure 2-26, in 2015 Denmark had the lowest energy intensity among the countries in the macro-region, at 65 tonnes of oil equivalent (toe) per million euros. Meanwhile Estonia needed 358 toe worth of energy to produce the same economic output.

Figure 2-26: Energy intensity of the economy in the Baltic Sea Region, 2015



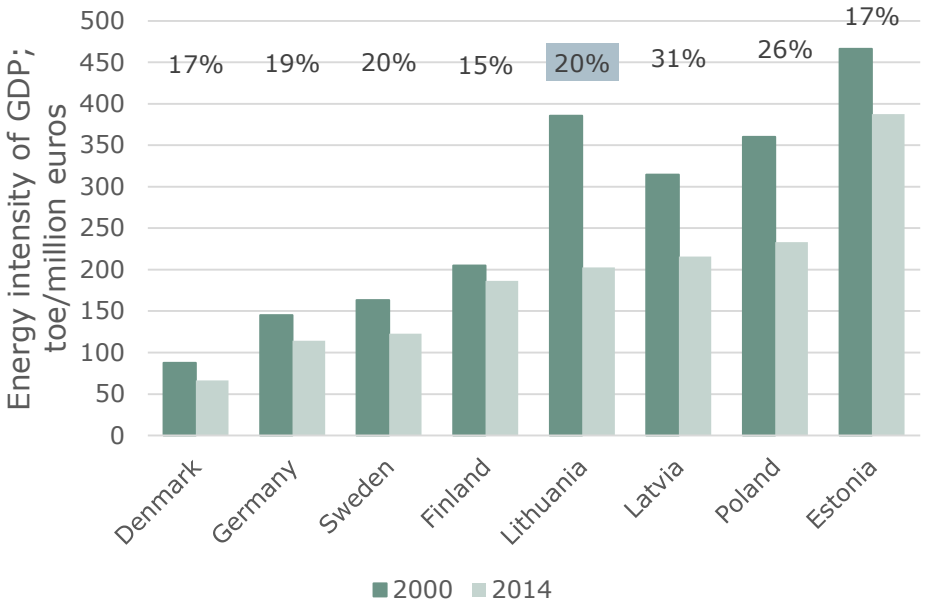
To assess the reasons for the differences, additional analysis would be required. This reveals a limitation of using energy intensity as proxy to energy efficiency, as energy efficiency is only one element of energy intensity. Other factors include prevalent types of economic activity, climate, size of the country and behavioural factors. On a country level, sector-level indicators could provide a more informative picture on energy efficiency, but to compare countries, overall energy intensity is a useful measure. Moreover, for the purposes of this analysis, it is complemented by the second indicator, to partially overcome this shortcoming.

Efficiency gains

The second indicator complements the energy intensity by showing the countries' progress on energy efficiency over time. In addition to that, this indicator addresses the sectoral differences in energy use.

As shown in Figure 2-27, the countries with the highest energy intensity have shown substantial improvements in the period 2000-2014. The figure shows how much lower the energy intensity was in 2014 compared to 2000 levels. The highest improvement in the Baltic Sea Region was achieved by Latvia, followed by Poland, which are two of the countries with the highest energy intensity. The development means, that the countries are becoming more alike in this respect. However, Estonia, which has the lowest performance on energy intensity in the region, also shows one of the lowest improvements.

Figure 2-27: Energy intensity and improvement over time (2000-2014), based on Eurostat and Odysee-Mure data. Percentage values indicate energy efficiency gains as per Odysee index. Shaded value for Lithuania from 2013

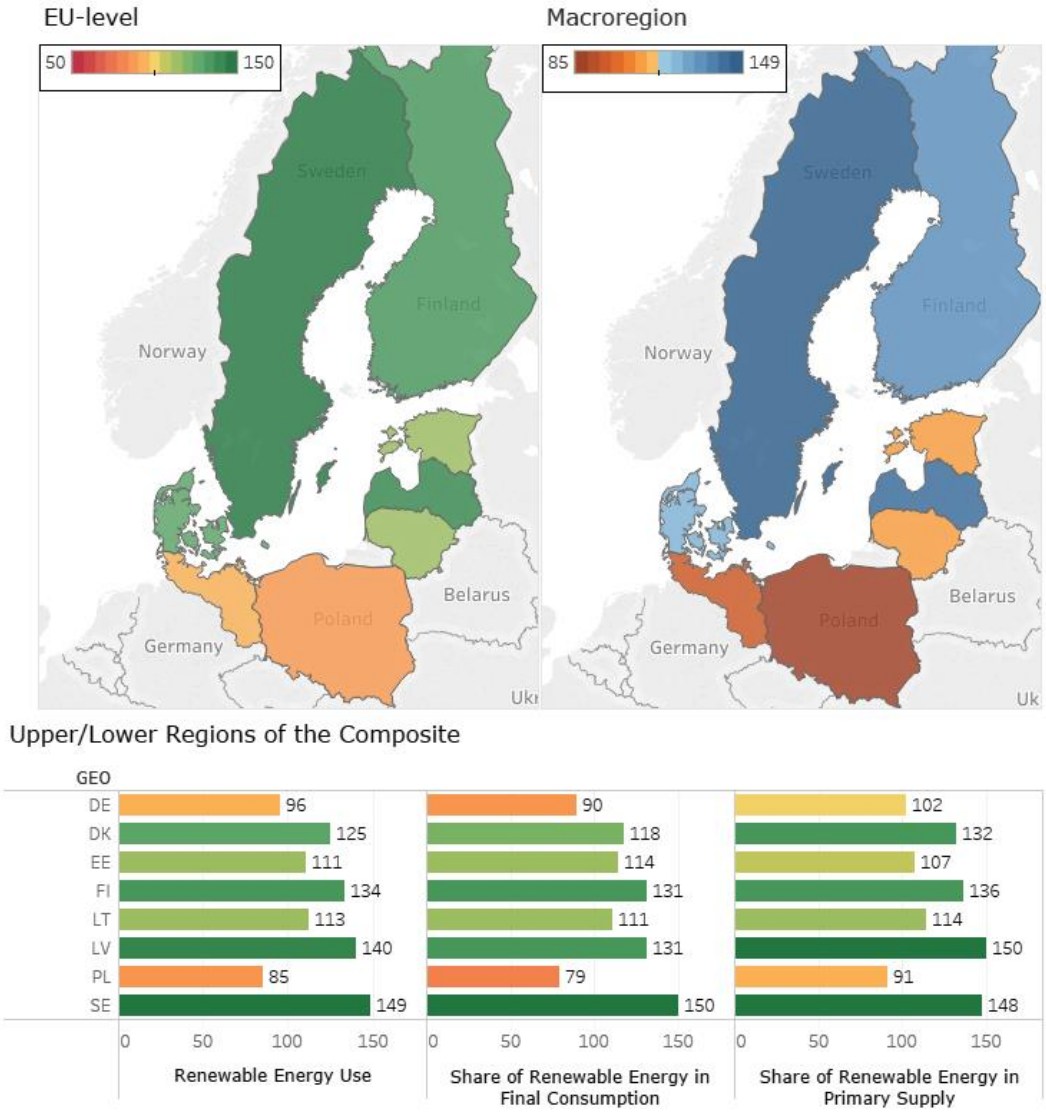


Composite index

The composite index shows that Denmark scores highest overall, and it shows high performance not only in terms of energy intensity but also in continued improvements. Estonia, on the other hand, scores lowest on the energy intensity as well as energy efficiency gains. This is different from other regions where countries with high performance on energy intensity showed lower performance on efficiency gains and the other way around.

Renewable Energy Use

Figure 2-28: Renewable Energy Index by country in 2014. The top figure shows an EU-wide comparison while the middle map illustrates the index on the macro-regional scale. The bottom figure shows the benchmarked index values for each country, along with component indicators



Text Box 2-22: Explanation of the indicator: 'Renewable Energy Use'

The indicator for renewable energy use is a composite indicator consisting of two separate indicators: Share of renewables in primary energy supply (expressed in %), and share of renewables in gross final energy consumption (expressed in %). The first indicator is sourced from OECD, and the second from Eurostat.
Definition of renewables in both data sources are compatible: renewables include energy produced from hydropower, wind power, solar power, as well as tide, wave and ocean energy, energy from solid biomass, biofuels and renewable waste, and geothermal energy (Eurostat classification server RAMON and the OECD database).
Share of renewables in primary energy supply.
OECD country level data for 2014 was used to obtain the indicator for the share of renewables in primary energy supply. For the purposes of this indicator, OECD defines *Primary energy supply* as the sum of energy production and imports, from which exports and bunkers are subtracted, and subsequently adjusted for stock changes. OECD provides the renewable energy indicator as percentage of primary energy supplied by renewables in the total primary energy supply.
Share of renewables in gross final energy consumption.
Eurostat data for 2014 was used, specifically indicator table t2020_31. This indicator is used to measure EU's progress towards its 2020 target, namely to achieve 20% share of renewable sources in the final energy consumption.
Composite renewable energy indicator is calculated as the equally weighted sum of the benchmarked values of the above indicators.

Renewable energy is defined by International Energy Agency (IEA) as energy "that is derived from natural processes (e.g. sunlight and wind) that are replenished at a higher rate than they are consumed"[63] This includes wind, solar, hydro, geothermal, wave and bioenergy. Renewable energy is considered an important means to improve energy security, in particular important in countries with low indigenous availability of fossil fuels, as well as pollution and climate benefits[64].

For the purpose of this analysis, two indicators were selected to measure the level of renewable energy use: share of renewable energy in primary supply and share of renewable energy in consumption.

Table 2-7 shows the values of both indicators for the countries in the Baltic Sea Region.

[63] https://www.iea.org/topics/renewables/
[64] IEA (2015). *Medium-Term Renewable Energy Market Report 2015*. International Energy Agency.

Table 2-7: Shares of renewables in primary energy supply and in consumption, 2014. Source: Eurostat, OECD

Country	Share of renewables in primary supply, %	Share of renewables in final consumption, %
Denmark	27.4	29.2
Finland	29.9	38.7
Germany	11.6	13.8
Poland	9.1	11.4
Sweden	35.9	52.6
Estonia	14.2	26.5
Latvia	37.2	38.7
Lithuania	18.3	23.9

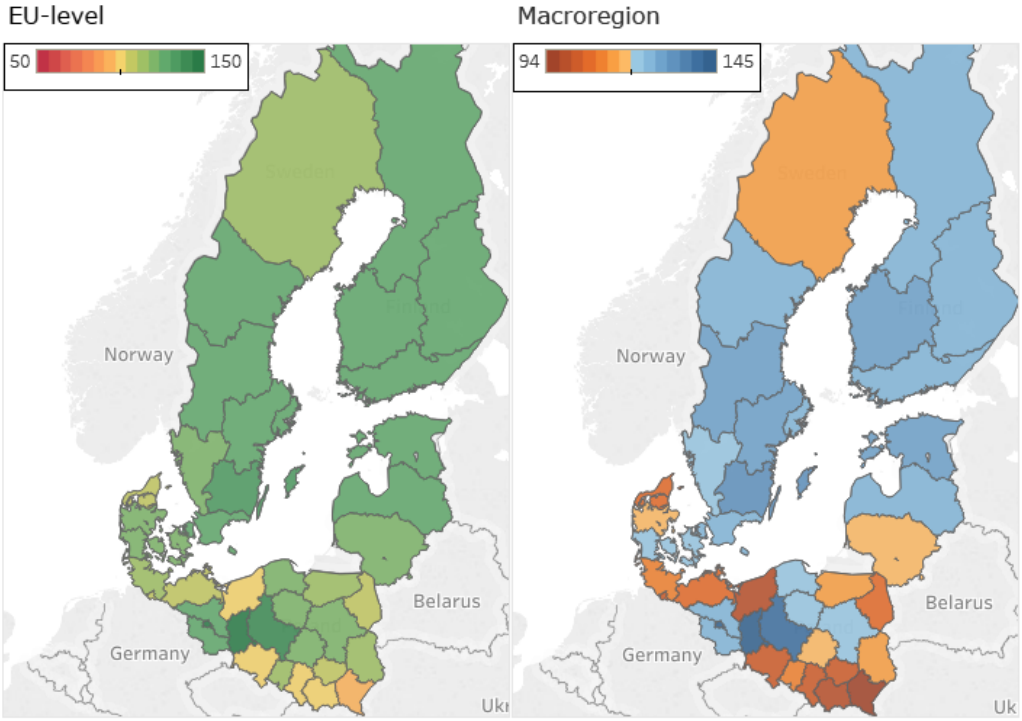
In the Baltic Sea macro-region the share of renewable energy in both primary supply and final energy consumption is relatively high. Sweden, Finland and Latvia have already reached the levels of 40-50% share of renewable energy in final energy consumption and they are the leaders in the EU regarding this parameter. The share of renewables in primary supply is also highest in these countries. Denmark, Estonia and Lithuania are following, with shares above 20%. This value represents the EU target for the year 2020.

All countries in the macro-region register a smaller share of renewables in primary supply compared to the share in the final energy consumption. The difference between the two indicators is the highest for Sweden (36% share of renewables in primary supply compared to 52.6% share in consumption), Estonia (14% share of renewables in primary supply compared to 26.5% share in consumption) and Finland (30% share of renewables in primary supply compared to 38.7% share in consumption). For the other countries the differences are small, below 5 percentage points. The lowest difference is registered in Denmark with 1.85 percentage points.

The composite index for 2014 reveals the best performance in the macro-region on renewable energy use in Sweden, Latvia and Finland followed by Denmark, Lithuania and Estonia with above median index values. The lowest values are registered in Germany (just below the median) and Poland.

2.5.8 Climate Change: Adaptation

Figure 2-29: Potential Climate Change Vulnerability by NUTS-2, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components. The analysis is from 2011, but the climate simulation for 2071-2100.



Text Box 2-23: Explanation of the indicator: 'Climate Change: Adaptation

Climate change can be influenced by territorial development. Thus climate change mirrors territorial development which on the other hand can lower regional vulnerability to climate change (Schmidt-Thome and Greiving, 2013)[65]. Territorial development can contribute to developing climate change mitigation and adaptation capacities to cope with the influence of climate change (IPCC, 2007)[66]. Therefore, the ESPON Climate project calculated the potential impacts on climate change as "a combination of regional exposure and sensitivities to climate change"[67]. The exposure analysis made use of existing projections on climate change and climate variability from the CCLM climate model, which has also been used by the Intergovernmental Panel on Climate Change (IPCC). The data have been aggregated for two time periods (1961-1990 and 2071-2100) for eight climate stimuli. A region's climate change sensitivity was calculated on the basis of several sensitivity dimensions - physical, environmental, social, cultural and economic. Together, exposure and sensitivity determine the possible impact that climatic changes may have on a region. For this analysis, the Environmental- and Economic Impact are analysed as a separate component.

The ESPON Climate project analyses how and to which degree climate change will impact on the competitiveness and cohesion of the European regions and Europe as a whole. Moreover, it investigates the ways in which policy can contribute to mitigate climate change, and to adapt to and manage those results of climate change that cannot be avoided. Based on these insights, the adaptive capacity was calculated as a weighted combination of most recent data an economic, infrastructure, technological, and institutional capacity as well as knowledge and awareness of climate change[68].

Due to the fact that the adaptive capacity enhances impacts of climate change, it feeds into a region's overall vulnerability to climate change. Combined with the five types of impacts (see above), the potential regional vulnerability has been calculated (Schmidt-Thome and Greiving, 2013).

ESPON Climate's approach of disaggregating the multitude of impacts as well as assessing these on a regional scale helps to shape concrete policy implications; as is also emphasised by the European Commission and its Green Paper "*Adapting to climate change in Europe*". Therefore, it is important to analyse climate change and territorial impacts on regions and local economies in Europe. In the following, a comparison of the vulnerability to climate change among the NUTS-2 regions of the macro-region is being performed. For this analysis, NUTS-3 data has been aggregated into NUTS-2 regions.

[65] Schmidt-Thome P. and S. Greiving (2013) editors: European Climate Vulnerabilites and Adaptation: A Spatial Planning Perspective, published by John Wiley and Sons Ltd. UK. ISBN 978-0-470-97741-5

[66] IPCC (2007): Climate Change 2007, Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC (978 0521 88010-7 Hardback; 978 0521 70597-4 Paperback).

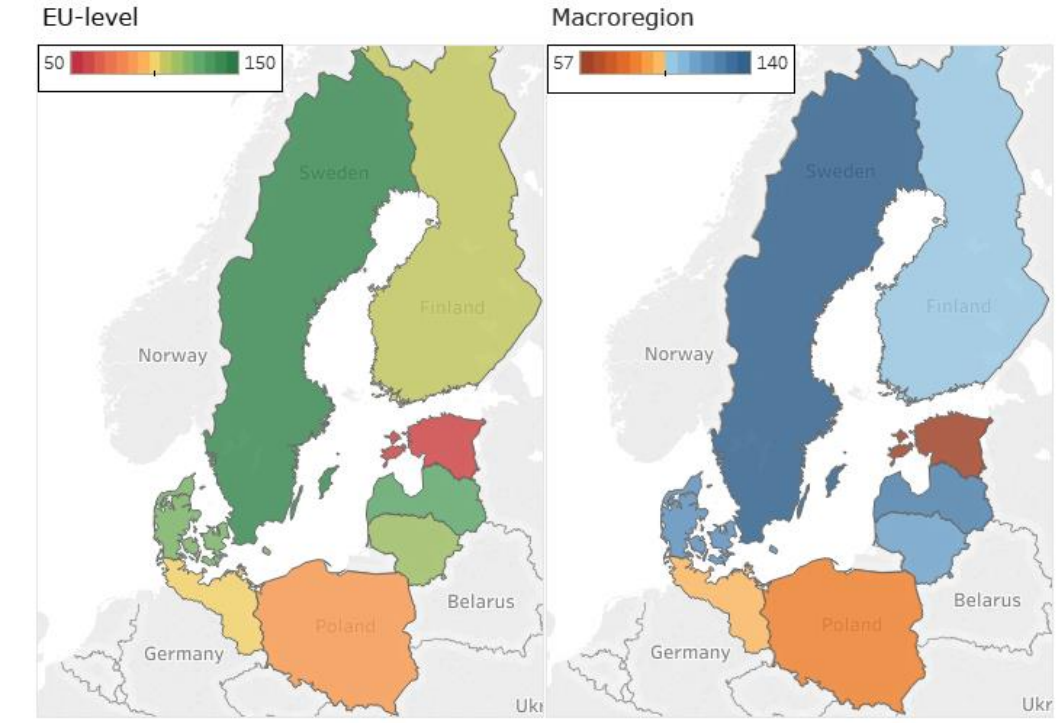
[67] URL: https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/CLIMATE/ESPON_Climate_Final_Report-Part_A-ExecutiveSummary.pdf

[68] *See footnote above*

Potential Vulnerability	Throughout the entire macro-region, only one NUTS-2 region in Poland scores below the EU-median (Podkarpackie). The macro-region further comprises some of Europe's least vulnerable regions, and is therewith by far not as affected by climate change than other regions throughout Europe. On average, all region score 119 points. Finland leads with an average score of 131 points, followed closely by Estonia (130), Latvia (127), Sweden (125), and Denmark (119).
Environmental Impact	The ESPON Climate study evaluates that environmental changes are mainly consisting of potential changes in summer and winter precipitation, annual mean temperature and annual mean evaporation in the environment. The two regions of Länsi-Suomi in Finland and Stockholm in Sweden have top scores, with latter with the lowest potential environmental impact in Europe. Finland (133), Latvia (131), Sweden (135) are the countries scoring above 130, and thus have some of the least severe impacts, with a bottom score of 91 in Övre-Norrland at the northern end of Sweden. Germany's environmental impacts are in the range of the median. In Poland, the most severe impacts, yet not more severe than a score of 96, in its southern regions as well as its north-western border to Germany.
Economic Impact	Climate change can induce natural disasters with major economic and budgetary consequences. An analysis of the data reveals negative economic impacts in almost all regions. However, in almost none of the regions this impact will be more severe than the EU-median. Nordjylland (Denmark) will experience and impact below the median. Länsi-Suomi and Pohjois-Suomi in Finland are in turn the least economically impacted regions in Europe, scoring each 150 and 154. Poland and Germany will have on average similar impacts that correspond to a benchmarking score of around 110.
Adaptive Capacity	Adaptive capacity measures the ability of a system to adapt to disturbances and its capability to respond to changes. This concept, in recent years, has become synonymous to a yardstick of effective environmental governance. This unique measure offers a combination of various indicators to calculate the robustness of the society faced with change. The adaptive capacity is the only area that causes a large disparity in the Baltic Sea. Since the Nordic countries are traditionally the Member States with some of Europe's highest institutional capacity, it is not unexpected that Finland (132), Sweden (130), and Denmark (126) perform the highest in the Baltic Sea. Germany's readiness is comparably average. The adaptive capacity in the new Member State is in contrast below the median: The Baltic States score below the median, but not to a substantial degree. Poland scores on average 72 points, of which twelve out 16 regions are in the bottom quarter of the bottom half of the EU's performance spectrum. In conclusion, the Baltic Sea macro-region comprises of some of Europe's least vulnerable regions; Environmentally and Economically. Further, the vulnerability is quite cohesive in this macro-region, though the adaptive capacity of the new Member States does not yet meet the EU standard.

2.5.9 Climate Change: Mitigation

Figure 2-30: Climate Change Mitigation Index by Country in 2013, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-24: Explanation of indicator: 'Climate Change: Mitigation'

The composite indicator for climate change mitigation is an average of two benchmarked indicators:
CO_2 emissions per capita.
CO_2 emissions per unit of GDP.
The first indicator, CO_2 emissions per capita, shows the average emissions per person in each country. This allows comparison on countries on equal terms. There is no regional data available since emissions are reported on a national level. Therefore, country level data was sourced from the World Bank's World Development Indicators database. The indicator name and code in the database: *CO_2 emissions (metric tons per capita) (EN.ATM.CO2E.PC)*. Latest available year for this indicator is 2013.
The second indicator, CO_2 emissions per unit of GDP, shows the carbon intensity of the economy: that is how much CO_2 is emitted for a monetary unit of GDP produced. There is no regional data available, since emissions are reported on a national level. Therefore, country level data was sourced from the World Bank's World Development Indicators database. The indicator name and code in the database: *CO_2 emissions (kg per 2010 US$ of GDP) (EN.ATM.CO2E.KD.GD).* Latest available year for this indicator is 2013.
Benchmarking: both indicators were benchmarked against the EU-level median, highest and lowest performing countries. Since the lower values of emissions are preferred, the scale was inverted during benchmarking. The resulting benchmarked figures therefore indicate better performance with higher values.

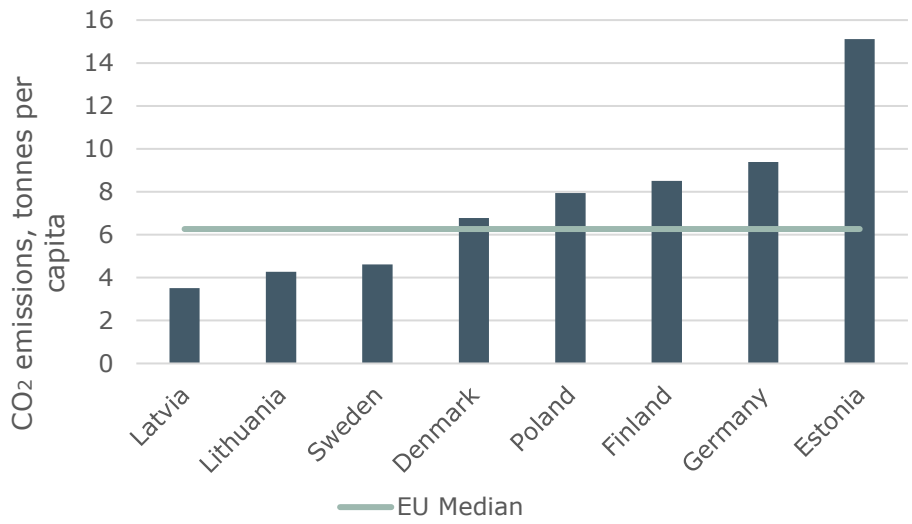
For the Climate Change Mitigation theme, two indicators were selected: CO_2 Emissions per capita and *CO_2* Emissions per unit of GDP. While several gases contribute to greenhouse gas emissions, CO_2 represents its main component in most sectors, and over 80% in the EU[69].

Among the EU countries, Luxembourg has the highest level of CO_2 emissions per capita, at over 18 tonnes per average inhabitant. Meanwhile Latvia emits the lowest amount, at 3.5 tonnes of CO_2 per capita. When CO_2 emissions are expressed per unit of GDP, Sweden is the leader in the EU at only 87 kilograms per thousand US$ of GDP, according to the World Bank data. For this indicator, Estonia scores worst, emitting 10 times more CO_2 than Sweden per unit of economic production.

In the Baltic Sea macro-region, Estonia has an emission level per capita above 15 tons, the highest in the macro-region. Germany, Finland, Poland, and Denmark also have emissions above the EU-median (see Figure 2-31). Latvia is the EU leader on this indicator, with the lowest emissions per capita. The region as a whole has relatively high emissions per capita, which could be due to its cold climate and the need for heating.

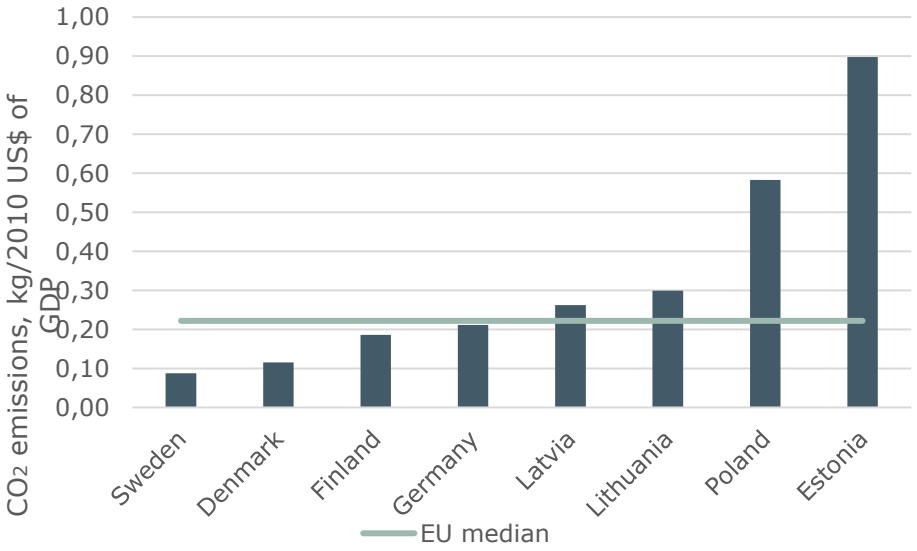
[69] http://ec.europa.eu/eurostat/web/environment/emissions-of-greenhouse-gases-and-air-pollutants/air-emission-accounts/database

Figure 2-31: CO_2 emissions per capita (tonnes), in the Baltic Sea macro-region, 2013. Source: World Bank



An analysis of the carbon intensity of GDP in the Baltic Sea macro-region shows the best performance for Sweden and Denmark (see Figure 2-32) and a below-median values for Germany and Finland. Meanwhile, Latvia and Lithuania, who have the best scores for CO_2 emissions per capita, for this indicator score above the EU-median value. The lowest performance is that of Estonia and Poland (3-4 times above EU-median value).

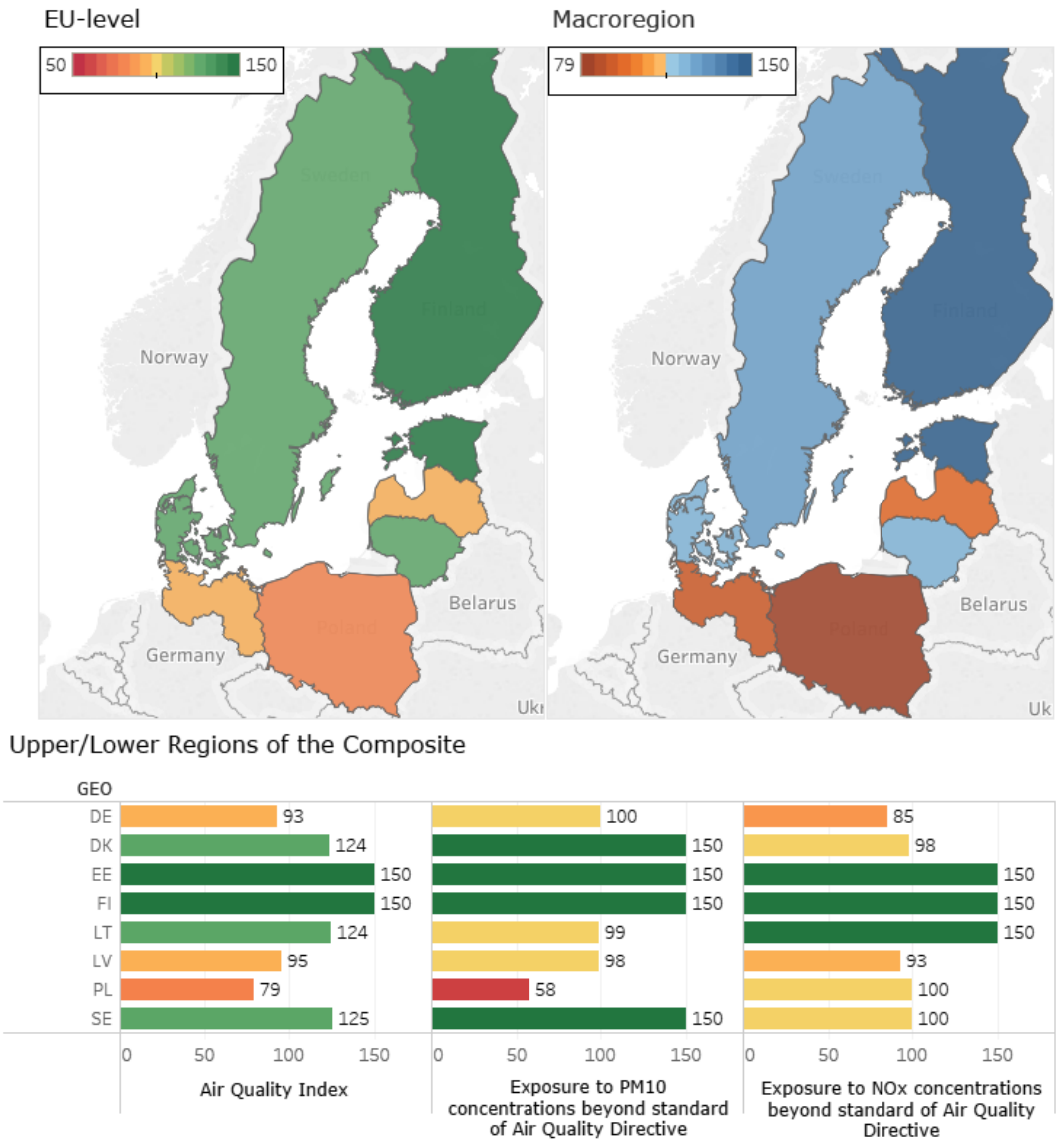
Figure 2-32: CO_2 emissions in kg per 2010 US$ of GDP, in the Baltic Sea macro-region, 2013. Source: World Bank



The benchmarked composite indicator which bundles the two indicators shows the best overall situation regarding the CO_2 emissions in 2013 in Sweden, followed by Latvia, Denmark, Lithuania and Finland, all exhibiting values above the EU-median benchmark. A slight below average performance of this indicator is to be found in Germany. This means that most of the region is scoring relatively well. The lowest performers in the macro-region are Poland and Estonia.

2.5.10 Environment: Air Quality

Figure 2-33: Air Quality Index by country in 2014, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-25: Explanation of the indicator: 'Air Quality'

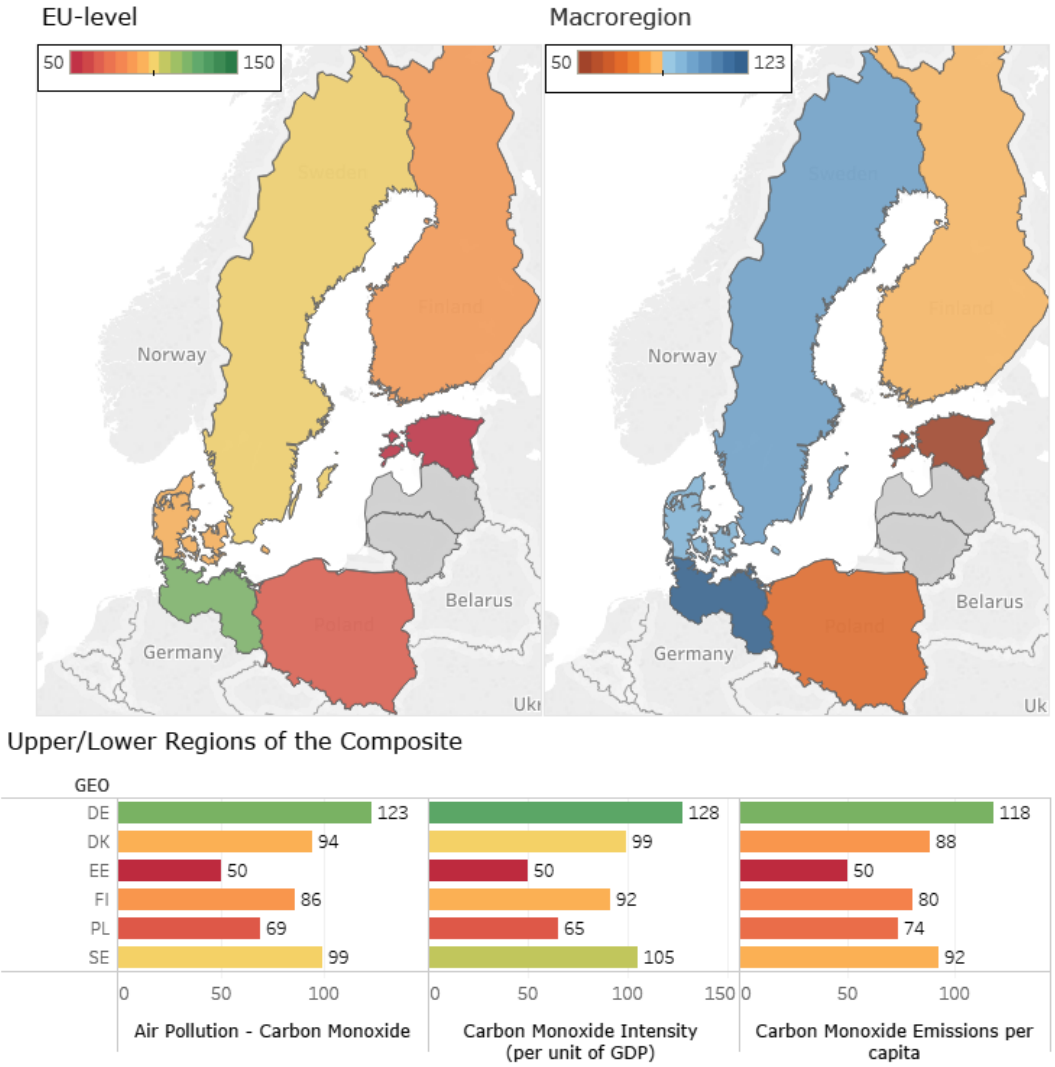
The theme Environment – Air Quality consists of 2 indicators: Share of urban population exposed to PM_{10} (particulate matter) above regulated threshold and Share of urban population exposed to NO_2 (nitrogen dioxide) above regulated threshold.
There are several air pollutants that have an adverse impact on human's health. The difference between PM_{10} and $PM_{2.5}$ is their size (in microns). These pollutants include dust, coming from construction, coal plants, bacteria and other organic dust. PM_{10} means all particles in size below 10 microns, while $PM_{2.5}$ means particles under 2.5 microns in size. Hence $PM_{2.5}$ is included in PM_{10}, and only the latter is used in this analysis. PM does not include gases like SOx and NOx; their concentration is calculated separately. While PM_{10} particles can penetrate only lungs, smaller $PM_{2.5}$ particles (visible only in electronic microscope) can pass from lungs into the blood supply.
The PM_{10} monitoring data at EEA – AirBase provide the basis for estimating the exposure of the urban European population to values of the PM_{10} higher than the daily limit value stipulated under the Air Quality Directive. This is set at 50 µg/m3 and should not be exceeded on more than 35 days during a calendar year. The exposure is estimated based upon PM_{10} measured at all urban and suburban background monitoring stations for most of the urban population, and at traffic stations for populations living within 100 meters from major roads.

The most exposed country to PM_{10} in the macro-region in 2014 is Poland (84% of the population is exposed to concentrations above the reference level) followed by Latvia (4% of population is exposed to concentrations above the reference level), Lithuania (3%) and Germany (1%). In the other countries of the macro-region, Estonia, Sweden, Denmark, and Finland, none of the population is exposed to concentrations above the reference level. The highest exposure to concentrations above the reference level for NO_2 can be found in Germany (7% of population), Latvia (4%), Denmark (2%), Poland (1%), and Sweden (1%). The best performing countries are Finland, Estonia and Lithuania where the population is not exposed to concentrations above the reference level.

The composite indicator combining the two indicators shows Estonia, Finland, followed by Sweden, Lithuania, and Denmark as best performers. They all have values better than the EU-level median; in fact Finland and Estonia are Europe's top performers in this respect. The lowest performers are Poland, Germany and Latvia, although the latter two are not far below the EU-median.

2.5.11 Environment: Air Pollution

Figure 2-34: Air Pollution Index by country in 2014, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-26: Explanation of the indicator: 'Air Pollution'

The theme Environment – Air Quality consists of 2 indicators: carbon monoxide emissions per capita and carbon monoxide emissions per 1000 USD GDP.
To compare the carbon monoxide emissions per capita and per unit of GDP (Kg per 1000 USD) of the individual European macro-region countries, data from the Organisation for Economic Co-operation and Development (OECD) has been used. Although data have not been available for the same year for every country in the analysis, the comparison gives a picture of the situation. This analysis excludes the following countries as there were no data available: Bulgaria, Croatia, Moldova, Romania and Ukraine.

CO per unit GDP

In 2008, Germany produced the least amount of carbon monoxide emissions with a value of 1.06 kg per 1000 USD, followed by Sweden with 1.47 kg per 1000 USD. Denmark and Finland are in the middle with values of 1.83 and 1.93 kg per 1000 USD. The countries with the highest carbon monoxide emissions per unit of GDP are Estonia (4.81 kg per 1000 USD) and Poland (3.80 kg per 1000 USD).

A comparison with the 2014 data shows a massive decrease in the produced carbon monoxide emissions. However, the country ranking stays the same. Germany holds on to its first place with a produced carbon monoxide emissions of 0.86 kg per 1000 USD, again followed by Sweden with 1.20 kg per 1000 USD. Denmark and Finland come in on third and fourth place with values of 1.31 and 1.71 kg per 1000 USD. The poorest performers are again Poland (3.05 kg per 1000 USD) and Estonia (3.80 kg per 1000 USD). There are no data available for Lithuania and Latvia, therefore they are excluded from this ranking.

CO emissions per capita

Regarding the carbon monoxide emissions per capita, the country rankings are quite different.

Germany is leading the country ranking with the least amount produced with a value of 42.53 kg per capita. Germany is then followed by Sweden (62.29 kg) and Poland (74.34 kg per capita). The highest values of emissions were produced by Finland, Denmark and Estonia in 2008 with carbon monoxide emission outcomes ranging from 79.03 in Finland to 115.56 kg per capita in Estonia.

However this ranking changed in 2014. The best performing country is again Germany with a total of 36.57 kg per capita, followed by Sweden with 51.35 kg per capita. In 2014, Denmark comes in on third place with an outcome of 55.62 kg carbon monoxide emissions per capita. Finland holds on to its fourth place (63.93 kg per capita), while Poland falls back to the fifth place (71.08 kg per capita). The highest value registers Estonia with an outcome of 96.06 kg carbon monoxide emissions per capita in 2014. There are no data available for Lithuania and Latvia.

The composite indicator combining the two indicators shows for 2014 Germany as best performer followed by Sweden and Denmark. They all have values better or around the EU-level median. The lowest performers are Poland and Estonia. Compared to the year 2008 the ranking did not change.

2.5.12 Environment: Waterbodies

Text Box 2-27: Explanation of the indicator: 'Waterbodies'

Anthropogenic activities adversely impact the waterbodies of Europe; mostly through the use pesticides and fertilisers in agriculture. Of which the latte leads to eutrophication of waterbodies, which negatively impacts the aquatic biodiversity, due to an excessive bloom of algae's.

In order to improve European Waterbodies, the EU commissioned the Water Framework Directive, which requires the Member States to achieve at least "Good Ecological Status" and "Good Chemical Status" of surface waters[1]. Ecological Status refers to biological and hydrological quality of the water, and its "chemical characteristics"[1]. The ecological status can be classified into four categories: High, Good, Moderate, and Poor. The chemical status describes in turn the water's quality in terms of it content of chemical substances, and is classified as either Good or Fail.

The categories of surface waters under this directive are coastal waters, transitional waters, rivers, and lakes.

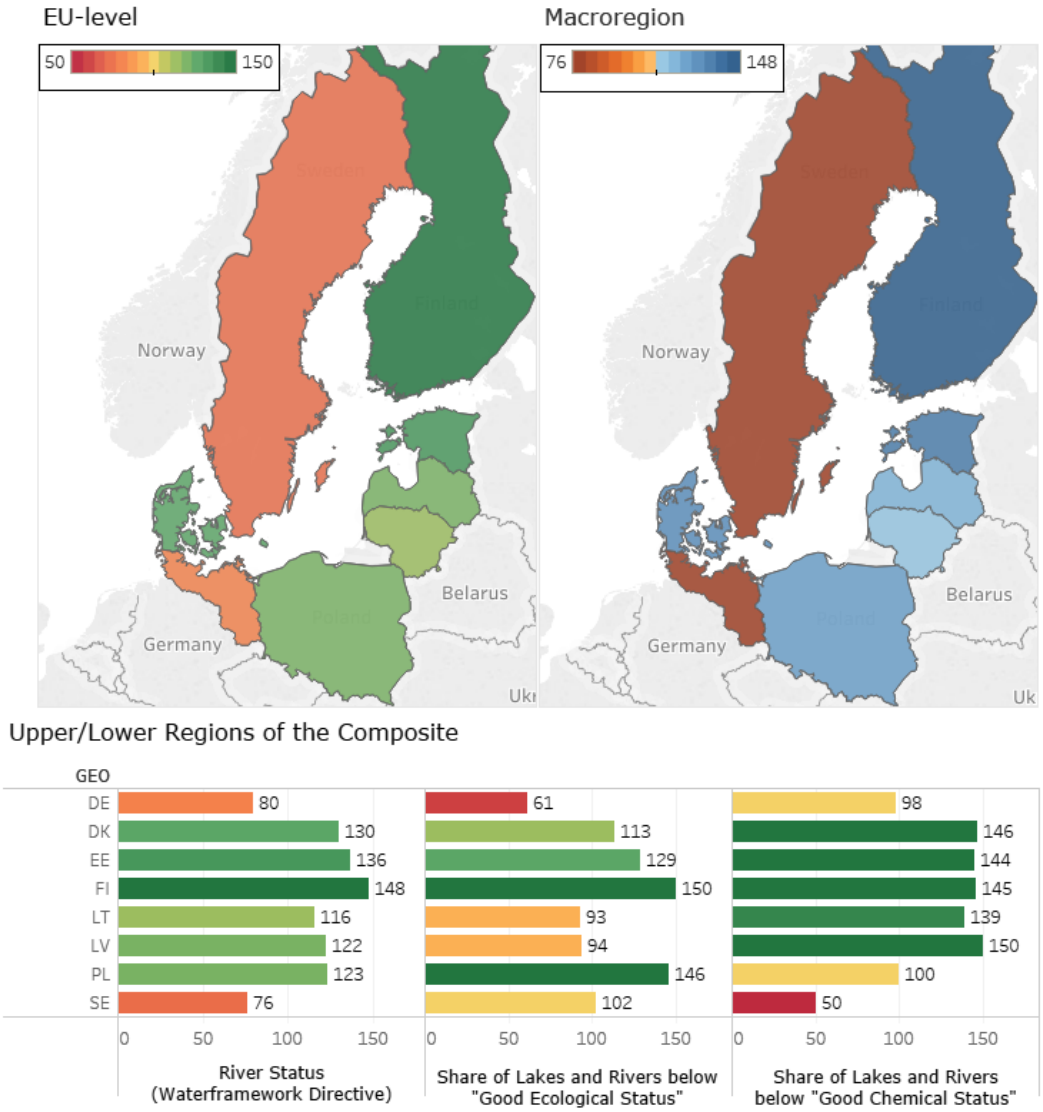
The Directive set 2015 as the year, until which all waterbodies had to achieve a good status. However, this was not achieved, and a re-drafting of the Water Framework Directive is scheduled before the end of this decade.

Fertiliser inputs from agriculture may also stream down into open seas. The resulting increased Nitrogen and Phosphorus concentrations promote the growth of phytoplankton. In order to estimate the biomass of phytoplankton, chlorophyll-a concentrations in water provide reliable inference [1]

The indicators in this section assess the share of waterbodies that are below good status. This is done for inland waterbodies (rivers and lakes) and sea waters (coastal and transitional waters) separately. For sea waters, also the chlorophyll-a concentrations are benchmarked.

Environment: River Status

Figure 2-35: River Status by country, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components

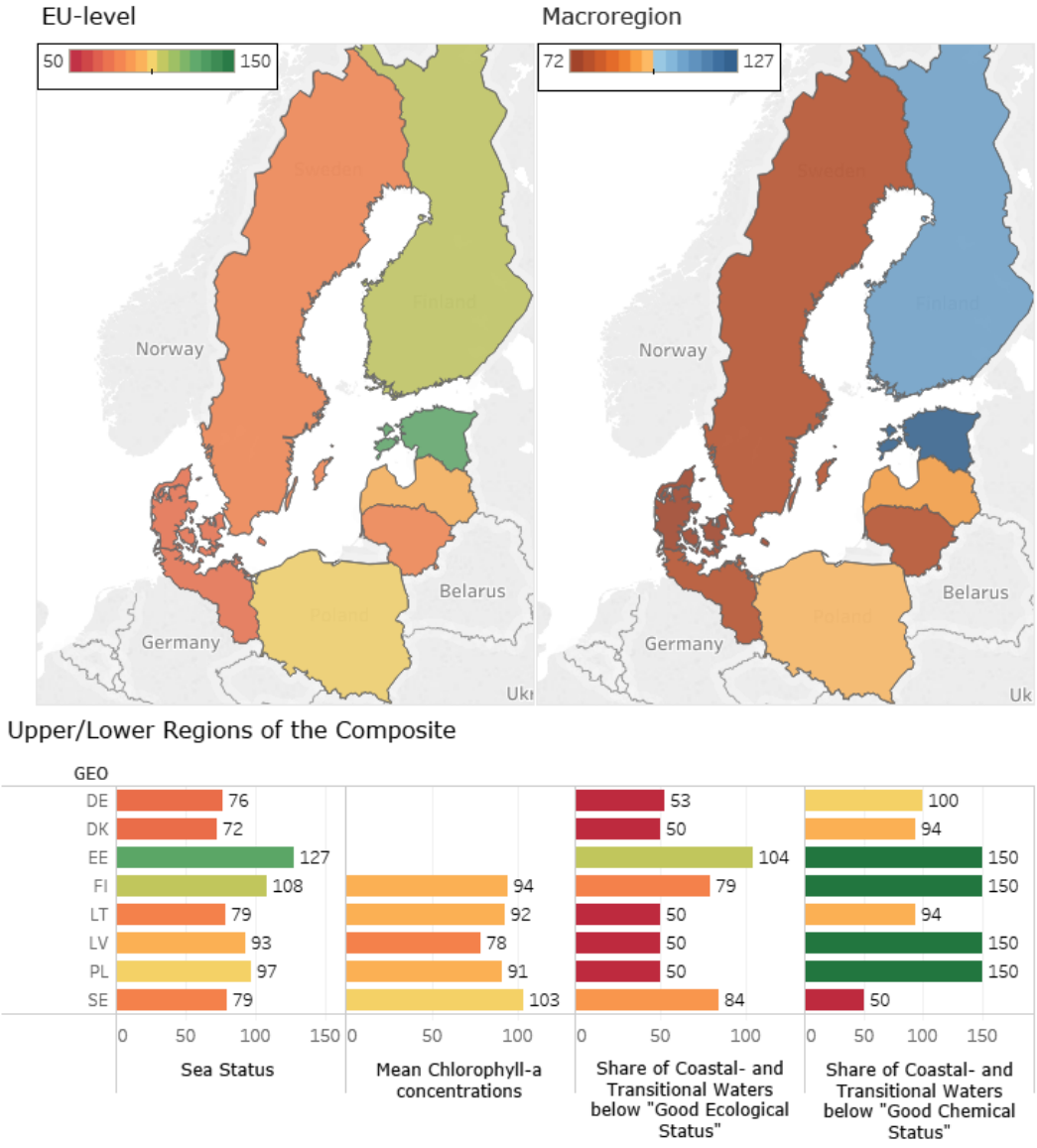


When considering the ecological status of rivers and lakes, Finland and Poland have the lowest share of waters of moderate, poor and bad quality with less than 20% followed by Estonia with about 28%. The highest shares of rivers and lakes of lower quality has Germany with a share of about 87%. For the other countries of the macro-region the share of moderate, poor and bad quality water range between 36% in Denmark and 51% in Lithuania.

A look at the chemical quality of rivers and lakes in the macro-region shows the largest share of fails in Sweden with almost 100% followed by Germany with more than 8%. The other countries of the macro-region register fail shares below 1% and thus a very good chemical quality of water.

Environment: Sea Status

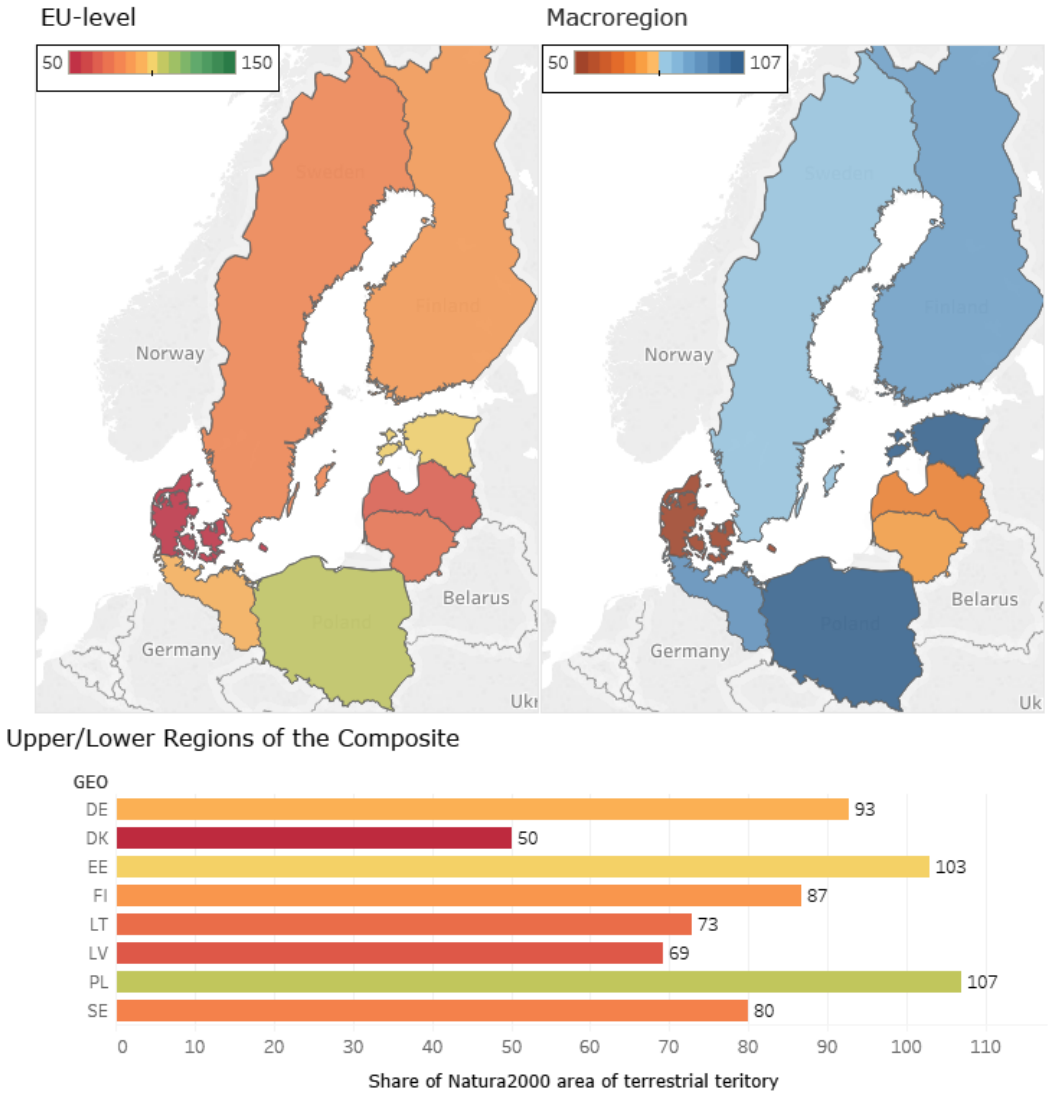
Figure 2-36: Sea Status by country, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the Upper/Lower Regions, including their components



The ecological status of transitional and coastal water is the best in Estonia with a share of waters of moderate, poor and bad quality amounting to about 68% and the lowest in Poland, Latvia, Lithuania and Denmark (100% share) as well as in Germany (99%). Slightly better water quality can be found in Finland and Sweden. The chemical quality of water is the lowest in Sweden with 100% fails and the best in Latvia, Poland, Finland and Estonia with 0% fails. The other countries show also a relatively good chemical quality of sea water.

2.5.13 Biodiversity: Natura 2000

Figure 2-37: Natura2000 share by country in 2015, on an EU-wide (top) and Macro-regional (middle) comparison. The bottom figure shows the benchmarked values for each country.



Text Box 2-28: Explanation of the indicator: 'Natura 2000'

The indicator shows what proportion of territory is covered by terrestrial Natura 2000 sites at the country level. This gives an indication of a country's efforts towards biodiversity, conservation and sustainable use of its territorial areas. It includes both sites designated under the Birds and the Habitats Directives, and accounts for any overlaps. The marine areas are not included in the proportion of land area, although some countries have designated substantial marine zones as Natura 2000 sites.

The indicator is published in the Natura 2000 Barometer (for the current value at the end of 2015) and the Natura Newsletter for other years.

Natura 2000 is "a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right."[70] It covers both terrestrial and marine zones in all 28 EU countries. The network includes sites designated under the Birds Directive and under the Habitats Directive. The indicator used is the proportion of land area covered by Natura 2000 sites under both Directives (see Text Box 2-28).

In the EU as a whole, 18% of land area is designated as Natura 2000 sites. The top performer in the EU is Slovenia with nearly 38% of its area designated as either Sites of Community Importance under the Habitats Directive, or Special Protection Areas under the Birds Directive (or both). Denmark, on the other hand, has only 8.3% if its area designated as Natura 2000 sites. The EU-median is 17%. These values are used for benchmarking the values of each country.

In the Baltic Sea macro-region, most countries exhibit values below the EU-median, with the exception of Poland and Estonia (see Table 2-8). Denmark is the EU-level lowest performer, hence scoring 50 on the benchmarked scale. However, Denmark has designated large marine areas as Natura 2000 sites, equivalent to nearly half of its land territory, which this indicator does not cover. The rest of the countries have designated between 11 and 16 % of their territory under one of the Directives. Overall, it seems that the region countries show similar tendencies in this respect, and that a similar level of priority is assigned to this issue.

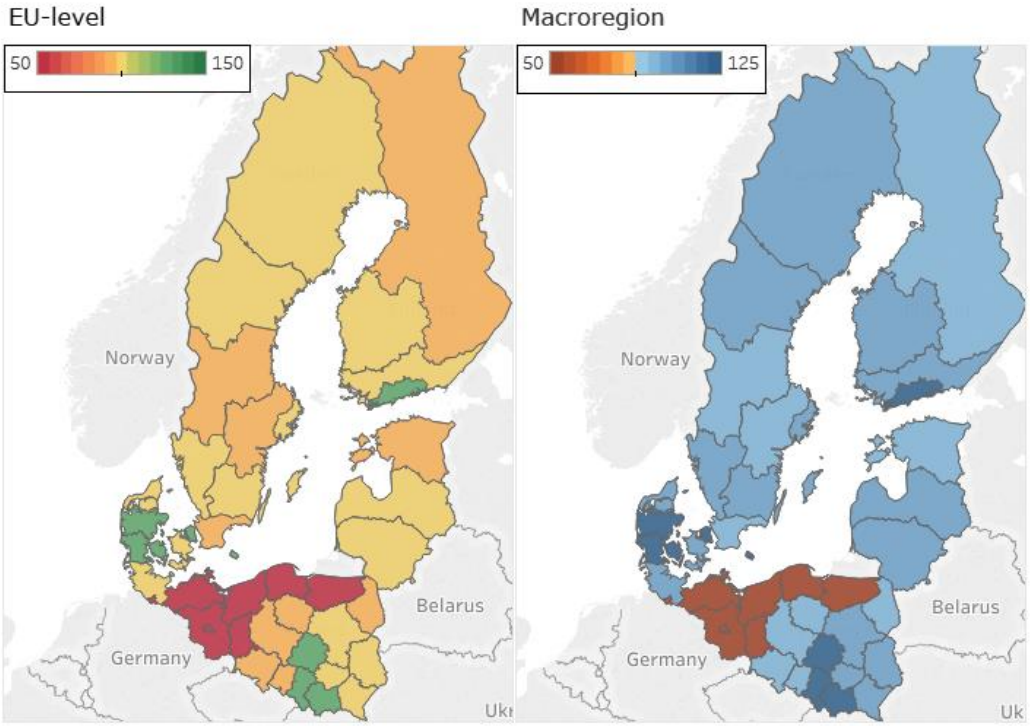
Table 2-8: Indicator and benchmarked indicator values for Natura 2000 indicator

Country	% of territory designated as Natura 2000 site	Benchmarked value
Germany	15.5%	93
Denmark	8.3%	50
Estonia	17.9%	103
Finland	14.4%	87
Lithuania	12.2%	73
Latvia	11.5%	69
Poland	19.6%	107
Sweden	13.3%	80

[70] http://ec.europa.eu/environment/nature/natura2000/index_en.htm

2.5.14 Diversity of Land Cover (Shannon Index)

Figure 2-38: Shannon Evenness Index by NUTS-2 in 2012, on an EU-wide (top) and Macro-regional (middle) comparison.



Text Box 2-29: Explanation of the indicator: 'Shannon Evenness Index'

Shannon Evenness Index (SEI) used here was obtained from the LUCAS survey data. LUCAS is carried out in the EU countries.

This index takes values between 0 and 1, where 0 represents a completely homogenous landscape, i.e. where all the area has only one type of land cover. On the other hand, the value of 1 represents a perfectly heterogeneous landscape, where all considered land cover types are present at equal amounts. Therefore when interpreting the values of this index, the higher values indicate higher land cover diversity. The indicator does not by itself provide a value judgement of different landscape types.

Note that due to the categorisation of data from the source, several regions score the same value on the benchmark. As a result, too many regions qualify as top or bottom scorers to be displayed in the bottom part of the figure.

As the results show, the NUTS-2 regions of Denmark record the highest SEI values. Four out of five Danish regions rank amongst the top 25%. This means they have high landscape diversity due to the fact that land cover patches seem to be smaller than the European average and so they often alternate with other types of land cover. Finland and Estonia have a low SEI value. This is due to the fact that they have a strong dominance of one land cover type, namely they are mainly covered by forests. Poland, Germany and Sweden have a balanced mixture with no clear dominant land cover type. Baltic Sea regions in Germany seem to show a lower diversity than other regions in the country.

2.5.15 Biodiversity: Coverage of marine protected areas in Europe's seas

This section discusses how much of the seas bordering on Europe are considered marine protected areas (MPAs).

Table 2-9 shows the proportion of sea area that is designated as marine protected area in the assessment area regions relevant to the Adriatic-Ionian Sea Region. It also includes other regions for comparison.

Table 2-9: Coverage of marine protected areas in 2012. Source: EEA; NM-nautical miles

Macro-region	MPA assessment area regions and sub-regions	% of 0-1 NM zone covered by MPAs	% of 1-12 NM zone covered by MPAs	% of 12 NM-END zone covered by MPAs
Baltic Sea macro-region	**Baltic sea**	36.1	16.4	3.9
-	**North-east Atlantic Ocean** (excl. Icelandic, Norwegian & Barents seas)	52.1	16.4	2.3
	Celtic Sea	47.5	8.9	2.3
	Greater North Sea	63.4	32.4	11.2
	Bay of Biscay and Iberian coast	48.9	15.8	1.7
	Macaronesia	28	4	0.6
Adriatic Ionian macro-region	**Mediterranean Sea**	30.6	14.2	6.1
	Western Mediterranean Sea	60.4	29.6	10.1
	Ionian and Central Mediterranean Sea	30.5	2.7	0
	Adriatic Sea	17	1.4	0
	Aegean and Levantine Sea	14.2	2.4	0
-	**Black Sea**	77.9	19.3	0

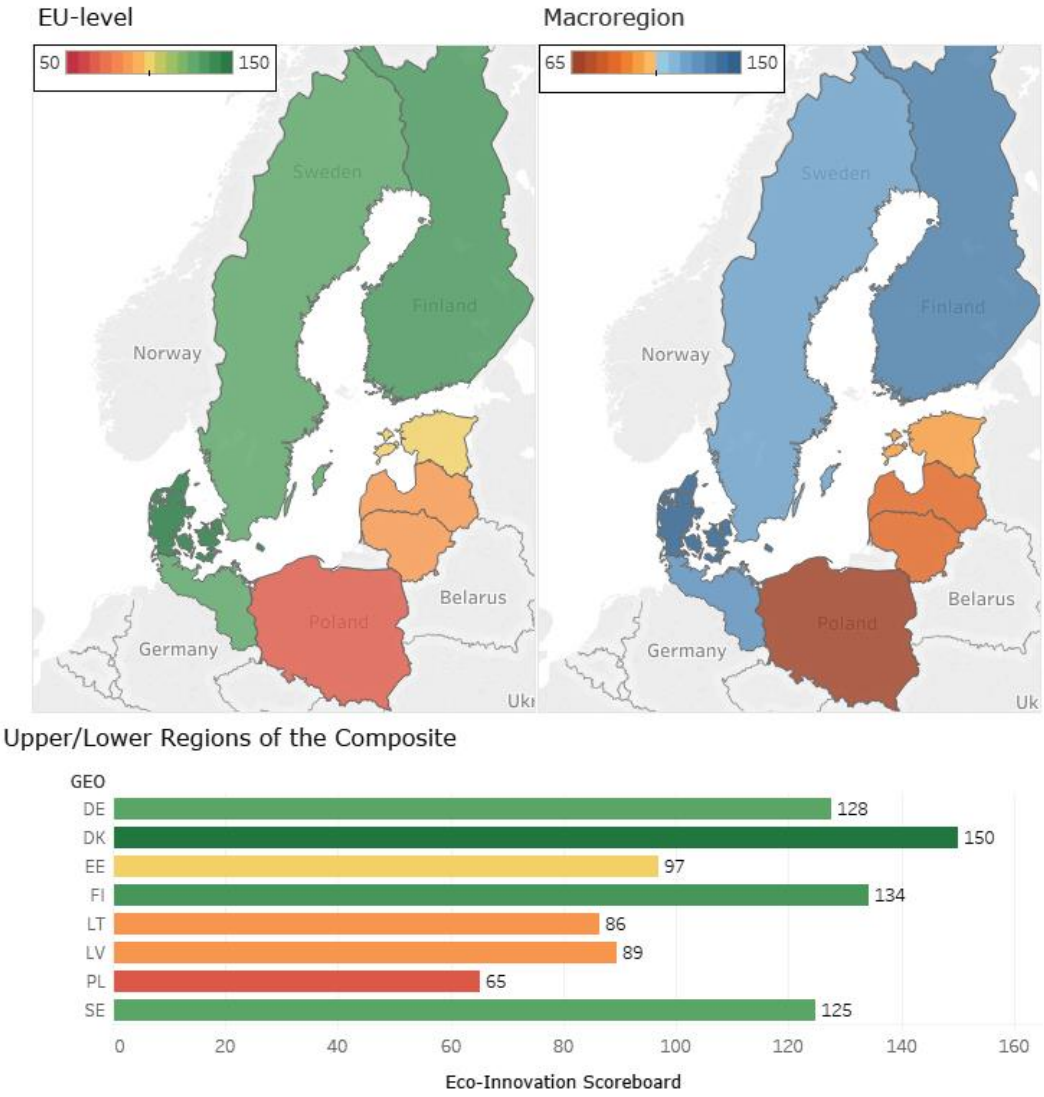
The first category, that is closest to the shore, is that with the highest proportion of Marine Protected areas. In the Baltic Sea, 36% of this zone is designated as MPAs. While compared to the Adriatic-Ionian Sea Region seas, this is a comparatively high value, other seas, such as Greater North Sea and the Western Mediterranean Sea have values over 60%.

The next zone is between 1 and 12 nautical miles from the shore and here the proportion covered by MPAs is half that of the zone closest to the shore, in the Baltic Sea. Similar level differences are observed in the "leader" seas, but the Adriatic-Ionian Sea Region seas have much lower values in this area. In this respect the Baltic Sea Region is showing higher commitment.

Finally in the last category, further than 12 miles from the shore, only 4% of the territory is covered by MPAs. However, in the seas bordering the Adriatic-Ionian Sea Region, there are no MPAs in this category. Overall, it seems that there has been more focus on this in the Baltic Sea Region.

2.5.16 Eco-Innovation Scoreboard

Figure 2-39: Eco Innovation Scoreboard by country in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-30: Explanation of the indicator: 'Eco-Innovation Scoreboard'[71]

The Eco-Innovation Scoreboard (Eco-IS) and the Eco-Innovation Index measure the eco-innovation performance across the EU Member States. Different aspects of eco-innovation are measured by using 16 indicators grouped into five dimensions: eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency and socio-economic outcomes. The Eco-Innovation Index pictures the performance of individual Member States in different dimensions of eco-innovation compared to the EU average by stressing their strengths and weaknesses. The Eco-IS and the Eco-Innovation Index show a picture on economic, environmental and social performance. [1]

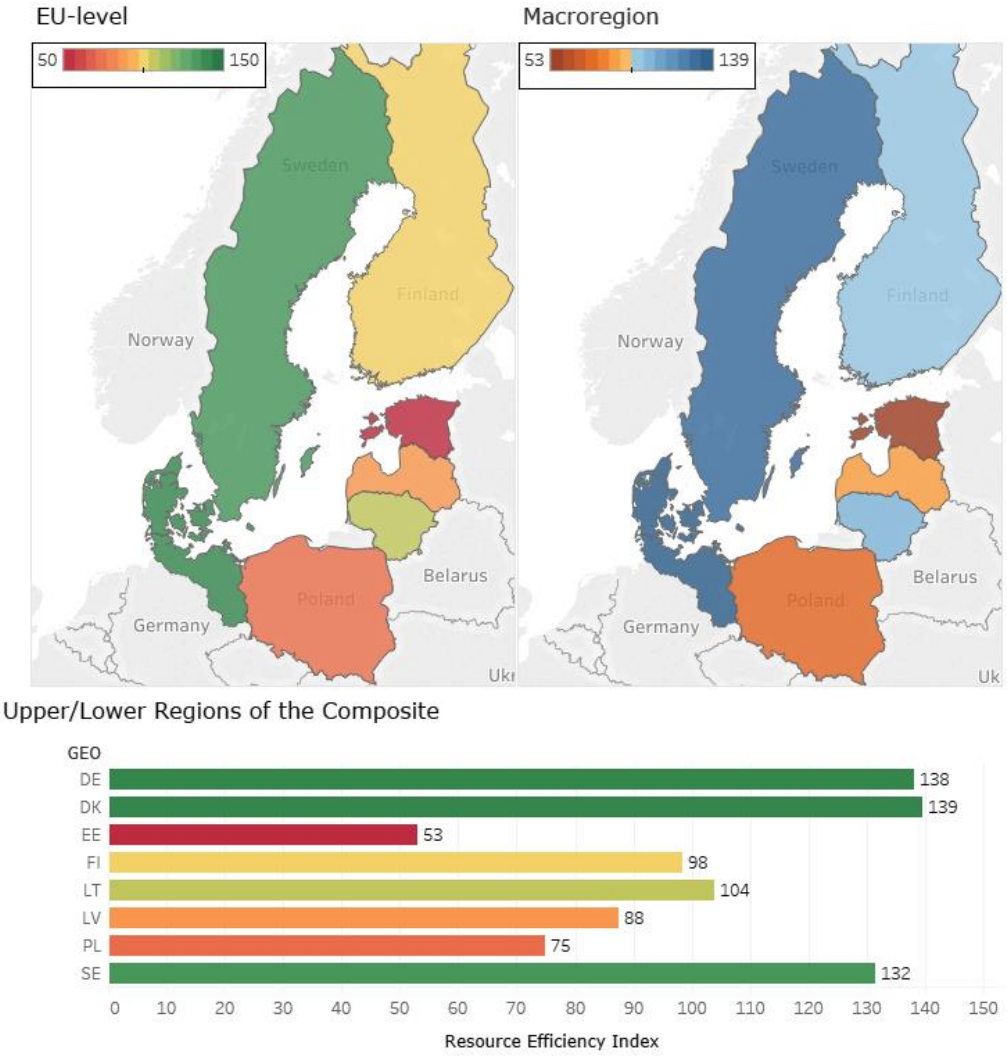
The Eco-Innovation Index is a composition of indices for eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency outcomes and socio-economic outcomes. Each of these indices consists of many sub-indices. It is only published for the Member States of the European Union. The latest data available refers to the year 2015. The basic value for this index is the average of all 28 Member States of the European Union.

In the Baltic Sea region, the best scoreboard value can be identified for Denmark, which lies 67% above the European average. Also Finland (40% above average), Germany and Sweden (29 and 24% above average) perform very well. The country which performed worst concerning the year 2015 is Poland, with a value of 41% below the average. Estonia, Latvia and Lithuania are located in the middle of the spectrum with values between 20% and 27% below the European average.

[71] https://ec.europa.eu/environment/ecoap/scoreboard_en

2.5.17 Resource Efficiency (composite of Eco Innovation Scoreboard)

Figure 2-40: Resource Efficiency by country in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-31: Explanation of the indicator: 'Resource Efficiency' [72]

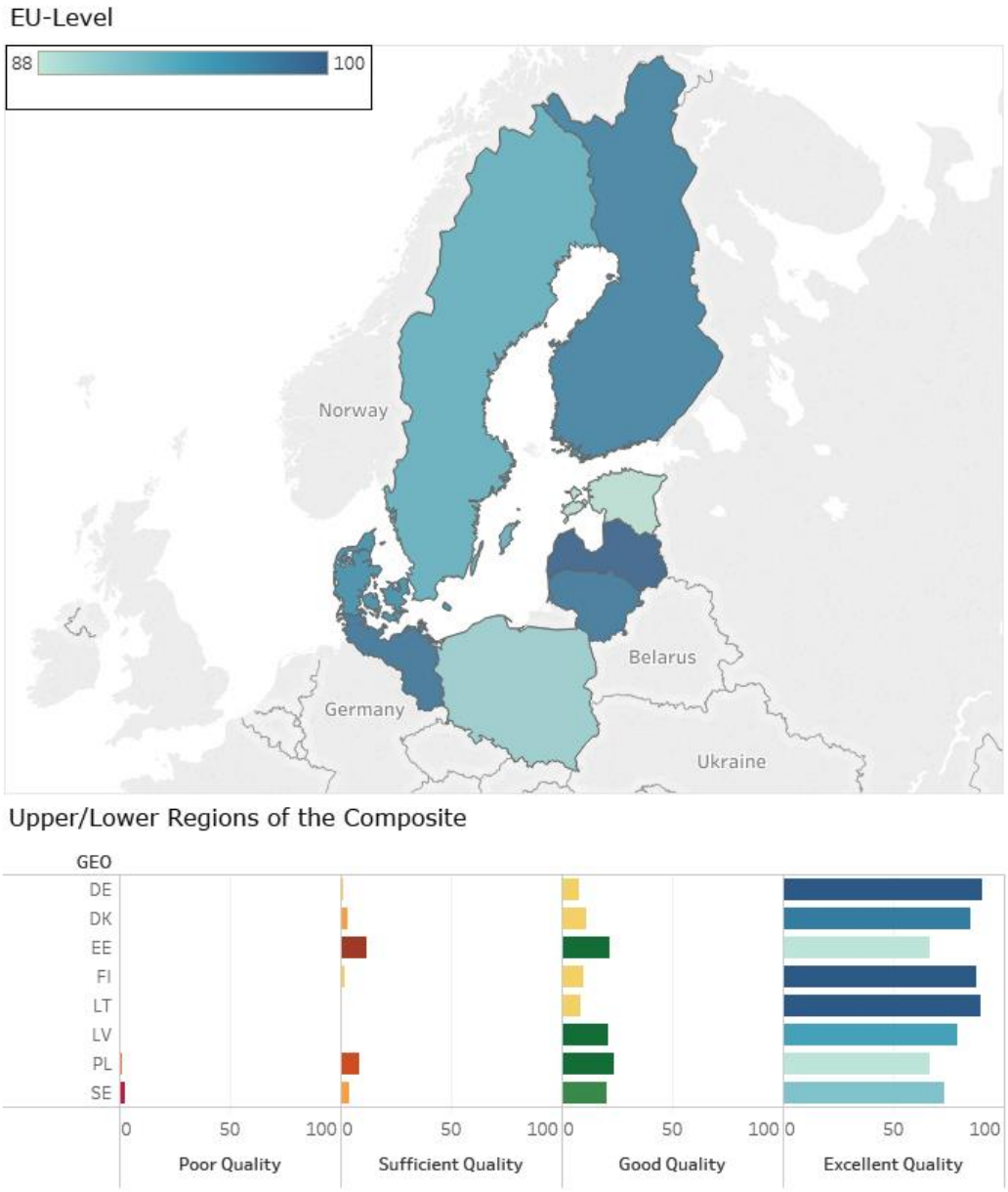
Eco-innovation can at the same time rise the creation of economic value, while reducing pressures on the natural environment.[1]
"The component of resource efficiency outcomes puts eco-innovation performance in the context of a country's resource efficiency. The four indicators in the component of resource efficiency outcomes are: Material productivity (GDP/Domestic Material Consumption), Water productivity (GDP/Water Footprint), Energy productivity (GDP/gross inland energy consumption), GHG emissions intensity (CO_2e/GDP)."[1]
The Resource Efficiency Index is only published for the Member States of the European Union. The latest data available refers to the year 2015. The basic value for this index is the average of all 28 Member States of the European Union.

In the Baltic Sea macro-region there are three countries which show an above average performance. These countries are Denmark, Sweden and Germany and they perform by 2% to 8% better than the European average. All other Baltic Sea countries show a performance below the EU-average. Lithuania and Finland are closer to the EU-average with scores which are 19% and 23% respectively below the average. The lowest performing country of this macro-region on this indicator is Estonia. Its indicator value is placed 52% below the EU-average. The two remaining countries, Latvia and Poland display a better performance than Estonia, but however worse than Lithuania and Finland.

[72] https://ec.europa.eu/environment/ecoap/scoreboard/resource-efficiency-outcomes

2.5.18 Bathing Water Quality

Figure 2-41: Bathing Water Quality by country in 2015. The top figure shows the percentage share of a country's Bathing Waters with a 'Good' or 'Excellent' status. The bottom figure shows the percentage share of waters in the respective status category (sums up to 100%)



Text Box 2-32: Explanationof the indicator: 'Bathing Water Quality'

The index of the bathing water quality of the evaluated regions is classified into four categories: excellent, good, sufficient and poor, which enables people to choose better quality bathing water. The indicator is expressed as proportion of bathing sites within each category. The report of the European Environment Agency published in 2016 was used for the analysis. It contains information about more than 21 000 European coastal and inland bathing water sites, from which 85% show an excellent water quality.

Note that since the analysis was conducted a new report was published (on the 23rd of May 2017).

The theme bathing water quality consists of indicators evaluating the water quality for various kinds of water categories such as river, lake, coastal water and transitional water. The analysis is based on the information provided by the European bathing water quality report which is published every year by the European Environment Agency (EEA) and the European Commission, in order to help citizens to make informed choices concerning their touristic destinations.

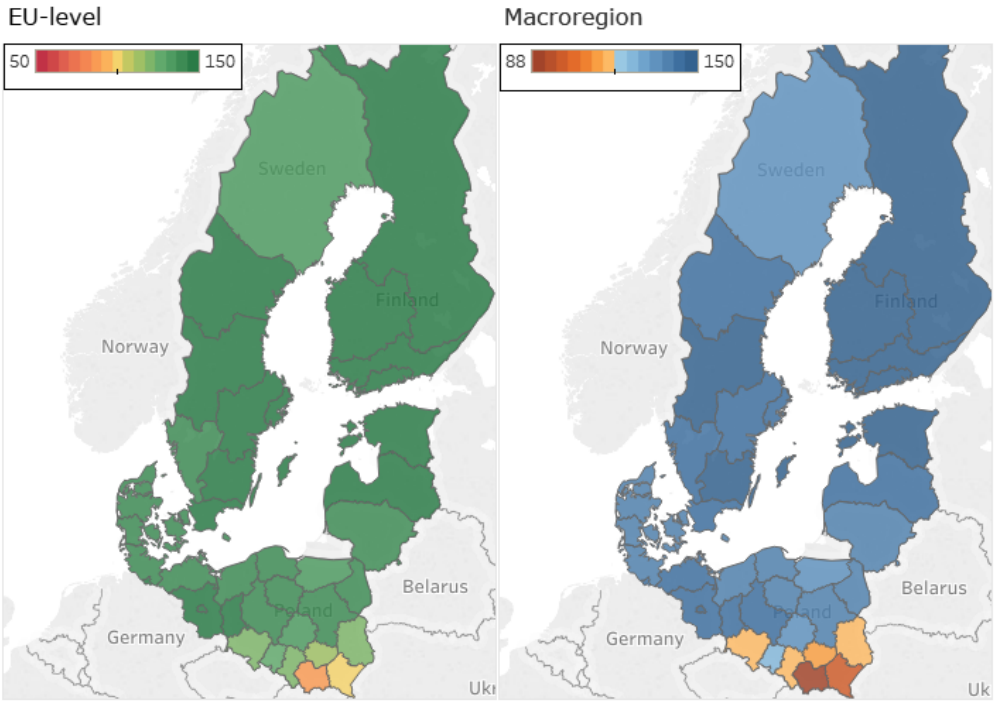
The EEA report assesses the bathing water quality of all 28 EU Member States as well as of Albania and Switzerland.

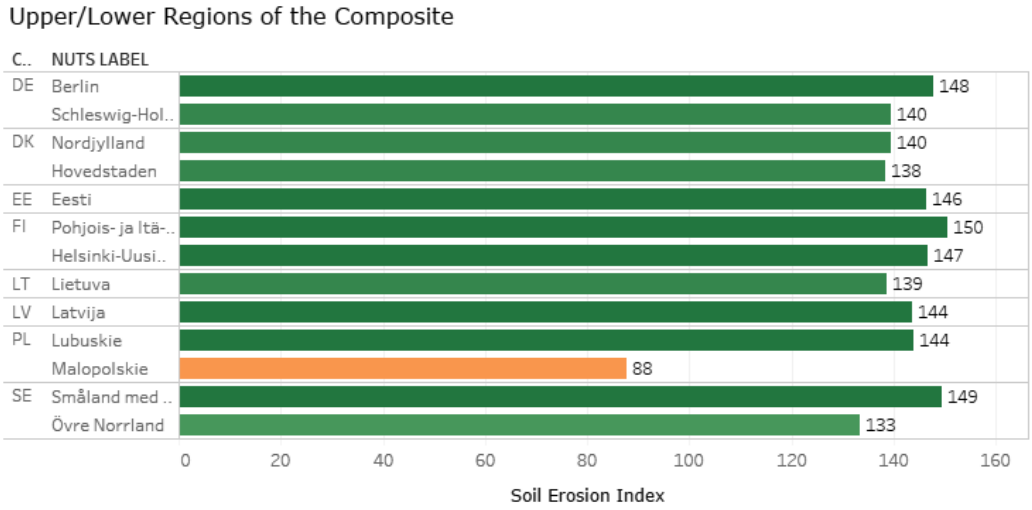
Within the Baltic Sea macro-region the water sites of eight EU Member States are evaluated in the EEA report. Germany shows the best results. 90.3% of Germany's water sites show an excellent bathing water quality. In Finland 92.4% of the water sites are reported to meet the directive's standards of having at least a good water quality (with 83.1% classified as excellent). The same can be said about Lithuania, where the bathing water quality index also indicates that a vast majority of all water sites have an excellent or a good water quality. In Latvia and Estonia all assessed water sites in 2015 achieved at least a "sufficient" water quality, according to the minimum quality standards of the directive. According to the EEA, 120 out of 197 water sites in Poland (or 60.9%) have an excellent bathing water quality, 43 more are classified as good. Nevertheless, around 10% of the country's water sites were identified as having only sufficient or poor water quality.

2.5.19 Agricultural Impact

Soil erosion by water

Figure 2-42: Soil Erosion by NUTS-2 in 2010, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components.





Text Box 2-33: Explanation of the indicator: 'Soil Erosion by Water'

The indicator used here is one of the 28 Agri-environmental indicators used to monitor environmental aspects under the EU's agricultural policy. It is expressed as estimated erosion of soil in tonnes per hectare per year[73] (i.e. how many tonnes of soil from a hectare is removed by water and deposited elsewhere). The indicator is aggregated for NUTS-3 region level, thus allowing assessment in the macro-regions. This indicator is not measured, but modelled using the Revised Universal Soil Loss Equation (RUSLE) model, methodology developed and documented by JRC.[74] The indicator is re-published by Eurostat, dataset [*aei_pr_soiler*], with the latest year 2010 at the time of downloading. This indicator covers the territory of the EU28, hence candidate and potential candidate countries are not included in the dataset.

Higher values of this indicator show higher erosion, hence poorer performance. When benchmarking, the scale is inverted, so higher values indicate a better situation, i.e. lower erosion.

Benchmark is calculated on a country level (i.e. EU-median, top and lowest performer on a country level), therefore some NUTS-2 regions may score below the minimum benchmark (50), or above the maximum benchmark (150).

Soil erosion is defined as the displacement of material from the land surface by water (rainfall, irrigation, and snowmelt) or wind. It is considered one of the main threats to soil, as acknowledged by the European Commission's Thematic Strategy for Soil Protection[75]. The strategy stresses the importance of soil and the impact erosion and other types of soil degradation has on the climate, water quality, food safety and biodiversity. Soil formation is a very slow process, and heavily eroded or otherwise degraded soil would take hundreds of years to regenerate. The rates of regeneration differ, and are estimated to be around 1.4t/ha/year in Europe (Verheijen et al., 2009[76]). According to JRC, to protect most vulnerable soils, rates of soil erosion above 1 tonne per hectare per year should be considered unsustainable, and more than 10 t/ha/year indicate a high-risk[77]. Indicator showing specifically soil erosion by water was chosen for two reasons. First, this type of erosion is more widespread than wind erosion.

[73] http://ec.europa.eu/eurostat/statistics-explained/index.php/Agri-environmental_indicator_-_soil_erosion

[74] Panagos, P., Borrelli, P., Poesen, J., Ballabio, C., Lugato, E., Meusburger, K., Montanarella, L., Alewell, .C. 2015. The new assessment of soil loss by water erosion in Europe. *Environmental Science & Policy*. 54: 438-447

[75] Communication COM(2006) 231; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52006DC0231

[76] F.G.A. Verheijen, R.J.A. Jones, R.J. Rickson, C.J. Smith. 2009. *Tolerable versus actual soil erosion rates in Europe*. Earth-Science Reviews, 94 (1–4) (2009), pp. 23–38. This paper defines "upper limit of tolerable soil erosion" as that equal to the rate of soil formation.

[77] JRC. 2012. *The state of soil in Europe.* A contribution of the JRC to the EEA Environment State and Outlook Report.

Second, even though no actual measures of erosion rates exist on the European level, there are good quality estimates for the entire territory of the EU, at a high level of resolution. For more information on the indicator used, see Text Box 5-19.

Data shows that the average erosion in the EU28 is 2.46 t/ha/year (Eurostat; Panagos *et al*, 2015). Generally the situation is better in the northern countries than elsewhere, the country with lowest erosion rate being Finland at 0.06t/ha/yr. Italy is on the opposite end of the scale with 8.5t/ha/yr. These values as well as the EU-median (2.1t/ha/year) are used in the benchmarking.

The vast majority of regions within the Baltic Sea macro-region have soil erosion values below 1 tonne per hectare per year, therefore this macro-region has a lower risk in this respect. The reasons for northern countries performing better in this respect are lower rainfall erosivity (amount and intensity of rain) and higher vegetation cover[78]. Finland has the best performance both on the country and regional level. Pohjois- ja Itä-Suomi is the region with erosion rate of only 0.045 tonnes per hectare per year, which is a good margin below the regeneration rate, and the "safe" rate of soil erosion. Sweden and Denmark and their NUTS-2 level regions also show values significantly better than the EU-median, and so do Estonia, Latvia and Lithuania.

Germany shows an interesting pattern in that its country level value is significantly different from the values of the regions in the Baltic Sea macro-region. Soil erosion in Germany is estimated to be 1.3t/ha/yr, while in the Baltic Sea macro-region, the values range from 0.2 in Berlin to 1.5 in Schleswig-Holstein.

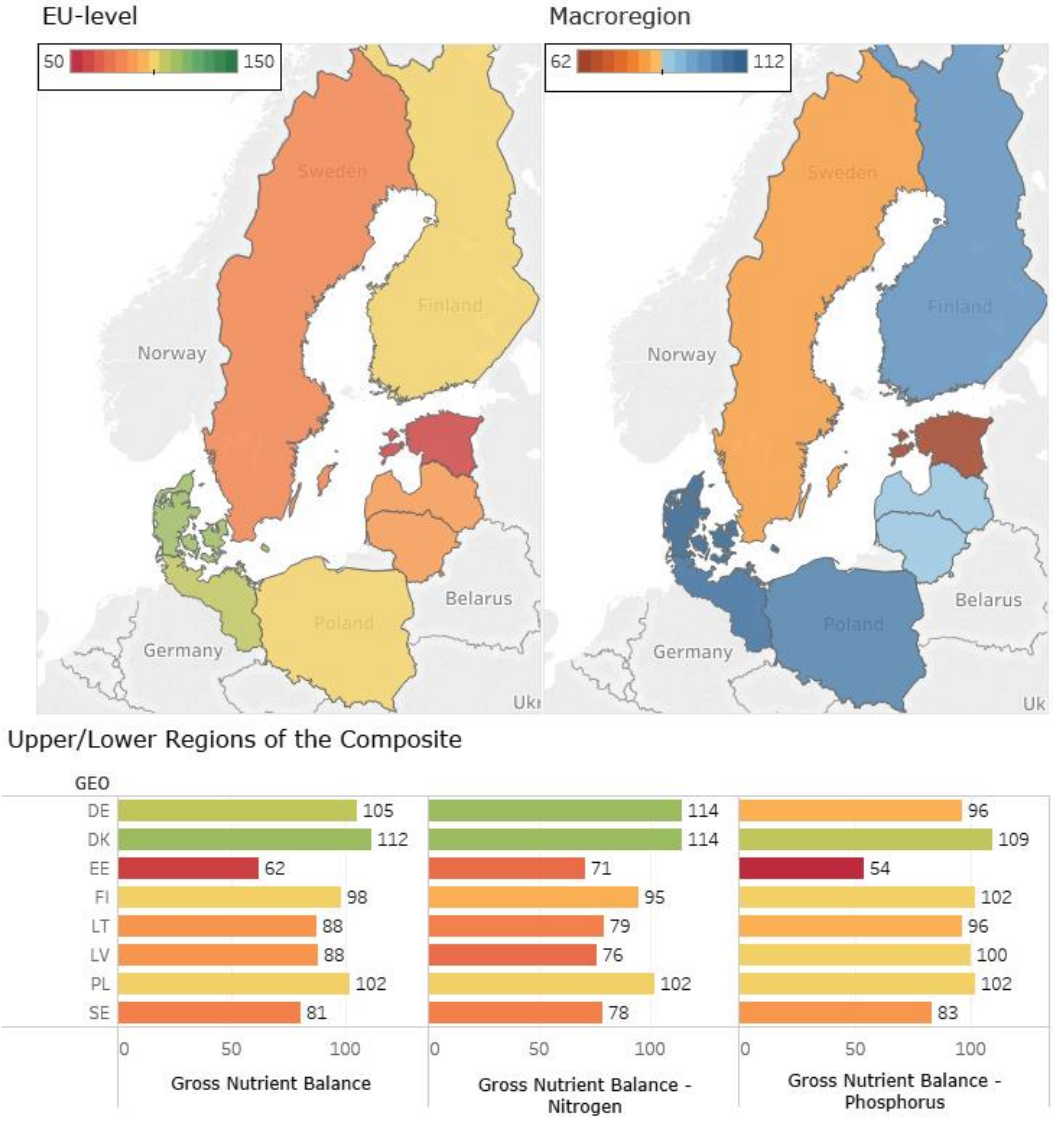
In the Baltic Sea macro-region, the most affected by soil erosion are the southernmost NUTS-2 regions in Poland, even though they are not too far behind the EU-median. The regions which are the most affected by soil erosion by water are Malopolskie with a rate of erosion of 3.6 t/ha/yr and Podkarpackie with 2.2 tonnes per hectare per year. These are the regions in hillier or mountainous areas. Moreover, Maloposkie has a particularly warm and humid climate.

Overall, the Baltic Sea region performs very well in terms of soil erosion levels. The regional detail in Germany and Poland, seen alongside the results in other macro-regions, seem to show that common geographical location and climatic conditions can be defining factors in terms of defining common strategies to address challenges presented by certain natural features. In the Baltic-Sea macro-region, addressing soil erosion is likely to be of lower priority than, for instance, in the Alpine macro-region.

[78] ibid (JRC, 2012)

Gross Nutrient Balance

Figure 2-43: Gross Nutrient Balance by country in 2013, on an EU-wide (top) and macro-regional (middle) comparison. The bottom figure shows the indicator values by country



Text Box 2-34: Explanation of the indicator: 'Gross Nutrient Balance'

According to EEA[79], the indicator Gross Nutrient Balance "estimates the potential surplus of nitrogen on agricultural land". The estimation accounts for nitrogen and phosphorus additions to agricultural lands as well as the amounts that are removed from the system, via crops harvested and eaten by feedstock.

The indicator measures the balance of nutrients, expressed as kg of nitrogen and phosphorus per ha of Utilised Agricultural Area (UAA).[80]

The data is available for EU countries only.

The composite indicator is the average of benchmarked gross nitrogen balance and gross phosphorus balance values.

The strong use of artificial fertilisation for crops in Europe, or more generally a surplus of nutrients, has several implications on the environment, of which most prominent are eutrophication and nitrification. While a too high and too long a surplus is not desirable, a deficit can also have negative implications for land-use.

In the Baltic Sea macro-region the highest gross nutrient balance (including nitrogen and phosporus) on country level can be found in Denmark (95 kg/ha), followed by Germany (85 kg/ha), and Poland (59 kg/ha). Finland, Sweden, Lithuania, and Latvia range in the middle with values between 49 kg/ha in Finland and 31 kg/ha in Latvia. The lowest gross nutrient balance of the macro-region can be found in Estonia (15 kg/ha). In the European context, the Estonian value is very low, much below the EU-level median, while Denmark and Germany are somewhat above the EU-median, showing relatively large differences in soil status in the Baltic region.

2.6 Political, Institutional, and Governance factors

The political, institutional and governance indicators draw a picture on the political state of the macro-region. The indicators in this section inform about the quality of governance and the institutional capacity. In the context of Cohesion Policy, these indicators essentially reflect the likely capacity of the macro-region's countries to effectively pursue interventions on the economic, social as well as territorial cohesion.

In addition, the selected indicators in this chapter inform about the quality of civil freedom as well as the enforcement of law on macro-regionally relevant

[79] URL: http://www.eea.europa.eu/data-and-maps/indicators/gross-nutrient-balance-1

[80] http://ec.europa.eu/eurostat/cache/metadata/EN/aei_pr_gnb_esms.htm

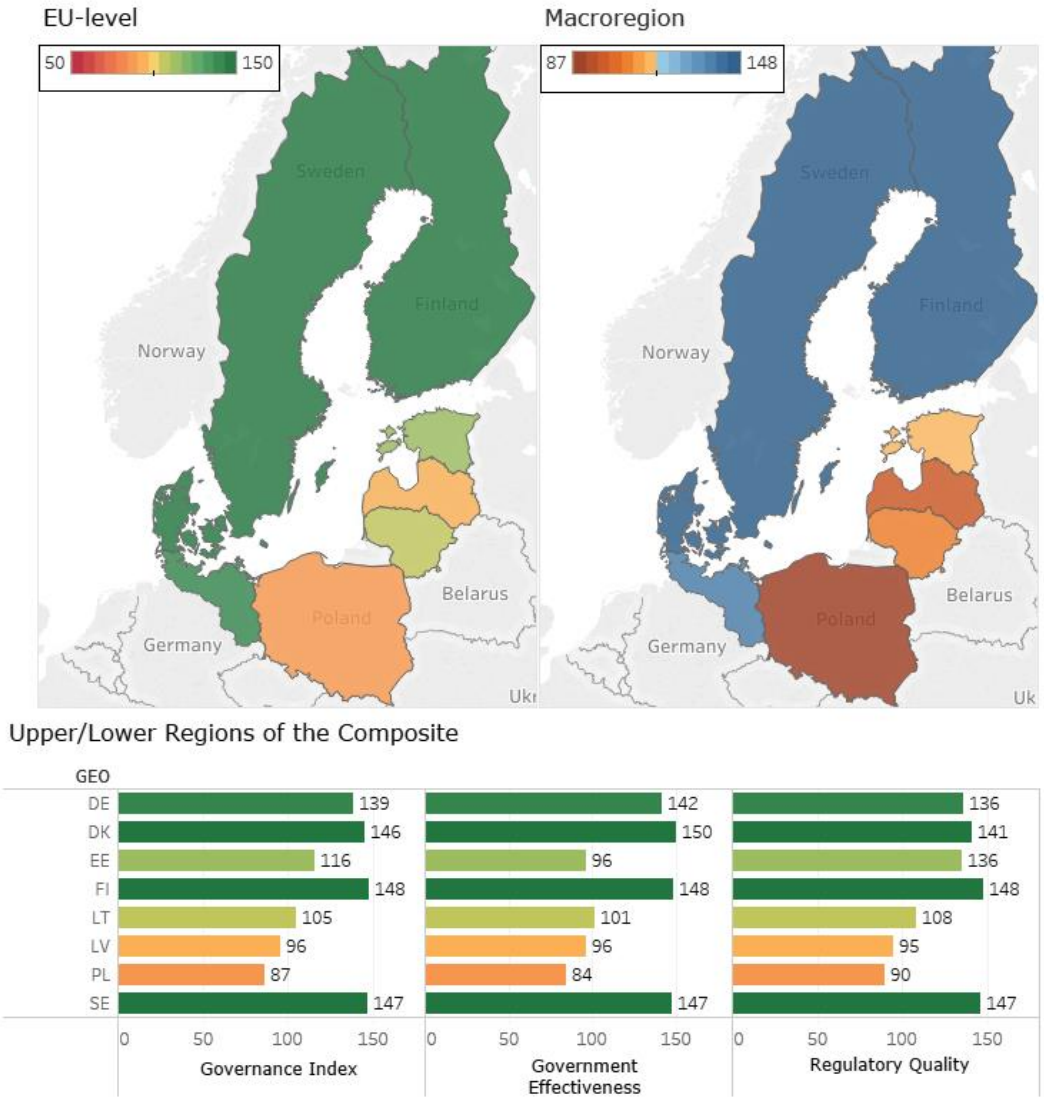
problems: Human trafficking and Drugs. The selected indicators are shown in the table below.

Table 2-10: Overview of Political, Institutional & Governance indicators

Composite	Components
Governance	Government effectiveness
	Regulatory Quality
Public Institutions	*none*
Voice & Accountability	*none*
Human Trafficking	*none*
Number of Drug Seizures	*none*

2.6.1 Governance

Figure 2-44: Governance by country in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-35: Explanation of the indicator: 'Governance'

Governance is defined as the "processes of governing […] undertaken by a government […] over a […] territory […] through laws, norms, power or language."[81] It includes "the processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions."[82] In this context, a government has the responsibility and authority to make binding decisions in a given geopolitical system (such as a state) by establishing laws.[83] Thus, Governance refers to the way the rules, norms and actions are structured, sustained, regulated and held accountable. A government may operate as a democracy, where citizens vote on the people who govern with the aim to achieve a public good.

The governance of the macro-region is analysed using two governance indicators: Regulatory Quality and Government Effectiveness. Regulatory Quality refers to "the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development"[84]. Government Effectiveness reflects the "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies."[85] Both indicators are part of the Worldbank's broader Worldwide Governance Indicators (WGI) Project of the World Bank Group.[86]

An analysis of the composite indicator Governance shows a high quality of governance in Finland, Sweden, and Denmark with a score above 140 points. Germany and Estonia follow with a score of 139 and 116, respectively. Lithuania reaches with 105 a score above the EU-median. Values below the EU-median were recorded only in Latvia (96) and Poland (87). However, all countries have made considerable progress in the period 2008 to 2015 on improving governance.

As a whole, the macro-region performs above the EU-median, and thus stands better on governance than the rest of Europe, with the exception of two countries (Latvia and Poland) which at the same time perform only limitedly below the median. It should also be noted that these two countries show considerable improvements since 2008, with scores of 81 and 73 respectively.

---

[81] *Bevir, Mark (2013). Governance: A very short introduction. Oxford, UK: Oxford University Press.*

[82] *Hufty, Marc (2011). "Investigating Policy Processes: The Governance Analytical Framework (GAF). In: Wiesmann, U., Hurni, H., et al. eds. Research for Sustainable Development: Foundations, Experiences, and Perspectives.". Bern: Geographica Bernensia: 403–424.*

[83] Wikipedia 2017, https://en.wikipedia.org/wiki/Governance

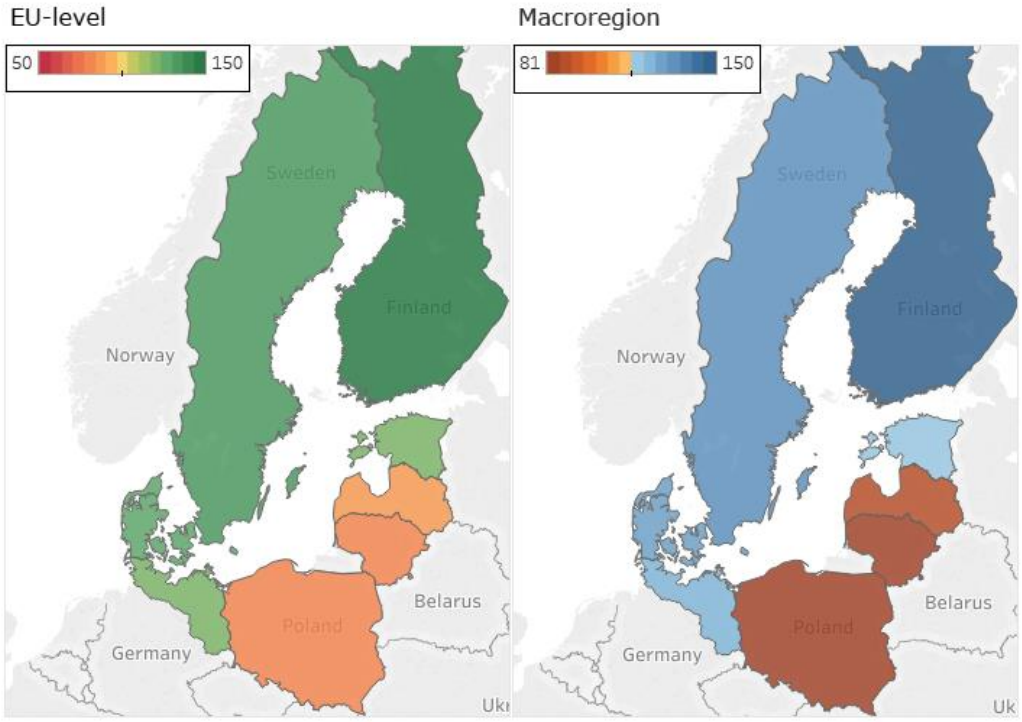
[84] URL: http://info.worldbank.org/governance/wgi/pdf/wgi.pdf

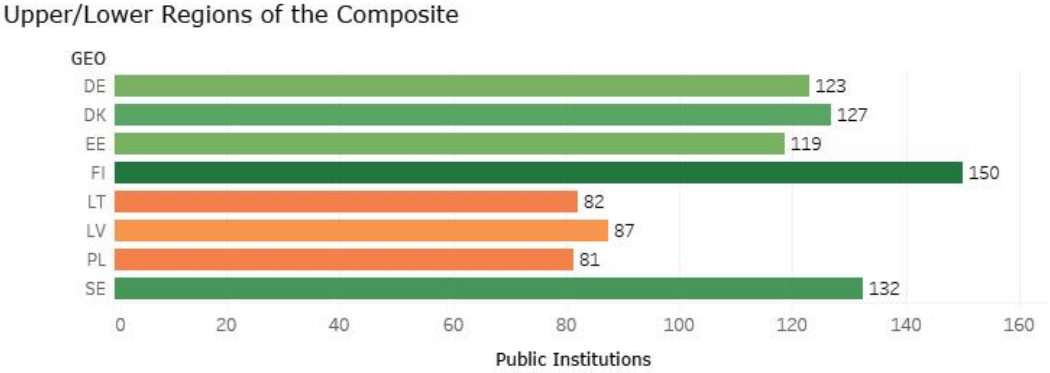
[85] URL: http://info.worldbank.org/governance/wgi/pdf/wgi.pdf

[86] URL: http://info.worldbank.org/governance/wgi/#home

2.6.2 Public Institutions

Figure 2-45: Public Institutions by country in 2015-2016, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-36: Explanation of the indicator: 'Public Institutions'

The indicator on public institutions is a composite of the World Economic Forum's (WEF) Global Competitiveness Index for 2016[87]. This composite consists in turn of indicators on 'property rights', 'ethics and corruption', 'undue influence', 'public-sector performance', and '(public) security'. The public institutions indicator thus reflects the quality with which public entities ensure that the "basic requirements" [88] of a competitive/fair economy are upheld. Vice-versa, it also reflects how much of an existing factor unfair or preferential treatment is. To a limited degree, this indicator also reveals the institutional capacity, mostly reflected through the 'public-sector sector performance' composite. At last, this indicator provides partial inference on the compliance with the EU-Acquis, chapter 23, Judiciary and fundamental rights[89].

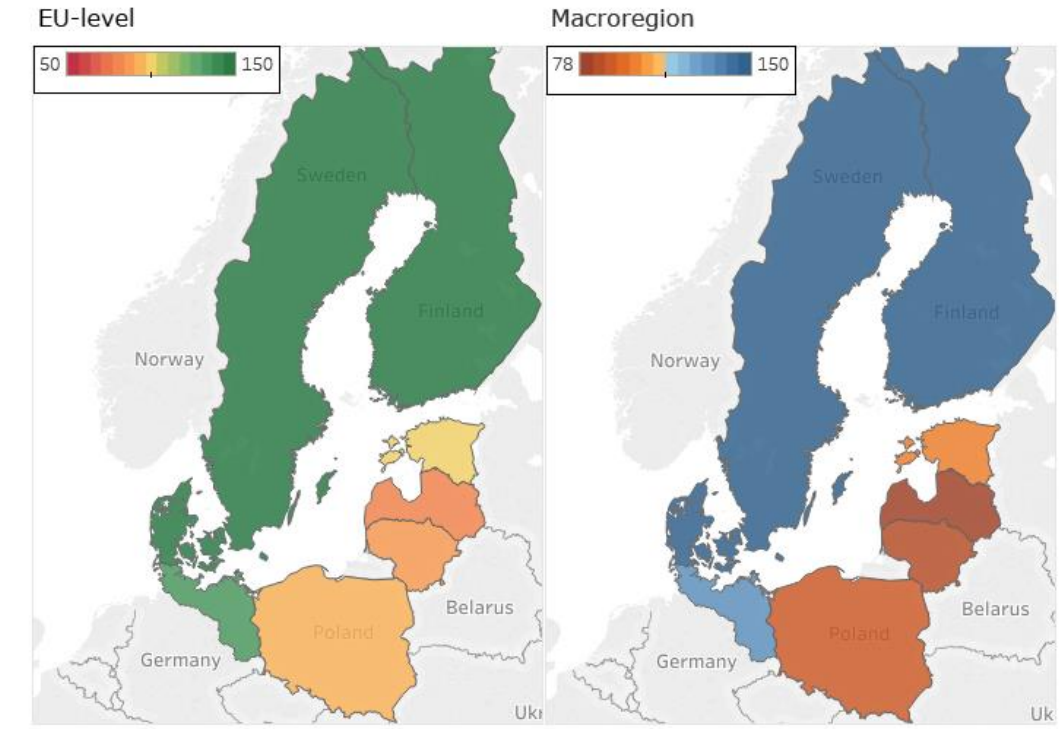
An analysis of the indicator Public Institutions shows a high quality of public institutions in 2016, with Finland performing as the EU's top performer (150). The Nordic countries, as well as Germany and Estonia also perform strong above the EU-median (scores of 119-132). The quality of public institutions has particularly improved since 2008 in Finland, Sweden and Estonia. An opposite development can be seen for Denmark and Germany, of which the former traditionally scored as the top performer of the EU until 2010. This corresponds to an astonishing drop of 20 points on the benchmark.

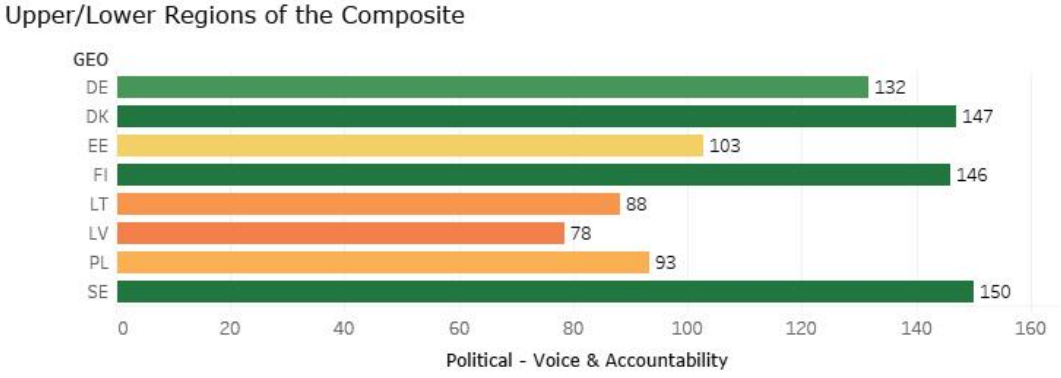
The seemingly strong performance of the Baltic Sea is however complemented by three bottom performers: Lithuania, Poland, and Latvia, scoring between 82 and 87 points. However, Latvia and Poland both improved the quality of their public institutions considerably since 2008, while Lithuania only improved marginally. At last, Poland's scores decreased since 2015, when the national cabinet of Beata Szydło was put in place.

[87] World Economic Forum, Global Competitiveness Index, http://reports.weforum.org/global-competitiveness-report-2015-2016/institutions/
[88] World Economic Forum, Global Competitiveness Index, http://reports.weforum.org/global-competitiveness-report-2015-2016/institutions/
[89] URL: https://ec.europa.eu/neighbourhood-enlargement/policy/conditions-membership/chapters-of-the-acquis_en

2.6.3 Voice and Accountability

Figure 2-46: Voice and Accountability by country in 2015, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components





Text Box 2-37: Explanation of the indicator: 'Voice and Accountability'

The indicator Voice and Accountability mirrors "*the freedom of a country's citizens in selecting their government, as well as freedom of expression, freedom of association, and a free media."*[90] In its essence, it is an indicator on democracy, i.e. civil freedoms and the therewith indirect accountability of governments', as a result of freedom of expression and free media. As with the public institutions indicator, this indicator provides partial inference on the compliance with the EU-Acquis, chapter 23, Judiciary and fundamental rights[91]. The underlying indicator is part of the Worldbank's broader Worldwide Governance Indicators (WGI) Project of the World Bank Group.

An analysis of the indicator Voice and Accountability shows, similarly to the cases above, that the Nordic countries and Germany perform among the top of Europe (132 – 150), with Sweden even being the EU's top performer. In all of those countries, except Denmark, the performance has increased between 2008 and 2016, of which particularly in Germany.

The lower end of the macro-region consists of the Baltic countries and Poland, which all strongly improved on voice and accountability over these past 8 years. Nevertheless, these countries, except for Estonia, perform below the EU-median. When comparing the performances of the new Member States over the three preceding indicators (governance, public institutions, and voice and accountability), Estonia always scored notably higher than the other countries.

[90] URL: http://info.worldbank.org/governance/wgi/pdf/va.pdf

[91] URL: https://ec.europa.eu/neighbourhood-enlargement/policy/conditions-membership/chapters-of-the-acquis_en

2.6.4 Human Trafficking

Figure 2-47: Human trafficking in Europe, Source: Eurostat Report on Trafficking in Human Beings 2015

Country of origin / citizenship of victims reported	Countries reporting victims in 2010 - 2012, sorted in decreasing order of the number of registered victims by citizenship EU, EFTA, EU Candidate and Potential Candidate Countries																											Total Registered Victims
	RO	BG	NL	HU	PL	FR	SK	DE	LV	CZ	RS	LT	UK	ES	EE	HR	IE	EL	SI	BE	IT	CH	FI	DK	CY	LU	MT	IS	
Romania	3 230		218	<5	65	427		434		6	<5		493	464		<5	19	126	<5	62	472	13	5	23	24	7	<5		6 101
Bulgaria		1 698	421		44	167	<5	370		35	<5		63	29			5	75	<5	49	50	13		<5	15	<5	<5		3 043
Netherlands			1 079										<5																1 080
Hungary	<5		394	153	<5	40		156					243				<5	<5	9	<5		41		<5					1 046
Poland			187		263	12		92		<5		<5	405				5			6		<5	<5	<5		<5			976
France			<5			476		<5					6													<5		<5	491
Slovakia			49				78	26		10			296						6	6		<5		<5					477
Germany		<5	19			<5		389					<5																415
Latvia			12					25	277	<5			34				<5	<5						<5	<5				355
Czech Republic		<5	26			<5		41		34			233				<5		5	<5			<5	<5					351
Serbia	<5		<5			5		20			230		<5			<5		<5	<5	5									269
Lithuania			22			<5		16				50	146				<5	<5						<5		<5			244
United Kingdom			6			<5							197							<5									205
Spain			<5			8		<5					<5	117															132
Estonia			<5					<5					<5		55								8		<5	5			77
Turkey			11					41			<5		<5							<5			<5		<5				61
Croatia			<5								<5					25				<5		<5							32
Ireland													<5				31												32
Portugal			9			<5		<5					7							<5				<5		<5			27
Greece	<5		5					<5										4							<5				14
Slovenia								<5											12										13
Belgium			<5			<5		<5					<5																8
Italy			<5		<5	<5		<5					<5																6
Montenegro								<5			5																		6
Austria			<5			<5					<5											1							4
Switzerland						<5																	<5						3
Finland			<5																				1						2
Norway								<5																					2
Denmark																								1					1
Cyprus																									1				1
Total victims	3 233	1 700	2 476	156	375	1 153	79	1 626	277	87	241	51	2 138	610	55	29	66	212	40	142	522	73	20	39	47	22	4	1	15 474

Key: Citizens of reporting country; 10 – 99 victims; 100 – 399 victims; 400+ victims

Text Box 2-38: Explanation of the indicator: 'Human Trafficking

According to the Eurostat Report of Trafficking in Human Beings a person is considered to be a victim of trafficking in human beings when the crime against her/him fulfils the constituent elements of trafficking in human beings as defined in the EU Directive 2011/36 on preventing and combating trafficking in human beings, protecting its victims. An "identified victim" is defined as "a person who has been formally identified as a victim of trafficking in human beings by the relevant formal authority in a Member State". [92]

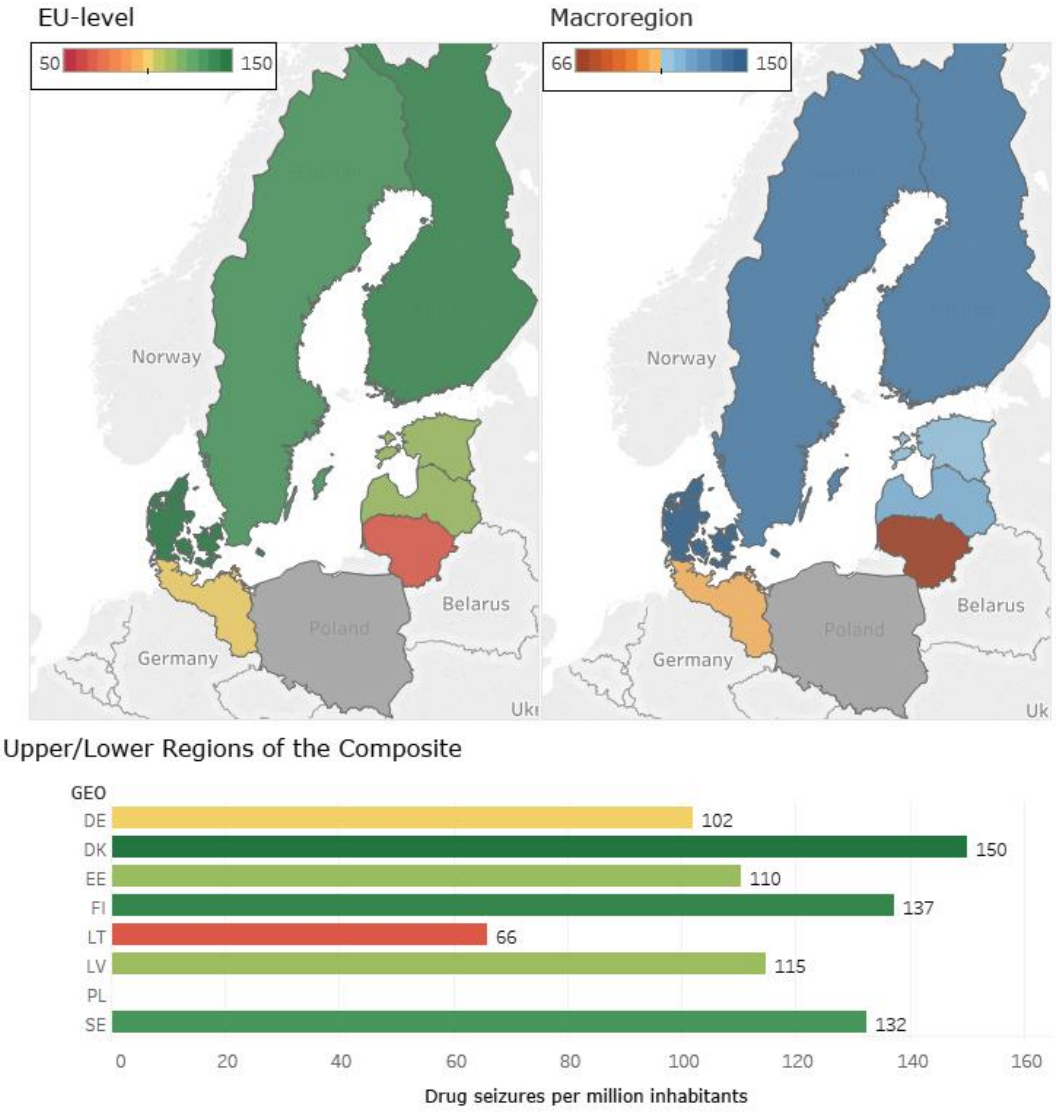
According to the Eurostat Report of Trafficking in Human beings it is generally difficult collect data on trafficking. The primary reason being that victims do not always report the crime to the police or do not even want to cooperate with the police. Registering victims in an accurate manner is further largely depended on the capacity to identify victims in the form of formal authorities or the existence of a national register[93]. The data on Human Trafficking in the EU Member States used for the current analysis cover a three year period from 2010 to 2012. To avoid population sizes of countries having an effect on the interpretation of the statistics, a registered victim prevalence rate has been calculated for victims of trafficking, by expressing the number of registered victims with citizenship of a particular country as a proportion of that country's population, averaged across 2010-2012.[94]

Over the three-year period covered by the data (2010 – 2012), most victims with citizenships from the macro-region came from Poland, Germany, Latvia and Lithuania. Poland exhibits by far the highest number of identified victims. A total number of 976 Polish victims of human trafficking have been registered, of which most victims were found in the United Kingdom (405), Poland (263) and the Netherlands (187). Most German victims (389) and Latvian victims (336) were also identified in these countries. Most Lithuanian victims were found in the UK (146), followed by Lithuania (50), the Netherlands (22), and Germany (16). While most victims were registered in their own countries of origin, citizens from the new EU Member States like Poland, Latvia and Lithuania were also registered as victims of human trafficking in other EU countries.

[92] Publications Office of the European Union (2015): Trafficking in Human Beings, Luxembourg, 2015.
[93] Publications Office of the European Union (2015): Trafficking in Human Beings, Luxembourg, 2015.
[94] Publications Office of the European Union (2015): Trafficking in Human Beings, Luxembourg, 2015.

2.6.5 Number of Drug Seizures

Figure 2-48: Drug Seizures by country in 2014, on an EU-wide (left) and Macro-regional (right) comparison. The bottom figure shows the Upper/Lower Regions, including their components



Text Box 2-39: Explanation of the indicator: 'Number of Drug Seizures'

Europe is an important market for drugs. The drugs are either locally produced or they are produced in other world regions and are trafficked in Europe. There are regional differences in stimulant consumption patterns across Europe. Cocaine use appears higher in Western and Southern European countries, while amphetamines are more used in Northern and Eastern Europe.[95]

An analysis of the number of drug seizures per 1 million inhabitants for the year 2014 gives a picture of the drug consumption and the countries' capacity to combat drug trafficking. The source of the data on the number of drug seizures is the European Drug Report 2016 and Eurostat for the data on population. The data on drug seizures are available only at country level, no data are available for NUTS-2 regions.

In the macro-region, Denmark, Finland and Sweden record the highest number of drug seizures per 1 million inhabitants, ranging from 959 in Denmark (and a top performer score of 150) to 711 in Sweden (score of 134). These results point to a very active engagement on the government side to combat drug consumption and trafficking, as all countries but Lithuania and Poland perform above the EU-median. Countries making up the middle range are Latvia, Estonia, and Germany with a number of seizures ranging from 463 seizures / 1 million inhabitants in Latvia to 286 seizures in Germany. Lithuania with 98 seizures / 1 million inhabitants shows the lowest drug seizures in the region. Lithuania is a notable transit country for trafficking as well as known production sites of synthetic drugs for the European market (next to Poland, for which no data is available), which points to an alarming need for more drug seizures[96].

2.7 Meta-analysis

2.7.1 Macroeconomic Indicators

Regional development is a complex, multidimensional concept. Various factors such as: endowment with natural resources, quantity and quality of labour, availability of and access to capital, investment in physical and technological infrastructure, factor productivity dynamics, sectorial structure of the economy impact on regional development.[97]

[95] European Monitoring Centre for Drug and Drug Addiction (2016): European Drug Report, Trends and Developments, Luxembourg: Publications Office of the European Union, 2016, ISBN: 978-92-9168-890-6, doi:10.2810/04312

[96] EMCDDA, country overview Lithuania, http://www.emcdda.europa.eu/countries/lithuania and country overview Poland, http://www.emcdda.europa.eu/countries/poland

[97] Nijkamp P. and M. Abreu (2003). Regional development theory. PN218MA-EOLSS. URL: ftp://dlib.info/opt/ReDIF/RePEc/vua/wpaper/pdf/20090029.pdf

Economic Performance

Countries of the Baltic Sea macro-region are at different stages in their economic development. Within the macro-region, there are mature economies such as Denmark, Sweden, Finland and Germany. [98] These countries are characterized by a high GDP per capita and a high level of labour productivity and low to moderate growth rates. These are also the countries that have the most advanced social systems, as measured by the Social Progress Index. Other economies such as Estonia, Latvia, Lithuania and Poland have lower GDP per capita and lower productivity levels but higher GDP growth rates compared to the other group. Their GDP growth differential to the other group takes yearly values of about 1.5 to 2 percentage points. Thus, convergence is currently taking place at a moderate pace. Their social systems need to progress to narrow the gap to the advanced countries in the group.

Since their accession to the European Union, the new Member States have undergone major economic and social changes. Further, in the last ten years, structural change has been the result of an adjustment to the new environment induced by the financial and economic crisis. The crisis changed their growth model fundamentally. In the period preceding the crisis, the strong growth was primarily driven by private consumption and investment, fuelled by extensive crediting with money from abroad. In the aftermath of the crisis, economic growth became increasingly driven by exports and internal demand. GDP growth became more moderate, but the differential to the economically advanced countries in the group allowed them to progress towards catching up and narrowing the development gap. They have made considerable progress in the convergence process. Between 2008 and 2015, the gap to the EU average GDP per capita was reduced by 14 percentage points in Poland and by 12 percentage points in Lithuania. Estonia and Latvia also made progress, albeit with values below 10 percentage points. Progress continues, fuelled by the EU financial support through the EU Cohesion Funds. Poland has the highest absorption degree compared to the other new Member States.

Employment

At the same time, unemployment has been reduced considerably in recent years in all new Member States, and the activity rates increased. However, reducing youth unemployment and long-term unemployment are still outstanding issues, especially in the new Member States of the macro-region.

Inside the individual countries of the macro-region and especially inside Poland, being a large country compared to the Baltic countries, there are (large) economic and social disparities. Urban regions and especially the capital region show higher development levels and growth rates compared to the other regions in Poland. "Agglomeration advantages" in terms of e.g. the number of companies or research institutions in the urban regions support high GDP and

[98] Investopedia, 2017: "A mature economy is the situation where the country's population has stabilized or is in decline, and where the pace of economic growth has also slowed. A population has stabilized or is in decline when the birth rate is equal to or less than the mortality rate. A mature economy is characterized by a decrease in spending on infrastructure, and a relative increase in consumer spending." Read more: Mature Economy http://www.investopedia.com/terms/m/mature-economy.asp#ixzz4vedfmFqg

skilled labour force concentrations and fast growth in urban centres. Businesses may benefit from lower transport costs as they are closer to their markets and their infrastructure is better developed. They may take advantage of learning from others, as they are closer to information sources, and they may be part of clusters where the availability of skilled and more productive workers is higher. Furthermore, the overall regional productivity may increase in such urban agglomerations due to more intensive use of infrastructure by a larger number of firms.

To conclude, there are disparities inside the macro-region on the macroeconomic and social fronts between the advanced EU members and the new EU Member States. However, these disparities have been continually reduced since the outburst of the financial and economic crisis in 2008. There are large internal disparities (especially in Poland) between the urban regions and the rural and peripheral regions in the individual countries. Slow progress in reducing the internal disparities has been observed, and progress has so far mainly been concentrated in the urban centres.

2.7.2 Macro-regional Integration

During the last two decades, the fast growth of trade in intermediate inputs contributed to the enhancing growth of the countries in the macro-region. Multinational firms account for a large share of input trade. They create global vertical production networks by locating input processing in their foreign affiliates. Vertical production networks allow multinational firms to take advantage of lower wages for less-skilled labour and lower production costs, lower trade costs, and lower corporate income tax rates.[99]

Trade Integration

Turning to the trade and investment relations between the countries of the macro-region, besides the strong role of multinational companies, traditional, neighbourhood and historical relations dominate the picture. Integration in the macro-region is high and above the EU median. Germany is the main partner for all countries except Estonia. Relations are very strong among the Scandinavian countries and also between the Scandinavian countries and Germany. A large share of trade and investment takes place inside this group, and they are the main trade partners for each other (Germany and Sweden are Denmark's and Finland's main trade partners, Germany and Denmark are Sweden's main trade partners). Germany is also the main trade partner for Poland. Sweden, Finland, Latvia, and Lithuania are the main trade partners for Estonia. Lithuania, Estonia, Germany, and Poland are among the top 5 partners of Latvia. Also Latvia, Germany Poland, and Estonia are among the top 5 partners of Lithuania. As a result, two groups can be observed inside the macro-region: one is made up of the three Scandinavian countries and Germany, and the other is made up of the three Baltic Sea countries, Poland and Germany (since it is a main trade partner

[99] Hanson, G. H., R. Mataloni Jr. M. J. Slaughter (2003). Vertical production networks in multinational firms. NBER Working Paper Series. Working Paper 9723 http://www.nber.org/papers/w9723

for both groups). Compared to the EU average, the Baltic Sea macro-region shows an above average integration intensity, which had increased slightly in 2015 compared to 2008.

Labour Integration

The data on migration as well as remittances also show a high degree of integration inside the macro-region (above the EU28, except for Germany), however less strong than in the Alpine or Adriatic Ionian macro-regions. The flow of migrants mostly goes from East (Poland, Estonia, Latvia, and Lithuania) to West (Germany, Sweden, Finland, and Denmark) or from the new EU Member States to the EU-15 EU Member States, whereas the flow of remittances takes the opposite direction. Integration in student exchanges reflected in the share of mobile students from abroad is below the EU median. However, one has to bear in mind the scarce data for the macro-region and the EU (data are available only for 17 EU countries and in the Baltic Sea macro-region not for Germany).

Capital Integration

Capital integration in the Baltic Sea macro-region is rather heterogeneous. Three countries (Latvia, Estonia, and Lithuania) perform above the EU median, and another three countries (Denmark, Finland, and Poland) perform averagely. Germany and Sweden score below the EU median. Between 50 and 60% of the exports of the Baltic States are absorbed by other countries in the macro region, while only 9% of Germany's exports stay in the region. Furthermore, this share decreased from 2008 to 2015. Because of the small part of Germany that is part of the macro-region, its capital integration, measured through foreign direct investment (FDI), compared to the other countries in this macro-region is almost non-existent. All the other countries show a high degree of capital integration.

Energy Integration

On energy integration, it is noted that Denmark trades most within the region, followed by Estonia, Latvia, and Sweden. Other large exporters like Germany and Poland show rather low connectivity within the region. Overall, just about 8% of the energy products exported by the macro-region stays within the region.

Accessibility Potential

Concerning the accessibility potential in the Baltic Sea macro-region (i.e. the ease of getting around from place to place), Germany is the top performer. Berlin does better in every single category (road, rail, air, multimodal) than the other regions. The low accessibility in Sweden and Finland can be traced to the low population density.

Territorial Cooperation

Territorial Cooperation is a major aspect of territorial cohesion and also one of the three cornerstones of the EU Cohesion Policy. The Nordic and the Baltic Member States score highest in the macro-region. Organisations in the countries of the macro-region were strongly involved in the implementation of regional cooperation programmes. A divide between the urban regions with more organisations being part of strong networks and rural regions with less organisations is observed, which shows that transnational cooperation is less organised in rural regions. It is noted that there is a wide gap between the high and low performing regions in Poland. Pomorskie scores highly while Swietokrzyskie is one of the EU's lowest-performing regions.

2.7.3 Competitiveness

In recent years, efforts at regional level have been intensified to improve location-specific conditions for production and services and/or the performance of headquarters functions, which at the same time intersected with a more focused approach to attract potential investors. Regions do no longer delegate the acquisition of foreign direct investment to the national level but get themselves engaged such activities with region-specific institutions and instruments (for example in the form of an autonomous regional brand management).[100] As a result, the markets are shaped more according to regional instead of national boundaries. This implies a second level of interregional competition.

Therefore regions are struggling to adapt to constantly changing conditions in order to at least maintain their competitiveness and, if possible, even to increase it.[101] In the framework of this study competitiveness has been analysed by using various indicators. The overall competitiveness indicators show a similar picture to that gained from the macroeconomic overview and integration. The best performing regions are located in Sweden, Denmark, Finland and Germany. Estonia, Latvia, Lithuania and some Polish regions show an average achievement regarding competitiveness. The lowest performing regions can be found in Poland. However the average and low performers managed to improve their scores on some competitiveness indicators in the recent scoreboards. Generally the performance on competitiveness in the macro-region is very heterogeneous.

Among the key competitiveness factors of the macro-region are the leadership role in innovation, strong position regarding digitalization, good transport infrastructure especially regarding air and multimodal transport modes.

Economic Competitiveness

The EU Regional Competitiveness Index (RCI) shows that the best performing regions in the Baltic Sea macro-region are located in Sweden (Stockholm), Denmark (Hovedstaden), Finland (Helsinki-Uusimaa), and Germany (Hamburg). The Baltic countries, Estonia, Latvia, and Lithuania scored averagely and were able to improve their competitiveness position in 2016 compared to 2013. The lowest performing regions were located in Poland (Podlaskie, Warminkso-Mazurksie, Kujawsko-Pomorskie). Still, the latter two regions were able to improve slightly compared to 2013.

Innovation, Digitalisation and Education

Crucial indicators for competitiveness are innovation and digitalisation. Denmark and Sweden are the leader countries on both indicators. While Finland belongs to the "big three" by the Digitalisation Index, Germany joins the two Scandinavian countries as leaders in innovation. The Baltic Sea macro-region shows a strong performance by another important indicator for competitiveness:

[100] Grozea-Helmenstein D., C. Helmenstein, T. Slavova (2009). Who is the best? Insights from the benchmarking of border regions. Trames. Journal of the Humanities and Social Sciences, 13(63/58), (3). pp. 285-302.

[101] Grozea-Helmenstein D., C. Helmenstein, T. Slavova (2009). *Who is the best? Insights from the benchmarking of border regions.* Trames. Journal of the Humanities and Social Sciences, 13(63/58), (3). pp. 285-302.

education. The top ranked regions are Hovedstaden (Denmark), Stockholm and Övre Norrland (Sweden), and Helsinki-Uusimaa (Finland). The top performance can be attributed to a qualitatively strong education system with a high tertiary education attainment, as well as a low NEET rate. On a NUTS-2 region basis, Germany, Latvia, and Estonia scored only slightly above the EU median. An explanation is that these regions have a high rate of early leavers from education and training.

Transport

Performance on the completion of the trans-European transport infrastructure (TEN-T) for road and rail is mixed, while the completion of water infrastructure is quite advanced, with top performance values in almost every country. Only Germany, Finland, Sweden, and to a lesser extent Denmark score above the EU median on the completion of the trans-European transport network.

Tourism and fisheries are less important to the Baltic Sea macro-region. Only Berlin and Stockholm (tourism), and Estonia and Finland (fisheries) show notable scores above the EU median in these two areas.

Energy

Energy efficiency and the usage of renewable energy are relatively heterogeneous in the region. Denmark had the lowest energy intensity among the countries in the Baltic Sea macro-region. Estonia, which was located on the other end of the scale, needing more than five times the energy than Denmark to produce the same amount of economic output. Between 2000 and 2014, Estonia also had the lowest improvements in energy intensity.

Environment

Scores on air pollution and water quality are mixed in the macro-region. Estonia and Finland score highest on air quality and river status. Sweden, on the other hand, scores around the EU median in terms of air pollution and has the lowest values concerning the status of its waterbodies. Nevertheless, data show that the Baltic Sea macro-region has excellent performances in soil erosion compared to other regions in Europe. Performance on resource efficiency is for most of the countries relatively low. Scores on potential climate change vulnerability, air pollution and water quality show a mixed picture for the macro-region.

2.7.4 Political, Institutional, Governance indicators

Governance

Overall, the macro-region can be considered effective in terms of policy implementation. The divide inside the region between the EU-15 and the new EU members is also evident when looking at governance performance (government effectiveness and regulatory framework), quality of public institutions and voice and accountability, showing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media. However, the less advanced countries are progressing towards narrowing the gap to the best performers.

The analysis of the composite indicator Governance shows a similar picture. High performers are Finland, Sweden, and Denmark followed by Germany and Estonia. Lithuania was also able to stay above the EU median. Latvia is slightly

below the EU median whereas Poland has the lowest scores in the macro-region. All countries improved their governance scores in the period from 2008 to 2015.

Public Institutions

In 2016, Finland was EU's top performer when it came to Public Institutions. Apart from Finland also Sweden and Estonia were able to improve their scores compared to 2008, of which Estonia's Public Institutions developed as the only Baltic State into the EU's solid top performing half. The performance of Denmark and Germany went in the opposite direction. Although Latvia and Poland are located at the bottom of the spectrum, they could also show an improvement in the quality of their public institutions.

Crime

Between 2010 and 2012, Poland had the highest number of identified victims of human trafficking. About half of the victims were found in the United Kingdom. Other victims were identified in Poland and in the Netherlands. In the same timeframe, Germany and Latvia also reported a high number of victims. While most victims were registered in their own countries of origin, citizens from the new EU Member States like Poland, Latvia and Lithuania were also registered as victims of human trafficking in other EU countries. Poland reported a relatively small number of drug seizures, although it is a production site for synthetic drugs for the European market. [102]

A summary of political, institutional, and governance factors in Germany, Denmark, Finland, Sweden results show good to top performance. Estonia, Latvia, and Lithuania are located around the EU median. Poland can also participate by the most indicators in this range, except for Human Trafficking and Drug Seizures. Improvements in the low-performing countries are observed.

[102] European Monitoring Centre for Drug and Drug Addiction (2016): European Drug Report, Trends and Developments, Luxembourg: Publications Office of the European Union, 2016, ISBN: 978-92-9168-890-6, doi:10.2810/04312

REVIEW OF THE MACRO-REGIONAL STRATEGIES

EUSBSR (TASK 2)

3 Review of the Macro-regional Strategies (Task 2)

3.1 Introduction to Task 2

The below sets out the key research questions that have framed the conduct of the analyses presented in this report on Task 2 for the EUSBSR, as well as the sources of information that have been consulted to answer these research questions.

Each macro-regional strategy contains a range of context specific elements. Terminologies are not always the same, but in essence all strategies define their objectives, their priorities, their focus areas and provides related indicators for monitoring. In terms of governance each strategy has its own multi-layered structure which ensures transparent and consistent decision making and the ability to implement: across regions/countries and sectors, and within regions/countries. Bearing this in mind, and given that the information to inform the answering of the below research questions must to a large extent be based on primary data collection, the summaries are based on a targeted collection of data.

Approach

The approach to the analysis of the macro-regional strategies has been to select a number of policy/priority/pillars (hereafter called PAs) in each strategy as case studies. Interviews have been made around the cases PA. For the EUSBSR, 5 cases have been selected, namely PA Education, PA Innovation, PA Nutri, PA Safe, and PA Transport

Outline of this report

This report is structured in four sections one per sub-task, corresponding to the research questions as listed in Table 3-1.

Table 3-1 Overview of Task 2 research themes

Research themes		Source of information
a	Description of objectives via relevant indicators, examination of the strategic relevance of the macro-regional level for the priorities selected	Desk review and expert interviews
b	Description of the main achievements of the strategies – content-wise and process-wise – whether it is new actions and new projects or adjustments or new developments of the policies concerned	Desk review, interviews, focus groups, case studies
c	Compare the objectives with the achievements, assess the quality of the objectives setting and the extent to which they have been achieved as well as the added value provided by the macro-regional approach for tackling the shared issues identified. Analyse in particular for which priorities the macro-regional approach proved especially relevant and providing the participating countries and regions with more effective results than would have been the case had these priorities been pursued in a different geographical scope – more limited or larger	Data gathering and analytical results from 2a and 2b, Contribution analysis, interviews, case studies, desk research, surveys
d	Description and assessment of a) whether the macro-regional strategies (MRS) have influenced the implementation of European Structural and Investment Funds (ESIF) programmes, b) Whether and how programmes are contributing the implementation of MRS – and the strengths and weaknesses of current approach and c) whether and how a macro-regional approach contributes to strengthening the territorial cohesion objectives of EU	Interviews, surveys, EU spending programmes

3.2 Methodology for Task 2

Research theme a

Task 2a reviews the objectives of each Strategy. This is done by examining the strategical relevance of each objective in the macro-regional context. In other words, this task scrutinises whether a given objective (1) corresponds to an identified need or opportunity for intervention, and (2) whether the macro-regional approach provides a concrete benefit.

The need for intervention

The need for intervention is primarily identified through a pre-defined set of indicators that have been developed and are reported on in section 2 of this report. Where needed, additional indicators or external literature supplement the judgement. The need for intervention is considered at three geographical levels: i) the macro-region as a whole, ii) the macro-region's individual countries, and iii) internal levels (e.g. urban vs rural).

The macro-regional relevance

The macro-regional relevance is established through expert knowledge and external literature. The results of the review were tested and discussed with independent regional experts on each of the four macro-regions.
The review applies a traffic light methodology to categorise each objective in terms of need and macro-regional relevance. Further details about the methodology as well as the detailed results of this task can be found in Appendix A.

Research theme b

The focus of Subtask 2b is to describe the implementation of concrete activities linked to the policy fields covered by the strategies. This provides an understanding of the progress towards achieving the specific objectives set out in the formative strategic documents.

We illustrate the actual performance of each strategy at the policy area level through a set of case studies. These case studies investigate the ways that the MRS structure facilitates, and otherwise affects, the cooperation between stakeholders towards achieving progress in the PAs at an 'operational level'. From these, we can then develop concrete examples of the various factors that contribute to the achievements. A particular focus will be on the way that contents and processes of the strategies helped stakeholders to drive progress. The application of case studies brings about additional advantages, which mostly evolve from generating an insight into specific contextual mechanisms and the ways in which the frameworks provided by the MRSs support progress in the PAs, especially concerning cooperation.

The core research team will prepare the frameworks for processing the data we obtained in the interviews. The responses will be integrated to facilitate the sorting of qualitative responses across different countries and stakeholder types.

Organising and documenting the findings

Information from the cases, interviews, and desk research is synthesised into evidence matrices, which each provide overviews of the results and impacts for each MRS. The developed intervention logic provides the typology of categories for the types of results and impacts observed. Information from the cases will be extracted to demonstrate the areas in which stakeholders created new actions, projects, adjustments, or policies. All examples of results and impacts will be summarised in the evidence matrix, and the source of evidence will be identified.

Research theme c

This section includes an analysis of the objectives (from the Action Plan), targets (from road maps or workplans)[103], achievements (progress reports), and indicators (where available) of the PAs analysed for the four macro-regional strategies. These are illustrated in a logframe for each PA. For each PA, the progress towards targets and objectives is tracked through examples of achievements and progress registered in the progress report. The achievements are discussed drawing on the analysis of the achievements in Section 3.1.

Verifiable indicators

Where possible, the progress towards achieving the objective has been illustrated via one or more objectively verifiable indicators (OVI). The indicators used are either those included in the target by the PAs (where available), or examples of those that were identified/analysed in in Task 1 and Task 2a. To the

[103] List of European Union Strategy for the Danube Region (EUSDR) Targets. Validated in the meeting of national Coordinators and Priority Area Coordinators held in Bratislava on 23 May 2016.

extent possible, data for two periods is included for the indicators in order to describe the progress. These periods are however not identical for all indicators but span the period 2010-2017.

Research theme d

Subtask 2d Impact of MRSs on ESIF and vice-versa

This subtask focusses on analysing the linkages between the MRSs and the ESIF programmes that support territorial cohesion.

The coordination between the structures of the MRSs and the relevant Operational Programmes in the Member States and ETC programmes is examined to determine the influence of the MRSs on the formation of the OP and the impact they have had on complementary spending programmes.

Activity 2.12 Linkages between MRSs and EU spending programmes

The first part of this analysis will look at the extent to which the MRSs are used to influence the design of ESIF programmes in the macro-regions. Influence shall be defined as the (used) possibility of the MRSs to steer/guide the activities funded under the ESIF programmes. This would be done either through incorporating the priorities of the MRSs or securing that the actions/activities of the spending programmes support the objectives and policy areas of the MRSs. The analysis will concentrate on a desk review of programme documents and programme portfolios.

Data collection methods

This analysis report is based on an integrated data collection framework, driven by the approaches used to address the analytical tasks and intended to provide a picture as comprehensive as possible. This task draws on evidence through three major stages of data collection: desk research, an interview programme with 82 stakeholders, and a survey of approximately 6000 actors. The interview programme and survey have be used to gather qualitative data to answer questions related to each research theme and sub-themes, i.e. the research themes analysed in this report, as well as research themes relating to Task 3 and Task 4.

Desk research

As a first step, a desk research of the strategies has been conducted, relying on existing data. This has been accomplished by studying, in particular:

- the strategy's Action Plans (and other strategic documents),
- the work plans of the individual PAs, and
- the progress or implementation reports of the PAs
- supplemented with other data, e.g. from the strategy's or individual area's websites and publications.

Most of the reviewed data is published and thus readily available, but particularly with respect to the progress and implementation reports, much of the information material we have relied on concerns draft versions requested from the individual area's coordinators.

Appendix A presents a list of sources consulted. It includes for example several documents produced as part of various evaluation initiatives for cohesion policy programmes, as well as academic and analytical publications on the MRSs. Further, also documents have been analysed that outline the European policy framework related to cohesion policy, such as Communications, regulations, and evaluations linked to specific regional programmes. These documents support the analysis of the context in which the strategies have been developed as well as the rationale for the development of MRSs in addition to or instead of initiatives taken at the local, national, or European level.

Identification of case studies

Twelve case studies have been conducted in order to investigate the ways that the MRS structure facilitates, and otherwise affects, the cooperation between stakeholders towards achieving progress in the PAs at an 'operational level'.

Initially, a pre-selection of the case studies was made based on preliminary desk research (as presented in the inception report), which subsequently was elaborated based on explorative interviews with key stakeholders and representative at EU level. Accordingly, the final and current selection of cases was made informed by inputs from key stakeholders and the Commission. The case are presented in fact-sheet and used in the analysis across case studies.

Interviews

The interviews have been carried out in a structured format. They cover the core analytical themes and issues identified in through the desk research and through explorative interviews. Standard interview guides have supported us in addressing the identified analytical dimensions. In addition, the guides have assured conformity of the interviews with the objectives of assigning attribution, evaluating progress and outlining the value-added of each strategy.

The interviews with relevant stakeholders were conducted in the 12 selected PAs (case studies). Interviewees were identified and selected in cooperation with the relevant Directorates-General (DGs) as well as the PAs' coordinators. The interview period runs over a span of five months, namely from April 15th to September 15th. For each area, an average of 6-7 interviews have been conducted.

Validity and bias of interview finding

The interview findings are used in the analysis as a key source. All interviews are recorded by the study team in reports. Throughout the analysis, selected interview findings are present in tables and text (shortened and adapted by the team in order not to reveal the identity of the interviewee). The study team has identified relevant interview statements (answers to the question, which reflect the content of the question). To the extent possible, the selected statements reflect a condensation of both positive and negative assessments and opinions of the interviewed stakeholders (where available). A certain bias may be inherent in the statements as those stakeholder, who agree to partake in an interview, are often more involved and active stakeholders and thus generally more positive (biased).

In the table below, an overview of the case studies and the respective interviews conducted is presented.

Table 3-2 Overview of case study interviews conducted

Strategy	Policy Area / Priority Area / Pillar / Action	No. of interviews conducted
EUSBSR	PA Education	8
	PA Innovation	7
	PA Nutri	6
	PA Safe	8
	PA Transport	10
EUSDR	PA 1A Waterways mobility	5
	PA 4 Water quality	6
	PA 7 Knowledge Society	5
	PA 9 People and skills	11
	PA 11 Security	4
EUSAIR	Thematic Steering Group (TSG) 4 Sustainable tourism	5
EUSALP	(AG) 6 Natural / cultural resources	5
Explorative Interviews		9
Total		**88**

Survey

The third part of the data collection framework consists of conducting a survey of approximately 6000 stakeholders – comprising key actors such as the PAs' coordinators and steering group members, as well as other stakeholders. Lists[104] of stakeholders were provided by each strategy (PA coordinators or communication officers) or the EU Commission.

The questionnaire used for the survey was initially drafted based on the findings of the desk research. Subsequently, it was further elaborated based on the explorative interviews/case study interviews and the first analysis, and was finalised in accordance with comments from DG REGIO.

The survey has been designed with the objective to test the insights already gained through desk research, case studies and interviews with regard to the intervention logic of the macro-regional strategies and the PAs. Therefore, the survey serves to verify and confirm findings and thus validate the evidence upon which the analysis of Task 3 and Task 4 is based. Moreover, the survey has provided the opportunity for stakeholders to contribute with additional insights through open answers and commenting opportunities, which numerous respondents have taken advantage of.

[104] Based on conference participation, newsletter subscription lists, among others.

The survey respondents consist of different types of stakeholders in the four strategies, and have been sent an electronic invitation to participate in the online-survey based on their association with a (or several) strategies. The table below presents an overview of how many stakeholders the invitation was sent to as well as the number of respondents. This report is based on the final survey data extracted on 14.09.2017.

On the survey closing date, 14 September 2017, 999 respondents (Table 3-3) had answered the survey (around 16%). The names and contact data of the 6000 respondents invited to answer the electronic survey were provided by the four macro-regional strategies. It is assumed that these lists cover a representative selection of actors in the four macro regions. Data is drawn at strategy level, as the numbers per policy/priority/thematic/pillar vary considerably. An uneven level of responses may bias the results. Across the four strategies more respondents at policy level than project level have answered. Since the questions for policy and project area are separated, this should not result in a bias.

Table 3-3 Overview of survey recipients and respondents

Strategy	No. of recipients to whom the survey was sent	No. of answers received[105]
European Union Strategy for the Baltic Sea Region (EUSBSR)	3891	429
European Union Strategy for the Danube Region (EUSDR)	927	233
European Union Strategy for the Adriatic-Ionian Region (EUSAIR)	1003	258
European Union Strategy for the Alpine Region (EUSALP)	264	79
Total	**6085**	**999**

Finally, Table 3-4 below provides a brief overview of the timeline of the survey.

[105] On survey closing date, 14.09.2017

Table 3-4 Timeline of survey

Event	Date (2017)
Survey open & invitations sent	7 July
1st reminder sent	21 July
2nd reminder sent	4 August
3rd reminder sent	21 August
4th reminder sent	6 September
Survey closing date	14 September

3.3 Review of the EUSBSR (Task 2a) – Summary

Contents of section

This section contains a summary of Task 2a, the review of the EUSBSR. The main report, as well as the methodological framework applied, can be viewed in Appendix A below.

Review of EUSBSR (summary)

The review of the EUSBSR objectives concludes that the majority of the chosen Sub-Objectives correspond to a need or opportunity and are also macro-regionally relevant; this is demonstrated in multiple forms by addressing

- commonly shared problems that require common solutions (esp. sub-objectives 1.1, 1.2, 1.3);
- issues that are not affected by national borders (esp. sub-objective 3.4);
- new opportunities and challenges arising from the European Single Market (esp. sub-objectives 3.3); and
- new opportunities and challenges arising from increased territorial cohesion (esp. sub-objective 1.4, 2.1 - 2.4, 3.2). [106]

The table below shows the summarised results of the review of the EUSBSR's sub-objectives through relevant indicators. Three sub-objectives proved not to correspond to an identified need or opportunity for intervention, and were conclusively given a yellow traffic light rating. The following paragraphs elaborate on the justification in the cases.

Sub-objective 2.3 (Connecting People) seeks to promote territorial cooperation in the Baltic Sea region. The applied indicator on transnational cooperation shows that the average of the regions in nearly all individual countries exhibit a degree of cooperation that is already higher than the EU-median level. [107] Only

[106] 1.1 Clear water in the sea, 1.2 Rich and healthy wildlife, 1.3 Clean and safe shipping, 1.4 Better Cooperation; 2.1 Good transport conditions, 2.2 Reliable energy markets, 2.3 Connecting people, 2.4 Fighting cross-border crime; 3.1 Frontrunner for deepening and fulfilling the single market, 3.2 EU2020 implementation, 3.3 Improved global competitiveness, 3.4 Climate change adaptation, risk prevention and management

[107] While the aggregate average of all regions corresponds to the EU-median level, the average of the regions in each country is above the EU-median; except for Poland.

Poland performs below the EU median, while particularly the Baltic States are among the countries with the highest transnational cooperation. The underlying sub-objective thus strengthens already strong cooperation, but does not respond to a specific need for the macro-region. Connecting the people in the region to promote better cultural, educational and scientific exchange can however be macro-regionally relevant. Even in the form of mere bilateral cooperation, the existing cooperation experience can be shared throughout the region. At last, territorial cohesion is enforced through cooperation on the cross-border, transnational as well as interregional level.

The selected indicators for sub-objective 2.4 (Fighting cross-border crime) do not point to a need for intervention for the Baltic Sea region as a whole. Looking at the individual countries, a few exhibit a need for action on human trafficking and drug seizures. Poland and Lithuania stand out; yet are none of the judgement criteria fulfilled. At the same time, criminal activities always try to operate in the unknown, which means that no officially recorded data are available. A research report by Kegö & Leijonmarck shows however that the cross-border and especially transnational dimension of criminal activities has become ever more relevant as a result of globalization (i.e. facilitation of communication and transport).[108] To some respect, this sub-objective therefore intervenes on one of the side effects of territorial cohesion. A macro-regional approach is therefore relevant.

[108] Kegö, W. & Leijonmarck, E. (2011), Countering Cross-Border Crime in the Baltic Sea region, http://isdp.eu/content/uploads/images/stories/isdp-main-pdf/2011_kego-leijonmarck_countering-cross-border-crime.pdf.

The sub-objective 3.1 (Frontrunner on the Single Market), shows that the existing achievements on the EU level leave no need for intervention for the macro-regional strategy. [109] *Conclusively, no need for intervention can be identified. Another noteworthy is aspect is that the macro-regional relevance is ambiguous. The macro-regional approach contradicts the Single Market principle to create "one territory without any internal borders or other regulatory obstacles to the free movement of goods and services", as the Baltic Sea region is separated into a geography of higher priority.* [110] *At the same time this sub-objective targets also the reduction of trade hurdles with neighbouring third countries. This is macro-regionally relevant, as FI, EE, LV, LT, and PL each have third country neighbours. As a result, it is assessed that this sub-objective is only macro-regionally relevant.Table 3-5 Summarised review of the EUSBSR's objectives*

Objective	Theme of intervention	SWOT	Traffic Light
1.1 Clear water in the sea	Environmental Sea Status	Weakness	Corresponds to need + Macro-regionally relevant
1.2 Rich and healthy wildlife	Biodiversity	Threat	Corresponds to need + Macro-regionally relevant
1.3 Clean and safe shipping	Sustainable shipping	Threat	Corresponds to need + Macro-regionally relevant
1.4 Better Cooperation	Maritime Cooperation & Coordination	Weakness	Corresponds to need + Macro-regionally relevant
2.1 Good transport conditions	Infrastructure Quality	Opportunity	Corresponds to need + Macro-regionally relevant
2.2 Reliable energy markets	Energy	Weakness	Corresponds to need + Macro-regionally relevant
2.3 Connecting people	Transnational Cooperation	Strength	Macro-regionally relevant
2.4 Fighting cross-border crime	Crime	Threat	Macro-regionally relevant
3.1 Frontrunner for deepening and fulfilling the single market	Single Market	Opportunity	Macro-regionally relevant
3.2 EU2020 implementation	EU2020	Opportunity	Corresponds to need + Macro-regionally relevant
3.3 Improved global competitiveness	Competitiveness	Strength	Corresponds to need + Macro-regionally relevant
3.4 Climate change adaptation, risk prevention and management	Potential Climate Change Vulnerability	Threat	Corresponds to need + Macro-regionally relevant

The results of the survey validate that the EUSBSR addresses the major challenges in the macro-region (see table below): 40% and 48% respectively agree strongly or to a somewhat degree. Nearly half of the respondents are thus of the opinion that the Action Plan addresses most but not all relevant major challenges for the macro-region. The alignment of the action plan with future global challenges that will affect the area is overall quite strong according to the respondents, but still with a slightly lower score. At last, most respondents (70%

[109] EU COM, 2014, *A Discussion Paper for the revision of the Action Plan of the EU Strategy for the Baltic Sea Region (EUSBSR), not public*

[110] DG Growth, The European Single Market, https://ec.europa.eu/growth/single-market_en

at least somewhat agree) think that the action plan is regularly updated to the changing needs of the region.

The relevance of the action plan finds a similar rate of approval. About three-quarter of the respondents at least somewhat agree that the action plan addresses themes suitable for regional cooperation. A quarter of the respondents agree even strongly. The addressed needs in the action plan correspond also well to the national/local priorities according to the results of the survey.

The results from the survey support the conclusion that the action plan overall addresses relevant needs, which are at the same time relevant in the macro-regional context. All five aspects from the survey find broad support, and the share of respondents who strongly disagree is significantly low, and therewith shows that there are no polarised views about the content of the action plan. One should keep however in mind that this observed tendency of positive answers can potentially indicate a confirmation bias, which refers to the tendency that respondents tend to agree with hypotheses to avoid discomfort.

Table 3-6 Does the action plan for the policy/priority/pillar/thematic area include needs relevant for the macro-region[111]

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Respondents	Standard deviation
The major challenges for the macro-region are reflected in the action plan	40%	48%	4%	1%	7%	189	1,06
There is a regular revision/update of the action plan to adapt to changing needs	19%	51%	15%	2%	12%	189	1,18
Needs identified in the action plan are well-suited for regional cooperation	27%	50%	12%	1%	10%	189	1,14
The needs identified for the macro-region reflect future global challenges affecting the area	23%	55%	12%	1%	10%	189	1,1
The needs identified are coherent with national/local priorities	20%	51%	14%	5%	11%	189	1,17
Total						189	1,13

3.4 Achievements of the EUSBSR (Task 2b)

For the analysis of the EUSBSR five policy areas (hereafter PAs) and one horizontal area were selected for a case study: PA Education, PA Innovation, PA Nutri, PA Safe and PA Transport. PA Capacity building was also included in the

[111] Survey data per 14.09.17 (policy level).

data collection but is not analysed as a separate theme, but included as a horizontal theme within the analysed PAs. An analysis of the achievements of these five policy areas is presented in the sections below. The section is divided into two subsections: 1) achievements content-wise (subsection 3.4.1) and 2) process-wise (subsection 3.4.2). The tables included in the following subsections, show the key findings from the interviews, the survey and the desk study across the five case studies. The case policy areas are described in individual factsheets at the end of the chapter (Section 3.7).

3.4.1 Achievements – contents-wise

Content achievements of the EUSBSR (2b)

The achievements of the EUSBSR are numerous, but difficult to accumulate and provide an overview of. The achievements of the analysed policy areas are thus summarized below through a number of key recent examples. Table 3-7 below provides an overview of some of the most important survey findings in terms of content-wise achievements, followed by a more detailed discussion of the different aspects of achievements in Table 3-8.

In the survey conducted in the EUSBSR (all policy areas) respondents were asked to reflect over questions regarding 'achievements in the medium/longer term'. Between 10-16% of the respondents at policy level answered that it was too early to answer this question, and 13-20% answered that they did not know. The highest scores in this group of questions, are given to the sub-questions related to: technical capacity increase and increased implementation of EU policies in the macro-region in particular, but also to new tools and new or improved services/products/training development. Respondents mainly disagreed that the work within the strategy had resulted in: changes to national polices as well as the development of common standards and new funding methods (see Table 3-7 below).

These results indicate that whereas the technical cooperation has developed, the policy part is still somewhat lagging behind. The analysis of each of the aspects will be detailed in this assessment through the case studies in the section below.

Table 3-7 Survey results (EUSBSR): What are the results (medium/longer term, 3-5 years) of the cooperation in the policy/priority/thematic area?[112]

Percentage distribution/ Sub-questions	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Too early to say	Respondents	Standard deviation
There has been an increase in the technical capacity of actors	14%	49%	8%	2%	16%	11%	165	1,64
New tools (technical excellence) have been developed in the area	16%	41%	10%	2%	15%	15%	165	1,73
New or improved services/products/training have been developed	13%	44%	10%	3%	16%	13%	165	1,68
Common standards have been developed in the area	10%	30%	23%	5%	20%	12%	164	1,59
New funding concepts have been developed (e.g. private, International Financial Institutions)	10%	28%	26%	7%	18%	10%	164	1,54
Increase in implementation of EU polices in the macro-region	17%	46%	8%	3%	13%	12%	164	1,67
The results have led to changes and improvements in national policy	7%	34%	22%	5%	16%	16%	164	1,62
Total							165	1,64

Policy dialogue and common development of policy

For PA Transport, the recent progress report mentions, as a key achievement, an 'Extensive dialogue and cooperation among the regional transport Coordinators from all macro-regions (sharing best practises, discussing challenges and emerging problems)'. Interviews with stakeholders in PA Transport show that stakeholders find that the policy dialogue has increased recently. PA Transport is in a phase of development, improving the cooperation within the management of transport policy of the Member States. An effective cooperation in the TEN-T core network corridor has improved the policy making, according to one interviewed stakeholder. A better dialogue in relation to funding also from Interreg has supported this development. There is now a dialogue between ministries, administrations, etc., and real information exchange happens on tasks level, according to another stakeholder. However, more critical voices amongst the interviewed stakeholders do not find that the dialogue has improved. Policy development do not depend on better cooperation alone, but the cooperation helps.

Interviewed stakeholders in PA Transport mention that the EU2020 goals are an important factor in identifying common challenges that can promote the dialogue. Also, interviewed stakeholders in PA Safe and PA Education confirm similar findings to those of PA Transport. Interviews with stakeholders across the policy areas reveal that some policy areas have spent considerable time getting to know each other, creating trust and developing the cooperation. The progress report of PA Education, for instance, points to that policy workshops with flagship leaders have been organised. However, many actors at national

[112] Survey results per 14.09.17 (policy level).

level (sectoral ministries) are not used to transnational cooperation, and the representatives participating in meetings do not always have the mandate for decision making. These are factors that can make it difficult to establish a policy dialogue in the steering groups. Nevertheless, the progress reports show that some policy areas (PA Education and PA Innovation) in the EUSBSR have produced outcomes in the form of e.g. action plans and policy papers – as a result of policy dialogue processes. (see Table 3-8 below)

Table 3-8 EUSBSR: Findings from interviews, survey and desk research – examples of policy dialogue

Policy area	Results – examples from progress reports[113]	Interviews – selected findings[114]	Survey – results [115]
PA Transport	Extensive dialogue and cooperation among the regional transport Coordinators from all macro-regions (sharing best practises, discussing challenges + emerging problems)	We are in a phase of development, improving […] our cooperation within the management of transport policy of MS There is a good dialogue for core network corridor There is a support for joint activities and policy making There is more policy dialogue	26% and 50% for the respondents strongly or somewhat agreed to that the MRS process facilitates synergies between policies; helps better understand the big picture at the policy level 7% and 34% for the respondents strongly or somewhat agreed to that the results have led to changes and improvements in national policy
PA Education	Organisation of policy-workshops with flagship leaders Draft Action Plan, a process involving six DGs and 16 line ministries in all eight Member States.	Policy impact is now the red thread in the EUSBSR Good PA Education Coordinators – it helps to develop cooperation, policy dialogue Dialog always existed. No need for more dialog and the existing dialog is sufficient BRS always was a common approach and there is a possibility to generate joint policies. The existing cooperation is high in comparison with other regions	
PA Innovation	Policy paper and digital policy profiles for all BSR countries Draft policy paper on growth potential and barriers in innovation policy concerning SMEs	There is a larger difference in the development level with regard to innovation in the participation countries. This makes the policy dialogue complex as countries have different approaches Pushing policies – can make these even better if the EU COM follows	

Mobilisation of finance

The survey (EUSBSR respondents from all policy areas) did not find that there has been a general improvement in terms of mobilisation of finance (Table 3-9) – less than 40% of the respondents made a positive response. Nevertheless, the case studies show that there are activities in several of the analysed policy areas to improve the mobilisation of financing.

PA Education reports on a 'Guide on project funding' (tool for helping stakeholder to navigate and find financial instruments)[116]. Interviews in this policy area confirm that in especially Interreg and to some extent ESF there have been improvements in relation to mobilization of funds. The first concepts for the use of ESIF have been developed (in case of PA Education in particular ESF/Sweden) and have also been addressed in national calls. One stakeholder stated that use of ERDF had been tried, but it is difficult to create transnational coherence as countries like to plan and utilise their own financing nationally.

[113] Progress reports for the respective policy areas, see section 3.5

[114] Interviews with policy area stakeholders May-September 2017

[115] Survey results per 14.09.17 (policy level)

[116] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

Some stakeholders observe that countries act separately with individual approaches. It is therefore difficult to mobilise financing for cross-border issues, but there have been some success recently. In addition to outputs mentioned above, PA Safe has organised a seminar on funding issues (Table 3-9). From the side of the European Commission, stakeholders have observed an increased awareness in the need for better mobilisation of finance through ESIF.

Most stakeholders in the other policy areas (PA Innovation, PA Nutri, PA Safe, PA Transport and PA Capacity) agree that mobilisation of finance has improved, especially in relation to Interreg. But the interviewed stakeholders emphasize that it is still difficult and that there are issues to be tackled at national level in order to use the ESIF funding for cross-border activities. Large differences in national approaches to the use of the ESIF for transnational cooperation still exists, and also play an important role (PA Innovation) for the mobilisation of finance in the EUSBSR.

Table 3-9 EUSBSR: Findings from interviews, survey and desk research – examples of mobilisation of finance

Policy area	Results – examples from progress reports[117]	Interviews – selected findings[118]	Survey – results[119]
PA Education	Guide on project funding (tool for helping stakeholder to navigate and find financial instruments)	Especially the European Territorial Cooperation (Interreg) and, to some extent, European Social Fund (ESF) European Structural and Investment Funds (ESIF) to be used and have to be addressed in national calls. From EC there is an increased mobilization but of course countries are acting separately It is difficult because within education area the main funds used are ESF and the EU Programme for Education, Training and Sport (Erasmus+).	10% and 28% of the respondents strongly or somewhat agreed to that new funding concepts have been developed (e.g. private, International Financial Institutions)
PA Nutri	Two flagships have received funding and begun activities as PA Nutri flagships (IWAMA and NutriTrade)	Financing via EU instruments – EU financing is very important for projects but the issue is that innovative projects end when there is end of project financing There are 14 flagships and 4 of them with secured financing, 4 implemented, 2 new projects for flagships. But there are several projects where funding is still needed. 3 projects rejected 2 times by Interreg Baltic – PL projects (many projects with PL leader) Regional strategy is linked to EU funds through Interreg projects. Large investment projects are not panned as part of the strategy It has not yet been fully achieved and there is a room for improvement	
PA Safe	Seminar regarding funding issues Paper "Internal Guidance on General Principles of Alignment of Funding, Project Selection and Endorsement of Projects"	Almost all projects got funding. The challenge is not so much to get money, but rather to find project makers Financing [for Blue Growth] provided by EMFF, big part managed under shared management, but there is also a part covered under direct management (in selection criteria BSR and MRS dimension could be taken into account) Should be looked at all possible financing possibilities. In the project, are financed by government and there is no need. PANOS – EU grant – EU funded from the start – government has to finance half of the project	

[117] Progress reports for the respective policy areas, see section 3.5

[118] Interviews with policy area stakeholders May-September 2017

[119] Survey results per 14.09.17 (policy level)

Joint development of projects and generation of project ideas

'Formulation of viable business projects, matched with companies in a neighbouring country, by 200 students at Vocational Education and Training (VET)'[120] – this is an achievement highlighted in the recent progress report by PA Education[121]. PA Education has created three knowledge backbones and platforms for early school leavers, VET and migrants. According to stakeholders, the Policy Areas Coordinators (hereafter PACs) are regarded as very efficient assisting in developing the cooperation, policy dialogue and identifying projects. One stakeholder underlined that ideas generation depends on the possibilities of a financial period, e.g. ESIF programming. PA Education has developed four main flagships, which are responsible for the work in PA Education (Table 3-10).

Table 3-10 PA Education – Overview of Flagships[122]

Flagship	Short description
School to work - S2W network	Flagship partners are from all Member States in the Baltic Sea Region. The main focus on preventing early school leaving and reducing NEETs.
Baltic Sea Labour Forum - BSLF network.	Flagship partners are 28 organisations from 8 countries. The main project focus areas are to identify and remove obstacles to free movement, counter pay dumping and to provide internships in neighbouring countries
Baltic University Programme - BUP network	The largest university network in the Baltic Sea Region including 230 universities and colleges. The project main focus is on sustainable regional development through cooperation in education, research and applied projects.
Baltic Science Network - BSN	The flagship involves partners from 8 Member States and Russia. The main focus areas are macro-regional framework for more strategic and efficient science policy, political coordination framework for joint higher education and science and research policy.

Other policy areas also underline that they have developed the project generation into a new (higher) level. In PA Innovation, there has been a focus on developing flagships, which are regarded as process. For example the flagship BSR Stars is considered the 'support vessel' that picks up relevant project ideas in the area by linking strong research environments, clusters and SME networks[123]. As an extension, this project also aims at strengthening innovation policy capabilities to work with smart specialisation on a macro-regional level. BSR stars is financed by all participating MS, and the individual projects pay a fee to participate in the flagship. In PA Nutri, the Policy area coordinators (PACs) have been very active looking for joint projects/flagships and interviewed stakeholders see the EUSBSR as tool to justify and develop new projects. One stakeholder in PA Safe mentions that public events have been arranged to increase the generation of ideas and projects.

[120] (Building the EU's lifelong learning programme (HansaVET)-model of Journeyman travel method into a structure: the European Credit system for Vocational Education and Training (ECVET))

[121] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

[122] http://groupspaces.com/eusbsr-education/

[123] http://www.bsr-stars.eu/about-bsr-stars/

More findings on the joint development of projects and generation of project ideas are summarised in Table 3-11 below.

Table 3-11 EUSBSR: Findings from interviews, survey and desk research – examples of increased joint development of projects and generation of project ideas

Policy area	Results – examples from progress reports[124]	Interviews – selected findings[125]	Survey – results[126]
PA Education	Formulation of viable business projects, matched with companies in a neighbouring country, by 200 students at Vocational Education and Training (VET) (building the HansaVET-model of Journeyman travel method into a structure: ECVET)	Good PA Education Coordinators, help to develop cooperation, policy dialogue and different projects are identified. However, in LT, there was a plan for 3 years and money planned for 3 years, but no new projects could be identified Agrees, says: Ideas generation depends on financial period, e.g. ESIF programming and between programming period. Specific situation between ESIF periods Agrees to a high extent, says: created 3 knowledge backbones, have responsible partners from FI and SE. Platforms created – early school leavers, (NEET) and migrants	32% and 42% of respondents strongly or somewhat agreed to that there is an increase in capacity for cooperation
PA Innovation	Dialogue-meeting with flagship representatives + workshop on Cluster activities, Copenhagen Draft policy paper on growth potential and barriers in innovation policy concerning SMEs (cluster-driven SME-development in the whole macro-region through 2020)	PA has set up projects – the flagships are process – they are responsible that the blue growth happens EU Strategy for the Baltic Sea Region's flagship BSR Stars is the support vessel for other projects. Single project as a flagship has to be highly relevant BSR stars is paid by all MS (special) – the others in the project pay a fee to participate in flagship	
PA Nutri	Long lists of project ideas for PA Nutri	Has increased (If you put people together they will generate ideas) Strategy as additional tool to justify and develop new projects Policy area coordinators (PACs) have been very active looking for joint strategies (projects)	

Increased cooperation on major issues in the macro-region

The PA Nutri progress report notes that an important achievement has been the organisation of a stakeholder seminar 'Reducing nutrient inputs to the Baltic Sea – how to strengthen project partnership in the region' on 14 April 2016'[127]. This constitutes a good example of cooperation on major challenges in the region. Stakeholders confirm that more cooperation has been developed in water projects. Some interviewed stakeholders underline that the EUSBSR provides a regional approach, e.g. an opportunity to focus more on concrete solutions, and to target very specific objectives characteristic only to this particular region. One stakeholder adds that although there is an increase in cooperation on major issues, there is still a possibility to incorporate more issue in the cooperation.

Stakeholders in the other policy areas confirm that the structures are in place for cooperation on major issues – slowly but surely, as one stakeholder phrases

[124] Progress reports for the respective policy areas, see section 3.5

[125] Interviews with policy area stakeholders May-September 2017

[126] Survey results per 14.09.17 (policy level)

[127] PA Nutri Progress Report 17.05.16 (Contribution by PA Nutri coordinators to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of macro-regional strategies. 17.05.2016).

it. There is an increase in the commitment and more priority is given to the cooperation (PA Innovation). PA Education has seen an increase in work together in the region on youth employment, according to one of the stakeholders. Also PA Safe has seen cooperation, namely around rescue operations. We have developed common process procedures for risk operations, said one interviewed stakeholder. Another stakeholder remarked that it is important to note that the EUSBSR is not the only actor in addressing major issues, and that there is a need to coordinate on safety, environmental protection, spatial planning – also with other actors such as HELCOM (see Table 3-12 below).

Table 3-12 EUSBSR: Findings from interviews, survey and desk research – examples of increased cooperation on major issues in the macro-region

Policy area	Results – examples from progress reports[128]	Interviews – selected findings[129]	Survey – results [130]
PA Education	Preparing a new Action in the Action Plan on integration of refugees. A process involving six DGs and 16 line ministries in all eight MS + the National Coordinators.	Agrees and comments: youth employment Whole process depends on EU 2020 strategy and it helps to identify issues that are important for Baltic Sea Region	40% and 48% of respondents strongly agree or somewhat agree that the major challenges for the macro-region are reflected in the action plan
PA Nutri	Stakeholder seminar 'Reducing nutrient inputs to the Baltic Sea – how to strengthen project partnership in the region' on 14 April 2016	Cooperation – created more cooperation in water projects Strategy gives regional approach, e.g. opportunity to focus more on concreate solutions for specific region. To target very specific objectives characteristic only to this particular region Strategy helped to increase cooperation between sectors, e.g. environment and agriculture Still a possibility to incorporate more issues	
PA Safe	More accurate sea charts (through flagships, resurveying of shipping routes and ports)	Agrees to some extent, says: we had several projects to develop cooperation on rescue operations. We have developed common process procedures for risk operations. All in the Macro-region Agrees to a high extent, says: BSR is not the only one, e.g. HELCOM addressing needs. There is a need to coordinate.	

Increase in implementation of (regional/EU) polices in the macro-region

In the survey, 17% and 46% strongly or somewhat agree to that there has been an increase in implementation of (regional/EU) polices in the macro-region. 13% did not know and 12% found it too early to say. The figures indicate a mixed picture amongst policy areas in the EUSBSR. In PA Safe, there are efforts to influence and increase the implementation of policy – mostly at the global level. PA Safe therefore works towards 'shaping the global regulatory process through flagships' (e.g. e-Navigation) aiming at international standardisation and regulation[131]. Interviewed stakeholders underlined that there should be common joint policies, but individual Member States should have authority to decide on the level on cooperation.

[128] Progress reports for the respective policy areas, see section 3.5

[129] Interviews with policy area stakeholders May-September 2017

[130] Survey results per 14.09.17 (policy level)

[131] EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016.

Stakeholders in other policy areas have also worked on increasing the implementation of EU or regional policy. In PA Education, actors have been able to raise the question about early school leavers in each country and make youth employment an issue. In PA Innovation, there is a push (as part of the new strategy) for updating the SMART specialisation strategies throughout the EUSBSR. An interviewed stakeholder mentioned that transnational cooperation should be a requirement (from the side of EU COM) in the SMART specialisation strategies. This would strengthen and enhance the implementation SMART specialisation strategies through the EUSBSR. There is currently support for this, but as one interviewed stakeholder noted: 'be aware that EUSBSR often loses the competition between the national and the EU policy agenda'.

In PA Nutri, the aim is the implementation of Marine Strategy Framework Directive (MSFD) and Water Framework Directive (WFD). Interviewed stakeholders underline that MSFD cooperation comes through HELCOM. One interviewed stakeholder pointed to that the effect of the EUSBSR is limited, as it focuses on small projects in different specific thematic fields. Another stakeholder notes that the directives will be implemented with or without the strategy (see Table 3-13 below).

Table 3-13 EUSBSR: Findings from interviews, survey and desk research – examples of implementation of (regional/EU) polices

Policy area	Results – examples from progress reports[132]	Interviews – selected findings[133]	Survey – results [134]
PA Nutri	Assessment of the effectiveness of the measures and environmental instruments applied in the river basin management plans of the Water Framework Directive and the programmes of measures of MSFD	There is a conscious aim on the MSFD and WFD. In Fi we try to take Nutri more actively involved in the programmes, creating management plans. But that is mainly in Finland. Lots of MSFD cooperation comes through HELCOM, so a bit redundant, but we really help to implement the EU directives Agrees, saying: Implementation – in environment area regional norms are stricter than EU Directive – requirements have to be implemented. Each member state is obliged to draw and implement national plans of marine waters protection. Strategy focuses on small projects in different specific thematic fields and cannot force anyone to implement the project Strategy's target is to help to implemented EU Directives, Conventions, Action Plans. Directives to be implemented despite the strategy	17% and 47% strongly or somewhat agree – Increase in Implementation of (regional/EU) polices in the macro-region
PA Safe	Shaping the global regulatory process through flagships (on e-Navigation in the IMO, International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) and the International Hydrographic Organisation (IHO) aiming at international standardisation and regulation)	Agrees to some extent, says: There should be common joint policies, but individual MS should have an authority to decide on level on cooperation that it is not a strong requirement	
PA Transport	PA Transport Coordinators took part in the activity of the TEN-T Forums New revised Action Plan due to regulation on TEN-T network implementation (2013)	Mostly it is done via national policies Interreg and other projects support MRS aims, increased implementation of policies	

3.4.2 Achievements – process-wise

Process achievements of the EUSBSR

In this section, the process-related achievements of the EUSBSR are analysed for the five case policy areas. Overall, the analysis finds achievements 'process-wise' in a number of policy areas in: bringing together new actors across sectors and across countries, and bringing together actors across levels (national/regional) and type (public/private) – see Table 3-14 below.

[132] Progress reports for the respective policy areas, see section 3.5

[133] Interviews with policy area stakeholders May-September 2017

[134] Survey results per 14.09.17

Table 3-14 Survey results (EUSBSR): What is the added value of cooperation under the macro-regional strategies (MRS) in the policy/priority/pillar/thematic area? [135]

Percentage distribution/ sub-question	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Respondents	Standard deviation
Continuing on from previous cooperation and building on existing transnational networks[136]	45%	46%	3%	1%	5%	182	0,98
The MRS process brings together (new) actors across sectors (cross-sectoral cooperation)	39%	46%	8%	2%	6%	171	1,03
The MRS process brings together actors across countries	61%	32%	3%	1%	4%	171	0,91
The MRS process brings together actors across levels (national/regional) and type (public/private)	32%	49%	12%	2%	5%	171	1
The MRS process facilitates access to funding (the cooperation leads to an increase in funding)	13%	54%	20%	5%	8%	171	1,03
The cooperation brings legitimacy to the work and increases recognition of issues/needs/challenges	26%	51%	15%	1%	6%	171	1,01
The MRS process facilitates/deepens cooperation with third countries	8%	44%	28%	7%	12%	171	1,12
The MRS process facilitates synergies between policies; helps better understand the big picture at the policy level	26%	50%	16%	2%	6%	171	1,01

Building on collaboration in topic/area which already existed in the region (before the strategy

In the EUSBSR part of the survey (all policy areas), 45% and 46% of respondents strongly or somewhat agreed to that they are building on collaboration in a topic/area which already existed in the region (before the strategy)[137]. Very few respondents disagreed or did not know. The case studies confirm this picture:

The topics of environmental protection addressed by PA Nutri have for many year been the focus of HELCOM. Several stakeholders confirm that the work in PA Nutri largely builds on the cooperation in HELCOM and the CBSS. The HELCOM BSAP is the main policy document for PA Nutri. The policy dialogue in this area was developed a long time before the development of the EUSBSR. According to interviewed stakeholder, the EUSBSR added at EU level to the existing regional cooperation. However, there has been a need for clarifying the roles of HELCOM (setting policy goals) and PA Nutri (addressing the region's common challenges), respectively. This has now been achieved. Also, there has traditionally been cooperation through the CBSS in the area of environmental protection, one interviewed stakeholder emphasised.

[135] Survey results per 14.09.17. Note that this table does not provide totals, as it integrates questions from different parts of the survey.

[136] From question: What are the drivers for collaboration within your area/topic? (Survey results per 14.09.17 (policy level)).

[137] Survey results per 14.09.17 (policy level)

Interviewed stakeholders in PA Education underline that cooperation has always existed in the BSR. Spread out on numerous networks with different kinds of focus and membership. The work in PA Education builds, to some extent, on this, but integrates the different perspectives from the networks. PA Education has helped to formalise the cooperation. In PA Safe, stakeholders mentioned that collaboration already existed at the governmental level (HELCOM), but this cooperation has been improved and enhanced - extended to other government levels - because of the EUSBSR. In PA Transport, interviewed stakeholders also mentioned that some collaboration in transport existed before the strategy and that many of the key issues have been worked on before: sustainability, connectivity, and accessibility. The EUSBSR and the work within the PA Transport supports developing the important topics in the PA and pushing these onto national and EU agendas. See Table 3-15 below for more findings.

Table 3-15 EUSBSR: Findings from interviews, survey and desk research – examples of building on collaboration in topic/area which already existed in the region (before the strategy)[138]

Policy area	Results – example from progress reports[139]	Interviews – selected findings[140]	Survey – results[141]
PA Nutri	Clear roles of HELCOM (setting policy goals) and PA Nutri (address region's common challenges), respectively Establishment of new networks / processes (cooperation with HELCOM)	Collaboration – in Baltic States water utilities had cooperation due to historical reasons but more on a bilateral basis - now due to Interreg funding there is even wider cooperation Nutri related policy dialog is a long lasting, e.g. HELCOM BSAP – the main document for Nutri in the Baltic Sea area. Policy dialog was developed long time before strategy approval, strategy added importance at EU level There was already good cooperation in the area of environment protection, security through SBSS	45% and 46% of the respondents strongly or somewhat agree that they are continuing on from previous cooperation and building on existing transnational networks
PA Safe	No example from report	Collaboration already existed on the governmental level, but this cooperation has been improved and enhanced because of the strategy. One important thing is that we have enhanced cooperation among different kind of organisations, which is one of our major achievements	
PA Transport	Improved cooperation with programmes' Joint Secretariats (Interreg Baltic Sea Programme, South Baltic and Central Baltic Programme)	Many of our things have been worked on before (sustainability, connectivity, accessibility has always existed and always somewhat prioritised). What we can do is promote the transnational perspective There were Interreg projects before For many topics cooperation existed before, but strategy pushes things forward	

The MRS–process brings together (new) actors across sectors and countries

The survey results show that 39% and 46% of the respondents strongly or somewhat agree that the MRS process brings together (new) actors across sectors (cross-sectoral cooperation). 61% and 32% of respondents strongly or somewhat agree to that the MRS process brings together actors across countries. Very few percent of the respondents disagreed or did not know. These significant results cover all the policy areas of the EUSBSR, but are largely confirmed by the interviews (see Table 3-14 and Table 3-16).

[138] Survey results per 14.08.17.

[139] Progress reports for the respective policy areas, see section 3.5

[140] Interviews with policy area stakeholders May-September 2017

[141] Survey results per 14.09.17 (policy level)

The progress report for PA Safe points to that there has been an increase of cross-sectoral cooperation[142]. Interviewed stakeholders confirm that cooperation has been extended among different kind of organisations, which is one of a major achievements. For example in Blue growth – there are cross cutting issues that can contribute to many PAs. This brings in new actors partly also through network (initialled by DG MARE) and HELCOM process. A stakeholder warns that the one issue that may hamper this development is the availability of resources: Actors will only participate if there are resources (financial: travel costs) available to compensate their travel and participation.

In PA Education, stakeholders find that EUSBSR provides a platform where different actors can cooperate and work together. New actors continuously appearing and with more than 60 members in a flagship project, it is difficult not to improve networking (there was a quality jump when the membership went from 30 to 60 members). Some interviewed stakeholder do not find that cross-sectorial cooperation has increased and do not find that this should be the main focus for PA Education. Other interviewed stakeholders in the research area find that universities are very active and work across all EUSBSR countries and across research areas. The increased cross-sector cooperation is not necessarily a result of the EUSBSR, but in the nature of the research world.

Stakeholders in PA Transport find that the EUSBSR provided impetus to establish solid networks among the actors from different sectors. One stakeholder found that the cooperation has developed to a level that could not have been done without the EUSBSR. The cooperation is important as EUSBSR gets everybody involved and it is easier to find partners for: addressing similar challenges, to develop projects and common solutions. It is very important to develop the collaboration with TEN-T coordinators. New links between project promoters and institutions have been developed. The new cross-sectoral cooperation relates especially to energy efficiency, small and medium-sized enterprises (SMEs), and climate change. Table 3-16 below presents a summary of these and other findings for PA Safe, PA Education and PA Transport.

In PA Nutri stakeholder interviews found that the EUSBSR helped to increase cooperation between sectors, e.g. environment and agriculture. Considerable energy is needed to bring all Member States together in a cross-sectoral cooperation. The EUSBSR is an important tool, but there are other processes such as HELCOM and Marine Strategy Framework Directive (DG ENV). EUSBSR often finds itself somewhere between those two policy processes – national and EU. Several stakeholders reflected that cooperation between different policy areas, for instance, bio-economy could be improved. Cooperation between environment and other sectors is not working, but this is a wider issue not only for EUSBSR. One interviewed stakeholder said that the environment sector sees the need to have a dialogue with other sectors, but the other sectors are often not interested in a dialogue.

[142] EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016.

Table 3-16 EUSBSR: Findings from interviews, survey and desk research – examples of the MRS-process bringing together (new) actors across sectors and countries

Policy area	Results – examples from progress reports[143]	Interviews – selected findings[144]	Survey – results[145]
PA Education	Preparing a new Action in the Action Plan on integration of refugees. A process involving, amongst others, 16 line ministries in all eight MS. Increased number of stakeholders A growing number of stakeholders involved in the flagships.	The Baltic region has plenty of networks living in their own world/focus. National/regional/global/Commission level – MRS integrates the perspectives, inviting others to join us. E.g. labour labour mobility MRS provides a platform where different actors can cooperate and work together, can identify have partners to and reach out for There is no cross sectorial cooperation, e.g. ESF and ERASMUS. Cooperation is not institutionalised (4) [also:] not the main focus area and do not have cooperation outside ESF related topics In research areas cross sectorial research companies and universities, energy sector New actors are always appearing More than 60 members in flagship project as the purpose of flagship project is to improve networking. Making progress as participation went from 30 to 60 members	39% and 46% of the respondents strongly or somewhat agree that the MRS process brings together (new) actors across sectors (cross-sectoral cooperation) 61% and 32% of respondents strongly or somewhat agree to that The MRS process brings together actors across countries
PA Safe	Increase of cross-sectoral cooperation Work on cooperation (with PA Ship + other PACs/HACs)	Our PA has increased cooperation and dialogue among several countries. [And:] Some countries have been active in the beginning only, while other are becoming more active. 1-2 countries were always less active. Some countries have lack of resources, change in representative. Some had a lack of money If MS in BRS want to cooperate and have resources [And:] Depends on MS whether they have representatives – resources to participate in meetings and planning	
PA Transport	Increase of cross-sectoral cooperation (PA Ship + PA Safe) Extensive dialogue and cooperation among the regional transport Coordinators from all macro-regions (sharing best practises, discussing challenges + emerging problems)	The macro-regional strategy provided great impetus to establish solid networks […] among the actors from different sectors. […] facilitates the dialogue and mutual influence within and between different sectors In Interreg the same actors play role and it is not easy to involve new actors Cooperation related to energy efficiency, SMEs, climate change and transport works well. In other areas maybe not so sufficient cooperation Good solutions require approaches at least across the border	

Also at the project level, the EUSBSR appears to have been able to contribute to increased level of cooperation across countries. As shown in Table 3-17 below, which includes the survey results concerning the value added of running a project within the macro-regional strategy, 44% and 38% strongly or somewhat agree that they 'were able to involve new partners and increase the geographical scope'.

[143] Progress reports for the respective policy areas, see section 3.5.

[144] Interviews with policy area stakeholders May-September 2017

[145] Survey results per 14.09.17

Table 3-17 Survey results (EUSBSR): What is the added value of running a project within the macro-regional strategy (MRS) in your area?[146]

Percentage distribution/ sub-question	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Respondents	Standard deviation
We were able to involve new partners and increase the geographical scope (working within new thematic areas and/or geographical regions)	44%	38%	6%	2%	10%	125	1,21
We have been able to develop new concepts/ideas for tackling issues	42%	40%	6%	3%	9%	125	1,18
We have been able to attract new or additional funding	24%	42%	14%	8%	12%	125	1,27
We have developed new skills for cooperation on the issues in the area/topic	40%	42%	6%	3%	9%	125	1,17
We have been able to involve different levels of government/administration (multi-level governance)	31%	41%	15%	4%	9%	125	1,18
Total						125	1,2

The MRS-process brings together actors across levels (national/regional) and type (public/private)

32% and 49% of respondents at policy level strongly or somewhat agree to that the MRS process brings together actors across levels (national/regional) and type (public/private) (Table 3-14). 31% and 41% of respondents at project level strongly or somewhat agree that they have been able to involve different levels of government/administration (multi-level governance) (Table 3-17). Only a few respondents answered that they 'disagreed or did not know' in relation to these two survey questions. These positive results are reflected in most of the analysed policy areas:

According to interviewed stakeholders, PA Innovation is increasingly focusing on the regional and local level – through the SMART specialisation strategies (one of three policy instrument). The progress report mentions the Conference on S3 - "The macro regional context" in Sandviken (with CPRM Baltic Sea Commission) as a key step in this direction. PA Innovation operates in an environment where there are large difference between the Member States. Some Members States are more focused at Triple helix cooperation[147]. EU Innovation allows for coordination at overall policy level and implementation in accordance with national rules and financing provided at project/actor level.

Also in other policy areas, interviewed stakeholders see an increase in cooperation with actors at other government levels, with NGOs and the private sector. In PA Safe, stakeholders find that they have enhanced cooperation among different kinds of organisations and consider this as a major achievement. Cooperation has been extended not only at governmental level, but also with regards to NGOs, research, academia and industry. For PA Safe, according to stakeholders interviewed, getting all kinds of institutions with the same objective together is the key success. It is noteworthy that private sector

[146] Survey results per 14.09.17. (project level)
[147] public sector-academia-business

actors at the international level are more involved in the activities of the PA Innovation, as they seem to see business opportunities in this area.

In PA Transport, interviewed stakeholders regard the EUSBSR as an innovative tool for regional and inter-regional cooperation uniting representatives from business, academia and public structures. One stakeholder pointed to the importance of multi-level governance and specially the role of regions as a party in the strategy implementation. Regions are becoming more important as project promoters and economy developers. There are good examples in the region of this way of cooperation at local/regional level; e.g. the Öresund region (Sweden/Denmark). This is an example where actors under the umbrella of PA Transport got public and private actors together to obtain information on passengers on a cross-border level. Other interviewed stakeholders are more sceptical and state that it is not easy to involve new actors, especially private companies[148]. This could be because of prohibitive administrative burdens and because private actors may not have the capacity (and interest). See Table 3-18 below for more findings.

[148]In particular with reference to state aid rules

Table 3-18 EUSBSR: Findings from interviews, survey and desk research – examples of multilevel cooperation (national/regional and public/private)[149]

Policy area	Results – examples from progress reports[150]	Interviews – selected findings[151]	Survey – results[152]
PA Education	Formulation of viable business projects, matched with companies in a neighbouring country, by 200 students at Vocational Education and Training (VET) (building the HansaVET-model of Journeyman travel method into a structure: ECVET)	Research (agencies/council/university) are on board, which results working towards the national level. National network in all MS, which is a total of 500 stakeholders. They are inviting to countries they live in and to webinars. Many NGOs, municipalities, government agencies… quite a broad range of organizations. Every time there are new NGOs and private actors. Cooperation has improved but it is difficult to measure at which degree In this programming period there is Interreg funding and it is allowed for private companies to participate and they are eligible as partners. It helps to develop BRS. In IT sector, many private companies participate	32% and 49% of respondents strongly or somewhat agree to that the MRS process brings together actors across levels (national/regional) and type (public/private) 31% and 41% of respondents at project level strongly or somewhat agree to that they have been able to involve different levels of government/administration (multi-level governance))
PA Innovation	Conference in on S3 - "The macro regional context", Sandviken (with Baltic Sea Commission)	We are now at the regional and local level – through the SMART specialisation strategies (one of three policy instruments) Very different levels - a high degree of difference between MS – innovation runs parallel process using regional/national rules. EU INNO is good as it allow coordination at an overall level and implementation with national rules and financing Triple helix cooperation – focus in Scandinavia	
PA Nutri	Stakeholder seminar 'Reducing nutrient inputs to the Baltic Sea – how to strengthen project partnership in the region', April 2016 (brought together over 60 participants interested in regional cooperation, including implementers, policy makers, and representatives of funding instruments)	On some level we have increased the coordination with the national policies between countries and within institutions. It's more difficult to reach private sector, but NGOs are generally taken account of and they are active in projects Mostly public or project organisations are participating. Problem on macro-regional financing level, as there is a need to involve private partners in order to get additional financing and to create innovations – and also commercialize project outcomes, so that the project results are genuinely sustainable There are some new actors coming, e.g. universities, regional authorities [And:] Dialogue between national and regional authorities. [Concerning NGOs + private actors:] Not yet fully utilised, as main cooperation is between different authorities	

Increase in cooperation with sector relevant EU Commission services

In PA Education, the new Draft Action Plan (AP) with 4 Actions, including 4 flagships (and two additional, emerging ones) has been developed in consultation with EU COM (various DGs). Since 2015, the steering Group (SG) meetings are organised in Brussels occasionally, in order to increase the dialogue and involvement of DG HOME, DG RDI, DG AGRI, DG EMPL, and others. Interviewed stakeholders emphasize that DG REGIO is very involved in the process and take part in coordination group meetings 1 – 2 times per year. DG EMPL is involved at the larger events. One interviewed stakeholder stated that there is no need for special attention from European Commission, as it is a natural process of cooperation. According to another interviewed stakeholder, in an ideal world the European Commission services would be directly in contact with flagship project managers, where the real sectoral topics and challenges are discussed.

[149] Survey results per 14.08.17. (policy area)

[150] Progress reports for the respective policy areas, see section 3.5.

[151] Interviews with policy area stakeholders May-September 2017

[152] Survey results per 14.09.17 (policy and project level, respectively)

PA Nutri have a DG REGIO representative in the Steering Committee and interviewed stakeholders find that it would be good to have a representative from DG ENV as well. Overall, the cooperation with DG REGIO and other DGs has increased. In PA Safe, interviewed stakeholders stated that they have a very good relationship with REGIO. With other DGs, the contact has varied; and therefore, for the next steering committee meeting, DG MARE and DG MOVE have been invited in the hope of improving the relationship.

Table 3-19 below presents a summary of findings from interviews and progress reports for PA Education, PA Safe and PA Transport.

Table 3-19 EUSBSR: Findings from interviews, survey and desk research – examples of cooperation with sector relevant EU Commission services

Policy area	Results – examples from progress reports[153]	Interviews – selected findings[154]	Survey – results
PA Education	Draft Action Plan (AP) with 4 Actions, including 4 flagships (and 2 additional, emerging ones) in consultation with EU COM (various DGs); e.g. Action on integration of refugees: A process involving six DGs	Too closely linked too DG Regio. SG meetings in Brussels (DG HOME, DG RDI, DG AGRI, DG EMPL, & 2 others. This developed by 2015 EC – DG REGIO is very involved in the process, coordination group meetings 1 – 2 times per year, DG REGIO always present. DG EMPL at the bigger events EC states objectives and goals BSR is regional strategy, no special financing and political collaboration, issues are similar. There is no need for special attention from EC as it is a natural process of cooperation Thanks to flagship project management they are reaching out to DG EMPL, transnational coordination coordinators, etc. Trying to keep cooperation with EC but in an ideal case EC should be reaching out for flagship project managers	Not covered by survey
PA Safe	The international Steering Committee has been well-functioning for several years […]. The PACs see great yield by permanent participation from the Commission (DG Regio and if possible also DG Move and DG Mare) at the international Steering Group meetings.	We had very good relationship with REGIO. But with other DGs it has varied. MARE's connection varies. MOVE we had not much connections. Invited MARE and MOVE, with the hope to improve our relationship There are so many other lobbying services and EU decision making including politics, policies, etc. Not easy to assess if there is true cooperation	
PA Transport	No example in report	Cooperation with relevant EU Commission bodies has increased recently. Besides day to day cooperation with DG REGIO, 2016/2017, cooperation increased with DG MOVE, especially in TEN-T core network corridor Forums and other events related to cooperation with European Coordinators in developing the above corridors in the BSR territory Still it is not easy to be heard in Brussels. Interreg and other projects help with cooperation as one bundles voices	

Cooperation with third-countries

In the survey responses from EUSBSR (policy level), 8% and 44% of respondents strongly agree or somewhat agree to that the MRS process facilitates/deepens cooperation with third countries. 12% did not know and 28% and 7% somewhat or strongly disagreed. This is result of a strategy, which primarily focuses on intra-regional cooperation. The summary of findings from

[153] Progress reports for the respective policy areas, see section 3.5.

[154] Interviews with policy area stakeholders May-September 2017

interviews in the policy area below shows a mixed picture and that the level of cooperation with third countries depends on the topic (Table 3-20).

The progress report for PA Transport identifies the increased cooperation /synergies with four of the European Coordinators (Scan Med, North Sea – Baltic, Baltic – Adriatic and Motorways of the Sea) as a key achievement. Interviewed stakeholders explain that in annual forums, Ukraine is present, but that in general PA Transport focus on the EU, e.g. there are discussions with China but no practical steps have been taken. Cooperation with Norway is very developed though. Interviewed stakeholders in PA Education explain that there is a particular initiative in relation to refugee integration (e.g. the knowledge platform).

At the launching of the EUSBSR, it was an EU strategy, and only later the cooperation with third countries was added. Overall, stakeholders do not find that the EUSBSR increased cooperation with third countries. For the current programming period, the cooperation with Russian and Belorussia is limited due to political reasons (PA Transport). According to stakeholders in PA Nutri the activities, which have taken place in the past, have been possible because of the available financing opportunities. In 2011, several projects undertaken, e.g. agriculture practice in BSR, with Belorussia partners. The difference between HELCOM and EUSBSR is that in HELCOM, Russia is member.

According to some stakeholders, other initiatives contribute more to cooperation with non-EU members (i.e. CBSS, Northern Dimension). In this connection, interviewed stakeholders also mention the links to EUSDR and EUSALP (Table 3-20).

Table 3-20 EUSBSR: Findings from interviews, survey and desk research – examples of cooperation with third-countries

Policy area	Results – examples from progress reports[155]	Interviews – selected findings[156]	Survey – results[157]
PA Nutri	Strengthening the cooperation with HELCOM (e.g. presenting results from coordination work at HELCOM meetings) Alignment of policies/funding (cooperation with … NDEP and BSAP Fund)	Third countries – work with BY and RU due to financing opportunities available; without financing it would not have happened Have HELCOM representative in the Steering Committee – very active and helpful, although have to present / balance the opinion of all member states [And:] In 2011, had several projects which were completed, e.g. agriculture practice in BSR, one project with BY partner There was already good cooperation with Norway and Russia, and it has increased [And:] For BSR, other strategies contribute more to cooperation with non-EU members	8% and 44% of the respondents at policy level strongly or somewhat agree that the MRS process facilitates/deepens cooperation with third countries
PA Safe	Shaping the global regulatory process through flagships (on e-Navigation in the IMO, IALA and the International Hydrographic Organisation (IHO) aiming at international standardisation and regulation	In some flagship projects, we have RU, e.g. Stormwind [winter navigation and transport in icy conditions]. We also had RU representatives Project is planned global worldwide and not limited to EU; but including third countries and private companies HELCOM, Russia is part of activities and affecting BSR. It is possible to have third country MS and also involvement at professional level and not politics – Russia has the same interests (professional agree on policies, environment, etc.) [Also:] Important that there is a cooperation in other forums, as non EU members do not participate in EU events	
PA Transport	Increased cooperation /synergies with four of the European Coordinators (Scan Med, North Sea – Baltic, Baltic – Adriatic and Motorways of the Sea) Extensive dialogue and cooperation (sharing best practises, etc.) ,among the regional transport Coordinators from all macroregions	The Association [EWTCA)] consists of 27 partners from 11 European and Asian countries In annual forums there will Ukraine. But not going outside EU to a high extent, e.g. there are discussion with China, but no practical steps Third countries – cooperation with Russia more difficult, but those difficulties are not linked with MRS but external factors. Norway – cooperation increased	

3.5 Comparison of objectives of the EUSBSR with achievements (Task 2c)

Comparison of objectives of EUSBSR with achievements (2c)

This section provides an analysis of the objectives (from the action plan), targets[158], achievements (progress reports), and indicators (where available) of the five policy areas analysed for the EUSBSR. These are illustrated in a logframe for each policy area (Table 3-22, Table 3-25, Table 3-28, Table 3-31, and Table 3-35). For each policy area, the progress towards targets and objectives is tracked through the identification of examples of achievements and the progress registered in the progress report. The logframe is based on the action plans, the work programmes (where available) and the progress reports. The achievements are discussed drawing on the analysis presented in Section 3.7.

[155] Progress reports for the respective policy areas, see section 3.5.

[156] Interviews with policy area stakeholders May-September 2017

[157] Survey results per 14.09.17 (policy level)

[158] EUSBSR Action Plan

Verifiable indicators

Where possible, the progress towards achieving the objective is illustrated via one or more objectively verifiable indicators (OVI). The indicators used are either those included in the target by the policy areas (where available), or indicators that were identified/analysed in in Task 1 (Section 2) and Task 2a (Section 3.3). To the extent possible, data for two periods is included for the indicators in order to assess the progress. These periods are however not identical for all indicators but they all span over the period 2010-2017. Data for many of the indicators only exist for specific years.

Reporting and indicators

All the policy areas in the EUSBSR are well established and have developed procedures. The progress is recorded/documented in progress report. Indicators are not used to any great extent to monitor progress (except in a few PAs). Currently, however, work is on-going to establish a monitoring system with indicators for the PAs[159]. Moreover, the European Grouping on Territorial Cooperation ESPON intends to develop a tailor-made monitoring system for each of the four macro-regions[160].

PA Education - Objectives vs. achievements

PA Education

PA Education focuses on increasing mobility for pupils and students. PA Education has set four targets in the Action Plan, of which two can be verified via external indicators[161].

The logframe for PA Education

The logframe included in Table 3-22 shows the activities and the achievements (output/results) for PA Education from the progress report. The progress report does not establish a direct link between the output results and specific targets. The output and results are of the kind that will contribute to several targets by strengthening the framework for educational activities and cooperation. A key tool of the PA Education is the development of flagships. Currently four flagships are active in PA Education (see Table 3-21 below).

Table 3-21 PA Education – Flagships[162]

Flagship	Short description
School to work - S2W network	Flagship partners are from all Member States in the Baltic Sea Region. The main focus on preventing early school leaving and reducing NEETs.
Baltic Sea Labour Forum - BSLF network.	Flagship partners are 28 organisations from 8 countries. The main project focus areas are to identify and remove obstacles to free movement, counter pay dumping and to provide internships in neighbouring countries
Baltic University Programme - BUP network	The largest university network in the Baltic Sea Region including 230 universities and colleges. The project main focus is on sustainable regional development through cooperation in education, research and applied projects.

[159] Monitoring indicators and targets in the EUSBSR. Final Report. 31.08.2016. Spatial Foresight.

[160] https://www.espon.eu/call-tenders-european-and-macro-regional-territorial-monitoring-tool

[161] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

[162] http://groupspaces.com/eusbsr-education/.

Baltic Science Network - BSN	The flagship involves partners from 8 Member States and Russia. The main focus areas are macroregional framework for more strategic and efficient science policy, political coordination framework for joint higher education and science and research policy.

A key achievement listed by PA Education in the progress report [163]is 'the conceptualization of flagships as development processes, with School to Work (S2W) as the best example'. The 'Connectivity among institutions and countries effectively secures well-being of young people who are at risk of early school leaving and becoming NEET[164] in the Baltic Sea Region', according to the description of the flagship[165]. The work in this flagship is assessed as contributing to Target 2. Also the achievement 'Formulation of viable business projects, matched with companies in a neighbouring country' is assessed as contributing to this target.

Targets 3 and 4 are more indirectly linked to the activities of PA Education as there currently seem to be limited activities in relation to students outside the BSR.

Table 3-22 Logframe for PA Education[166]

Input	Example of activities	Examples of outputs/results	Targets
People/organisations Funding Other (e.g. infrastructure, facilities, services)	• Organisation of stakeholder seminars • Building communication channels to stakeholders (national networks) • Initiation of development processes – flagships (e.g. School to Work (S2W)) • Follow-up on and support of flagships • Organisation of policy-workshops with flagship leaders • Development and update of communication / information materials • Development of website • Revision of Action Plan (AP) • Preparing a new Action in the Action Plan on integration of refugees. A process involving six DGs and 16 line ministries in all eight MS + the National	• National stakeholder network ('channels for communication') in Sweden • Communication materials: Graphical brochure and newsletters • Website (group space) • Increased number of stakeholders • Guide on project funding (tool for helping stakeholder to navigate and find financial instruments) • Draft Action Plan (AP) with 4 Actions, including 4 flagships (and 2 additional, emerging ones) in consultation with EU COM (various DGs) • Formulation of viable business projects, matched with companies in a neighbouring country, by 200 students at Vocational Education and Training (VET) (building the HansaVET-model of Journeyman travel method into a structure: ECVET) • The conceptualization of flagships	1) By 2020, aiming at a Baltic Sea region average at 10 % of tertiary education graduates with a period of higher education-related study or training (including work placements) abroad and within Baltic Sea region, representing a minimum of 15 ECTS credits or lasting a minimum of three months. 2) By 2020, an EU average of at least 6 % of 18-34 year olds with an initial vocational education and training qualification should have had an initial VET-related study or training period (including work placements) abroad and within Baltic Sea region lasting a minimum of two weeks, or less if documented by Europass. 3) Number of students from outside the BSR. Numbers of students 2020; + 10%.

[163] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

[164] Not in Education, Employment, or Training

[165] https://www.balticsea-region-strategy.eu/8th-annual-forum/programme/16-8th-annual-forum/seminar-information/590845-holistic-school-to-work-transition.

[166] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

	Coordinators. In parallel preparing a new flagship with its activities, organizing workshops with stakeholders and finally preparing structure for the flagship to come.	as development processes, with School to Work (S2W) as the best example. • A growing number of stakeholders involved in the flagships.	4) Number of researchers at research institutions from outside BSR. Number of researchers 2020; + 10%

Measuring progress via indicators

Progress on the targets is not included in the progress reports for PA Education. There is a general section on progress focusing on progress in relation to activities in the work programme. A key activity has been to work with member states in establishing platforms for multi-level governance[167]. The platforms are seen as key communication tool with stakeholders for policy discussions, initiating new projects and building partnerships. The platforms should increase civil society and business involvement.

PA Education has set four targets, of which two can be verified via external indicators. The first target seeks to increase the share of students who study abroad and in the Baltic Sea region. The composite 'Share of mobile students from abroad' of the 'Labour Integration Index' [168], which provides a verifiable context on targets 1 and 2, shows that the countries hosted in 2015 on average a slightly higher share of students from abroad and within the Baltic Sea Region than the EU median. The score of 103 shows that the result is however only marginally higher.

Target 3 aims to increase the number of students from the BSR region. The indicator on the 'number of mobile student from abroad' shows that the target of a 20% increase is already nearly met, if looking at the time span of 2013-2015. As the data is not available for 2008-2012, it is difficult to verify if this three-year span also corresponds to a strong increase since 2008.

Table 3-23 Progress on targets – PA Education

Objectives	Targets[169] and indicators	Progress according to progress report[170]	Progress towards objectives via indicators (OVIs)
Increased mobility for pupils and students.	*Increased mobility for pupils and students (1)* By 2020, aiming at a Baltic Sea region average at 10 % of tertiary education graduates with a period of higher education-related study or training (including work placements) abroad and within Baltic Sea region, representing a minimum of 15 ECTS credits or lasting a minimum of three months.	Not stated in relation to targets in the report	'Labour Integration Index', 'Share of mobile students from abroad' (Benchmark) 103 (2015)
Attracting students and researchers from	*Increased mobility for pupils and students (2)* By 2020, an EU average of at least 6 % of 18-34 year	Not stated in relation to targets	'Labour Integration Index', 'Share of mobile students

[167] 2016.04.13. PA Education – work programme – final. May, 1, 2016 – April, 30, 2018
[168] See Task 1 - State of the Macro-region - Baltic Sea
[169] COMMISSION STAFF WORKING DOCUMENT, European Union Strategy for the Baltic Sea Region – ACTION PLAN {COM(2009) 248}; SWD(2017) 118 final.
[170] EUSBSR Policy Area Education Progress Report, draft 24.07.2017.

outside the Baltic Sea region.	olds with an initial vocational education and training qualification should have had an initial VET-related study or training period (including work placements) abroad and within Baltic Sea region lasting a minimum of two weeks, or less if documented by Europass.	in the report	from abroad' (Benchmark) 103 (2015)[171]
	Attracting students and researchers from outside the Baltic Sea region (1) Number of students from outside the BSR. Numbers of students 2020; + 10%.	Not stated in relation to targets in the report	Number of mobile students from abroad 154,075 (2013) 183,834 (2015) -> 19%
	Attracting students and researchers from outside the Baltic Sea region (2) Number of researchers at research institutions from outside BSR. Number of researchers 2020; + 10%	Not stated in relation to targets in the report	No direct data

PA Innovation - Objectives vs. achievements

PA Innovation

PA Innovation focuses on promoting a globally competitive position within research and innovation for growth in the BSR. The main aim is to increase innovation capacity and support entrepreneurship, business development, and science.[172] The Policy Area Innovation is a recent merger of several policy areas and has in its current form not existed over the full period of the EUSBSR. A new PAC organisation took over in 2015. According to the interviewed stakeholder, there is currently a focus on involving the regional and local level through the SMART specialisation strategies.

PA Innovation flagships/processes

A key tool of the PA Innovation are the six flagships. According to interviewees, the flagships are processes, functioning as mini-policy areas on specific topics[173]. One of the flagships is BSR Stars. The flagship operations are funded by all Member States and the related projects pay a fee to be part of the flagship. BSR Stars was assessed in the study 'Added value of macro-regional strategies' and the assessment is included in Table 3-24. Interviews with stakeholders find that: '*By enhancing the network between different cluster initiatives, stakeholders in the Baltic Sea region have become more aware of the innovation and research and development possibilities in the region. They are aware know that testing facilities, funding opportunities and partners can also be found at regional level rather than on global level*'[174].

Table 3-24 PA Innovation – assessment of Flagship: BSR Stars[175]

Flagship	Assessment
Cooperation is seen as essential to increase the	The StarDust contributes to the EUSBSR objectives through:

[171] This is Tertiary Education data, and thus not really comparable with vocational education. VET data, has not international dimension (e.g. Pupils enrolled in vocational upper secondary and post-secondary non-tertiary education by education level, sex and field of education (educ_uoe_enrs10)).

[172] Policy Area Innovation Strategy Guide – Putting the Action Plan into Practice: Nordic Council of Ministers. 2016

[173] Interview with Forsling

[174] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight. 12/12/2016

[175] Ibid.

number of competence that a single player does not have. The region is seen as shared resource-base in which useful knowledge is available, one does not necessarily need to rely on non-EU resources to create knowledge. The EUSBSR inspired the project partners to join forces across different policy sectors, reaching a critical mass and so increasing the impact of their actions.	- Facilitating transnational networks partnerships and strategic alliances between cluster organisations, companies, universities, research centres and public authorities; - Sharing, developing and utilising open and demand-driven innovation; - Improving macro-regional innovation capacities to lever specialised national assets; - Strengthening the international visibility and attractiveness of the Baltic Sea region and its innovation capabilities.

The logframe for PA Innovation

This policy area has developed a new strategy as well as a monitoring system in 2016. The strategy sets out the log-frame of the policy area. The monitoring system will track the inputs of the flagships and projects to the objectives of the strategy. The latest progress report does not track these developments directly yet. It is the assessment that the activities, output/results as described in the logframe can contribute to targets set for PA Innovation. Some of the activities of PA Innovation (Table 3-25) focus on setting up the strategy and the system described above. Other activities target the facilitation of networks, financing, and the development of policy papers.

Table 3-25 Logframe for PA Innovation[176]

Input	Examples of activities	Examples of outputs/results	Targets
People/ organisations Funding Other (e.g. infrastructure, facilities, services)	• Establishing and implementing PA Innovation • Establishing and facilitating processes and focus for Steering Group • Establishment of management team • Development of strategic action plan (incl. facilitation of work/cooperation leading up to) • Development of monitoring framework (incl. facilitation of work/cooperation leading up to) • Assisting EUSBSR Seed money facility (prioritizing applicants) • Organisation of meetings (e.g. Steering Group, Seed money facility, round table discussion) • Organisation of workshop, seminar + conference • Project preparation and identification of financing • Identification and support of Flagships • Dissemination of information materials	• Policy Area Innovation (replacing the previous separate policy areas for PA Innovation, SME and parts of PA Market and HA Promo) • Management team for PA (comprising representatives from Vinnova (SE), Ministry of Economic affairs (EE), Danish Agency for Science, Technology and Innovation (DK), Ministry of Science and Higher Education (PL), Baltic Development Forum Denmark, and Nordic Council of Ministers) • Digital Policy Profiles (policy paper and an annex that includes digital policy profiles for all BSR countries) • Strategic action plan "Policy Area Innovation - Strategy Guide": "Putting the Action Plan into practice" • Monitoring framework with indicators (anchored to Strategy Guide) • Multi-national meeting for Seed money projects in Copenhagen November 2015 (with Flagship representatives) • Dialogue-meeting with flagship representatives + workshop on Cluster activities, Copenhagen • Conference in on S3 - "The macro regional context", Sandviken (with Baltic Sea Commission) • Draft policy paper on growth potential and barriers in innovation policy concerning SMEs (cluster-driven SME-development in the whole macro-region through 2020)	Enable shared learning through networking and knowledge-transfer activities and other instruments. Create and strengthen networks through platforms for matchmaking, creating visibility, engaging networks in a dialogue, and opening up funding instruments for their activities. Align funding resources through strong co-ordination of funding sources, flexible procedures for funding allocation, and alignment of funding instruments with common objectives. Join forces by allocating funds or submitting existing programmes to the decision-making authority of the regional structure.

[176] based on PA Innovation – draft progress document, August 2018.

Measuring progress via indicators

The review could not identify direct indicators for the targets set by PA Innovation. The targets used in the table are those of the recent strategy and not the Action Plan. However, the 'Regional Innovation Scoreboard' can indirectly describe the performance of the NUTS2 regions on innovation. For the Baltic Sea Region, the overall progress of on innovation of regions stagnated between 2008 and 2016. In both years, 23 out of 42 NUTS2 regions scored as either 'Strong' or 'Leader' innovators. From a more detailed perspective, nine regions improved their innovation performance, but seven regions show a decreased scoring. In both years, it is the same regions that score as 'Strong' or 'Lead' innovators (Table 3-26).

Table 3-26 Progress on targets – PA Innovation

Objectives	Targets[177] and indicators	Progress according to progress reports[178]	Progress towards objectives via indicators (OVIs)
Enable shared learning through networking and knowledge-transfer activities and other instruments.	Target: 75% of survey respondents reporting positive feedback on PA-Innovation and flagship activities	The progress report does not yet include progress on the indicator	'Regional Innovation Scoreboard'; 'Strong'/'Leader' innovating regions 23 out of 42 (2008) 23 out of 42 (2016) Improvement: 9 Deterioration: 7
Create and strengthen networks through platforms for matchmaking, creating visibility, engaging networks in a dialogue, and opening up funding instruments for their activities.	Targets: Minimum 10% increased volume of engagement of different actor groups, two new collaboration platforms, and mapping of open-innovation infrastructure facilities in the BSR	The progress report does not yet include progress on the indicator	
Align funding resources through strong co-ordination of funding sources, flexible procedures for funding allocation, and alignment of funding instruments with common objectives	Target: Alignment of EUR 10 million in funding from different funding sources	The progress report does not yet include progress on the indicator	
	Join forces by allocating funds or submitting existing programmes to the decision-making authority of the regional structure.	The progress report does not yet include progress on the indicator	

PA Nutri - Objectives vs. achievements

PA Nutri

PA Nutri focuses on the restoration of good environmental status of the Baltic Sea by using an ecosystem approach. The main focus areas are improved waste water treatment, promotion of bio-economy and coordination with other related PAs. The main policy implementation processes are defined by HELCOM and the Marine Strategy Framework Directive (MSFD). PA Nutri is often regarded as an

[177] Policy Area Innovation Strategy Guide (including the PA INNO Monitoring Guide), Nordic Council of Ministers, 2016.

[178] The PA Innovation Monitoring system and guide is recently developed an not yet reflected in the progress report.

implementation vehicle for policies developed in HELCOM and the EU (MSFD), according to interviewed stakeholders[179].

PA Nutri flagships/processes

PA Nutri has 10 on-going flagships and four closed[180] ones. Topics covered by the flagships include wastewater management, mussel farming, data collection on nutrient loads, and environmental protection. Project results include e.g. tools to be used by water utilities, data collection, information about technologies, and pilot investments. Concretely, the flagship project Baltic Deal identified around 50 different measures for farmers to limit nutrient losses[181].

Table 3-27 PA Nutri – assessment of Flagship: Baltic Deal[182]

Flagship	Assessment
The Baltic Deal project supported innovative cost-effective measures and actions to limit nutrient losses by farmers. Human activities in the Baltic Sea region are increasingly pressuring marine ecosystems. The continuing eutrophication of the Baltic Sea is a serious environmental challenge and difficult to tackle. Despite the decreased nutrient loads in recent decades, the eutrophication status of the Baltic Sea is still a threat for the natural ecosystem. Baltic Deal addresses this challenge without impairing farmers' competitiveness or production.	Without the EUSBSR more effort would have been necessary by the project partners in finding a common ground and common objectives. The EUSBSR supported knowledge exchange among experts in the field and speed-up a common understanding. This helped in solving problems easier and developing new tools, for example, a common methodology to calculate nutrient losses. These actions collectively boosted the agricultural sector in the entire Baltic Sea region. In total the project identified around 50 different measures for farmers to limit nutrient losses. Through these achievements, the project contributed to the EUSBSR policy area "Nutri". It also supported the maintenance and further development of a common, transnational Baltic Sea region approach, with appropriate adaptation at national level in different countries.

The logframe for PA Nutri

The activities of the policy area regarding networks and communication support the development of the flagships as well as provides the possibility for policy coordination (with HELCOM, in the framework of the EU MSFD) among Member States. The direct contributions of the PA Nutri outputs and result (see logframe in Table 3-28) are assessed as providing support to implement the activities in HELCOM and EU MSFD which should ensure the achievement of the targets[183]. Interviewed stakeholders explained that the networking activities help getting the actors in the environmental sector and agriculture together and support the cooperation in water projects in the macro-region (see section 3.4.1). An assessment of the 'Baltic Deal' flagship (see description in Table 3-27) found

[179] Interviews with policy area stakeholders May-September 2017

[180] http://groupspaces.com/eusbsr-nutrient-inputs/.

[181] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight. 12/12/2016.

[182] Ibid.

[183] PA Nutri Progress Report 17.05.16 (Contribution by PA Nutri coordinators to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of macro-regional strategies. 17.05.2016).

that it also supported the maintenance and further development of a common, transnational Baltic Sea region approach, with appropriate adaptation at national level in different countries'[184].

Table 3-28 Logframe for PA Nutri[185]

Input	Examples of activities	Examples of outputs/results	Targets
People/ organisations Funding Other (e.g. infrastructure, facilities, services)	• Strengthening the cooperation with HELCOM (e.g. presenting results from coordination work at HELCOM meetings) • Facilitation of initiation of projects • Project preparation and identification of financing (e.g. 'Assessment of Regional Nutrient Pollution Load and Identification of Priority Projects to Reduce Nutrient Inputs from Belarus to the Baltic Sea') • Identification and development of new flagship projects • Development of communication plan with new flagships • Recommendation / assignment of flagship status (e.g. SUWMAB and RelNutData) • Organisation of seminar and Annual Forum • Dissemination of communication / information materials • Assessment of the effectiveness of the measures and environmental instruments applied in the river basin management plans of WFD and the programmes of measures of MSFD	• Clear roles of HELCOM (setting policy goals) and PA Nutri (address region's common challenges), respectively • Establishment of new networks / processes (cooperation with HELCOM) • Alignment of policies/funding (cooperation with … NDEP[186] and BSAP[187] Fund) • Long lists of project ideas for PA Nutri • Two flagships have received funding and begun activities as PA Nutri flagships (IWAMA and NutriTrade) • Stakeholder seminar 'Reducing nutrient inputs to the Baltic Sea – how to strengthen project partnership in the region' on 14 April 2016 • Improved visibility of PA Nutri • Flagship projects implemented or under implementation.	1) Total nutrient reduction by putting in place the necessary measures by 2016 or jointly by 2020 at the latest as agreed in BSAP 2007 and revised by HELCOM in 2013. 2) Whole Baltic Sea is in a path to a full recovery to good environmental status by 2020 due to fully implemented measures and further decreased loads achieved.

Measuring progress via indicators

PA Nutri targets are set in HELCOM and MSFD and the activities for PA Nutri are designed to support these activities. Four indicators have been identified to describe the progress on the two targets of PA Nutri. The indicators are listed in Table 3-29. The progress measured on the indicators cannot be clearly attributed to the PA Nutri, but the assessment is that the activities of PA Nutri will contribute to progressing on the targets.

For Target 1, HELCOM's Pollution Load Compilation shows that the nutrient input into the Baltic Sea has been decreasing over the past decades already. Between 2008 and 2012 the load of nitrogen as well as phosphorus was reduced by approximately 6% and 7% respectively. The inputs of nitrogen and phosphorus have however risen above the levels of 2008 in 2010 and 2011. Furthermore, no significant change in the reduction trend can be identified, if compared to the observed reduction trend before 2008.

[184] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight. 12/12/2016.

[185] based on PA Nutri Progress Report 17.05.16

[186] Northern Dimension Environmental Partnership

[187] Baltic Sea Action Programme

In terms of the target to achieve good environmental status, the share of coastal and transitional waterbodies below 'good' ecologic and chemical status in accordance with the Water Framework Directive is used as verification. The indicators show that a strong majority of 84% is still below the 'good status', which results in a benchmark value of 80 points. With respect to the chemical status, the share of coastal and transitional waterbodies is substantially lower (55%). Still, the majority of waterbodies is below the desirable status, which is further emphasised by low benchmarking score of 74. One should keep in mind that these indicators measure impacts, which are determined by a multitude of factors, of which the PA Nutri itself has no direct control over since the PA mainly functions on processes. The identified lack of progress can in conclusion not be attributed to the EUSBSR alone.

Table 3-29 Progress on targets – PA Nutri

Objectives	Targets[188] and indicators	Progress according to progress report[189]	Progress towards objectives via indicators (OVIs)
Clear water in the sea	1) Total nutrient reduction by putting in place the necessary measures by 2016 or jointly by 2020 at the latest as agreed in BSAP 2007 and revised by HELCOM in 2013.	No progress towards target directly reported in progress report - To be measured in 2020	Pollution Load Compilation (HELCOM), Nitrogen[190] ca. 900,000 T N (2008) ca. 850,000 T N (2012) -> Reducing Trend (~ -6%)
			Pollution Load Compilation (HELCOM), Phosphorus ca. 32,000 T P (2008) ca. 30,000 T N (2012) -> Reducing Trend (~ -7%)
Clear water in the sea, Rich and healthy wildlife	2) Whole Baltic Sea is in a path to a full recovery to good environmental status by 2020 due to fully implemented measures and further decreased loads achieved.	No progress towards target directly reported in progress report - To be measured in 2020	Share of coastal and transitional waters below 'Good Ecologic Status' Share: 84% Benchmarked: 80
			Share of coastal and transitional waters below 'Good Chemical Status' Share: 55% Benchmarked: 74

PA Safe - Objectives vs. achievements

PA Safe

PA Safe aims at reducing the number of maritime accidents. This is addressed through enhancing the overall navigation safety for vessels operating in the Baltic Sea; improving the safety, efficiency and environmental sustainability of winter navigation through enhanced cooperation between relevant authorities, transport operators and research institutes.

[188] Policy Area 'Nutri', Work Plan 2017 – DRAFT; and COMMISSION STAFF WORKING DOCUMENT, European Union Strategy for the Baltic Sea Region – ACTION PLAN {COM(2009) 248}; SWD(2017) 118 final.

[189] PA Nutri Progress Report 17.05.16.

[190] HELCOM, Pollution Load Compilation, http://www.helcom.fi/PublishingImages/baltic-sea-trends/pollution-load-compilations/input_N_P_final.PNG.

PA Safe flagships/processes

A key tool of the PA Safe policy are the 9 on-going flagships[191] developed and which correspond to key actions (in the Action Plan) in: maritime surveillance, navigable fairways, e-Navigation, winter navigation transport of hazardous waste and emergency response. Project results include: a risk identification system for vessels, hydrographic surveying, standard operational procedures for search and rescue, and technologies for accident prevention. Concretely, the EfficienSea resulted in 'comprehensive best practice demonstration of the e-Navigation concept'[192]. Interviewed Stakeholders confirmed that the flagship had developed risk operation procedures (see also 3.4.1).

Interviewed stakeholders in PA Safe explained that networks and communication have expanded cooperation to different levels and types of actors/institutions (see also 3.4.2). This is also illustrated through the project EfficienSea where 'partnership as well as the scope of the project have been expanded'. Most of the partners are still based in the Baltic Sea region, but with the inclusion of more shipping companies the focus has become more European/global'. The PA Safe activities, outputs or results aim at developing a better framework for navigation in the Baltic Sea. The assessment is that the outputs/results (e.g. improved sea charts, e-Navigation) can contribute to progressing on the targets in PA Safe of reducing accidents in the Baltic Sea.

Table 3-30 PA Nutri – assessment of Flagships: Baltic Deal[193]

Flagship	Assessment
EfficienSea aims to enhance maritime safety and prevent accidents in the Baltic Sea. The project provides an experimentation area where components of an e-Navigation concept can be demonstrated and evaluated prior to full-scale implementation. EfficienSea provides a comprehensive best practice demonstration of the e-Navigation concept to facilitate further development and full-scale implementation of it for the benefit of the Baltic Sea region and the international maritime community.	EfficienSea continued as a Horizon 2020 project. This funding source fitted better when the project became more mature. Where Interreg supports projects that involve experiments and testing, Horizon 2020 offers the possibility to continue funding and developing products and services, in this case to bring e-navigation tools to the market. During its follow-up project, the partnership as well as the scope of the project have been expanded. Most of the partners are still based in the Baltic Sea region, but with the inclusion of more shipping companies the focus has become more European/global. Shipping companies act at a global scale rather than at macro-regional or continental levels. The perspective is to continue working in this area in order to keep promoting safe navigation in the Baltic Sea region.

[191] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight. 12/12/2016, https://www.dma.dk/Vaekst/EU/EUOestersoestrategi/PAsafe/Pages/default.aspx

[192] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight.

[193] Added value of macro-regional strategies: Collecting practice examples Final report – Project factsheets. Spatial Foresight.

Table 3-31 Logframe for PA Safe[194]

Input	Examples of activities	Examples of outputs/results	Targets
People/ organisations Funding Other (e.g. infrastructure, facilities, services)	• Development and update of communication / information materials (website, brochure) • Publicity work for PA Safe (exhibitions, stands, conferences + seminars) • Organisation of programme modules + seminar) • Facilitation of competence building • Establishing networks (among project makers) • Facilitation of idea generation/initiatives for projects • Project preparation and identification of financing • Support of flagship projects • Assessment of flagship status • Work on flagship status assessment procedure • Drafting (+ continuous update) of paper (funding alignment) • Work on developing targets (more practical than reducing maritime accidents) • Work on cooperation (with PA Ship + other PACs/HACs)	• Enhanced visibility of PA Safe • 9 on-going Flagship Projects • Three Baltic Leadership Programme modules + one seminar regarding funding issues • Shaping the global regulatory process through flagships (on e-Navigation in the IMO, IALA and the International Hydrographic Organisation (IHO) aiming at international standardisation and regulation) • More accurate sea charts (through flagships, resurveying of shipping routes and ports) • Paper "Internal Guidance on General Principles of Alignment of Funding, Project Selection and Endorsement of Projects" • Increase of cross-sectoral cooperation	Reduction in the number of maritime accidents

Measuring progress via indicators

Progress towards the Target (PA Safe has one target) is traced through a relevant indicator: 'number of accident in the Baltic Sea per 1,000 ship crossings in the progress report (Table 3-32). The progress report mentions that new indicators are under development.

The objectively verified indicator used in this review is the 'number of accidents in the Baltic Sea per 1,000 ship crossings. The data shows: The number of accidents has increased between 2008 and 2013 by 36%. The externally verifiable evidence thus shows that the macro-region is moving away from its set target. The progress report of PA Safe notes that a number of factors influence this number and it is difficult to discern what the reasons are for the increase in the number of accidents[195].

[194] EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016; Danish Maritime Authority and Finnish Transport Safety Agency.

[195] EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016.

Table 3-32 Progress on targets – PA Safe

Objectives	Targets[196] and indicators	Progress according to progress report[197]	Progress towards objectives via indicators (OVIs)
Reduction in the number of maritime accidents	Reduction in the number of maritime accidents Target: Measurable reduction/decreasing trend in the number of maritime accidents per 1,000 ships by 2020	Progress on indicator track by progress report – new indicators under development	Number of accidents in the Baltic Sea per 1,000 ship crossings[198] 0.314 (2008) 0.428 (2013) -> 36%

PA Transport - Objectives vs. achievements

PA Transport

PA Transport has three objectives: improving the TEN-T core network corridors for better connectivity, accessibility and cohesion; improve transport cooperation with the third countries; encourage macro-regional transfer of sustainable solutions in passenger and freight transport[199]. For these three objectives five targets have been set[200].

PA Transport flagships/processes

PA Transport has 4 flagships (Table 3-34), which are seen as processes for facilitating the information exchange on different EU wide initiatives and the linking of different stakeholders. Flagships function as mini-policy areas on specific topics consolidating partnerships and to work as a vehicle for sharing best practices. An example of one of the flagship projects, TENTacle, is included in Table 3-33 below. The flagship started activities in 2016, and is thus relatively new. 8 projects are linked to TENTacle.

Table 3-33 PA Transport – assessment of Flagships: TENTacle[201]

Flagship	Assessment
In early 2016 a new transnational cooperation project called TENTacle will launch its action. Over the period of three years the 23 TENTacle partners from nine countries surrounding the Baltic Sea will be working together to boost the development opportunities generated by the implementation of the TEN-T core network corridors. They will be supported by 65 associated partners to altogether bring a wide range of expertise and experience in transport, logistics and policy making.	The project's aim is to maximise the regional growth, prosperity and cohesion benefits of the new EU transport policy instrument, established to improve mobility, intermodality and interoperability on the major transport axes across Europe. In each of the cases, TENTacle will address a better physical and functional connection to the TEN-T core network corridors. Action plans, pre-feasibility investment studies, new business models and transport strategies, to be delivered through intense interaction among the public and business stakeholders, will demonstrate how to strengthen positive corridor synergies in different geographic and development contexts.

[196] EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016.

[197] Ibid.

[198] Based on HELCOM, 2014, Annual report on shipping accidents in the Baltic Sea in 2013, http://www.helcom.fi/Lists/Publications/Annual%20report%20on%20shipping%20accidents%20in%20the%20Baltic%20Sea%20area%20during%202013.pdf.

[199] PA Transport has no active webpage – overview information for this chapter is collected through various sources.

[200] A new set of objectives is included in the work plan: PA Transport Work Plan for 2017 – draft 25.01.2017 TE. For the present assessment, the Action Plan's objectives and targets are used, as there is no progress report relating to the new objectives yet.

[201] http://www.tentacle.eu/

Table 3-34 PA Transport – Flagships[202]

Flagship	Short description
Enhancing freight mobility and logistics by strengthening inland waterway and river sea transport (EMMA)	The project aims to measure where inland navigation is a realistic alternative with moderate infrastructure improvements in transport chains.
Capitalise on the core network corridors implementation (TENTacle)	Focusing on transport corridors intersecting the Baltic Sea region; The project aims to improve stakeholder capacity to reap benefits of the core network corridor implementation for the prosperity, sustainable growth and territorial cohesion in the BSR.
North Sea Baltic Connector of Regions - NSB CoRe	The project aims improving the accessibility of the Eastern Baltic Sea Region to freight and passenger transport
Scandria®2Act	The fosters clean fuel deployment and multimodal transport through the corridor regions to increase connectivity and competitiveness while minimising negative environmental impact induced by transport activities.

PA Transport focuses on initiating networks, setting-up communication and preparing projects as listed in the logframe in Table 3-35 (it is noted that there is no PA-webpage yet). The work in PA Transport progresses especially through the developed flagships, all of which address important aspects of the objectives. A key focus of PA Transport is to build up the cooperation with TEN-T corridors. Interviewed stakeholders underlined that cooperation with relevant EU Commission bodies (DG MOVE) has increased recently[203] – especially the cooperation within TEN-T core network corridor forums and with European Coordinators (see 3.4.2). The flagship TENTacle is described in Table 3-33 and is an example of the focus on implementation of the TEN-T core network corridors.

[202] EMMA; TENTacle; NSB CoRE; Scandria®2Act.

[203] Interviews with policy area stakeholders May-September 2017

Table 3-35 Logframe for PA Transport[204]

Input	Examples of activities	Examples of outputs/results	Targets
People/ organisations Funding Other (e.g. infrastructure, facilities, services)	• Revision of Action Plan • Communication of revised Action Plan • Strengthening cooperation between EUSBSR states • Initiating cooperation with new actors (e.g. among regional transport Coordinators) • Assessment of (flagship) projects • Issuance of Letters of Commitment / Support (5 new projects) • Building cooperation (e.g. with European Coordinators and TEN-T Forums) • Facilitation of projects' knowledge sharing • Improving and securing exchange of information (between Coordination Group + with flagship projects' Lead Partners) • Development of website • Project preparation and identification of financing • (Flagship) project support	• 4 on-going Flagship projects • New revised Action Plan • Improved cooperation with programmes' Joint Secretariats (Interreg Baltic Sea Programme, South Baltic and Central Baltic Programme) • Increased cooperation /synergies with four of the European Coordinators (Scan Med, North Sea – Baltic, Baltic – Adriatic and Motorways of the Sea) • Increase of cross-sectoral cooperation (PA Ship + PA Safe) • Extensive dialogue and cooperation among the regional transport Coordinators from all macroregions (sharing best practises, discussing challenges + emerging problems) • 5 projects accomplished (e.g. Scandria, TransGovernance, Rail Baltica Branding and a pre-feasibility study of Helsinki-Tallinn link)	Target 1: No. of thematic events within PA Transport attended by European Coordinators – Once a year. Target 2: No. of core network corridors in the Baltic Sea Region covered with networking projects for more sustainable growth, better accessibility and territorial cohesion – 3. Target 3: No. of thematic events within PA Transport attended by representatives of the third countries – Once a year. Target 4: No. of joint projects initiated under the auspices of PA Transport with partners from the third countries – 2. Target 5: No. of thematic events arranged within PA Transport on exchanging best practice between the EU Member States – Once a year. Target 6: No. of joint projects on topics of shared interest initiated under the auspices of PA Transport – 4.

Measuring progress via indicators

Progress on the targets is not reported on in the progress report (Table 3-36). Target 4 and 5 are PA Transport internal targets (output/result). Two indicators from Task 1 and 2a are relevant to for measuring progress towards the objectives.

The indicators on improved connectivity in the Baltic Sea region (Target 1) show that none to only marginal improvements have been made on the TEN-T corridors for roads, conventional-, and high-speed rail between 2013 and 2014. The time-span of one year is however also a short time-span for the implementation of infrastructure projects. Only limited, if any conclusions on the basis of these indicators can be made. The comparison with the completion rates in the EU of 71% and 51% on roads and conventional railways respectively, demonstrates that the Baltic Sea region is noticeably behind. This is further emphasised by the respectively low benchmarking scores for 2014.
A further aspect of target 1 is the reduction of the average travel time. The 'Multimodal Accessibility Potential' measures how far a commuter can travel in a given amount of time. An improvement on this indicator value thus corresponds

[204] Policy Area Transport Implementation Report 2016 – 10.06.2016; and COMMISSION STAFF WORKING DOCUMENT, European Union Strategy for the Baltic Sea Region – ACTION PLAN {COM(2009) 248}; SWD(2017) 118 final.

also to an improved accessibility. The indicator shows that multimodal accessibility has reduced by 1 benchmark point between 2011 and 2014. Overall, this leads to the conclusion that the macro-region has not made notable progress in this rather short time-period.

Table 3-36 Progress on targets – PA Transport

Objectives	Targets[205] and indicators	Progress according to progress report[206]	Progress towards objectives via indicators (OVIs)
Capitalise on the TEN-T core network corridors for better connectivity, accessibility and cohesion	Target 1: No. of thematic events within PA Transport attended by European Coordinators – *Once a year*. Target 2: No. of core network corridors in the Baltic Sea Region covered with networking projects for more sustainable growth, better accessibility and territorial cohesion – *3*.	No progress towards target reported in progress report	Completion of TEN-T, Road: 56% (2013) 56% (2014) Benchmark: 89
			Completion of TEN-T, Conventional Rail: 34% (2013) 35% (2014) Benchmark: 82
			Completion of TEN-T, High-speed Rail: 20% (2013) 20% (2014) Benchmark: 110
			'Multimodal Accessibility Potential' (Benchmark) 97 (2011) 96 (2014)
Improve transport cooperation with the third countries	Target 3: No. of thematic events within PA Transport attended by representatives of the third countries – *Once a year.* Target 4: No. of joint projects initiated under the auspices of PA Transport with partners from the third countries – *2*.	No progress towards target reported in progress report	Internal PA Transport output indicator
Encourage macro-regional transfer of sustainable solutions in passenger and freight transport	Target 5: No. of thematic events arranged within PA Transport on exchanging best practice between the EU Member States – *Once a year*. Target 6: No. of joint projects on topics of shared interest initiated under the auspices of PA Transport – *4*.	No progress towards target reported in progress report	Internal PA Transport output indicator

[205] COMMISSION STAFF WORKING DOCUMENT, European Union Strategy for the Baltic Sea Region – ACTION PLAN {COM(2009) 248}; SWD(2017) 118 final.
[206] Policy Area Transport Implementation Report 2016 – 10.06.2016

3.6 EUSBSR and ESIF (Task 2d)

Funding of the EUSBSR is a concern of many of the strategy's stakeholders. A relatively high percentage of the survey participants agree that it is difficult to find/obtain funding for both specific projects and activities as well as for the administration and coordination of the strategy. The survey respondents furthermore find that the competition in EU programmes is high (Table 3-37).

The key funding mechanism is the Baltic Sea Region Programme (ETC) and the various CBC programmes in the Baltic Sea Region. EU Programmes (Horizon, BONUS, LIFE, and Erasmus+) are also active in supporting projects. The European Regional Development Fund (ERDF) and European Social Fund (ESF) are relatively new in terms of funding the cooperation under the EUSBSR. In the following, the funding sources identified through the interviews, the desk research and the survey are discussed.

Table 3-37 Survey results (EUSBSR): Is financing available for collaboration within the policy/priority/pillar/thematic area?[207]

Percentage distribution/ sub-question	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Do not know	Respondents	Standard deviation
It is difficult to find financing for the projects/activities	19%	39%	24%	6%	12%	161	1,21
Funding for the administration and the coordination is not available or difficult to find	17%	35%	27%	10%	11%	161	1,2
The competition for funding is very high in EU Programmes (Horizon 2020, LIFE, etc.)	35%	39%	9%	2%	14%	161	1,34
There is an increase in alignment between the macro-regional strategy and ESIF funding – it is easier to get ESIF funding	11%	34%	15%	3%	37%	161	1,5
There is no added value being part of a MRS when applying for EU funding (labelling does not make a difference)	7%	26%	37%	12%	18%	161	1,17
Total						161	1,28

Different policy areas have different funding challenges

Table 3-38 shows examples of findings from interviews with stakeholders in the five policy areas analysed. Most interviewed stakeholders find that funding is a challenge, but the degree varies considerably. Several interviewed stakeholders find that the financing types are not designed to respond to the EUSBSR (PA Education, PA Nutri), while other interviewed stakeholders find that 'good projects' will always find funding (PA Safe). There are also some stakeholders who find that funding can be a challenge in certain periods, and for certain activities (PA Innovation and PA Transport). One stakeholder mentions that it is more difficult to find funding for 'cooperation and coordination' of the policy areas than for projects. Competition has become an issue – there are more projects than available funding, and the project requirements have risen over the years, according to several stakeholders.

[207] Survey data 14.09.17 (policy level)

One stakeholder mentions the Baltic Funding Inventory - KEEP. It is a data base tool, developed by INTERACT as a possible way to find funding in an ever more competitive environment. State aid rules are another issue, and some stakeholders find that the rules, as well as pre-financing, are prohibitive.

Table 3-38 EUSBSR: Selected interview findings – financing[208]

Policy Area	Question: It is difficult to find financing for the projects
PA Education	• Existing financing instruments are not designed to MRS (traditional cooperation programmes not suited for EUSBSR). ESF Network is the main source. Funding is nevertheless difficult to obtain. • If there are good projects it is not difficult to get financing. • ESIF reinforce to have international partners and to have international calls. But very small funding up to 10 % could be spent on international calls. It is difficult to ask countries to spend funds on other countries as they are national allocation. • It is not difficult to find financing - but it is difficult to get financing.
PA Innovation	• There are difficulties in the periods between budgetary years.
PA Nutri	• All current 3 projects are Interreg funded. […] There are attempts to explore how Interreg can be established on the national domain. • There is no more funding for water related projects in BSR. Financing is more targeted to less concrete issues than before. It is important to support capacity building activities but this provide less funding for concrete projects. • Projects rejected by Interreg several times and had to look for other funding programmes. There is database of available financial options and project database - KEEP. The Baltic Funding inventory – done by INTERACT. • There are opportunities. • It is difficult to find funding and one reason is the gab in linking funding to political objectives. Stronger incentives to open regional and national Operational Programmes for regional cooperation. • Problem with pre-financing, cannot involve in projects some institutions as they cannot ensure co-financing and pre-financing.
PA Safe	• Financing is always difficult and with time it gets even more difficult (competition for funds is getting harder, as project makers get more competent). Project makers, with good idea aligned with the Strategy and Programme, will get money. [At the moment, the funding is quite okay. • Funding depends on MS commitment to project financing and for many years. More difficult for private sector.
PA Transport	• Not sufficient funding and just starting to look at other financial options. • Too complicated at municipality level – Interreg (ETC) especially pre-financing. • Tried to integrate SMEs but if they are involved – state aid rules applied. For CEF – there is no state aid issue. It takes 6 months to clear state aid issues. • There is financing available at project level and lack of financing for MRS (4) For projects – funding is available. • The application process is too lengthy, costly (specially for Lead Partner) and complicated. • BSR has Interreg for project financing to reach goals of the strategy. Not all project fit the strategy and those projects have challenge in getting approved. • Interreg projects – problem is project pre-financing at the regional level. • There are many funds which are not used well enough.

[208] Interviews with policy area stakeholders May-September 2017. Interview findings represent a selection of representative answers (adapted by the study team) – both positive and negative answers are reflected.

ETC Transnational Programme

The Interreg BSR Programme and CBC programmes still play an important role in funding activities in the BSR (see Table 3-39). Specific initiatives have been taken in some of the policy areas to create platforms for financing of the projects and initiatives (PA Education, PA Innovation, and more). Interviewed stakeholders point to that the BSR programme lacks flexibility and alignment with the policy areas (action plan). Funding for the MRS should be more adapted to the EUSBSR (taking into consideration the type of projects), and issues such as pre-financing should be addressed.

The survey shows (Table 3-39) that ETC (Transnational and cross-border cooperation (CBC)) are the source, which most respondents have acknowledged to have received funding from – followed by the ERDF and the European Agricultural Fund for Rural Development (EAFRD). National funding is also an important source of financing (56% of the respondents at policy level, and 67% of the respondents at project level). At the Operational Programmes (OP) level, the transnational programme is largely aligned with the EUSBSR. However, interviewed stakeholders do not find that labelling by the EUSBSR 'directly' leads to funding of projects by the BSR Programme.

Table 3-39 Survey results: Funding for EUSBSR activities (policy and project level)[209]

Survey results	a. The policy area has received funding from the following sources		b. Projects in the policy area have applied for or tried to get funding from the following sources – without success or with limited success		Number of respondents	
	Policy level	Project level	Policy level	Project level	Policy level	Project level
Interreg: Transnational	77%	70%	27%	20%	98	80
Interreg: Cross-Border Cooperation	64%	59%	25%	24%	95	71
ERDF/CF	38%	43%	19%	23%	72	30
EAFRD	33%	9%	24%	9%	42	11
ESF	33%	42%	24%	25%	51	24
IPA/ENI Cross-Border Cooperation	20%	27%	17%	33%	46	15
IPA/ENI	16%	20%	22%	20%	37	10
Horizon 2020	25%	26%	32%	28%	65	53
LIFE	3%	18%	30%	29%	37	28
Erasmus	23%	47%	28%	22%	39	32
International Financial Institution (loans)	6%	20%	18%	15%	33	20
National/regional	56%	67%	25%	25%	85	75
Private	30%	42%	19%	21%	47	38

[209] Survey results per 15.09.17 (policy and project level)

Other	67%	54%	20%	19%	30	26
I do not know	54%	50%	88%	60%	57	20
Total					145	120

ESIF and the EUSBSR

In general, respondents to the survey and the interviewees (Table 3-41) do not yet perceive that there is an alignment between ESIF and the EUSBSR. The use of ESIF programmes for funding the policy areas varies considerably between policy areas. Interviewed stakeholders find that National ESIF programmes have been aligned formally, so that the potential for funding has been made. The assessment that the alignment is only formal may be because the possibility is new, and has not yet been tested. Another reason may be that some policy areas are less relevant for ESIF funding, and more suitable for funding by various EU Programmes.

According to a survey conducted by the EU COM (Table 3-40), 17 programmes have already supported in total 456 the EUSBSR projects/actions (national/regional programmes – 353 (Finland alone 298); Interreg programmes – 103).

Table 3-40 ESIF contribution to the EUSBSR (findings of survey conducted by the EU Commission)[210]

Types of alignment between ESIF and MRS	Number of programmes
Organisation of targeted calls	5 programmes (RoPs, ESF, TN)
Extra points/bonus or preference to a project/action with high macro-regional significance or impact	13 programmes have indicated this
Indicated that extra points are to be attributed to specific measures supporting the EUSBSR	15 programmes
Monitoring Committee includes, or plans to include in the near future, representatives of macro-regional strategies, i.e. national coordinators, policy area coordinators, flagship leaders	6 programmes
Compatibility with, and contribution to, specific thematic areas of the EUSBSR. The most supported areas are: PA 'Innovation' (31), PA 'Transport' (27), PA 'Culture' (27), PA 'Education' (25), HA 'Climate' (23) and PA 'Energy' (22)	39 programmes

Interviewed stakeholders generally recognise that initiatives have been taken to improve the alignment between the EUSBSR and the ESIF (Table 3-41). Several interviewed stakeholders comment that there has been such a process, and some stakeholders say that they have been involved. Other interviewed stakeholders point to that the ESIF does not take the cooperation aspect into

[210] European Structural and Investment Funds programmes' contribution to the EU macro-regional strategies. DG REGIO 16.02.17.

account, and that the ESIF financing is not flexible or agile enough to finance the activities of the cooperation (PA Education).

Other stakeholders interviewed found that there was a good process to include the objectives of the EUSBSR when drafting the OPs (PA Transport). Interviewed stakeholders confirmed that the Managing Authority (MA) network was created to identify common goals and projects. However, this is not backed by all interviewed stakeholders in this policy area; some find that there is a mismatch between the objectives of the OP (thematic targets) and the EUSBSR, and that there was unclear communication from DG REGIO during the last programming process[211].

One interviewed stakeholder in PA Safe mentioned the project calls conducted by DG MARE. Some projects in PA Safe were apparently funded as part of the European Maritime and Fisheries Fund (EMFF).

Table 3-41 EUSBSR: Selected interview findings – ESIF and the EUSBSR

Policy Areas	Question: The MRS-process has help reflect MRS priorities in the ESIF programmes in the macro-region Question: There is an increase in alignment between ESIF funding - it has become easier to combine different EU funds Question: MRS-actors have been involved in programming of ESIF and/or are in dialogue with Managing Authorities (MA) for ESIF
PA Education	• Programs are still not clear about PAs added value. Managing authorities are afraid to engage, due to lack of clear rules. • There are some criteria for projects that they got more points if they are flagship projects (BSR evaluation criteria). Maybe points given for flagship projects are too high.
	• Alignment of funding is complicated, despite the ESF network with a long way to go. There is missing a tool in the EU toolbox. EU funding is not agile enough to be important. • The is no increased in alignment between ESF and ERASMUS, there is no cooperation between ESF and ERDF
	• More alignment, but has not been involved in ESIF programming - there is a dialogue with policy coordinator. • There is transnational network between ESF MA in BSR. Good dialogue with them.
PA Innovation	• We do not work a lot with financing. But here is a dialogue between PA INNO and the MA-network.
	• More alignment is needed.
	• *[no answers in interviews]*

[211] Drafted but not issued guidance note on switch of funding between different regional Operational Programmes (Common Regulation, Article 70, paragraph 2).

Policy Areas	Question: The MRS-process has help reflect MRS priorities in the ESIF programmes in the macro-region Question: There is an increase in alignment between ESIF funding - it has become easier to combine different EU funds Question: MRS-actors have been involved in programming of ESIF and/or are in dialogue with Managing Authorities (MA) for ESIF
PA Nutri	• There are direct conflicts in some parts within EU policies, for instance, ESIF financing and environment norms which we have in BSR. • ESIF programmes – implementing policies but not according to regional requirements and targets. • For this programming period, there was EC requirement to provide a link between ESIF and MRS, but it was very formal, as financing was allocated without consulting MRS and later justified. • To better link with EU programming, otherwise only cooperation platform.
	• Alignment is getting better, and there is a progress for alignment between EU strategies and ESIF. No competence to judge about funds combination. • There is still not increased alignment between ESI funds. Many ERDF national and regional Operational Programmes do not take cooperation fully into account. It is different for Interreg, as it takes regional strategy into account.
	• Only Interreg aligned - The MRS could participate in the meetings/monitoring of the Interreg committee. MRS & PAs should be included. In the cohesion policy on national level, e.g. FI, they are listing projects, but no one knows if the approaches are relevant. It's difficult to see the whole picture. • There is a dialogue between macroregional actors and persons responsible for ESIF planning.
PA Safe	• Priorities have been reflected, and some effect on applying for financing e.g. if there is flagship status
	• Alignment with EU programme objectives has improved, but we still got some way to go. • It is easier, but question whether this way of financing is good - limits number of projects.
	• *[no answers in interviews]*
PA Transport	• The main obstacle - MRS planning and financing is coming from cohesion policy objective and growth perspectives, but does not cover all objectives of MRS, e.g. security is not covered. • 2014-2020 specific provisions in ESIF regulations are made and planning is done at OP level. • LT is an example at EU level to embed BSR issues at OP level. • In OP, there are clear priority axes and links to BRS policy areas. • Programmes were formulated while AP was still outdated. Though actively try to align. • ESIF priorities are established and reflected in the strategy. • Helps to reflect priorities, but process could be wider by involving more stakeholder consultation, e.g. only one meeting per annum, and not enough workshops for stakeholders to get actively involved.
	• It is very important to mobilise mainstream structural funds, and to ensure that this mobilisation is accepted by EU and auditors, as there is a general feeling of uncertainty about implementation rules and how they are audited. • Transport CG has already started discussions concerning a review of the Smart Specialisation priorities (in the national programmes) in order to look for the alignment of funding among the Baltic Sea Region partner countries in implementing innovations and sustainable transport solutions. • The potential of amending Common Regulation (Article 70, paragraph 2 – shifting funding between different regional Operational Programmes) has not been used, and it put a question on rigid audit procedures. Very few people dare to do something new, as everybody is afraid of financial corrections at the end.
	• Financing – network of ERDF Managing Authorities (MA) has been established last year, working on ERDF programmes cooperation. It is important to mobilise finance for regional development and cooperation potential.

For ESF and ERDF, networks of managing authorities have been established in order to improve the coordination between the EUSBSR and the two programmes. For PA Education, activities and flagships are already financed at

national level. Some member states have included the possibility in their OPs that they can use part of the ESF programmes on transnational activities (e.g. Sweden, Finland, Poland, and more). The newly established network of the Managing Authorities (ERDF) in the BSR has initiated a dialogue with PA Innovation with regard to financing innovation activities.

Only a few interviewed stakeholders have made direct reference to EAFRD and EMFF. For PA Safe, there has been obtained funding for activities and projects through responding to calls on blue labs and blue technologies.

Community programmes

Projects under PA Innovation have also received financing from Horizon 2020 and ERASMUS. Table 3-42 provides an overview of EU Programmes funded to EUSBR policy areas, as observed in interviews; and Table 3-43 presents selected comments by interviewed stakeholders regarding funding from EU Programmes.

Table 3-42 EUSBSR: Selected interview findings – Funding from community programmes for EUSBSR

	PA Education	PA Innovation	PA Nutri	PA Safe	PA Transport
COST	-	-	-	-	-
ERASMUS+	X	X	-		-
EUREKA	-	-	-	-	-
LIFE	-	-	X (one flagship)	-	-
CEF	-	-	-	X (one project)	X
Horizon	X	X	-	X (several examples)	X
BONUS	-	-	-	X	-

Table 3-43 EUSBSR: Selected interview findings – Financing, EU/community programmes

Policy Area	Question: Funding has been obtained from other EU programmes
PA Education	• Funding received from Erasmus+.
PA Innovation	• Erasmus (5) Flagship projects attract money from Erasmus and Horizon2020. • Some of the cluster project develop into Horizon projects.
PA Nutri	• Tried LIFE and BONUS, but never obtained any. LIFE & BONUS are easier if only one country is involved; therefore Interreg. • Other programmes – have not been involved, have not applied. • At the beginning, used LIFE projects for flagship project.
PA Safe	• Horizon & BONUS have provided money. • No funding from other EU programs has been obtained.
PA Transport	• For transport projects, possibilities to look outside Interreg have not been explored. • Interreg project results are often used to prepare applications for CEF, H2020, to lift a bigger challenge. • Funding has been obtained from other programmes, but not under MRS

Other funding

PA Education received considerable funding through Member States (national and regional) and the Swedish Institute[212] (active on many projects), according to interviewed stakeholders. Also international organisations such as CBSS (2) and Northern Dimension have funded projects and activities for the EUSBSR. Table 3-44 list some of the interview finding in relation to other financing. Only interviewed stakeholders in PA Education reported on other funding. In PA Nutri, funding from NEFCO has been obtained (Table 3-44).

[212] https://eng.si.se/

Table 3-44 EUSBSR: Selected interview findings – Financing, other financing

Policy Area	Question: It has been possible to attract outside financing (financial institutions, national/regional resources, other international (non-EU) and private funding
PA Education	• There are other funding related to mobility schemes. Different project activities are financed, except activities related to mobility (not financed). • At times there is financing from other countries (bilateral funding) and without it projects would not have happed. • Additional financing was obtained only once. • Some financing is coming from national and regional resources.
PA Innovation	• Membership fee: Members of flagship pay to be part of network.
PA Nutri	• Had financing from Nordic Environment Finance Corporation (NEFCO) & SE instrument/institute. • Additional financing – have not seen in practice. Private financing is not encouraged. • Generally in the region for PA Nutri - HELCOM BSAP Support Fund. • Not yet happening. • Mainly in terms of personnel (staff costs).
PA Safe	• Industry partners have (co-)funded projects, equipment, technologies. • Some projects got national funding, and co-funding has been granted by industry. • Possible to attract but is it feasible for the project. • Now more opening more to investment bank and other financing sources.
PA Transport	• Don't know of any other financing sources for our projects. (2) • For transport projects possibilities to look outside Interreg have not been explored. • In some cases, the participation of private companies is feasible. • In Interreg BSRP outside funding, e.g. from private sector, is not allowed and it creates additional challenges for lead partners! • There are some examples but too few.

3.7 EUSBSR Case fact sheets

Fact sheet – PA Education

Table 3-45 Profile/factsheet of the Policy Area Education

	Name of macroregional strategy: EUSBSR		Policy/Priority/Pillar: Education
Description	Policy Area education strives to increase mobility for pupils and students; attracting students and researchers from outside the Baltic Sea Region; effective coordination of research and higher education policies; access to good education and training for all	Drivers/barriers	BSR recognised as one of the top EU regions in relation to research and innovation Recognition by MS stakeholders of benefits from closer cooperation Differences between MS with respect to labour market, education and research practices, refugees policies
Objectives	Combating early school leaving; improving transition from education to labour market; improving quality of education; VET through work-based learning; International excellence in tertiary education; science and research; recognising potential and easing the way for newly arrived refuges	Indicators	Number of graduates studying or training abroad and within BSR 18-34 year olds with VET related study or training abroad and within BSR Number of students from outside the BSR Number of researchers at research institutions from outside BSR
Outputs[213]	By 2020, BSR average at 10 % graduates from abroad and within BSR By 2020, an EU average of at least 6 % of 18-34 year olds with VET have study or training period abroad and within BSR Numbers of students and researchers from outside BSR by 2020; + 10%.	Results	Cooperation networks between universities and research institutions on education, research and applied projects Combatting youth unemployment and supporting labour mobility More policy dialogue and coordination of ESF activities and establishment of ESF networks
Operational aspects	The main policy implementation processes are done at national level and BSR MRS is related only to specific fields where higher interaction between MS is needed	Organisation	PAC (Nordec Association) Steering committee – not all members are active Not all MS participate in ESF network
Projects	Baltic Sea Labour Forum (BSLF) – forum to create a sustainable regional labour market … (BTP) – supporting internationalisation of VET Baltic University Programme (BUP) – development of university network Baltic Science Network (BSN) – coordination framework for research S2W – transnational cooperation preventing early school leaving	Flagships/labelled projects	Flagship projects are mostly used to create different networks and to increase coordination between MS in the fields of education and research For many projects deadline still TBD Present flagships: School to Work (S2W); Baltic Training Programme (BTP); Baltic University Programme (BUP); Baltic Sea Labour Forum (BSLF) Emerging flagships: Baltic Science Network (BSN); Entrepreneurship Lab (E-lab)
Financing	Member States and Swedish Institute[214] (active on many projects) ESF (financing activities at MS level and some BSR MRS activities); ESF coordination in relation to MRS has started Interreg Baltic Sea Programme (in very few cases)	Phases/development	PA mostly coordinated at MS level and very few PA areas are coordinated at BSR level PA coordination at BSR level is at an early stage and mostly covers the exchange of practices between MS related to students and researchers, new emerging issues, e.g. migrants, are added

[213] http://www.balticsea-region-strategy.eu/action-plan.

214 https://eng.si.se.

Fact sheet – PA Innovation

Table 3-46 Profile/factsheet of the Policy Area Innovation

	Name of macro-regional strategy: EUSBSR		Policy/Priority/Pillar: Innovation
Description	Policy Area Innovation strives to promote a globally competitive position within research and innovation for sustainable economic growth in the Baltic Sea Region. The EU Strategy for the Baltic Sea Region sets the overall direction and goals of policy area innovation.	Drivers/barriers	• Common challenges • Implementation of EU policy (SMART specialisation strategies; and more)
Objectives	• Increased stakeholder and institutional capacity, • Improved engagement through the efficient use of networks, • Concentration of funding and the alignment of policies and regulations, • Long-term commitment and joint funding and decision-making.	Indicators	1) Action plan: Innovation score board 2) Strategy/monitoring: survey
Outputs	• Policy Area Innovation established (replacing the previous separate policy areas for PA Innovation, SME and parts of PA Market and HA Promo) • Management team for PA established (comprising representatives from Vinnova (SE), Ministry of Economic affairs (EE), Danish Agency for Science, Technology and Innovation (DK), Ministry of Science and Higher Education (PL), Baltic Development Forum Denmark, and Nordic Council of Ministers) • Multi-national meeting for Seed money projects in Copenhagen November 2015 (with Flagship representatives) • Dialogue-meeting with flagship representatives + workshop on Cluster activities, Copenhagen	Results	• Digital Policy Profiles (policy paper and an annex that includes digital policy profiles for all BSR countries) • Strategic action plan "Policy Area Innovation - Strategy Guide": "Putting the Action Plan into practice" • Monitoring framework with indicators (anchored to Strategy Guide) • Conference in on S3 - "The macro regional context", Sandviken (with Baltic Sea Commission) • Draft policy paper on growth potential and barriers in innovation policy concerning SMEs (cluster-driven SME-development in the whole macro-region through 2020)
Operational aspects	Strategy for the work of the PA – with targets (very advanced) Monitoring guidelines (very good)	Organisation	PACs: - NCM (international institution) - Mo) (EE) - MoSHE (PL) Steering committee: not everybody is active – often members are not specialised in the topics or international cooperation.
Projects	• BSR Stars • The SUBMARINER Network • ScanBalt® fmba • Baltic Science Link • BSR City Innofund • Cross-border e-services	Flagships/labelled projects	Flagships are seen as processes encompassing a number of projects. Members pay a fee to participate in the flagship process. The main activities take place within the flagship (
Financing	• Interreg BSR • Interreg CBC (South Baltic, etc) • Horizon • ERDF – beginning (ERDF MA network)	Phases/development	This PA is very advanced (based on three different earlier PAs) The first years were used to get to know each other and to create trust between national authorities and agencies. The second phase focused creating a common vision (strategy). The current phase focuses on getting the regions (and local authorities) involved the work (through SMART Specialisation strategies).

Fact sheet – PA Nutri

Table 3-47 Profile/factsheet of the Policy Area Nutri

	Name of macroregional strategy: EUSBSR		Policy/Priority/Pillar: Nutri
Description	Policy Area Nutri strives to restore the good environmental status of the Baltic Sea by using ecosystem approach. The main focus areas are Improved waste water treatment, promotion of bio-economy and coordination with other related PA	Drivers/barriers	Close cooperation with HELCOM (Baltic Marine Environment Protection Commission) Different countries have different points of view on potential practical interventions Environment protection measures are higher than defined by EU legal framework
Objectives	The objectives are to reduce nutrient inputs that come from land-based activities including sewage, agriculture, air emissions as eutrophication creates problems for all sectors of economy. To reduce phosphorus deposition in the Baltic Sea.	Indicators	Indicators are defined by HELCOM and Marine Strategy Framework Directive and there no BSR MRS specific indicators. Nutrient inputs – tons Share of the sea in the good environmental status – km, %
Outputs[215]	Total nutrient reduction Whole Baltic Sea is in path to a full recovery to good environmental status Lifelong learning about environment aspects, promotion of circular economy and nutri recycle, improved waste water treatment, improved nutrient load data	Results	Total normalised nitrogen and phosphorus inputs to the Baltic Sea decreased by 18 % and 23% respectively since the mid-1990. The progress made is not sufficient to the achieve the set objectives and outputs
Operational aspects	The main policy implementation processes are defined by HELCOM and Marine Strategy Framework Directive (DG ENV). Those two processes are priority for Member States (MS) and not all MS have additional commitment needed for BSR	Organisation	PAC (Poland, National Water Management Authority) Steering Committee – not all members are active PAC is not informed about the progress made on Interreg financed projects and PAC role for this topic is not institutionalised
Projects	NutriTrade – innovative policy instruments RelNutData – nutrient data Baltic Blue SUWMAB, BaRuWa, SmallWWTPS, BEST, IWAMA – waste water management CONSUME - guidelines for meat producers Growth - mussel farming SIGWET - construction of new midfield wetlands	Flagships/labelled projects	Flagships are seen as a label to increase possibility to obtain project financing 14 flagships identified, 10 included in Action Plan Different topics covered by flagships including policy development and implementation, exchange of best practices examples and production improvement related projects
Financing	Interreg Baltic Sea Region programme plays a crucial role in 3 flagships financing Interreg Central Baltic (1 project) National funding supports selected projects Swedish Institute is very active supporter	Phases/development	One of the first PA in BSR but much dependent on other initiatives including HELCOM (established before) and Marine Strategy Framework Directive (EU legal framework and primary focus for MS)

[215] http://www.balticsea-region-strategy.eu/action-plan.

Fact sheet – PA Safe

Table 3-48 Profile/factsheet of the Policy Area Safe

	Name of macroregional strategy: EUSBSR		Policy/Priority/Pillar: Safe
Description	Policy Area safe strives to enhance the overall navigation safety for the vessels operating in the Baltic Sea; improve the safety, efficiency and environmental sustainability of winter navigation through enhanced cooperation between relevant authorities, transport operators and research institutes	Drivers/barriers	Baltic Sea Region is the leading region in terms of maritime safety and security European level initiatives towards the creation of a Common Information Sharing Environment (CISE) Winter storms and the global economic situation directly impacts the number of vessels
Objectives	Development of co-operation in maritime surveillance and information exchange; implementation of e-Navigation and new technologies; sharing of public maritime data, system interoperability; improving resurveying of shipping routes; enhancing the safety of transportation of oil, hazardous and noxious substances; well-trained crews; preparedness for emergency situations	Indicators	Number of maritime accidents – indicator included in Action Plan Other indicators could be developed based on the project outputs, for instance, service level digitalisation, administrative burden, sailors trained, parameters related to navigation safety
Outputs[216]	Measurable reduction / decreasing trend in the number of maritime accidents per 1000 ships by 2020	Results	Cooperation networks between universities and research institutions Information sharing and exchange between different stakeholders
Operational aspects	The main policy implementation processes are defined by HELCOM and Marine The policy area covers international issues and in most of the cases cooperation between countries is required	Organisation	PA Safe is coordinated by Hamburg (Germany) and Norden Association (Sweden) The cooperation on planning resurveying of the Baltic Sea is politically adopted by HELCOM and practically handled by the Baltic Sea Hydrographic Commission
Projects	WINMOS II, STORMWINDS – efficiency and risks of winter navigation; CHEMSAR – operational plans; STM - Sea Traffic management validations; FAMOS - Surveys for the Baltic Motorways of the Sea; DiveSmart – facilitating safe diving; Vessel Triage – risk identification system for vessels in ship accidents; EfficienSea – improve navigation safety; Speed up re-surveying of major shipping routes and ports	Flagships/labelled projects	Many flagships are projects that relate to tangible and practical results to improve navigation in the Baltic Sea Flagships are very international and in many cases involve partners outside EU, results also could be used at a wider scale Some of flagships are developed as follow-up initiative from the previous projects Currently running flagship projects: Efficiensea 2.0; VesselTriage; FAMOS; MIRG; DiveSMART Baltic; Speed up re-surveying of major shipping routes and ports; STM; ESABALT Currently running seed money projects: SEAGLE; ICEULTIMATE; MARSEILLE
Financing	CEF (significant part of flagship financing) Interreg Baltic Sea programme Horizon 2020 National funding	Phases/development	There is a strong need to coordinate PA and to have a policy dialog between MS. Good progress has been achieved on implementation of practical solutions, including safety issues, information exchange and digitalisation

[216] http://www.balticsea-region-strategy.eu/action-plan.

Fact sheet – PA Transport

Table 3-49 Profile/factsheet of the Policy Area Transport

	Name of macroregional strategy: EUSBSR		Policy/Priority/Pillar: Transport
Description	Policy Area Transport strives to solve transport relates issues in the region as distances are big and external to the rest of Europe and third countries. The region is located on the periphery of the economic centre of Europe and depends strongly on foreign trade and needs well-functioning transport infrastructure to achieve growth.	Drivers/barriers	Implementation of core transport network corridors – North Sea – Baltic, Scandinavian-Mediterranean, Baltic-Adriatic Significant investments in transport infrastructure, for instance, Rail Baltica Regional economy dependency on the connectivity
Objectives	Capitalise on TEN-T core network corridors for better connectivity, accessibility and cohesion Improve transport cooperation with third countries Encourage macroregional transfer of sustainable solutions in passenger and freight transport	Indicators	Number of thematic events attended by the European Coordinators Number of core network corridors covered with networking projects Number of thematic events and number of joint projects together with third countries Number of thematic events and projects in exchange of best practice between MS
Outputs	Number of thematic events attended by the European Coordinator – once per year Number of core network corridors – 3 Events with third countries – once per year Number of joint projects with third countries – 2 Number of thematic events on best practices – once per year Number of joint projects on best practice - 4	Results	Improved stakeholder capacity to recap benefits of the core transport network implementation for sustainable growth and territorial cohesion Developed transport services and removed bottlenecks Facilitation to the sustainable and efficient transport system via exchange of best practices
Operational aspects	PA strategy very advanced with indicators and targets set Very close cooperation with DG MOVE and EU wide initiatives	Organisation	PAC - Swedish Ministry of Enterprise and Innovations … (VASAB) Secretariat, Horizontal Area Spatial Planning Coordinator Not everybody is active at Steering Committee
Projects	TENTacle – platform for cooperation between European Coordinators and PACs NSB CoRe – bridge between regional planning authorities in different countries Scandria – clean fuel and environment EMMA – enhancing freight mobility and logistics	Flagships/labelled projects	Flagships are seen as processes on facilitating the information exchange on different EU wide initiatives and linking different stakeholders
Financing	Interreg BSR (strategy implementation coordination projects, flagships) ERDF and CF (implementation of national infrastructure projects) CEF (implementation of projects with high EU added value)	Phases/development	Transport PA is very advanced due to very strong cooperation with activities related to core transport network corridors. The current phase focuses on linking local areas to the core transport network

APPENDICES

EUSBSR

Appendix A TASK 2a: Review of the EUSBSR

A.1 Methodological Framework for Task 2a

A.1.1 Review of objectives

The review of the objectives hence utilises the previously gained insights to the degree possible. In some cases, literature had to be used instead. In order to provide an appropriate judgement on the objectives, which were defined in 2009 for the EUSBSR, the indicator data uses the years 2008 – 2010 (where possible).

Each objective is categorised into 'themes of intervention', to support a suitable choice for the relevant indicator. The themes generalise the objectives into broader categories such as RDI, competitiveness, or the aquatic environment.

The review occurs on three strands of needs:

- i) Aggregate,
- ii) Individual, and
- iii) Internal.

The Text Box below provides an explanation on the logic behind this definition.

Text Box 3-1: Explanation on the terminology used for the scopes of need

The preceding task benchmarks the four macro-regions on three strands:
i) Macro-region against Europe,
ii) Country against macro-region, and
iii) Internal differences (e.g. rural-urban, where applicable).

These three strands essentially analyse the i) **aggregate** performance of an entire macro-region, ii) the performance of the macro-region's **individual** countries, and lastly iii) the macro-region's **internal** performance (to the extent possible).

The underlying review uses judgement criteria to provide a justified traffic light assessment. The judgement criteria are as follows:

Table 3-50: Judgement criteria and associated indicators

Judgement criteria	Indicators
1) To which extent does the objective reflect an actual need for intervention?	The entire macro-region is a "bottom-performer" according to scope **i)** (see next section)
	A significant number of countries are "bottom-performers" according to scope **ii)** (ca. > 1/3 of the countries)
	Internal "bottom-performance" according to scope **iii)** (e.g. rural-urban)

2) Is the objective strategically relevant in a macro-regional context?	There is concrete evidence of an advantage in the macro-regional context (e.g. synergies, opportunities to learn from others, improved competitiveness of one country benefits all others)

The traffic light ruling is as follows in the table below.

Table 3-51: Traffic Light Ruling

Number judgement criteria fulfilled	Traffic Light
2	Corresponds to need + Macro-regionally relevant
1	Corresponds to need - OR – Macro-regionally relevant
0	No need + Not macro-regionally relevant

A.1.2 Composite Benchmarks

Composite Indices

Composite indices bundle separate (component) indicators into one index which allows the values of the whole bundle expressed as only one measure[217]; examples of such indices are the Human Development Index, Environmental Sustainability Index, and stock indices like the NASDAQ Index. In the course of gathering indicator data, the data have been grouped into sets of related indicators according to appropriately identified themes.

Composite Benchmarks

The benchmarking analysis focuses on the four macro-regions and the four dimensions inside each macro-region compares countries and/or NUTS-2 regions inside the individual macro-region based on a common reference framework of EU countries. The reference framework for each component indicator or composite index is delineated by the "top performer" of EU28 countries (benchmarked at 150), the "lowest performer" (50) and the median performer(s) at 100[218]. Throughout this analysis, a 'bottom performer' refers to a score below 100, while a 'top performer' refers to a score above 100. A high benchmarking score always reflects a more "desirable" situation. Taking unemployment rates as an example, higher scores reflect lower unemployment rates. In this way, the benchmarking results can always be read as showing whether – and to what extent – they are above or below the median in the EU at country level. This common framework enables observations to be made across different regions, even though the main focus remains within each macro-region.

[217] See http://www.investopedia.com/terms/c/compositeindex.asp

[218] The median is the point in a dataset in which a split of that dataset results in two sets with an equal number of data points. See http://www.investopedia.com/terms/m/median.asp for more details

The benchmark is always scaled on a country level against all EU28 Member States. The benchmarking score hence indicates a country's or region's relative position to all EU28 countries. This means in turn that one can observe values above 150 and below 50 in the cases summarised in the table below.

Table 3-52: Cases with benchmarking scores above 150 and below 50

Case	Explanation
Regional analyses (NUTS-2 level)	A NUTS-2 region may out-/underperform its country. Such as Stockholm (SE), performing higher than Sweden as a whole.
Non-EU countries	A non-EU country is not included in the benchmarking scale. Thus, a country like Ukraine may score above 150 or below 50, as they are not included in the scaling.
Macro-regional Integration analyses	Countries that are stronger/weaker integrated in a macro-region than the EU's 'top performing'/'bottom performing' country is integrated in the EU28 (see paragraphs below). For example, Germany's trade integration with countries in the Danube region comprises only a small share of its trade with all EU28 countries and is at the same time lower than that of the EU's 'bottom performer'.

Integration Indices

The chapter on integration includes new integration indices. These IHS-proprietary indices cover respectively Labour Integration (three indices plus a composite of these 3 components), Capital Integration (Foreign Direct Investment (FDI), Energy Integration, and Trade Integration. Each of these seven indices is constructed on a similar principle, which is outlined as follows.

When the amount or value of labour, capital etc. supplied by a country to another country (a 'partner'), or, equivalently, received from a partner, increases, it can be said that the level of integration between the two has increased. Considering a particular group of countries, the focus is on the bilateral flows between them. For the task of estimating integration within macro-regions, i.e. between individual countries belonging to the macro-region in question, the first step is the development of a "Bilateral Flow Matrix", as shown in the table below.

Table 3-53: Energy Integration Example (Baltic Sea), energy exports (kTOE)

Partner	Denmark	Germany	Estonia	Latvia	Lithuania	Poland	Finland	Sweden
Denmark	0.0	1,917.4	0.0	0.0	0.0	0.0	505.6	3,503.5
Germany	3.5	0.0	0.0	0.0	0.0	916.5	0.0	0.0
Estonia	0.0	0.0	0.0	522.7	0.0	0.0	25.6	0.0
Latvia	0.0	0.0	0.4	0.0	293.9	0.0	0.0	0.0
Lithuania	0.0	0.0	79.7	14.4	0.0	51.4	0.0	0.0
Poland	0.0	251.7	0.0	0.0	5.6	0.0	0.0	1.7
Finland	0.0	0.2	432.8	0.0	0.0	0.0	0.0	0.1
Sweden	477.6	168.3	0.0	0.0	0.0	302.0	1,484.4	0.0

Immediately, certain strong relationships between certain country-pairs are visible. What such a table of absolute values does not make clear is the 'importance' of a bilateral relationship for a specific country. A second step therefore converts the data to a relative share of all its exports (or foreign investments, migration flows, remittances) (in worldwide).

Table 3-54: Energy Integration Example, Share of total exports to partner country (in %)

Partner	Denmark	Germany	Estonia	Latvia	Lithuania	Poland	Finland	Sweden
Denmark	0.0	11.8	0.0	0.0	0.0	0.0	3.1	21.5
Germany	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Estonia	0.0	0.0	0.0	24.8	0.0	0.0	1.2	0.0
Latvia	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0
Lithuania	0.0	0.0	0.9	0.2	0.0	0.6	0.0	0.0
Poland	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Finland	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0
Sweden	2.6	0.9	0.0	0.0	0.0	1.6	8.1	0.0

The new integration index provides a common basis for measuring integration in each of the four macro-regions, just as the case for every other indicator considered in this study. Given that the number of countries in the macro-regions vary, the total share of e.g. energy exports to the macro-region would grow with the number of member countries. Therefore, to provide a measure of integration that is not affected by the size of a macro-region, the chosen measure for each country's degree of integration within its macro-region is its per partner share (ppShare); i.e. the average flow to a destination country.

Table 3-55: Energy Integration Example, resulting per partner share

Partner	ppShare
Denmark	5.21
Germany	0.22
Estonia	3.72
Latvia	1.98
Lithuania	0.23
Poland	0.18
Finland	0.83
Sweden	1.90

Benchmarking Integration Indices

In the case of integration indices, the procedure to establish the benchmark is identical in formation as for the other indices, except that in this case the bilateral flow matrix is 28 x 28 for the EU28. Thus, the benchmark is defined by the average share that each Member State exports to the EU28 countries. This results in a per partner share of each Member State, but to the whole EU28, instead of a macro-region.

In other words, using the per partner share as a unit of measure enables the degree of integration within each macro-region to be benchmarked against the

degree of integration in the EU as a whole. This provides a deep insight into the question of whether the common geographical basis (and more) for the macro-regions is actually, and to what extent, of particular relevance compared to the entire setting of all EU countries, which may in general cover a more or less contiguous area, but which course also comprise (even more) multiple regional contexts.

As mentioned in Table 3-52 above, there are many cases found to score well below 50 or well above 150. This is entirely consistent: The reason, expressed mathematically, is that the two-dimensional flow matrices gives rise to country index values in macro-regions that are not subsets of the EU index; for non-integration indices, in contrast the (EU) country indicator values form by definition a subset of the EU28.

A.2 Review of the EUSBSR

A.2.1 Save the Sea

Clear water in the sea (1.1)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-56: Summary of Assessment – EUSBSR – 1.1 Clear water in the sea

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	1.1 Clear water in the sea		X		
Theme of intervention		**Indicator**			
Environmental Sea Status		Environment: Sea Status			
Judgement on the strands of need					
Aggregate	84% of the Baltic Sea's coastal/transitional waters have an Ecologic Status below Good, and 55% have a Chemical Status below Good. On the benchmarking, the Baltic Sea is a "bottom-performer" in both aspects. In terms of chlorophyll-a concentrations in 2008, the Baltic Sea performs only slightly below the EU-median.				
Individual	DK, LT, LV and PL have no waterbody with a Good Ecologic Status, and the best performing country (EE) has a share of 69% below Good status (which is also the only country qualifying as a top-performer). EE, FI, LV, and PL have no waterbody with a Failing Chemical Status, and only SE is a clear bottom-performer.				
Internal	*Not applicable*				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	The analysis shows that there is a particular need to improve the Ecologic Status of coastal and transitional waters, on an aggregate as well as individual strand, since the whole macro-region as well as nearly all countries qualify as a "bottom-performer". In terms of the Chemical Status, there is "less" need, as many countries perform well or even have no failing waterbodies. Yet, the requirements of the directive are a failing share of zero, which is not the case for Denmark, Germany, Lithuania, and Sweden. The Chlorophyll-a concentrations in 2008 are above the EU-				

	median, however only limitedly. Summing up, the judgement criterion is fulfilled. Under the consideration that these streams further flow into the deeper Baltic Sea, and thus decrease the status of the Baltic Sea as a whole, there is a need for intervention on a macro-regional scale. All countries can be affected by the other countries' behaviour, and this applies to all three indicators assessed. In conclusion, the objective has a yellow light as the Chemical Status and Chlorophyll-a indicators do not point to a very urgent need.

Theme of Intervention & Relevant Sources

The sub-objective addresses primarily the threat of eutrophication of the Baltic Sea, but also threats to the chemical status of waterbodies, such as waste water, rural settlements, shipping, and agriculture. The allocated theme of intervention is therefore Environmental Sea Status.

The composite indicator 'Environment – Sea Status' provides information on Eutrophication, the Chemical and Ecological Status of waterbodies.

Strand of Need: Aggregate

The table below shows the Ecologic Status of coastal and transitional waters according to data from the Water Framework Directive.[219] 84% of the Baltic Sea's coastal and transitional waters have a status below "Good", which points to a need for action. In comparison the EU-wide benchmark, the estimated benchmarking value corresponds to 80, which is below the EU-median.

*Table 3-57: Ecologic Status of coastal and transitional waters and benchmarking score. Source: Task 1 & EEA. * Also North Sea waters are included for Denmark and Germany*

	Below Good	At least Good	Classified	%<Good	Benchmark
DE*	43	1	44	98	53
DK*	62	0	62	100	50
EE	11	5	16	69	104
FI	224	40	264	85	79
LT	6	0	6	100	50
LV	7	0	7	100	50
PL	19	0	19	100	50
SE	403	101	504	80	84
Baltic Sea	775	147	922	84	80

When it comes to the Chemical Status of waterbodies, the picture is different, yet similar (see the table below): The share of waterbodies with failing chemical quality is significantly lower, but the Baltic Sea's estimated benchmarking score has a similar magnitude. Slightly more than half of the waterbodies "Fail", and on the EU-wide comparison, the Baltic Sea lags behind the rest of the countries. It should be underlined that this assessment includes only coastal and

[219] In order to improve European Waterbodies, the EU commissioned the Water Framework Directive, which requires the Member States to achieve at least "Good Ecological Status" and "Good Chemical Status" of surface waters[219]. Ecological Status refers to biological and hydrological quality of the water, and its "chemical characteristics"[219]. The ecological status can be classified into four categories: High, Good, Moderate, and Poor. The chemical status describes in turn the water's quality in terms of it content of chemical substances, and is classified as Good or either Fail.

transitional waters. The status in the middle of the Baltic Sea is therefore not included.

*Table 3-58: Chemical Status of coastal and transitional waters and benchmarking score. Source: Task 1 & EEA. * Also North Sea waters are included for Denmark and Germany*

	Fails	Good	Classified	% Fails	Benchmark
DE*	4	75	79	5	100
DK*	28	137	165	17	94
EE	0	16	16	0	150
FI	0	276	276	0	150
LT	1	5	6	17	94
LV	0	7	7	0	150
PL	0	19	19	0	150
SE	623	0	623	100	50
Baltic Sea	656	535	1.191	55	74

A look at the Chlorophyll-a concentrations in the Baltic Sea in 2008 shows that the average concentrations lead to a benchmarking score of 92, which is only slightly below the EU-median.

Strand of Need: Individual

Table 3-57 and Table 3-58 above show the Ecological and Chemical Status in the individual countries. The Ecological Status is in all countries below Good for at least 69% of the waterbodies, and only Estonia scores above the median. Further, Denmark, Lithuania, Latvia and Poland have none of their waterbodies in Good status. In the case of the Chemical status, nearly all countries have barely any with a Fail status, with the exception of Sweden that forms the bottom-end of the EU. Estonia, Finland, Latvia, and Poland even have no waterbodies with a failing Chemical Status.

The chlorophyll-a concentrations in the individual countries are for nearly all only slightly below the EU-median (91 – 103), and only Latvia scores significantly lower (78).

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The analysis shows that there is a particular need to improve the Ecologic Status of coastal and transitional waters, on an aggregate as well as individual strand, since the whole macro-region as well as nearly all countries qualify as a "bottom-performer". In terms of the Chemical Status, there is "less" need, as many countries perform well or even have no failing waterbodies. Yet, the requirements of the directive are a failing share of zero, which is not the case for Denmark, Germany, Lithuania, and Sweden. The Chlorophyll-a concentrations in 2008 are above the EU-median, however only limitedly. Summing up, the judgement criterion is fulfilled.

› *Is the objective strategically relevant in a macro-regional context?*

Under the consideration that these streams further flow into the deeper Baltic Sea, and thus decrease the status of the Baltic Sea as a whole, there is a need for intervention on a macro-regional scale. All countries can be affected by the other countries' behaviour, and this applies to all three indicators assessed.

Rich and healthy wildlife (1.2)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-59: Summary of Assessment – EUSBSR – 1.2 Rich and healthy wildlife

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	1.2 Rich and healthy wildlife				X
Theme of intervention		**Indicator**			
Biodiversity		BEAT HELCOM (Interpolated status of biodiversity) *not from Task 1*.			
Judgement on the strands of need					
Aggregate	The southern part of the strait between Finland and Sweden have an acceptable status. However, a clear majority of the Baltic Sea is in an unacceptable status.				
Individual	The northern coasts of Finland and Sweden have a generally acceptable status, with the exception of the Baltic Sea's northern end. Other than that, all coasts have an unacceptable status. Areas with a particularly undesirable status are found in the corner of Russia in the strait between Estonia and Finland, and the strait of Denmark and Sweden (especially the Great Belt and Kattegat). The sea between the Baltic States and Sweden, which forms the Baltic Sea's centre, also exhibit a very low status. At last, the Eastern coast of Germany shows a very low status.				
Internal	The status of biodiversity does not vary between coasts and the higher Baltic Sea according to a clear pattern. There is however, a tendency that ragged coastal waters have a less acceptable status than their straight counterparts. Specific coastlines are the Great Belt in Denmark, eastern Germany, and South-Western Finland.				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	Nearly the whole Baltic Sea has an unacceptable biodiversity status and all countries have coastal lines with such. Further, already a poor status in a small share of the Baltic Sea could have averse implications for the whole Baltic Sea in the long-term and habitats are not constraint by country or other geographical borders. In conclusion, this objective thus responds well to a need.				

Theme of Intervention & Relevant Sources

The sub-objective addresses threats to the marine biodiversity in the Baltic Sea in the form of eutrophication, alien species, (in-) organic contaminants, fishing, and coastal activities.

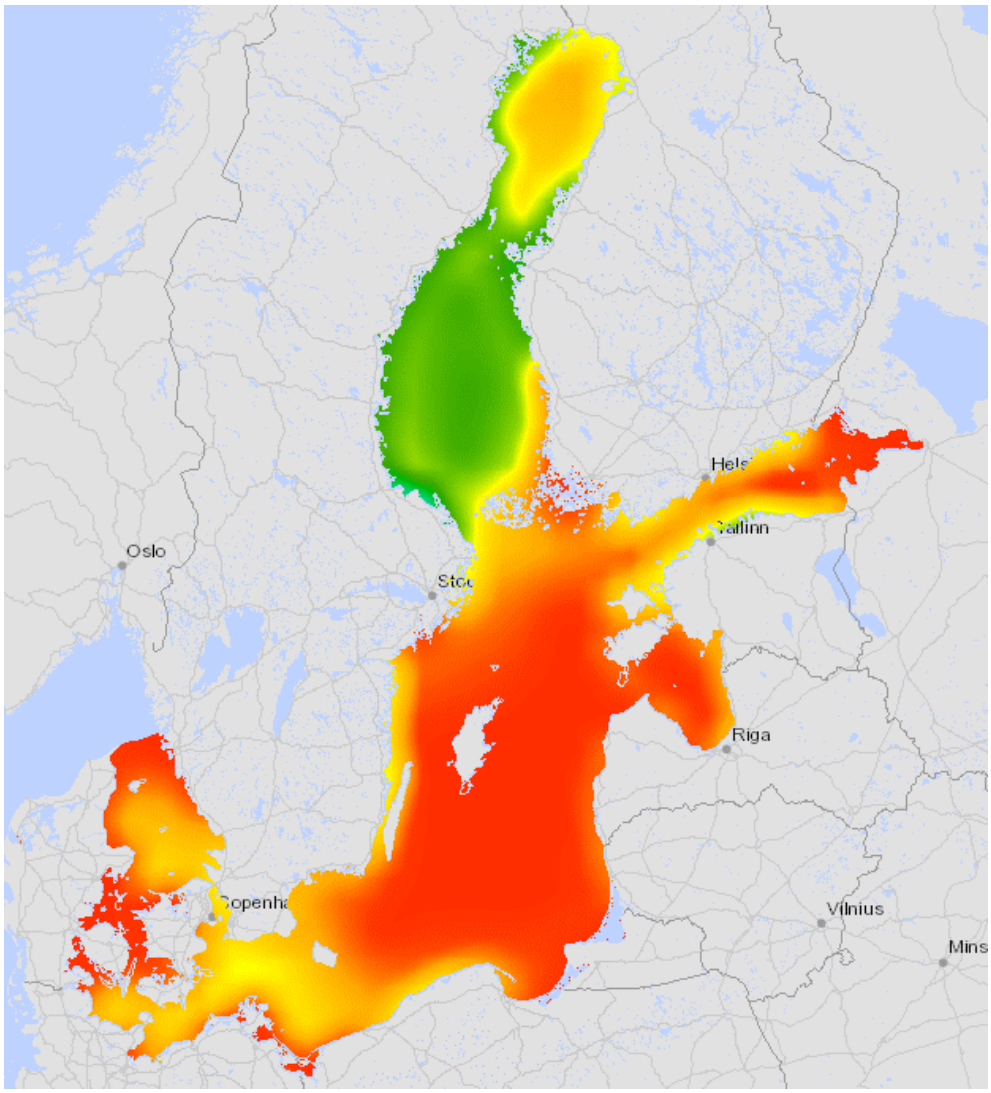
From Task 1, there is no direct indicator for the status of biodiversity, but only the coverage of marine protected areas, which is only one of several measures to protect biodiversity. HELCOM provides however a data map that provides inference on the status of biodiversity, which is used instead. [220]

Strand of Need: Aggregate

The figure below shows the interpolated status of biodiversity in the Baltic Sea in 2010. The southern part of the strait between Finland and Sweden have an acceptable status. However, a clear majority of the Baltic Sea is in an unacceptable status.

[220] https://www.arcgis.com/home/item.html?id=62d56cae0caa4bdeb475a07ac41f9dfb & http://maps.helcom.fi/website/getMetadata/htm/All/Interpolated%20biodiversity%20status.htm

Figure 3-1: Interpolated Biodiversity Status in the Baltic Sea in 2010. Blue and Green corresponds to an 'acceptable status', and yellow, orange and red to an 'unacceptable status'. Source: BEAT HELCOM, 2010



Strand of Need: Individual

The figure above shows that the northern coasts of Finland and Sweden have a generally acceptable status, with the exception of the Baltic Sea's northern end. Other than that, all coasts have an unacceptable status. Areas with a particularly undesirable status are found in the corner of Russia in the strait between Estonia and Finland, and the strait of Denmark and Sweden (especially the Great Belt and Kattegat). The sea between the Baltic States and Sweden, which forms the Baltic Sea's centre, also exhibit a very low status. At last the Eastern coast of Germany shows a very low status.

Strand of Need: Internal

The status of biodiversity does not vary between coasts and the higher Baltic Sea according to a clear pattern. There is however a tendency that ragged coastal waters have a less acceptable status than their straight counterparts. Specific coastlines are the Great Belt in Denmark, eastern Germany, and South-Western Finland.

› *To which extent does the objective reflect an actual need for intervention?*

On an aggregate and individual strand, there is a clear need to address biodiversity, as nearly all of the Baltic Sea and every country's coastal line has an unacceptable status.

› *Is the objective strategically relevant in a macro-regional context?*

Biodiversity is often a transnational issue as habitats are not constrained by national borders. Particularly in the marine case of a sea, there is no geophysical feature that somewhat separates habitats (unlike e.g. a mountain on terrestrial habitats). Thus, a poor status of biodiversity can have implications for all coastal parts. As for example invasive species that that enter the sea through shipping transport.

Clean and Safe Shipping (1.3)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-60: Summary of Assessment – EUSBSR – 1.3 Clean and safe shipping

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	1.3 Clean and safe shipping				**X**
Theme of intervention		**Indicator**			
Sustainable shipping		*No indicators from Task 1 are relevant.* Other literature: Number of shipping accidents in 2010, Illegal oil spills in 2010, National NO_X & PM 2.5 emissions from shipping sector			
Judgement on the strands of need					
Aggregate	There is an aggregate need for action when it comes to 'Illegal oil spills' as these commonly occur in international waters (and thus outside a country's legal responsibility). Although 'Shipping accidents' most often happen close to coasts or in harbours, there is a need on the aggregate level since many accidents also occur in the gateway to the North Sea (which is the only exit/entrance from/to the Baltic Sea).				
Individual	The national emissions of NO_X and PM 2.5 in the shipping sector is in a significant number of countries considerably higher than the EU28 median. Through actions aiming on knowledge sharing and cooperation, action on this need can be macro-regionally relevant.				
Internal	*not applicable*				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	All three indicators exhibit a need of action on an aggregate level with macro-regional relevance. The underlying sub-objective thus corresponds well to a need				

Theme of Intervention & Relevant Sources

The sub-objective seeks to reduce the environmental impact of shipping (i.e. emissions of ports, illegal discharges of oil and other harming substances, introduction of alien species), and strengthening the maritime surveillance

system as well as human capital. All these issues correspond to a weakness to the Baltic Sea as these do not threaten the Baltic Sea as a waterway.

None of the indicators from Task 1 are relevant, and therefore only additional literature is used. The following indicators are used to review this objective:

- Number of shipping accidents in the Baltic Sea in 2013[221] (also in Action Plan)
- Illegal oil spills in the Baltic Sea in 2010[222] (also in Action Plan)
- National NO_X & PM 2.5 emissions from the shipping sector in 2010[223]

Strand of Need: Aggregate

In the Baltic Sea, 130 accidents have been registered in 2010. Most accidents occurred either in proximity to shore or in harbours. Accidents occurred in all countries except for Lithuania. At first sight, this may point to the conclusion that there is no aggregate need in Baltic Sea. However, many accidents are recorded in the passage to the North Sea between Denmark and Sweden. Since the straights of the Øresund and Great Belt are the only entry to the Northern Sea, safe shipping in these passages is important.

A total of 149 illegal oil discharges occurred in 2010, of which most are recorded on the open sea in international waters. In comparison to 2000, there has been a decreasing trend of illegal discharges with a further decrease in the average spill size. Since these spills are often outside of the countries sovereignty, there is a need for action on an aggregate level.

Strand of Need: Individual

The table below shows the national emissions of NO_X and PM 2.5 from the shipping sector in 2010. As can be seen, five out of the eight countries of the EUSBSR (63%) have NO_X emissions above the EU28 median. In the case of particulate matter (PM 2.5), half of the EUSBSR's countries had emissions above the EU28 median. For both indicators, three countries (DE, DK, and SE) exhibit emissions more than twice as high as the median, which is a striking difference calling for intervention.

[221] HELCOM, 2014, *Report on shipping accidents in the Baltic Sea during 2013, http://www.helcom.fi/Lists/Publications/Annual%20report%20on%20shipping%20accidents%20in%20the%20Baltic%20Sea%20area%20during%202013.pdf*

[222] HELCOM, 2010, Annual 2010 HELCOM report on illegal discharges observed during aerial surveillance

[223] EMEP, 2017, WebDab search - Officially reported emission data, http://webdab1.umweltbundesamt.at/official_country_year.html?cgiproxy_skip=1

Table 3-61: National emissions from the shipping sector in 2010, NOx & PM 2.5, including their quartile position on a EU28-wide scale. Source: EMEP.

	NOx		PM 2.5	
	Giga gram	Quartile	Giga gram	Quartile
DE	17.21307	Q3	0.552214	Q2
DK	18.89189	Q4	0.447343	Q3
EE	0.576197	Q2	0.041653	Q2
FI	11.892	Q3	0.437	Q3
LT	0.493928	Q1	0.008809	Q1
LV	1.334346	Q2	0.024434	Q2
PL	5.916894	Q3	0.405317	Q3
SE	9.929282	Q3	0.549608	Q4
	17.21307	Q3	0.498475	Q3
	4.181	Median	0.23144	Median
	0.576197	Q2	0.013783	Q2

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The envisioned judgement criteria prove not practical for 'Illegal oil spills' and 'Shipping accidents' as not all events can be attributed to one individual country. With regards to the national emissions of the shipping sector, it can be seen that a significant share of countries is among the top 25% of NO_X and PM 2.5 emitters in the shipping sector.

› *Is the objective strategically relevant in a macro-regional context?*

The data on 'Illegal oil spills' and 'Shipping accidents' clearly demonstrate a macro-regional relevance of these issues, provided they occur outside territorial waters, and thus outside sovereignty of the countries. The macro-regional approach can clearly add value in addressing these.
Addressing national emissions from the shipping sectors, is limitedly relevant, as high emissions in one country don't affect the emissions of other countries as such. However, under the context of knowledge sharing and cooperation, this need can be considered macro-regionally relevant.

Better Cooperation (1.4)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-62: Summary of Assessment – EUSBSR – 1.4 Better Cooperation

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	1.4 Better Cooperation		X		
Theme of intervention		**Indicator**			
Maritime Cooperation & Coordination		Visuri, P. & Hellenberg, T., (2013), Analysis of Civil Security Systems in Europe, Baltic Sea Maritime Cooperation Gilek *et al.* (2011), Environmental Risk Governance of the Baltic Sea (RISKGOV), Deliverable 12 *No Indicator from Task 1.*			
Judgement on the strands of need					
Aggregate	According to Visuri and Hellenberg (2013), the existing civil security system for accidents on the Baltic Sea is effective, since the number of accidents has decreased between 2005 and 2007, despite an increase of shipping traffic. Due to the increase of traffic, the potential for accidents has however increased. The report highlights that the organisational differences of civil security authorities are diverse among the countries of the Baltic Sea, such as the roles of the rescue services or their (de-)centralisation. Furthermore, response management systems reportedly differ among the individual countries, which can hamper quick and effective coordination in emergencies. On the environmental domain, the results of the RISKGOV project from 2011 conclude a need to improve regulatory coordination, cross-sector cooperation, and integrative policies, so as to "avoid inefficient overlaps and regulatory gaps" (Gilek *et al.*, 2011)[224].				
Individual	*Not addressed*				
Internal	*Not applicable*				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	The literature confirms the need to improve cooperation on civil security and the environmental governance on the Baltic Sea. While many cooperation structures already exist, the complexity of several governance systems hampers an optimal intervention on establishing a safe and environmentally acceptable sea. This complexity induces a weakness to the Baltic Sea, as it weakens the overall response capacity to accidents and effectiveness of maritime governance. The conclusions on the other three sub-objectives of this objective ('Save the Sea') further manifest a need for cooperation due to the Macroregional dimension of existing needs. Shipping safety, and marine- biodiversity and environmental quality are issues that are unaffected by borders. Any adverse events in the Baltic Sea can have negative repercussions on all countries of this Macro-region. Examples are the potential wide-spread risk of oil spills, or the invasion of alien species. The macro-regional context is therefore highly relevant.				

Theme of Intervention & Relevant Sources

The sub-objective seeks to facilitate cooperation and coordination among the countries when it comes to maritime matters and essentially supports the three preceding sub-objectives 'Clear Water in the Sea', 'Rich and Healthy Wildlife', and 'Clean and Safe Shipping'. The specific focus lies an accelerated implementation of the HELCOM Baltic Sea Action Plan and cooperation on

[224] Gilek *et al.* (2011), Environmental Risk Governance of the Baltic Sea (RISKGOV), Deliverable 12, https://www.bonusportal.org/files/1601/RISKGOV_Final_Report.pdf

maritime spatial plans. The allocated theme of intervention is therefore Maritime Cooperation & Coordination.

Task 1's composite indicators 'Territorial Cooperation' reflects the number of organisations that participated in transnational cooperation projects under the INTERREG IV-B between 2007 and 2011, which does not address the theme in this sub-objective. Instead, an EU co-funded report on the Baltic Sea's Maritime Cooperation on civil security systems serves to provide inference safe shipping. [225] A report by the Environmental Risk Governance of the Baltic Sea (RISKGOV) projects further informs on the need of cooperation on environmental issues. [226]

Strand of Need: Aggregate

According to Visuri and Hallenberg (2013), the existing civil security system for accidents on the Baltic Sea is effective, since the number of accidents has decreased between 2005 and 2007, despite an increase of shipping traffic. Due to the increase of traffic, the potential for accidents has however increased. The report highlights that the organisational differences of civil security authorities are diverse among the countries of the Baltic Sea, such as the roles of the rescue services or their (de-)centralisation. Furthermore, response management systems reportedly differ among the individual countries, which can hamper quick and effective coordination in emergencies.

On the environmental domain, the results of the RISKGOV project from 2011 conclude a need to improve regulatory coordination, cross-sector cooperation, and integrative policies, so as to "avoid inefficient overlaps and regulatory gaps" (Gilek *et al.*, 2011)[227].

Strand of Need: Individual

Not addressed

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The literature confirms the need to improve cooperation on civil security and the environmental governance on the Baltic Sea. While many cooperation structures already exist, the complexity of several governance systems hampers an optimal intervention on establishing a safe and environmentally acceptable sea. This complexity induces a weakness to the Baltic Sea, as it weakens the overall

[225] Visuri, P. & Hellenberg, T., (2013), Analysis of Civil Security Systems in Europe, Baltic Sea Maritime Cooperation, http://anvil-project.net/wp-content/uploads/2014/01/BSR_v1.0.pdf

[226] Gilek *et al.* (2011), Environmental Risk Governance of the Baltic Sea (RISKGOV), Deliverable 12, https://www.bonusportal.org/files/1601/RISKGOV_Final_Report.pdf

[227] Gilek *et al.* (2011), Environmental Risk Governance of the Baltic Sea (RISKGOV), Deliverable 12, https://www.bonusportal.org/files/1601/RISKGOV_Final_Report.pdf

response capacity to accidents and effectiveness of maritime governance. The conclusions on the other three sub-objectives of this objective ('Save the Sea') further manifest a need for cooperation due to the Macroregional dimension of existing needs.

› *Is the objective strategically relevant in a macro-regional context?*

Shipping safety, and marine- biodiversity and environmental quality are issues that are unaffected by borders. Any adverse events in the Baltic Sea can have negative repercussions on all countries of this Macro-region. Examples are the potential wide-spread risk of oil spills, or the invasion of alien species. The macro-regional context is therefore highly relevant

A.2.2 Connect the Region

Good Transport Conditions (2.1)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-63: Summary of Assessment – EUSBSR – 2.1 Good Transport Conditions

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	2.1 Good Transport Conditions		X		
Theme of intervention		**Indicator**			
Infrastructure Quality		'Logistics Performance Index', 'Completion of TEN-T', 'Accessibility Potential'			
Judgement on the strands of need					
Aggregate	The 'Logistics Performance Index (LPI)' shows for 2010 a quality of logistical infrastructures above the EU-median (score on the benchmark of 112). When it comes to the completion of TEN-T in 2014, the Baltic Sea region is ahead of the EU on High-speed Rail (110) and Inland Waterways (150), but lags behind on Road (89) and Conventional Rail (82). The 'Accessibility Potential' of the Baltic Sea region for 2011 shows performances that are close to the EU average. The average multimodal and air accessibility is close to the EU-median (97 and 96 respectively). The rail and road accessibility is slightly lower with 90 and 88 points on the benchmark respectively.				
Individual	The performance of the countries on the 'LPI' varies substantially in the Macro-region. Half of the countries are among Europe's top (FI, DE, SE, DK), and the rest is among Europe's bottom. PL scores close to the median with 94 points. LV, EE, and LT however score a maximum of 84 points. The completion of TEN-T is comparably more homogeneous, which is also due to the later date of the data (2014). All countries except DE perform below the EU-median on Conventional Rail, while all countries but DK and LV are bottom-performers, of which FI and SE however only remotely. The 'Accessibility Potential' is highly diverse in the macro-region. DE, DK and LT are high performers on all aspects. The rest of the Baltic Sea exhibits however areas with a clear bottom-performance, of which particularly Rail and Road.				
Internal	The 'Accessibility Potential' varies also on the internal dimension: Rural areas have significantly lower accessibility than their urban counterparts do. In all countries, the differences are palpable. Areas of particularly low accessibility are Eastern PL, northern FI and SE, and Eastern EE and LV.				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	Broadly speaking, the Baltic Sea region as a whole performs on the indicators in Europe's top and median. The Baltic Sea region scores high on logistics performance, completion of TEN-T (High-speed Rail and Inland Waterways), and scores slightly below the median on 'Accessibility Potential' and TEN-T Conventional Rail and Road. On the individual strand, a more divided picture becomes visible as more than one-third of the countries are bottom-performers on either of the three indicators, which fulfils the judgement criteria. Interregional transport conditions are an important aspect in promoting Economic and Territorial Cohesion as it provides economic growth opportunities from intra-European trade opportunities and reduces the geographical barriers between the individual regions. Thus, a macro-regional approach to improve transport conditions provides benefits to all countries. Seen in the context of building transport infrastructures that are environmentally sustainable and resilient to man-made disasters, cooperation can promote a harmonisation of standards. Given that some countries perform well-ahead of the EU-standard and thus not have an extensive need to improve their infrastructures, the sub-objective responds to a need.				

Theme of Intervention & Relevant Sources	The sub-objective seeks to ensure good transport systems that are efficient, not harming to the Baltic Sea's environment and resilient to man-made disasters. The theme of intervention is thus Infrastructure Quality, which is measured through the indicators 'Completion of TEN-T' (trans-European Transport Network), 'Logistics Performance Index', as well as 'Accessibility Potential'. The first indicator provides information on an "input" factor, while the latter two are "output" factors of how well the infrastructure works.
Strand of Need: Aggregate	The 'Logistics Performance Index' shows for 2010 a quality of transport infrastructures above the EU-median (score on the benchmark of 112). When it comes to the completion of TEN-T in 2014, the Baltic Sea region is ahead of the EU on High-speed Rail (110) and Inland Waterways (150). The completion of Road (89) and Conventional Rail (82) lags in turn on average slightly behind. The 'Accessibility Potential' of the Baltic Sea region for 2011 shows performances that are close to the EU average. The average multimodal and air accessibility is close to the EU-median (97 and 96 respectively). The rail and road accessibility is slightly lower with 90 and 88 points on the benchmark respectively.
Strand of Need: Individual	The performance of the countries on the 'Logistics Performance Index' varies substantially in the Macro-region. Half of the countries are among Europe's top (Finland, Germany, Sweden, Denmark), and the rest is among Europe's bottom. Poland scores close to the median with 94 points. Latvia, Estonia, and Lithuania however score a maximum of 84 points. The completion of TEN-T is comparably more homogeneous, which is also due to the comparably later date of the data (2014). All countries except Germany perform below the EU-median on Conventional Rail, while all countries but Denmark and Latvia are bottom-performers, of which Finland and Sweden however only remotely. The 'Accessibility Potential' is highly diverse in the macro-region. Germany, Denmark and Lithuania are high performers on all aspects. The rest of the Baltic Sea exhibits however areas with a clear bottom-performance, particularly Rail and Road.
Strand of Need: Internal	The 'Accessibility Potential' varies also on the internal dimension: Rural areas have significantly lower accessibility than their urban counterparts do. In all countries, the differences are palpable. Areas of particularly low accessibility are Eastern Poland, northern Finland and Sweden, and Eastern Estonia and Latvia.
Final Assessment	› *To which extent does the objective reflect an actual need for intervention?* Broadly speaking, the Baltic Sea region as a whole performs on the indicators in Europe's top and median. The Baltic Sea region scores high on logistics performance, completion of TEN-T (High-speed Rail and Inland Waterways), and scores slightly below the median on 'Accessibility Potential' and TEN-T Conventional Rail and Road. The judgement criteria are therefore barely fulfilled for the latter three indicators. On the individual strand, a more divided picture becomes visible as more than one-third of the countries are bottom-performers on any of the three indicators, which validates a need on this strand.

The internal domain has also shown that the urban-rural differences are strong, highlighting again a need for intervention.

› *Is the objective strategically relevant in a macro-regional context?*

Interregional transport conditions are an important aspect in promoting Economic and Territorial Cohesion as it provides economic growth opportunities from intra-European trade opportunities for all Member States from all Member States and reduces the geographical barriers between the individual regions. Thus, a macro-regional approach to improve transport conditions provides benefits to all countries. Seen in the context of building transport infrastructures that are environmentally sustainable and resilient to man-made disasters, cooperation can promote a harmonisation of standards.

Reliable Energy Markets (2.2)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-64: Summary of Assessment – EUSBSR – 2.2 Reliable energy markets

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	2.2 Reliable energy markets		X		
Theme of intervention		**Indicator**			
Energy		'Energy Integration', 'Renewable Energy Use', 'Energy efficiency', *Additional Literature:* Weyers, T. P. (2013), Energy Security in the Baltic States			
Judgement on the strands of need					
Aggregate	The Baltic Sea exhibits on average a strong energy integration, based on data from 2015, which follows the completion of multiple key projects in the Baltic States, PL and SE. Further, the macro-region is on average a top-performer in Europe on renewable energy, but a slight bottom performer on energy efficiency gains.				
Individual	Three out of eight countries rank as bottom performers on energy integration: DE, LT and PL. PL's and DE's low scores are also explained by the relatively small size of the Baltic Sea market compared to their other geographic markets. The indictor on 'Renewable Energy Use' demonstrates that only PL is a clear bottom-performer. DE also scores below the median, though only to a small extent. On 'Energy Efficiency', there are three countries performing clearly below the median: EE, FI and LT. Poland is a weak median performer.				
Internal	*Not applicable*				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	The 'Energy Integration' points itself to no concrete conclusion on a need, due to the recent date of the data. The additional literature by Weyers (2013) confirms however a need to improve energy security in the Baltic States. The assessment shows, that there are individual difference among the countries on the three indicators. Three out of eight countries perform low on 'Energy Integration', which reflects an actual need for intervention according to the defined judgement criteria. The 'Renewable Energy Use' indicators highlights only PL as a clear bottom performer. At last, the 'Energy efficiency' indicator shows three out of eight countries as clear bottom performers. The completion of the EU's Internal Energy Market and removal of energy islands in the Baltic Sea as called for in the Action Plan of the EUSBSR is macro-regionally relevant, as a diversification of the geographic origin of energy supply improves the resilience towards disturbances. Particularly in the context of an intended increase of renewable energies, where the share of intermittent energy sources such as solar and wind also increases, energy integration is an important aspect to the reliability of the system. At last, when it comes to technical innovation on energy (e.g. energy efficiency), a macro-regional approach can support knowledge transfers.				

Theme of Intervention & Relevant Sources

The objective addresses improved interconnections of energy infrastructures in the Baltic Sea to primarily obtain a higher security of energy supply. Also, this sub-objective serves to promote more sustainable energies with the aim of providing competitive and low emission energy. The theme of intervention is thus Energy. For the review of this sub-objective, three indicators are analysed: 'Energy Integration', 'Renewable Energy use', and 'Energy efficiency'.

The review of this sub-objective is supplemented by an analysis of the energy security in the Baltic States by Weyers (2013).[228]

Strand of Need: Aggregate

The average performance of the Baltic Sea macro-region on the composite benchmark of 'Energy Integration' is 124 points, which puts this macro-region clearly above the EU-median. It should be noted that the energy integration rests on data from 2015, in which infrastructural links between Sweden and Lithuania, Lithuania and Poland, and Estonia and Latvia were just recently completed. Prior to 2015, the overall integration was thus presumably lower, but cannot be assessed through this indicator. Weyers' (2013) analysis on the Baltic States concludes however that the Baltic States' energy dependency (particularly on Russia) calls for a need to diversify geographic supply sources to improve on supply security.
The indicator 'Renewable Energy Use' shows that the Baltic Sea region scores for 2010 on average 118 points on the benchmark, which puts the aggregate region as a top-performer.
On 'Energy Efficiency', the Baltic Sea scores for 2010 only slightly below the EU-median with a score of 97.

Strand of Need: Individual

Although the Baltic Sea scores high on 'Energy Integration' on an aggregate level, there are some major discrepancies to be observed. The benchmarking score of the individual countries ranges from 69 to 187, and exhibits thus a quite diverse degree of energy integration. While the Nordic countries are very well integrated, Germany, Lithuania and Poland are not. The underlying indicator represents the exports to partner countries, and thus does not provide a measure on how import-dependent countries are, but how well these manage to sell their energy to the Baltic Sea region.

On the indicator 'Renewable Energy Use', the majority of countries perform above the EU-median. Germany scores slightly below the EU-median with 95 points, and Poland is the only clear bottom-performer when it comes to renewable energy use.
The indicator 'Energy Efficiency' shows that three countries perform for 2010 clearly under the median (Estonia: 75 points; Finland: 86; and Lithuania: 92). Poland performed only merely below the median with 98 points and performs nearly as strong as Denmark, Germany, and Sweden (scoring 102/102/104 each).

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The 'Energy Integration' points itself to no concrete conclusion on a need, due to the recent date of the data. The additional literature by Weyers (2013) confirms however a need to improve energy security in the Baltic States.
The review above shows individual difference among the countries on the chosen

[228] Weyers, T. P. (2013), Energy Security in the Baltic States, https://repositori.upf.edu/handle/10230/21000

indicators. Three out of eight countries perform low on 'Energy Integration', which reflects an actual need for intervention according to the defined judgement criteria. The 'Renewable Energy Use' indicators highlights only Poland as a clear bottom performer. At last, the 'Energy efficiency' indicator shows three out of eight countries as clear bottom performers.

› *Is the objective strategically relevant in a macro-regional context?*

The completion of the EU's Internal Energy Market and removal of energy islands in the Baltic Sea as called for in the Action Plan of the EUSBSR is macro-regionally relevant, as a diversification of the geographic origin of energy supply improves the resilience towards disturbances. Particularly in the context of an intended increase of renewable energies, where the share of intermittent energy sources such as solar and wind increases, energy integration is an important aspect to the reliability of the system. The strong dependency on Russia further exposes the region to political pressure. At last, when it comes to technical innovation on energy (e.g. energy efficiency), a macro-regional approach can support knowledge transfers.

Connecting People in the Region (2.3)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-65: Summary of Assessment – EUSBSR – 2.3 Connecting People in the Region

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	2.3 Connecting People in the Region	X			
Theme of intervention		**Indicator**			
Transnational Cooperation		'Transnational Cooperation'			
Judgement on the strands of need					
Aggregate	The Baltic Sea region scores on average 100 points on the benchmark, which puts it on the European median level of cooperation, when measured by the number of participating organisations.				
Individual	When aggregated to a country-level, only Poland exhibits a level of cooperation that corresponds to bottom performing level. All old Member States (DE, DK, FI, SE) score around the median level, and the Baltic States (EE, LV, LT) all score as strong top performers.				
Internal	*Not applicable*				
Traffic Light	Macro-regionally relevant				
Justification	Neither the aggregate nor individual strand points to an actual need for intervention. Overall, the Baltic Sea region shows a degree of cooperation that is as strong as the EU on average. Therefore, there is no specific need for an intervention. The underlying sub-objective conclusively strengthens already strong cooperation, but does not respond to a specific need for the macro-region. Connecting the people in the region to promote better cultural, educational and scientific exchange can be macro-regionally relevant. Even in the form of mere bilateral cooperation, the existing cooperation experience can be shared throughout the region. At last, territorial cohesion is enforced through cooperation on the cross-border, transnational as well as interregional level. In conclusion, the sub-objective is macro-regionally relevant.				

Theme of Intervention & Relevant Sources	The sub-objective aims to connect people in the macro-region by setting up new and strengthening existing networks and cooperation platforms. Further, communication networks shall be improved to propagate a closer and more spontaneous cooperation and exchange. The areas addressed are culture, education and science. The theme of intervention is therefore Territorial Cooperation. The indicator 'Territorial Cooperation' from Task 1 benchmarks the number of organisations that participated in transnational cooperation projects under the INTERREG IV-B between 2007 and 2011. This data exists on the NUTS-2 level, but is for this analysis aggregated to the country level.
Strand of Need: Aggregate	The macro-region exhibits a cooperation among organisations that is on average the magnitude of the EU-median. The top performers are found in the Baltic States as well as the Nordic countries. Germany and Poland have a notable diversity of high and low performing regions. Poland even has one of the EU's bottom-performing regions. On average however, the Baltic Sea region scores 100 points on the benchmark, which puts it on the European median.
Strand of Need: Individual	In the German NUTS-2 regions belonging to the Baltic Sea macro-region there was a total of 129 organisations, in Denmark 121 organisations, in Estonia 78 organisations, in Finland 161 organisations, in Lithuania 105, in Latvia 73, in Poland 219, and in Sweden 247 organisations which were participating in 2011 in INTERREG IV-B projects. The NUTS-2 regions with the highest number of organisations involved in IV-B projects were: Etelä-Suomi with 77 organisations, Mecklenburg-Vorpommern with 64 organisations, Hamburg with 54 organisations, Pomorskie with 54 organisations, and Sydsverige with 47 organisations. In the case of the Baltic States and Southern Finland, the high scoring is interesting in the light of the fact that these regions were only covered by one transnational cooperation programme (Baltic Sea), and thus made a strong effort to capitalise on cooperation opportunities through the programme. When aggregated to a country-level, only Poland exhibits a level of cooperation that corresponds to bottom performing level.
Strand of Need: Internal	*Not applicable*
Final Assessment	› *To which extent does the objective reflect an actual need for intervention?* Neither the aggregate nor individual strand points to an actual need for intervention. Overall, the Baltic Sea region shows a degree of cooperation that is as strong as the EU on average. Therefore, there is no specific need for an intervention. The underlying sub-objective conclusively strengthens already strong cooperation, but does not respond to a need for the macro-region to meet the EU standard. › *Is the objective strategically relevant in a macro-regional context?*

Connecting the people in the region to promote better cultural, educational and scientific exchange can be macro-regionally relevant. Even in the form of mere bilateral cooperation, the existing cooperation experience can be shared throughout the region. At last, territorial cohesion is enforced through cooperation on the cross-border, transnational as well as interregional level. The existing cooperation is overall strong. Any intervention thus builds on a strength of the macro-region.

Better Cooperation Fighting Cross-border Crime (2.4)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-66: Summary of Assessment – EUSBSR – 2.4 Better Cooperation Fighting Cross-border Crime

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	2.4 Better Cooperation Fighting Cross-border Crime				**X**
Theme of intervention		**Indicator**			
Crime		'Human Trafficking', 'Number of Drug Seizures', and external literature.			
Judgement on the strands of need					
Aggregate	The number of drug seizures, as measured by seizures per million inhabitants, is in the Baltic Sea region higher than the EU-median, scoring 119 points on the benchmark, which does not indicate a need for intervention. On human trafficking, 2,070 victims had a country of origin or citizenship in the Baltic Sea macro-region, out of 15,474 victims in Europe with European citizenship. About 13% of Europe's victims thus originate in the Baltic Sea region. However, most of the trafficking occurs domestically.				
Individual	Nearly all countries in the Baltic Sea region are top performers, with the exception of LT (score of 73). There is no data available for PL. There is thus one country that is weak on drug seizures. On human trafficking, four countries of the Baltic Sea are in the upper half of the number of victims in Europe. However, only for two of those, the cross-border dimension is relevant.				
Other aspects	According to Kegö & Leijonmarck, globalisation in the sense of facilitated communication and reduced border restrictions have turned organised crime to a more transnational scale.[229] In order to address this threat, a joint investigation team for the Baltics is a suggested solution.				
Traffic Light	Macro-regionally relevant				
Justification	The selected indicators do not point to a need for intervention on the aggregate strand. On the individual strand, a few countries exhibit a need for action on human trafficking and drug seizures. Poland and Lithuania stand out. None of the judgement criteria are therefore fulfilled. At the same time, criminal activities always try to operate in the unknown, which means that no officially recorded data are available. The research report by Kegö & Leijonmarck shows that the cross-border and especially transnational dimension of criminal activities has become ever more relevant as a result of globalization (i.e. facilitation of communication and transport). A macro-regional approach is therefore relevant. Since only on judgement criterion is fulfilled, the objective receives a yellow light. Furthermore, as crime is threatens the security of citizens, it is categorised as a threat.				

[229] Kegö, W. & Leijonmarck, E. (2011), Countering Cross-Border Crime in the Baltic Sea region, http://isdp.eu/content/uploads/images/stories/isdp-main-pdf/2011_kego-leijonmarck_countering-cross-border-crime.pdf

Theme of Intervention & Relevant Sources	The sub-objective addresses general cross-border crime issues, and is not focused on specific themes. In the cross-border context, potentially relevant types of crimes are the trafficking of drugs, humans or stolen goods. This review builds on two indicators: 'Human Trafficking' in 2014 and 'Number of Drug Seizures' in 2010-2012. Note that the latter indicator does not provide information on the severity of drug trafficking as such, but rather the activity of relevant authorities. The information from the indicators is supplemented by a research paper from the Institute for Security & Development Policy. [230]
Strand of Need: Aggregate	The number of drug seizures, as measured by seizures per million inhabitants, is in the Baltic Sea region higher than the EU-median, scoring 119 points on the benchmark, which does not indicate a need for intervention. On human trafficking, 2,070 victims had a country of origin or citizenship in the Baltic Sea macro-region, out of 15,474 victims in Europe with European citizenship. About 13% of Europe's victims thus originate in the Baltic Sea region. However, most of the trafficking occurs domestically.
Strand of Need: Individual	Nearly all countries in the Baltic Sea region are top performers, with the exception of Lithuania (score of 73). There is no data available for Poland. There is thus one country that is weak on drug seizures. The indicator on human trafficking shows that most victims from the Baltic Sea come from Poland (976 victims), of which a strong majority is trafficked outside of Poland. Germany also has many victims (415), but nearly all of the identified victims remained within its borders. Other countries highly affected by trafficking are Latvia (355 victims) and Lithuania (244). Most of Lithuania's victims have been identified outside of the country. In conclusion, four countries of the Baltic Sea are in the upper half of the number of victims in Europe. However, only for two of those, the cross-border dimension is relevant.
Strand of Need: Internal	The geographic solution of the data (i.e. country level) does not enable an internal assessment.
Other aspects	According to Kegö & Leijonmarck, globalisation in the sense of facilitated communication and reduced border restrictions have turned organised crime to a more transnational scale.[231] In order to address this threat, a joint investigation team for the Baltics is a suggested solution.
Final Assessment	› *To which extent does the objective reflect an actual need for intervention?*

[230] Kegö, W. & Leijonmarck, E. (2011), Countering Cross-Border Crime in the Baltic Sea region, http://isdp.eu/content/uploads/images/stories/isdp-main-pdf/2011_kego-leijonmarck_countering-cross-border-crime.pdf

[231] Kegö, W. & Leijonmarck, E. (2011), Countering Cross-Border Crime in the Baltic Sea region, http://isdp.eu/content/uploads/images/stories/isdp-main-pdf/2011_kego-leijonmarck_countering-cross-border-crime.pdf

The selected indicators do not point to a need for intervention on the aggregate strand. On the individual strand, a few countries exhibit a need for action on human trafficking and drug seizures. Poland and Lithuania stand out. None of the judgement criteria are therefore fulfilled. At the same time, criminal activities always try to operate in the unknown, which means that no officially recorded data are available.

› *Is the objective strategically relevant in a macro-regional context?*

The research report by Kegö & Leijonmarck shows that the cross-border and especially transnational dimension of criminal activities has become ever more relevant as a result of globalization (i.e. facilitation of communication and transport). A macro-regional approach is therefore relevant.

A.2.3 Increase Prosperity

Frontrunner on the Single Market (3.1)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-67: Summary of Assessment – EUSBSR – 3.1 Frontrunner on the Single Market

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	3.1 Baltic Sea region as a frontrunner for deepening and fulfilling the single market			X	
Theme of intervention		**Indicator**			
Single Market		'Capital Integration', 'Trade Integration'; *external literature*: non-public discussion paper.			
Judgement on the strands of need					
Aggregate	The Baltic Sea region shows an average integration of capital that is significantly stronger than the EU on average. The resulting score on the benchmark of 354 clearly shows that the capital market in the Baltic Sea is stronger integrated than that of the EU on average. The trade integration of the Baltic Sea is with 206 points for 2008 also higher than the EU-median. The Baltic Sea is conclusively a top performer for trade and capital integration. The internal discussion paper shows that with regard to the internal market, a lot of work has already been achieved on the EU level. As a result, the implementation is challenged by no need for action.				
Individual	On the individual strand, the Baltic Sea countries are generally top performers on capital integration. However, Poland and Sweden have a capital integration that is two-thirds lower than the macro-region and Germany scores very low with -9 points. The 'Trade Integration' indicator shows only Germany as a low scoring region (with 30 points). Germany thus has a low share of exports destined for the Baltic Sea Macro-region. Further, Germany's position as the EU's strongest exporter and largest economy explains the low integration with the Baltic Sea region.				
Internal	*Not applicable*				
Traffic Light	Macro-regionally relevant				
Justification	The Baltic Sea region as a whole is a strong top performer on 'Capital Integration' and 'Trade Integration'. Looking at the individual countries, Germany is the only bottom performer on both indicators. The additional literature shows further that the existing achievements on the EU level leave no need for intervention. The Macroregional relevance of this sub-objective is ambiguous. While the European Single Market strives to create "one territory without any internal borders or other regulatory obstacles to the free movement of goods and services", a Macroregional approach to fulfil such contradicts this principle, as the Baltic Sea region is separated into a geography of higher priority. [232] This leads to the question, whether trade between DK and RO should at all be less relevant in the Single Market than between DK and EE; which it shouldn't. Single Market matters should be EU-wide matters. The sub-objective addresses on the other hand also the reduction of trade hurdles with neighbouring third countries, which also includes better tax enforcement. This is macro-regionally relevant, as FI, EE, LV, LT, and PL each have third country neighbours. The targeted reduction in trade barriers can further benefit the rest of the EU, due to the Single market concept. The resulting traffic light is therefore yellow.				

[232] DG Growth, The European Single Market, https://ec.europa.eu/growth/single-market_en

Theme of Intervention & Relevant Sources

The underlying sub-objective addresses legal and administrative obstacles that hinder trade and the fulfilment of the European Single Market, which is seen as an important part to maintaining the region's competitiveness due to the small size of its countries (except for Germany). The allocated theme of intervention is Single Market.
The Task 1 indicators on integration measure, among others, the degree to which the capital and trade markets are integrated with the Baltic Sea region as compared to other countries in the EU. The used indicators are thus: 'Capital Integration' in 2012, as measured in inward FDI stocks, and 'Trade Integration' in 2008, as measured in exports to partner countries. In addition, an internal, non-public, discussion paper is used for this assessment.[233]

Strand of Need: Aggregate

The Baltic Sea region shows an average integration of capital that is significantly stronger than the EU on average. The average share of FDI stocks in the Macro-region that derives from countries inside the Macro-region is higher than the share of FDI stocks that come on average in the EU from other Member States. The resulting score on the benchmark of 354 clearly shows that the capital market in the Baltic Sea stronger integrated than that of the EU on average. The trade integration of the Baltic Sea is with 206 points for 2008 also higher than the EU-median. The Baltic Sea is conclusively a top performer for trade and capital integration.

The internal discussion paper shows that with regard to the internal market, a lot of work has already been achieved on the EU level. As a result, the implementation is challenged by no need for action.

Strand of Need: Individual

On the individual strand, the Baltic Sea countries are generally top performers on capital integration. Only Germany scores very low with -9 points. This points to the fact that Germany receives only very little FDI from the Baltic Sea. Given Germany's comparable large size of the economy, this observation is not surprising. Sweden and Poland further have a capital integration that is two-thirds below the average of the macro-region. At last, it should be noted that the indicator uses country-level data. The inward FDI in the relevant NUTS-2 regions of this Macro-region may therefore be higher.
The 'Trade Integration' indicator shows only Germany as a low scoring region (with 30 points). Germany thus has a low share of exports destined for the Baltic Sea Macro-region. Further, Germany's position as the EU's strongest exporter and largest economy explains the low integration with the Baltic Sea region.

[233] EU COM, 2014, *A Discussion Paper for the revision of the Action Plan of the EU Strategy for the Baltic Sea Region (EUSBSR), not public*

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The Baltic Sea region as a whole is a strong top performer on 'Capital Integration' and 'Trade Integration'. Looking at the individual countries, Germany is the only bottom performer on both indicators. The additional literature shows further that the existing achievements on the EU level leave no need for intervention.

› *Is the objective strategically relevant in a macro-regional context?*

The Macro-regional relevance of this sub-objective is ambiguous. While the European Single Market strives to create "one territory without any internal borders or other regulatory obstacles to the free movement of goods and services", a Macro-regional approach to fulfil such contradicts this principle, as the Baltic Sea region is separated into a geography of higher priority. [234] This leads to the question, whether trade between Denmark and Romania should at all be less relevant in the Single Market than between Denmark and Estonia; which it should not. Single Market matters should be EU-wide matters.
The sub-objective addresses on the other hand also the reduction of trade hurdles with neighbouring third countries, which also includes better tax enforcement. This is macro-regionally relevant, as Finland, Estonia, Latvia, Lithuania, and Poland each have third country neighbours. The targeted reduction in trade barriers can further benefit the rest of the EU, due to the Single market concept. The resulting traffic light is therefore green; however only barely.

[234] DG Growth, The European Single Market, https://ec.europa.eu/growth/single-market_en

Europe 2020 Strategy (3.2)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-68: Summary of Assessment – EUSBSR – 3.2 Europe 2020 Strategy

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	3.2 EUSBSR contributing to the implementation of EU 2020 Strategy			X	
Theme of intervention		**Indicator**			
EU2020		'Blue Growth', 'Resource Efficiency', 'Digitalisation', 'Regional Innovation', and 'Climate Change Mitigation'. *Additional literature:* Eurostat (2016)			
Judgement on the strands of need					
Aggregate	The Baltic Sea region is a slight bottom performer of resource efficiency and a solid top performer on digitalisation. The Blue Growth performance is on average 5 points below the EU-median; the score on Climate Change Mitigation is 5 points above. The macro-region performs on 'Climate Change Mitigation' five points above.				
Individual	The underlying results on the indicators point to the following conclusions on the Flagship Initiatives. There is a need for intervention on Blue Growth, Sustainable Growth, and Inclusive Growth. The Smart Growth flagship indicators do not fulfil the judgement criteria.				
Internal	*Not applicable*				
Traffic Light	Corresponds to a need + Macro-regionally relevant				
Justification	The review identified a need for intervention on the Flagship Initiatives Blue-, Sustainable-, and Inclusive Growth; based on the define judgement criteria. The 'Blue Growth' indicator shows that some new Member States are far behind. The Smart Growth indicators ('Digitalisation' and 'Regional Innovation') have each only two bottom performers (Latvia and Poland; and Poland). The Sustainability dimension flags four bottom performers on 'Resource Efficiency' and three on 'Climate Change Mitigation' (of which one only to a slight degree). The Inclusive Growth initiative indicates, according to the judgement criteria, a need for intervention only on poverty and social exclusion, and thus also for the initiative. The sub-objective responds hence to a broad dimension of the EU2020 Strategy. When the EU2020 strategy was adopted in 2010, it set the path for growth and jobs in the EU in the coming decade. Cooperation on subject matters that concern the strategy's flagship initiatives can facilitate a successful achievement of the set goals, through for example the exchange of best practices. On a macro-regional level, where commonalities on the geographic, economic, cultural and social dimension exist, cooperation can be a major catalyser for progress towards the strategy's goals. In summary, a macro-regional approach provides an opportunity to capitalise on such commonalities.				

Theme of Intervention & Relevant Sources

The sub-objective is about contributing to the key areas of the EU2020 Strategy, and provides as an external aspect an opportunity for intervention. The EUSBSR's Action Plan emphasises several flagship initiatives: Resource efficiency, blue growth, industrial policy, innovation, skills and jobs, and the Digital Single Market. The allocated theme of intervention is EU2020.

The indicators applied to review this sub-objective are the following: 'Blue Growth', 'Digitalisation', 'Regional Innovation' (measured by categories: Leader, Strong, Moderate, Modest), 'Resource Efficiency', and 'Climate Change Mitigation'. Due to no indicators on Inclusive Growth, a progress report by

Eurostat on the EU2020 target is used as well. [235] The relationship of the indicators to the individual Flagship Initiatives is shown in the table below.

Table 3-69: Indicator coverage of the EU2020 Flagship Initiatives

Priority	Flagship Initiatives	Indicators
-	Blue Growth	Blue Growth
Smart Growth	Innovation Union	Regional Innovation
	Digital Agenda	Digitalisation
Sustainable Growth	Resource Efficiency	Resource Efficiency
	Industrial Policy for the Globalisation Era	Climate Change Mitigation
Inclusive Growth	New Skills & Jobs	*Eurostat (2016)*
	Poverty & Social Exclusion	*Eurostat (2016)*

Strand of Need: Aggregate

The Baltic Sea region is a slight bottom performer on resource efficiency and a solid top performer on digitalisation. The 'Blue Growth' performance is on average though five points below the EU-median. The macro-region performs on 'Climate Change Mitigation' five points above.

Strand of Need: Individual

The 'Blue Growth' indicator shows a clear discrepancy between the old and new Member States in 2010. The former score as solid top performers (119-122), while the latter, separated by at least 42 points on the benchmark, ranges between 66 and 77 points.

The 'Digitalisation' indicator shows that most countries are well digitalised compared to the rest of the EU. However, Latvia and Poland lag behind with a score of 89 and 78 respectively.
The indicator 'Regional Innovation' shows that most NUTS-2 regions of the Baltic Sea are Strong or Leader innovators in 2008 (Denmark, Finland, Germany, Sweden). Poland is the only country that scores as a Moderate to Modest innovator. No data is available on the Baltic States.

The 'Resource Efficiency' indicator also points to a diverse performance. Four countries score below the EU-median, of which two are only slight bottom performers (Finland and Lithuania), and two are solid bottom performers (Estonia and Poland).
Three countries perform on 'Climate Change Mitigation' below the EU-median: Estonia (64 points), Poland (83), and Finland (96); though the latter performs only slightly below.

The table below shows the indicators for the Flagship Initiative Inclusive Growth for 2010. As can be seen, the share of people at the risk of social poverty or

[235] Eurostat (2016), Smarter, Greener, More Inclusive? – Indicators to support the EU2020 Strategy – 2016 Edition, http://ec.europa.eu/eurostat/documents/3217494/7566774/KS-EZ-16-001-EN-N.pdf/ac04885c-cfff-4f9c-9f30-c9337ba929aa

social exclusion is above the EU-median in Lithuania, Latvia, and Poland (each in the fourth quartile). In relation to the education indicators, there are in each case only two countries that perform below the EU-median: Germany and Latvia on early leavers (each on the third quartile) and Latvia and Poland on the tertiary education attainment (each on the second quartile). The indicators thus point to a need of intervention for the poverty and social exclusion only, which meets the judgement criteria.

Table 3-70: Key indicators on Inclusive Growth in 2010, in percentage and quartiles (source: Eurostat, 2016).

	At risk of poverty or social exclusion (%)		Early leavers from education and training (%)		Tertiary education attainment (%)	
DE	19.7	Q2	11.8	Q3	22.70	Q3
DK	18.3	Q1	11.0	Q2	27.5	Q3
EE	21.7	Q2	11.0	Q2	30.0	Q4
FI	16.9	Q1	10.3	Q2	31.6	Q4
LT	34.0	Q4	7.9	Q2	26.9	Q3
LV	38.2	Q4	12.9	Q3	22.60	Q2
PL	27.8	Q4	5.4	Q1	19.4	Q2
SE	15.0	Q1	6.5	Q1	28.2	Q3
EU27	23.7		14.0		22.8	

The underlying results on the indicators point to the following conclusions on the Flagship Initiatives. There is a need for intervention on Blue Growth, Sustainable Growth, and Inclusive Growth. The Smart Growth flagship indicators do not fulfil the judgement criteria.

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The review identified a need for intervention on the Flagship Initiatives Blue-, Sustainable-, and Inclusive Growth; based on the define judgement criteria. The 'Blue Growth' indicator shows that some new Member States are far behind. The Smart Growth indicators ('Digitalisation' and 'Regional Innovation') have each only two bottom performers (Latvia and Poland; and Poland). The Sustainability dimension flags four bottom performers on 'Resource Efficiency' and three on 'Climate Change Mitigation' (of which one only to a slight degree). The Inclusive Growth initiative indicates, according to the judgement criteria, a need for intervention only on poverty and social exclusion, and thus also for the initiative. The sub-objective responds hence to a broad dimension of the EU2020 Strategy.

› *Is the objective strategically relevant in a macro-regional context?*

When the EU2020 strategy was adopted in 2010, it set the path for growth and jobs in the EU in the coming decade. Cooperation on subject matters that

concern the strategy's flagship initiatives can facilitate a successful achievement of the set goals, through for example the exchange of best practices. On a macro-regional level, where commonalities on the geographic, economic, cultural and social dimension exist, cooperation can be a major catalyser for progress towards the strategy's goals. In summary, a macro-regional approach provides an opportunity to capitalise on such commonalities.

Improved Global Competitiveness (3.3)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-71: Summary of Assessment – EUSBSR – 3.3 Improved Global Competitiveness

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	3.3 Improved Global Competitiveness of the Baltic Sea region	X			
Theme of intervention		**Indicator**			
Competitiveness		'Regional Competitiveness Index'			
Judgement on the strands of need					
Aggregate	The Baltic Sea Macro-region scores on the benchmark 110 points, which makes it a top performer in the EU. As a result, there is no aggregate need for an intervention.				
Individual	Looking at the individual countries, three countries perform below the EU-median: Latvia (74 points), Poland (82), and Lithuania (83). Estonia ranks with 102 points as a slight top performer. The other countries of this Macro-region, Denmark, Germany, Finland and Sweden all score strongly with at least 124 points.				
Internal	*Not applicable*				
Traffic Light	Corresponds to a need + Macro-regionally relevant				
Justification	The review shows that the Macro-region performs as a whole above the EU-median. However, three countries (Latvia, Poland, and Lithuania) qualify as bottom performer and are separated from the top performers (ignoring Estonia with 102 points) by at least 41 points. This blend of weak and strong performing countries provides an opportunity for this region, as the new Member States can build on the existing strengths of the old Member States. A macro-region with, more or less, evenly competitive countries ensures on the one hand economic cohesion, as each country is similarly able to harness economic growth opportunities and similarly robust against competition from other economies. On the other hand, competitiveness is not an issue exclusively relevant to this macro-region, but an EU-wide problem, which thus should not be a macro-regional strategy's task. At the same time, one potential strength of macro-regional strategies is the ability to tailor interventions to regional differences and be less dependent from decisions by the EU Commission. Given that both judgement criteria are fulfilled, the sub-objective corresponds well to a need.				

Theme of Intervention & Relevant Sources

The sub-objective seeks to improve to the global competitiveness of the economies in the Baltic Sea. Primarily with the consideration that nearly all countries are small economies, which [236] benefit from cooperation if these are to "create a vibrant innovation environment". The theme of intervention is

[236] European Union Strategy for the Baltic Sea Region, Action Plan, SWD(2017) 118 final, p. 53

therefore Competitiveness, which is measured by the indicator 'Regional Competitiveness Index'.

Strand of Need: Aggregate

The Baltic Sea Macro-region scores on the benchmark 110 points, which makes it a top performer in the EU. As a result, there is no aggregate need for an intervention.

Strand of Need: Individual

Looking at the individual countries, three countries perform below the EU-median: Latvia (74 points), Poland (82), and Lithuania (83). Estonia ranks with 102 points as a slight top performer. The other countries of this Macro-region, Denmark, Germany, Finland and Sweden all score strongly with at least 124 points.

Strand of Need: Internal

Not applicable

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The review shows that the Macro-region performs as a whole above the EU-median. However, three countries (Latvia, Poland, and Lithuania) qualify as bottom performer and are separated from the top performers (ignoring Estonia with 102 points) by at least 41 points. This blend of weak and strong performing countries provides an opportunity for this region, as the new Member States can build on the existing strengths of the old Member States.

› *Is the objective strategically relevant in a macro-regional context?*

A macro-region with, more or less, evenly competitive countries ensures on the one hand economic cohesion, as each country is similarly able to harness economic growth opportunities and similarly robust against competition from other economies. On the other hand, competitiveness is not an issue exclusively relevant to this macro-region, but an EU-wide problem, which thus should not be a macro-regional strategy's task. At the same time, one potential strength of macro-regional strategies is the ability to tailor interventions to regional differences and be less dependent from decisions by the EU Commission.

Climate Change Adaptation (3.4)

Assessment Summary

The table below provides the summary of this objective's assessment. Further detailed information can be found below the table.

Table 3-72: Summary of Assessment – EUSBSR – 3.4 Climate Change Adaptation

Strategy	Objective	Strength	Weakness	Opportunity	Threat
EUSBSR	3.4 Climate change adaptation, risk prevention and management				**X**
Theme of intervention		**Indicator**			
Potential Climate Change Vulnerability		'Potential Climate Change Vulnerability'			
Judgement on the strands of need					
Aggregate	All four components, potential vulnerability (score of 123), economic (124) and environmental (123) impacts, and adaptive capacity (115), show high scores and indicates that the Baltic Sea region will be less impacted than the EU-median. Nevertheless, there will be impacts.				
Individual	Most countries score high on the benchmark on all four components. All countries score high on the potential vulnerability (at least 113). Similarly, all countries score as clear top performers on the Economic Impact dimension, with at least 113 points. In terms of environmental impacts of climate change, only LT qualifies as a bottom performer with a score of 91. On the adaptive capacity, PL is the only bottom performer with 72 points. The rest of the countries, except for DE, are clear top performers. The indicator does in conclusion not provide evidence of a particular need of intervention, if measured on the EU-wide comparison.				
Internal	The northern regions of Lapland in FI and Norrbotten County in SE are expected to have the strongest environmental impacts. Looking at coastal and non-coastal regions, the environmental impacts are notably weaker in the coastal areas for the northern part of the macro-region (FI, SE, and the Baltic States). The environmental impacts in DK, DE and PL do not have such pronounced differences in the coastal regions.				
Other aspects	It is important to note that a low potential vulnerability still implies a need for climate change adaptation, as the overall likelihood to the exposure of extreme weather increases nevertheless. The actual increase of extreme weather depends strongly on the inputs and results of the global mitigation efforts as well as the materialisation of climate change impacts. Precautionary adaption may therefore be important. At last, the horizontal dimension of climate change and the pan-European need for adaptation is recognised in the EU Strategy on adaptation. [237]				
Traffic Light	Corresponds to need + Macro-regionally relevant				
Justification	The indicator does not reflect an actual need for intervention, as almost all countries score in the upper half of the European spectrum, with the exception of LT and PL on one component each. The indicator tells however only that the impacts will be significantly less severe than in the EU-wide comparison. The uncertainty of how mitigation efforts and climate change impacts will materialise gives however a strong reason to adapt as a precautionary principle. The phenomenon of climate change is not affected by borders. Neighbouring countries may therefore be affected by the same impact. Cross-border cooperation is in that sense a beneficial approach towards climate change as it enables for example common approaches towards "hard" measures, such as flood protection on Border Rivers. Cooperation on climate change can also be relevant on a Macroregional scale, yet more so for "soft" measures like disaster coordination plans that can be applied on a transnational scale.				

[237] An EU Strategy on adaptation to climate change, COM(2013) 216 Final, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0216&from=EN

Theme of Intervention & Relevant Sources	The sub-objective is concerned with the potential impacts by climate change, particularly due to its cold climate and vulnerable natural environment. Special sectors of attention are agriculture, forestry, fisheries, tourism and infrastructure. The suitable theme of intervention is therefore Potential Climate Change Vulnerability, as measured by the indicator of the same name. The indicator measures Environmental and Economic Impacts, as well as the Adaptive Capacity as a weighted combination of most recent data an economic, infrastructure, technological, and institutional capacity as well as knowledge and awareness of climate change. Combined with the cultural, physical, and social impacts, a potential vulnerability was calculated.
Strand of Need: Aggregate	All four components, potential vulnerability (score of 123), economic (124) and environmental (123) impacts, and adaptive capacity (115), show high scores and indicates that the Baltic Sea region will be less impacted than the EU-median. Despite the projection of impacts below the EU-median, climate change will have some form of impacts on the Baltic Sea.
Strand of Need: Individual	Most countries score high on the benchmark on all four components. All countries score high on the potential vulnerability (at least 113). Similarly, all countries score as clear top performers on the Economic Impact dimension, with at least 113 points. In terms of environmental impacts of climate change, only Lithuania qualifies as a bottom performer with a score of 91. On the adaptive capacity, Poland is the only bottom performer with 72 points. The rest of the countries, except for Germany, are clear top performers. The indicator does in conclusion not provide evidence of a particular need of intervention, if measured on the EU-wide comparison.
Strand of Need: Internal	The northern regions of Lapland in Finland and Norrbotten County in Sweden are expected to have the strongest environmental impacts. Looking at coastal and non-coastal regions, the environmental impacts are notably weaker in the coastal areas for the northern part of the macro-region (Finland, Sweden, and the Baltic States). The environmental impacts in Denmark, Germany and Poland do not have such pronounced differences in the coastal regions.
Other aspects	It is important to note that a low potential vulnerability still implies a need for climate change adaptation, as the overall likelihood to the exposure of extreme weather increases nevertheless. The actual increase of extreme weather depends strongly on the inputs and results of the global mitigation efforts as well as the materialisation of climate change impacts. Precautionary adaption may therefore be important. At last, the horizontal dimension of climate change and the pan-European need for adaptation is recognised in the EU Strategy on adaptation. [238]

[238] An EU Strategy on adaptation to climate change, COM(2013) 216 Final, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0216&from=EN

Final Assessment

› *To which extent does the objective reflect an actual need for intervention?*

The indicator does not reflect an actual need for intervention, as almost all countries score in the upper half of the European spectrum, with the exception of Lithuania and Poland on one component each. The indicator tells however only that the impacts will be significantly less severe than in the EU-wide comparison. The uncertainty of how mitigation efforts and climate change impacts will materialise gives however a strong reason to adapt as a precautionary principle.

› *Is the objective strategically relevant in a macro-regional context?*

The phenomenon of climate change is not affected by borders. Neighbouring countries may therefore be affected by the same impact. Cross-border cooperation is in that sense a beneficial approach towards climate change as it enables for example common approaches towards "hard" measures, such as flood protection on Border Rivers. Cooperation on climate change can also be relevant on a Macroregional scale, yet more so for "soft" measures like disaster coordination plans that can be applied on a transnational scale.

Appendix B List of literature

The literature used for and referenced by this study is presented below. It is organised into five sections:

1. Academic publications
2. European Policy Framework
3. Macro-regional Strategies
4. Documents related to each macro-regional strategy
5. Specific Data/Indicator & Internet Sources

1. Academic Publications & Reports

There is an emerging literature on the concept, application, and effectiveness of macro-regional strategies. The sources of these publications are broadly grouped into economic geography research focused on the economic and technical changes that are driving a rescaling process in Europe, and studies that focus on the policy instruments themselves.

Banister D. 2002. Transport Planning, Spon Press, New York.

Bengtsson, R. 2009. "An EU Strategy for the Baltic Sea Region: Good Intentions Meet Complex Challenges," Swedish Institute for European Policy Studies

Bevir, M. 2013. Governance: A very short introduction. Oxford, UK: Oxford University Press.

Bhagwati, J. N. 1987. Quid pro quo foreign investment and welfare: A political-economy-theoretic model. Journal of Development Economics, Volume 27, Issues 1-2, Pages, 127-138.

Bialasiewicz, L.; Giaccaria, P.; Jones, A.; Minca, C. (2013) Re-scaling 'EU'rope: EU macro-regional fantasies in the Mediterranean. European Urban and Regional Studies, Vol. 20, No. 1, 59–76

BMVI Bundesministerium für Verkehr und Digitale Infrastruktur (ed.). 2017. Wirkungen der Transnationalen Zusammenarbeit in Interreg B. Untersuchung ausgewählter Interreg IVB-Projekte nach erzielten Wirkungen und zentralen Gelingensfaktoren. Berlin: BMVI.

Böhme K. 2013. "Added value of macro-regional strategies: a governance perspective," Spatial Foresight Brief

Braun and Kovács. 2011. "Macro-regional strategies: Experiment for the Renewal of Economic Policy of the European Union," in Public Finance Quarterly.

Brenner, N. (2004) New State Spaces. Urban Governance and the Rescaling of Statehood, Oxford: Oxford University Press.

Christiansen, T. 1997. "A European Meso-region? European Union Perspectives on the Baltic Sea Region" in P. Joenniemi (ed.) Neo-nationalism or Regionalism? The Re-structuring of Political Space around the Baltic Rim

Cugusi, B. and Stocchiero, A. 2012. "Macro-regions, "la Nouvelle Vogue" of Transnational Cooperation, the Geopolitical Case of the Mediterranean Basin," in EUBORDERREGIONS Working Paper Series

Dühr, S., Colomb, C., and Nadin, V. 2010. European spatial planning and territorial cooperation. London, New York: Routledge.

Dühr, S. 2011. "Baltic Sea, Danube and Macro-regional Strategies – A Model for Transnational Cooperation in the EU?" Notre Europe Study & Research

Dühr, S. 2013. The added-value of macro-regional strategies from the perspective of spatial planning. Report for the European Commission, DG Regio.

Dühr, S. 2014a. Are there arguments for a Central European macro-regional strategy? Report for the INTERREG IVB Central Europe 'City-Regions' project.

Dühr, S. 2014b. Scales of cooperation, spaces of communication. Inaugural lecture delivered at the acceptance of the post of Professor of European Spatial Planning Systems at the Nijmegen School of Management, Radboud University Nijmegen, on Friday 11 April 2014. Nijmegen: Radboud University Nijmegen.

EIPA. 2013. Improving Public Organisations through Self-Assessment – The Common Assessment Framework (CAF).

Folfas, P. 2011. FDI between EU Member States: Gravity model and taxes. Working Paper, http://www.etsg.org/ETSG2011/Papers/Folfas.pdf

Foster, N., G. Hunya, O. Pyndyuk and S. Richter. 2011. Revival of the Visegrad Countries' Mutual Trade after their EU Accession: a Search for Explanation. Wiiw Research Report No. 372.

Gänzle S and Kern K. 2011. "Macro-regional Strategies: A New Mode of Differentiated integration in the European Union," Paper for CEPSA Annual Conference.

Gänzle S and Kern K (eds). 2016. A 'Macro-regional' Europe in the Making: Theoretical Approaches and Empirical Evidence.

Gänzle, S. 2014. "Macro-regional Strategies and the EU. Building Inter- and Trans-government Relations," in Public Administration Times.

Geerlings, H. and Stead, D. 2003. The Integration of Land Use Planning, Transport and Environment in European Policy and Research. Transport Policy, Vol. 10, No. 3, pp. 187- 196.

Geurs T. K. and B. van Wee. 2006. Ex-post Evaluation of Thirty Years of Compact Urban Development in the Netherlands, Urban Studies, vol. 43, Issue 1, 2006.

Grozea-Helmenstein, D., Helmenstein, C., Kleissner, A., Moser, B. 2008. *Makroökonomische und sektorale Effekte der UEFA EURO 2008 in Östereich.* Wirtschaftspolitische Blätter, 2008 (1). pp. 7-20.

Grozea-Helmenstein D., C. Helmenstein, T. Slavova. 2009. *Who is the best? Insights from the benchmarking of border regions.* Trames. Journal of the Humanities and Social Sciences, 13(63/58), (3). pp. 285-302.

Grozea-Helmenstein, D. and H. Berrer. 2013. Benchmarking EU-Border-Regions: Regional Economic Performance Index, EUBORDERREGIONS Project Report.

Grozea-Helmenstein, D., G. Grohall, C. Helmenstein. 2017 (forthcoming). Convergence and Structural Change in Romanian Regions, in Larisa Schippel, Julia Richter, Daniel Barbu (2017): Rumäniens "Rückkehr" nach Europa. Versuch einer Bilanz. - Wien: new academic press.

Gustavson, Patrick & Koko, Ari. 2004. Regional Integration, FDI and Regional Development. European Investment Bank. In: *Papers of EiB-Conferences*, Vol. 9, No. 1, pp. 122, Luxembourg.

Hanson, G. H., R. Mataloni Jr. M. J. Slaughter. 2003. Vertical production networks in multinational firms. NBER Working Paper Series. Working Paper 9723, http://www.nber.org/papers/w9723

Healey, P. 2007. Urban Complexity and Spatial Strategies: towards a relational planning for our times. London, New York: Routledge.

Hornok, C. 2010. Trade-Enhancing EU Enlargement and the Resurgence of East-East Trade. Focus on European Economic Integration, Q3/2010. OeNB, Vienna.

Hufty, M. 2011. Investigating Policy Processes: The Governance Analytical Framework (GAF). In: Wiesmann, U., Hurni, H., et al. eds. Research for Sustainable Development: Foundations, Experiences, and Perspectives. Bern: Geographica Bernensia: 403–424.

Huggins, R., and lzushi, H. 2008. UK Competitiveness Index 2008. Cardiff, UK: Centre for International Competitiveness.

Hull A. 2011. Transport Matters: Integrated Approaches to Planning City-regions, Routledge.

IPCC. 2007. Climate Change 2007, Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC (978 0521 88010-7 Hardback; 978 0521 70597-4 Paperback).

IMF. 2013. Sixth Edition of the IMF's Balance of Payments and International Investment Position Manual (*BPM6*).

Karou, S. and Hull, A. 2012. Accessibility Measures and Instruments, in Angela Hull, Cecília Silva and Luca Bertolini (Eds.) Accessibility Instruments for Planning Practice. COST Office, pp. 1-19.

Keating, M. 2009. Rescaling Europe. Perspectives on European Politics and Society, Vol. 10, No. 1, 34–50.

Krugman, Paul R. 1979. Increasing returns, monopolistic competition, and international trade. Lohmann, G.; Panosso Netto, A. (2017): Tourism Theory: concepts, models and systems. ISBN 9781780647159; DOI 10.1079/9781780647159.0193

Metzger and Shmitt. 2012. "When Soft Spaces Harden: The EU Strategy for the Baltic Sea Region," in Environment and Planning.

Nijkamp P. and M. Abreu. 2003. Regional development theory. PN218MA-EOLSS. URL: ftp://dlib.info/opt/ReDIF/RePEc/vua/wpaper/pdf/20090029.pdf

OECD. 2008. Public Management Reviews: Ireland 2008. Towards an Integrated Public Service.

Offe, C. 2009. Governance: An "Empty Signifier"? Constellations, 16: 550–562. doi:10.1111/j.1467-8675.2009.00570.x

Raub, J. 1999. Environmental Health Criteria 213, CARBON MONOXIDE (SECOND EDITION). Geneva, Switzerland, World Health Organization.

Robert, J., Stumm, T., de Vet, J.M., Reincke, C.J., Hollanders, M. and Figueiredo, M.A. 2001. Spatial Impacts of Community Policies and Costs of Non-Coordination. Study carried out at the request of the European Commission DG REGIO, Brussels: CEC.

Schmidt-Thome P. and S. Greiving (2013) editors. European Climate Vulnerabilities and Adaptation: A Spatial Planning Perspective, published by John Wiley and Sons Ltd. UK. ISBN 978-0-470-97741-5

Sielker, F. 2016. "What could the future role of Macro-regional strategies in the EU be? –Four scenarios", Working Paper No. 1/2016, Friedrich-Alexander Universität Erlangen-Nürnberg.

Stead, D. 2014. "European Integration and Spatial Rescaling in the Baltic region: Soft spaces, soft planning and soft security," in European Planning Studies 22(4).

Stead, D. 2014. "Rescaling environmental governance – the influence of European transnational cooperation initiatives," Environmental Policy and Governance 24(5).

Stead, D., and Meijers, E. 2009. Spatial Planning and Policy Integration: Concepts, Facilitators and Inhibitors. Planning Theory & Practice, Vol. 10, No. 3, pp. 317-332.

Taylor, J. Edward. 1986. Differential migration, networks, information and risk. In: Stark, Oded (Ed.), Migration, Human Capital and Development. JAI Press, Greenwich, CT

Tuckman, B. W. 1965. "Developmental sequence in small groups", Psychological Bulletin. 63 (6): 384–399. PMID 14314073.

Williams, C., 2014, The Informal Economy and Poverty: Evidence and Policy Review, https://www.researchgate.net/profile/Colin_Williams/publication/260453006_The_Informal_Economy_and_Poverty_Evidence_and_Policy_Review/links/02e7e5319cc6d0fcf6000000/The-Informal-Economy-and-Poverty-Evidence-and-Policy-Review.pdf

2. European Policy Framework

The European policy framework is driven by developments in overall economic, environmental, and social perspectives, and reinforced by the evaluation of territorial cooperation approaches.

2.A General

European Commission. 20120. EU 2020 - A New European Strategy For Jobs And Growth. COM(2010) 2020, Brussels.

2.B Cohesion Policy

Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006

Common Provisions Regulation (EU) No 1303/2013. Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006. (See page 93 for Common Strategic Framework)

Ex post evaluation of Cohesion Policy programmes 2007-2013 financed by the ERDF and the Cohesion Fund - WP1: Synthesis Report

European Structural and Investment Funds 2014-2020: Official Texts And Commentaries

Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal

Council Regulation (EU) No 1300/2013 of 17 December 2013 on the Cohesion Fund and repealing Council Regulation (EC) No 1084/2006

Climate change, impacts and vulnerability in Europe. http://www.eea.europa.eu/publications/climate-change-impacts-and-vulnerability-2016

Climate-ADAPT. Website/platform: http://climate-adapt.eea.europa.eu/countries-regions/transnational-regions

Climate change indicators. Website/platform: http://www.eea.europa.eu/data-and-maps/indicators/#c5=climate-change-adaptation&b_start=0

Climate-ADAPT vulnerability maps. Website: http://climate-adapt.eea.europa.eu/knowledge/tools/urban-adaptation/introduction

DG Employment. 2014. Monitoring and Evaluation of European Cohesion Policy-European Social Fund, Guidance Document on Indicators of Public Administration Capacity Building

European Commission. 2004. A new partnership for cohesion. Convergence, competitiveness, cooperation. Third report on economic and social cohesion. Luxembourg: Office for Official Publications of the European Communities.

European Commission. 2010. Fifth Report on economic, social and territorial cohesion - Investing in Europe's future. Luxembourg: Office for Official Publications of the European Communities.

Polycentric crossborder system and transport. Towns as components of an Organised Transport Systems can be found at p. 23-25 of this draft chapter for the Urban agenda of an Euroregion

Pucher, J., Frangenheim, A., Sanopoulos, A., Schausberger, W. 2015. The Future of Cohesion Policy, Report I, Committee of the Regions, Brussels.

S3 platforms contain data about different countries and regions and use "tools" to analyze them. Website/platforms: http://s3platform.jrc.ec.europa.eu/; http://s3platform.jrc.ec.europa.eu/s3-cooperation; http://s3platform.jrc.ec.europa.eu/s3-tools

TEN-T: On the (TEN-T) Corridors dimension and their interrelation with the macro-regional strategies, refer to the EU Coordinators Work Plans, notably for:

- Danube Strategy - > Rhine Danube Corridor
- Alpine Strategy -> Scan-Med corridor (it concerns 3 other corridors too but less involved – interesting to see the governance elements referred to – and partially set-up by the Coordinator, Pat Cox)
- Baltic Sea Strategy -> North Sea- Baltic corridor. Website: http://ec.europa.eu/transport/node/4876

3. Macro-regional Strategies

The concept, application, and spread of macro-regional strategies as policy instruments has been supported by the institutions that comprise the European Union, along with the supporting programmes that support broader territorial cooperation.

3.A Policy Publications

3.A.1 European Commission

Charron, N., Dijkstra, L., Lapuente, V. 2012. Regional Governance Matters: A Study on Regional Variation in Quality of Government within the EU. European Commission, DG REGIO.

European Commission. 2014. A Discussion Paper for the revision of the Action Plan of the EU Strategy for the Baltic Sea Region (EUSBSR), not public

European Commission. 2013a. Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the added value of macro-regional strategies. COM(2013) 468 final.

European Commission. 2013b. Commission Staff Working Document *accompanying the document* 'Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the added value of macro-regional strategies'. SWD(2013) 233 final.

European Commission. 2014. 'Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the governance of macro-regional strategies'. COM (2014) 284 final.

European Commission. 2015. Enabling synergies between European Structural application: and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes.

European Commission (2016), report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU macro-regional strategies. COM(2016) 805 final.

Samecki, P. (2009) Macro-regional Strategies in the European Union, Discussion Paper presented by Commissioner Pawel Samecki in Stockholm, 18 September, Brussels: DG Regio

3.A.2 European Parliament

European Parliament. 2010. Working Document on the European Union Strategy for the Baltic Sea Region and the role of macro-regions in the future cohesion policy, Committee on Regional development, 06.01.2010

European Parliament. 2012. The evolution of EU macro-regional strategies: present practice and future prospects, especially in the Mediterranean, Motion for Resolution,

European Parliament. 2012b: Resolution from the European Parliament on optimising the role of territorial development in cohesion policy

Common Provisions Regulation (EU) 1303/2013, see page 93 for Common Strategic Framework

European Parliament. 2015. The New Role of Macro-regions in European Territorial Cooperation. Study Commissioned by the Directorate General for Internal Policies, Brussels

European Parliament. 2015. The New Role of Macro-regions in European Territorial Cooperation. Study Commissioned by the Directorate General for Internal Policies, Brussels. (incl. ANNEX)

3.A.3 Committee of the Regions

Committee of the Regions (2013): Opinion concerning the added value of macroregional strategies, CoR 28,29

3.A.4 Supporting programmes

ESPON programme

INTERACT programme

Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU macro-regional strategies {SWD(2016) 443 final} 16.12.2016 COM(2016) 805 final

The added value of macro-regional strategies seen from a project and programme perspective. Final report Spatial Foresight 2016

Added value of macro-regional strategies: Collecting practice examples. Final report Spatial Foresight 2016

- Interact has been working on the short documents clarifying MRS. MRS Glossary here and Overview on MRS priorities.
  - Website/platform: http://www.interact-eu.net/library?field_fields_of_expertise_tid=33#470

  Website/platform: http://www.interact-eu.net/library?field_fields_of_expertise_tid=33#819

Interact Joint Annual Work Plan for 2017 (at activity level). Website: http://www.interact-eu.net/#news

ESPON provides European-wide comparable. Website/Platform: https://www.espon.eu/main/

4. Documents related to specific strategies

Each macro-region has followed a similar process of identifying functional problems that require flexibility and coordination. The policy process has followed a similar trajectory. However, these needs and strategies are unique to each region, and are contained in the strategies and Action Plans for each region.

4.A Baltic Sea

A beginner's guide to the Baltic Sea Region – Swedish Tillvaxtverket

Action Plan - Working document accompanying the Communication concerning the European Union Strategy for the Baltic Sea Region - SEC(2009) 712 - September 2015 update

Analysis currently under finalisation by University of Geneve on networking patterns in the PAs/HAs related to environment in the EUSBSR. Report to come (Experts working on it are Dr Erik Gløersen (erik.gloersen@unige.ch) and Clément Corbineau (Clement.Corbineau@unige.ch). Please contact colleagues directly for further information.

Annex to the Action Plan: Ongoing and completed flagships of the EUSBSR

COM (2012) 128 final - 23.03.2012 concerning the European Union Strategy for the Baltic Sea Region (2012)

Embedding EUSBSR with ESIF – Case study of Lithuania

ESPON TeMo (BSR Territorial Monitoring System). Website/Platform: http://bsr.espon.eu/opencms/opencms

EU Strategy for the Baltic Sea Region (EUSBSR – 2009)

European Commission (2009a), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – European Union Strategy for the Baltic Sea Region, Brussels, 10.06.2009, COM(2009) 248 final.

European Commission. 2011. Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the EU Strategy for the Baltic Sea Region (EUSBSR). COM(2011) 381 final (June 2011), Brussels.

European Parliament (2010): Report on the European Union Strategy for the Baltic Sea Region and the role of macro-regions in the future cohesion policy.

EUSBSR Policy Area Education Progress Report, draft 24.07.2017

EUSBSR Policy Area on Maritime Safety and Security "PA Safe" Implementation Report 2016; Danish Maritime Authority and Finnish Transport Safety Agency

List of EUSDR Targets. Validated in the meeting of national Coordinators and Priority Area Coordinators held in Bratislava on 23 May 2016.

Newsletter (2009 through to 2014)

Ongoing work on climate action, have a look at the EUSBSR dedicated website. Website: http://www.cbss.org/strategies/horizontal-action-climate/

PA Education – work programme – final. May, 1, 2016 – April, 30, 2018 (2016.04.13).

PA INNO Monitoring Guide – Roles, Targets, Process. Nordic Council of Ministers, 2016.

PA Innovation – draft progress document, August 2018

PA Nutri Progress Report 17.05.16 (Contribution by PA Nutri coordinators to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of macro-regional strategies. 17.05.2016

PA Transport Work Plan for 2017 – draft 25.01.2017 TE

Policy Area Innovation Strategy Guide – Putting the Action Plan into Practice. Nordic Council of Ministers, 2016

Policy Area 'Nutri', Work Plan 2017 – DRAFT

Policy Area Transport Implementation Report 2016 – 10.06.2016

Progress Report – 2011 (most recent)

Project-to-policy loop. Meeting of coordinators for the EUSBSR and Interact 25 November 2016. Stockholm, Sweden

Report on the implementation of the Horizontal Action Climate of the EUSBSR in 2015-2016.

Study 'Cooperation methods and tools applied by European Structural and Investment Funds programmes for 2014-2020 to support implementation of the European Union Strategy for the Baltic Sea Region' here. Study was conducted by Spatial Foresight 2016. 1st and 2nd Interim Reports from the study on the EUSBSR web also available. Report link: http://interact-eu.net/library?field_fields_of_expertise_tid=33#809

Trends, challenges and potentials in the Baltic Sea Region. Website/platform: http://www.strategyforum2016.eu/media/reports/trends,-challenges-and-potentials-in-the-baltic-sea-region-33964731

VASAB workshop on territorial monitoring. Website/Platform: http://www.vasab.org/index.php/events/past-events/item/314-vasab-workshop-on-territorial-monitoring-krakow

Website of Policy Area Education, http://groupspaces.com/eusbsr-education/

Website of Policy Area Innovation. http://www.pa-innovation.eu/, Nordic council of Ministers

Website of Policy Area Nutri, http://groupspaces.com/eusbsr-nutrient-inputs/

Website of Policy Area on Maritime Safety and Security – PA Safe. https://www.dma.dk/Vaekst/EU/EUOestersoestrategi/PAsafe/Pages/default.asp

Website of the EUSBSR, https://www.balticsea-region-strategy.eu/, EUSBSR 2017.

4.B Danube

Case study on Water Protection – 2015.

Communication - European Union Strategy for the Danube Region - COM(2010) 715 - 08/12/2010. Website of the EUSDR, http://www.danube-region.eu/, EUSDR 2017.

Cooperation methods and tools applied by EU funding programmes to support implementation of the EU Strategy for the Danube Region. Study is done by Metis to be finalized in March 2017.

Dynamic integrated management with regard to climate change. Report: Edith Hödl, Bratislava, 3 November 2016.

European Commission (2013) Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Concerning the European Union Strategy for the Danube Region, COM(2013) 181 final.

EUSDR | PA9 - Investing in People and Skills. Work Programme "Education and training, labour market and marginalized communities", MARCH 2016.

Implementation Report of EUSDR Priority Area 11 (Priority Area 11 "Security"), reporting period: 01/08/2015 - 30/06/2016.

Implementation Report of EUSDR Priority Area 11 (Priority Area 11 "Security"), reporting period: 01/07/2016 - 31/12/2016.

Implementation Report of EUSDR Priority Area 4 "to restore and maintain the quality of waters", reporing period: 07/2015 - 06/2016 and 07/2016 - 12/2016.

Implementation Report of EUSDR Priority Area 7 "To develop the Knowledge Society (research, education and ICT)", reporting period: 07/2015 - 06/2016.

Implementation Report of EUSDR Priority Area 7 "To develop the Knowledge Society (research, education and ICT)", reporting period: 07/2016 - 12/2016.

Implementation Report of EUSDR Priority Area PA 9 "Investing in People and Skills", reporting period: 07/2015 - 06/2016.

Implementation Report of EUSDR Priority Area PA 9 "Investing in People and Skills", reporting period: 07/2016 - 12/2016.

Implementation Report of EUSDR Priority Area PA1a Mobility | Waterways, reporting period: 01/07/2015 to 30/06/2016 and 07/2016 - 12/2016.

Public consultation on the EU Strategy for the Danube Region – 2010.

RC Scientific Support to the Danube Strategy. Website/platform: https://ec.europa.eu/jrc/en/research/crosscutting-activities/danube-strategy

Report Concerning the EU Strategy for the Danube Region (EUSDR - 2010)

Study on Socio-Economic conditions in the region - 2015.

Website of the Priority Area 11 Security, https://www.danube-security.eu/, PA 11 | Security, 2017.

Website of the Priority Area 4 Water Quality, https://www.danubewaterquality.eu/, PA 04 | Water Quality, 2017.

Website of the Priority Area 7 Knowledge Society, https://www.danubeknowledgesociety.eu/, PA 07 | Knowledge Society, 2017.

Website of the Priority Area 9 People and Skills, http://www.peopleandskills-danuberegion.eu/, EU Strategy for the Danube Region | Priority Area 9 "Investing in People and Skills", 2016.

Website of the Priority Area PA 1A Inland Waterways, https://www.danube-navigation.eu/, PA 1A | Inland Waterways, 2017.

11 Country Fact Sheets.

5th Annual Forum of the EUSDR 2016 - Summaries of the Plenary Sessions and Workshops; http://www.oerok.gv.at/fileadmin/Bilder/4.Reiter-Contact_Point/Portal_MRS/EUSDR/Events/2016-11_EUSDR_5th_Annual_Forum__Summary_notes.pdf.

4.C Adriatic/Ionian

Action Plan - EU Strategy for the Adriatic and Ionian Region (EUSAIR – 2014)

Adriatic and Ionian Euroregion (AIE), https://www.adriaticionianeuroregion.eu/

Communication concerning the European Union Strategy for the Adriatic and Ionian Region

Council Conclusions on the EU Strategy for the Alpine Region, 27 November 2015

Endorsement of the European Union Strategy for the Adriatic and Ionian Region (EUSAIR), European Council, Brussels, 23-24 October 2014

European Commission. 2012. Maritime strategy for the Adriatic and Ionian Seas

EUSAIR: PILLAR 4: Sustainable Tourism – 2015 ANNUAL PROGRESS REPORT; Prepared by Pillar Coordinators and approved by TSG 4 on 29/04/2016

http://www.adriaticionianeuroregion.eu/index.php?lang=it

Supportive Analytical Document Accompanying the communication concerning the European Union Strategy for the Adriatic and Ionian Region

Website of the European Union Strategy for the Adriatic and Ionian region (EUSAIR). http://www.adriatic-ionian.eu/, EUSAIR 2017.

4.C Alpine

Action plan Accompanying the communication concerning a European Union Strategy for the Alpine Region - 28.07.2015 - SWD(2015)

Communication concerning a European Union Strategy for the Alpine Region 2015

Council Decision 96/191/EC of 26 February 1996 concerning the conclusion of the Convention on the Protection of the Alps (Alpine Convention)

EU Strategy for the Alpine Region (EUSALP – 2015)

European Parliament resolution of 23 May 2013 on a macro-regional strategy for the Alps (2013/2549(RSP))

European Union Strategy for the Alpine Region, EUSALP, Action Group 6, June 2016 – June 2019 [Work Plan]

EUSALP post 2020. Input paper for the workshop on 25 January. 2017. Spatial Foresight. 17.01.2017

First Report on the implementation of the EU-Strategy for the Alpine Region, April 2017

4.D Other geographic strategies:

4.D.1 Atlantic Area

Action Plan Maritime for a Maritime Strategy in the Atlantic area Delivering smart, sustainable and inclusive growth

Action Plan. Maritime for a Maritime Strategy in the Atlantic area

European Commission (2011b): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning Developing a Maritime Strategy for the Atlantic Ocean Area, Brussels, 21.11.2011, COM(2011) 782

Maritime affairs and fisheries - Safeguarding the future of our seas, generating new prosperity

4.D.1 Mediterranean Region

European Parliament (2012a): Resolution from the Committee on Regional Development on the evolution of EU macro-regional strategies: present practice and future prospects, especially in the Mediterranean

4.D.2 North Sea Region

Annual Reports

North Sea Programme (Interreg) Ongoing Evaluations

Thematic Papers

5. Specific Data/Indicator & Internet Sources

ESPON (2013). European Territorial Cooperation as a Factor of Growth, Jobs and Quality of Life, Applied Research 2013/1/9 Interim Report | Version 4/04/2011.

European Monitoring Centre for Drug and Drug Addiction (2016). European Drug Report, Trends and Developments, Luxembourg: Publications Office of the European Union, 2016. ISBN: 978-92-9168-890-6, doi:10.2810/04312.

European Network for Accessible Tourism (2015). Mapping and Performance Check of the Supply of Accessible Tourism Services, Final Report, Annex 8.

EU Commission, DG Regio, European Regional Competitiveness Index, http://ec.europa.eu/regional_policy/en/information/maps/regional_competitiveness/

Eurostat, (2017). Database.

Eurostat, (2017). Glossary.

European Union Open Data Portal, (2017). Primary production of renewable energy by type (ten00081).

Mizrahi, Y., (2003) "Capacity Enhancement Indicators: Review of the Literature", WBI Evaluation Studies No. EG03-72, World Bank Institute, The World Bank

Odysee-Mure (2017). Database.

OECD (2013). OECD Factbook 2013: Economic, Environmental and Social Statistics. Paris

OECD (2015). Education at a Glance, 2015, Paris.

OECD (2017). Database.

Publications Office of the European Union (2015). Trafficking in Human Beings, Luxembourg.

Social Progress Imperative (2016). Social Progress Index 2016.

United Nations (2017). COMTRADE Database.

Internet Sources

https://ec.europa.eu/neighbourhood-enlargement/countries/check-current-status_en

http://www.investopedia.com/terms/m/mature-economy.asp#ixzz4vedfmFqq

http://www.wired.co.uk/article/finland-and-nokia

http://www.socialprogressimperative.org/wp-content/uploads/2016/06/SPI-2016-Main-Report.pdf

http://www.socialprogressimperative.org/custom-indexes/european-union/

http://www.sciencedirect.com/science/article/pii/0022-1996(79)90017-5.

https://www.globalpolicy.org/nations-a-states/political-integration-and-national-sovereignty-3-22.html

https://www.imf.org/external/pubs/ft/bop/2007/pdf/appx5.pdf

http://www.etsg.org/ETSG2011/Papers/Folfas.pdf

https://www.stat.fi/til/ssij/2015/ssij_2015_2016-10-27_en.pdf

http://www.accessibilityplanning.eu/wp-content/uploads/2013/01/Accessibility-Measures-and-Instruments-R.pdf

http://www.odyssee-mure.eu/

https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/TERCO_Interim-Report-and-Annex_FINAL.pdf

http://www.europarl.europa.eu/cmsdata/116220/tent-issues-papers.pdf

https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1

http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/TERCO/Final_Report/TERCO_FR_ExecutiveSummary_Dec2012.pdf

http://ec.europa.eu/regional_policy/en/information/publications/studies/2013/eu-regional-competitiveness-index-rci-2013

http://data.europa.eu/euodp/data/dataset/rxNwNXHw9XYLOrFEezkGIQ

http://ec.europa.eu/growth/industry/innovation/facts-figures/regional_de

http://www.ipex.eu/IPEXL-WEB/dossier/document/COM20150192.do.

http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_5.9.4.html

https://ec.europa.eu/digital-single-market/en/access-digital-single-market

https://ec.europa.eu/digital-single-market/en/desi

https://ec.europa.eu/growth/smes/business-friendly-environment/small-business-act_de

http://www.europarl.europa.eu/cmsdata/116220/tent-issues-papers.pdf

https://ec.europa.eu/transport/facts-fundings/scoreboard/compare/investments-infrastructure/ten-t-completion-rail-hs_en

http://lpi.worldbank.org/

https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/leaflet-blue-growth-2013_en.pdf

http://www.indicators.odyssee-mure.eu/energy-efficiency-database.html

https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/CLIMATE/ESPON_Climate_Final_Report-Part_A-ExecutiveSummary.pdf

https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data

https://diamondenv.wordpress.com/2010/12/10/particulate-pollution-pm10-and-pm2-5/

http://ec.europa.eu/environment/nature/natura2000/index_en.htm

http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Shannon_evenness_index_(SEI)

http://www.eea.europa.eu/data-and-maps/figures/percentage-cover-of-marine-protected

https://ec.europa.eu/environment/ecoap/scoreboard_en

https://ec.europa.eu/environment/ecoap/scoreboard/resource-efficiency-outcomes

https://ec.europa.eu/environment/ecoap/scoreboard_en

https://www.eea.europa.eu/highlights/more-european-sites-meet-excellent

http://ec.europa.eu/environment/soil/index_en.htm

http://ec.europa.eu/eurostat/statistics-explained/index.php/Agri-environmental_indicator_-_soil_erosion

http://www.eea.europa.eu/data-and-maps/indicators/gross-nutrient-balance-1

https://www.eea.europa.eu/data-and-maps/indicators/gross-nutrient-balance-1/gross-nutrient-balance-assessment-published

http://info.worldbank.org/governance/wgi/#home

http://info.worldbank.org/governance/wgi/pdf/wgi.pdf

http://info.worldbank.org/governance/wgi/pdf/va.pdf

http://www.accessibletourism.org/?i=enat.en.reports.1740

https://www.stat.fi/til/ssij/2015/ssij_2015_2016-10-27_en.pdf