European Union
Regional Policy

# THE EUROPEAN UNION STRATEGY FOR THE BALTIC SEA REGION

## BACKGROUND AND ANALYSIS

MAY 2010

More information on the European Union Strategy
for the Baltic Sea Region is available on the Internet at:
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PREFACE

# The European Union Strategy for the Baltic Sea Region

## FROM WORDS TO ACTIONS

The EU's Strategy for the Baltic Sea Region is a new way of working together in the Union. Regions in eight Member States, nearly 100 million people, are able to plan, prioritise and implement activities confident that their colleagues and neighbours are working in the same vein, towards the same goals. This will enable the Baltic Sea Region to enjoy a sustainable environment and optimal economic and social development and, moreover, will be a concrete contribution to European integration.

## INVOLVING EVERYONE

The strategy was requested by the European Council following work by the European Parliament. As you will read in this publication, the strategy is based on detailed socio-economic analysis, a thorough consultation of the national, regional, inter- and non-governmental stakeholders in the region and on a close analysis of Community policy in the fields addressed by the strategy. It is therefore comprehensive, realistic and coherent. Having been endorsed by the Council of Ministers, the European Parliament and the European Council, it is also evidence of a very strong consensus on the need to take action across a wide range of policy areas. This background study shows why.

## NEXT STEPS

Background documents, strategies and even action plans are only valuable if they are aids to effective action. In the months since the information in this document was gathered and the strategy adopted we have seen many encouraging signs that the stakeholders and partners in the regions are taking up their responsibilities and seeking to implement the actions in their respective domains. Clearly, this is not always easy especially – in the current economic climate. However, a sustained and continuous effort is required if we are to meet the challenges identified and exploit the full possibilities of this region. I hope that the information in this publication will facilitate this work.

**Dirk Ahner**

Director General, European Commission

Directorate-General for Regional Policy

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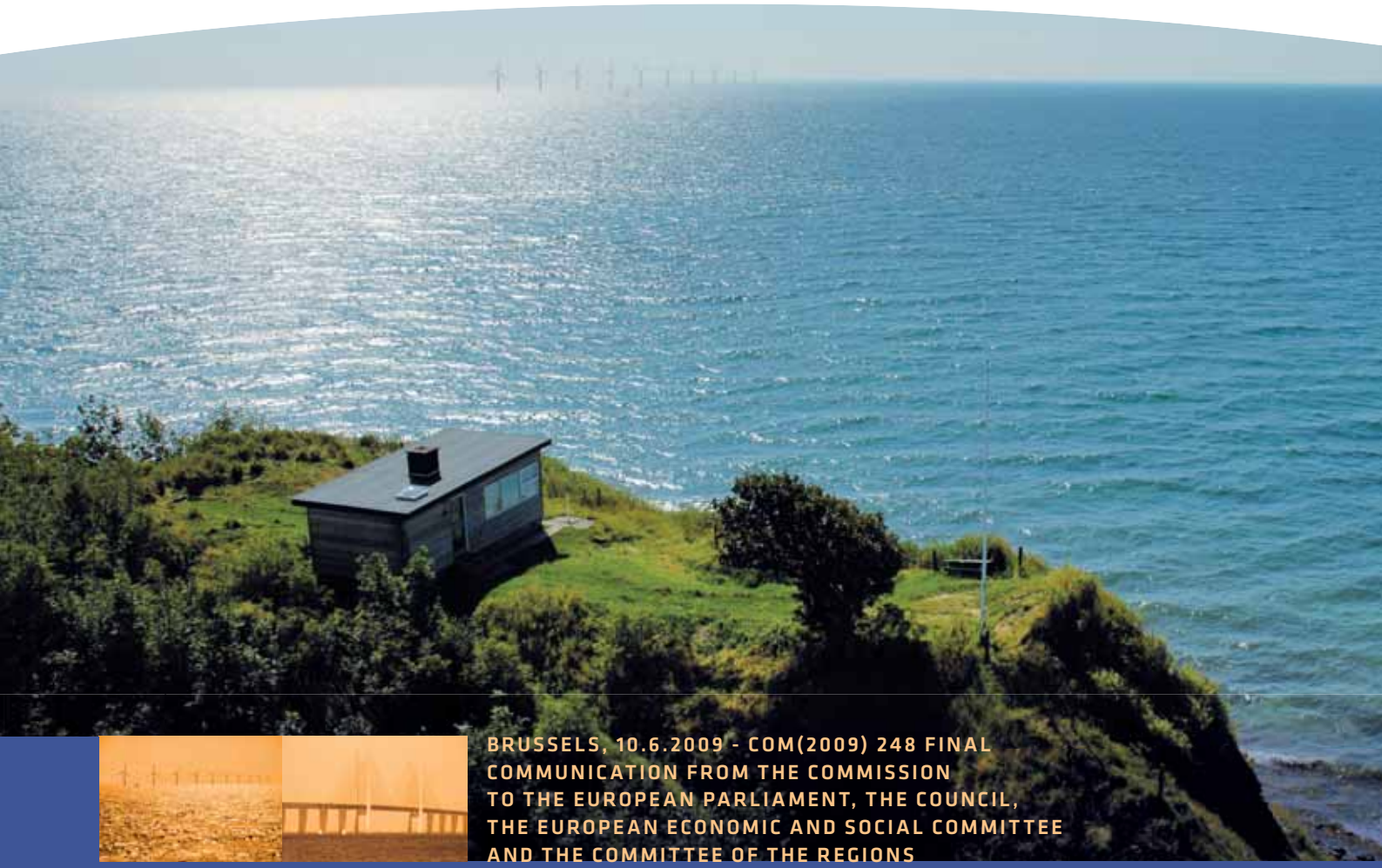



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COMMUNICATION FROM THE COMMISSION
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# COMMUNICATION CONCERNING THE EUROPEAN UNION STRATEGY FOR THE BALTIC SEA REGION

## 1. INTRODUCTION

Eight of the nine states bordering the Baltic Sea are members of the European Union[1]. The introduction of Community rules, and the opportunities created by Community instruments and policies (e.g. Cohesion Policy, the strategy for sustainable development, environmental policy, the integrated maritime policy, the internal market and the Lisbon Agenda) have opened important new possibilities for a more effective co-ordination of activities, thus delivering higher standards of living for the citizens of these Member States. However, even with good levels of international and interregional communication and co-operation, full advantage of the new opportunities that EU membership provides has not yet been taken and the challenges facing the region have not yet been adequately addressed.

The Baltic Sea Region is a highly heterogeneous area in economic, environmental and cultural terms, yet the countries concerned share many common resources and demonstrate considerable interdependence. This means that actions in one area can very quickly have consequences for other parts, or the whole, of the region. In these circumstances, the area could be a model of regional co-operation where new ideas and approaches can be tested and developed over time as best practice examples.

Recognising this, the European Parliament published a report in late 2006 calling for a strategy for the Baltic Sea Region. On 14 December 2007, the European Council in its Presidency Conclusions invited the Commission to present a European Union strategy for the Baltic Sea Region no later than June 2009. This followed increasingly visible degradation of the Baltic Sea itself but also the need to address the disparate development paths of the countries in the region and the potential benefits of more and better co-ordination.

The European Council set three parameters for the Commission in its development of the strategy. It should be without prejudice to the Integrated Maritime Policy endorsed in the same Conclusions, it should inter alia help to address the urgent environmental challenges related to the Baltic Sea and the Northern Dimension framework[2] should provide the basis for the external aspects of co-operation in the region. In the same conclusions, the European Council endorsed the Integrated Maritime Policy and asked the Commission to ensure that regional specificities be taken into account. The present strategy thus also constitutes an important first step towards the regional implementation of the Integrated Maritime Policy in the Baltic.

This Communication presents the strategy requested by the European Council. The strategy seeks to provide both a co-ordinated, inclusive framework in response to the key challenges facing the Baltic Sea Region and concrete solutions to these challenges. It should be read with the indicative action plan. The strategy and the proposed actions and flagship projects have been prepared following intensive consultation of Member States and stakeholders. The Commission has also endeavoured to keep non-EU Member States in the region fully informed of the preparations for this strategy.

## 2. CHALLENGES AND OPPORTUNITIES

### 2.1. Challenges

Many challenges require action at the level of the Baltic Sea Region: responses at national or local level may be inadequate. Four key challenges have been identified as requiring our urgent attention. They are:

> to enable a sustainable environment
> to enhance the region's prosperity
> to increase accessibility and attractiveness
> to ensure safety and security in the region.

Foremost among these is the environment, highlighted by the European Council. Particular attention is therefore given to the impact of excess nutrients in the Baltic Sea itself leading to eutrophication and algal blooms. There is also damage to the ecological balance due to overfishing, land-based pollution, rising sea temperatures, the presence of hazardous substances and other pressures. Adaptation to climate change is also a growing challenge. These impacts are now so widespread that leisure activities and small-scale commercial uses suffer in many areas.

The main economic challenges are to overcome the wide disparities (and hence realise the high potential) in research and productive innovation and to remove impediments to the single market. Priority issues for accessibility are the improvement of networks, ending the energy isolation of parts of the region, and ensuring sustainability of transport modes. Finally, priorities in the field of safety are to reduce risks posed to the region's citizens, infrastructure and environment by hazards from a variety of sources, in particular accidental marine pollution and organised crime.

### 2.2. Opportunities

Clearly the region has significant potential that can be better used. This includes a very well-educated workforce, expertise in innovation – especially in knowledge-based industries – a spacious and relatively unspoilt land environment rich in natural resources

1 Denmark, Germany, Estonia, Latvia, Lithuania, Poland, Finland and Sweden.
2 The Northern Dimension provides a common framework for the promotion of dialogue and concrete co-operation in northern Europe between the European Union, Iceland, Norway and Russia.

and a strong tradition of intra-regional co-operation. Networking among research funding agencies from all EU Baltic States, supported by the research framework programme, provides a sound basis for collaboration in research and knowledge transfer within the Region. The framework provided by European Union policies and law provides a strong base on which to build more effective co-operation. For example, designation of the Baltic Sea as a Particularly Sensitive Sea Area (PSSA) will help to ensure that the growth of shipping and other maritime activities is sustainable.

## 3. THE STRATEGY: AN INTEGRATED FRAMEWORK TO ADDRESS THE CHALLENGES AND OPPORTUNITIES OF THE BALTIC SEA REGION

The analysis conducted by the Commission[3] highlights the following points.

- An integrated approach is necessary for the sustainable development of the Baltic Sea Region. The issues are interrelated: for example, improvements to the sea quality bring increased employment due to more marine business potential, which will require better transport links. Through an integrated strategy, everyone stands to benefit from a common approach.
- Better co-ordination and a more strategic use of Community programmes are key ingredients, especially at a time of crisis, to ensure that funds and policies in the region contribute fully to the strategy. Moreover, results of research programmes in the area must be fully integrated into other programmes and policy areas.
- Within the existing financial and legal framework, there are great opportunities for effective action through closer co-operation and co-ordination.
- Specific actions are needed to respond to the identified challenges. These will be undertaken by stakeholders in the region, including governments and agencies, municipalities, international and non-governmental organisations.
- The strategy is an internal one addressed to the European Union and its Member States. The effectiveness of some of the proposed actions will be enhanced by continuing constructive co-operation with interested third countries in the region. Existing, well-functioning structures, notably but not exclusively within the Northern Dimension, provide the framework for the EU to pursue further co-operation with these countries.

So the strategy should provide an integrated framework that allows the European Union and Member States to identify needs and match them to the available resources through co-ordination of appropriate policies. This will enable the Baltic Sea Region to enjoy a sustainable environment and optimal economic and social development.

The Commission is therefore proposing an indicative action plan, fully discussed with the Member States and regional stakeholders, to encourage the implementation of visible projects. The action plan is organised around the four pillars. It is, however, an integrated strategy; the proposed actions often contributing to more than one identified objective. The individual actions and flagship projects have been selected for their fast implementation and impact.

## 4. BACKGROUND AND CONTEXT

### 4.1. Geographical coverage

The strategy covers the macro-region around the Baltic Sea. The extent depends on the topic: for example, on economic issues it would involve all the countries in the region, on water quality issues it would involve the whole catchment area etc. Overall, it concerns the eight Member States bordering the Baltic Sea. Close co-operation between the EU and Russia is also necessary in order to tackle jointly many of the regional challenges. The same need for constructive co-operation applies also to Belarus and Norway.

### 4.2. Relevant policies

Many European Union policies and programmes are important in the region and we expect these to be key elements in the strategy. Among these is Cohesion Policy, which contributes over €50 billion to the region in 2007-13. The common fisheries policy (CFP) directly contributes another €1.25 billion. The Commission plans to work with the managing authorities to help them ensure that allocations are aligned with the strategy.

The Arctic Region, the subject of a specific Commission Communication last year[4], has strong links with the Baltic Region through its interaction with the Barents Euro-Arctic Region. The Marine Strategy Framework Directive and the Helsinki Commission (HELCOM) Baltic Sea Action Plan guide the interventions on the environment, keeping in mind EU common policies affecting the marine environment such as agriculture, fisheries, transport. The common agricultural policy, in particular through rural development, contributes to the objectives of making the Baltic Sea Region an environmentally sustainable and prosperous place.

3 Staff working paper on a European Union Strategy for the Baltic Sea Region: forthcoming.

4 The European Union and the Arctic Region, COM(2008) 763 final of 20.11.2008.

The single market policies and the Lisbon Agenda including the Small Business Act, will provide the inspiration for relevant parts of the strategy especially the section related to prosperity while the European Research Area, together with its funding instrument the seventh framework programme (FP7), will provide a sound scientific basis for sustainable management of the Baltic Sea basin. The Trans-European Networks for transport and energy are the backbone of the accessibility and attractiveness pillar. In addition, the European Economic Recovery Plan offers important additional financial support for numerous energy infrastructure-related projects in the region. Co-operation on fisheries with Russia will be promoted, where relevant, under the framework of the EU-Russia agreement on fisheries.

## 5. RESPONSE

Guided by the almost unanimous position of respondents to the consultations, from every level and type of partner, the Commission is convinced that these challenges and opportunities can best be addressed by an integrated multi-sectoral regional strategy. The range of issues makes this an ideal case for the application of a territorial cohesion approach, as requested in the informal meeting of Ministers at Leipzig in 2007.

The Baltic Sea Region is a good example of a macro-region – an area covering a number of administrative regions but with sufficient issues in common to justify a single strategic approach. Other areas of the European Union are beginning to self-identify as macro-regions and the approach adopted in this strategy will offer important lessons as to the potential of the macro-regional approach.

This follows the territorial cohesion proposals of the Commission in the Green Paper of October 2008, whereby interventions are built around the needs of functional regions rather than according to predetermined financial and administrative criteria. This form of macro-regional approach also provides the EU with an innovative policy instrument, which could serve as a good example of efforts to achieve common EU objectives and a more effective co-ordination of territorial and sectoral policies based on shared territorial challenges.

In the same way, the coherent and proactive implementation of the maritime actions in the strategy will be an important test case for the regional (sea-basin) implementation of Integrated Maritime Policy initiatives.

We can group the necessary actions into the four pillars below plus a section addressing horizontal issues. This grouping is only for ease of analysis: every pillar relates to a wide range of policies and will have impacts on the other pillars.

### 5.1. An environmentally sustainable region

The Baltic Sea is one of the largest bodies of brackish (part saline) water in the world with significant salinity differences between sub-basins. It is relatively shallow (average depth of 50 m compared with the Mediterranean's 1 500 m) and almost completely enclosed. Only 3% of the water (by volume) is exchanged each year – i.e. more than 30 years for the total volume. Rivers drain a land area four times larger than the sea itself with a population of nearly 90 million.

The unique features of the Baltic Sea, and its environmental pressures, demand a macro-regional approach to combat its long-term deterioration. This has been long-recognised, including through joint action in HELCOM, although there is a need for increased co-ordination among sectoral policies.

**Main issues concerning the marine environment**

Available data suggest that pressures such as pollution by nutrients, predominantly nitrates and phosphates, cannot easily be absorbed but have rapid and visible impacts. The increasing algae blooms, covering more of the sea each summer, are the result. These algae consume oxygen at the expense of fish and other forms of life. This problem has been recognised for many years but so far the initiatives taken have not been effective enough due to increased population pressure, insufficient targeting of the agricultural measures to intensive agricultural areas and a time lag before the measures show significant results.

Fishing activities pose another significant impact on the ecosystem. Stocks of some species have significantly declined and certain fishing practices cause incidental catches of non-target species or destroy habitats. Establishing an ecosystem-based management approach, as proposed under the reform of the CFP, and using CFP provisions to minimise the effect of fishing on marine environment will support the conservation of the Baltic ecosystem, taking into account the HELCOM Baltic Sea Action Plan. The fishing fleet should be in balance with available resources.

The Action Plan covers the following priority areas: (i) to reduce nutrient inputs to the sea to acceptable levels; (ii) to preserve natural zones and biodiversity including fisheries; (iii) to reduce the use and impact of hazardous substances; (iv) to become a model region for clean shipping; (v) to mitigate and adapt to climate change.

## 5.2. A prosperous region

The region is united by the sea. But it is also clearly divided between a prosperous, highly innovative north and west and a developing east and south. However, the differences between the most successfully innovative regions in the EU, in the Nordic countries and Germany, and the regions with well-educated young people and deficient infrastructure in Poland and the three Baltic States, provide opportunities for complementary co-operation and development of great benefit to all sides. In particular, such co-operation should provide real business opportunities to SMEs, especially those working in innovative fields.

The European Union is confronting a severe economic crisis. It needs to profit from the internal market on one hand and maximise the opportunities from innovation on the other. The strategy offers the opportunity to further reduce the barriers to trade and draw greater benefits from the single market and to exploit the potential of wide innovative disparities. In addition, it is important to maintain the profitability and competitiveness of the key sectors of agriculture, forestry and fisheries in order to enhance their contribution to the economy and to sustainable development.

Main issues concerning prosperity

**Remove barriers to trade:** Due to small national markets in the Baltic, it is essential to upgrade the business environment to stimulate development of local enterprises and attract foreign investors. Despite the internal market, practical obstacles to trade in goods and services still exist. Consultations and analysis carried out to prepare the 2007 single market review show that in some areas and sectors the single market legal framework is not yet functioning as well as it should. Improvement will be particularly important for SMEs as already recognised by the Small Business Act. Efforts are also needed to facilitate cross-border movement of goods and administrative communication.

**Foster innovation:** The east-west division in innovation capacity across the Baltic Sea is reflected in the last European Innovation Scoreboard (EIS 2007). Transfer of knowledge and competence and deepened co-operation from the Nordic countries and Germany as innovation top-performers can greatly help the Baltic States and Poland to continue catching up. Together, we can create a dynamic environment for further enhanced innovation performance by strengthening transnational co-operation in different fields such as research, clusters and services innovation.

To achieve high productivity, high levels of innovation and sustainable economic growth, the Baltic Sea Region also needs to increase labour market inclusion and integration. High levels of employment, good quality jobs, the continued presence of a well-trained and adaptable workforce as well as low levels of social exclusion are all vital factors in assuring both the competitiveness and attractiveness of the region.

The Action Plan covers the following priority areas: (i) to remove hindrances to the internal market in the Baltic Sea Region; (ii) to exploit the full potential of the region in research and innovation; (iii) implementing the Small Business Act: to promote entrepreneurship, strengthen SMEs and increase the efficient use of human resources; (iv) to reinforce sustainable agriculture, forestry and fishing.

## 5.3. An accessible and attractive region

The Baltic Sea itself and the low-lying land around it, have provided routes for trade and communication through history. The post-1945 division was an interruption to a pattern of open contacts that has resumed in the 1990s. Massive investment has followed in the last two decades but there is still much to be done before the infrastructure endowment reaches levels elsewhere in the Union. Land and sea routes still need to be made more straightforward and environmentally friendly. The east and north remain too isolated from the rest of the Union. The region is also increasingly a gateway to Asia, notably through rail links.

Main issues concerning transport and energy

**Transport:** Accessibility is low in many parts of the region: the Baltic States, northern Finland and Sweden, have the lowest accessibility rates in the whole of Europe in both internal and external relations. The causes are the large size of the region, resulting in long travel distances and times, and difficult geographical and climate conditions. Low infrastructure or service density implies high prices. Improvements must be through sustainable modes of transport.

**Energy:** The energy markets lack appropriate infrastructures and are too nationally oriented instead of being linked across the region. This creates higher energy supply risks and prices. In addition, for the internal energy market to function well, countries need to be interconnected. However, Estonia, Latvia, and Lithuania remain, with the exception of the Estlink power cable between Estonia and Finland, essentially isolated from the wider energy networks of the European Union.

Energy supply and security is a particular concern: though some countries in the region have substantial indigenous sources of energy, most must rely on imports. Therefore, interconnections need to be further developed and diversified to offset possible interruptions or other shocks. Human relationships are also important and can be strengthened by actions in the fields of education, tourism and health.

The Action Plan covers the following priority areas: (i) to improve the access to, and the efficiency and security of, the energy markets; (ii) to improve internal and external transport links; (iii) to maintain and reinforce the attractiveness of the Baltic Sea Region in particular through education, tourism and health.

### 5.4. A safe and secure region

The region's safety and security environment will continue to experience significant changes during the coming years: maritime traffic is expected to increase, thus increasing the risk of accidents and vulnerability to pollution. Co-operation already exists, but should be strengthened to make the region a world-leader in maritime safety and security. A maritime disaster such as the 'Erika' shipwreck would have a catastrophic effect. The expansion and deepening of EU co-operation in criminal matters means that regional activity in combating crime should focus on intensified practical cross-border co-operation. Finally, the region must be prepared for the expected increase in extreme weather events as a result of climate change.

The Action Plan covers the following priority areas: (i) to become a leading region in maritime safety and security; (ii) to reinforce protection from major emergencies at sea and on land; (iii) to decrease the volume of, and harm done by, cross-border crime.

Main issues concerning safety and security

**Accidental or deliberate marine pollution:** Due to its strategic position, the Baltic Sea Region is a natural route for oil transport, in particular from Russia. Between 1995 and 2005, oil shipping in the Gulf of Finland increased fourfold with significant growth expected to continue. There is also an increasing trend towards transport of liquefied natural gas. These activities carry risks for the environment, especially in difficult winter conditions. In 2007, there were 120 ship accidents in the Baltic Sea. Further actions are still needed to improve co-operation, co-ordination and the coherence of maritime safety and surveillance agencies and disaster response.

**Cross-border crime:** The region's crime patterns are influenced by its geographical location, differing economic and social conditions, differences in prices of excisable products, along with the openness and ease of access within the Baltic Sea Region that is a feature of intra-Community relations. These factors put special responsibilities on those Member States with external borders, especially since the abolition of checks at internal borders. All Member States need to take co-operative measures to safeguard internal security.

### 5.5. Horizontal actions

A number of cross-cutting actions are fundamental to the entire strategy. These include the development of integrated maritime governance structures and maritime and land-based spatial planning. The BONUS-169 project combining an ecosystem approach with an effective science/policy interface funded under FP7 is central to the success of the strategy.

## 6. IMPLEMENTATION AND GOVERNANCE – FROM WORDS TO ACTIONS

### 6.1. Consultation process

The Commission has engaged in an intensive consultation process which has had three principal components: non-papers from governments and other official bodies in the region; stakeholder events to allow official, NGO and private sector participants to contribute their expertise; public consultation through the Europa website which elicited a very wide response.

The messages were clear.

> No new institutions. The Baltic Sea Region has many co-operative structures: we should not create new ones that could impose added administrative overhead without contributing to effective action.
> Not just a strategy. There must be actions – concrete, visible actions – to overcome the challenges facing the region. In its action plan, therefore, the Commission insists that Member States and other stakeholders take responsibility as lead partners for specific priority areas and flagship projects, for example, by developing integrated maritime governance structures in line with the Integrated Approach to Maritime Policy.
> European Commission involvement. This should go beyond monitoring the implementation of funding programmes and the transposition of Directives. The Commission could fulfil the need for an independent, multi-sector body that

can guarantee the necessary co-ordination, monitoring and follow-up of the action plan, as well as a regular updating of the plan and strategy as necessary.

### 6.2. Governance and implementation proposals

In the light of these conclusions, and the need for a flexible approach in view of the wide range of actions, we make the following proposals on governance and implementation.

- **Policy development:** As Member States come together to co-operate on concrete measures, general oversight will be within Community structures, with periodic reports and proposals for recommendations from the Commission to the Council. The European Council will be updated regularly on the progress of the strategy.
- The Commission will be responsible for **co-ordination, monitoring, reporting, facilitation of the implementation and follow-up.** In partnership with the stakeholders of the region, it should prepare regular progress reports, and use its power of initiative to make proposals for adaptation of the strategy and action plan whenever these are required. Co-ordination should keep under review how the use of funds is contributing to the priorities of the strategy. A review of the European added-value of the strategy and the implementation of the action plan is foreseen in 2011.
- **Implementation on the ground** – the responsibility of the partners already active in the region – will be further aligned with the objectives and targets of the strategy. The Commission will work in partnership with the other institutions, Member States and regions, international financing institutions, transnational programming bodies and intergovernmental organisations such as HELCOM to identify co-ordinating bodies at the level of priority areas and lead partners for flagship projects.
- In order to maintain the high level of involvement of all the stakeholders in the region, clearly evident during the consultation exercise, there will be an **annual forum** to bring together partners concerned with different aspects of the strategy, including from interested third countries, to review and discuss the progress of the strategy and to make recommendations on implementation.
- Finally, **relations with third countries** should be conducted primarily through the Northern Dimension with the option to use alternative channels when useful.

### 6.3. Practical implementation

These arrangements will encourage efficient policy co-ordination, more effective application of Community legislation and better co-ordination of funding instruments. The Commission is not proposing additional funding or other resources at this time. However, some of the specific actions and projects will require financial support. A major source is the Structural Funds[5] available in the region – most programmes already allow actions envisaged in the strategy. Programming authorities can review the allocation criteria and facilitate the selection of projects aligned with the strategy. Furthermore, the Commission will welcome appropriate modifications of the programmes where necessary.

In addition, Member States have agreed to examine funding projects and actions aligned with the Strategy priorities from their own resources. The European Investment Bank and other international and regional financial institutions, such as the Nordic Investment Bank and the European Bank for Reconstruction and Development, could also contribute.

## 7. CONCLUSION

The Baltic Sea Region has an established history of networking and co-operation in many policy areas. This strategy offers the opportunity to move from words to action and to deliver real benefits for the region as a whole.

The analysis described above demonstrates the need for a common strategic vision to guide future territorial development for the Baltic Sea Region. It is clear that no one acting alone can apply the range of measures necessary to confront the challenges and exploit the opportunities of the region. We are convinced that a strategy for the Baltic Sea Region, consisting of the approach and actions described above are essential to protect the Baltic Sea and to exploit fully the opportunities open to the region.

The Commission therefore invites the Council to examine and endorse this Communication and the related Action Plan.

5 European Regional Development Fund, Cohesion Fund, European Social Fund, European Agricultural Fund for Rural Development, European Fisheries Fund.

# COMMISSION WORKING DOCUMENT

**DISCLAIMER**

This document reflects the situation and knowledge of the situation as of end of 2008.

The Baltic Sea area is a potential model for intensified regional co-operation, one in which new ideas and approaches can be tested and developed over time as best practice examples.

# EXECUTIVE SUMMARY

On 14 December 2007, the European Council in its Presidency Conclusions invited the European Commission to present an EU Strategy for the Baltic Sea Region (EUSBSR) no later than June 2009. Prior to this, the European Parliament had called for a strategy to address the urgent environmental challenges arising from the increasingly visible degradation of the Baltic Sea. The European Council set three parameters for the Commission in its development of the strategy. The strategy should: i) be without prejudice to the Integrated Maritime Policy (IMP) endorsed in the same conclusions; ii) inter alia help to address the urgent environmental challenges related to the Baltic Sea; and iii) the Northern Dimension (ND) framework[1] should provide the basis for the external aspects of co-operation in the region.

The Commission presented its Communication on the EUSBSR on 10 June 2009 alongside a detailed indicative Action Plan. The strategy and the proposed actions and flagship projects were prepared following intensive consultation of Member States (MS) and stakeholders. The Commission also endeavoured to keep non-EU MS in the region fully informed of the preparations. The presented strategy proposed both a co-ordinated, inclusive framework response to the key challenges facing the Baltic Sea Region (BSR) and concrete solutions to these challenges. It would also make important first steps towards regional implementation of the IMP.

On 26 October 2009, the General Affairs Council endorsed the Commission's approach and agreed on detailed conclusions on the strategy. With its adoption by the European Council in its meeting on 29 and 30 October 2009, the EUSBSR became the first macro-regional strategy in the EU.

This working paper underpins the Commission Communication on the EUSBSR and the accompanying Action Plan. It presents the background for the strategy requested by the European Council and explains why a macro-regional approach is considered the best response to the range of challenges, problems and opportunities facing the BSR today. The key features of the BSR are discussed and existing European, national and regional activities are outlined. On this basis, potential responses of the EUSBSR are put forward, some of them reflected in the Action Plan. The paper concludes with a brief review of some of the methodological considerations that were relevant for the conception, development and implementation of European macro-regional strategies.

## WHY A MACRO-REGIONAL STRATEGY FOR THE BSR?

Eight of the nine countries bordering the Baltic Sea – Denmark, Germany, Estonia, Latvia, Lithuania, Poland, Finland and Sweden – are now members of the EU. Russia also borders the Baltic Sea, with Belarus and Norway being important stakeholder countries.

In economic, environmental and cultural terms, the BSR countries are highly heterogeneous, yet they share many common features. The introduction of Community rules and the opportunities created by Community instruments and policies have paved the way for a more effective co-ordination of activities to deliver higher standards of living for citizens in the region. However, even with good levels of international and interregional contacts and communication, no overall co-operation and co-ordination have yet been developed to take full advantage of the new opportunities that EU membership provides and to adequately address common challenges.

Today, the Baltic Sea countries face the urgent challenge of the Baltic Sea's deteriorating environment. As this is a common sea, there is considerable interdependence across a wide range of domains – from protecting the environment and developing transport networks to interregional trade and maritime safety. Actions taken in one area may affect other parts, or the whole, of the region.

Countries in the region are taking various different development paths and the identification of common challenges and the scope for more and better co-ordination is still in progress. Consequently, the Baltic Sea area is a potential model for intensified regional co-operation, one in which new ideas and approaches can be tested and developed over time as best practice examples.

1 The ND provides a common framework for the promotion of dialogue and concrete co-operation in Northern Europe between the European Union, Iceland, Norway and Russia.



Below, the strengths and weaknesses, opportunities and threats (SWOT) of the BSR are introduced through a walk-through of the main socio-economic, environmental, transport, energy and security characteristics. This analysis will subsequently form the background for identifying the possible responses of a macro-regional strategy for the BSR.

## SOCIO-ECONOMIC INDICATORS

**Demographics:** The BSR has a population of around 96.5 million, equivalent to one fifth of the EU's population. Almost 40% of them live in Poland. The Nordic countries represent 25%; 15% live in the German BSR regions; 13% in the Russian BSR regions; and 7% in the Baltic States. With a land area of approximately 3.2 million km², population density here is much lower than on average in the EU: 30 inhabitants per km² compared to 114 in the EU.

The BSR is characterised by a considerable east-west divide[2] that informs most socio-economic domains, including demographics. The BSR East accounts for 60% of the total population and the BSR West for 40%. Population growth in the BSR West is 0.2% a year, but just – 0.4% in the East.

Around three quarters of the BSR population live in the 97% of the land area that is classified as rural. Cities, especially in the BSR East, are relatively small, have weak urban structure and are often separated by significant distances. Though rural areas today are not as remote as they used to be, these characteristics still tend to result in smaller job and service markets, less accessible services, reduced competitiveness and consequently the risk of rural marginalisation.

**Gross domestic product (GDP), trade and the labour market:** Prior to the onset of the economic and financial crisis, the economy of the BSR was strong. Real GDP growth has been above the EU average and according to some measures the region has been one of the world's top performing macro-regions. There are several key factors behind the region's attractiveness and competitiveness, such as strong productivity and labour mobilisation. Its countries are also implementing a number of important reforms. BSR strengths include high levels of further education and research and development (R&D) personnel and expenditure, which provide fertile grounds for the creation of leading scientific and technological clusters. Trade is also constantly increasing within the BSR, driven by deregulation and removal of many customs administrative procedures in the New Member States (NMS) of the EU. Foreign direct investment to these countries has also been especially high.

However, since 2008, parts of the BSR have been strongly affected by the economic and financial crisis, and considerable economic disparities continue to characterise the region. Disparities in GDP per capita, for instance, are amongst the highest in the EU. The BSR West has a GDP/capita equal to 122% of the EU-27 average, whereas the GDP/capita in the BSR East is only 52.6% of the EU average.

Though the strong growth in labour productivity in the BSR may help compensate for the demographic decline that the EU as a whole is facing, employment rates in the region are still below the Lisbon target of 70%. Labour mobility also remains low due to major structural challenges such as differences in language (each of the nine countries surrounding the Baltic Sea as well as Norway has its own language, and these languages belong to five different language groups), culture and labour legislation.

**Knowledge economy, innovation and entrepreneurship:** The BSR countries perform well in education and training and already enjoy benefits from highly developed bilateral and regional co-operation. So the challenge is to maintain the quality of this education system and to promote exchanges between the west and the east of the region.

In 2005, Denmark, Estonia, Finland and Sweden were among the top six MS with the highest share of highly educated labour in the workforce (tertiary education). This educational level is a main factor behind the high competitiveness of some parts of the BSR and should sustain their acceptable growth rates in the future. The regions covered by the BSR also have one of the largest shares of people employed by the

2 The BSR West covers the countries of the EU-15 falling within the BSR plus Norway. The BSR East covers the CEECs falling within the BSR plus Russia.

knowledge economy in the EU-27, though this share is mainly found in the BSR West. On average, the BSR countries spend 2.2% of their GDP on R&D, which is above the EU-27 average (1.9%). However, at 0.6% the share in the BSR East is even below the average for the 12 newest MS. If the BSR is to stay competitive on major markets, it will need a critical mass of innovative companies and innovation capacity. The region has relatively small countries and innovation areas as well as continued east-west disparities, so more transnational co-operation is needed for policy and at the practical level.

Institutional barriers substantially restrict the activities of small and medium-sized enterprises (SMEs) in the region and must be lifted. Moreover, the general conditions for growth in the BSR need to be strengthened through increased and more effective support for entrepreneurship and SME development and through strengthened co-operation between business-support institutions. The level of trade and investments in the region could be increased through better co-operation and the development of supportive measures aimed at further economic integration. To secure long-term prosperity, entrepreneurship needs to be included in all levels of education. Teachers should also be given appropriate economic knowledge and innovative teaching methods should be developed. The notion of starting your own business should be better promoted among young people.

The **agriculture, forestry** and **fishing** sectors are important to the economy and sustainable development in the BSR. Keeping these sectors profitable and competitive, in balance with the natural resources and the ecosystems they depend on is, thus, of key importance to securing the future sustainable development of the region. Interregional co-operation within the sectors has so far been relatively modest, though many advantages could be gained if it were increased. This is especially the case in fisheries, which are not only governed by a common policy but also based on shared resources.

## ACCESSIBILITY AND ATTRACTIVENESS

**Accessibility** is a key concern in the BSR, as distances (internally, to the rest of Europe, and to the wider world) are long and transport conditions often difficult (forests, lakes, snow and ice in the winter, etc.). The BSR countries are highly dependent on intra-EU and foreign trade. Moreover, because the region is located outside the economic centre of Europe, it needs smoothly functioning transport infrastructures for its economic growth. The Baltic Sea is also a sensitive ecosystem, making environmental considerations important in the development of transport infrastructures.

In terms of **road transport**, all countries in the BSR have experienced traffic growth. But primary road networks are fragmented and only Denmark and Germany have a relatively integrated network of motorways. The BSR East especially needs better motorway connections between countries, to improve the carrying capacity of the existing motorway infrastructure and ensure smoother border crossings with neighbouring non-EU countries – where waiting times can be several hours for both coaches and trucks. **Rail transport** here is characterised by the lack of interoperability between national railway networks: the main challenge is the gauge differences between the Russian (1520 mm) and European (1435 mm) systems.

Most **airports** in the BSR have seen a sharp increase in their passenger volumes over the past few years. However, while the region's air travel network is fairly dense for a handful of connections, it is practically non-existent for travelling to many other parts of the world. For example, there are few or no connections to large established markets such as Australia, Canada and Japan, or emerging markets such as India and Latin America. There are also almost no direct connections to Africa.

If the Baltic Sea presents a natural obstacle for the expansion of terrestrial transport in the region, it is an outstanding asset for the development of an integrated **maritime transportation network**. The Baltic Sea is one of the maritime areas with the densest traffic in the world. Both the number and size of ships have grown in recent years and this trend is expected to continue. There are around 2 000 ships at sea in the Baltic at any given time, accounting for 15% of the world's cargo transportation. Many countries of the BSR are only separated by a narrow sea channel, which increases the opportunity to use maritime transportation on a cross-border basis.



This could enhance the mobility of persons, goods and services and therefore boost the economic integration of the BSR regions.

**Energy interconnections** are also important for accessibility. For the internal energy market to function well, regions need good interconnections. However, the three EU Baltic States are largely isolated from the wider energy networks of the region and the rest of the EU, which increases the risks related to energy security and pricing. Moreover, several BSR countries can only nationally produce a small share of the energy that they consume. Apart from Norway, Russia and to some extent Denmark, all countries in the BSR depend on energy imports. This means energy dependency is a key topic when there are discussions about energy policy at the EU and national levels. These strong dependencies underline the importance of developing integrated energy networks and markets, enabling supply and demand patterns to be aligned across borders, and of co-operating on energy efficiency policies. Today, the BSR energy markets are highly diverse (electricity, gas, oil, nuclear, renewable energy) and nationally oriented, lacking appropriate infrastructures.

The BSR also has great potential to improve its **energy efficiency** and the use of **renewable energy** sources. The Action Plan for Energy Efficiency has set a goal of realising 20% savings in the EU's annual primary energy consumption by 2020. The EU is to adopt a mandatory target for renewable energies by 2020, with the Commission proposing an overall binding target of a 20% share of energy from renewable sources in the gross final energy consumption and a 10% binding minimum target for renewable energy in transport to be achieved by each Member State. The challenge in the BSR region is to continue the work already begun to promote more efficient use of energy, more use of renewable energy and more co-operation on these issues.

Over recent years, **information and communication technologies** (ICT) have also become an integral part of policy debates on the notion of accessibility. Many BSR countries are EU leaders in ICT. Nonetheless, there are sizeable pockets of deprivation. Though all BSR countries have managed to reduce significantly the disparities between densely and sparsely populated regions, metropolitan areas continue to enjoy better ICT access. Latvia, Lithuania and Poland in particular still suffer from a wide disparity in broadband coverage in their urban and rural areas. Wider access to broadband Internet and the strategic use of ICT by individuals, enterprises and public administrations could help reverse the trends of depopulation and relocation of economic activities from these areas.

**Attractiveness:** Good **public health** is essential for an attractive region and good economic development. Many economic sectors thus rely on a sound health infrastructure, including the sectors producing goods and services, investments from abroad, and tourism. In the BSR, there are still considerable differences between the 'old' and 'new' MS in terms of the availability of good primary healthcare.

Regarding **culture** and **identity**, divisions seen in the region until relatively recently have created barriers that are now difficult to tear down. Efforts should therefore be made to rebuild people's sense of belonging to a region, without artificial or exaggerated narratives, in a way that respects current realities but opens wider horizons for citizens.

**Tourism** is an essential driver and user of cultural assets. The BSR has tremendous assets in both 'natural' and cultural tourism. Its vast expanses of unspoiled countryside as well as the historical and cultural traces of past interactions, linked by the Baltic Sea itself, provide an opportunity for co-operation which could bring considerable regional advantages.

## THE ENVIRONMENT

As mentioned above, sea transport levels in the Baltic Sea are among the highest of any of the world's marine area. The main environmental effects of shipping and other activities at sea include air pollution, illegal and accidental discharge of oil, hazardous substances and other wastes, and the introduction of invasive alien organisms via ships' ballast water or on their hulls. Today, the Baltic Sea faces serious ecological hazards due to the effects of eutrophication, ecosystem disturbances, unsustainable fisheries and the impact of climate change. These influences are particularly

severe in the Baltic Sea, due to its unique geographical, climatological and oceanographic characteristics. The Baltic Sea is an almost enclosed sea with limited exchanges of water; its catchment area is almost four times larger than the sea itself; its average depth is just 53 m; it has one of the world's largest bodies of brackish water with limited biodiversity; and it is highly stratified.

The ecosystem of the Baltic Sea is, therefore, unique, ranging from the northern parts with nearly fresh water and up to six months of ice cover to the more marine Kattegat. Only a small number of species can survive in this brackish water, and the low number of macro-species makes the ecosystem extra sensitive to changes in its physical and chemical composition. Even relatively small changes can, therefore, affect the balance of entire food webs.

**Eutrophication** is a major problem in the Baltic Sea today and refers to a condition where high concentrations of nitrogen and phosphorus stimulate growth of algae, which leads to an imbalance in the functioning of the ecosystem. Oxygen depletion and the death of marine organisms are among the consequences, resulting in a threat to ecosystems and living natural resources. Nutrients enter the Baltic Sea from airborne or waterborne sources, the main ones being transport, agriculture, industries, fish farms, managed forestry and urban areas. Discharge of nutrients from point sources is declining, but nitrogen is still discharged from municipal waste.

**Hazardous substances** pose another risk for the environment. They include organic contaminants and heavy metals, as well as chemicals released from weapons sunk in the Baltic Sea. Once released into the sea, hazardous substances can remain in the marine environment for very long periods and accumulate in the marine food web. These substances can cause health and reproductive problems in animals, especially top predators. Fish caught in some parts of the Baltic, particularly herring and salmon, have been found to contain concentrations of dioxin that exceed maximum allowable levels for foodstuffs as defined by the EU.

While the Baltic Sea has been designated worldwide as the first special SOx Emission Control Area (SECA) with limits on sulphur emissions since 2005 under the MARPOL Convention[3], additional joint efforts are still needed to efficiently combat marine pollution from **shipping**.

The projected increase in **global temperatures** – together with changes in other conditions associated with increased windiness and precipitation – is likely to have a major influence on the biota conditions in the Baltic Sea basin. Though several BSR countries have already taken action to combat climate change, much more can still be done in particular to improve energy efficiency in residential buildings, district heating (DH) and combined heat and power (CHP) facilities.

## SAFETY AND SECURITY

Risks associated with **maritime transport** are of particular relevance for the BSR. Together with legislative tools to improve ship standards, maritime surveillance is vital for ensuring the safe use of the sea and for securing Europe's maritime borders. Surveillance activities are carried out by MS, but most of the activities and threats that they address are transnational. Within most MS, surveillance of fisheries, the environment, policing of the seas or immigration falls under the responsibility of different enforcement agencies operating independently from each other. This often results in suboptimal use of scarce resources.

The rising density of ship traffic in the Baltic Sea increases the risk of accidental pollution, due to possible groundings or collisions of ships. The number of reported shipping accidents in the Baltic Sea regularly exceeds one hundred per year, of which 7% cause discharges to the sea. Deliberate illegal discharges are another major challenge.

3 MARPOL is an International Convention for the Prevention of Pollution From Ships adopted in 1973 and modified by the Protocol of 1978. (MARPOL is the acronym for MARine POLlution.)

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The BSR is a base for several nuclear power plants (NPPs). Some countries in the region do not have any nuclear power, while others have decided to shut down their plants; but several others are building new reactors. Besides NPPs, nuclear and radiological material is used in several other applications for industrial, medical, scientific and military purposes. In this context, **nuclear and radiation safety** – i.e. technical safety of installations, radiation protection and radioactive waste management, both civil and military – have been identified by the Council of the Baltic Sea States (CBSS, see below) as a concern for the region.

The region's **crime patterns** are influenced by its position between EU and non-EU criminal environments, the variation in economic and social conditions in the region, and the openness and ease of access that are a feature of intra-Community relations. MS with external borders, therefore, have additional responsibilities, especially since the abolition of checks at EU internal borders. However, all MS need to take co-operative measures to safeguard internal security. Organised cross-border smuggling of goods, drugs, arms and persons is a key challenge for the region, which contains and is close to supply and transit countries.

Major disasters – natural, man-made or a mix of both – have led to increased calls to improve the effectiveness of existing EU and MS disaster response capacities. EU **civil protection policies** have strong links with regional policy initiatives and projects, and an integrated view of these actions is crucial to improve the speed, effectiveness and cost-efficiency of efforts. Adopting this approach in the BSR would be beneficial, for instance when faced with substantial economic damage in coastal urban regions after flooding caused by storms or major ship accidents.

Despite medical progress and some international and national action programmes, there is still a distinct east-west epidemiological disparity in the region. In general, most health problems there stem from considerable social and geographical differences in morbidity and mortality. There is considerable scope for health improvement, as shown by current region-wide variations in resources, access to and quality of prevention, screening, diagnosis and treatment, and outcomes of health services.

## EU ACTIVITIES IN THE BSR

The EU's **Cohesion Policy** is the most important source of funding in the BSR, with approximately €55 billion made available during the 2007-13 period. In addition, other Community programmes[4] – as well as national, regional and local policies – finance important projects. The European Investment Bank (EIB) also provides lending/co-financing to a large number of projects in the region.

Much of the activity in existing programmes is in line with the challenges that arise from the particular demographic, economic and environmental conditions of the BSR, as identified above. For instance, in terms of actions to support prosperity, programmed expenditure for 2007-13 under the European Regional Development Fund (ERDF) and under the Cohesion Fund (CF) for the Convergence and Competitiveness and employment programmes include €2.4 billion in innovation in SMEs and entrepreneurship, and €2.3 billion in investments in research, technology and development (RTD) activities and infrastructures.

Other EU policies also play an important role in dealing with the challenges and opportunities of the BSR. The **common agriculture policy** (CAP), for instance, and especially its Rural Development Policy (RDP) aim at enhancing competitiveness in line with the Lisbon Agenda. The CAP also has tools that may impact on eutrophication and biodiversity. In particular, the proposal made in the Health Check to add standards on buffer strips along water courses and specification of landscape features should mitigate the impact of agriculture for these two issues. The implementation of the RDP and other aspects of the CAP, however, differ significantly in the region, and there is little tradition to voluntarily co-operate over borders in order to increase coherence and thereby create win-win situations and synergies.

4 In particular the seventh research framework programme, the LIFE programme, the ESF, the European Territorial Co-operation programmes, the European Neighbourhood and Partnership Instrument Cross-Border Co-operation programmes (ENPI CBC), the European Agriculture Fund for Rural Development (EAFRD), the EFF, the TEN-T, and the Competitiveness and Innovation programme.

EU activity in the areas of environmental policy, research and innovation, entrepreneurship, labour mobility, energy, customs co-operation, fisheries, transport, education, culture, tourism and the information society also have specific relevance for efforts to strengthen regional co-operation. Though the wide scope of EU policies means that they cannot normally cover the specific circumstances of a region, policies can achieve a greater regional dimension.

## ACTIVITIES OF REGIONAL GOVERNMENTAL AND NON-GOVERNMENTAL ORGANISATIONS

Three intergovernmental organisations unite all national governments of the BSR: the CBSS (including several sub-organisations), the Helsinki Commission (HELCOM), and Vision and Strategies around the Baltic Sea 2010 (spatial planning and development – VASAB).

The **CBSS** was created in 1992 and became an important early platform for trilateral dialogue between Russia, countries that had formerly been part of the Soviet bloc, and parts of western Europe. An institution of national governments and the European Commission, the CBSS enables policy dialogue, learning and in some areas joint action in sectors such as the environment, economic development, energy, education, culture and civil security. The CBSS does not have a general budget, and members are responsible for funding common activities and/or for seeking and co-ordinating financing from other sources.

The **HELCOM** is the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area. Since the early 1980s, HELCOM has been working to improve the Baltic marine environment, largely through some 200 HELCOM recommendations. It unanimously adopts these recommendations, which the governments commit to act on in their respective national programmes and legislation. In addition to the national governments, the European Commission is a contracting party to HELCOM. In 2007, the HELCOM Baltic Sea Action Plan (BSAP) was adopted, so as to identify the specific actions needed to achieve agreed targets for the main environmental priorities: combating eutrophication, curbing inputs of hazardous substances, ensuring maritime safety and response capacity to accidents, and halting habitat destruction and the ongoing decline in biodiversity.

The **VASAB**, founded in 1992, is an intergovernmental network promoting regional co-operation on spatial planning and development. Its work focuses inter alia on preparing long-term perspectives for the spatial development of the BSR and on facilitating exchanges on innovative spatial planning and development approaches. A new VASAB Long-Term Perspective was endorsed on 16 October 2009 at the seventh Ministerial Conference in Vilnius, Lithuania. The Ministers underlined that new common responsibilities and challenges called for deeper pan-Baltic co-operation on spatial planning and development, and with regard to maritime spatial planning.

In addition to these pan-regional organisations, there are many other groupings in the region. These reflect a long tradition of co-operation between governmental organisations, regional and local authorities, non-governmental organisations (NGOs) and business sector federations there. These organisations include, but are by no means limited, to the following:

The Northern Dimension (**ND**) policy was developed in 1999 with the participation of EU MS, Iceland, Norway and Russia. The ND also involves other stakeholders including the CBSS, the Arctic Council (AC), the EIB and NGOs. Canada and the United States participate as observers. Its main objectives are to provide a common framework for the promotion of dialogue and concrete co-operation in northern Europe.

The **Nordic Council** was launched in 1952 as a forum for collaboration between parliamentarians from Denmark, Finland, Iceland, Norway and Sweden. In 1971, the Nordic Council of Ministers (NCM) was added as a platform for governments, and given its own secretariat and budget. NCM participation in joint activities in the BSR has increased over recent decades and it now has offices in Estonia, Latvia and Lithuania, as well as in north-west Russia. The **Nordic-Baltic Co-operation** (NB8) is a flexible co-operation network for promoting political dialogue as well as practical co-operation.

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A number of other organisations of local and regional authorities aim at increasing co-operation in the BSR, notably the **Baltic Sea States Subregional Co-operation** (BSSSC), the **Union of Baltic Cities** (UBC), and the Baltic Islands Network (B7), which were all founded in the early 1990s. Other elements of civil society – educational institutions, businesses, trade unions and environmental interest groups – have formed alliances or associations covering the BSR.

## RESPONSES OF THE EUSBSR

As the above analysis suggests, there are significant strengths in the BSR, both absolutely and in comparison with other parts of the EU. These strengths create opportunities to enhance the quality of the region in terms of the environment, prosperity, accessibility as well as safety and security. There are of course also weaknesses in the region, especially concerning the natural environment of the Baltic Sea and the exposure of parts of the region to deteriorating economic conditions. These strengths and weaknesses underline the opportunities that the EUSBSR should seek to exploit. The task is not so much to bring new expertise into the region as to ensure that the region's own resources are being exploited across internal boundaries to the maximum benefit of all.

This section therefore summarises recommendations for regional intervention and co-operation through the EUSBSR. Each recommendation or project is elaborated in depth in Section 4 of this Communication. The recommendations start from the premise that Community policies provide the basis for effective action, but that such policies need to be implemented in a way that takes account of the particular characteristics of the region. For ease of analysis, the recommendations are grouped under four headings: environmental sustainability, prosperity, accessibility and safety. It should be noted that the actions and projects included are not viewed as exhaustive or definitive, and will need to be modified as circumstances change.

## EUSBSR AND ENVIRONMENTAL SUSTAINABILITY

Protection of the environment is a major issue in the BSR. The region has abundant resources in terms of vast nature areas, high biodiversity value and a varying landscape. However, this environment is affected by human activities, including the effects of climate change. In the environment, there are no borders and a macro-regional approach is necessary to address the issues properly. Concrete responses of the EUSBSR to the environmental challenges outlined above are proposed below. Possible partners for EUSBSR action in this pillar include the HELCOM, the northern Dimension on Environmental Partnership (NDEP), the EIB and the ERA-NET project 'Baltic Organisations Network for Funding Science (BONUS) for the Baltic Sea Science'.

In response to **eutrophication**, the EUSBSR contains specific actions to reduce nutrient inflows, increase research on eutrophication and ensure the implementation of the HELCOM BSAP. Implementation of the BSAP is also central for EUSBSR projects aimed at preserving **natural zones and biodiversity**. In addition, the Strategy proposes to promote sustainability in fisheries and reduce the negative effects of fishing on the Baltic ecosystem.

To preserve **natural habitats**, proposed EUSBSR responses include the implementation of the EU's Natura 2000 network on land and the creation of marine protected areas at sea. In terms of **coastal zone management**, the EUSBSR suggests promoting the development of national strategies for Integrated Coastal Zone Management (ICZM).

To reduce **hazardous substances** in the Baltic Sea, the EUSBSR will promote the implementation of the zero-emission target set by the HELCOM BSAP; implementation of the REACH Regulation; and the development of actions to clean chemical weapon dumps in the Baltic Sea. To minimise **pollution from ships**, the EUSBSR will promote the reduction of waste water discharges from ships as well as of air pollution in ports; and it will encourage implementation of the proposed BSAP actions in the area.

Concrete EUSBSR actions on **climate change** will include energy-efficiency actions (see below), the establishment of a regional adaptation strategy and implementation of the Green Paper 'Adapting to Climate Change in Europe – options for EU action'. As such, the BSR has the potential to become a model region in the field of climate change.

## EUSBSR AND PROSPERITY

Economic trends in the BSR show that some countries are very developed and innovative, while others are rapidly catching up. There are strong enterprises in the fields of industry, services, energy, agriculture, forestry and fisheries, among others. Yet the BSR and its cities could benefit more from the single market through increased trade and fully integrated markets, including an open labour market. In addition to intra-EU trade, the region should leverage its position at the EU's north-eastern border as an international trade route by improving infrastructure and border-crossing efficiency. To increase and maintain its competitiveness, the region has to continue moving towards a strong network and knowledge society, by for instance promoting innovation through SMEs and fully implementing the EU *acquis*.

As a macro-regional strategy, the EUSBSR can foster closer territorial integration (more co-operation between stakeholders from different countries) to promote a truly **single market**, enable deeper market integration and promote closer co-operation between tax authorities.

For **innovation**, the EUSBSR can promote activities on transnational collaboration on clusters and innovations systems. It can also establish transnational dialogue on setting innovation priorities and establish a common innovation strategy for the region.

To support **entrepreneurship**, the EUSBSR can further develop measures on the basis of best practices, including female entrepreneurship. It can also promote trade and attract more investments through better co-operation between trade and investment promotion bodies, and secure access to capital for SMEs by promoting and introducing new, innovative tools (e.g. cross-border venture capital funds and guarantee schemes).

Given the diversity of **labour market** practices and conditions across the BSR, the main challenge for the Strategy is to enable the weaker regions to reach the standards of the best. A second challenge is to exploit the potential created by these differences, in ways that bring the maximum benefits in terms of competitiveness and social conditions to the whole region. Specific projects include the promotion of existing European efforts to improve education, qualifications and experience, for instance by the promotion of exchanges of curricula and the development of regional centres of excellence in various types of higher education.

For **customs co-operation**, the challenge is to support and facilitate the development of trade and economic co-operation, and to combat customs fraud and enhance the security and safety of the supply chain throughout the region. This requires for instance strengthened co-operation between customs authorities of the MS and third countries, in particular Russia, and removal of procedural, human resource and infrastructural bottlenecks. Concretely, the EUSBSR could ensure follow-up on the strategy adopted in 2007 by the EU-Russia Subcommittee on Customs and Cross-border Co-operation. This strategy includes a call for the implementation of a pilot project on EU-Russia information exchanges and the development of border-crossing and customs infrastructure.

For **fisheries**, the objective will be to support the achievement of existing policies and political commitments, as well as to contribute to the reform process of the common fisheries policy (CFP). Therefore, the EUSBSR includes actions on fleet capacity adaptation, eradication of discards, improvement of the control and halting of illegal fishing, as well as the strengthening of regionalisation and stakeholder involvement, and the streamlining of the European Fisheries Fund (EFF) programmes. For **agriculture and forestry**, proposed responses include the targeting of existing instruments, and in particular the RD programmes, so as to adequately target unwanted environmental effects, halt biodiversity losses and foster a competitive forestry and agricultural sector and thriving rural areas.



## EUSBSR AND ACCESSIBILITY AND ATTRACTIVENESS

For the BSR to be dynamic, it has to be accessible and attractive. It should have good transport links both internally and to the rest of the world. Energy supplies – which are vital for quality of life and for development – should be secure, affordable and efficient. In addition, human capital (education level, demography and health) should remain strong, making full use of the information society. Finally, cultural and tourism assets are key elements for development of the region. Concrete proposals for macro-regional action are outlined below for all these fields.

Concrete responses to improving **transport** include the establishment of better transport links within the region (especially east/west and to the north) and to the rest of the EU; improving connections with Russia; and the promotion of efficient freight transport as well as of maritime transport and ports.

Proposed responses to improve **energy connections** include building more and better energy infrastructures to reduce the isolation of the Baltic States and improving the integration of the energy markets. To promote **energy efficiency and renewable energy sources**, proposed actions include the establishment of plans for policies and actions for energy efficiency and renewable energies; the adoption of measures in sectors such as transport or buildings; and the transfer of knowledge on CHP and DH.

For **education**, the EUSBSR proposes to improve links among the universities in the region; to promote the 'Erasmus' programme; to use the 'Erasmus Mundus' programme, and, with Russia, the 'Tempus' programme; and to strengthen education in the maritime sector.

To improve **health**, the EUSBSR will work towards ensuring a better use of existing co-operative and partnership frameworks to address problems in timely and efficient ways. There will also be proposals for intensified co-operation on health security issues such as pandemic preparedness, vaccination issues and sharing information on alerts. As with the environment, health issues are borderless, especially with regard to infectious diseases. The EUSBSR therefore aims at ensuring close co-operation with neighbouring countries, particularly with Russia.

For **culture and tourism**, proposed EUSBSR actions include developing 'people-to-people' actions, the need to improve co-operation with Russia, and the use of 'rural development' measures to attract tourists. Proposed **information society** actions include securing high-speed broadband Internet access for all, calling on the funding available under the ERDF, European Social Fund (ESF) and the CF.

## EUSBSR AND SAFETY AND SECURITY

The BSR faces some common challenges in terms of exposure to hazards and threats. A major tanker disaster, for instance, would affect several, if not all, the coastal countries of the Baltic Sea. Winter storms and storm surges are not unusual in the region. Crime, trafficking and migratory routes cross the region. And because of geographic proximity, national health problems also become regional.

To promote measures in **cross-border crime prevention and control**, EUSBSR responses can include the improvement of inter-jurisdictional and cross-sectoral co-operation in crime prevention and border management as well as in law enforcement. To optimise the use of resources and promote **maritime safety**, responses can include the improvement of cross-border and cross-sectoral integration of maritime surveillance, and efforts to ensure the quality of navigation.

The EUSBSR also proposes to establish plans for policies and actions for **radiological safety**. For **civil protection**, responses can include better co-ordination and exchange of experience and further pooling of resources. Proposed responses to **health threats** include projects to contain the spread of HIV/AIDS and tuberculosis through furthering partnerships and international collaboration; fighting health inequalities through the improvement of primary healthcare by assessing differences in accessibility and quality; and developing a sustainable approach for injury prevention.

## METHODOLOGY AND PRACTICAL APPROACH

As stated at the start of this Communication, the Commission believes the best response to the range of challenges and opportunities listed above is a macro-regional strategy for the BSR. This section sets out a number of practical and methodological considerations important for securing the coherence, efficiency and success of this strategy.

**Better use of existing resources**: As it stands, this strategy will not involve additional EU funding or require new EU legislation. This is because it is essential to ensure that available resources are used in the most effective way before employing new funds. The actions proposed above should also be seen as contributing to the strengthening of EU legislation and not, in any circumstances, as reducing its impact.

**Governance system**: Macro-regional strategies should not be divisive for the EU, creating splits among MS between the 'ins' and the 'outs'. Overall control of the strategy should therefore be placed firmly in the Council of Ministers.

To ensure the Council can operate effectively, and to maintain consistent awareness and information flows about the strategy, the Commission will be in charge of monitoring, facilitation of the implementation and follow-up. To assist these tasks, a High-Level Group is convened to advise the Commission on the progress of the Strategy and the Action Plan.

By definition, the regional stakeholders are essential to the success of the macro-regional strategy. Regional stakeholders are directly involved in the EUSBSR through the priority areas, actions and flagship projects listed in the Action Plan. Many flagship projects will be led by regional actors. The Commission will also organise an Annual Forum to create a direct channel for consultation among the stakeholders and between the wider partnership and the Commission.

**Associating non-MS**: The approach set out is clearly a European strategy focused on the MS and territory of the EU. However, it is very clear that the Baltic Sea is not EU property and the region extends beyond the EU to include Belarus, Norway, Russia and Ukraine. The strategy will require input from these non-MS, especially Russia, if the goals are to be achieved. In order to respect the status of all participants and clarify channels of communication, Russia will be associated primarily, but not exclusively, through the ND. This allows Russia to be fully informed of the progress of the strategy and Action Plan, without being obliged to take a position on it.

**Reporting**: The Commission will prepare an annual report based on input from the Priority Area Coordinators and other partners. The first overall review of the Strategy will take place in 2011. It will be based on the Annual Reports and on more qualitative inputs from the Commission and the stakeholders, in order to show progress and focus on how the scope and impact of the strategy may be adapted to focus on changing needs.

# 1. WHY HAVE A EUROPEAN STRATEGY FOR THE BALTIC SEA REGION?

In economic, environmental and cultural terms, the BSR countries are highly heterogeneous, yet they share many common features. This section presents the main socio-economic, environmental, transport, energy and security characteristics of the region to provide the background for identifying the possible responses of a macro-regional strategy.

# 1. WHY HAVE A EUROPEAN STRATEGY FOR THE BALTIC SEA REGION?

Since 2004, eight of the nine countries bordering the Baltic Sea have been members of the European Union, namely Denmark, Germany, Estonia, Latvia, Lithuania, Poland, Finland and Sweden. Russia also borders the Baltic Sea, with Belarus and Norway being important littoral stakeholder countries.

The introduction of Community rules, and the opportunities created by Community instruments and policies (e.g. Cohesion Policy, the strategy for sustainable development, environmental policy, maritime policy, the internal market and the Lisbon Agenda), have paved the way for a more effective co-ordination of activities, thus delivering higher standards of living for the citizens of these MS. However, even with good levels of international and interregional contacts and communication, no overall co-operation has yet been developed to take full advantage of the new opportunities that EU membership provides and to adequately address common challenges.

The BSR is a highly heterogeneous area in economic, environmental and cultural terms, yet its countries share many common resources and largely interdependent. So actions in one area can very quickly have affect other parts, or the whole, of the region. The area could therefore be a model of regional co-operation for the rest of the EU, one where new ideas and approaches can be tested and developed over time as best practice examples.

Recognising this, the European Parliament published a report in late 2006 calling for a strategy for the BSR. On 14 December 2007, the European Council in its Presidency Conclusions invited the Commission to present a EUSBSR region no later than June 2009. This followed the increasingly visible degradation of the Baltic Sea itself and growing recognition of the need to address the disparate development paths of the countries in the region and the potential benefits of more and better co-ordination.

The European Council set three parameters for the Commission in its development of the strategy. The strategy should be without prejudice to the IMP, it should inter alia help to address the urgent environmental challenges related to the Baltic Sea, and the ND framework[5] should provide the basis for the external aspects of co-operation in the region. In the same conclusions, the European Council endorsed the IMP and asked the Commission to ensure that regional specificities be taken into account. The strategy would thus also make important first steps towards regional implementation of the IMP in the Baltic.

The Commission presented its communication on the EUSBSR on 10 June 2009 alongside a detailed indicative action plan. Its Strategy proposed to provide both a co-ordinated, inclusive framework response to the key challenges facing the BSR and concrete solutions to these challenges. The Strategy and the proposed actions and flagship projects were prepared following intensive consultation of MS and stakeholders. The Commission also endeavoured to keep non-EU MS in the region fully informed of the preparations for this Strategy.

In this Communication, the key features of the BSR are discussed and existing European, national and regional activities are outlined. On this basis, a SWOT analysis is undertaken and potential responses of the EUSBSR discussed. The Communication concludes with a walkthrough of methodological considerations relevant for the conception, development and implementation of European macro-regional strategies.

5 The ND provides a common framework for the promotion of dialogue and concrete co-operation in northern Europe between the European Union, Iceland, Norway and Russia.



# 1.1. Value of a regional integrated approach

In proposing a macro-regional strategy, the Commission is obliged to answer two questions: What are the obstacles or challenges that the Strategy must overcome? And why would a regional integrated approach be the best way of overcoming them?

Details on the obstacles and opportunities of the BSR are reviewed in Section 1.4, Socio-economic analysis, below. The justification for specific macro-regional approaches is found in the later sections on the Strategy's content. However, the analysis adopted can be expressed in fairly simple terms: there are actions that **must** be done at regional[6] level, that should be done at that level and that may be done in the context of the Strategy.

Many actions to protect the natural environment, especially in the Baltic Sea, are obviously only effective if applied at the regional level. The Sea is a classic example of a 'commons' that all benefit from, but one where no actor is sufficiently motivated to protect it if acting alone. Actions to improve networks, for example, energy connections, may also need to be undertaken at a regional level to ensure that the necessary but costly investment is effective.

A range of activities should be carried out at the macro-regional level to maximise their effectiveness. This includes all initiatives that depend on network or clustering effects to achieve their impact. Transport planning may be included in this category, as may interventions to protect the environment or ensure sustainability (since these can have locally negative effects on competitiveness).

Among the actions that may be included in the Strategy are co-operation initiatives that create potential partnerships and open horizons. In most cases, these could be organised at any level and between any group of regions, but the momentum developed in a macro-regional strategy will often make such co-operation more effective. The macro-regional approach is also a comprehensive approach. Essentially, all policies that have effects across and around the region should be included in the Strategy, so that initiatives in one sector take account of the needs and constraints of other sectors.

6 Regional is from here onward taken to mean 'macro-regional' unless otherwise specified.

# 1.2. Horizontal issues

A number of topics that a macro-regional approach addresses are not linked to specific policies or sectors, but are cross-cutting or horizontal. Important horizontal issues to be addressed by the macro-regional strategy for the BSR include territorial cohesion, urban and rural issues and maritime issues. Other horizontal elements will be reviewed under the most relevant headings throughout this Communication.

### 1.2.1. TERRITORIAL COHESION

Territorial cohesion, as the territorial dimension of sustainable development, is about providing citizens with fair opportunities in terms of living conditions, and enterprises with fair prospects for development across the whole of the EU.

Territorial cohesion is obtained through an integrated approach including:

- horizontal co-ordination between sectoral policies at each level from local to European,
- vertical co-ordination between levels and multilevel governance,
- co-operation with neighbouring territories to allow functional approaches, as challenges do not respect administrative borders.

It should result in the combination, at each relevant level, of competitiveness, cohesion and sustainable environment policies based on specific territorial potential.

Territorial cohesion applied to a macro-region such as the BSR is therefore about ensuring that policies at all levels – local, regional, national and European – contribute to a competitive, cohesive and sustainable development of the area, whether maritime or terrestrial.

The EUSBSR will contribute to the objectives of territorial cohesion by:

> reducing territorial disparities,
> ensuring equivalent living conditions,
> building on the region's assets, in particular by:

- ecognising diversity as an asset,
- acknowledging the potential of the region,
- enabling fair access to infrastructures and services,
- promoting good governance with equal participation and the sharing of common resources.

The Strategy for the BSR illustrates several innovations in territorial cohesion. These include a tailored, integrated sustainable development strategy responding to the needs of a functional macro-region; horizontal co-ordination of sectoral policies at different levels at the core of a strategic territorial development process, including both land-based and maritime issues; a vertical co-ordination system which includes stakeholders and territorial actors from different levels; better co-ordination of national legal frameworks and strategies; and an improved alignment of different funding mechanisms.

To assure policy coherence, horizontal actions have to be implemented and appropriate implementation structures built with specific cross-cutting tools.

### 1.2.2. URBAN AND RURAL ISSUES

Traditional approaches to regional development depend on a dichotomy between cities and rural areas. From this perspective, cities are inherently dynamic and attract both labour and capital to make use of the economies of scale they can offer. The role of rural areas, however, is to act as a source of labour in particular, as the economy matures and agriculture becomes less and less viable.

Cities in the BSR (especially in the east of the region) are largely characterised by their relatively small size, weak urban structure and significant distances between them. These characteristics lead to smaller job and service markets, less accessible services, reduced competitiveness and attractiveness, and the risk of rural marginalisation. Metropolitan regions, especially in the BSR's eastern part, are not strong enough to act as drivers and gateways of global economic processes. However, the rural areas are no longer as remote as they used to be and it is often more helpful to see a city, or set of cities, together with the surrounding rural areas, as a mutually supportive system without clear frontiers between them. This means that traditional ideas of appropriate development models for urban areas, as distinct from rural ones, may no longer be valid.

On the other hand, many Baltic cities are dynamic, and rural regions can build on natural resources and quality of life. Optimal future development may well follow a functional region or growth pole approach, where policies are applied according to the needs of the whole region in question rather than in the context of increasingly artificial distinctions between the urban and rural areas.

The EUSBSR can provide an impetus for this integrated approach, thereby making the most of the whole region's assets. Co-operation and networking between functional areas at regional, cross-border and transnational scales should be enhanced, so as to create critical mass, increase regional integration and prosperity.

Therefore, the role and potential of small and medium-sized cities will largely depend on their co-operation with rural areas. Given current demographic and migration trends, it is essential to integrate these cities in the knowledge economy and to enhance their role, as serving centres and potential 'hubs' for surrounding rural areas, in order to extend growth and promote balanced development of the region.



The true metropolitan regions – mainly around the capitals of the western BSR – require policies focused on their specific needs and assets. In particular, the rural component of these city-regions may be so limited as to be irrelevant, while the ability to access regional, national and even international transport links increases the chances of effective networking.

Cities and rural areas will be leaders in implementing some actions included in the Action Plan, such as a network of sustainable cities, sustainable tourism or development of land-based spatial planning. They will also be major partners of many other actions.

### 1.2.3. MARITIME ISSUES

There is a maritime dimension to every major issue facing the BSR today, including environmental protection and conservation, energy, climate change, research and innovation, competitiveness and job creation, trade, transport and logistics. The IMP for the European Union – proposed by the Commission[7] and endorsed, as mentioned above, by the European Council in December 2007[8] – addresses these issues through its cross-sector integrated approach. It focuses on sustainable development for all sea-related activities and on the competitiveness of the region's maritime economy. While the broad principles that underpin the IMP are the same everywhere, implementation of the policy requires translating them into targeted strategies and specific measures tailored to the specificities of each sea basin.

The strong maritime component of the Strategy is in itself an important first step towards the regional implementation of the IMP in the Baltic. It will help meet the challenges in the region, through strengthened internal co-ordination within MS and through cross-border networks and good co-operation with Russia. The coherent and proactive implementation of maritime actions in the Strategy will therefore be an important test case for the sea-basin approach pursued in implementing the IMP. Actions at sea-basin level could also establish positive examples and best practices.

Cross-sectoral tools of the IMP – such as maritime spatial planning, integration of surveillance systems and marine knowledge, which are all being used in the Strategy's actions – can contribute substantially to improving the management of the Baltic Sea. Another horizontal action on development of maritime governance structures will help to strengthen internal co-ordination within the MS and ensure that policies related to the Baltic Sea are not developed in isolation but take account of connections and synergies with other policy areas. Implementation of the Marine Strategy Framework Directive, which is the environmental pillar of the IMP, also requires the development of sea-basin co-operation between all relevant sectors and services.

The Strategy may also play an important role in the context of the upcoming reform of the common fisheries policy (CFP). In addition to contributing to fisheries' profitability and sustainability, in line with the current CFP, the Strategy provides an opportunity to develop and test new approaches – as discussed in the Green Paper on the reform of the CFP[9]. These new approaches include regionalisation and strengthening of stakeholder involvement in fisheries management.

Furthermore, maritime actions such as clean shipping, enhanced maritime training and employment, and the strengthening of maritime clusters, especially during a period of economic downturn, should put more focus on sustainable economic growth, employment and innovation in the BSR.

7 'An Integrated Maritime Policy for the European Union', COM(2007) 575 final of 10.10.2007 and SEC(2007) 1278 of 10.10.2007.

8 'Progress report on the EU's Integrated Maritime Policy', COM(2009) 540 final of 15.10.2009 and SEC(2009) 1343 final of 15.10.2009. For the Council Conclusions, see online (www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/ec/97669.pdf).

9 'Reform of the common fisheries policy', COM(2009) 163 final of 22.04.2009.

# 1.3. The Baltic Sea Region and the financial crisis

Any new EU policy or approach published in 2009 must take into consideration the impact of the recent and still ongoing financial and economic crisis. The Strategy was developed as the crisis approached, but the policy actions and projects proposed are valid for a much longer time frame. This is because of awareness that long-term needs and opportunities in the region will not significantly change, even though short-term resources and constraints may be affected.

On the contrary, the new pressures brought by the crisis emphasise the need to reinforce integration and mutual support in the region. For example, collapsing markets worldwide risk increasing protectionist pressures locally, so measures to reinforce the internal market are more valuable and timely than ever. In each of sector, the same combination of factors offers scope to decisively influence the future development of the region. This means ensuring that sustainability is as powerful a force as profitability; enabling better connections and market access to counter monopsonist suppliers; and enhancing protection against civil and natural risks.

At least in the short term, falling tax revenues and increased public sector deficits will clearly limit the ability of the public sector to make significant new investments. However, this Strategy does not depend on new spending but is intended to ensure the best use of existing financial resources. At a time of reduced market-based activity, there is also less risk that public investment will divert resources from the market-signalled needs of the economy. For example, the energy connectivity projects linked to the 'Recovery Plan'[10] will address both the short-term crisis and better equip the region for the long-term challenges.

10 See http://ec.europa.eu/commission_barroso/president/pdf/Comm_20081126.pdf

# 1.4. Socio-economic analysis

## 1.4.1. OVERVIEW

### Demography

The BSR has a population of around 96.5 million , equivalent to one fifth of the EU's population. Almost 40% of them live in Poland. The Nordic countries represent 25%, the German BSR regions 15.1%, the Russian BSR regions 12.8% and the Baltic States are home to 7%. The BSR East accounts for 60% of the total population and the BSR West for 40%[11].

The land area of the BSR is approximately 3.2 million km². Population density is much lower than in the EU as a whole, with only 30 inhabitants per km² compared to 114 in the EU (see Map 1). Of the 58 regions, 10 (in Russia, Finland, Sweden and Norway) have fewer than eight inhabitants per km². The German BSR regions (170), Poland (122) and Denmark (126) are the most densely populated.

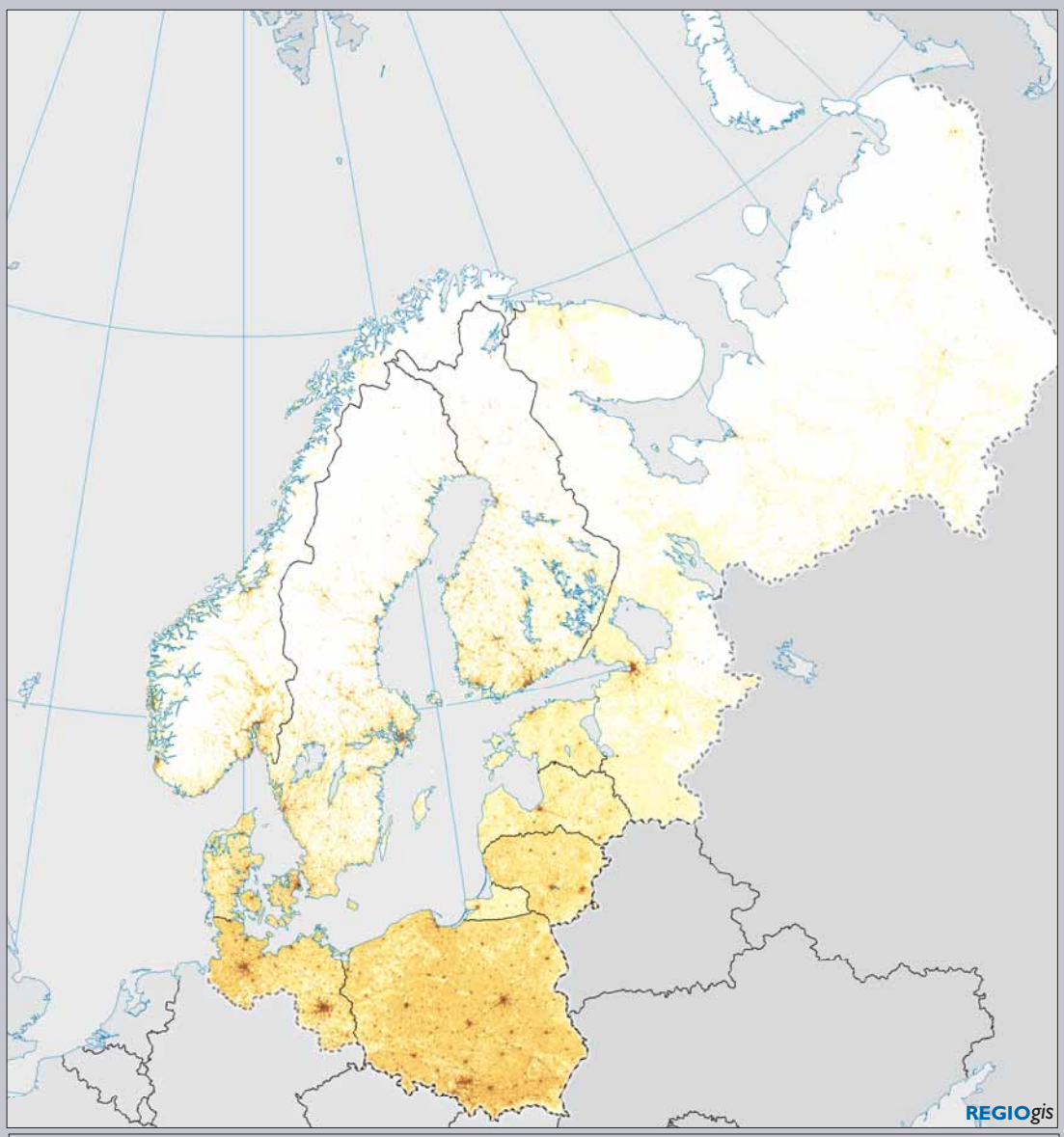
The population of the BSR has been declining by 0.1% a year since 2000, while in the same period the EU population has increased by 0.3% a year. The east-west divide in the region is marked, with the BSR West gaining population at 0.2% a year and the BSR East experiencing a decline of 0.4% in 2000-05. Norway (0.6%) has the fastest growing population and the Russian regions (– 0.7%) and Latvia (– 0.6%) the sharpest decline. For 2000-05, Map 2 (2a/2b/2c) shows the total population growth, natural population growth and net migration in the BSR.

In the BSR East, population declined through both natural and migration causes. The yearly natural population decline was 0.24%. The net outward migration reduced the population by another 0.1% a year. All the eastern countries in the region experienced net outward migration except Estonia.

11 The BSR West covers the countries of the EU-15 falling within the BSR plus Norway. The BSR East covers the CEECs falling within the BSR plus Russia.



## MAP 1: POPULATION DENSITY




**Population Density**

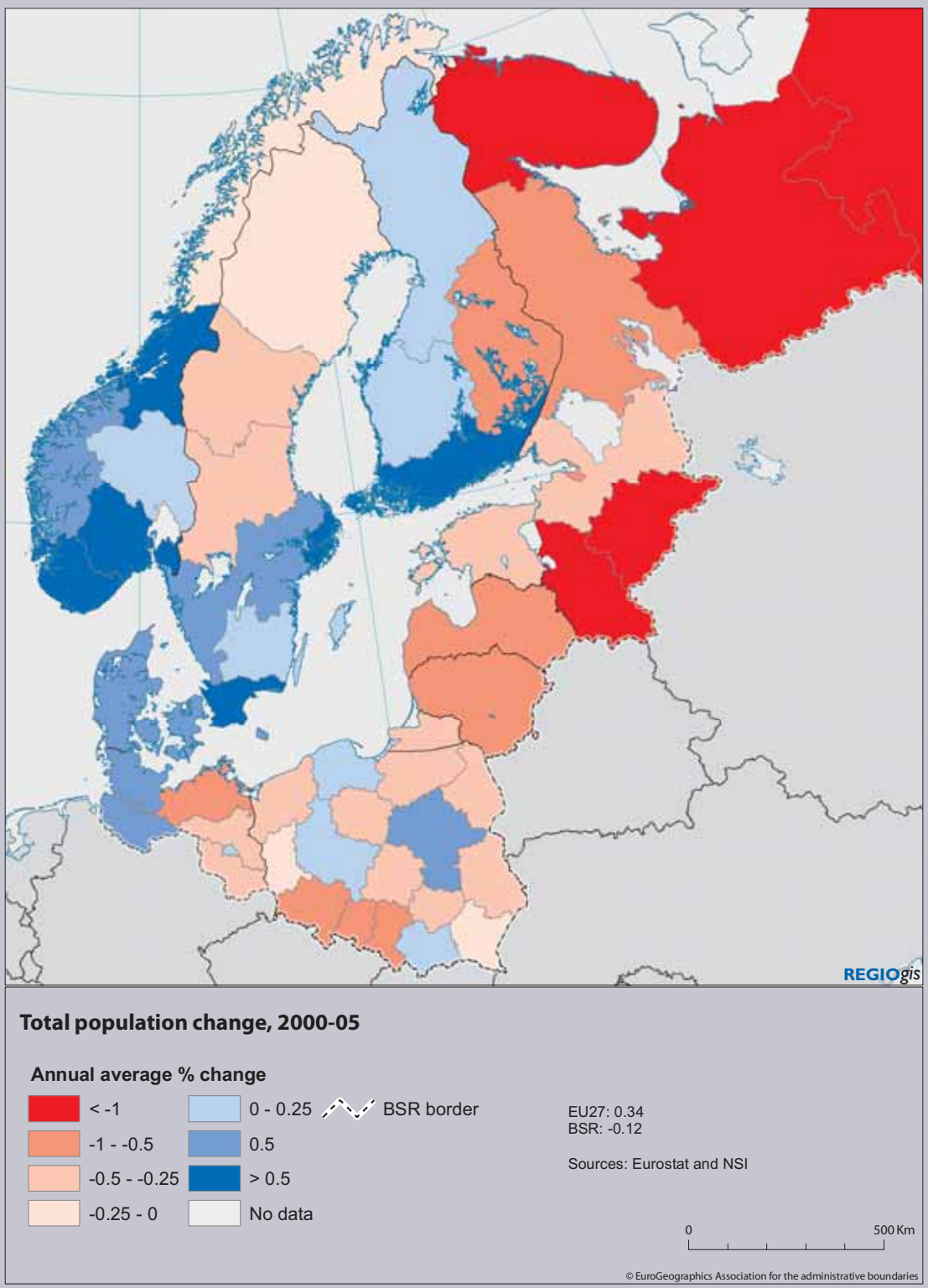
- 0
- 0 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 250
- 250 - 500
- 500 - 1000
- 1000 - 2500
- 2500 - 5000
- 5000 - 10000
- > 10000
- BSR border

EU27: 114
BSR: 30

Sources: JRC, Statistics Sweden, Statistics Findland, Statistics Norway, Landscan, DG Regio

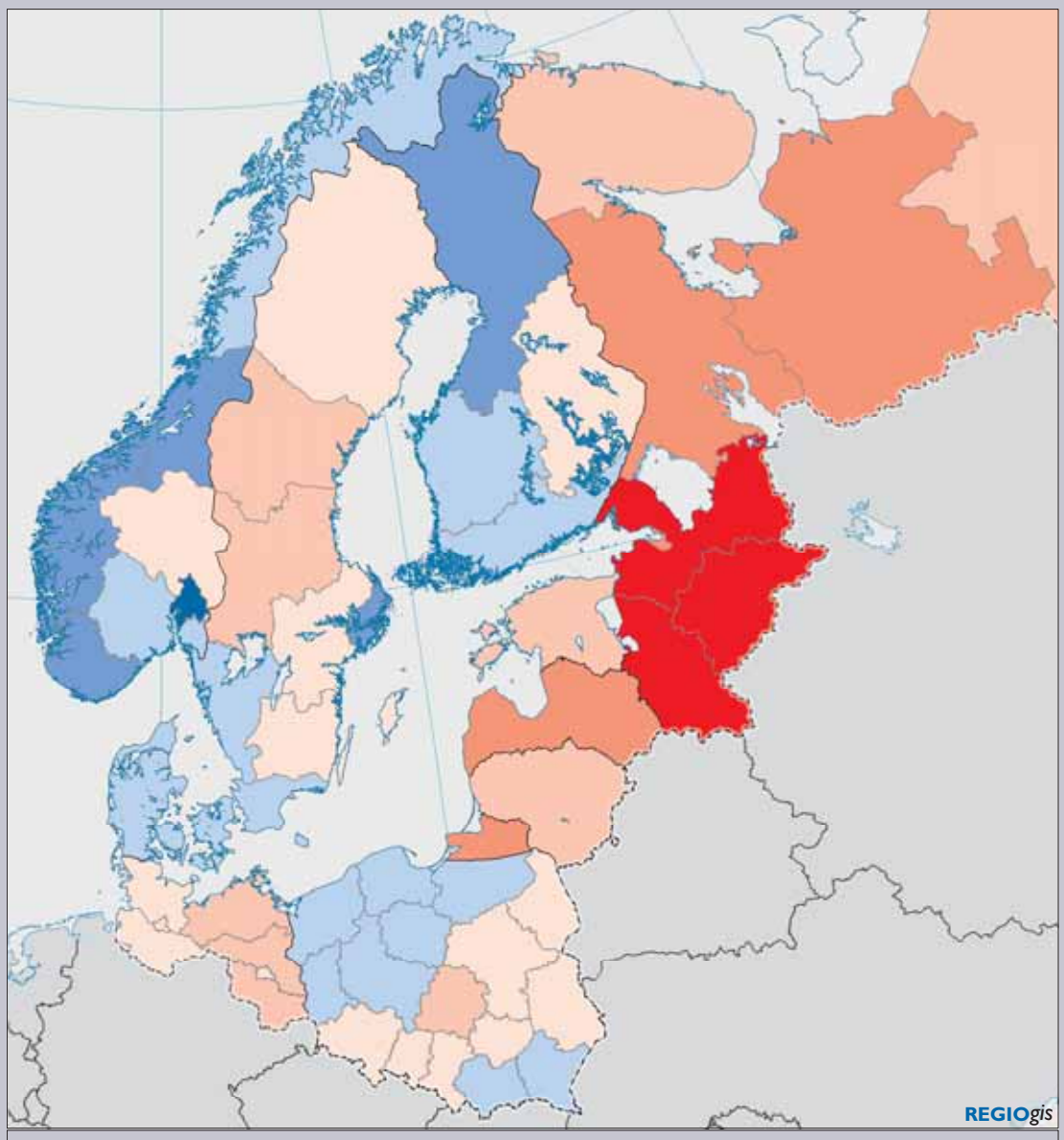
0 500 Km

## MAP 2A: TOTAL POPULATION CHANGE, 2000-05





## MAP 2B: NATURAL POPULATION CHANGE, 2000-05




**Natural population change, 2000-05**

**Annual average % change**

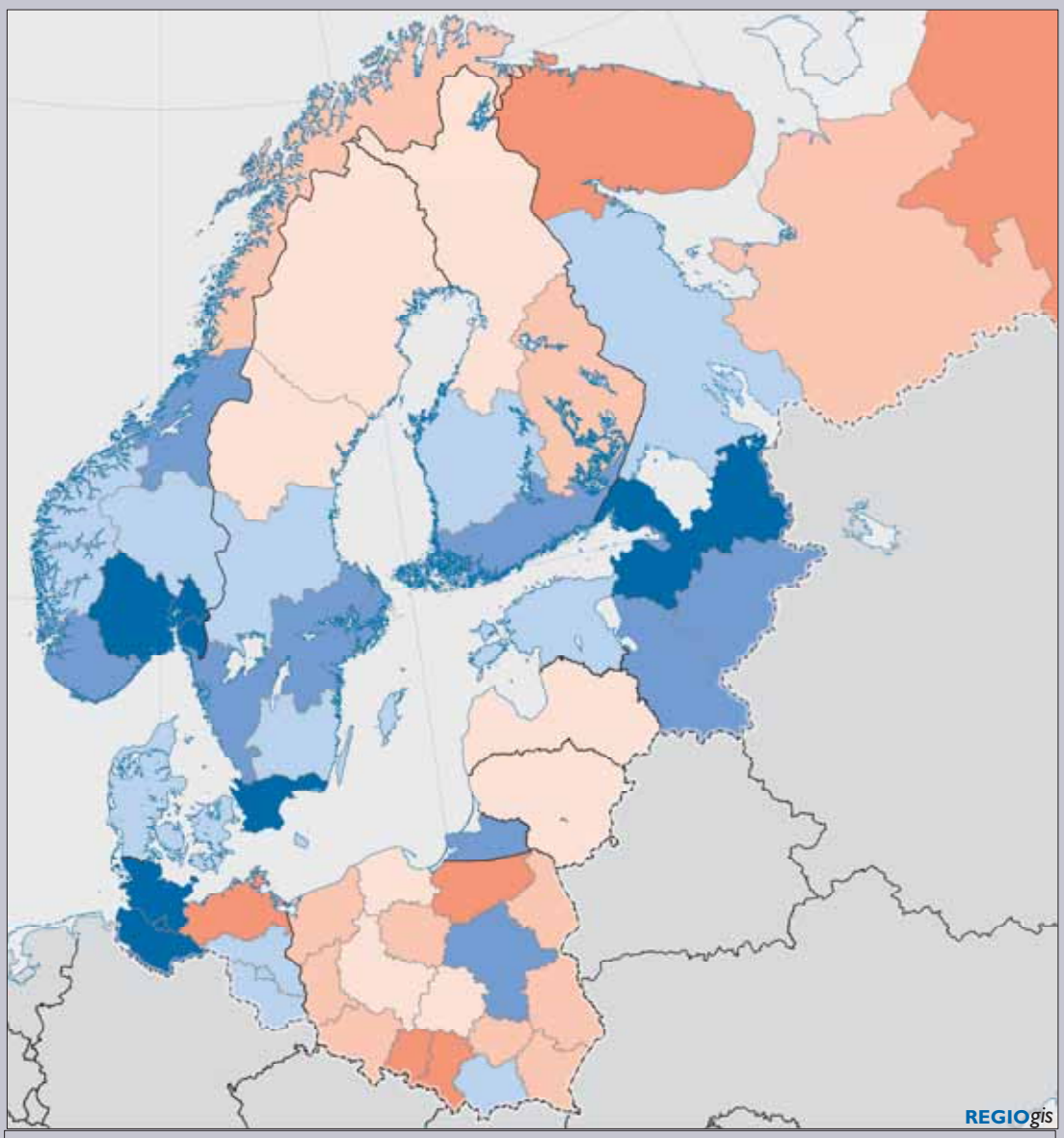
- < -1
- -1 - -0.5
- -0.5 - -0.25
- -0.25 - 0
- 0 - 0.25
- 0.25 - 0.5
- > 0.5
- No data
- BSR border

EU27: 0.05
BSR: -0.13

Sources: Eurostat and NSI

0 500 Km

## MAP 2C: NET MIGRATION, 2000-05




**Net migration, 2000-05**

**Annual average % change**

- < -1
- -1 - -0.5
- -0.5 - -0.25
- -0.25 - 0
- 0 - 0.25
- 0.25 - 0.5
- > 0.5
- No data
- BSR border

EU27: 0.29
BSR: 0.02

Sources: Eurostat and NSI

0 500 Km



## Economic performance

The BSR includes some of the fastest growing regions in the EU. As shown in Figure 1, GDP growth in the regions around the Baltic Sea was above the EU-27 average until 1998 and in 2003 outpaced it again. Since then the BSR's GDP has grown almost 3% a year, compared to the 2.2% in the EU-27.

The Baltic States have had the highest GDP growth in the EU since the late 1990s. In 2006, Latvia's growth peaked at 12.2%. BSR West growth rates ranged from 2.3% (Norway) to 4.9% (Finland). But the BSR countries are being hit by the current financial and global economic crisis. GDP growth in the region was expected to fall to 1.5% in 2008 (1% in the EU), while for 2009 forecasts indicated that GDP in the BSR would fall by – 0.7% (– 1.8% in the EU) before recovering to grow by 1.2% (0.5% in the EU) in 2010.

Disparities in GDP per capita in the BSR are amongst the highest in the EU. Map 3 clearly demonstrates the strong east-west divide in the region. The BSR West has a GDP/capita equal to 122% of the EU-27 average, whereas the GDP/capita in the BSR East is only 52.6% of the EU-27 average. The Baltic States and Poland have the lowest GDP/capita in the EU-25 – only Bulgaria and Romania are lower in the EU-27. The Russian BSR regions have an average of only a quarter of the EU's GDP/capita.

On the other hand, all the BSR West countries have values above the EU-27 average. The GDP/capita of Norway (179.8%) is higher than any EU Member State except Luxembourg. Denmark (126%) and Sweden (123%) are placed fifth and sixth.

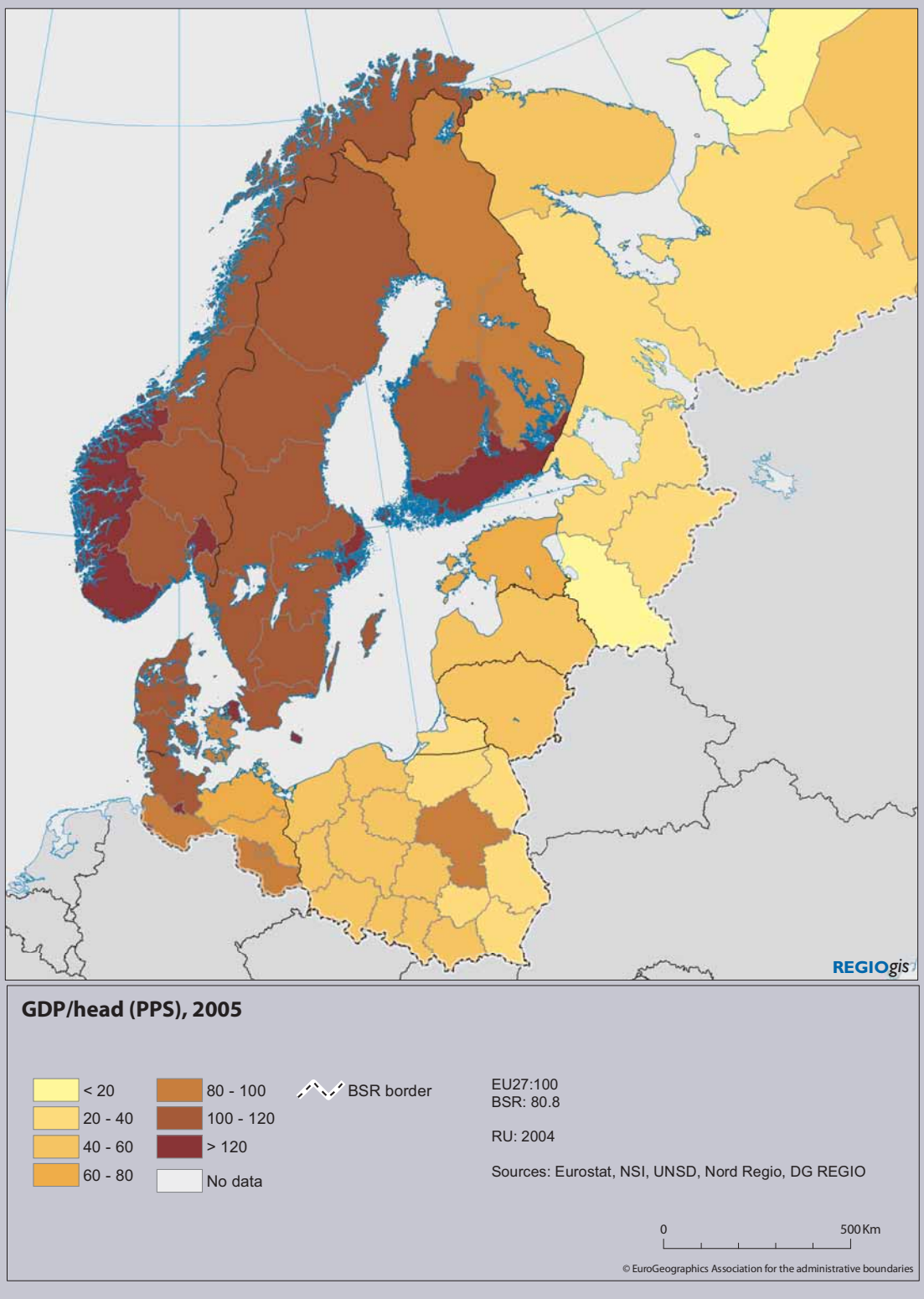
At regional level, 36 of the 58 nomenclature of territorial units for statistics 2 (NUTS 2) regions that make up the BSR had a GDP/capita, in 2005, in purchasing power standards (PPS), below 75% of the EU average and 29 were below 50%. The only eastern region to have a GDP/capita above 75% of the EU average was Mazowickie (Poland).

Figure 1: GDP growth

GDP GROWTH, 1996-2010*


Source: Eurostat
Notes: No data for the RU regions
* Data for 2007-10 are forecasts of the Directorate-General for Economic and Financial Affairs from 19 January 2009. Data for Norway are forecasts from autumn 2008.

## MAP 3: GDP/HEAD INDEXED TO EU-27 AVERAGE, 2005





The magnitude of the regional disparities in the area becomes clear when one compares the top 20% of NUTS 2 regions in the BSR with the bottom 20% in terms of GDP per capita in 2005. The top regions are 4.1 times richer than the bottom ones, which equals the ratio between the top and the bottom regions in the EU-27 in 1995. In the EU-27, the ratio in terms of GDP per capita between the top and bottom 20% regions was 3.3 in 2005. Despite the geographic proximity of the regions, the income of the different regions is therefore even more unequal than for the whole EU.

### 1.4.2. PROSPERITY

#### Dynamic analysis and future challenges

Table 1 shows the sources of economic growth in 2000-05. Undoubtedly, the strength of the BSR countries lies in the high growth of labour productivity triggered by the high-tech manufacturing sectors, highly educated human capital and a high rate of innovation.

In 2000-05, labour productivity grew at a rate almost triple that of the EU-27. The region has now reached a productivity level of 87% of the EU-27 average compared to 78% 10 years ago (see Map 4). The eastern countries have significantly lower productivity levels, but are continuing to catch up with the BSR at average rates of 4% a year.

The high productivity growth created considerable space for regional growth, but not all of it has been reflected in GDP growth. While the share of active population had a weak but still positive impact on GDP growth, the heavy decline of the employment rate in Poland and the German BSR, and the weak or negative population growth in most of the BSR regions, was a drag on GDP growth and as a result it was only one percentage point higher than in the EU-27.

The employment rate (also discussed below) is very low in Poland and the Russian BSR regions, thus there is space for improvement. Indeed, the forecast for the Polish employment rate until 2020 suggests that there will be an improvement but that employment will still be relatively low[12]. In the long term, however, the demographic decline will make it difficult to increase total employment in the region.

12 Globalisation challenges for European regions, Directorate-General for Regional Policy, 2009, p. 14. The study covers only the regions of the European Union.

Table 1: Sources of economic growth, 2000-05

| GDP growth | | Labour productivity | | Employment rate | | Active population | | Population |
|---|---|---|---|---|---|---|---|---|
| 1. EE (8.3%) | | 1. EE (7.1%) | | 2. LV (1.8%) | | : | | : |
| 2. LV (8.2%) | | 2. LT (6.9%) | | 4. EE (1.1%) | | 5. LT (0.5%) | | : |
| 3. LT (7.8%) | | 4. LV (6.4%) | | : | | 6. PL (0.4%) | | NO (0.6%) |
| : | | 5. PL (6.1%) | | 8. DK (0.9%) | | 7. LV (0.4%) | | EU-27 (0.4%) |
| 13. PL (3.2%) | | : | | 10. LT (0.8%) | | 8. EE (0.4%) | | 13. SE (0.4%) |
| 16. SE (3.0%) | = | BSR (2.9%) | + | 12. FI (0.7%) | + | 9. NO (0.2%) | + | 14. DK (0.3%) |
| NO (2.2%) | | 13. SE (2.3%) | | EU-27 (0.3%) | | BSR (0.2%) | | 16. FI (0.3%) |
| : | | NO (1.9%) | | : | | : | | 19. PL (– 0.05%) |
| BSR (1.9%) | | 16. FI (1.6%) | | 22. SE (– 0.1%) | | 18. SE (0.03%) | | BSR (– 0.1%) |
| EU-27 (1.8%) | | 18. DK (1.3%) | | NO (– 0.5%) | | EU-27 (– 0.04%) | | 23. EE (– 0.5%) |
| 19. FI (1.7%) | | EU-27 (1.1%) | | BSR (– 1.1%) | | 21. FI (– 0.1%) | | 24. LT (– 0.5%) |
| : | | : | | 27. PL (– 3.2%) | | 26. DK (– 0.4%) | | 25. LV (– 0.6%) |

Source: Eurostat, Directorate-General for Regional Policy calculations
Notes: No data for the RU regions.

With the exception of Övre Norrland in Sweden and Nord-Norge in Norway, all the regions that are already faced with declining population – plus Berlin and Pomorskie in Poland – will continue to lose people. This population decline will start to affect the BSR's active population[13]. In 2020, the proportion of population of working-age is expected to be particularly low in most of Finland (Itä-Suomi, Länsi-Suomi, Pohjois-Suomi), in the regions of northern Sweden (Mellersta-Norrland, Norra Mellansverige, Småland med öarna) and in all of eastern Germany except for Berlin, Hamburg and Bremen.

Increasing participation in the labour market can help to compensate for the shrinking working-age population. However, this will largely depend on the capacity of Poland to increase participation rates, since these are already very high in the rest of the BSR.

The Swedish and Finnish regions are well placed to take advantage of the globalisation process[14] thanks to their high levels of productivity and employment. Estonia, Denmark, Brandenburg-Nordost and Brandenburg-Südwest are also well placed[15]. Lithuania and the other eastern German regions are expected to become more vulnerable to the possible negative impacts of globalisation[16], especially due to a lower level of labour productivity expected in 2020 as compared to the EU-27 average, a high unemployment rate in eastern Germany and a lower educational level expected in Lithuania in 2020. The central Polish regions will improve their ability to face globalisation until 2020, thanks to a projected increase in the employment rate and an increase in the educational level. The remaining parts of Poland will remain vulnerable to the negative impacts of globalisation.

In general, the BSR West is more vulnerable to the demographic challenge. But it also covers some of the EU countries that are best prepared to face the globalisation challenge. By contrast the BSR East is less concerned by the demographic challenge, at least in the medium term, but is more exposed to globalisation.

### Labour market

Employment was flat in the BSR over the period 1996-2005, but this hides modest growth in the western Baltic and an equivalent decline in the East.

The same picture can be seen in the employment rate, as shown in Map 5. Despite high employment rates in BSR West, the average employment rate in the BSR was only 64.7%. This reflects the weight of the Polish and Russian working-age population with no employment. The highest employment rates were in the Finnish Åland region and Oslo (79%). The lowest rates were observed in 11 Polish regions, going down to 52% in Zachodniopomorskie and 54% in Kujawsko-Pomorskie.

Three (Denmark, Finland and Sweden) of the seven EU countries who meet the Lisbon target on employment rate (>70%) come from the BSR. If the Lisbon employment target were applied to Norway, that country would also meet it. Amongst the NMS, Estonia (69%) is the closest to meeting the Lisbon target.

13 Demographic challenges for European regions, Directorate-General for Regional Policy, 2008, pp. 14-15. The study covers only the regions of the European Union.

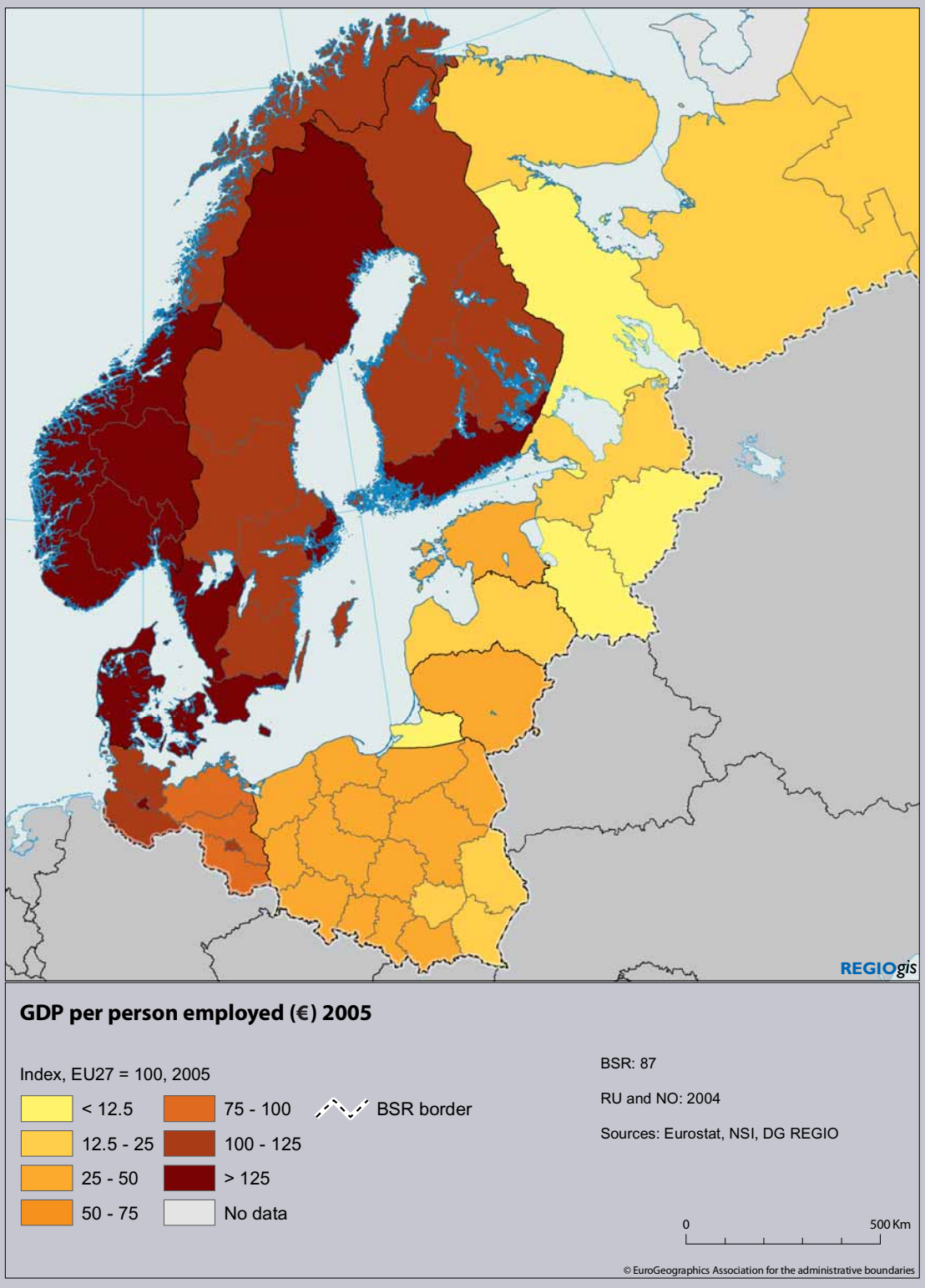
14 Advantages of globalisation include improved living standards, lower prices, wider choice of goods, enhanced labour demand and real wages for skilled labour, and an increase in productivity through diffusion of innovation and know-how.

15 Globalisation challenges for European regions, Directorate-General for Regional Policy, 2009.

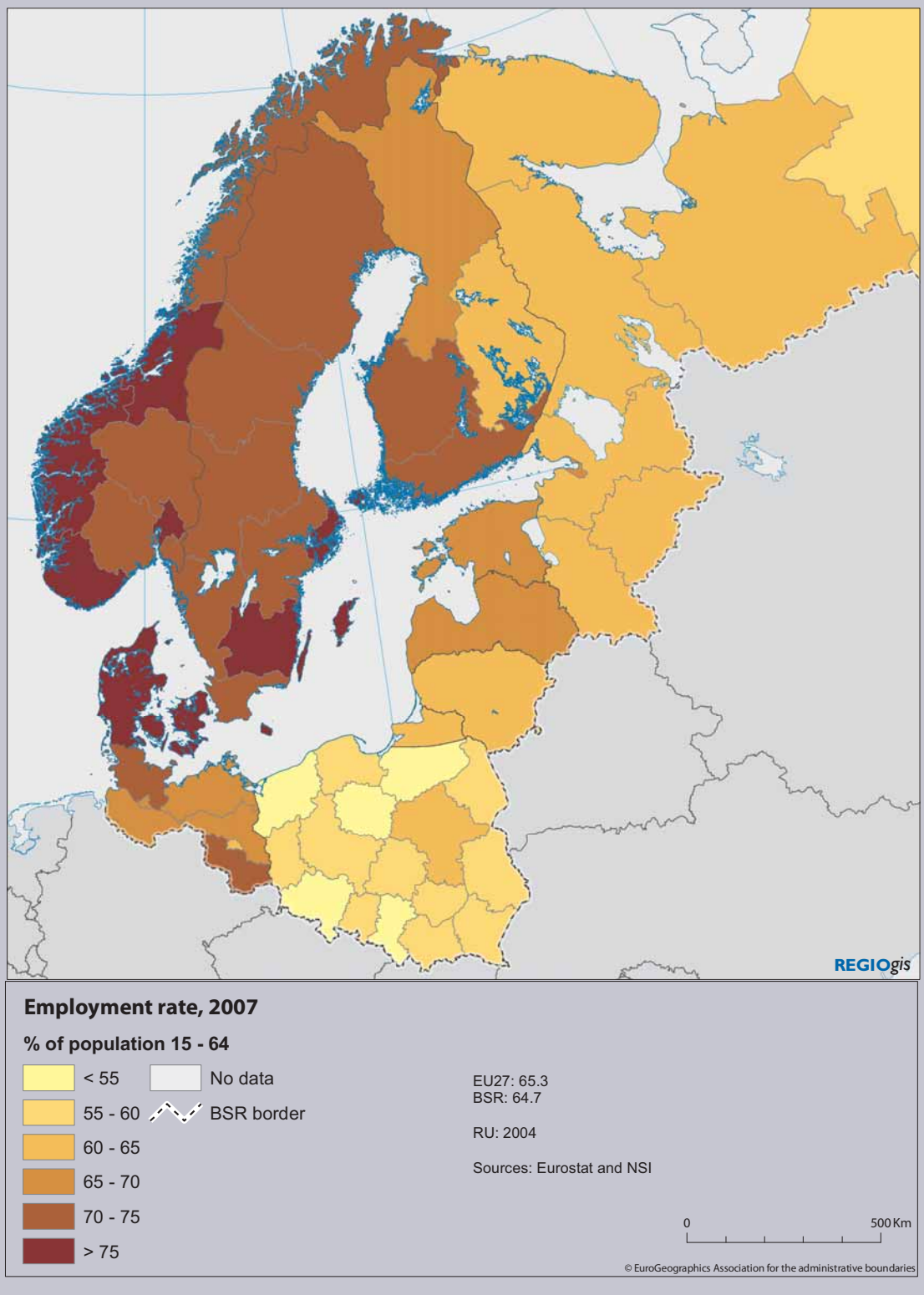
16 Possible negative impact of globalisation: lowered living standards by the reduction of economic activities now free to relocate where conditions are more favourable. Raising imports competition will further threaten local enterprises. Decline in economic activity leads to job losses, reduction of real wages for unskilled jobs and overall reduction of social welfare.



## MAP 4: LABOUR PRODUCTIVITY



## MAP 5: EMPLOYMENT RATE





The unemployment rate in the BSR (8%) in 2007 was above the EU-27 average (7.2%). This result was due to the high number of unemployed in Poland (9.6%) and in the German BSR (12.4%). Norway (2.6%) and Denmark had the lowest unemployment rates in 2007 followed by Lithuania (4.3%) and Estonia (4.7%). Outside Poland and Germany, only the Finnish region of Itä-Suomi (11%) and the Russian regions of Murmansk (11%) and Komi (12%) had unemployment rates above 10%.

## Very low labour mobility in the BSR

The BSR offers challenging conditions for labour market integration. These include differences in language, culture and labour legislation. For several years there were also labour market restrictions, as Denmark and Germany introduced transition periods for the free movement of labour from the NMS after the 2004 EU enlargement. Each of the nine countries surrounding the Baltic Sea plus Norway speaks its own language and these languages stem from five different language groups.

The working-age population who changed their region of residence[17] in 2006 accounted for 1% of the BSR's total working-age population, compared to 1.26% in the EU.

On the western side of the Baltic Sea, the residential moves from within the EU and Norway (see Table 2) represented 1.33% of the total working-age population; that is slightly above the average for the EU-15. This result was driven by the German regions, where 1.82% of the working-age population came from another EU region or Norway. This share is higher than that for the whole of Germany but below the average for France (2.1%) – the country with the highest inflow of working-age residents from the EU.

Compared to the BSR West, the BSR East receives four times fewer working-age residents from the other regions of the EU and Norway, equal to just 0.3% of its total working-age population. Regions in the BSR West are thus clearly the main destinations for working-age residents from other regions of the EU and Norway.

Working-age residents from non-EU countries during 2006 contributed 0.23% to the BSR's total (see Table 2). This share was higher in the old Member States than in the new ones, though the difference was less pronounced than for residential moves from within the EU.

The preferred destinations in the BSR for the non-EU working-age population who changed their residence in 2006 were the Finnish capital region (0.9%), Lithuania (0.6%) and Denmark (0.5%) followed by the German BSR regions (0.5%) and some of the Polish regions bordering Ukraine.

17 The data does not take into account seasonal work and education/training (unless they involve a change of residence), movement of workplace over shorter periods (daily commuting) and movement of workplace without a change in permanent residence.

Table 2: Share of working-age population changing residence, 2006

| Comparison between the EU and the BSR, 2006 | EU-27 | EU-15 | NMS12 | BSR | BSR_W | BSR_E |
|---|---|---|---|---|---|---|
| Share of working-age residents who moved from a different region/state | 0.96% | 1.12% | 0.34% | 0.75% | 1.33% | 0.29% |
| Share of working-age residents who moved from abroad | 0.30% | 0.34% | 0.16% | 0.23% | 0.31% | 0.18% |
| Net migration | 0.38% | 0.52% | – 0.12% | 0.002% | 0.02% | – 0.01% |

Source: NSI, Eurostat, Directorate-General for Regional Policy calculations
* Norway is only included for the calculation of labour mobility in the BSR.

In general, the share of labour mobility in the BSR, both from within the EU and Norway and from abroad, is lower than the already low shares observed in the EU as a whole. So clearly aspects other than labour mobility need to be considered when designing policies to reduce the east-west divide and increase the region's growth prospects.

## Employment and value added by sector

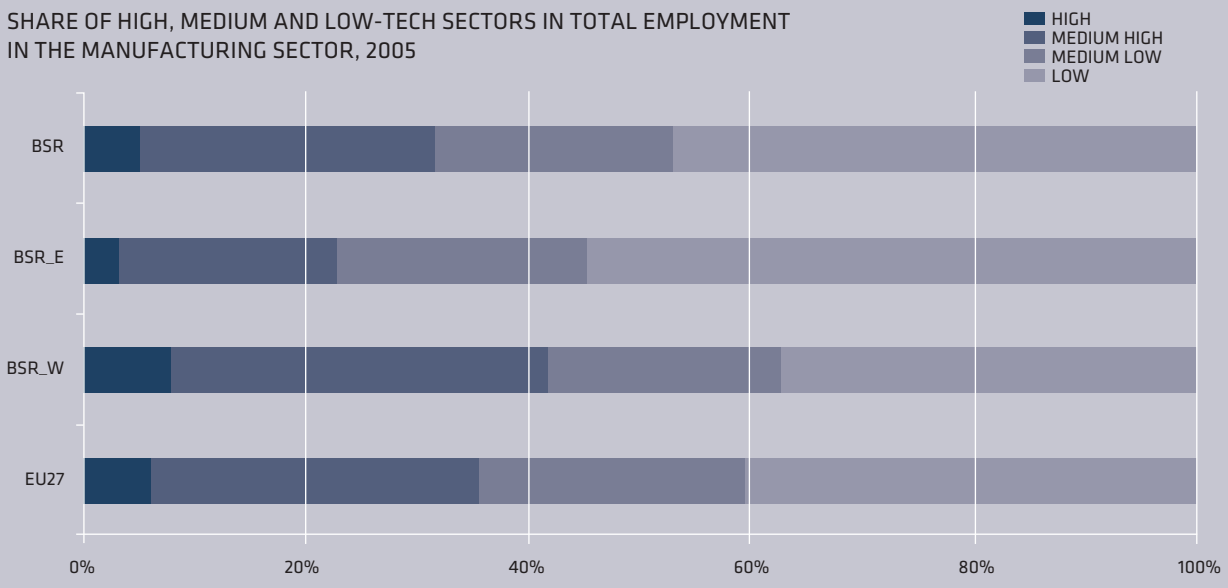
Table 3 (in the Annex) shows the change in the sectoral share of the gross value added (GVA) and employment in 2000-05 and it compares the division of GVA and employment between sectors in and within the EU-27 and the BSR in 2005. The table also shows the change in the labour productivity in 2000-05 and the level of labour productivity in the sectors indexed to the EU-27 in 2005.

It shows that both the BSR and the EU-27 have increased their share of employment in the services sector and public administration sector, which together employ more than half the labour force. In 2005, the shares of employment in these two sectors in the BSR and the EU-27 were very similar; however, labour in the EU-27 proved to be more productive. In the BSR, labour productivity in the services sector is 89% of the EU-27 average and only 83% of the EU-27 average in the public administration sector.

In 2005, the industry sector was the third biggest employer. It employed 19.2% of the people in the BSR and 19.8% in the EU-27. The BSR labour force in the industry sector is more productive than in the EU-27 as a whole. In other words, a share of employment that is below the value for the EU-27 produces a share of the total GVA (24.2%) that is above the value for the EU-27 (20.2%). This result is driven by the German regions and the Nordic countries, whose labour productivity is twice as high as in the EU-27 and 60% higher than in the EU-15, reflecting the concentration of high value-added high and medium-technology sectors.

Figure 2: The manufacturing sector

SHARE OF HIGH, MEDIUM AND LOW-TECH SECTORS IN TOTAL EMPLOYMENT IN THE MANUFACTURING SECTOR, 2005




Source: Eurostat
NB: No data for the RU regions



As shown in Figure 2, the countries on the western side of the Baltic Sea have a high share of people employed in the manufacturing sector and working in high-tech industry[18]. Finland (the home of Nokia), which has the second highest share in the EU-27, drives the region with 11.3%. All the other countries in the BSR West have shares above the EU-27 average (5.9%). In the eastern part of the BSR, Estonia and Latvia have shares close to the EU-27 average. When combining the share of the high and medium-tech sectors, the German regions (47.8%) show the highest share of employment followed by the Nordic countries, all with shares above the EU-27 average (35.5%). On the other hand, in the region's NMS, the shares of low and medium-low sectors are still very high when compared to the EU-27 average (64.5%), ranging from 88.8% in Latvia to 75.6% in Poland.

The agriculture sector's share of total employment has been declining over recent years, although this process seems to be happening faster in countries outside the BSR. On average, the NMS that still have a very high share of employment in agriculture experienced a decline of 5.6% a year during the period 2000–05, whereas in the BSR East it was only 2.4%. This has directly led to an improvement in labour productivity by 10.3% in all NMS, but only by 5.6% in the BSR East.

## Education

The increase in labour productivity is determined by the resources available, both human and physical, as well as by less tangible factors, such as the innovative capacity of the region and its system of governance.

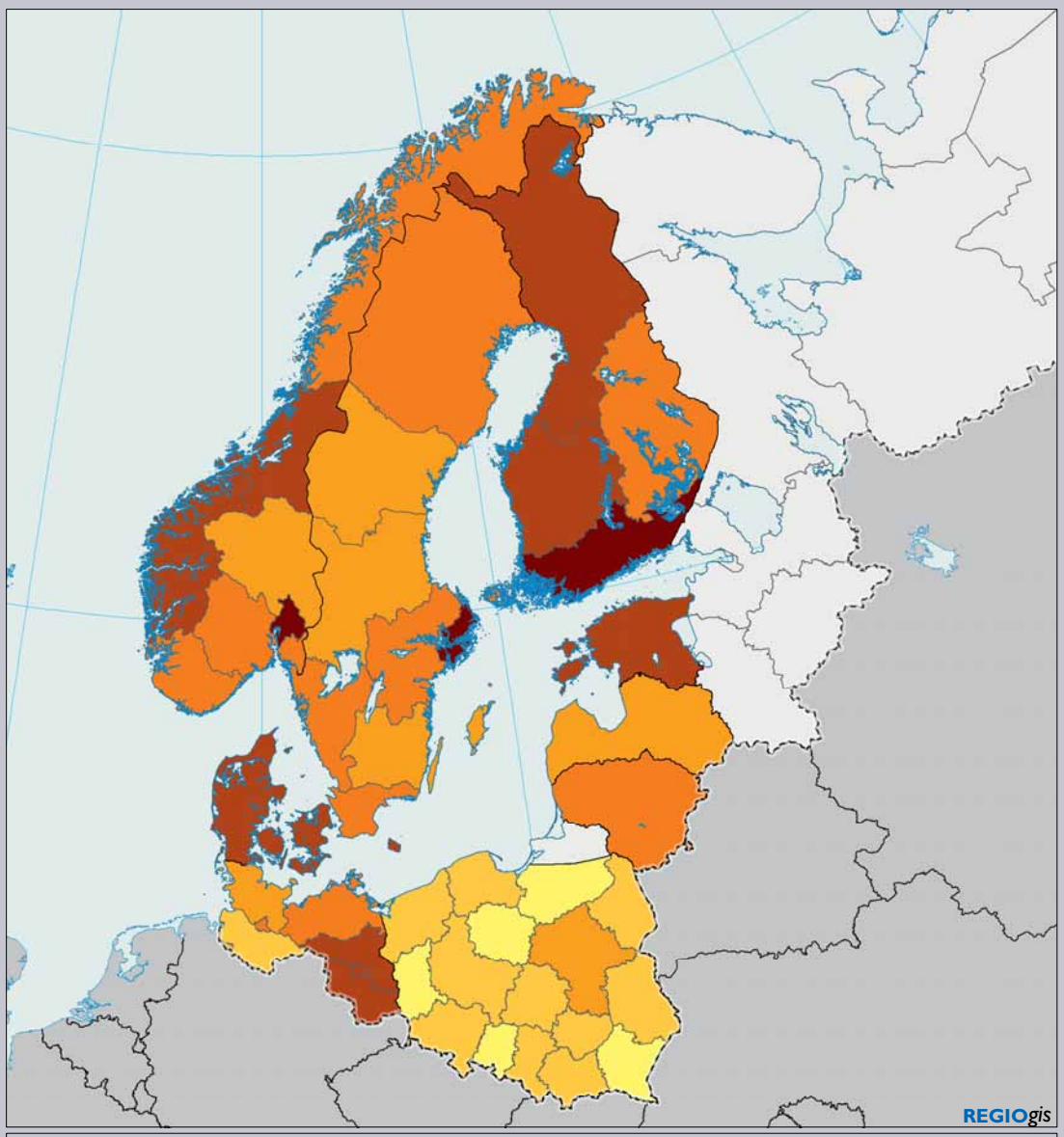
The workforce's educational level is one of the main factors explaining the high competitiveness of the BSR economy and a potential source of its capacity to achieve and sustain acceptable rates of growth in the future too. This is important for the individual countries but also for the BSR as a whole. Increasing the educational level of people of working-age is also a key part of the Lisbon Strategy.

The BSR includes three countries with the highest share of highly educated labour in the EU (see Map 6). In 2005, Finland had the largest share with 35% of its working-age population having completed tertiary education, followed by Denmark (33.5%) and Estonia (33.3%). Norway is fourth with 32.6% followed by Sweden (29%), placing them also amongst the first six in the EU.

The share of people with tertiary education, i.e. with university degrees or equivalent, is especially important. Many of the most dynamic activity sectors depend on the ability and know-how of university graduates and their capacity to absorb new knowledge and learn new skills. Amongst the BSR countries (excluding the Russian regions), only Latvia (20.5%) and Poland (16.7%) had a share below the EU-27 average of 22.2%.

18 The high-tech sector includes the manufacture of pharmaceuticals, computers, communication equipment, medical instruments, watches, aircraft and spacecraft. The medium-high-tech sector includes the manufacture of other chemical products, other machinery, motor vehicles and other transport equipment not included in the high-tech sector. The medium-low-tech sector includes the manufacture of petroleum products, plastic products, metals, and the repair of ships. The low-tech sector includes the manufacture of food products, beverages, tobacco, textiles, leather, wood, paper, publishing and other manufacturing.

## MAP 6: WORKING-AGE POPULATION WITH TERTIARY EDUCATION, 2005




**Population aged 25-64 with tertiary education (ISCED 5 and 6), 2005**

% of total population 25-64

< 15
15 - 20
20 - 25
25 - 30
30 - 35
> 35
No Data
BSR border

EU27: 22.20
BSR: 23.73

Source: Eurostat

0 500 Km



## The BSR West at the top of the knowledge economy in the EU

There is a high supply of labour with high educational levels and the demand for them is also very high. The regions covered by the BSR have one of the largest shares of people employed by the knowledge economy[19] in the EU-27 (see Map 7 on employment in the knowledge economy). The Swedish capital region tops the list with more than 60% of employment in the knowledge economy. The Norwegian capital region comes next, followed by Berlin and the rest of Sweden. In fact, all the Nordic countries and most of the German BSR regions have shares above the EU-27 average (39.2%). As a result, the average for the BSR (43.3%) is also above the EU-27 average.

In the NMS, the values range between 34.3% and 32.7% in the Polish Mazowieckie and Pomorskie regions, and between 24.3% and 21.5% in the Świętokrzyskie and Podlaskie regions of Poland. Estonia, which has the third highest share of people with tertiary education in the EU, has a share of 33%: this is the highest amongst the Baltic States but below the EU-27 average. Compared to the other NMS in the EU, Estonia is placed in the upper-middle group (after the Czech, Slovak and the Hungarian capital regions, Slovenia, several other Hungarian and Czech regions and the above mentioned two Polish regions).

## Innovation and research

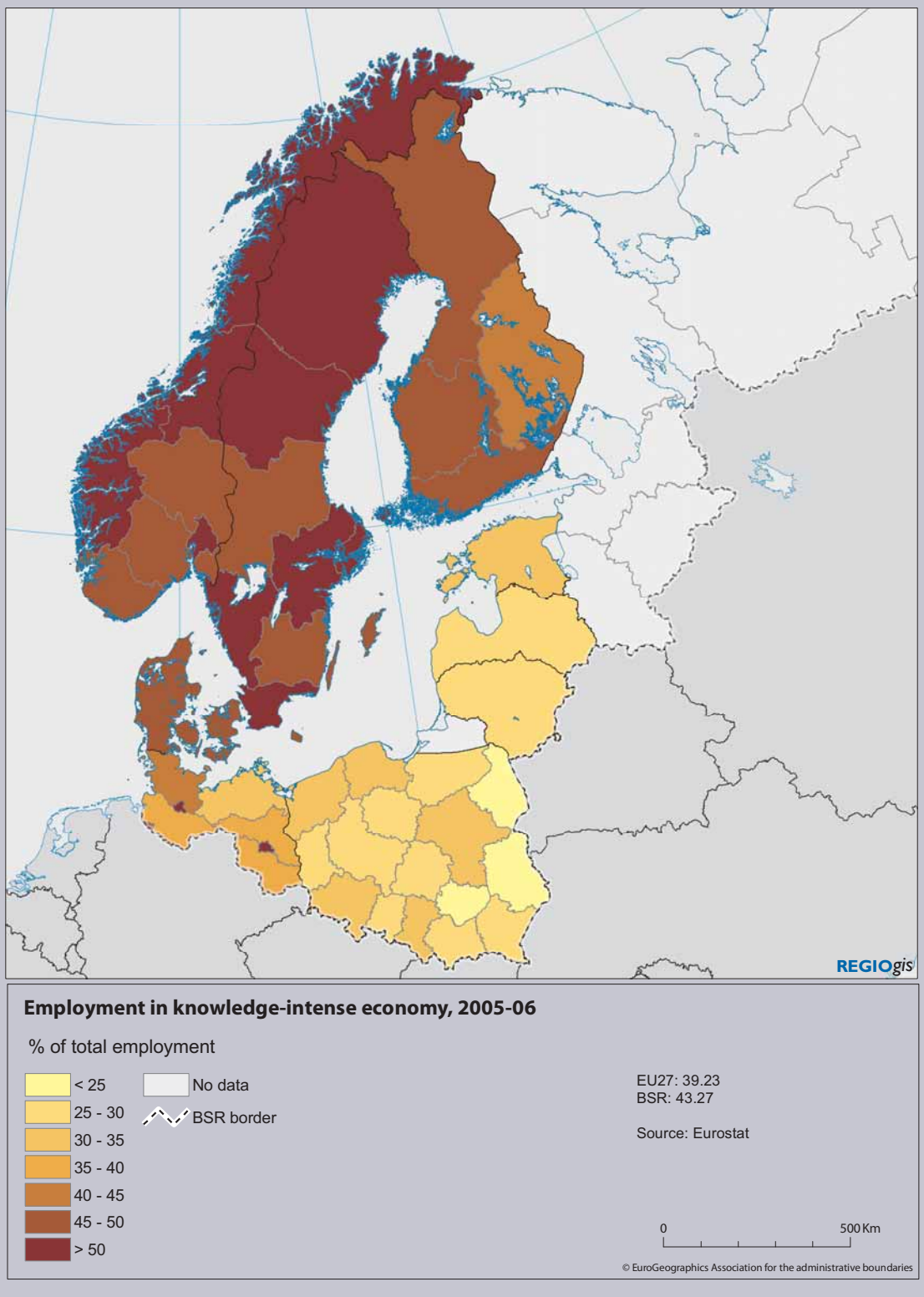
Innovation capacity is another important factor for the competitiveness of the BSR. The Swedish and Finnish regions, Denmark and Berlin are among the 30 regions in the EU with the highest share of GDP spent on R&D (see Map 8 on R&D expenditure). The Swedish Västsverige region performs best in the EU with 5.3%. The share of GDP devoted to R&D in the western part of the BSR is outstanding: 3.8% in Sweden, 3.4% in Finland and 2.5% in Denmark, whereas the average for the EU-27 is 1.9%. Amongst the NMS in the region, Estonia performs best with 0.9% of its GDP spent on R&D. In the eastern BSR, the values are between 1.1% and 1% in the Polish Mazowieckie and Malopolskie regions and close to 0.1% in the Opolskie and Świętokrzyskie regions of Poland.

On average, the countries in the BSR spend 2.2% of their GDP on R&D, which is above the EU-27 average (1.9%). The Nordic countries and the German BSR regions demonstrate an exemplary 2.6%. The share of GDP devoted to R&D in the eastern BSR regions is 0.6%, which is below the average for the NMS12.

On average, there were 200 European Patent Office (EPO) applications per million inhabitants in the BSR in 2004-05. In the EU-27, there were 268 applications per million inhabitants for an EPO patent. In absolute terms, the number of applications per million (see Map 9) inhabitants was higher in the western BSR (421) than in the EU-15 (334). However 1% of R&D-related expenditure in the EU-15 generated 176 EPO patent applications per million inhabitants, whereas in the western BSR it was only 164. The discrepancy in the efficiency of the R&D expenditure is higher when comparing the whole of BSR, where 1% of R&D expenditure leads to 90 EPO patent applications, compared to the EU-27 where the same R&D expenditure generates 143 EPO patent applications per million inhabitants.

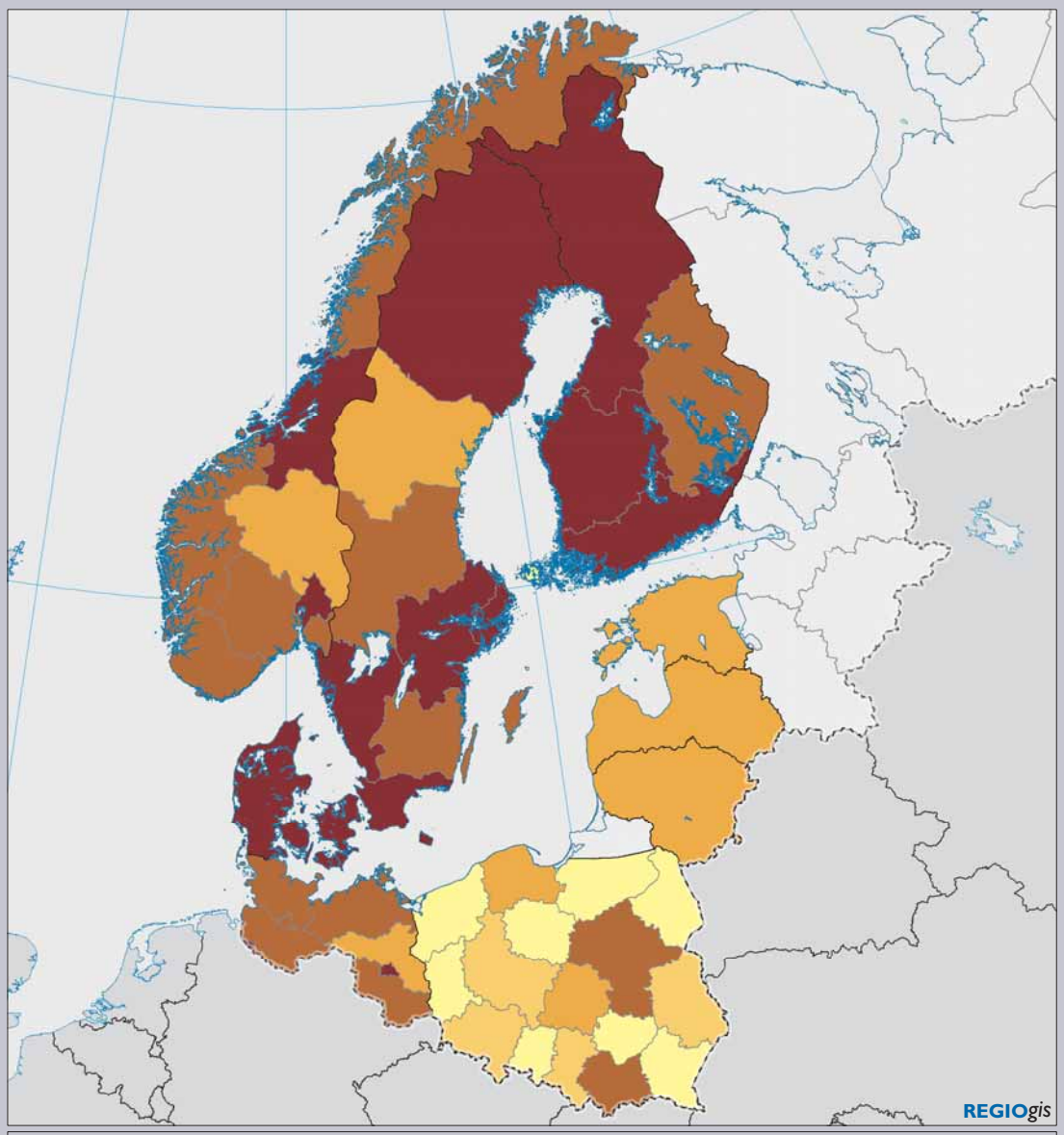
19 Knowledge-intense services and high and medium-high-tech sectors.

## MAP 7: EMPLOYMENT IN KNOWLEDGE-INTENSE ECONOMY, 2005-06

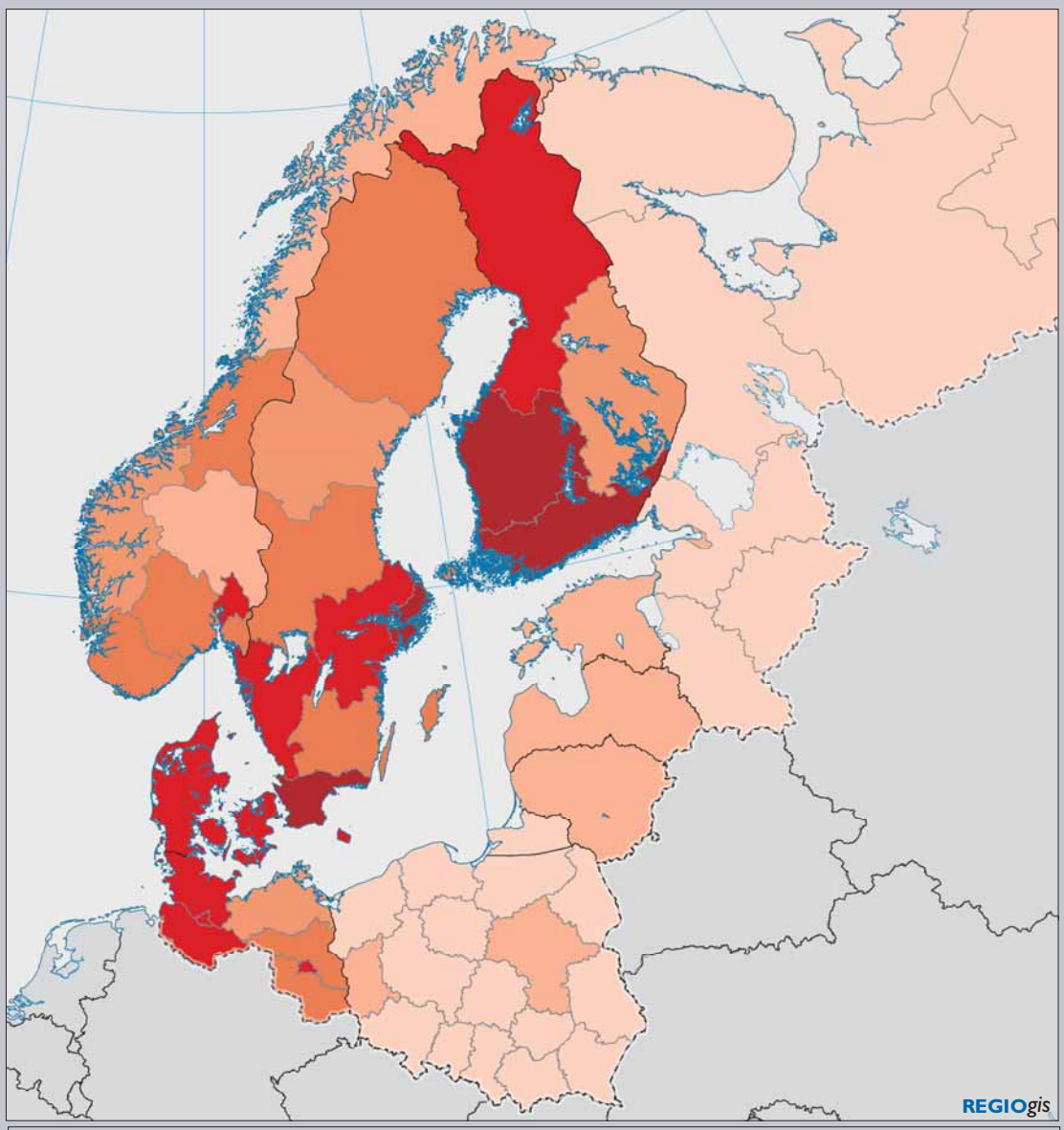




## MAP 8: R&D EXPENDITURE, 2005



## MAP 9: AUTHORS OF EPO PATENT APPLICATIONS, 2004-05




**Authors of EPO patent applications, average 2004-05**

**Inventors per million inhabitants**

- < 10
- 10 - 75
- 75 - 150
- 150 - 300
- 300 - 600
- > 600
- BSR border

EU27: 268
BSR: 200

Number of inventors by patent application, aggregated at NUTS2 or GAUL1 level

Sources: OECD REGPAT database May 2008, Eurostat, NSI, DG REGIO

0 500 Km



## Trade

Economic integration is crucial for regional integration. Measures of interregional trade (trade between countries within the region) and inter-industry trade (trade taking place in the same kind of commodities) are of particular interest when measuring economic integration.

Intra-regional trade flows within the BSR in the last five or six years show a period of consolidation, with only minor changes in the trading pattern. The BSR is the dominant foreign trade area for the smaller economies, such as Estonia and Lithuania (share of the BSR in their total trade is over 50%). For the four Nordic countries, the share of BSR trade is between 34.5% for Norway and 43.6% for Denmark. These figures are somewhat lower for Russia and Germany, due to the overall size and geographic location of these countries.

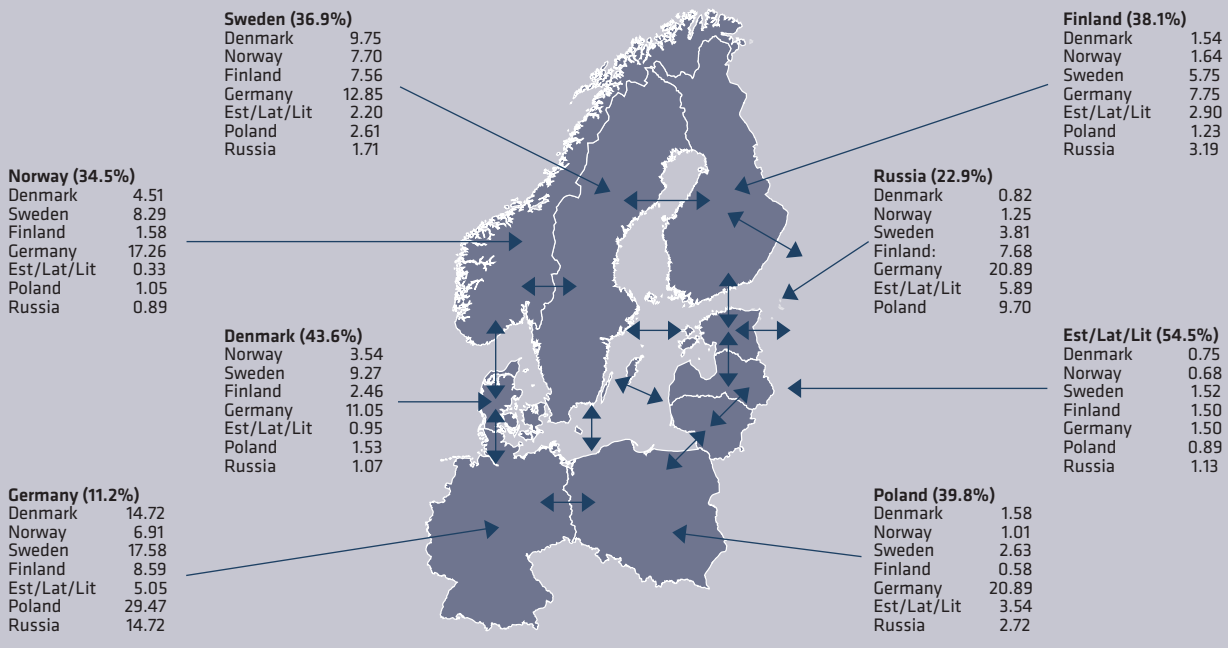
Trade is further explored in Figure 3, which shows the internal BSR trade relations. Numbers in parentheses show the percentage of each country's exports to other countries in the BSR, whereas the numbers underneath show the shares of imports from each of the BSR countries. The numbers are shown at national level, as there are no regional data on trade.

The intra-industry trade indexes, which can give an indication of sectoral convergence in the region, show a considerable degree of coherence in the production system in the BSR countries. The share of intra-industry trade has been constantly increasing, primarily in the eastern part of the BSR. However, Russia is an exception to this pattern.

Russian trade shows a predominance of inter-industry exchange, which is essentially non-integrative. Its export patterns are dominated by natural resources and commodities such as gas, oil and oil products; for its imports of manufactured goods, machines and equipments prevail.

The observed trends show a low but continuously increasing economic integration.

Figure 3: Trade in the BSR




Source: VASAB

Notes: The numbers in parentheses are the shares of exports to other countries in the BSR out of all exports in 2006. The numbers underneath show the shares of imports from each of the BSR countries.

## 1.4.3. SUSTAINABLE ENVIRONMENT

The Baltic Sea is a relatively small sea, but as one of the world's largest bodies of brackish water it is ecologically unique. Due to its special geographical, climatological and oceanographic characteristics, the Baltic Sea is highly sensitive to the environmental impacts of human activities in its sea area or catchment area. This sensitivity has been of great concern for the countries bordering the sea since the signing of the Helsinki Convention in 1974 by the then seven states around the Baltic Sea. In the light of political changes as well as developments in international environmental and maritime law, a new convention was signed in 1992 by all of the (now nine) states bordering the Baltic Sea and by the European Community. The HELCOM Convention now covers the whole of the Baltic Sea area, including inland waters as well as the seawater itself and the seabed. Measures are also being taken in the whole catchment area of the Baltic Sea to reduce land-based pollution. At the HELCOM Ministerial meeting in November 2007, all contracting parties signed the HELCOM Baltic Sea Action Plan, which aims to achieve good environmental status in the sea by 2021.

### What makes the Baltic so sensitive?

#### An almost enclosed sea

The Baltic Sea is connected to the world's oceans only by the narrow and shallow waters of the Sound and the Belt Sea. This limits the exchange of water with the north Sea, and means that the same water remains in the Baltic for up to 30 years – along with all the organic and inorganic matter it contains. The Baltic Sea consists of a series of sub-basins (Map 10), which are mostly separated by shallow sills. These basins each have their own water exchange characteristics.

#### Run-off enters the shallow Baltic Sea from a large catchment area

At an average depth of just 53 m, the Baltic Sea is much shallower than most of the world's seas. It contains 21 547 km³ of water and every year rivers bring about 2% of this volume of water into the sea as run-off. The catchment area covers an area of 2.13 million km², which is almost 20% of the European continent. Some 85 million people in 14 countries (Map 10) live in the area, which includes areas from the temperate, densely populated south to the subarctic rural north. The Baltic Sea's catchment area is almost four times larger than the sea itself[20].

#### Brackish water

The brackish water of the Baltic Sea is a mixture of seawater from the north Sea and fresh water from rivers and rainfall. The salinity of its surface waters ranges from around 25 parts per thousand in the Kattegat to one to two parts per thousand in the northernmost Bothnian Bay and the easternmost Gulf of Finland, compared to 35 parts per thousand in the open oceans.

#### A stratified sea

Salinity levels also vary with depth, increasing from the surface down to the sea floor. Saltier water flowing in through the Sound and the Belt Sea does not mix easily with the less dense water already in the Baltic, and tends to sink down into deeper basins. At the same time, the less saline surface water flows out of the Baltic. The boundary between these two water masses, known as the 'halocline', consists of a layer of water where salinity levels change rapidly. In the Baltic Proper and Gulf of Finland, for instance, the halocline lies at a depth of around 60–80 m. Like a lid, the halocline limits the vertical mixing of water. This means that the oxygen content of the deep basins may not be replenished by normal mixing of levels.

#### Limited biodiversity

In contrast to the other aquatic ecosystems, the brackish ecosystems of the Baltic Sea contain only relatively few animal and plant species – although this limited biodiversity does include a unique mix of marine and freshwater species adapted to the brackish conditions, as well as a few true brackish-water species. Where salinity levels are low, in the Baltic's northern and eastern waters, fewer marine species can thrive (Figure 4).

20 See also www.helcom.fi/environment2/nature/en_GB/facts/

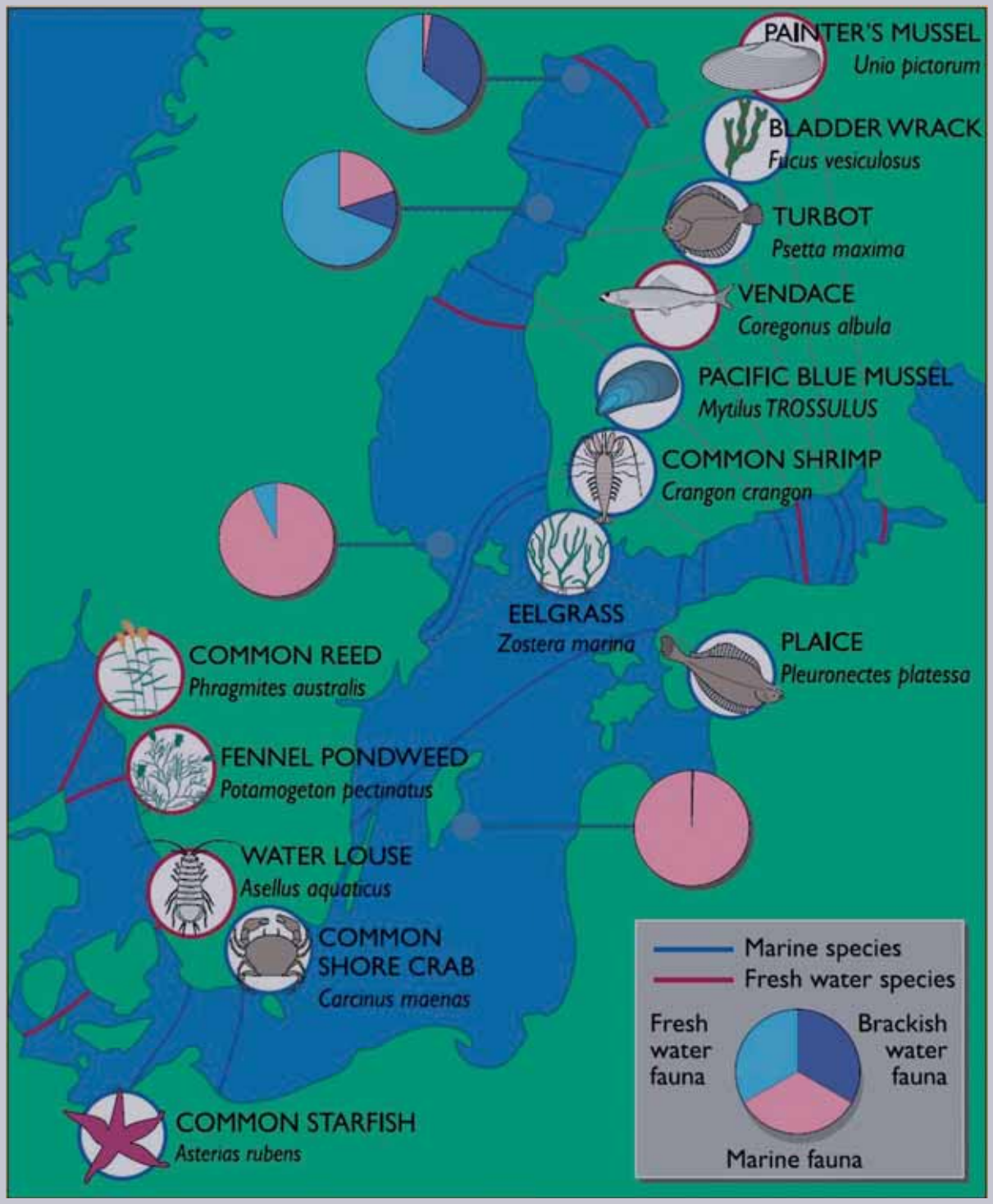


## MAP 10: THE BALTIC SEA CATCHMENT AREA

**Beside the countries bordering the Baltic Sea (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden) also Belarus, Czech Republic, Norway, Slovakia and Ukraine have run-off to the Baltic Sea. The map also shows the sub-basins of the Baltic Sea.**


Source: WWF

**FIGURE 4: BIODIVERSITY AROUND THE BALTIC SEA**
**While marine species (pink sector) dominate in the Baltic Proper, the species communities are dominated by brackish-water (darker blue) and freshwater (light blue) species in the Bothnian Bay.**





## Effects of eutrophication

Since the 1800s, the Baltic Sea has changed from an oligotrophic clear-water sea into a eutrophic marine environment. Eutrophication is a condition in an aquatic ecosystem where high concentrations of nitrogen and phosphorus stimulate growth of algae, which leads to imbalanced functioning of the system, such as:

> increase in oxygen consumption;
> altered communities of fauna and flora;
> production of excess organic matter;
> oxygen depletion;
> death of benthic organisms, including fish.

## Sources of eutrophication

About 75% of the nitrogen and at least 95% of the phosphorus enters the Baltic Sea waterborne (i.e. via rivers or as direct discharges). The atmospheric deposition of nitrogen to the Baltic Sea comprises about one quarter of the total nitrogen load to the Baltic Sea. Phosphorus enters the Baltic Sea mainly as waterborne input but can also enter as atmospheric deposition; however, as the estimated contribution is only 1-5% of the total phosphorus input, it is not further considered.

In 2005, the total inputs of nutrients amounted to 787 000 tonnes of nitrogen and 28 600 tonnes of phosphorus. The nutrient inputs entering the Baltic Sea are either airborne or waterborne. Waterborne sources are the main cause of the eutrophication of the Baltic Sea. About 75% of the nitrogen load and at least 95% of the phosphorus load enter the Baltic Sea via rivers or as direct waterborne discharges.

About 58% of this waterborne nitrogen and 49% of phosphorus inputs are from diffuse sources (see Maps 11A and 11B). These are mainly from agriculture but also include nutrient losses from managed forestry and urban areas.

Point sources contribute 10% of nitrogen and 25% of phosphorus. They include inputs from municipalities, industries and fish farms both discharging into inland surface waters and directly into the Baltic Sea.

Natural background sources provide the balance of the two elements. These are mainly natural erosion and leakage from unmanaged areas and nutrient losses from agricultural and managed forested land that would occur irrespective of human activities.

The remaining 25% of the nitrogen comes from airborne sources. These are atmospheric emissions of airborne nitrogen compounds emitted mainly from traffic or combustion of fossil fuels (heat and power generation) and from animal manure and husbandry that deposit on the Baltic Sea surface. The airborne contribution accounts for around 5% of the total phosphorus input.

In 2005, the transport (61%) sector accounted for the highest share of total emissions of nitrogen oxides. Over 30% of airborne nitrogen input originated from sources outside the catchment area.

Discharge of nutrients from point sources is declining, but nitrogen is still discharged from municipal waste. Reducing nutrient losses from diffuse sources is much more complicated. The practical implementation of the required measures is very difficult to assess and there is a considerable time lag before the effects of measures can be seen. This is due, for instance, to the high usage of fertilisers in the 1970s and 1980s in many countries, resulting in a long-term surplus of nutrients in the soil. Concerning the airborne nutrient inputs, since 1980, there has been a continuous reduction of the nitrogen emissions to the air; however, the deposition of nitrogen into the Baltic Sea is highly dependent on meteorological conditions, which change from year to year.

When comparing riverine nutrient discharges from the entire 13-year period from 1994 to 2006 for which annual data are available from Contracting Parties, especially of phosphorus, these discharges appear to have decreased. In addition to the hydrological changes, this most probably also reflects the implementation of load-reduction measures in the catchment area (mainly improved treatment of municipal and industrial waters). It is also known that the load-reduction measures are particularly efficient for phosphorus in municipal waste water treatment plants, which is reflected in the larger decrease in phosphorus load.

For further information, see *Eutrophication in the Baltic Sea: An integrated thematic assessment of the effects of nutrient enrichment in the Baltic Sea Region*[21].

## Biodiversity of the Baltic Sea

Biodiversity reflects the ability of ecosystems to adapt to changing circumstances. Reduced diversity of genes, species and biotopes leads to ecosystems that are more vulnerable to the effects of natural variability and stochastic events. They also lose their buffering capacity against large-scale human disturbance, e.g. climate change.

The Baltic Sea is one of the largest brackish-water bodies, with a unique combination of marine and freshwater species. Many are genetically distinct from their marine or freshwater source populations and cannot be replaced once driven to extinction, which underlines the importance of the well-being of populations of all native organisms.

The Baltic Sea Protected Areas (BSPAs), Natura 2000 and Emeralda sites play an important role in the maintaining and restoring of natural marine, coastal, and adjacent terrestrial landscapes. The objective of HELCOM is to have a coherent and well-managed network of these areas by 2010.

At present, there are 159 BSPAs covering 10.3% of the Baltic Sea marine area: the first sea region that will reach the UN goal, set for 2012, of having 'at least 10% of each marine and coastal ecological region globally effectively conserved'. However, management plans are still missing in several protected areas.

Biotopes are essential for the favourable status of the Baltic Sea biodiversity. These include the bladder wrack and eelgrass biotopes of the coastal zones but also less well-known types of communities. Changes in their structure have cascading effects on their associated species and the ecological function of the ecosystem. During the last decade, the occurrence of both bladder wrack and eelgrass has in some areas declined dramatically due to the effects of eutrophication. Although signs of recovery have been observed recently, neither community is thriving or balanced.

In general, 68.4% of the biotopes are rated as endangered, 15% are heavily endangered and 4.6% are potentially endangered, which reflects the severely adverse impacts that human activities have on coastal and marine biodiversity.

The newly introduced and established invasive and alien aquatic species constitute another threat to the ecosystem in the Baltic Sea, due to their effect of changing the native food web and causing substantial habitat modifications. More than 120 species of this kind have been recorded in the past 100 years. Around 60-70 of them have established reproducing populations in the sea.

Among fish, the common sturgeon is the only species known to have become extinct in the Baltic Sea in the recent history. However, stocks of cod have reached a historically low level and salmon stocks are dwindling too, especially in the Gulf of Finland. For most species, however, it is not possible to tell whether numbers have declined or increased, due to the absence of long-term studies.

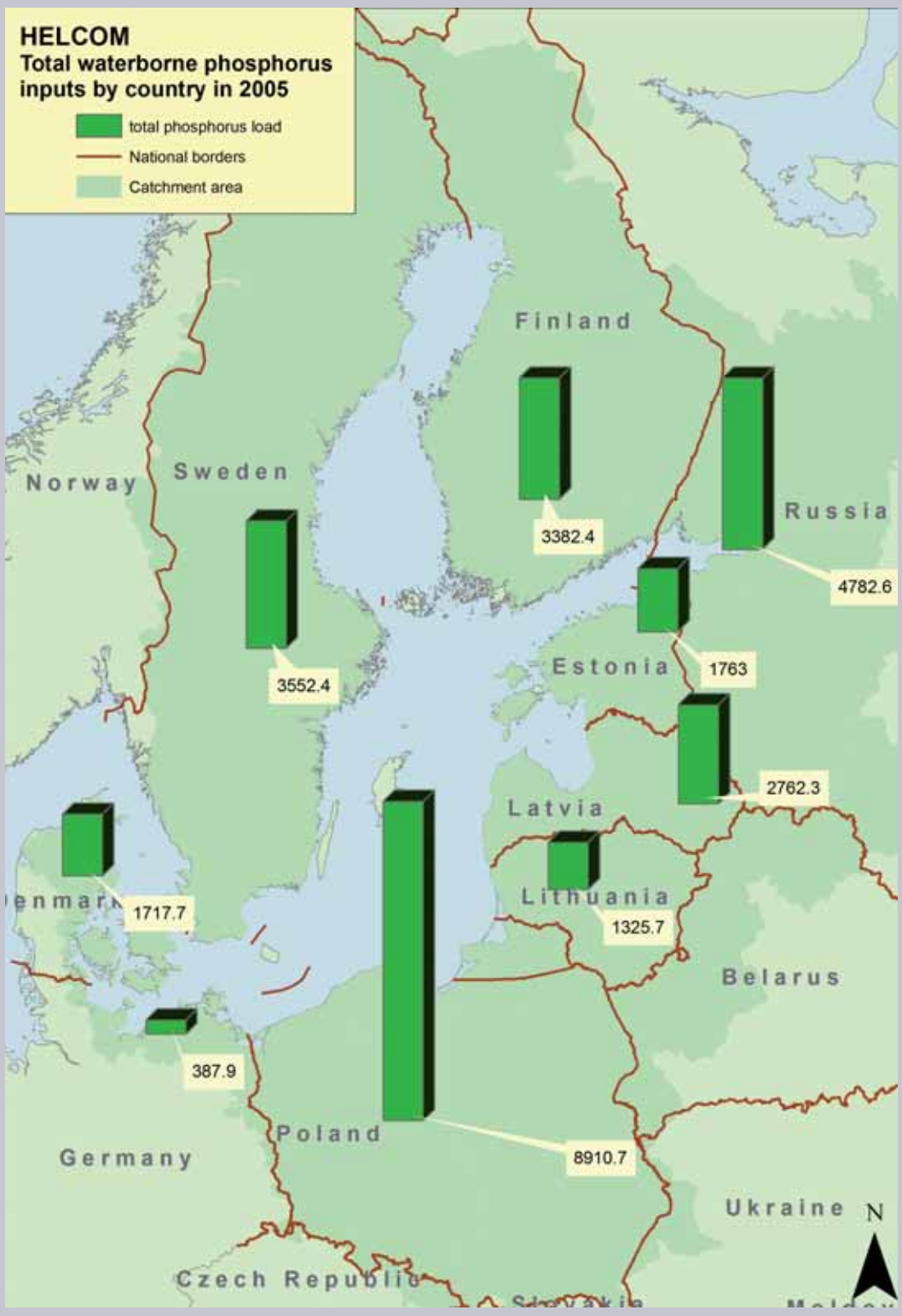
Fisheries directly impact fish diversity in the Baltic Sea and have led to declines in some fish stocks, mainly eels and cod. The main reasons for this decline in stocks are the setting of too high total allowable catches (TAC) at the European Council level and poor compliance with the rules with significant amounts of misreported or unreported catches. In addition, there are indications that the decline of cod, as the main top predator of the food chain in the Baltic Sea in the last decades, has caused a regime shift in the ecosystem. This has led to a sprat/herring-dominated fish community in the open Baltic Proper with further consequences on other species through the alteration in the plankton community. Fisheries also affect other aquatic species, seabirds and marine mammals through by-catches, incidental catches and competition for food. In the Baltic seabed, bottom trawling can affect benthic habitats through alteration of the physical structure of the sea floor, resuspension of nutrients and hazardous substances and alteration of the benthic fauna.

Baltic biodiversity is thus threatened by overfishing, by-catches and incidental catches of non-target species, destruction of habitats by many human activities (such as dredging and construction along shores and migratory obstacles in waterways), eutrophication, contaminants and alien invasive species.

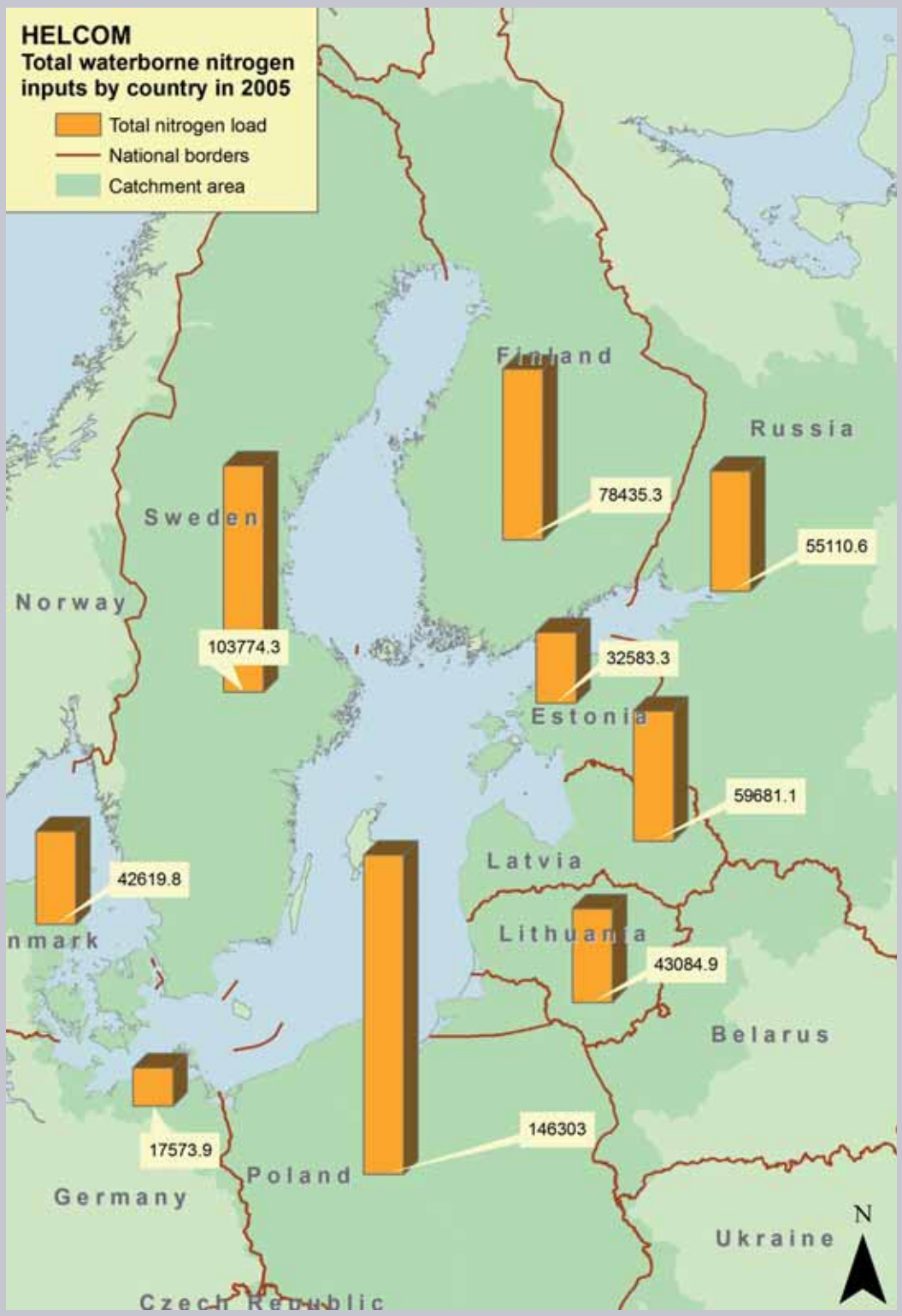
21 Baltic Sea Environment Proceedings No 115B, HELCOM.



## MAP 11A: WATERBORNE LOAD OF PHOSPHORUS TO THE BALTIC SEA, IN TONNES, BY COUNTRY, 2005



## MAP 11B: WATERBORNE LOAD OF NITROGEN TO THE BALTIC SEA, IN TONNES, BY COUNTRY, 2005





## Maritime transport

Sea transport levels in the Baltic Sea are among the highest of any of the world's marine area. Both the number and sizes of ships have been growing in recent years, especially oil tankers, and this trend is expected to continue. Maps 12 and 13 illustrate the number and type of ships crossing the HELCOM AIS[22] predefined lines in 2006 according to the type of vessels and their draught. There are around 2 000 ships at sea in the Baltic at any given time, accounting for 15% of the world's cargo transportation.

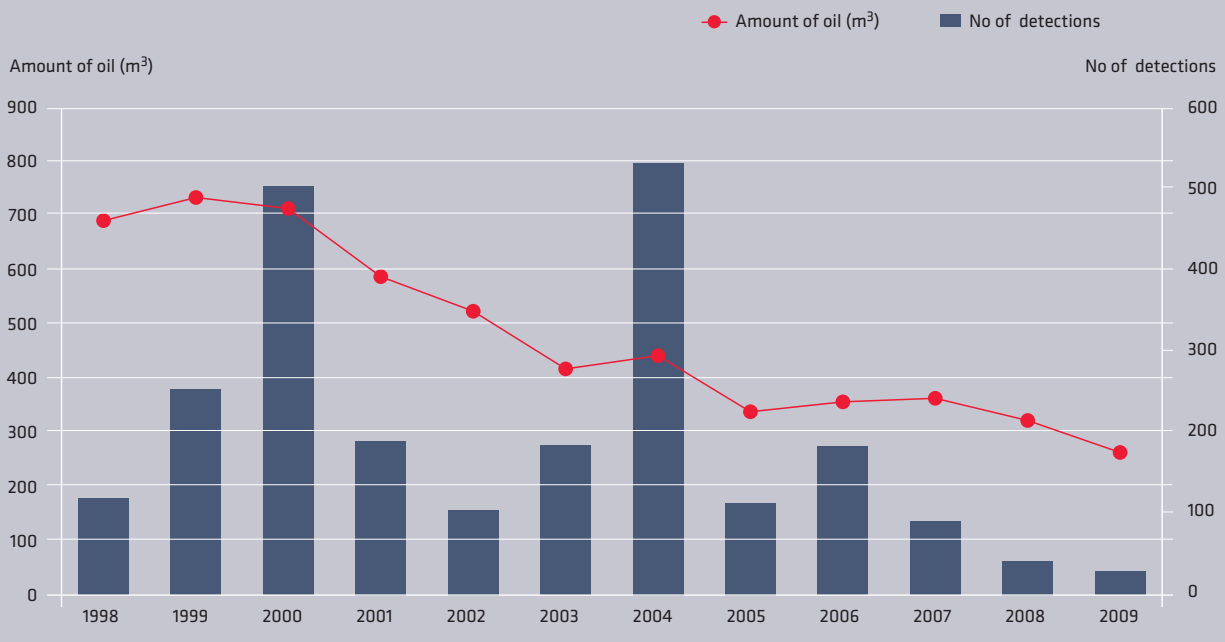
Forecasts indicate that the amount of cargo shipped in the Baltic will double by 2015, due to economic growth, especially in the eastern part of the region. The amount of oil transported via terminals of over three million tonnes increased from 125 million tonnes in 1997 to 210 million tonnes in 2005.

The main environmental effects of shipping and other activities at sea include air pollution, illegal and accidental discharge of oil, hazardous substances and other wastes, and the introduction of invasive alien organisms via ships' ballast water or on their hulls. Emissions of nitrogen oxides from ships contribute to the eutrophication of the sea, oil spilled during accidents may destroy important marine and coastal habitats, and alien species may cause economic loss and even pose risks to human health.

Figure 5 shows that the annual number of illegal discharges of oil in the Baltic Sea is decreasing, although the total volume discharged each time is growing. This trend appears to be related to the increasing hours of flight for aerial surveillance activities. The problem of illegal deliberate discharges does not only concern oil. Plastic and synthetic materials, which are durable and slow to degrade, have become the most abundant form of marine litter.

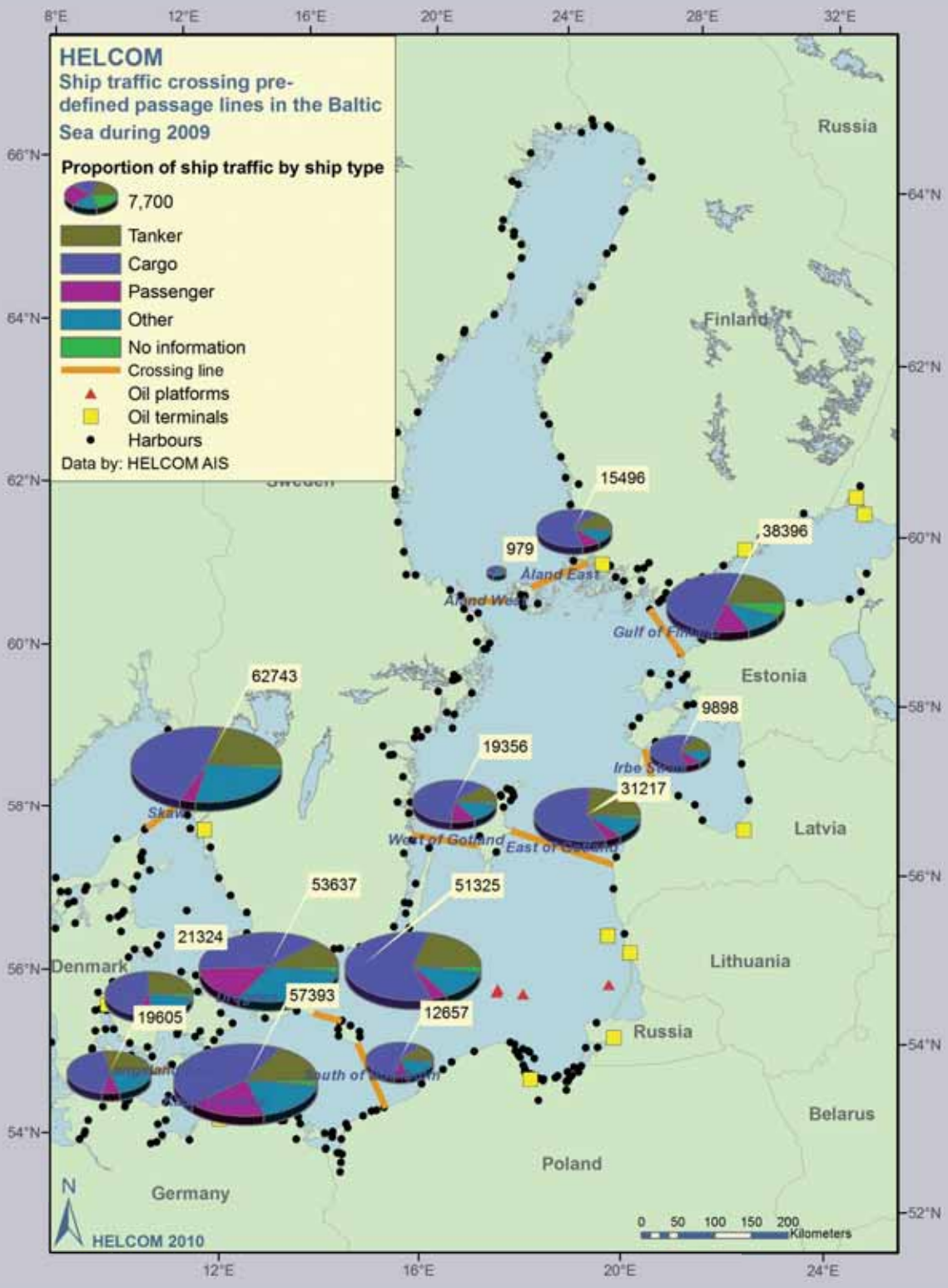
22 The Automatic Identification System (AIS) is a very high frequency (VHF) radio-based system which enables the identification of the name, position, course, speed, draught and cargo of every ship of more than 300 gross tonnes engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages and all passenger ships irrespective of size sailing on the Baltic Sea.

Figure 5: Total amount of oil illegally discharged in the Baltic Sea

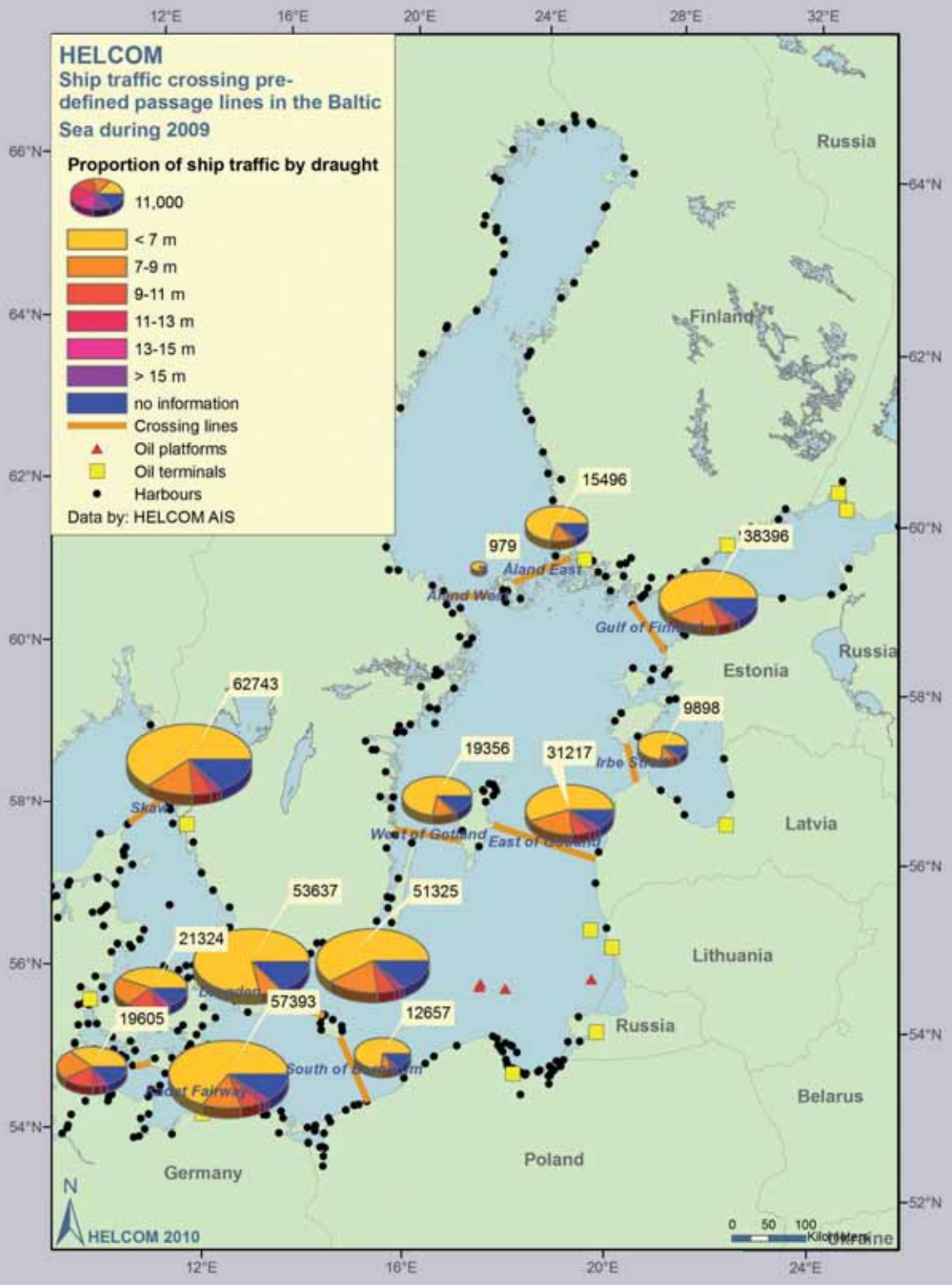



Source: HELCOM, 2006

## MAP 12: NUMBER OF SHIPS CROSSING THE AIS PREDEFINED LINE ACCORDING TO VESSEL TYPE, 2009



## MAP 13: NUMBER OF SHIPS CROSSING THE AIS PREDEFINED LINE ACCORDING TO DRAUGHT, 2009



The number of shipping accidents (see Section 4.4.2 on Maritime safety and security) is also on the increase.

The proportion of the nutrient pollution load to the Baltic Sea originating from ship-borne sewage discharges remains quite small, although it is not negligible due to the high sensitivity of the marine environment. This nutrient load, which is concentrated along the shipping routes, is immediately available for uptake by the plankton algae, thus contributing to the severe eutrophication problem of the Baltic Sea. Ship-borne discharges represent up to 0.05% of the total waterborne nitrogen load, and up to 0.5% of the total phosphorus load into the Baltic Sea[23].

Apart from accidental and deliberate discharges of oil and other wastes to the sea, the normal operation of a ship also contributes to the pollution of marine and coastal ecosystems. The main pollutants concerned are nitrogen oxides ($NO_x$) and sulphur oxides ($SO_x$). $NO_x$ is emitted to the air mainly from the operation of diesel engines and $SO_x$ emissions result from combustion of marine fuels and directly depend on the sulphur content of the fuel. While $SO_x$ cause acidification of terrestrial and freshwater ecosystems, damage materials and have a negative impact on human health in coastal areas, $NO_x$ emissions contribute considerably to the most severe environmental problem of the Baltic Sea: eutrophication. Baltic Sea shipping is the largest contributor to the deposition of oxidised nitrogen and the third greatest contributor to total nitrogen deposition in the Baltic Sea basin.

## Hazardous substances

Hazardous substances can accumulate in the marine food web up to levels that are toxic to marine organisms, particularly predators, and they may also represent a health risk for people. Once released into the Baltic Sea, hazardous substances can remain in the water for very long periods due to the long water-exchange time of the Baltic Sea's water.

Hazardous substances in the Baltic Sea include:

- substances occurring at concentrations exceeding natural levels, including heavy metals such as lead, copper, cadmium and mercury;
- substances that do not occur naturally in the environment, such as dioxins, PCBs, DDTs, TBT, nonylphenolethoxylates (NP/NPE), short-chained chlorinated paraffins (SCCP), brominated flame retardants (PBDEs), certain nitromusks and others.

Hazardous substances cause adverse effects on the ecosystem, such as:

- impaired general health status of animals;
- impaired reproduction of animals, especially top predators;
- increased pollutant levels in fish for human food.

### Airborne input

In 2005, total annual emissions to the air by HELCOM countries amounted to 112 tonnes of cadmium, 41 tonnes of mercury, and 1 103 tonnes of lead. The total atmospheric depositions of heavy metals into the Baltic Sea during 2005 were 5.3 tonnes of cadmium, 3 tonnes of mercury, and approximately 251 tonnes of lead.

In 2005, the countries in the catchment area were the source of 39% of airborne cadmium, 16% of the total deposited lead and 22% of airborne mercury deposited onto the Baltic Sea. Around 10% of airborne cadmium, 5% of airborne lead and 8% of airborne mercury deposited in the Baltic Sea originated from other European countries and 51% of deposited cadmium, 79% of airborne deposited lead and 70% of airborne deposited mercury came from other sources (re-emission, natural and global sources).

Poland, with the largest population in the Baltic Sea Region, is the most significant contributor to all three types of depositions. The others are Finland and Russia (cadmium), Germany and Estonia (lead), Denmark and the United Kingdom (mercury).

23 These figures are calculated on the assumption that there is no sewage treatment aboard ships (cargo ships, cruise ships and passenger/car ferries) and that all sewage is discharged into the sea, i.e. the theoretical worst-case scenario.



### Waterborne input

The waterborne inputs to the Baltic Sea, via rivers or as direct discharges, are the main source of mercury, lead and cadmium.

In 2005, the reported river-borne loads, including direct discharges from coastal areas, to the Baltic Sea amounted to 13.6 tonnes of mercury, 472.5 tonnes of lead and 54.5 tonnes of cadmium. The river-borne inputs of heavy metals are for cadmium and lead highest in the Gulf of Finland, while mercury inputs are highest in the main basin. A few large rivers account for very large proportions of the total river-borne heavy metal loads. Heavy metals and some hazardous substances end up in water from various different sources, such as industrial activities, urban waste waters, agriculture and waste management.

Until the early 1990s, the production and use of chlorophenols and the use of chlorine gas were the main source of dioxin and furan pollution in waterways. Chlorine is still used in Russia. The dioxin pollution caused by the use of chlorine and chlorophenols in the past is still relevant because of the continuous transport of dioxin-contaminated sediments from rivers to the Baltic Sea.

The main source or pathway to the Baltic marine environment of TBT and TPhT is the use of antifouling substances on ship hulls and subsequent direct release to seawater. On the other hand, the main pathways of pentaBDE, octaBDE and decaBDE, HBCDD, PFOS, PFOA, SCCP and MCCP to the Baltic Sea are via rivers receiving municipal and industrial waste water, direct municipal and industrial waste water discharges, and via the atmosphere. The main pathways of NP, NPE, OP and OPE are via rivers receiving municipal and industrial waste water and via direct municipal and industrial waste water discharges. The main pathways of endosulfan are via rivers receiving leaching waters from agricultural land and via atmosphere due to the application of agricultural pesticides containing endosulfan. Discharges from landfills and via storm water can be significant for some of the substances mentioned above.

Despite reductions in inputs, concentrations of heavy metals (mercury, cadmium and lead) in the water of the Baltic Sea are still up to five times higher than in the northern Atlantic[24].

### Radioactive substances

In 2006, the total discharges of caesium-137, strontium-90 and cobalt-60 into the Baltic Sea were 2.5, 24 and 5.1 GBq, respectively. In general, there has been a clear decreasing trend in the discharges of these substances during the last decade.

The most important sources with respect to the present total inventory of artificial radionuclides in the Baltic Sea have been the fallout from the Chernobyl accident in 1986, the fallout from atmospheric nuclear weapons tests in the 1950s and 1960s, and the discharges from nuclear reprocessing plants in western Europe.

## Climate change

The climate of the Baltic Sea basin is characterised by large seasonal variations, due to its geographical location, variable topography, and land-sea contrasts, and large differences between the northern and southern areas in the region. The climate is influenced by major air pressure systems, particularly the North Atlantic Oscillation during wintertime, which affects the atmospheric circulation and precipitation in the Baltic Sea basin.

From 1861 to 2000, the warming trend in the Baltic Sea was 0.08 °C/decade, while for the entire globe it was about 0.05 °C/decade. This warming trend has been reflected in a decrease in the number of very cold days during winter as well as a decrease in the duration of the ice cover and its thickness in many rivers and lakes, particularly in the eastern and south-eastern Baltic Sea basin.

The largest change has been in the length of the ice season, which has decreased by 14-44 days over the past century,

24 See for instance the report 'Heavy metals in water' by Christa Pohl and Ursula Hennings: www.helcom.fi/environment2/ifs/archive/ifs2004/en_GB/heavymetals_in_water/

mainly due to earlier ice break-up. The projected decrease of ice cover by the end of the 21st century is dramatic, with the Gulf of Bothnia, large areas of the Gulf of Finland and the Gulf of Riga, and the outer parts of the south-western archipelago of Finland becoming ice-free. The length of the ice season would decrease by one to two months in the northern parts of the Baltic Sea and by two to three months in the central parts.

The changes in long-term mean sea level along the coasts of the Baltic Sea result mainly from the uplift of the Scandinavian land plate with simultaneous lowering of the southern Baltic coast. Although the mean sea level of the ocean is increasing, this effect is partially balanced by the land uplift, which increases from 0 in the southern parts to about 9 mm/year in the northern parts. The calculated rate of sea level rise is estimated to be about 1.7 mm per year in the south-eastern Baltic Sea, while it falls by 9.4 mm per year in the north-western Gulf of Bothnia.

In association with the projected warming there would be changes in precipitation patterns, both geographically and seasonally. Geographically, southern areas of the basin would be drier than northern areas, particularly during summer. Seasonally, summer river flows would tend to decrease, while winter flows would tend to increase.

In some of the regional scenario simulations, the average salinity of the Baltic Sea is projected to decrease.

The projected increase in the temperature of the upper water layer of the Baltic Sea could result in a decrease in spring and autumn convective mixing, thus affecting the circulation and distribution of nutrients. A change in run-off could result in a change in the input of nutrients from the catchment area. The increase in water temperature may also increase bacterial activity, which can affect nutrient recycling and mineralisation in surface waters.

These changes can have an influence on phytoplankton species composition and primary production, which are of great importance for the Baltic Sea ecosystem. For example, warming will inhibit cold-water species (such as some diatoms) but may stimulate warm-water species, such as the bloom-forming toxic cyanobacteria. Reduced ice cover and earlier stabilisation of the water column in spring will also cause the spring bloom to begin earlier. Changes in the timing of the blooms and in the species composition will also disturb the existing food webs.

The potential decrease in salinity projected in some of the simulations would have a direct influence on the composition and distribution of species in the Baltic Sea, particularly for plankton and zoobenthos. The composition of phytoplankton species, in turn, has an influence on their predators, planktivorous fish such as herring and sprat, thus affecting their growth and condition.

The anticipated impact of warming on marine mammals in the Baltic Sea will mainly result from the large decrease of ice cover, impacting the seal species that breed on ice, primarily ringed seals but also grey seals. On the other hand, increased temperatures may be advantageous for harbour seals and harbour porpoises. Potential effects on birds indicate that migrating and wintering birds in the Baltic Sea may be most affected by warming processes, with birds wintering farther north in the Baltic Basin than previously.

Thus, although the impacts of climate change during the 21st century are difficult to predict with certainty, it is clear that the projected increase in temperature together with changes in other conditions associated with windiness and precipitation will have a major influence on the conditions for biota in the Baltic Sea basin. For more information see *Assessment of Climate Change for the Baltic Sea Basin* by BACC Author Team (2008).

### 1.4.4. ACCESSIBILITY

In the BSR, transport is particularly important as distances – internally, to the rest of Europe and to the wider world – are very long and the conditions for traffic are often difficult (forests, lakes, snow and ice in the winter, etc.). This region, which is located outside the economic centre of Europe, is highly dependent on foreign trade in goods and needs a well-functioning transport infrastructure for its economic growth. Moreover, the Baltic Sea is a sensitive ecosystem,



which makes environmental considerations important in the development of transport infrastructures.

## Road transport

### Transport infrastructure

While a high-capacity infrastructure, such as motorways or main double-track railways, permits good connections among the main metropolitan areas, secondary transport networks are important both for intra-regional travel and for connecting particular territories to the primary networks.

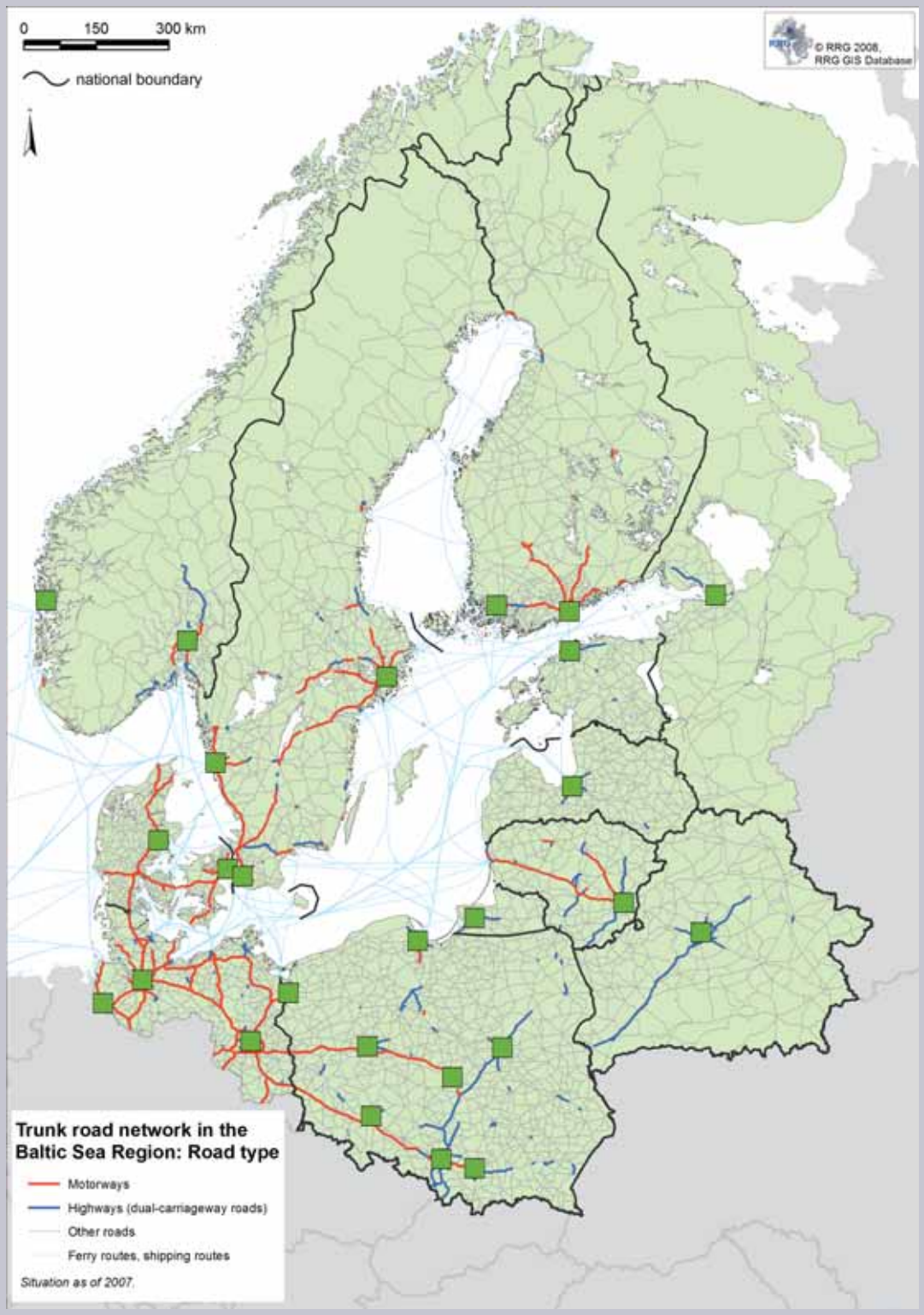
Germany and the Nordic countries have a good secondary road network. Since 1993, Lithuania has augmented its secondary road capacity by more than 40% and Estonia by 25%. In Latvia, the secondary road infrastructure is below its 1993 level due to downgrading and in Poland it only shows a slight increase – probably due to a stronger focus on upgrading of existing infrastructure.

The primary road network in the BSR is fragmented (see Map 14). Germany and Denmark, as the most densely populated territories of the BSR, are the only parts of the region that have a relatively dense and integrated network of motorways. In Finland, Norway and Sweden, most motorways connect to the main metropolitan areas. In the Baltic States, the high-capacity road sections are mostly concentrated around the capital regions and are not extended in either north-south or east-west directions towards the neighbouring countries capitals. In Poland, there are two motorways linking the country with Berlin and one highway connecting Katowice-Krakow with Warszawa. In the rest of the country, there are only scattered fragments of motorway/highway network. In north-west Russia, there are segments of highways around the cities of Saint Petersburg and Kaliningrad.

There are three main gaps in the motorway networks in the BSR. First, there is a need for a better connection of the eastern BSR countries with motorways. Secondly, the carrying capacity and the quality of the motorway infrastructure in the eastern BSR are low by European standards. Finally, border crossings between EU countries and the neighbouring countries along the eastern border cause a significant disruption in the road traffic, with waiting times of up to several hours for both coaches and trucks at many crossing points.

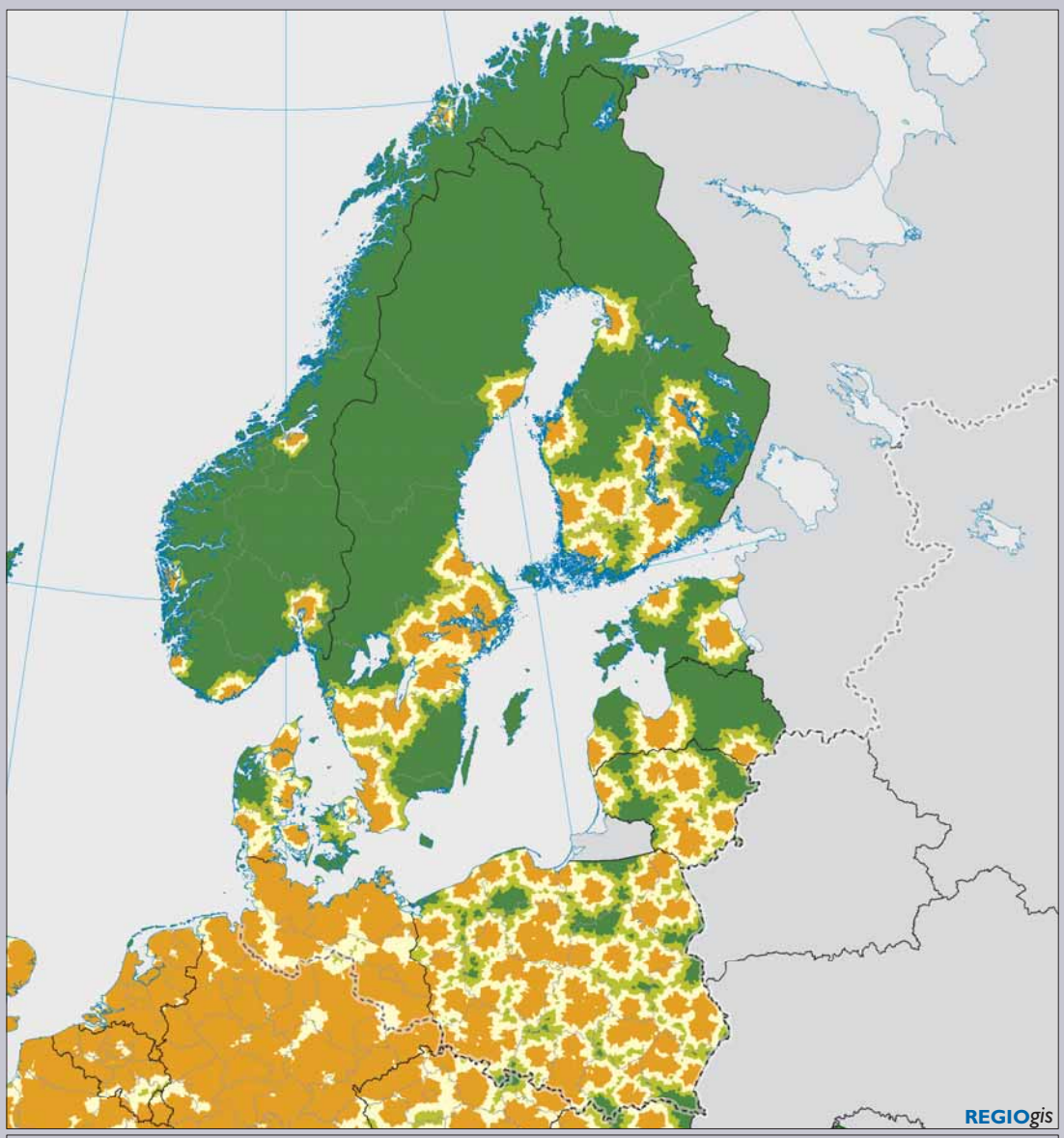
The main challenge for future transport development in the BSR is to reduce it's the region's remoteness by improving links within the region and to the rest of the EU. East-west linkages are needed to overcome the infrastructure shortfalls of the eastern and south-eastern sides of the sea. As the five maps (Maps 14, 15, 16, 17 and 18) below illustrate, the north is in many regards very remote. Better connections to Russia and other neighbours are needed, and further on to Asia as well as to the Mediterranean region. This would further increase it's the BSR's potential as the EU's gateway to Asia.

## MAP 14: ROAD NETWORK IN THE BSR





## MAP 15: ACCESSIBILITY BY ROAD TO CITIES WITH AT LEAST 50 000 INHABITANTS



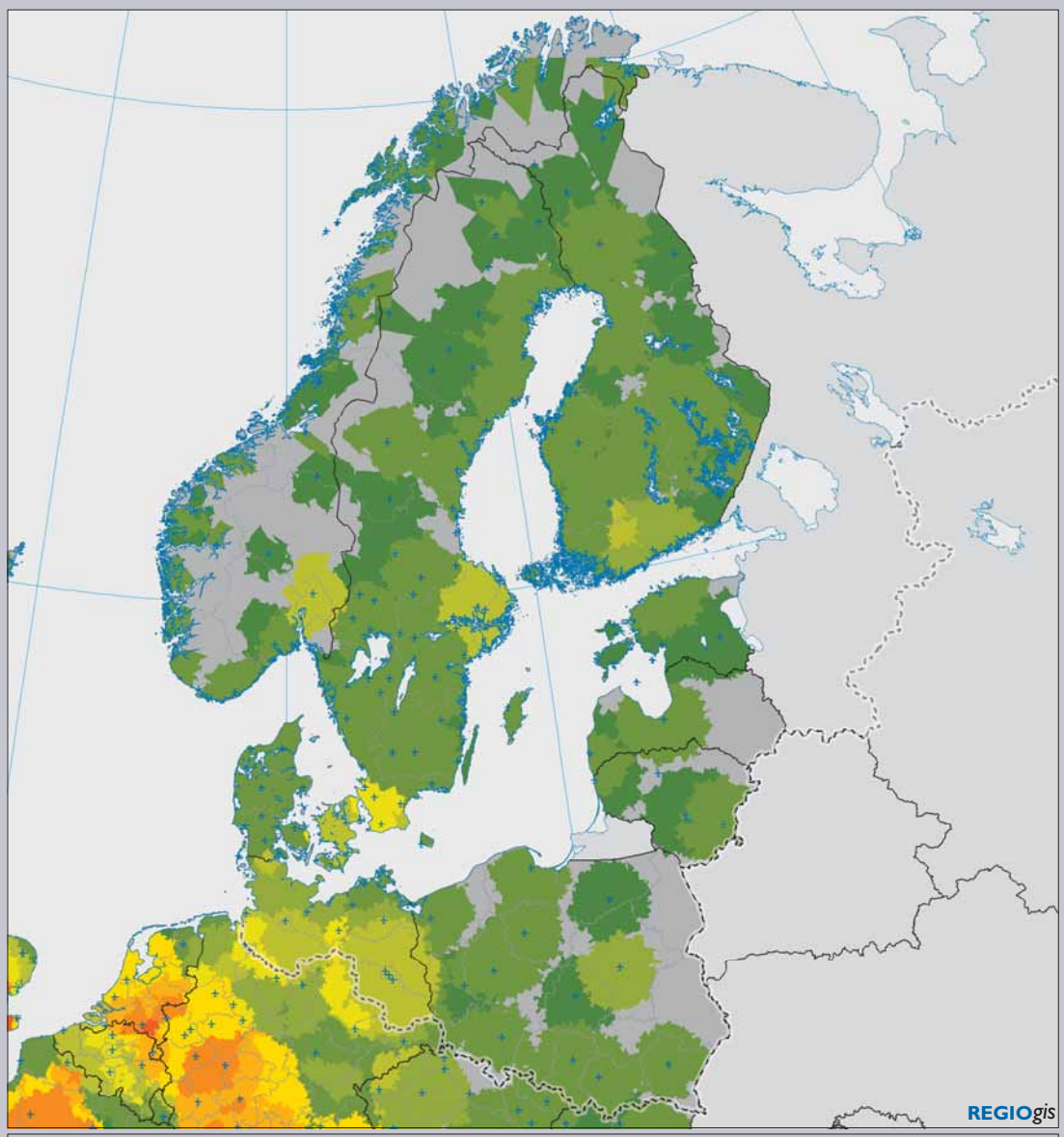

**Accessibility by road to cities with at least 50 000 inhabitants**

BSR border
0 - 30 minutes
30 - 45 minutes
45 - 60 minutes
> 60 minutes

Sources:
OECD, Eurostat, EuroGeographics,
EEA, JRC, REGIO-GIS

0 500 Km

## MAP 16: ACCESSIBILITY TO PASSENGER FLIGHTS, 2006




**Accessibility to passenger flights, 2006**

**Cumulated daily number of passenger flights available within 90 minutes of travel by road**

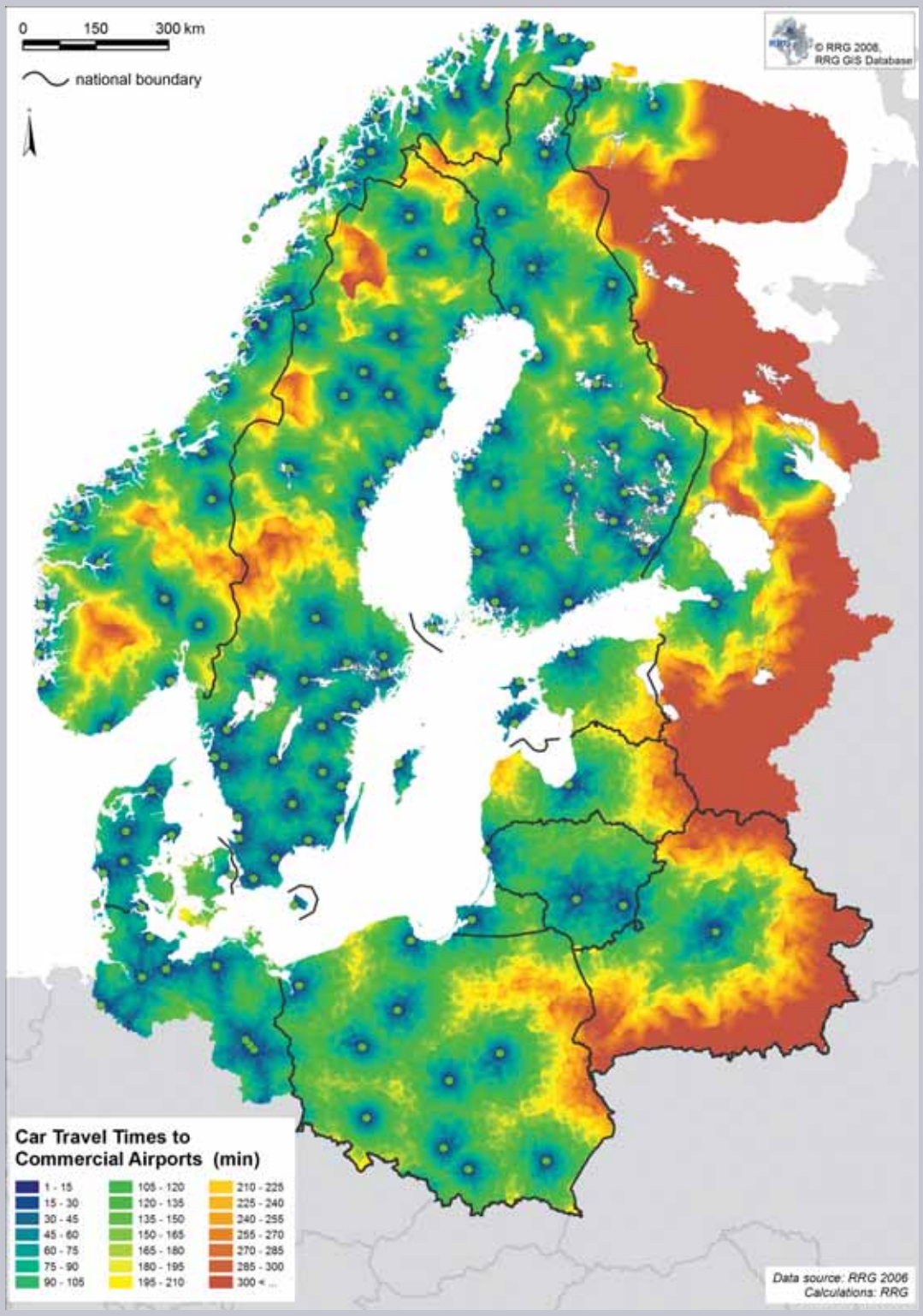
- 0 - 10
- 11 - 250
- 251 - 500
- 501 - 750
- 751 - 1000
- 1001 - 1500
- 1501 - 2000
- 2001 - 2500
- 2501 - 3000
- 3001 - 3614
- travel time to nearest airport > 90 min
- BSR border

Sources:
Eurostat, Eurographics, JRC, Statistics Finland, Statistics Sweden, EEA, REGIO-GIS

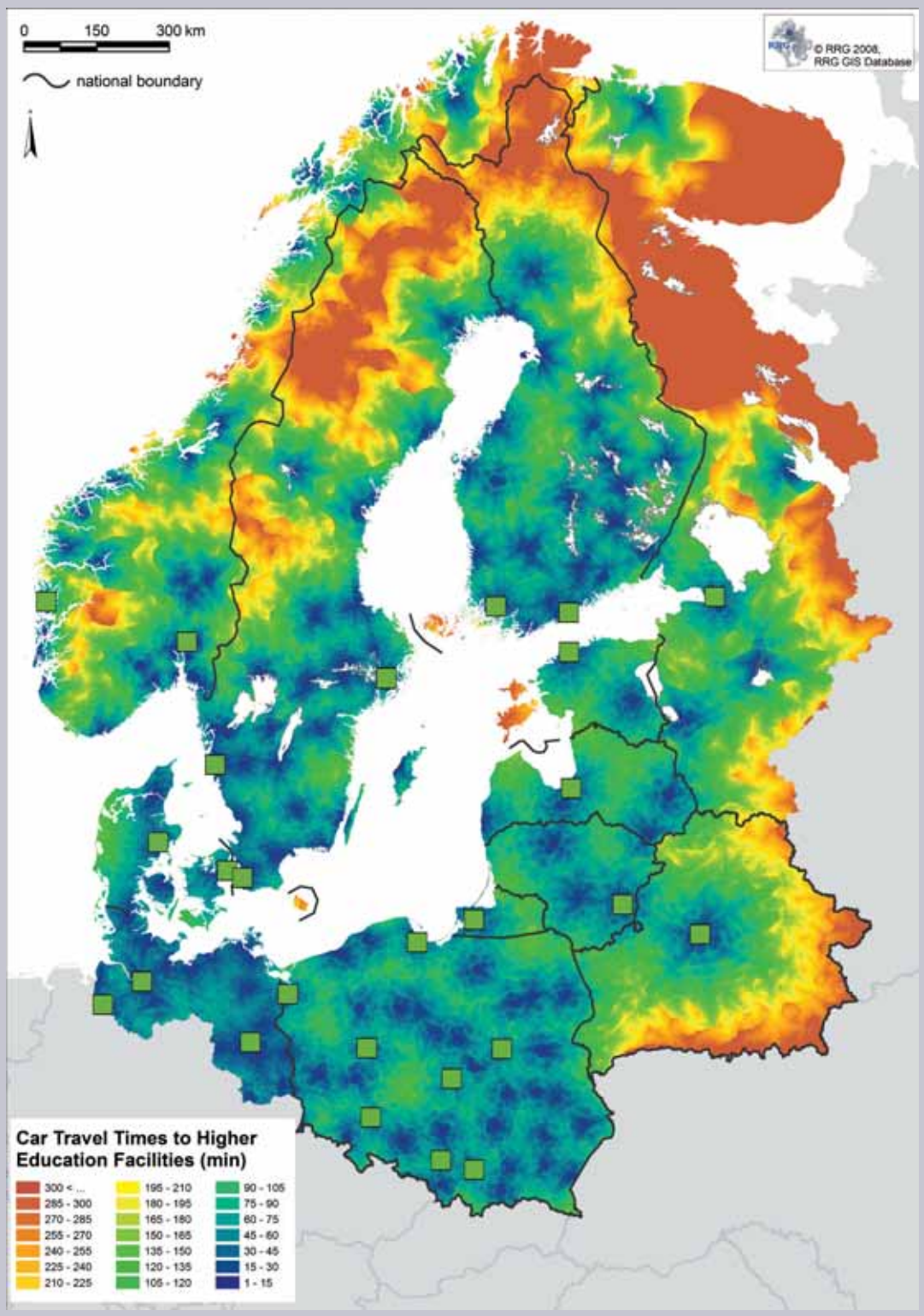
0 500 Km



## MAP 17: TRAVEL TIME TO COMMERCIAL AIRPORTS



## MAP 18: TRAVEL TIME TO HIGHER EDUCATION FACILITIES





## Growth forecast

All countries around the Baltic Sea have witnessed a steep increase in the total number of vehicles registered since 1980 (see Table 4). Germany is the country with the highest number of vehicles registered, with 546 vehicles per 1 000 inhabitants in 2003. Sweden (454), Finland (436) and Norway (422) also have a high number. However, it seems that the increase in those countries has slowed in recent years. As for Poland, Russia and the Baltic States, the number of vehicles per 1 000 inhabitants has more than doubled since 1990.

Table 4: Change in the number of vehicles per 1 000 inhabitants

| Country | 1980 | 1990 | 2000 | 2002 | 2003 |
|---|---|---|---|---|---|
| Denmark | 271 | 309 | 347 | 351 | 351 |
| Finland | 256 | 389 | 412 | 422 | 436 |
| Germany* | 330 | 385 | 532 | 541 | 546 |
| Sweden | 347 | 421 | 450 | 452 | 454 |
| Estonia | 84 | 154 | 339 | 295 | 321 |
| Latvia | 66 | 124 | 235 | 266 | 280 |
| Lithuania | 74 | 132 | 317 | 341 | 365 |
| Poland | 67 | 138 | 259 | 289 | 294 |
| Norway | 302 | 380 | 412 | 417 | 422 |
| Belarus | : | 59 | : | : | : |
| Russian Federation* | 33 | 60 | 140 | 156 | 161 |

* Whole country
Source: UNECE (2008)

Consequently, all countries in the BSR have experienced a growth in traffic. Taking the number of vehicles on the E-roads in 1995-2000, the country that has seen the highest growth in traffic was Latvia with an increase of 90.9%. Russia has also seen a strong increase in traffic (84.2%), although the figure covers the whole country. The traffic in Lithuania increased, over the same period, by about 50%. Other countries of the BSR have seen an increase in traffic of between 25 and 40%, with the exception of Sweden and Germany where the increase has been smaller (9.3%).

The increase in traffic presents a clear challenge for infrastructure, especially in the eastern part of the BSR, where the infrastructure tends to be of limited carriage capacity, a limited number of lanes or rather low-quality standards. Consequently, the increase in traffic together with slow improvements in the infrastructure may lead to an increase in road congestion in those territories. The identification of gaps in the road system is not just a question of finding missing links. Often capacity constraints emerge when the existing infrastructure cannot handle the increase in vehicle traffic.

In nominal terms, the increase in traffic is expected to be highest around the main metropolitan areas. As these have the best road infrastructure, they are better able to absorb the increase in traffic. In less densely populated regions, with a sparse road infrastructure, a large increase in traffic can cause serious congestion with severe repercussions for regional labour markets. In the Nordic countries, some road sections near the medium-sized towns of Trondheim, Sundsvall and Rovaniemi have seen an annual growth in traffic of more than 50% in the last couple of years. In northern Norway and Finnish Lapland, road traffic has been increasing annually by more than 50% on some road sections.

On the other side of the Baltic Sea, the increase in traffic has been highest on the main transnational axes. The roads connecting Saint Petersburg, Tallinn, Riga and Kaunas have seen a steady increase in traffic, between 10% and 50% each year for some years. Most of this growth is borne by small sections of the existing road system. Indeed, the small road

sections at the borders of Estonia and Latvia have seen an increase in traffic of 125% per year, while the road sections near the Estonian city of Narva, on the route between Tallinn and Saint Petersburg, have seen an increase in traffic of more than 70% per year. In Poland, road sections on the main national route have seen growth in traffic of between 10% and 50% annually for the last couple of years.

Gaps in the road infrastructure may not therefore be only a metropolitan phenomenon, as high traffic growth can be found also in less densely populated regions. Secondly, gaps in the road system are mainly felt locally, and so the integration of the region may often depend on the capacity of small portions of the road network to support high traffic loads.

### Rail transport

The major challenge for rail transport is the lack of interoperability of the various national railway networks, due to different technical solutions and differences in the age of vehicles and infrastructure.

The main challenge is to match the gauges between the Russian (1520 mm) and European (1435 mm) systems. The Russian gauge is used in Russia, Belarus, the Baltic States and Finland, while both the Russian and European systems can be found in Poland and Kaliningrad. Consequently, the latter territories serve as a central junction for enabling the integration of both railway systems on the eastern shore of the BSR.

Both Poland and the northern part of Germany have a dense network of electrified and double-tracked railway lines. The quality of the infrastructure between the crossing points varies, as some parts are only equipped with non-electrified lines and some with single-track lines. Denmark, Norway and Sweden enjoy rather good interconnectivity of their railway systems, as the electrified, double-track lines are not disrupted at the borders. Connectivity to the Danish and 'continental' networks has been improved with the construction of the Öresund Bridge. Although the Danish and north Germany railway systems are connected to each other with double-track lines, these lines are not electrified; this may limit, for instance, the planned high-speed train service between Germany and Scandinavia.

The situation in the Baltic States is different. The network of electrified and double-track lines are still very limited, despite the fact that rail has traditionally been the most used means of transport in these countries. Moreover, the lack of modern north-south rail connections linking the Baltic national networks is a visible obstruction to intra-Baltic mobility of persons and goods.

In the case of Kaliningrad, the east-west connections to the rest of the Russian Federation, via Vilnius and Minsk, are fairly well developed, but there are few connections to northern Poland or coastal parts of Lithuania. Saint Petersburg is connected to Finland with a double-track line.

Overall, the network of electrified, double-track railway lines in the BSR is only partially integrated. The process of integration has to date been through the integration of different 'blocks': Germany-Poland, Denmark-Sweden-Norway, Finland-NW Russia and Baltic States-Kaliningrad-Belarus-NW Russia, although the integration within the latter block is by far the weakest. The potential for further integrating the region as a whole lies in the capacity to improve the interconnectivity of these different 'blocks', for instance via the priority axes of the EU Trans-European Transport Network (TEN-T) programme.

The still poor level of connectivity between the main metropolitan areas on the eastern shore of the Baltic Sea, i.e. between Poland, the Baltic States, western Russia and Belarus, is probably the most serious barrier for the complete rail network integration of the BSR. There is, to date, no direct train service between Warsaw, Vilnius (or Kaunas), Riga and Tallinn.

Finally, in the context of Europe-Asia rail freight flows and the primary role that the BSR may play in this matter, Saint Petersburg serves as a connection point between the European and Asian networks and thus economic markets. Consequently, the railway corridors between Saint Petersburg and Tallinn/Helsinki carry heavy freight flows.

### Air transport

Maps 19 and 20 illustrate the spatial distribution of airport facilities around the BSR. They do not show the complete



airport infrastructure, as they mainly focus on facilities that attain a minimum threshold of passengers or cargo per year.

As shown on Map 19, the airports of Copenhagen, Stockholm (Arlanda) and Oslo are the main gateways in the BSR airport network for passengers. The total number of passengers transiting in each of those airports is approximately 20 million per year. While large relative to the region, these are quite low numbers in European terms. Copenhagen airport is, so far, the only airport located in the BSR that belongs in the top-20 European airports. The airports of Helsinki (Vantaa), Hamburg and Berlin (Tegel) are in the second category of airports, with a yearly total of passengers approaching 10 million in 2006. In the eastern part of the region, only Warsaw airport has passenger traffic volumes that approach those in BSR (West), with more than eight million passengers in 2006. Airports in Krakow, Vilnius, Riga, Saint Petersburg and Tallinn have a strong regional and even national importance, but still are small in international terms.

Thus, there is a strong and persistent imbalance between the western and eastern BSR. The structure of airports in the BSR is, however, very fluid. Most airports around the BSR have seen a sharp increase in their volume of passengers in the past few years. Medium-sized airports have enjoyed the fastest growth. Airports in Warsaw, Tampere, Aalborg, Tallinn and Saint Petersburg have experienced yearly passenger traffic growth between 25 and 50%, while growth in Berlin (Schönefeld), Riga, Gdansk, Katowice and Krakow, has exceeded 50% per year.

Passenger traffic airports in the BSR are therefore seeing an overall strong expansion, and this rapid expansion is especially noticeable in smaller airports. If this trend continues over the medium term, it will reduce the current imbalances between the western and eastern parts of the BSR. Low-cost carriers have played an essential role in this process.

The region's air travel network is fairly dense for a handful of connections, but almost non-existent for travelling to many other parts of the world. Indeed, there are few or no connections to large established markets, such as Australia, Canada and Japan, or emerging markets such as India and Latin America. There are almost no direct connections available to Africa. In order to reach other destinations, travellers in the BSR must use connecting flights to larger European airports in London, Paris, Frankfurt or Amsterdam.

## Maritime transport

If the Baltic Sea presents a natural obstacle for the expansion of terrestrial transport such as road and rail networks, it is an outstanding asset for the development of an integrated maritime transportation network between the BSR countries and regions.

The Baltic Sea is one of the maritime areas with the densest traffic in the world. Both the number and the size of ships have been growing in recent years, especially oil tankers, and this trend is expected to continue. Maps 12 and 13 above illustrate the number and type of ships crossing the HELCOM AIS[25] predefined line – as mentioned, there are around 2 000 ships at sea in the Baltic at any given time, accounting for 15% of the world's cargo transportation[26].

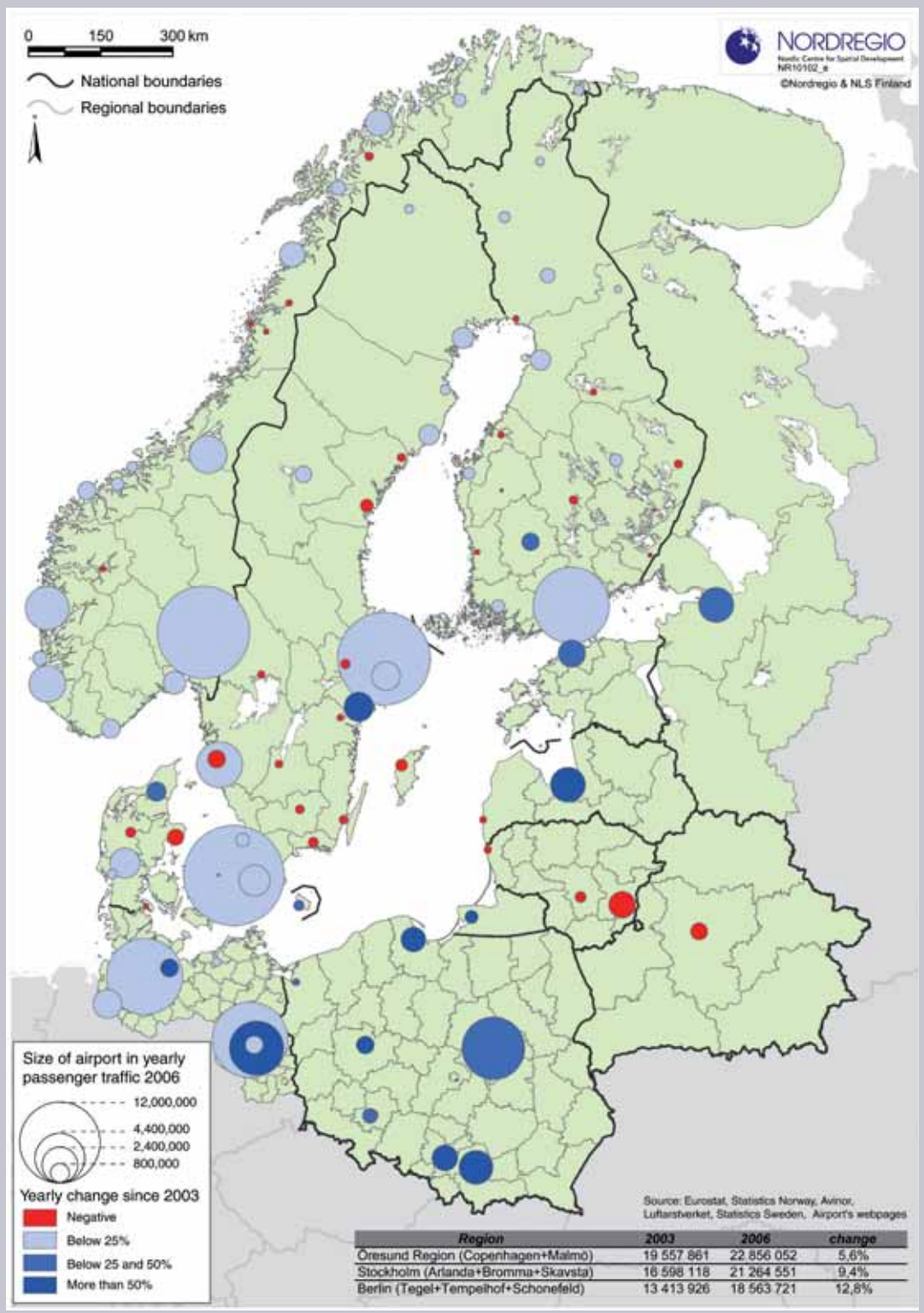
Forecasts indicate that economic growth, especially in the eastern part of the region, will result in the amount of cargo shipped in the Baltic doubling by 2015. The amount of oil transported in terminals of over three million tonnes increased from 125 million tonnes in 1997 to 210 million tonnes in 2005.

Ferry lines are not only used for cruises or leisure trips, but also as a means of transportation for commuting journeys, especially for reaching the many islands located in the Baltic Sea. This type of maritime transport is characterised by short distances and rather high frequency. One example is Denmark's Esbjerg-Nordby route in the north Sea, with an average 560 weekly connections in 2007. In Denmark and Norway, the many different groups of islands make the use of maritime transportation essential in their national transport systems.

25 The AIS is a very high frequency (VHF) radio-based system which enables the identification of the name, position, course, speed, draught and cargo of every ship of more than 300 gross tonnes engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages and all passenger ships irrespective of size sailing on the Baltic Sea.

26 See Chapter 4, Section 4.1.4, Pollution from ships, for the environmental effects of shipping in the Baltic Sea.

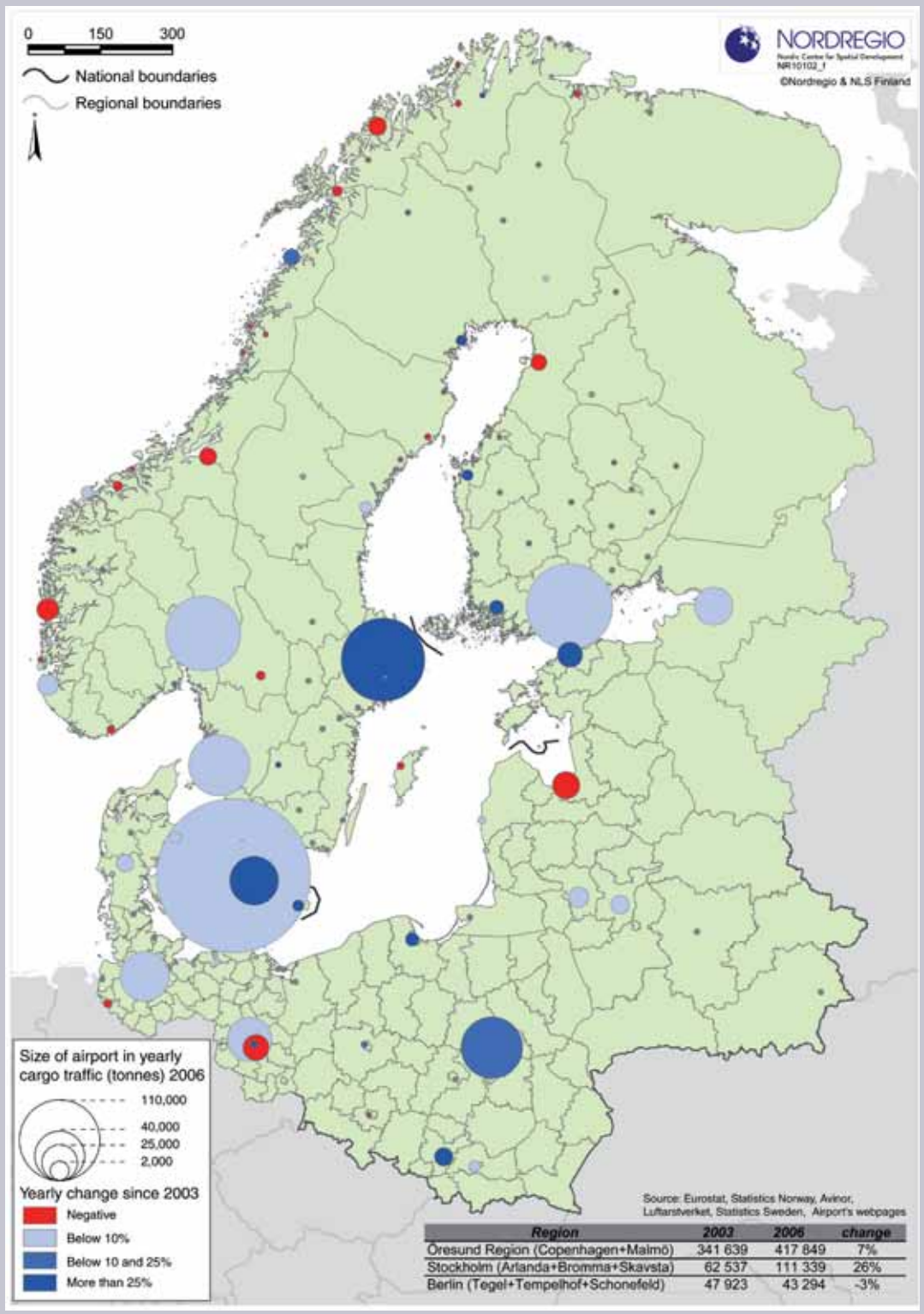
## MAP 19: MAIN PASSENGER AIRPORTS IN THE BSR




| Region | 2003 | 2006 | change |
|---|---|---|---|
| Öresund Region (Copenhagen+Malmö) | 19 557 861 | 22 856 052 | 5,6% |
| Stockholm (Arlanda+Bromma+Skavsta) | 16 598 118 | 21 264 551 | 9,4% |
| Berlin (Tegel+Tempelhof+Schonefeld) | 13 413 926 | 18 563 721 | 12,8% |



## MAP 20: MAIN CARGO AIRPORTS IN THE BSR




| Region | 2003 | 2006 | change |
|---|---|---|---|
| Öresund Region (Copenhagen+Malmö) | 341 639 | 417 849 | 7% |
| Stockholm (Arlanda+Bromma+Skavsta) | 62 537 | 111 339 | 26% |
| Berlin (Tegel+Tempelhof+Schonefeld) | 47 923 | 43 294 | -3% |

Furthermore, many BSR countries are only separated by a narrow sea channel, which increases the possibility of using maritime transportation on a cross-border basis. The most used cross-border ferry line in the BSR is the route between Helsingborg in Sweden and Helsingør in Denmark. In 2007, the average weekly frequency on the route was 945 connections. Similarly, ferry connections are well developed between Germany and Denmark. The Puttgarden-Rødby route is the fourth-most frequent in the whole BSR, with 336 weekly connections. The increase in high-speed ferry connections between Tallinn and Helsinki – now a one-hour journey – has further enhanced the economic integration between the two regions. In 2007, there were 392 weekly connections on average between Helsinki and Tallinn. On the eastern shore of the Baltic Sea, the ferry connection between Gdansk and Kaliningrad acts as an efficient substitute for road and rail transportation – which is difficult due to differing national technical standards.

These short-haul, cross-border ferry connections are important for enhancing the mobility of persons and especially for further integrating regional labour markets. Ferry connections are also used by trucks and buses, to transport goods across borders. In some cases, ferry connections allow trucks to avoid long detours on the existing road network. This is the case for connections between Germany and Denmark, and between Germany and Sweden. Consequently, short-haul, cross-border ferry connections can be efficient substitutes for missing road and rail links.

Maritime transportation is also well developed for longer journeys, essentially for connecting cities and regions located on the shores of the Baltic Sea. These long-haul, transnational connections are often very popular for leisure. The most frequent of these ferry connections are the routes Stockholm-Mariehamn (70 weekly) and Stockholm-Turku (56 weekly).

The largest passenger ports in the BSR are the 'Twin' ports of Helsingborg and Helsingør. The ports of Helsinki and Stockholm are respectively third and fourth in the BSR passenger ports ranking. The high frequency of ferry connections departing from both cities explains their high ranking. Tallinn is the only major passenger seaport not situated in the Nordic countries or Germany, and is ranked seventh with over six million passengers in 2006.

The top 25 cargo seaports are more evenly distributed around the Baltic Sea. This is especially true for bulk cargo. However, high-quality goods needing careful handling are mostly shipped via German and Nordic seaports. Hamburg is the busiest BSR cargo seaport by far, with up to 115 million tonnes loaded and unloaded. The Norwegian port of Bergen, formerly number one in the BSR, is second in the ranking with less than 70 million tonnes transported. The seaports of Saint Petersburg and Tallinn are third and fourth in the ranking, with respectively 54 and 41 million tonnes of goods loaded and unloaded. The fastest growing seaports are situated on the eastern shore of the BSR, which highlights the growing importance of these regions in the economic and commercial integration of the BSR.

When aggregated, the seaports of Germany located in the BSR are the largest platform for the transit of goods and freight from the BSR to a range of global destinations (Australia, Canada, China, India, Japan, non-BSR parts of Russia and the United States), with more than 41 million tonnes. Seaports in Norway and Sweden complete the podium, with respectively 18 and 10 million tonnes. Surprisingly, Finland and Denmark are the countries with the smallest volumes of goods transited. For Finland, this can be explained by the strong volumes of goods shipped to Russia – either via the Gulf of Finland or by train. As for Denmark, it is strongly focused on European and Baltic markets. The United States is the largest destination in terms of cargo shipments for the majority of the BSR countries. This is the case for all four Nordic countries as well as Estonia and Latvia. For BSR-Germany and Poland, the largest trade partner is China; for Lithuania it is Japan.

### 1.4.5. ENERGY

For the internal energy market to function well, regions need good interconnections. However, the three Baltic States (Estonia, Latvia, Lithuania) are largely isolated from the wider energy networks of the region and the rest of the EU.



This increases the risks related to security and pricing of energy supplies.

Moreover, in the BSR, energy markets (electricity, gas, oil) lack appropriate infrastructures and are nationally oriented rather than linked and co-ordinated (although some co-operation on energy issues has been initiated under the BASREC[27]). Levels of market opening and competition in certain MS are not sufficient to provide the right incentives for investments. In particular, the three Baltic States (Estonia, Latvia, Lithuania) are not properly integrated into the wider energy networks of the region and to the rest of the EU, and are hence effectively isolated in energy terms.

## Sources of electricity

Analysis of the sources of electricity production in each BSR country reveals different profiles. In Russia and, to a lesser extent, Denmark, energy generation is strongly based on coal and gas; in Estonia and Poland coal (oil-shale in Estonia) is the largest source of electricity production (more than 80%); in Lithuania (until the closure of the Ignalina plant in 2009) and Sweden, nuclear energy makes up more than or around half of the total national generation of electricity; in Latvia, the production of energy from renewable and waste resources represents 87% of the total generation of electricity, which is unique in the region. Finally, three countries have a more mixed range of energy sources. For energy generation, Germany uses mainly coal (42%) and nuclear energy (32%); Finland mainly renewable energies (42%) and nuclear (37%); and Belarus uses oil and gas (52%) and renewable energies (33%).

In terms of medium-term trends in the generation of electricity, one can see three groups of BSR countries. Five of these countries in total have significantly increased their total generating capacity – Denmark, Finland, Norway and Sweden since 1971 and Latvia since 1990. Belarus and the Russian Federation belong to the group of countries that has tended to stagnate. Finally, four countries (Germany, Estonia, Lithuania and Poland) have decreased their total production of electricity.

### Electricity

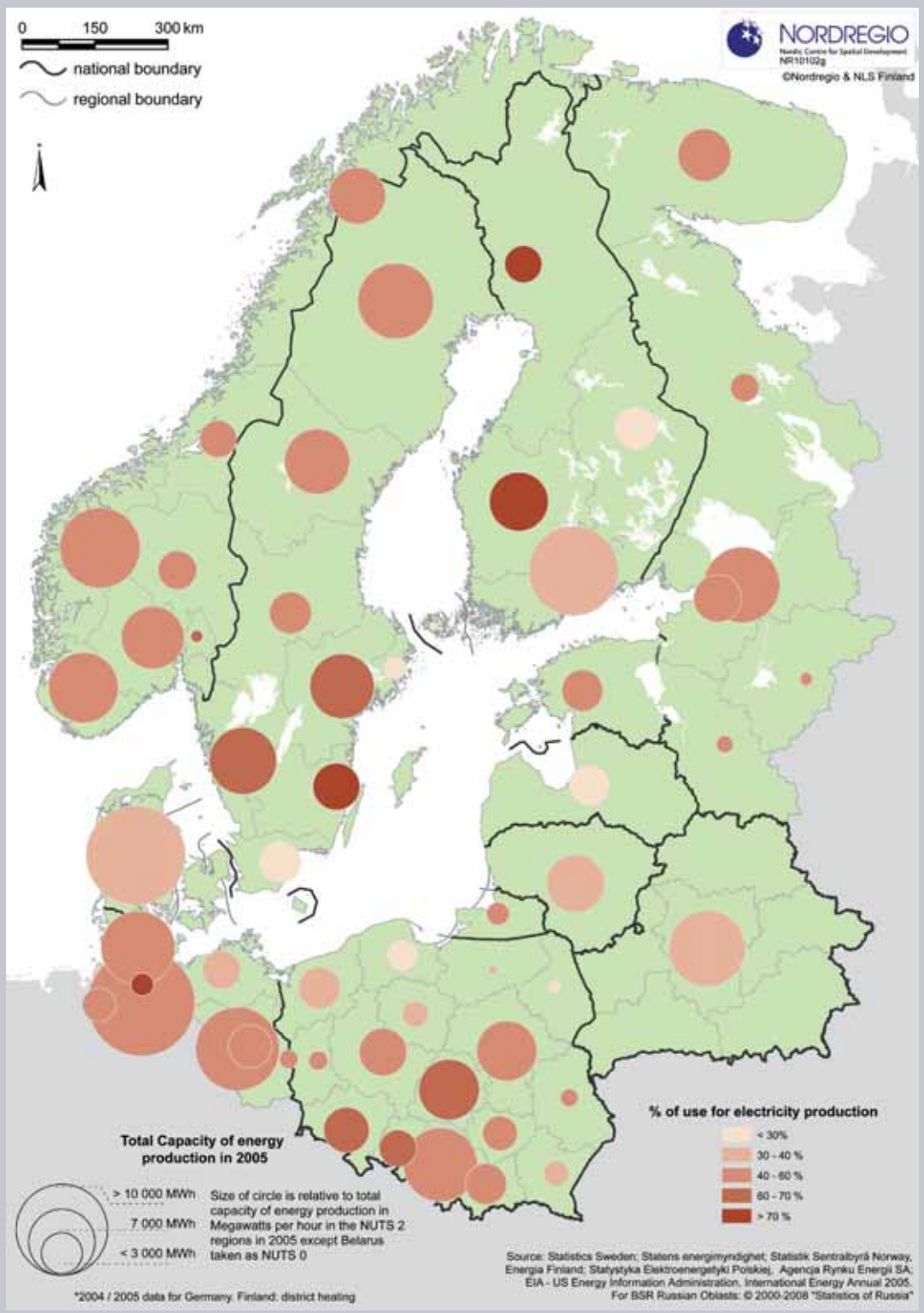
In the electricity field, the BSR faces a twin challenge:

- ending the effective isolation of the Baltic States, which still form an energy island – effective interconnections are essential for creating a fully functioning and integrated energy market in the region and, for the time being, the Baltic States are heavily dependent on Russia's electricity system;
- increasing electricity generation capacity to ensure security of supply.

Electricity production capacity is closely associated with the infrastructure available in each region and country, as it depends on the location of power facilities on their territory. Taken together, the indicators of total regional production and level of production per capita (see Maps 21 and 22) show the main profiles of regions and the importance of their position in the BSR context. A high ratio underscores an overproduction of electricity compared to regional needs, and thus the possibility of exporting electricity. A low ratio is indicative of smaller margins and the necessity of importing electricity from other parts. Regions of the BSR where the calculated ratio is high are situated in northern Sweden, south-western and northern Norway and in Lüneburg (Germany). On the eastern shore of the BSR, the ratio is rather low with the exception of southern Poland and the Leningrad and Murmansk oblasts of Russia. Evidently, large metropolitan regions such as Oslo and Stockholm show both a low production of electricity and a low ratio.

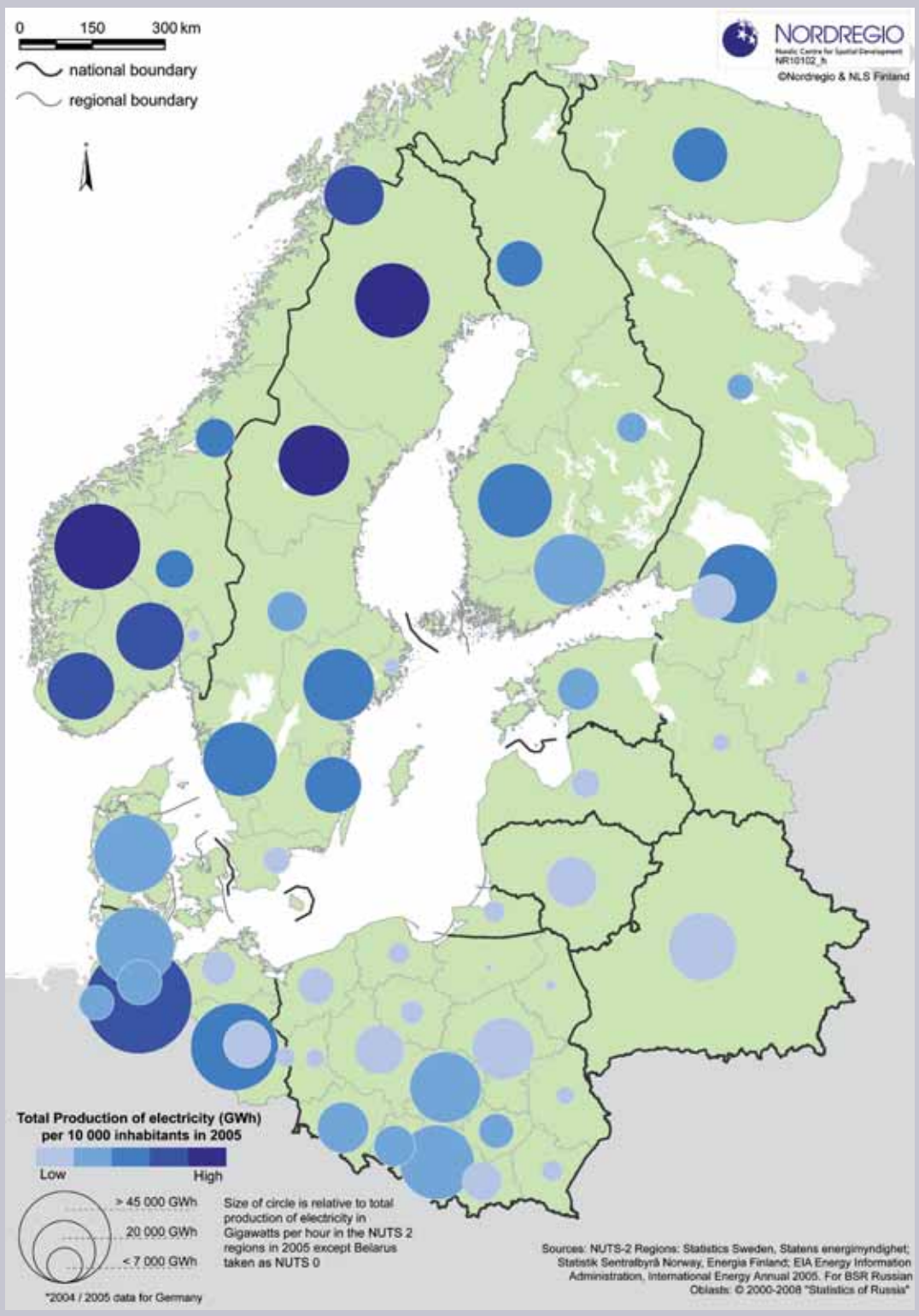
27 BASREC (initiated in 1999) includes the governments of Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. The European Commission is represented by Directorate-General for Transport and Energy. The participation in this work also involves the CBSS and the NCM.

## MAP 21: ELECTRICITY PRODUCTION CAPACITY IN TOTAL VOLUMES IN BSR REGIONS, 2005





## MAP 22: ELECTRICITY PRODUCTION CAPACITY PER CAPITA IN BSR REGIONS, 2005



## MAP 23: ELECTRICITY TRANSMISSION GRID IN THE BSR, 2007



Integration of the electricity transmission grids in the BSR countries is an essential step towards the creation of a consolidated energy network in the region (see Map 23). These grids have mainly been designed to supply the domestic market and so individual countries have adopted different technical standards. These differences in technical standards pose one of the main challenges for the interoperability of electricity networks in the BSR.

In the Nordic countries, the joint energy body (Nordel) ensures the compatibility of the Nordic electricity transmission systems by developing joint regulatory frameworks and providing technical standards to connect electricity facilities to consumers. On the eastern shore the transmission grids of the Baltic States, Belarus and Russia are relatively compatible as they share similar technical standards. Poland has developed another technical standard for its transmission grid, which is difficult to connect to neighbouring countries.

## Oil

The total known and proven reserves of oil in the countries of the BSR are around 7% of the worldwide known reserves. However, more than 85% of them are located in Russia. The Russian oil-producing areas are far from the Baltic Sea, but an increasing share of the Russian oil is exported via harbours in the Baltic Sea (they include Primorsk in Russia and harbours in the three Baltic States) and the Druzba pipeline into eastern parts of the EU.

A steady and secure flow of Russian oil is important to most of the neighbouring states in the BSR, as oil production in the north Sea has reached its peak level. Some of this oil flow can be replaced by oil from the north Atlantic or the Norwegian sector of the Barents Sea, but the amounts and time frame for possible production are still unclear and not likely to happen in the near future. Table 5 gives an overview of the oil situation in the BSR.

Table 5: Reserves and export of oil

| | Oil reserves | Production | Domestic consumption | Export/Import |
|---|---|---|---|---|
| | 1 000 Mbbl | Kbbl/d | Kbbl/d | Kbbl/d |
| Denmark | 1.3 | 377 | 189 | 188 |
| Estonia | 0 | 0 | 20 | – 20 |
| Finland | 0 | 0 | 233 | – 233 |
| Germany | 0.4 | 71 | 2 586 | – 2 515 |
| Latvia | 0 | 0 | 30 | – 30 |
| Lithuania | 0 | 0 | 57 | – 57 |
| Norway | 8.5 | 2 778 | 217 | 2 561 |
| Poland | 0.01 | 20 | 417 | – 397 |
| Russia | 74.4 | 9 190 | 2 753 | 6 437 |
| Sweden | 0 | 0 | 315 | – 315 |
| Total | 84.61 | 12 436 | 6 817 | 5 619 |

Source: Oil &Gas Journal, BP statistical review, IEA

Of the oil exported from Russia – almost 6.5 Mbd[28] – 1.7 Mbd is consumed by the BSR countries and some 2.1 Mbd by other European countries. Roughly 2.8 Mbd is exported outside the EU, mainly to the US and the Asian markets. This means that around 60% of oil imported to the BSR comes from Russia. Norway has an export surplus of almost 2.5 Mbd. Currently, Norway exports 500 Kbbl/d to the BSR, thus covering 16% of the total regional import demand.

### Nuclear power

Currently four countries located in the BSR have nuclear reactors in operation: Finland, Germany, Russia and Sweden. Finland is constructing a new NPP and the construction of a sixth plant is being considered. While Lithuania has traditionally had the highest ratio of electricity generated from nuclear power, the recent closure of the Ignalina power plant has made the country reliant on electricity imports. Lithuania therefore plans to build a new NPP in Visaginas and hopes to involve Latvia, Estonia and Poland in the project through their regional electricity markets integration strategy.

Likewise, the Polish government approved in August 2009 plans to build the country's first NPP by the end of 2020.In late 2008, the government of Estonia approved the objective to build its own NPP by 2023, also with the goal of reducing its energy dependence on Russia.

In April 2008, the Russian Federation also announced plans to build two reactors in Kaliningrad Oblast for a 2016 start up, and Belarus has already started building a plant that will initially comprise two reactors – scheduled to be commissioned in 2016 and in 2018 respectively.

### Natural gas

The BSR countries have very different characteristics with regard to natural gas. The region includes Russia with the world's largest reserves of gas, the two major exporters of gas to EU countries, Russia and Norway, as well as countries with no production and who depend solely on imported gas.

28 Million barrels

Table 6: Natural gas

| | Denmark | Estonia | Finland | Germany | Latvia | Lithuania | Norway | Poland | Russia** | Sweden |
|---|---|---|---|---|---|---|---|---|---|---|
| Reserves (mtoe)* | 67 | 0 | 0 | 133 | 0 | 0 | 2 400 | 83 | 39 700 | 0 |
| Production (mtoe/y) | 8,7 | 0 | 0 | 14,3 | 0 | 0 | 74,1 | 3,8 | 491 | 0 |
| Exports (mtoe/y) | 5,0 | 0 | 0 | 15,2 | 0 | 0 | 69,2 | 0 | 203 | 0 |
| Imports (mtoe/y) | 0 | 0,8 | 3,6 | 77,9 | 1,3 | 2,5 | 0 | 8,4 | 42 | 0,8 |

* Reserves by end of 2006, BP statistics
** Source Gazprom

Table 6 gives an overview of reserves, production, exports and imports of natural gas in the BSR. The reserves in the region amount to 28% of the world's reserves, of which 26% are in Russia.

### Renewable energy

Production of energy from renewable resources brings two major benefits. First, it has lower environmental impacts and reduces greenhouse gas emissions, which is important in the



context of fighting climate change; secondly, it improves the energy independency of countries and regions by reducing the need for imports.

The BSR countries have different renewable energy production profiles. In the first category are countries that utilise extensive river basin resources for hydropower (Latvia, Norway, Russia and Sweden). The second group comprises Belarus, Estonia, Finland and Lithuania, which mainly call on biomass for their production of renewable energies. Finally, a third group of countries (Denmark, Germany and Poland) has no dominant form of renewable energy, calling on a wider variety of sources (wind power, solar, photovoltaic, hydropower, waste, biomass, biofuels).

### Energy consumption

The three main energy consumption sectors are industry, transport and buildings, amounting to around 30% each.

In several BSR countries the national production of energy only covers a small part of the energy that they consume. Apart from Norway, Russia, and to a lesser extent Denmark, all other countries are dependent on energy imports, which makes energy dependency an important consideration for energy policies at EU and national levels. These strong dependencies underline the importance of developing integrated energy networks and markets, enabling supply and demand patterns to be aligned across borders, and enhancing energy efficiency.

In terms of energy consumption, oil products are widely used in all three main sectors: industrial (e.g. chemical), transport (e.g. gasoline and kerosene) and residential (domestic fuel). Almost all BSR countries have reduced their consumption in recent decades. For the former Soviet Union countries of Belarus, Estonia, Latvia, Lithuania and Russia, the fall was between 1990 and 1995. In Denmark and Sweden, a significant decrease took place in the late 1970s and early 1980s. In Germany and Finland, consumption has been mainly stagnant over the last 30 years. Norway and Poland are the only two countries in which the consumption of oil products has increased recently. While the level of consumption in 2005 in Norway was 125% of the consumption level in 1971, it has doubled in the case of Poland.

## 1.4.6. OTHER NETWORKS

### ICT networks

ICTs have become an integral part of policy debates about accessibility. New technologies such as mobile telephony or broadband Internet connections enable individuals and businesses to expand their contact networks, broaden the market area for their products and to access information more quickly and autonomously. As with transport and energy, ICT is about accessibility – in terms of available infrastructure and how individuals and businesses use these infrastructures.

Many BSR countries are EU leaders in ICT. In Sweden and Finland, this is a result of the presence in particular of Ericsson and Nokia, which are world leaders in the production of ICT hardware. Denmark, Germany and Norway have rapidly developed good hard and soft infrastructure for their respective economies. On the eastern shore of the BSR, the development of ICT infrastructure and management has emerged later in the process of economic restructuring towards market economies.

Recent figures on the penetration of fixed or mobile telephony across the BSR countries show that the main challenge for access to ICT is no longer how to exploit mature technologies, but rather how to catalyse and anticipate the development of emerging technologies. The disparities between BSR countries in the access to and use of ICT can be seen in two main areas. First, these disparities are substantial for emerging technologies (e.g. broadband), yet almost non-existent for mature technologies (e.g. mobile phones). Secondly, for a given technology, disparities between countries are bigger in the case of individual use (households) than for business use.

Germany, Estonia and the Nordic countries had already seen a strong increase in subscriptions to broadband services by 2000. Other countries, such as Lithuania, followed suit a few years after and finally countries such as Belarus, Lativa and Russia have been the latest to exploit the technology. However, it looks as if these disparities will rapidly be smoothed out, as was the case for mobile phones.

Yet within all BSR countries, there are strong disparities between different types of territories. In general, metropolitan areas have better access to ICT than more sparsely populated ones. This shows that the location of persons and businesses within the national territory has a strong influence on their capacity to access high-quality ICT networks.

In 2005, the BSR countries were classified into four categories in terms of disparity gaps in the household use of broadband connection between densely and sparsely populated regions. Sweden belonged to the top category (i.e. with the smallest disparities); Denmark and Finland to the second category; Estonia, Germany and Norway to the third; and finally Latvia, Lithuania and Poland to the last one.

In the space of just two years, all BSR countries have managed to reduce significantly the disparities between the densely and sparsely populated regions. Denmark, Germany, Finland and Norway joined Sweden in the top category; Estonia moved to the second category; Latvia and Poland to the third one; while Lithuania was still in the last category, although its ratio was reduced by half.

This progress shows that ICT territorial disparities are changing fairly quickly. But in general terms, territories outside the metropolitan areas are not as well equipped to act as driving forces in the ICT system. Transnational and cross-border co-operation should aim to accelerate the improvement of regional capacities for hard (e.g. infrastructure, networks connectivity) and soft (e.g. e-learning, education) investments in those regions.

E-accessibility in the BSR

Some recent transnational Interreg IIIB projects (Rural Broadband and LogOn Baltic) have highlighted important issues concerning access to ICT in the BSR.

The Baltic Rural Broadband project is designed to improve broadband access in selected rural regions of all BSR EU MS and Norway, through identification and dissemination of best practice examples, development of local or Subregional broadband strategies, and by encouraging local stakeholders to promote broadband solutions as a key element of future regional development strategies. The project highlights both territorial disparities, for instance in rural areas, and social disparities in terms of ICT access, for instance among older and low-income individuals. It also emphasises the role of private companies as providers of the necessary infrastructure in distant areas and technologies (e.g. radio-based) in providing such services. To that end the project oversaw some test installations and pilot implementation of local network modules through smaller investments.

The LogOn Baltic project concentrates on the role of logistics and ICT competence in regional development. It provides a transfer of knowledge for that and delivers recommendations to regional development agencies on how to support enterprises in the participating regions in their effort to improve ICT and logistics competence.

## 1.4.7. SAFETY AND SECURITY

### Cross-border crime threats

Trafficking in human beings and other forms of related organised crime (such as smuggling of persons, contraband, trafficking in drugs and firearms) pose a threat to the national security of the BSR countries. This illegal business serves as a basis for organised criminal structures, which are flexible and quick to react to any change in the market. In the border-free EU, illicit goods can easily be transported between supply and demand areas by existing criminal groups. This may lead to exploitation of significant non-EU and non-integrated communities in the MS.

Drugs and smuggling of highly taxed goods remain the most important cross-border criminal activities in many of the Baltic Sea countries. Organised crime groups active in the area range from mainly indigenous gangs through Russian-speaking or Balkan-origin groups. Such groups tend to adapt and expand to other criminal markets or regions, leading to wider cross-border and spillover effects.



Consequently, the BSR is seeing a rapid expansion of organised crime, as the region includes and is located close to supply and transit countries. It is an important transit and destination point for various drugs, such as heroin from Afghanistan, cannabis/hashish from Morocco and cocaine from South America. Synthetic drugs are also produced in the region. It also serves as a gateway for counterfeit goods destined for the region or on their way to the Russian or continental EU markets.

The main hub attracting and redirecting external criminal flows is located in the three Baltic States. The criminal situation in Estonia, Latvia and Lithuania is mostly influenced by their location between countries supplying cigarettes and synthetic drugs precursors and significant destination countries for cigarettes, synthetic drugs, cocaine and hashish. This criminal hub is attractive to organised crime from the BSR and from neighbouring eastern countries, such as Belarus, Russia and Ukraine. An important aspect of this hub operation is human trafficking.

Women trafficked through the Baltic States mainly come from Belarus, Russia, Ukraine and other former Soviet Bloc countries. The three Baltic States are also countries of origin for trafficking, with at least a few thousand citizens of Estonia, Latvia and Lithuania falling victim to trafficking annually. Trafficking in this area is mainly linked to social and economic conditions, including a high percentage of Russian-speaking minorities that are not fully integrated in the Baltic societies, a lower standard of living in the rural areas of all three States as well as salary inequalities, and discrimination against women on the labour market. In Poland, while fewer Russian citizens are transited through the country due to visa regulations, Ukraine continues to be the largest source of trafficked persons.

The three Baltic States and Poland are gradually also becoming target areas for human trafficking, however, due to the recent increase in living standards. These countries are thus likely to follow the path of the older EU MS as destination countries of sexual and labour exploitation of citizens from poorer EU countries, the neighbouring former Soviet Union republics, Asia and Africa.

Another hazard in the BSR is terrorist attacks, where alert levels have increased throughout the EU. While the region has no serious separatist or extremist violence acts, it may become threatened by terrorist groups outside and within the EU in an attempt to influence national policies in conflict areas. Even countries which are deemed low risk for international terrorism (e.g. Finland and the central and eastern European countries) risk being used as a logistical base or transit channels for terrorists operating outside the EU.

## Man-made and technological hazards

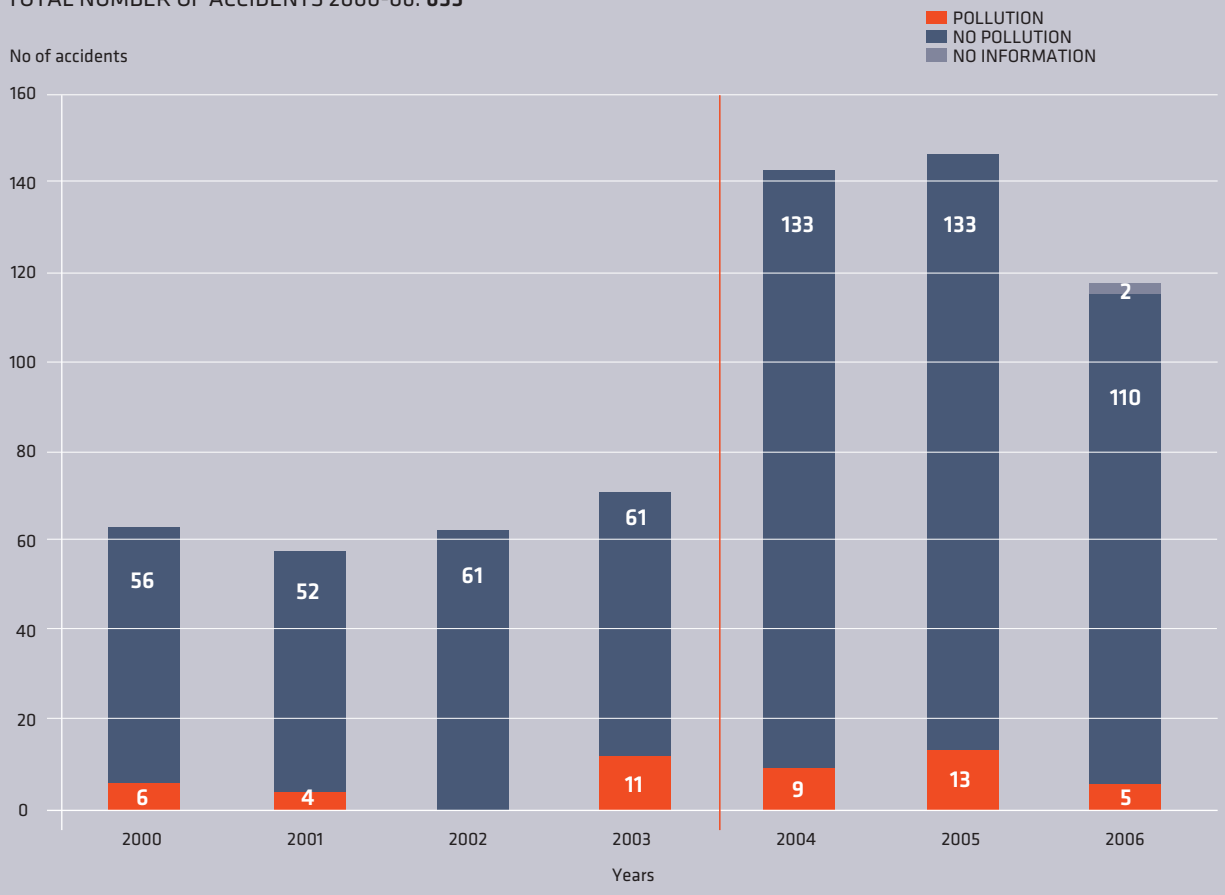
Man-made and technological hazards can be especially harmful, due to the risk of long-lasting unnatural effects (e.g. oil spills and nuclear fallout) or large influence areas (e.g. airborne or waterborne emissions from production plants or NPPs). Of particular relevance for the BSR are hazards from maritime transport.

As mentioned above, sea transport levels in the Baltic Sea are among the highest of any of the world's marine area. Both the number and size of ships have been growing in recent years and forecasts indicate that this trend will continue. The fastest growing segment is oil shipments.

The rising density of ship traffic in the Baltic Sea magnifies the risk of considerable accidental pollution from oil or other hazardous substances, due to possible groundings or collisions of ships. A non-exhaustive list of environmental effects of shipping accidents includes pollution of seawater and the seabed, killing of seabirds and mammals, pollution of the shores in recreational areas and wildlife habitats, as well as economic losses in the coastal regions.

The number of reported shipping accidents in the Baltic Sea regularly exceeds 100 per year, of which 7% cause discharges to the sea (see Figure 6). Most accidents in the Baltic Sea waters are collisions, which in 2006 accounted for almost half of all reported cases and for the second year in a row surpassed the number of groundings. The territorial distribution of collisions follows the major shipping routes.

Figure 6: Number of reported shipping accidents in the Baltic Sea in 2000-06



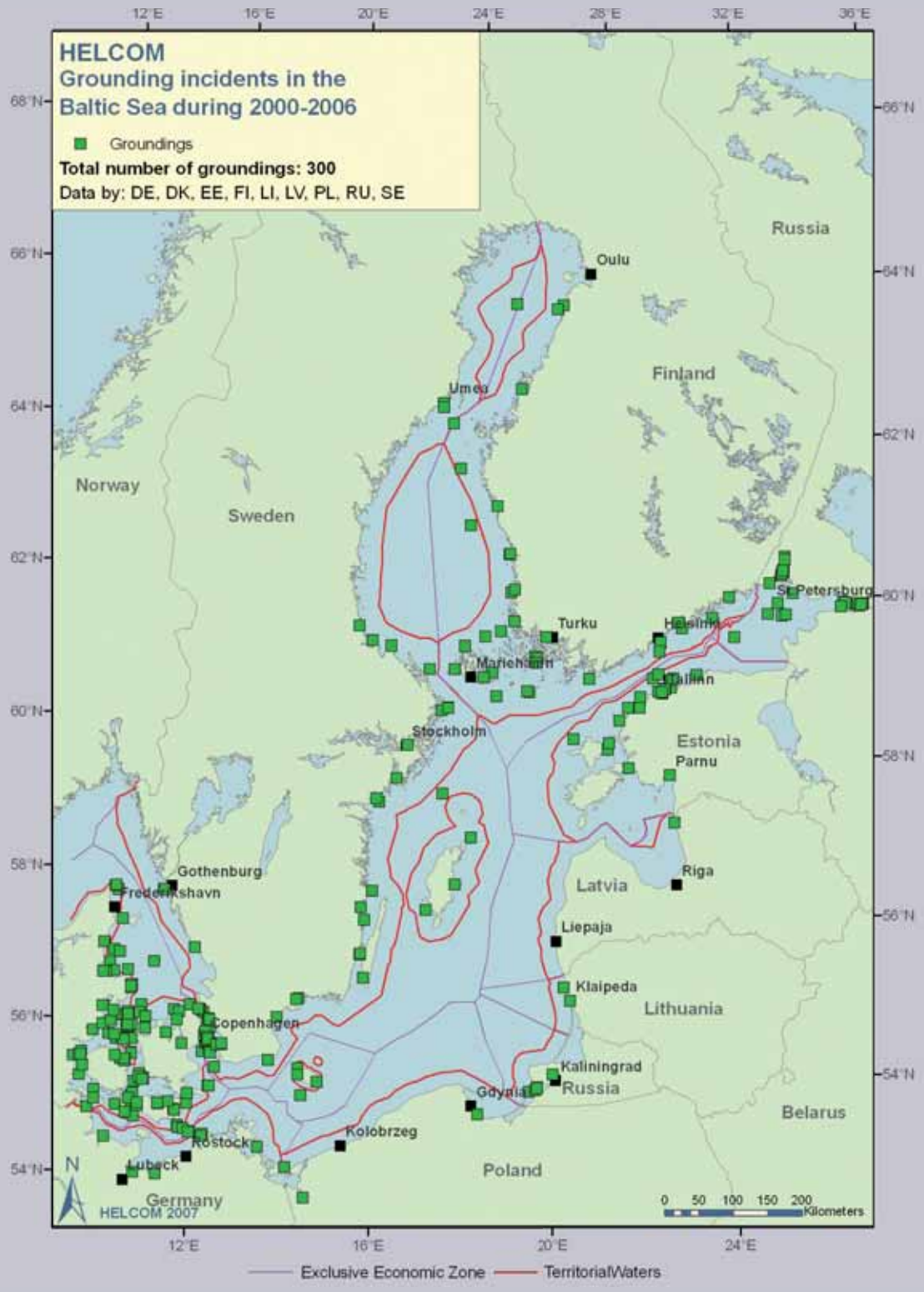

Source: HELCOM
Note: The difference, marked in red, in the number of shipping accidents between 2003 and 2004 can be partly explained by improved reporting within HELCOM.

The total number of groundings in the Baltic Sea is decreasing and the grounding events tend to be concentrated in Danish straits, the Gulf of Finland, the Åland Archipelago, the Swedish coast and within the port areas (see Map 24). There is a clear link between the absence of a pilot aboard and the risk of grounding. In 2006, when there were 46 groundings, a pilot was present aboard in only three cases.

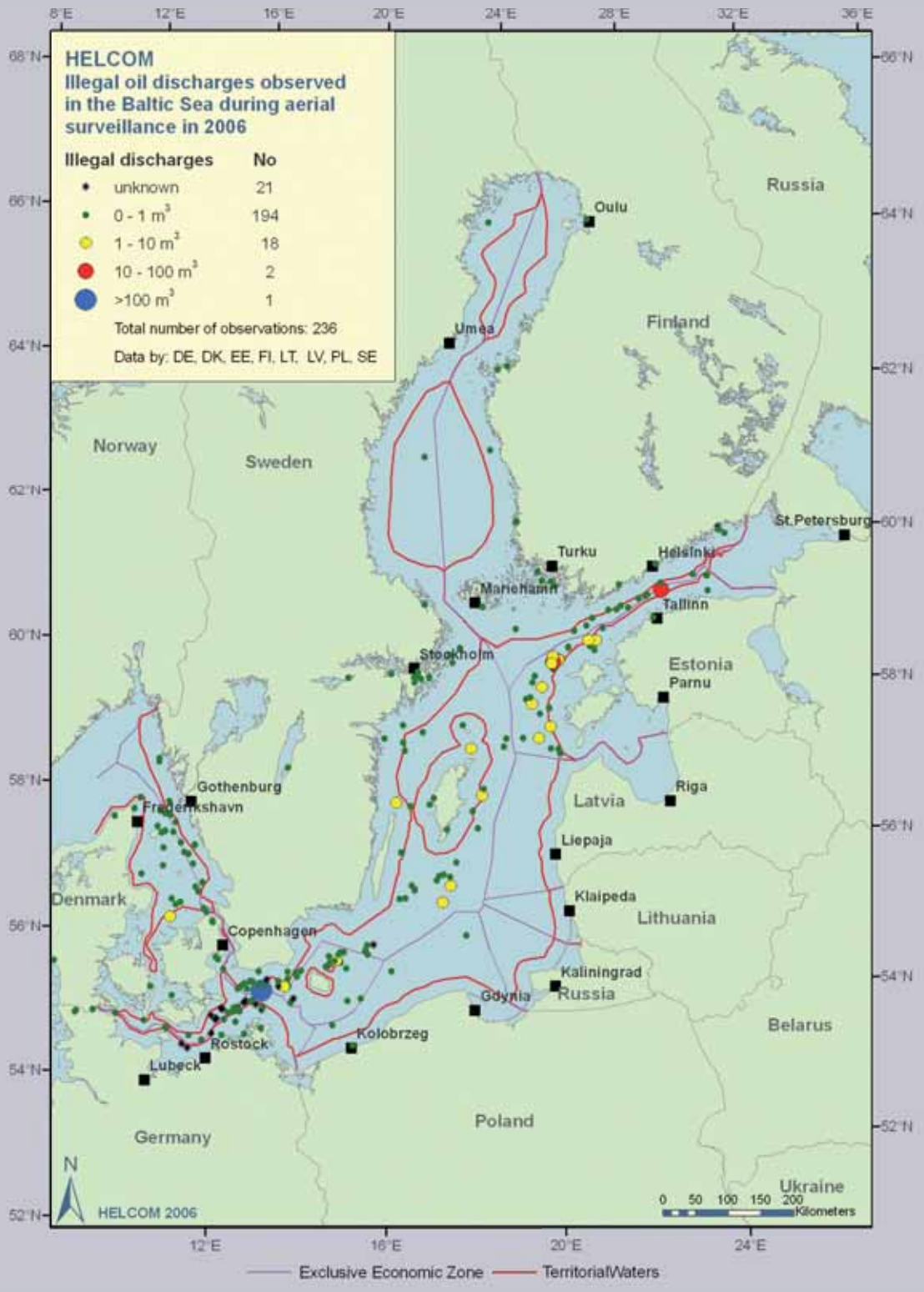
In addition to the hazard of accidental pollution, the Baltic Sea faces the challenge of deliberate discharges of oil and other wastes (see Map 25). Even though most of the detected deliberate oil discharges are smaller than 1 $m^3$ and the annual number of detected illegal oil discharges in the Baltic Sea is decreasing, the total volume of oil is substantial and much larger than the amount of oil spilled accidentally during most years. Moreover, the true number of illegal discharges is probably much higher than the 200-300 detected cases every year.



## MAP 24: GROUNDING INCIDENTS IN THE BALTIC SEA, 2000-06



## MAP 25: LOCATION AND SIZE OF DETECTED ILLEGAL OIL DISCHARGES IN THE BALTIC SEA, 2006





## Natural hazards

Natural hazards are understood as threats from extreme and short-lived natural events, which have a negative effect on population and/or the environment. Such events are predominantly of geological, hydrological or atmospheric origin and the most common include avalanches, droughts, earthquakes, heat and cold waves, floods, forest fires, landslides, storm surges as well as winter storms.

While some natural hazards are attributed to very local phenomena (e.g. landslides or avalanches) and may be addressed by domestic policies, several others show clear transboundary patterns and have an economic impact on a transnational scale.

Recent climate change trends may even result in the appearance of hazards like these in areas which have so far been associated with a low risk potential. This is also the case in the BSR, where certain territories face drought periods that can in turn lead to significant economic losses in agricultural production, the industrial sector and tourism. Especially vulnerable here are areas with a precipitation deficit, including the whole southern part of the BSR and south-western Norway. The effects of drought on groundwater and surface water levels may also have an impact on power production and energy prices in countries that depend greatly on hydropower, such as Latvia, Finland, Norway and Sweden.

The northern part of the region is, in turn, exposed to extreme temperature hazards, as its continental climate has higher annual temperature variations than marine-influenced climates. This population health hazard may even worsen, due to the faster-than-expected effects of climate change now being seen in the Arctic.

An interlinked set of natural hazards – consisting of winter storms, storm surges (seawater pushed towards the shore) and floods – has developed across the BSR following the area's exposure to humid air circulation from the northern Atlantic Ocean in the colder seasons. This exposure has a significant impact on the socio-economic sustainability of coastal cities and regions, especially in the southern part of the BSR. This territory, with its abundance of flat coastal areas and river mouth plains, is particularly vulnerable to a rise in sea level, which is related to the climate change trends and natural land subsidence processes. Threats associated with winter storm surges have also evolved along the Bothnia Bay and Gulf of Finland coastlines.

The cold season atmospheric conditions are predicted to vary more by the end of the current century, with a higher range of air pressure and stronger westerly winds. This may lead to increased storm surge heights and more extensive and frequent flooding events in vulnerable areas of the BSR, potentially resulting in severe human and economic losses (direct casualties, affected groundwater quality, damaged low-lying industrial and residential areas, etc.).

## Health threats

A particular safety hazard in the BSR is associated with antibiotic-resistant micro-organisms, which accompany migration flows to and within the EU. Despite medical progress and some international and national action programmes, there is still a distinct east-west epidemiological disparity in the region.

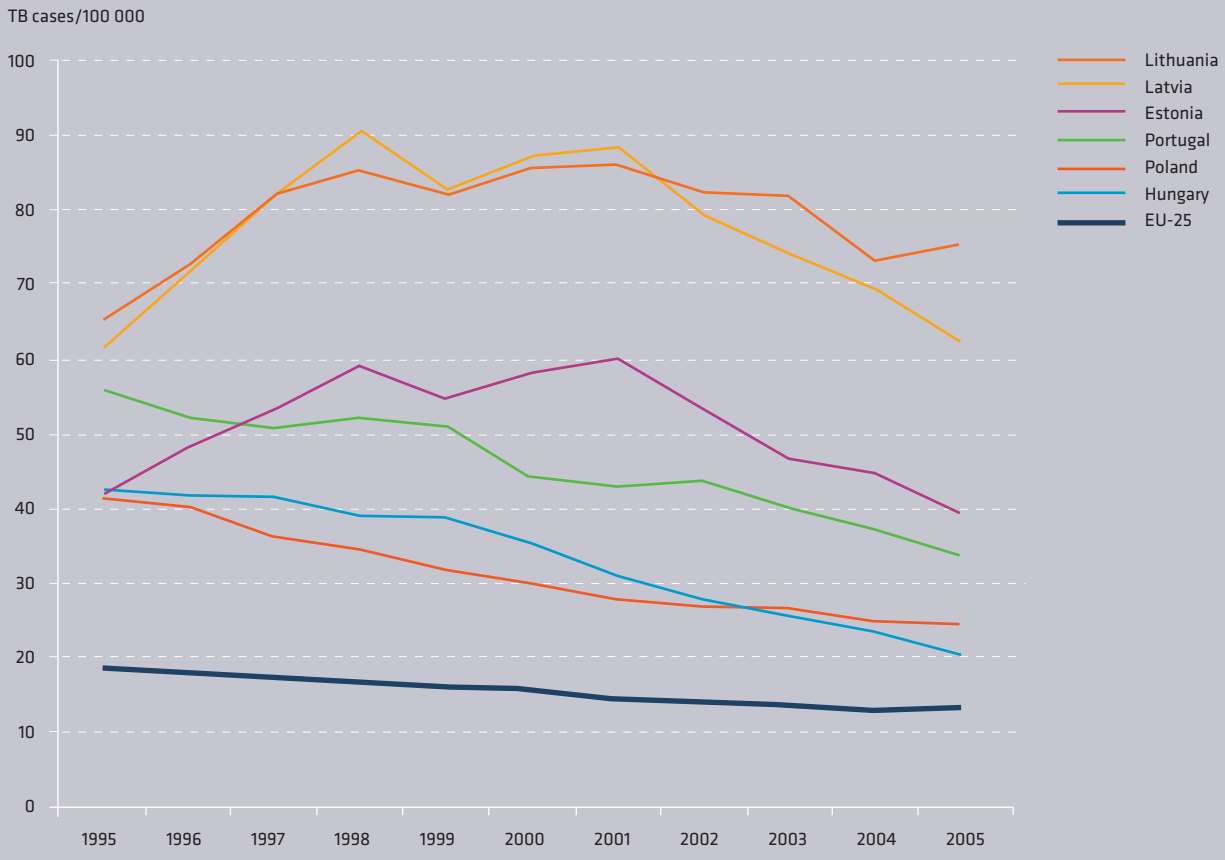
The incidence rates for HIV and tuberculosis (TB) in the western BSR countries are generally low and relatively stable, with the majority of cases detected among immigrants infected in a highly endemic country of origin. These include sub-Saharan Africa, parts of Asia and also eastern Europe.

By contrast, the eastern part of the BSR, notably Estonia, Latvia and Lithuania, are seeing significant rates of communicable diseases. High tuberculosis notification rates in the Baltic States (see Figure 7) are primarily of domestic origin and follow the socio-economic crisis and deterioration in healthcare infrastructure during the 1990s.

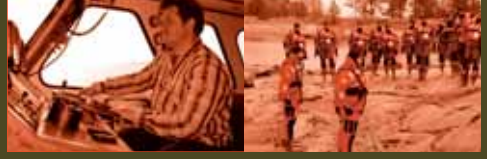
A major public health problem is the rise in medicine-resistant TB cases, especially among vulnerable HIV-positive individuals. Furthermore, Estonia and Latvia are among the countries with the highest HIV prevalence rates in Europe. The vast majority of infections are among drug users, especially in the eastern part of the countries bordering Russia.

Figure 7: Tuberculosis trend in the case-leading European countries in 1995-2005

TUBERCULOSIS IN COUNTRIES WITH MORE THAN 20 CASES PER 100 000 PER YEAR AND OVERALL FIGURES FOR THE EU-25 COUNTRIES, 1995-2005




Source: EuroTB



# 2. WHAT IS ALREADY HAPPENING IN THE REGION?

The BSR is a focus of intense activities by many actors and stakeholders. No survey can be comprehensive across the range of topics addressed by the Strategy but the section below seeks to identify the most significant. The chapter is divided into activities originating in European Union policies and initiatives; a short, and certainly incomplete, summary of key region related initiatives from the MS in the region and a review of the most significant regional organisations, both intergovernmental and mixed or non-governmental.

# 2. WHAT IS ALREADY HAPPENING IN THE REGION?

## 2.1. Activities of the EU and Member States

### 2.1.1. RESPONSES TO THE CRISIS

The economic crisis that blew up in 2008 has had a massive impact on the EU, not least in the BSR. Countries that until recently had been growth stars, such as Estonia, Latvia and Lithuania, find themselves (at the time of writing) facing precipitous falls in national income and, inevitably, in due course sharp rises in unemployment, poverty and other shortcomings of the economic system. All areas of Community action, not least Cohesion Policy, must contribute as best they can to alleviating the effects of this crisis and shortening its duration.

Cohesion Policy, using the instrument of the Structural Funds, is playing its part by removing where possible any obstacles to implementation, helping to maximise the stimulus effect of capital investment, and strengthening key innovative sectors in advance of the recovery. Among the short-term measures launched to mitigate the impact of the crisis are an increase in payments on account (advances) and the relaxing of certain restrictions on payments.

Clearly, initiatives like the EUSBSR will be affected by the crisis, particularly by the reduction in government receipts and the shortage of capital for investment. However, ways in which the Strategy can contribute to overcoming this short-term crisis are limited, especially since it does not bring with it any new source of funds. Since it clarifies the priorities within the region it may however help to accelerate the application of those funds that are available and to maximise the positive impact of such spending.

### 2.1.2. STRUCTURAL ACTIONS

#### ERDF, CF, ESF, EAFRD, EFF

It has been calculated that Cohesion Policy is making some €55 billion available to the region during the period 2007-13. This includes all programmes directly supporting the region except in Germany, where only Hamburg, Schleswig-Holstein and Mecklenburg-Vorpommern are included, and Poland where the programmes to support infrastructure and the eastern Regions are included along with the regional programmes for Zachodniopomorskie, Pomorskie and Warminsko-Mazurskie.

Each programme has its own priority axes and objectives. While these have been developed in accordance with the specific needs of the regions or sectors concerned, in many – perhaps most – cases these needs are compatible with the needs of the region as a whole. An obvious example is the creation or upgrading of waste water treatment plants: since all the watercourses in the region drain into the Baltic Sea, improvement in the quality of any of them – even hundreds of kilometres from the coast – will ultimately have a positive effect on the sea itself.

Similar arguments can be applied to most, though not all, transport improvements, business support, etc. Where such investments can be planned and implemented in the context of a wider strategy, they have more chance of benefiting both the locality concerned and the region as a whole. Some examples are listed in the following sections. New initiatives funded from Structural Funds sources can be limited by the fact that at this stage of the programming cycle many projects have already been selected. Nonetheless, it is expected that a number of operational programmes will be able to recognise the value of the Strategy directly by adapting their selection criteria, modifying the objectives of their Priority Axes or in other ways.

### 2.1.3. SECTORAL ACTIONS

#### Actions to support prosperity

Programmed expenditure for the 2007-13 period under the ERDF and CF for the Convergence and Competitiveness and employment programmes in the BSR in the field of prosperity:

| | |
|---|---|
| Innovation in SMEs and entrepreneurship | €2.4 billion |
| Investments in firms | €2.0 billion |
| RTD activities | €1.2 billion |
| RTD infrastructures | €1.1 billion |
| **Total:** | **€6.7 billion** |



In addition, other Community programmes (in particular the seventh research framework programme, the LIFE programme, the ESF, the European Territorial Co-operation programmes, the ENPI CBC, the EAFRD, the EFF[29] and the Competitiveness and Innovation programme) as well as national, regional and local policies are financing important projects. In addition, the EIB is already providing its lending/co-financing to a large number of projects and could further extend its activities to a large number of flagship projects.

### Examples of projects financed by the ERDF and the CF (ongoing and planned, total cost)[30]

> 'Fiber Optic Valley' (co-financed by Objective 2 in Sweden in 2000-06) and its spin-off project 'Testbed Gävleborg' (Norra Mellansverige programme) are considering a cluster across the Baltic Sea.
> Co-operation between universities: The Östra Mellansverige 2007-13 Competitiveness programme in Sweden finances the PRIM (Processes and Relations in Innovative Environments) project, which supports co-operation between several universities and their incubators (total cost: €6.5 million).
> JOSEFIN – Joint SME Finance for Innovation, is a European Territorial Co-operation project under the BSR 2007-13 transnational programme (project duration: January 2009 – December 2011). An extension of up to two years as a 'strategic project' is under consideration (total cost: €3.9 million).
> The Pomorski Science and Technological Park, Poland - extension 3rd stage (total cost: €48 million).
> Maritime Cluster in Schleswig Holstein, Germany (total cost: €50.8 million).

## Actions to support the environment

Programmed expenditure for the 2007-13 period under the ERDF and the CF for the Convergence and Competitiveness and employment programmes in the BSR in the field of environment:

| | |
|---|---|
| Waste water treatment: | €3.1 billion |
| Clean urban transport: | €2.3 billion |
| Household and industrial waste: | €1.6 billion |
| Water distribution: | €1.2 billion |
| Other[31]: | €1.6 billion |
| **Total:** | **€9.8 billion** |

In addition, other EU Community programmes (in particular the seventh research framework programme, the LIFE programme, the European Territorial Co-operation programmes (under the ERDF), the ENPI CBC, the EAFRD, the EFF (in particular for the protection of aquatic resources - EU contribution of €0.2 billion) and the Competitiveness and Innovation programme) as well as national, regional and local policies are financing important projects. The EIB is also already providing its lending/co-financing to a large number of projects and could further extend its activities to numerous flagship projects.

### Examples of projects (ongoing and planned, total cost)[32]

> Latvia:
  • Ongoing projects: The second stage of the development of Water Services in Liepaja (total cost €32 million) which is due to finish by 2010; the second stage of the development of Water Services in Daugavpils (total cost €25 million) which is due to finish by 2010.
  • Future project: The remediation project for the Liepāja Karosta Channel (estimated total cost €23 million).
> Estonia: The renovation of Narva City water and sewage networks in Estonia (total cost €28 million).
> Lithuania: The first package of the Nemunas Midland River Basin Project, which is co-financed from the CF (2000-06), with a total cost of €64 million and a CF

29 Programmed Community expenditures 2007-13 under the EFF in the field of prosperity: sustainable development of fisheries areas €316 million; investments in fisheries processing, marketing and aquaculture €500 million; total: €816 million.
30 Some of these projects also benefit from a framework loan from the EIB.
31 Including air quality, promotion of biodiversity and risk prevention.
32 Some of these projects also benefit from a framework loan from the EIB.

participation of €51 million which is due to finish by end 2010.

> Poland: The major waste water plants projects currently implemented are, inter alia, in Warsaw (€585 million), Szczecin (€282 million), Wroclaw (€158 million), Poznan (€104 million), Gdansk (€121 million), Krakow (€121 million) and Bydgoszcz (€201 million). These total costs were estimated at the time of adoption.
> Project financed by the European Parliament on the protection of the Baltic Sea from mainland-based threats by reducing agricultural nutrient loading and the risk of hazardous wastes (€3.5 million in 2009 from the budget of the European Parliament).
> During the programming period 2007-13, a large part of the EFF Operational programmes will focus on the definitive withdrawal of fishing vessels to establish a better balance between capacity and available resources.

## Actions to develop accessibility

Programmed expenditures for the 2007-13 period under the ERDF and CF for the Convergence and Competitiveness and employment programmes in the BSR in fields linked to accessibility and attractiveness:[33]

| | |
|---|---|
| Information Society: | €1.4 billion |
| Transport: | €23.1 billion |
| Motorways (TEN-T) | €8.4 billion |
| Railways (TEN-T) | €4.7 billion |
| National roads | €2.8 billion |
| Motorways (non-TEN-T) | €2.1 billion |
| Other[33] | €5.1 billion |
| Energy: | €2.6 billion |
| **Total:** | **€27.1 billion** |

In addition, the TEN-T Programme and other Community programmes (in particular the seventh research framework programme, the LIFE programme, the European Territorial Co-operation programmes (under the ERDF), the ENPI CBC, the EAFRD, the EFF (Programmed Community expenditures 2007-13 under the EFF contributing to the sustainable development of fisheries areas €316 million) and the Competitiveness and Innovation programme as well as national, regional and local policies are financing important projects. The EIB is also already providing its lending/co-financing to a large number of projects and could further extend its activities to numerous flagship projects.

### Examples of projects (ongoing and planned, total cost)[34]

> Latvia:
  - Ongoing projects: The track renewal on the east-west Railway Corridor (total cost €100 million) which is due to finish by 2010; the modernisation of the signalling systems of the Latvian east-west rail corridor (total cost €90 million) which is due to finish by 2010; the access roads to the Ventspils Port Terminal (total cost €28 million) which is due to finish by 2010.
  - Future projects: The first stage of the Rīga bypass – Koknese (estimated total cost €291 million); Rail Baltica, in particular the reconstruction and development of TEN-T railway segments (estimated total cost €80 million).
> Estonia: The development of Via Baltica, in particular the construction of Pärnu bypass in Estonia (total cost €43 million); the improvement of the accessibility of Baltic Sea islands, improving harbour facilities and airports on these islands (total cost €46 million).
> Lithuania: The design and construction of the railway 'Rail Baltica' which is planned to be co-financed by the CF (2007-13) with an indicative total cost of €135 million and an indicative CF contribution of €97 million. The estimated implementation start date is the beginning of 2012.
> Lithuania: The reconstruction and development of TEN-T railway segments including six projects co-financed from the CF (2000-06) with a total cost of €167 million. All projects are to be completed by the end of 2010.

33 Including regional and local roads, airports, urban transport and ports.

34 Some of these projects also benefit from a framework loan from the EIB.



- Germany: The improvements to the Lübeck harbour in Schleswig Holstein (total cost €13.1 million); the promotion of sailing tourism in Schleswig Holstein (total cost €5.5 million); major transport investments like the Berlin-Rostock railway (total cost €315 million) and the A14 highway (total cost €1.4 billion).
- Poland: The major transport investments being implemented are the road S22 Elblag-Grzechotki (€116 million) and part of E65 railway Warsaw-Gdansk (€1.261 billion). Further planned projects are: Rail Baltica (connection with Lithuanian border, €182 million), continuation of E65 railway (Warsaw-Gdansk, €801 million), S7 roads (Gdańsk-Elbląg, €346 million) and Via Baltica (Białystok-border with Lithuania, €511 million) as well as the airports of Gdańsk (€149 million), Olsztyn (€74 million), Szczecin (€21 million) and Koszalin (under study Zegrze Pomorskie, €13.82 million). These costs are estimates of the total costs.
- Major infrastructure projects supported under the TEN-T Programme[35].

### 2.1.4. THEMATIC AND LEGISLATIVE ACTIONS

#### Agriculture and forestry

The CAP and especially its RD policy aim to enhance the competitiveness of agriculture and rural areas. The RD policy, and the Community Strategy linked to it, aim to improve the competitiveness of agriculture and forestry (axis I), improve the environment and the countryside (axis II), and improve the quality of life in rural areas and to encourage diversification (axis III and IV). This is in line with the Lisbon Agenda, including the Göteborg conclusions.

Around three quarters of the population of the BSR live in the 97% of the land area that is classed as rural. Agriculture alone takes up around 30% of the territory, while forests cover almost half. The two sectors together account for 77% of the territory. Both sectors are very important to the region as producers of food and fibres as well as many services and public goods.

Many of the problems facing the region are of similar character, but the implementation of the RD policy and other aspects of the agricultural policy differ significantly. Today almost 50% of the total RD funding spent in the region[36] is spent on axis II (land management) whereas only 16% is spent on axis III (wider RD) and 5% on axis IV: the Leader method (area-based, bottom-up approaches). The share for cross-border co-operation is €67.15 million, which is 4% of axis IV. That equals 0.2% of the total public expenditure. There is very little tradition here of voluntary co-operation over borders and of increasing coherence, and thereby of creating win-win situations and synergies.

The CAP has other tools that may have an impact on two important issues: eutrophication and biodiversity. In particular, the proposal made in the Health Check to add, under the Good Agricultural and Environmental Condition framework, standards on buffer strips along water courses and specification of landscape features should mitigate the impact of agriculture in these two areas. The cross-compliance system more generally consolidates the farmers' compliance with these requirements, either new ones through the two new GAEC standards or those already implemented such as the various EU environmental texts (Nitrates Directive etc.)

#### Environmental policy

Environmental policy at European level is very significant and a number of key Directives have significant implications for the BSR. Among these are the EU Water Framework Directive, the Habitats Directive, and the Marine Strategy Framework Directive. However, given the wide scope of the EU's environmental policy, EU Directives cannot normally cover the specific circumstances of a region like the BSR. The European Commission therefore strongly supports

35 Detailed information available at: http://ec.europa.eu/transport/infrastructure/basis_networks/guidelines/doc/pp_implementation_progress_report_may08.pdf

36 €34 801 million – the figure includes the whole envelope for Poland.

organisations such as HELCOM. For the specific issue of co-operation with Russia, the EU-Russia Environmental Dialogue – which addresses issues such as climate change, forestry governance and conservation, pollution, water/marine, biodiversity and nature protection – can help to promote environmental sustainability in the region. It is therefore complementary to the agreements in HELCOM.

In the environment, the EIB can support water and waste water treatment, waste management, renewable energy, sustainable transport modes and urban renewal. In the BSR, the Bank has provided 267 loans with environmental eligibility in countries within the BSR. The total loan amount is approximately €32 billion.

## Research and innovation

In 2004, the ERA-NET project 'BONUS for the Baltic Sea Science' analysed the R&D funding for Baltic Sea research in all nine countries bordering the sea, covering all research carried out in governmental institutes and universities with national, EU or other funding and with competed and non-competed funding included[37]. The total number of research project was 882 and the total funding some €51 million. About 30% was funded by EU or the NCM. Around 35% was national funding channelled directly, without competition, to various institutes and research groups, and around 35% was national funding distributed through competition and peer review. In a follow-up study, BONUS analysed the output from science – the scientific publications (for 2002-06)[38]. A total of 1 975 scientific papers were analysed according to numbers of papers per country, cost per publication, research co-operation and research content. The study demonstrated that international research co-operation between Baltic Sea countries ought to be intensified, as scientific excellence in the Baltic Sea area is comprehensive and increases if countries collaborate.

Concerning innovation, evidence shows that clusters bringing together different sectors and different stakeholders to develop synergies between their activities are a promising development especially in the European maritime community. These clusters contribute to better quality and higher standards for European maritime products and services, and enhance the integration of the maritime economy. They thus contribute to economic growth and employment as well as the sustainability of the maritime economy overall. Their success will depend largely on innovative action by the private sector, and other stakeholders, particularly in the case of regional clusters. However, the EU can provide a framework to facilitate this. In October 2007, the European Commission presented a staff working document on Maritime Clusters that takes stock of the situation with regard to maritime clusters in the EU with a view to building a bridge between Maritime and Cluster Policies, identifying some of the drivers and characteristics of successful European Maritime Clusters, and outlining upcoming initiatives and future work in this area – including the promotion of a European network of maritime clusters.

Cluster development efforts have a positive history in the BSR and especially in the Nordic countries, which shows that the Baltic Sea countries recognise the benefits of building an attractive region through a co-ordinated cross-border approach. Examples of successful clusters in the region abound: ScanBalt and Cruise Baltic are two cross-border clustering initiatives established in the sectors of medicine and tourism, respectively. Both clusters have more than 20 members from almost all Baltic rim countries.

## Internal market

The region does not show any particular differences from the rest of the Union when it comes to the transposition of single market legislation (in a wide sense). For instance, as regards the timely transposition of single market regulation, the performance of EU MS around the Baltic Sea is, according to the Internal Market Scoreboard 17 of 9 July 2008[39], slightly above average. The number of open infringement cases of those MS is also comparable to that of other MS; no specific 'BSR trend' could be seen.

37 'Baltic Sea Research and R&D funding in 2004' BONUS Publication No 3 2005 (www.bonusportal.org).

38 'International Publications of Baltic Sea Science 2002-06' BONUS Publication No 9 2008 (www.bonusportal.org).

39 http://ec.europa.eu/internal_market/score/index_en.htm



An important part of the internal market is the implementation of the Services Directive, which must be transposed by MS by the end of 2009. As in other areas where MS share common borders, the EU/European Economic Area (EEA) MS from the BSR will significantly benefit from the effects of this Directive, as it aims to enhance cross-border trade which, in many areas of activity, can be particularly relevant for neighbouring countries[40]. The Services Directive is a central element of the renewed Lisbon Strategy for growth and jobs. It will remove discriminatory barriers, cut red tape, modernise and simplify the legal and administrative framework – also by use of information technology – and make Member State administrations co-operate with each other. In particular, it obliges MS to set up 'points of single contact', through which businesses can obtain all relevant information and complete all procedures necessary to start their activities, including by electronic means and across borders. Furthermore, the Directive will also strengthen the rights of users of services, including businesses, and thereby contribute to making European industry as a whole more competitive.

## Entrepreneurship

The EU RD policy includes 'measures to diversify rural economy, comprising: (i) diversification into non-agricultural activities, (ii) support for the creation and development of micro-enterprises with a view to promoting entrepreneurship and developing the economic fabric' (Council Regulation (EC) No 1698/2005).

BEPART[41] is a network project working towards more effective entrepreneurship promotion, part-financed by the EU under Interreg IIIC. The 12 partners of BEPART are universities with incubator organisations in the BSR. The project funding period ran from June 2004 to December 2007, with a total budget of €1 870 000. The project successfully addressed and bridged regional development, education and entrepreneurship development by concentrating on the competence of the people within the region. The main objective was sharing experience and improving existing practice. The publication '10 Propositions on Entrepreneurship Promotion and Education: Towards Entrepreneurial Regions' provides recommendations for a variety of actors involved in the field of entrepreneurship education in a regional context.

All the EU MS around the Baltic Sea have actively used the possibility to support entrepreneurship in rural areas. The planned public support for those measures in the programmes is around €2 200 million[42], although it is unevenly distributed over the region. The availability of the support corresponds to the actual need for it in rural areas.

## Labour market and mobility

The European Commission is encouraging job mobility. It has implemented a plan for improving information and transparency on job opportunities abroad. The European portal for job mobility, EURES[43], created in September 2003 provides information to jobseekers on job offers, working conditions and residence in 31 European countries. A wide range of practical services is offered through EURES (and its networks of more than 800 advisers across Europe) to both jobseekers and employers as well as to any citizen wishing to benefit from the principle of the free movement of persons. It is thus a key tool to implement the European Employment Strategy, and to contribute to flexicurity as well as to the anticipation of labour market needs in Europe.

The ESF – Baltic Sea Group was created in 2003 by the Swedish EQUAL Managing Authority during the launch of the second round of the EQUAL Community Initiative, in order to facilitate the exchange of experience related to EQUAL for the MS in the BSR. This is done through annual meetings, hosted in turn by different MS from the region.

The nature of the meetings has changed over time, starting from exchanging experiences by representatives of Managing Authorities regarding EQUAL in general (meeting in Sweden)

40 The Services Directive (Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market).

41 www.bepart.info

42 This sum includes the whole envelope for entrepreneurship measures for Poland, since the programme is nationally implemented.

43 http://ec.europa.eu/eures/home.jsp?lang=en

to meetings devoted to discussing technical issues (such as audit) by representatives of various bodies involved in EQUAL, such as paying authorities. This network can be seen as a MS initiative for transnational co-operation for the programming period 2007-13.

## Energy

In the view of the EU, security of supply should be managed through market-based mechanisms. The European Directive 'Security of Supply' adopted in 2005 establishes measures aimed at safeguarding security of electricity supply so as to ensure the proper functioning of the internal market for electricity and to ensure:

> an adequate level of generation capacity,
> an adequate balance between supply and demand,
> an appropriate level of interconnection between MS.

The energy ministers of the BSR Countries and the European Commission decided in 1999 that the energy co-operation in the region should be organised and have created BASREC.

The countries and institutions participating in Baltic Sea Region Energy Co-operation (BASREC) are the governments of Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. The European Commission is represented by the Directorate General for Energy. The participation in this work programme also involves the CBSS, the NCM and the Council of Baltic States (CBS).

The BASREC provides the member countries with a forum to build up a regional view of energy policy strategies. The networks and the BASREC's organisational structure provide administrations and business actors in the energy sector with a natural base for analysing ways to develop the market framework and rules to create the energy supply and to reduce environmentally problematic impacts of energy production, use and transmission.

The **EU-Russia Energy Dialogue**, established in 2000, is the main instrument to address major issues of mutual concern in the energy sector and strengthen co-operation on issues related to sustainability and continued reliability of production, distribution, transportation and efficient use of energy. Strengthening regional co-operation in the various fields of energy (including energy policy, energy efficiency, and renewable energy sources), continued dialogue, defining common goals and developing a regional strategy for energy are key in securing long-term prosperity in the region.

In terms of physical infrastructure, the EU has facilitated or financed considerable investments in the field of interconnections. The feasibility study 'Synchronous interconnection of the power systems of IPS/UPS to UCTE' co-financed under the Trans-European Networks for Energy (TEN-E) was completed in April 2008. The key conclusions of the study showed that a synchronous coupling should be considered as a long-term perspective. Market developments on both sides should be further explored before deciding on further steps, including with regard to infrastructures.

A Security of Supply Action Plan is currently been drawn up, with a focus on the three Baltic States. The urgent measures that will be shortlisted should be put in place without delay, focusing available EU funds on these priority projects in order to secure the availability of electricity in the Baltic region. Concrete replacement capacity should be put in place to secure the sufficiency of energy production as well as the further interlinking of the region with Poland, Finland and Sweden. This Action Plan will feed into the Baltic Interconnection Plan.

The idea of a Baltic Interconnection Plan has already been agreed among the MS concerned. A first major step has been taken: the European Council backed the plan in its conclusions of 16 October 2008. This plan incorporates gas and electricity interconnection projects, development of gas storage and liquefied natural gas (LNG) terminals to integrate the BSR's energy networks, to create a well-connected internal energy market and enhance security of supply.

The Poland-Lithuania power bridge has been identified as a project of European Interest in the TEN-E guidelines. This interconnection will link the Baltic grid to the European electricity network. A European coordinator was appointed by the European Commission in September 2007. A joint



project company, LitPol Link, was established in May 2008, jointly owned by PSE Operator (PL) and Lietuvos Energija (LT). The connection is expected to be operational in 2012-15, depending on the upgrade of the north-eastern Polish grid.

The Sweden-Lithuania link, SwedLit (or Swindlit), is a planned interconnection via a submarine cable. A feasibility study completed in March 2008 shows that the interconnection is feasible and would be economically reasonable in terms of technical, economic and legal aspects and that a possible wind park in the Baltic Sea could be connected to the cable. The interconnection could be operational in 2015. Elsewhere, Estonia and Finland are now planning a second undersea cable from Estonia to Finland (Estlink2) by 2013.

## Customs co-operation

The Commission proposed in 2006 a Community approach to the problem of long waiting times for trucks entering Russia. This approach includes short, medium and long-term actions. It also addresses Russia's request for advanced information exchanges on goods crossing the border.

This strategy was adopted at the meeting of the EU-Russia Subcommittee on Customs and Cross-border co-operation on 26 April 2007 and reconfirmed on 19 June 2008. It encompasses the three following priorities:

(a) implementation by Russia of legislative, administrative and procedural measures to improve the situation at the border;
(b) implementation of a pilot project on EU-Russia information exchanges;
(c) implementing and developing border-crossing and customs infrastructure.

For the follow-up, a working group on EU-Russia border customs issues was set up. It is composed of representatives of Russia's customs, the European Commission and volunteer MS[44]. The Working Group meets quarterly to discuss and monitor progress in the three priority areas, and to identify and recommend actions needed. Actions of the Working Group on EU-Russia border customs issues are co-ordinated with actions taken by the Working Group on Customs Co-operation and Border-Crossing Aspects (WGCB), in which the Commission takes part.

The WGCB is an expert body set up by a decision of the Directors-General of Customs Administrations of CBSS MS (Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia, Sweden) to improve regional border-crossing co-operation among border authorities – including harmonisation of working practices, common training and exchange of information, and exchange of best practices. The Group is chaired – on a rotation basis – by the country that holds the CBSS presidency.

The Group plans to launch specific projects on customs activities aimed at facilitation and security of trade flow in the region. The work of WGCG is based on a multi-annual action plan, the implementation of which is to be evaluated on a regular basis.

In its meeting of September 2008, the WGCB decided to relaunch the 'Laufzettel' project, originally carried out in 2001, 2003, and 2005, with the objective of measuring border-crossing times and identifying bottlenecks as well as opportunities to improve control procedures at the EU-Russian border. Co-ordination of this project was taken over in 2009 by the EU-Russia Working Group.

## Fisheries

According to the Lisbon Treaty, conservation of marine biological resources falls under the exclusive competence of the EU as set out in the CFP. While basic pillars of the policy such as control and the EFF are provided for by EU-wide regulations, an increasing number of Baltic-specific regulations are adopted and consultation with stakeholders is organised through the Regional Advisory Council for the Baltic Sea (BSRAC), which was established in 2006.

Independent total allowable catches (TACs) and quotas for the Baltic Sea have been fixed since 2006, and in

44 At the moment these are Belgium, Czech Republic, Germany, Estonia, Italy, Latvia, Lithuania, Hungary, Austria, Poland, Slovakia, Finland and Sweden. The Netherlands may join in the near future.

2005 a technical measure regulation for the Baltic Sea was adopted. In addition, a multi-annual plan for the two cod stocks in the Baltic Sea entered into force in 2008. Evaluation of the cod plan as well as further management plans on salmon and the pelagic stocks in the Baltic Sea are set to follow, as part of the work programme for the Commission for 2010.

Compliance and control continue to be an issue and in light of extensive overshooting of the quota for cod in the eastern Baltic by Poland, a payback regulation for Poland was adopted in 2007. The implementation of this regulation, which aims to address the underlying causes of overfishing via the implementation of two action plans for the improvement of the control system and the restructuring of the fleet, continues. The new EU-led Joint Inspection and Control Scheme has improved control in the Baltic Sea, adding to the new regulations on control and Illegal Unreported and Unregulated (IUU) fishing.

Discarding did not use to be significant in the Baltic, but is increasing with the strong recovery of the eastern cod stocks. Initial measures to reduce discards were agreed in October 2009 and further measures are being developed jointly by the Commission, the MS and the BSRAC.

On 1 January 2008 a complete ban on drift nets entered into force in the Baltic Sea. The drift net ban is a necessary conservation measure, in line with fisheries and environmental Community law and existing international obligations, to protect the critically endangered harbour porpoise population in the Baltic Sea, which is at a historically low level.

The Commission has developed a new set of indicators on fisheries' impact on the environment. These will be supportive in working towards the application of the ecosystem approach in fisheries in the Baltic and specifically for the implementation of the Marine Strategy Framework Directive.

International relations with Russia are developed under the bilateral agreement on co-operation in fisheries and the conservation of the living marine resources in the Baltic Sea, which was signed by both parties on 28 April 2009. The Agreement sets out provisions on co-operation in fisheries and the conservation of the living marine resources in the Baltic Sea, including joint management measures for stock management, control and enforcement, and provides for the establishment of a Joint Baltic Sea Fisheries Committee.

### Transport links and networks

The Trans-European Networks – Transport (TEN-T) policy operates in support of the internal market as well as economic and social cohesion in the EU by realising a number of strategic priority projects. Within this framework, Community action focuses in particular on the interconnection of national networks and their interoperability, links between peripheral and central regions of the Union, and access to the TEN-T. Action in the field of the TEN-T also aims at contributing to sustainable development objectives by minimising negative environmental effects.

The projects of common interest identified in the TEN-T Guidelines (Decision No 1692/96/EC on Community Guidelines for the development of a TEN-T, amended by Decision No 884/2004/EC) with respect to the BSR, and in particular the priority projects, respond to these objectives. There is also ongoing work to extend the TEN policy beyond the EU's borders through a high-level group including EU-27 neighbouring countries and international financial institutions. The group has recommended five major transnational axes; two of them (the northern axis and the Baltic Motorways of the Sea (MoS)) are important for the BSR.

Among projects already launched, the Øresund Fixed Link project, implemented under a Danish-Swedish public-private partnership scheme with financial support from the TEN-T budget, was completed in 2001. It has had a positive impact on cross-border regional development and plays an important role in the connection between Scandinavia and, via Germany, other EU MS.

Other priority projects are partly completed (the Nordic Triangle multi-modal corridor, involving rail, road and



maritime infrastructure in Finland and Sweden; linking the Nordic countries and their capitals to each other; improving passenger and freight transport from the region to central Europe, the Baltic countries and Russia) or under preparation ('Rail Baltica' project, linking Estonia, Latvia, Lithuania and Poland and connecting with a rail ferry link to Finland; Fehmarn Belt Fixed Link between Denmark and Germany, which is an extension of the Øresund crossing and the Nordic triangle road and rail links and a key component of the main north-south route that connects central Europe and the Nordic countries).

## Education

The EU MS have strengthened their co-operation in education and training policy by using the open method of co-ordination. Work within the open method of co-ordination is focused on exchanging good practice and peer learning activities, the development and monitoring of indicators and benchmarks, and creating reference tools to support national reforms.

Agreed between the Commission and the MS in May 2009, the strategic framework 'Education and Training 2020' provides the policy co-operation framework with MS in this field up to 2020. It underlines that in addition to strengthening the employability of citizens, learning is also very much about enabling and strengthening social inclusion and citizenship. It covers all levels of lifelong learning and addresses four strategic challenges in the years to 2020:

> making lifelong learning and mobility a reality;
> improving the quality and efficiency of education and training;
> promoting equity, social cohesion and active citizenship;
> enhancing creativity and innovation, including entrepreneurship, at all levels of education and training.

In addition to policy co-operation, the **Lifelong Learning Programme 2007-13** enables individuals at all stages of their lives to pursue stimulating learning opportunities across Europe. The programme supports multilateral partnerships and projects, transnational mobility and Community-wide exchanges in support of objectives that cannot be sufficiently achieved by Member State activities only. Also, the new **Erasmus Mundus Programme** 2009-13 contributes to enhancing quality in higher education through scholarships and academic co-operation between Europe and the rest of the world and strengthens links with a range of third countries around the world.

In the sphere of higher education, the BSR already has some successful co-operation. For example, the BSR University Co-operation Network was created in 2000 and enables co-operation between 37 universities/colleges from Finland, Estonia, Latvia, Lithuania, Poland, the Russian Federation and Belarus. Within this network, many common education programmes are being successfully carried out.

Other EU-wide projects such as Erasmus Mundus, Tempus and the Lifelong Learning programme operate successfully in the Baltic region and elsewhere.

## Youth

EU MS have also strengthened their co-operation by using the open method of co-ordination for youth policy. This co-operation is mainly based on peer learning activities, on reinforced mechanisms of structured dialogue with youth, and the development of knowledge tools, reporting and indicators. This policy process is supported by the Youth in Action programme (2007-13), which promotes a wide range of youth activities within and beyond the EU that include mobility and volunteering, active citizenship, non-formal learning and intercultural dialogue. The BSR already has significant participation in youth co-operation activities in this context. Participation of EU partner countries in the programme, notably the neighbouring ones (including Russia), is also supported.

## Culture and tourism

Actions financed under the Culture programmes, including the sub-strand European Capitals of Culture, include a number of cultural operators from the BSR. Co-operation projects in which cultural operators from this region participated were supported through this programme and it this international co-operation has surely had a positive indirect impact on the development of the cultural sector in the region.

The Culture 2007-13 programme supports three strands of activities: cultural actions; European-level cultural bodies; and analysis and dissemination activities. The European Capital of Culture and the EU awards for culture are among the special measures of the Culture programme. The MS entitled to host the European Capital of Culture event are ranked in a chronological order, laid down in a specific decision regarding the Capitals (Decision No 1622/2006/EC). In the coming years, several MS in the BSR will host a Capital: Lithuania with Vilnius in 2009, Finland with Turku in 2011, Estonia with Tallinn in 2011, Latvia and Sweden in 2014 (the selection of cities within these two countries is ongoing). Each of these Capitals should receive an amount of €1.5 million from the Culture programme, provided that they comply with the requirements mentioned in Decision No 1622/2006/EC..

The EU cultural awards highlight excellence and/or cross-border activity in the fields of contemporary architecture, cultural heritage, music and – from 2009 – contemporary literature. In 2008, a prize was given for the conservation of Tapiola Swimming Pool in Espoo, Finland.

Support from the EU for tourism activities in the area, outside that which comes through Cohesion Policy, is largely channelled through the European Fund for Agriculture and RD (EAFRD). All EU MS around the Baltic Sea have made it possible for inhabitants of rural areas to benefit from the programmes through the aspect of culture/tourism. The total budget for public support for encouragement of tourism activities is over €300 million[45] and for village renewal, development and rural heritage over €1 billion for the programming period. In eight of the 10 RD Programmes there is an indicator measuring the development of tourism.

Many sustainable tourism projects are already completed and several are ongoing, but there is only limited co-ordination between these supported projects. Long-lasting effects are low and mostly limited to the area where the project took place.

## Information society

The region includes some of the best-connected communities in the EU, if not the world, and generally has a high awareness of IT. Nonetheless, there are sizeable pockets of deprivation, not least because of the sparse population in certain areas, so public intervention can be essential in some circumstances.

The Commission issued a Communication on 'Bridging the Broadband Gap' in March 2006. The focus was on attracting political attention to the need for widespread access to broadband infrastructure and use of online broadband services for economic development and growth.

45 This sum includes the whole envelope for tourism and heritage in Poland, since the programme is nationally implemented.



# 2.2. Activities of international governmental and non-governmental organisations

In the BSR there is a long tradition of co-operation between governmental organisations, regional and local authorities, NGOs, business sector federations and other groupings. Many of these networks are organised in umbrella organisations on a pan-Baltic level. This section reviews some of the most significant.

## 2.2.1. INTERGOVERNMENTAL AND INTER-PARLIAMENTARY CO-OPERATION

While there are hundreds of different pan-Baltic organisations and networks, it is interesting to note that there are only three genuinely intergovernmental organisations including all the national governments of the BSR: the CBSS (albeit including several sub-organisations), the HELCOM and VASAB.

The Baltic Sea Parliamentary Conference is a forum for debate and information exchange between national and regional parliaments and other organisations in the region, both on international and interregional levels. It initiates and guides political activities in the region and further regional co-operation, especially towards the CBSS.

### CBSS

Created in 1992, the CBSS became an important early platform for the formal trilateral dialogue between Russia, countries that had formerly been part of the Soviet bloc, and parts of western Europe. An institution of national governments and the European Commission, it established thematic working groups that enabled policy dialogue, learning and, in some areas, joint action. In its biannual summits, the CBSS brings together the heads of governments and of the European Commission.

Since 2008, the CBSS has been embarked on a process of internal reform to ensure that the organisation is better equipped to focus on priority actions, including a capacity to develop regionally important and strategic projects and to explore the financing of projects. The long-term priority areas of the CBSS are environment, economic development, energy, education and culture, as well as civil security and the human dimension.

The CBSS does not have a general budget or project fund. Members are responsible for funding common activities and/or for seeking and co-ordinating financing from other sources. Since 1998, the CBSS MS have financed jointly a secretariat of the CBSS. In 2007-08, the secretariat of the CBSS had a total of 17 staff members.

### HELCOM

The HELCOM is the governing body of the 'Convention on the Protection of the Marine Environment of the Baltic Sea Area' – more usually known as the Helsinki Convention. Since the early1980s, HELCOM has been working to improve the Baltic marine environment, largely through some 200 HELCOM recommendations. The body unanimously adopts recommendations for the protection of the marine environment, which the governments commit to act on in their respective national programmes and legislation. In addition to the national governments, the European Commission is also a contracting party to HELCOM. HELCOM's work is supported by a 13-person strong secretariat.

HELCOM recognises that progress cannot be achieved using only the old administrative measures of equal reductions in pollution loads. It has therefore set out to find new tailor-made actions required to reach the goal of 'good ecological status'. To achieve this, it developed the BSAP, adopted in 2007. The cross-sectoral plan identifies the specific actions needed to achieve agreed targets within a given time frame for the main environmental priorities: combating eutrophication, curbing inputs of hazardous substances, ensuring maritime safety and response capacity to accidents at sea, and halting habitat destruction and the ongoing decline in biodiversity.

### VASAB

The VASAB, founded in 1992, is an intergovernmental network of 11 countries of the BSR[46] promoting regional co-operation on spatial planning and development. Its work

46 Belarus, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Russia and Sweden.

focuses inter alia on preparing long-term perspectives for the spatial development of the BSR and on facilitating an exchange of knowledge and expertise on innovative spatial planning and development approaches.

A new VASAB Long-Term Perspective was endorsed on 16 October 2009 at the seventh Ministerial Conference in Vilnius, Lithuania. The Ministers underlined that new common responsibilities and challenges had emerged that called for deeper pan-Baltic co-operation on spatial planning and development, and the integration of spatial development policies into all relevant sectors. There was also a growing understanding that the Baltic Sea itself is in urgent need of maritime spatial planning. The Long-Term Perspective is an effort to define important challenges with transnational relevance and set out ways to deal with them.

### The ND Policy

The ND Policy was developed in 1999 with the participation of EU MS, Iceland, Norway, and the Russian Federation. Geographically, the ND focuses increasingly on north-west Russia, Kaliningrad, the Baltic and the Barents Seas, the Arctic and subarctic areas. The main objectives of the policy are to provide a common framework for the promotion of dialogue and concrete co-operation, strengthen stability and well-being, intensify economic co-operation, and promote economic integration, competitiveness and sustainable development in northern Europe.

Apart from the major partners, the other stakeholders are: the CBSS, the Barents Euro Arctic Council (BEAC), the AC, the NCM; international financial institutions such as the European Bank for Reconstruction and Development (EBRD), the EIB and the Nordic Investment Bank (NIB); NGOs, trade unions, etc. Canada and the United States participate as observers.

The renewed ND Policy was launched at the Helsinki Summit in November 2006. As a result, co-operation among the actors in the region was intensified substantially. At the political level the new ND Political Declaration and ND Policy Framework Document were adopted to replace the Action Plans of 2000-03 and 2004-06. The two main characteristics of the renewed policy are: i) the co-ownership of EU, Iceland, Norway and Russia and ii) the strong link between the ND policy and the four EU/Russia Common Spaces[47], agreed in 2004 and specified in road maps adopted in 2005.

To facilitate the project implementation within the framework of the ND Policy, the following partnerships were created: the NDEP and the Northern Dimension Partnership in Public Health and Social Well-being (NDPHS). In October 2008, a decision was taken to establish the ND Partnership on Transport and Logistics.

### Nordic co-operation

The Nordic Council was launched in 1952 as a forum for collaboration between parliamentarians from Denmark, Finland, Iceland, Norway and Sweden, as well as their autonomous territories. In 1971, the NCM was added as a platform for governments, and equipped with its own secretariat (with currently about 200 employees) and its own budget (currently about €120 million per year). It has become a tool for dialogue and joint activities in a broad range of policy areas and has created a number of specialised institutions like the NIB, where Estonia, Latvia and Lithuania are also full members. Nordic co-operation has been further enhanced through the establishment of the Nordic Research and Innovation Area (NORIA) with the three dedicated institutions NORDforsk, Nordic Innovation Centre (previously Nordic Industrial Fund) and Nordic Energy Research.

The participation of the NCM in joint activities in the BSR has increased over the last few decades. It now has offices in Estonia, Latvia and Lithuania, as well as in several locations in north-west Russia. NB8 is a flexible co-operation network for promoting political dialogue as well as practical co-operation. The NCM plays an important role through its information offices and mobility and exchange programmes co-ordinated in the educational, cultural, social and economic fields.

47 The Common Economic Space, covering economic issues and the environment; the Common Space of Freedom, Security and Justice; the Common Space of External Security, including crisis management and non-proliferation; the Common Space of Research and Education, including cultural aspects.



Nordplus 2008-11 is the first Nordic scholarship programme equally implemented in the Nordic and Baltic States. In 2008, the three Baltic nations joined this programme on an equal basis with the Nordic countries. The programme prescribes co-operation in four sub-programmes: school co-operation on the general education level, co-operation on the higher education level, co-operation in the realm of adult education, and co-operation in lifelong learning programmes with contributions from various sectors.

### 2.2.2. INTERREGIONAL CO-OPERATION

There are numerous organisations of local and regional authorities which aim to increase the co-operation of these authorities in the BSR. The BSSSC, the UBC, and the B7 were all founded in the early 1990s. They complement the CBSS by initiating, in various thematic fields, trilateral dialogues between the local and regional levels in Russia, countries formerly belonging to the Soviet bloc, and parts of western Europe.

Since 1997, there have been EU territorial co-operation programmes for the BSR that have been and continue to be an important source of funding for regional collaboration projects. The stimulus provided by this funding, complemented by Nordic and national funding, has led to increased joint project development among local and regional authorities. The focus has been primarily on supporting innovation and competitiveness. In 2007, the Baltic Metropoles network completed its innovation strategy project with the development of the so-called Archipelago of Innovation, and is now implementing its action plan.

### 2.2.3. NON-GOVERNMENTAL ORGANISATIONS

#### Academia

In the early 1990s, universities around the Baltic Sea started organising joint programmes. With the emergence of the EU-funded BONUS in 2003, the research field in the region has started moving towards very broad and deep integration. BONUS brings together 11 organisations involved in the funding and organisation of Baltic marine science to pool their research funding and co-ordinate the use of infrastructures. Sharing good practice in programme management and removing administrative barriers have paved the way for joint research programmes. New structures created by the BONUS consortium will be responsible for fully integrated programme funding and management. Following a number of preparatory activities in the first years, the project is now creating joint research programmes and establishing agreed procedures for the management and shared use of research facilities, and will set up a joint postgraduate training programme. Ultimately, the project will define management and decision-making systems for long-lasting co-operation at programme level.

#### Business

In 1992, the Baltic Sea Chambers of Commerce Association (BCCA) was created as a platform to support the new chambers in formerly communist countries and push for a better business environment throughout the region. In 1998, the Baltic Development Forum (BDF) was created as a platform to network decision-makers from large companies, major cities, institutional investors and business associations. The BDF regularly arranges high-level networking and partnership events, the most notable being the annual BDF summit. Over the last few years, BDF has focused on the improvement of labour market structures and the creation of a resourceful talent base in the BSR. In the near future, BDF will increasingly focus on energy and climate issues. It will also actively participate in the Interreg project BaltMet Promo on branding the region[48].

#### Trade unions

In 1999, the Baltic Sea Trade Union Network (BASTUN) was created. Today it consists of 21 trade union confederations around the Baltic Sea. The BASTUN aims at political and social influencing, co-ordinates joint projects and raises issues related to the BSR within the international trade union family.

48 State of the Region Report 2008, BDF.

## Environmental NGOs

Among the many NGOs in the field of environmental protection, the WWF has a long tradition of nature conservation. Today, one of its major focuses is the conservation of oceans and coasts. Since 2007, the WWF Baltic Ecoregion Programme has been working intensively on eutrophication issues, with a particular focus on agriculture's impacts on the Baltic Sea. The Action Plan agreed by WWF and partner organisations in nine different countries includes integrated land, coastal and marine activities to strengthen the local and regional capacity to achieve sustainable ecosystem-based management of the Baltic Sea's resources. Ecosystem management is a broad-scale approach to biodiversity conservation; it seeks to integrate conservation and development by taking a strategic approach with all stakeholders to develop common goals and mutually supportive activities for the conservation and restoration of natural habitats.

In 1990, non-governmental environmental organisations from the countries of the BSR united and established Coalition Clean Baltic (CCB) in order to co-operate in activities concerning the Baltic Sea. At present, CCB unites 27 member organisations from the region. The CCB member organisations combined have over half a million members in all countries around the Baltic Sea. The CCB is a politically unaffiliated, non-profit organisation working primarily through lobbying, information, environmental education and other activities to raise public awareness, concrete co-operation projects in the field, and support to member organisations.

The region is also home to several private foundations that contribute to creating a sustainable Baltic Sea, initiating projects and supplying funding for important investments. Examples of are the John Nurminen Foundation, 'Björn Carlson's Östersjöstiftelse', more commonly known as the Baltic Sea 2020, and the Foundation for a Living Baltic Sea, more commonly known as the Baltic Sea Action Group.

# 3. SWOT ANALYSIS

This section brings together the strengths and weaknesses of the region, as revealed by the analysis, and identifies the needs and opportunities for action.

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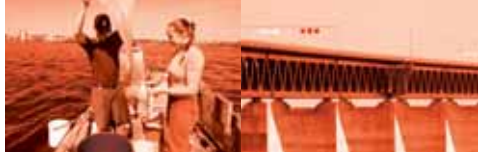
This section brings together the strengths and weaknesses of the region, as revealed by the analysis, and identifies the needs and opportunities for action (without specifying at this stage what form this action would take, or by whom).

The above analysis reveals significant strengths in the region, both absolutely and in comparison with other parts of the Union. These lead to opportunities to enhance the quality of the region in terms of environment, prosperity, attractiveness or safety and security. There are, of course, also weaknesses in the region, especially concerning the natural environment of the Baltic Sea, but also in terms of the exposure of parts of the region to deteriorating economic conditions, for example.

## SWOT ANALYSIS OF CHALLENGES IN THE BSR

### Drawn from the preparatory work on the impact analysis of the Strategy

| STRENGTHS | WEAKNESSES |
|---|---|
| **Socio-economic assets** | |
| > Good conditions for cluster development, rich portfolio of regional clusters and advanced industries having their base especially in W-BSR<br>> Well-educated population and considerable R&D capacity as a high potential for knowledge-based development<br>> Innovative potential of Baltic SMEs | > Large disparities in the status of socio-economic development between W-BSR and E-BSR, as well as lagging behind development of rural areas in some parts of the BSR<br>> Insufficient use of innovation potential and low intensity of joint efforts<br>> Weak innovation absorption capacity in some parts of the BSR, especially in rural areas<br>> Large disparities in the territorial distribution of leading clusters, as depicted by the European Cluster Observatory<br>> Insufficient support structures for boosting and transferring innovations due to low population and settlement density and to lagging behind socio-economic development especially in the E-BSR<br>> Cumbersome customs procedures in Russia and Belarus |





| STRENGTHS | WEAKNESSES |
|---|---|
| **Transport assets** | |
| > Dense network of maritime connections, especially in the western part of the BSR<br>> Advanced multimodal transport solutions in some parts of the area<br>> TEN-T network extending to countries neighbouring the EU<br>> High ICT usage in some parts of the BSR (top leading countries)<br>> Relatively good coverage of the area by transnational development zones enhancing cohesion and integration in the BSR | > Peripheral geographical location of the BSR to important economic centres in Europe<br>> Poor accessibility of some parts of the BSR (especially in the north and east) due to deficiencies in land and air transport infrastructure and perseverance of functional and institutional barriers (e.g. national planning systems)<br>> Decreasing road infrastructure capacity around some metropolitan areas<br>> Disparities in IT endowment between urban and rural areas in the BSR<br>> Insufficient infrastructure at the border-crossing points with Russia |

| STRENGTHS | WEAKNESSES |
|---|---|
| **Environmental assets** | |
| > Well-developed monitoring system on the environmental quality of the Baltic Sea<br>> Good scientific knowledge base for management of the marine environment<br>> Established ICZM and river basin practices at the local and regional level as a good potential for transnational co-operation<br>> Great nature values of European interest, relatively high quality of environment (including vast forest areas) and important cultural heritage<br>> High potential and know-how for production of renewable energy<br>> Well-established forum for co-operation on environmental issues in the BSR by the HELCOM, which regularly develops joint assessments of the Baltic Sea environment and plans for measures | > Lack of implementation of joint actions and action plans to prevent and to combat land-based marine pollution ('nutrient enrichment', leaky wastes disposal areas, insufficient waste water treatment)<br>> Lack of implementation of well-co-ordinated joint plans to prevent and to respond to maritime accidents, including oil spills and contamination by hazardous substances<br>> Lack of transnational co-operation and joint planning in usage of Baltic Sea space and in minimising risks caused by natural hazards<br>> Risk that other issues than the environment (economic growth, social issues, etc.) must have higher priority in many countries, which increases the imbalance between the countries in the region |

# SWOT ANALYSIS

## STRENGTHS

### Assets for urban and regional co-operation

> System of metropolitan regions acting as engines of development towards a Global Integration Zone
> Strong political support for BSR co-operation though existing pan-Baltic associations and high degree of institutional organisation across the BSR
> Vision of the territorial development of the BSR acknowledged by the pan-Baltic ministerial co-operation
> Good experience of transnational co-operation at all levels in result of the Interreg IIC and IIIB programmes in the BSR

## WEAKNESSES

### Assets for urban and regional co-operation

> Prevalence of the monocentric settlement pattern and weak structure of small and medium-sized cities in several parts of BSR
> Lack of potential for city networking based on physical proximity because of low population density in the northern and eastern part of the region
> Insufficient social dimension of sustainable development in some parts of the BSR, including public health problems

## OPPORTUNITIES

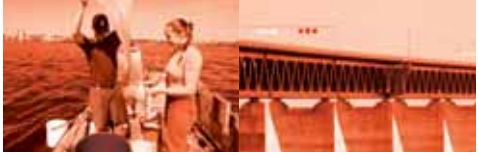
### Socio-economic challenges

> Formation processes of new competitive clusters
> Improving education and R&D footing in the BSR countries for fostering innovations across the area
> Good preconditions to develop and market the BSR as a model for:
  - a knowledge and innovation-oriented area
  - demonstrating the linkage between growth, social progress and protection of the environment
  - demonstrating that quality products, efficient organisation, boosting innovation and high social standards can be combined for global competitiveness
> Attracting human, industrial and financial resources, as well as more targeted foreign direct investments in the field of technical innovations
> Making use of the vast innovation potential of the E-BSR for the whole area
> Possible development of world-class clusters based on regional strength and concentrated efforts

## THREATS

### Socio-economic challenges

> Increasing regional disparities inside the BSR countries
> Insufficient progress in developing a knowledge and innovation basis in the E-BSR
> Decreasing potential for innovations due to ageing of the BSR population
> High potential for cross-border customs fraud and smuggling of excisable products





| OPPORTUNITIES | THREATS |
|---|---|
| **Transport challenges** | |
| > High potential to absorb future transport growth through maritime services<br>> Opportunity to enhance the gateway function of the BSR in serving especially flows to and from Russia and the Far East market<br>> Rising penetration of air services and advanced communication (Internet, mobile phone) to counteract peripherality and low population density<br>> More and more widely used e-government practices<br>> Strong potential to benefit from globalisation due to highly developed businesses and advanced ICT technologies in some parts of the BSR and to the sizeable BSR market | > Declining public passenger transport services and heavy increase of road transport due to weakness of more environment-friendly modes<br>> Environmental problems associated with the growth in both road and sea transport including reliability of the transport means as well as preparedness and response issues<br>> Increasing territorial divide in access to ICT and absorption capacity of digital services |

| OPPORTUNITIES | THREATS |
|---|---|
| **Environmental challenges** | |
| > Growing awareness of the poor status of the Baltic Sea environment<br>> Good natural and cultural heritage incentives to develop pan-Baltic environmental tourism products as a measure for the BSR branding<br>> Good quality of the marine environment as an asset to fish stocks<br>> EU Marine Strategy Framework Directive giving a higher status to protection of the marine environment and regional co-operation<br>> RD programmes of EU MS containing measures aimed at the protection of the environment, including biodiversity | > Uncontrolled exploration of marine resources leading to environmental hazards and/or use conflicts<br>> Lack of political commitment and low harmonisation of national management plans and legislation related to the marine environment<br>> Insufficiently prepared administrative personnel at regional and national level to adapt and implement EU regulations on ICZM and other marine regulations<br>> Economic development needs overriding other interests and weakening efforts to safeguard sustainable development of the Baltic Sea and its catchment area<br>> Natural hazards such as rising sea level, flooding, forest fires, etc.<br>> High vulnerability to technological hazards (e.g. oil spills) due to fragile ecosystem |

## SWOT ANALYSIS

| OPPORTUNITIES | THREATS |
|---|---|
| **Challenges for urban and regional co-operation** | |
| > Complementarity of the BSR Programme 2007-13 to cross-border convergence, as well as to regional competitiveness and employment programmes in the BSR<br>> Strengthening of the BSR identity and creation of the BSR brand<br>> Inclusion of social groups vulnerable to segregation or other social problems in the sustainable development process in the area | > Disadvantageous demographic (e.g. ageing and negative birth rate) and migration processes in already sparsely populated parts of the BSR<br>> Lack of co-ordinated civil protection actions and rescue assistance in case of disasters |

It is evident from this analysis that in almost every field the region displays both significant strengths and marked weaknesses. This underlines the opportunities that the Strategy should seek to exploit. Clearly the task is not so much to bring expertise or support into the region as to ensure that the region's own resources are being exploited, across internal boundaries, to the maximum benefit of all within it.

The following sections therefore present detailed recommendations for intervention and co-operation at the level of the region or subregion. The recommendations start from the premise that Community policies provide the basis for effective action, but that such policies need to be implemented in a way that takes account of the particular characteristics of the region.

# 4. THE EUROPEAN UNION STRATEGY FOR THE BALTIC SEA REGION

The analysis of the BSR in the previous chapters revealed a number of strengths and weaknesses, which a macro-regional strategy should seek to exploit. This section provides recommendations for regional intervention and co-operation through the EUSBSR under four headings: environmental sustainability, prosperity, accessibility, and safety. The task is not so much to bring new expertise into the region as to ensure that the region's own resources are being exploited across internal boundaries to the maximum benefit of all.

# 4. THE EUROPEAN UNION STRATEGY FOR THE BALTIC SEA REGION

Guided by the almost unanimous position of respondents to the consultations, from every level and type of partner, the Commission is convinced that these challenges and opportunities can best be addressed by an integrated multi-sectoral regional strategy. The range of issues makes this an ideal case for the application of a territorial cohesion approach, as requested in the informal meeting of EU Ministers responsible for regional and spatial development in Leipzig in 2007.

The BSR is a good example of a macro-region – an area covering a number of administrative regions but with sufficient issues in common to justify a single strategic approach. Other areas of the European Union are beginning to self-identify as macro-regions and the approach adopted in this Strategy will offer important lessons as to the potential of the macro-regional approach.

The salient characteristics of a strategy for a macro-region – a macro-regional strategy – are that a wide range of challenges and opportunities exists; that possible solutions should not necessarily depend on an inflow of new resources; and that stakeholders at all levels should be willing to work together in constructive and flexible ways.

This follows the territorial cohesion proposals of the Commission in the Green Paper of October 2008, whereby interventions are built around the needs of functional regions rather than according to predetermined financial and administrative criteria. This form of macro-regional approach also provides the EU with an innovative policy instrument, which could serve as a good example of efforts to achieve common EU objectives and a more effective co-ordination of territorial and sectoral policies based on shared territorial challenges.

In the same way, the coherent and proactive implementation of the maritime actions in the Strategy will be an important test case for the regional (sea-basin) implementation of IMP initiatives.

The necessary actions are grouped into the four fields below. This grouping is only for ease of analysis: every section relates to a wide range of policies and will have impacts on the other areas.

## 4.1. A strategy to make the Baltic Sea Region an environmentally sustainable place

The protection of the environment is a major issue in the BSR. The region has abundant resources in terms of vast nature areas, biodiversity values and a varying landscape. However, this environment is affected by human activities, including the effects of climate change. In the field of environment, there are no borders and a macro-regional approach is hence necessary to address the issues properly.

### 4.1.1. THE BALTIC SEA

The quality of the Baltic Sea environment is influenced by the activities of citizens living in the catchment area, the quality of the sewage treatment in towns and villages, the agricultural methods used, the large-scale livestock farms, the industrial pollution, and so on. Most of the population lives in the southern part of the region, where also most of the agricultural land is found. The Baltic Sea is also used for intensive maritime transport (ferries, oil tankers, etc.), wind turbine parks, recreation and for fishing and aquaculture.



These activities have heavily influenced the environment in the Baltic Sea and have caused significant changes in the ecosystem during the latter half of the last century[49]. The challenge is to restore a healthy ecosystem in the Baltic Sea, as the countries in the catchment area are well aware. At the HELCOM Ministerial Meeting 2007 they all signed the BSAP[50], which together with the EU directives is the base for the environmental actions in this Strategy (HELCOM is a forum where the EU MS and Russia work together to protect the Baltic Sea environment). The Action Plan is supported by the research programme BONUS (Baltic Organisations' Network for Funding Science EEIG) Plus. All countries in the catchment area have to co-operate to reduce the input of nutrient and to prevent hazardous substances from entering the sea. All countries, and the EU, are also responsible for implementing sustainable fisheries and good maritime practice.

In particular, since 1992, 162 serious pollution areas or 'hotspots' have been identified by HELCOM around the Baltic Sea and its catchment area. Of these, around half have been cleaned up and subsequently removed from the list. Hotspots are grouped into industry, municipal and industry waste water sites, agriculture sites and coastal lagoon/wetlands sites, according to the source of pollution. Municipal and industrial waste water sites are generally significant sources of nutrients and particularly phosphorus. Agricultural sites are also significant sources of both nitrogen and phosphorus. Originally 16 agricultural hotspots and five coastal lagoon/wetland hotspots were identified, of which only five had been deleted from the list by March 2008.

## Eutrophication

### CHALLENGES[51]

In the BSR, eutrophication is, as mentioned above, a major problem for the sea (and for the lakes of the region), especially in the southern and eastern parts of the Baltic Sea. It is caused by excessive nutrient inputs (nitrogen and phosphorus), which mainly originate from inadequately treated sewage, agricultural run-off and airborne emissions from road and maritime traffic and combustion processes.

The land-based losses of nutrients are to some degree being addressed through existing EU legislation, but there are many further actions that have to be undertaken. The newly adopted Marine Strategy Framework Directive, in effect since 15 July 2008, includes the objective of achieving good environmental status by 2020 in regional seas around Europe, including the Baltic Sea. This objective is to be achieved in a co-operative approach, involving where possible third countries and using where appropriate existing structures such as regional sea conventions. In this respect, the HELCOM provides the appropriate forum in the BSR.

In addition, reductions in nutrient inputs have primarily been achieved through improvements at major point sources, such as municipal sewage treatment plants and industrial waste water outlets. Achieving further reductions is a tougher task, requiring actions that address diffuse sources of nutrients such as run-off from agriculture and taking into account the rapidly growing agricultural sector in the region. However, in some agricultural areas significant reductions have been made through farm-level advisory services[52].

### PROPOSED RESPONSES

#### > Reduce nutrient inflows

First, it is important to reduce the nutrient leakages from agriculture. To achieve this, in addition to the full implementation of the Nitrates and Water Framework Directives, and the new CAP cross-compliance requirement to establish buffer strips along water courses no later than 1 January 2012, additional RD measures could be used, for

49 ICES Baltic Committee, 2008, Report of the Working Group on Integrated Assessment of the Baltic Sea (WGIAB) CM 2008/BCC:04, Savchuck, O., Wulff, F., Hill, S., Humborg, C., and Pollehne, F., 2008. The Baltic Sea a century ago – a reconstruction from model simulations, verified by observations, Journal of Marine Systems, Vol. 74, No 1-2 (pp. 485-494).

50 HELCOM BSAP, 2007 (www.helcom.fi/BSAP/en_GB/intro/).

51 See Section 1.4.3.

52 For example the programme 'Focus on nutrients', (www.greppa.nu/ovrigt/kontakt/english.4.1c0ae76117773233f780001230.html).

example, to maximise fertiliser efficiency or achieve nutrient recycling. Hence, it is important to identify all the intensively used agricultural land of the whole catchment area to focus on these areas first.

Secondly, construction and improvement of waste water treatment plants and the restoration of wetlands would contribute to the 'recycling' of nutrients.

Thirdly, the removal of phosphates from detergents would be a first significant step to reduce inflows. It is to be noted that some MS such as Germany and Sweden have already banned their use.

> Increase research on eutrophication

In order to know the sources of nutrients, their effects (locally) and how they can be replaced, more research is needed. This research can, for example, be carried out through the BONUS 169 programme or though specific projects.

> Implement the HELCOM BSAP

The plan's objectives for eutrophication include the following objectives: Concentrations of nutrients close to natural levels; Clear water; Natural levels of algal blooms; Natural oxygen levels; and Natural distributions and abundance of plants and animals.

HELCOM has[53] estimated that for good environmental status to be achieved, the maximum allowable annual nutrient pollution inputs into the Baltic Sea would be 21 000 tonnes of phosphorus and about 600 000 tonnes of nitrogen. Over the period 1997-2003, average annual inputs amounted to 36 000 tonnes of phosphorus and 737 000 tonnes of nitrogen. Therefore, annual reductions of some 15 000 tonnes of phosphorus and 135 000 tonnes of nitrogen would be required to achieve the plan's crucial 'clear water' objective.

To diminish nutrient inputs to the Baltic Sea to the maximum allowable levels, the HELCOM countries have agreed to take actions no later than 2016 to reduce nutrient loads in waterborne and airborne inputs, aiming to reach good ecological and environmental status by 2021. The Action Plan proposes countrywide nutrient input reduction targets for both nitrogen and phosphorus. The base for the countrywide allocation is: i) all countries should implement in full the EU Urban Waste Water Directive; ii) the remaining total reduction is allocated to the countries in proportion to their load.

To reach these reduction targets, the Baltic Sea countries will develop national programmes, by 2010, designed to achieve the required reductions. For this, each country will be given enough flexibility to choose the most cost-effective measures, which can also be incorporated into River Basin Management Plans. They will also implement specific measures to improve the treatment of waste water, including increasing phosphorus removal from 80% to 90%, and substituting phosphorus in detergents. These measures alone will reduce phosphorus inputs into the Baltic by 6 700 tonnes, almost half of the total required reduction and identify individual pollution hotspots such as major facilities for the intensive rearing of cattle, poultry and pigs, where actions should be prioritised in order to comply with revised requirements for prevention of pollution from agriculture (Annex III of the 1992 Helsinki Convention). Accordingly, a more stringent system of environmental requirements for livestock facilities based on their environmental performance and best available techniques (BAT) should be applied for large installations, with a simplified approach for smaller units also introduced.

## Natural zones and biodiversity

### CHALLENGES[54]

The ecosystem of the Baltic Sea is unique, from the northern parts with nearly fresh water and up to six months of ice cover to the more marine Kattegat. Therefore, only a specific

53 HELCOM BSAP background document, 2007, Towards a Baltic Sea unaffected by eutrophication, HELCOM Overview 2007 (www.helcom.fi/stc/files/Krakow2007/Eutrophication_MM2007.pdf).

54 See also Section 1.4.3.



selection of species can survive in this brackish water, and the low number of macro-species makes the ecosystem extra sensitive to changes in its physical and chemical composition – changes which can effect the balance of the entire food webs. This makes the ecosystem extra vulnerable to changes, whether in its physical and chemical composition or in the balance of the food web.

The principal threats come in particular from eutrophication (see above), invasion of non-native species, climate change, chemical contamination and unsustainable fisheries.

## PROPOSED RESPONSES

### > Reduce the negative effects of fishing on the Baltic ecosystem

The CFP incorporates many measures to improve biodiversity and sustainability of stocks, including management plans for key species such as cod, measures to reduce by-catches and discards and fleet reduction initiatives. Some of these measures are within the exclusive competence of the EU. Within the environmental domain such measures include the swift and efficient implementation of the Birds and Habitats Directives. The Directives oblige MS to designate Natura 2000 sites for the protection of species and habitats with accompanying management plans. The Directives also request actions from MS to protect species of EU interest such as cetaceans within their national waters. As a large share of by-catch of cetaceans and seabirds is likely to occur in coastal zones and by vessels not covered by, for example, the Pingers Regulation (i.e. only requiring the use of acoustic devices outside 12 nm and only applicable for fisheries operated by vessels larger than 12 m), MS have a large responsibility to reduce such by-catch.

### > Implement HELCOM BSAP

The biodiversity segment of the Action Plan aims to restore and maintain natural marine landscapes, thriving and balanced communities of animals and plants, as well as viable populations of species. Actions are focused on three cross-cutting issues to be addressed together with the relevant international authorities: marine spatial planning, long-term management plans for threatened species and habitats, and the promotion of the research needed to fill in the information gaps that currently hamper the planning of further actions.

To secure the sustainable use of marine resources by reducing conflicts and the adverse impacts of human activities, HELCOM will devise a set of principles for cross-sectoral marine spatial planning, as well as test and apply tools to be further developed jointly with other international organisations. This will also make HELCOM a natural partner for testing and applying principles for marine spatial planning in the Baltic Sea area under the European Maritime Policy. The marine spatial planning principles and tools should be ready by 2012. One particularly important issue is the further development of an ecologically coherent network of well-managed marine protected areas around the Baltic Sea, including fisheries management measures to be applied in marine protected areas by 2010 (so far only 7% of the Baltic is protected).

To enhance the balance between the sustainable use of marine natural resources and their protection, the HELCOM countries have agreed that good management of human activities for the Baltic Sea area should be based on the ecosystem approach. This will involve: taking measures, by 2013 at the latest, for protecting the most threatened and declining species and habitats defined by HELCOM; further developing and implementing long-term management plans for commercially exploited fish stocks so that they remain within safe biological limits; preventing catches of non-target species and undersized fish; and devising long-term plans for the monitoring, protection and sustainable management of coastal fish species.

These actions will be carried out by the competent fisheries authorities in co-operation with the Baltic Sea Regional Advisory Council (RAC) and HELCOM, mainly by 2012.

HELCOM will also promote further research designed to support the conservation of marine landscapes, habitats, communities and species. This work will involve: developing detailed landscape and habitat maps, especially for habitat-forming species; updating HELCOM Red Lists of Baltic habitats/biotopes and biotope complexes, and producing a

comprehensive HELCOM Red List of threatened Baltic Sea species; and developing additional methods for assessing and reporting on the impacts of fisheries on biodiversity, including effective monitoring and reporting systems for by-catches of seabirds and marine mammals.

### 4.1.2. THE BALTIC SEA REGION (LAND)

#### CHALLENGES

On land, while many valuable habitats in Europe are maintained by extensive farming, agricultural practices can also have an adverse impact on natural resources (pollution of soil, water and air, fragmentation of habitats and loss of wildlife). EU policies, including the CAP, are therefore increasingly aimed at addressing the risks of environmental degradation and biodiversity loss. Through the cross-compliance conditions for direct aid to farmers and targeted RD measures, farmers are encouraged to play a positive role in the maintenance of the countryside and the environment.

#### PROPOSED RESPONSES

> Implement the 'Natura 2000' network on land

The European Union is seeking to ensure biodiversity by conserving natural habitats and wild fauna and flora in the territory of the MS. An ecological network of special protected areas, known as 'Natura 2000', is being set up for this purpose. The network is given coherence by other activities involving monitoring and surveillance, reintroduction of native species, introduction of non-native species, research and education[55].

The Directive states that the MS must take all necessary measures to guarantee the conservation of habitats in special areas of conservation, and to avoid their deterioration. The Directive provides for co-financing of conservation measures by the Community. They must also: encourage the management of features of the landscape which are essential for the migration, dispersal and genetic exchange of wild species; establish systems of strict protection for those animal and plant species which are particularly threatened and study the desirability of reintroducing those species in their territory; and prohibit the use of non-selective methods of taking, capturing or killing certain animal and plant species.

> Create marine-protected areas in the sea

The creation by the MS of such a network of marine-protected areas in the Baltic Sea has been supported by the Birds[56] and Habitats directives[57] (Natura 2000 network), as well as HELCOM. To be truly efficient these areas need adopted and implemented management plans that correspond to the threats to the species or habitat they are created to protect.

### 4.1.3. HAZARDOUS SUBSTANCES

#### CHALLENGES

In the BSR, hazardous substances are a risk for the environment. They include organic contaminants and heavy metals, as well as chemical weapons sunk in the Baltic Sea. Once released into the sea, hazardous substances can remain in the marine environment for very long periods and accumulate in the marine food web. Hazardous substances cause adverse effects in ecosystems, including health and reproductive problems in animals, especially top predators. Contaminants may be hazardous because of their toxicity (acute and chronic effects, e.g. hormone-disruption etc.), persistence and bioaccumulating properties. For example, fish caught in some parts of the Baltic Sea, particularly herring and salmon, contain concentrations of dioxin that exceed maximum allowable levels for foodstuffs as defined by the EU. Hazardous chemicals released into the water environment are still used, for example, in antifouling products. Lastly, new

55 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (see amending Acts).

56 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds.

57 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.



environmental problems are emerging, such as new chemical substances such as perfluorooctanesulfonic acid (PFOS[58]) and pharmaceutical products. The use of pharmaceutical products is increasing and sewage treatment plants are not designed to break down these products. Many hotspots in the Baltic Sea area have now been tackled, so more attention should focus on diffuse sources of chemical substances such as pharmaceutical products.

Hazardous substances in the Baltic Sea have sources from several countries around it and from countries outside the area. They have an impact on the entire ecosystem and ultimately on human health. Therefore, no country acting alone will be able to solve the problem: solutions can only come from co-operation at the level of the BSR, the EU and internationally.

Hazardous substances require a strict control regime. This is why EU directives provide for additional record keeping, monitoring and control obligations from the 'cradle to the grave'. Moreover, to prevent risks for the environment and human health, more care must be taken when different categories of hazardous waste are mixed with one another or with non-hazardous waste. Also the permit exemptions that may be granted to installations dealing with hazardous waste are more restrictive than for installations dealing with other waste.

## PROPOSED RESPONSES

### > Implement the HELCOM BSAP

HELCOM has already set a zero-emission target for all hazardous substances in the whole Baltic Sea catchment area by 2020. The ecological objectives set out in the HELCOM BSAP are: to reach concentrations of hazardous substance close to natural levels; to ensure that all Baltic fish are safe to eat; and to safeguard the health of wildlife.

Under the plan, all the coastal countries will launch national programmes addressing nine priority hazardous substances and two heavy metals. These substances have been selected by HELCOM as being of specific concern in the Baltic marine environment. The HELCOM countries will restrict uses of the selected hazardous substances and promote substitutions with less hazardous substances in industry and other sectors. The selected hazardous substances include mainly halogenated hydrocarbons, as well as mercury (in certain applications) and cadmium (in fertilisers and certain other uses). There is also a need to define guidelines and build up the capacities of the relevant authorities and industries in order to increase awareness of how pollution involving hazardous substances can be eliminated. To this end the need to provide more reliable substance-specific information on the amounts of chemicals used for various purposes has been stressed, using as far as possible existing registers as well as those under development.

The information currently available on inputs and sources of hazardous substances is not as extensive as for nutrients, so it is not yet possible to conduct a comprehensive assessment of the situation in the Baltic Sea. The HELCOM countries have therefore decided to work together to build up more information about the sources of the selected hazardous substances, the extent of their occurrence in the Baltic marine environment, and their biological effects, to be carried out both through regular national monitoring activities as well as in tailor-made and innovative ad hoc research projects, e.g. in co-operation with the NCM. This knowledge can then be used as a basis for identifying further actions.

### > Implement the REACH Regulation

The REACH Directive is a new European Community Regulation on chemicals and their safe use. It deals with the Registration, Evaluation, Authorisation and Restriction of Chemical substances. The new law entered into force on 1 June 2007. The aim of REACH is to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. At the same time, innovative capability and competitiveness of the EU chemicals industry should be enhanced. The benefits of the REACH system will come gradually, as more and more substances are phased into

58 Perfluorooctanesulfonic acid (PFOS), or perfluorooctane sulfonate, is a man-made fluorosurfactant and global pollutant. PFOS is a proposed persistent organic pollutant (POP) because it is persistent, bioaccumulative and toxic.

REACH. The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified.

The REACH Regulation gives greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances. Manufacturers and importers will be required to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in a central database run by the European Chemicals Agency (ECHA) in Helsinki. The Agency will act as the central point in the REACH system: it will manage the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals, and run a public database in which consumers and professionals can find hazard information.

> Consider action to clean the chemical weapons dumps in the Baltic Sea

Some 40 000 tonnes of chemical munitions were dumped into the Baltic Sea after the Second World War. It is estimated that these chemical munitions contained around 13 000 tonnes of chemical warfare agents (this figure does not take into account the dilution and degradation which have taken place since then). No new information on these dumps has been reported in recent years. Chemical warfare agents are chemical compounds which through chemical or biochemical reactions interfere with the physiological functions of the human organism in such a way that the combat capability of soldiers is impaired or that death is caused. Chemical warfare agents are gaseous, liquid or solid substances for anti-personnel use. They are mostly contained in shells and bombs. HELCOM has mapped the dumping sites and incidents are monitored annually since 1995.

## 4.1.4. POLLUTION FROM SHIPS

### CHALLENGES

In the BSR, maritime transport is an important backbone for trade (at any given moment over 2 000 ships are in the Baltic Sea). Both the number and size of ships have been growing in recent years, currently representing up to 15% of the world's cargo traffic, and this is predicted to increase by over 100% in the Baltic Sea, especially oil tankers. Moreover, while maritime transport is a clean mode of transport, when measured in emissions per tonnes of cargo it is also a major source of greenhouse gas emissions. The IMP 'clean shipping' priority should thus be an umbrella for a range of measures that will reduce the environmental impact of maritime transport.

The main negative environmental effects of shipping include air emissions, illegal and accidental discharge of oil, hazardous substances and other waste and the introduction of alien organisms via ships' ballast water and hulls. This is especially important for the Baltic Sea, given its semi-closed environment.

Marine transport provides important services to the BSR and the whole EU. The Baltic Sea has been designated worldwide as the first special SECA with limits on sulphur emissions since 2005 under the MARPOL Convention[59] (Annex VI) under the International Maritime Organisation (IMO). However, additional efforts are still needed to combat marine pollution arising from this economic activity. In view of the importance of maritime traffic in the Baltic Sea and the effects on the marine environment, it is important for the countries in the BSR to act jointly to reduce this source of pollution.

### PROPOSED RESPONSES

> Reduce waste water discharges from ships

Every year the Baltic Sea sees around 90 million trips made on ferries. More than 250 cruises (typical duration of 10-12 days) carrying more than 360 000 passengers visit several ports of the Baltic Sea. Additionally some 584 000 trips on cargo vessels, with a crew of 15 on average, are annually made on the Baltic Sea. The discharge of sewage and grey water into the sea is allowed by on-board purification systems and under certain conditions. However, the waste water treatment on-board is not sufficient to

59 MARPOL is an International Convention for the Prevention of Pollution From Ships adopted in 1973 and modified by the Protocol of 1978. (MARPOL is the acronym for MARine POLlution.)



reduce nitrogen or phosphorus load from waste waters. Calculations show that the nutrient load originating from ships is not big, but nor is it negligible, due to the sensitivity of the Baltic Sea marine environment. The nutrient load is concentrated along shipping routes, and immediately available for uptake by e.g. blue-green algae, adding to the severe eutrophication of the Baltic Sea.

The purpose of Directive 2000/59/EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues is to reduce the discharges of ship-generated waste into the sea. According to the Directive, MS shall ensure the availability of port reception facilities adequate to meet the needs of the ships normally using the port. However, in many ports the reception facilities are still not sufficient to guarantee for cruisers and ferries a smooth and timely discharge of sewage or grey water to the sewer network. A solution could be to encourage ports to reduce the additional fees to collect ship-generated waste.

> Reduce air pollution in ports

The port reception facilities should be improved to enable ships to use shoreside electricity instead of fuel. To encourage ports to do so, voluntary labels for sustainable port management could be introduced. Another solution would be to reduce or remove taxation of shoreside electricity or differentiated port dues depending on their environment friendliness.

> Implement the HELCOM BSAP

Firstly, the countries plan to propose an amendment to the Annex IV of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) to obtain an acknowledgement of the sensitivity of the Baltic to nutrient inputs and introduce new regulations especially for passenger ships and ferries to eliminate their discharges of nutrients in sewage.

Secondly, the plan also envisages the use of non-regulatory measures such as economic incentives to stimulate further reductions in emissions from ships.

Thirdly, another important part of the HELCOM Action Plan concerns the intensified enforcement of existing environmental regulations. The Baltic Sea countries will better utilise satellite surveillance to detect illegal discharges, as well as a newly developed detection system based on AIS, to identify non-compliant ships in the HELCOM area.

Fourthly, growing numbers of non-native species are being observed in seas all around the world, and the Baltic Sea is no exception. Shipping is the most important vector of unintentional species introductions into aquatic environments, due to releases of ballast water and the fouling of hulls. The entry into force of the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) is the most important step towards combating the spread of invasive non-native species. So far, none of the Baltic countries have ratified it. However, the HELCOM countries have agreed to ratify the BWM Convention by 2013. Measures included in a Road Map drawn up by HELCOM will be taken already before ratification, to ensure this urgent issue is addressed as soon as possible.

## 4.1.5. ADAPTATION TO CLIMATE CHANGE

### CHALLENGES

In the BSR, the impacts on the ecosystem of climate change may be particularly important due to the region's location, the very cold climate and the vulnerability of the natural environment. Major changes are expected to affect the hydrology and biology of the region. Some sectors are particularly vulnerable, such as agriculture, fisheries and tourism. Hence, a number of the Baltic Sea countries, including Latvia, Finland and Sweden, are already preparing national adaptation strategies focusing on the impacts and measures that need to be taken in order to cope with climate change. Given the importance of the Baltic region and relevance of cross-boundary issues, consideration could also be given to developing a regional adaptation strategy.

Although the likely impacts of climate change are difficult to predict with certainty, it is clear that the projected increase

in temperature and precipitation will have a major influence on conditions in the BSR. It will be important to identify more precisely the impact of climate change at local level and how to reduce this impact.

There are several expected regional impacts of climate change. There will be changes in precipitation, which will affect the run-off into the Baltic Sea, with potential increases in annual river flows from the northernmost catchments together with decreases in the southernmost catchments. Seasonally, summer river flows would tend to decrease, while winter flows would tend to increase. The water in the sea will be affected, as the average salinity of the Baltic Sea is projected to decrease and water temperature, water balance, and circulation can be expected to change. This will have impacts on the biological processes and biota in the Baltic Sea, affecting the species that live in the Baltic Sea, their distribution, and their interaction. The anticipated impact of warming on marine mammals in the Baltic Sea is mainly expected in the large decrease of ice cover, impacting the seal species that breed on ice, primarily ringed seals and grey seals.

The BSR has the potential to be a model region in the field of climate change. In particular, there is room for improvement in the energy efficiency of residential buildings, transport, DH (system for distributing heat generated in a centralised location for residential and commercial buildings) and CHP facilities.

#### PROPOSED RESPONSES

> Establish a regional adaptation strategy at the BSR level

Such a strategy would provide a useful framework for strengthening co-operation and sharing information across the region. The adaptation strategy could apply a similar approach to the EU framework (White Paper) by focusing on issues of cross-border interest such as: developing a more robust evidence base on the impacts and consequences of climate change, raising awareness of the need for action; and ensuring and measuring progress (using indicators as a benchmark for measuring progress) and taking early action to ensure that adaptation is integrated in key policy areas – this means reviewing policies in light of the risks of climate change and considering options for adaptive action.

> Implement the Green Paper 'Adapting to Climate Change in Europe – options for EU action'

The Green Paper 'Adapting to Climate Change in Europe – options for EU action'[60] already indicated that the Baltic Region will be affected, with projected temperature increases and significant increases in yearly precipitation. This will affect energy generation capacity by hydropower, and may induce more winter floods. There is potential for cultivating new areas and crops thanks to much longer growing seasons, but agriculture could also suffer from new pests and diseases. The species composition and structure of forests could be much affected by higher temperatures, intense precipitation and severe storms. With a warmer climate, the Baltic Sea could be increasingly affected by eutrophication (algal bloom) and pollution.

### 4.1.6. COASTAL ZONES

#### CHALLENGES

Approximately 20 million people in the Baltic Sea drainage area live within 20 km of the coast and depend on a good coastal environment. However tourism, aquaculture, coastal fisheries, constructions, industries and other activities all have an impact on coastal zones. In addition, coastal zones are particularly exposed to risks (e.g. flooding, coastal erosion, risks linked to maritime transport) and comprehensive planning and risk reduction strategies are needed, with a focus on prevention.

Coastal zones are important areas for economic development and for the maintenance of a healthy environment. The development of integrated management plans for coastal zones is thus crucial far beyond the borders of these coastal zones themselves. The availability of sound knowledge and well-developed information systems is critical to successful

60 COM(2007) 354 final of 29.06.2007.



integration across sectors. Due to the transboundary nature of environmental processes and impacts of human activities, joint strategies and actions are needed. With increasing human activity in the marine part of the coastal zone also, coherent development across the land-sea boundary should be a focus.

PROPOSED RESPONSES

> Develop national strategies for ICZM

In 2000, the Commission adopted two documents: a Communication from the Commission to the Council and the European Parliament on 'ICZM: A Strategy for Europe' and a proposal for a European Parliament and Council Recommendation concerning the implementation of ICZM in Europe. This Recommendation was adopted by Council and Parliament on 30 May 2002. The Communication explains how the Commission will work to promote ICZM through the use of Community instruments and programmes. The Recommendation outlines steps that the MS should take to develop national strategies for ICZM. The national strategies were due for spring 2006 and should have involved all the coastal stakeholders.

## 4.1.7. OTHER PARTNERS AND PARTNERSHIPS

### NDEP

The EU-Russia Environmental Dialogue – which addresses such issues as climate change, forestry governance and conservation, pollution, water/marine, biodiversity and nature protection – can help to promote environmental sustainability in the region, over and above what is included in the agreement in HELCOM. In particular, many actions and projects with Russia are implemented in the framework of the Northern Dimension Environmental Partnership (NDEP). Through its pipeline of projects in water, waste water, solid waste and energy efficiency, this instrument is helping to deliver real benefits to the environment – and the people – in the area extending from the Baltic Sea to the Arctic Barents Sea region.

### Role of the EIB

In the field of environment, the EIB can support water and waste water treatment, waste management, renewable energy, sustainable transport modes and urban renewal. For the BSR, during 1995-2008 the Bank approved some 294 loans with environmental eligibility in the BSR countries. The total loan amount is €31.9 billion, corresponding to a total investment in the region of about €100 billion. The EIB can finance up to 50% of the total eligible investment cost. In some circumstances, for instance in projects mitigating climate change, the Bank can finance up to 75% of the project costs. For the geographical distribution of the environmental loans, see table below. The figure for Germany includes the lending for the whole country, not only the part of Germany with the Baltic Sea catchment area.

The Bank will continue to finance projects that reduce the load of nutrients to the Baltic Sea, particularly in overloaded parts of the Baltic Sea, such as the Gulf of Finland and Gulf of Riga. The Bank will further develop its financial services to adapt to the needs of the region and assist the MS in reaching sufficient capacity to produce environmentally acceptable energy. Climate change issues, the use of new technologies and increased use of renewable energy need some focus. The EIB is currently intensifying its efforts in these areas to better support environmental targets.

# 4.2. A strategy to make the Baltic Sea Region a prosperous place

In the region, some countries are very developed and innovative while others are rapidly catching up. There are strong enterprises in the fields of industry, services, energy, agriculture, forestry, fisheries, among others. Yet its regions and cities could benefit more from the single market through increased trade and fully integrated markets, including an open labour market. In addition to intra-EU trade, the region should leverage its position at the EU's north-eastern border as an international trade route by improving infrastructure and border-crossing efficiency. To increase and maintain its competitiveness, the BSR should continue moving towards a strongly networked and knowledge society by promoting innovation in particular through SMEs and by fully implementing the EU *acquis*.

## 4.2.1. GENERAL OVERVIEW[61]

The economy of the BSR has been strong. Real GDP growth has been above the EU average and the region has, by some measures, been one of the top performing macro-regions in the world. The region possesses a number of important qualities that make it attractive and competitive. The BSR performs strongly on productivity and on labour mobilisation and the region's countries are implementing a number of important reforms. Its strengths include high levels of education, further education, and R&D personnel and expenditure, which provide fertile ground for the creation of leading scientific and technological clusters in many fields. Trade is also constantly increasing within the BSR, driven by the EU enlargement in 2004 and the harmonisation of customs procedures in the region. Foreign direct investment to these countries has also been especially high.

However, the BSR has a dual economic situation. Some MS benefit from strong interconnections, high competitiveness focusing on innovation, and well-qualified workers. But some are less advanced yet have benefited from above-average growth rates (especially Russia and the MS which joined in 2004). While the gap between the older and newer market economies slowly narrowed for some years, the latest data indicate that economic disparities between and within Baltic Sea countries may have started to widen again. Considerable differences in the level of socio-economic development between the western and eastern BSR countries, as well as lagging development of rural areas in some parts of the region, are major weaknesses in terms of its overall cohesion.

The financial and economic crisis that emerged in 2008 provides a less favourable climate for investment and business generally. This makes it all the more essential that the EUSBSR allows the partners in the region to take a longer perspective, recognising that when this crisis has passed the regions that have best prepared will be those best equipped to take advantage of the new opportunities.

## 4.2.2. SINGLE MARKET

### CHALLENGES

The markets in the region are relatively small, operating in an over-regionalised or localised manner. As a result there is often a low level of competition leading to relatively high price levels and reduced competitiveness.

The (2006) State of the Region report by the BDF emphasises that high price levels are likely to stem from weak competition, which can be a deterrent for investors. According to the study, high (input) prices combined with small markets in the individual countries contributed to the decrease in foreign direct investment flows seen in recent years. Due to small markets in the Baltic, it is essential that appropriate measures to upgrade the business environment continue to stimulate development of local enterprises and attract foreign investors. A policy framework conducive to investors and a dynamic business environment offer the best option for sustaining high levels of development in the west and further income convergence in the eastern part of the Baltic Sea rim.

Although all MS are part of the internal market, obstacles to trade in goods and services still exist at the practical level. Consultation and analysis carried out to prepare the

61 See Section 1.4.2.



single market review[62] in November 2007 showed that, in many areas and sectors of the single market, the legal framework is not functioning as well as it should. Citizens and businesses often fail to seize the many opportunities offered because rules are not properly implemented, applied or enforced. This is mainly due to lack of coherence in the implementation of legislation and the introduction of burdensome administrative processes at national level. The effect on the willingness and ability of SMEs to export their products and services – even to neighbouring states – is therefore very negative.

Special attention should, therefore, be paid to measures that lead to a better integration of the BSR markets and internal market regulations should be implemented in a way that avoids obstacles to cross-border trade. If this proves to be possible in the BSR, other MS can then share the experience.

There are however no 'BSR specificities' when it comes to the transposition of single market legislation (in the broader sense). For instance, as regards the timely transposition of single market regulation, the performance of EU MS around the Baltic Sea is, according to the Internal Market Scoreboard 17 of 9 July 2008[63], slightly above average. The number of open infringement cases of those MS is also comparable to that of other MS; no specific 'BSR trend' could be observed.

## PROPOSED RESPONSES

There are two key priorities: to foster closer territorial integration (more co-operation between stakeholders from different countries) and to enable deeper market integration (the market becomes a real single market – 'domestic' market – without barriers). For the latter, a better application of the mutual recognition principle and reduction of the costs linked to trade procedures will be the key elements. Closer territorial integration will be achieved by MS (and Russia) co-ordinating their policies and administrative/legal rules, to make it easier for enterprises (especially SMEs) to work with other countries in the region.

Examples of good practice in the countries of the BSR include co-ordination structures for the single market, as found already in Denmark and Sweden. The internal market unit in the Swedish Ministry of Foreign Affairs and the Swedish National Board of Trade (NBT – an independent government agency working under the authority of the Ministry of Foreign Affairs) enhance co-operation with other national bodies on the application of single market rules and ensure that new national legislation respects single market law. In Lithuania and Sweden, training is organised for authorities on single market issues. In Poland, regular policy discussions take place in the European Committee of the Council of Ministers on the state of implementation of single market directives.

Such co-operation on single market issues between the authorities of the BSR could be developed in line with the Commission's Recommendation on Partnerships with MS in implementing the single market, to be adopted in mid-2009. The Recommendation will aim to set out how the Community and all MS can jointly take more responsibility for managing the single market. In particular, closer co-ordination could be further facilitated by a 'Single Market Guide' containing information about the rules on the single market, an example of which already exists in Sweden. As underlined in the 20 November 2007 single market review, fostering ownership and reinforcing mutual trust through close partnerships are of key importance to make the single market work effectively.

In addition, the Commission is currently working on the 'Single Market Assistance Services' action plan. The aim of this plan is to ensure that citizens and businesses receive better information and better guidance, to enable them to make the most of their rights in the internal market. This involves providing clear information on rights, with easy access to problem-solving systems where they are needed. SOLVIT is one example of a problem-solving network. The plan also includes other services such as European Consumer Centres, SOLVIT, Eures, the Citizens' Signpost Service and Europe Direct. The aim is that all different services work together in a seamless manner, offering citizens and businesses genuine one-stop access to all information and assistance they need to fully benefit from the internal market.

62 Commission Communication 'A single market for 21st century Europe'; COM(2007) 724 final of 20.11.2007.
63 http://ec.europa.eu/internal_market/score/index_en.htm

Two further ways of perfecting the single market would be:

> to foster closer co-operation between the administration bodies responsible in each Member State for implementing the Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market by extending the ongoing co-operation between the Nordic countries to the rest of the BSR;
> to develop the co-operation between the tax authorities in the BSR area: as the tax authorities in the country of origin have all the necessary information about a company interested in exporting goods and services, they should develop networks to exchange information and develop common methods and principles with the aim to reduce the administrative burdens for SMEs exporting goods and/or services.

### 4.2.3. INNOVATION

#### CHALLENGES

Ongoing globalisation results in increased competition between countries and regions regarding investments in knowledge, innovation and production. Furthermore, knowledge-intensive products and services are required to be competitive on major markets. To be competitive in a globalised world, the regions need to develop strong clusters that offer a combination of entrepreneurial dynamism, intensive linkages with top-level knowledge institutions and increased synergies among innovation actors. To achieve this, critical mass in innovative companies and innovation capacity is needed. In the BSR, with relatively small countries and innovation clusters, more transnational co-operation is needed at the policy and practical levels.

The east–west division in the Baltic Sea is still very noticeable, despite recent high growth in the east. It is reflected also in the last European Innovation Scoreboard (EIS) 2008. The BSR includes some of the innovation top performers in Europe and those lagging behind, even if they are catching up. The EIS statistical analysis confirms that in the Nordic countries there is a well-balanced high performance across practically all innovation indicators. This highlights the solid base formed by the innovation system in these countries. The fairly constant high performance achieved by the Nordic countries together with the promising efforts being made in the other Baltic Sea countries will prove vital for further accelerating the pace of innovation in the whole region in the near future.

Industrial clusters are an effective way of developing core regional capabilities and helping companies based in the region to exploit new market opportunities. Clusters assemble a critical mass and build linkages in areas where countries, regions or companies would otherwise find it difficult to develop a competitive position. Moreover, interactions within clusters result in increased innovation of the whole group, thus further increasing the region's competitive advantage.

As an example, local and regional clusters bringing together different sectors and different stakeholders to develop synergies between their activities are a promising development in European maritime communities. These clusters contribute to better quality and higher standards for European maritime products and services, and enhance the integration of the maritime economy. They thus contribute to economic growth and employment as well as the sustainability of the maritime economy overall. Moreover, the EU can provide a framework to facilitate this. In October 2007, the European Commission presented a staff working document on Maritime Clusters that takes stock of the situation with regard to maritime clusters in the EU with a view to building a bridge between Maritime and Cluster Policies, identifying some of the drivers and characteristics of successful European Maritime Clusters, and outlining upcoming initiatives and future work in this area, including the promotion of a European network of maritime clusters.

#### PROPOSED RESPONSES

> Establish a transnational dialogue on setting priorities by launching the Strategic Forum as an annual meeting place where representatives from national ministries in charge of innovation policy, innovation agencies and related cluster stakeholders will meet to discuss actual and new priorities as well as activities



to be implemented. All countries of the region are recommended to participate. Moreover, linkages should be established with the EU initiative 'INNO-Partnering Forum', dealing with the development of new mechanisms of innovation support to EU firms, particularly SMEs.

> Establish a common innovation strategy for the region focusing on (a) the need to better use the high-level human capital to generate financial revenues for the region; (b) the need to better co-operate (e.g. exchange of researchers, common projects, clusters); and (c) the need to reduce barriers to innovation (e.g. different legal and regulatory environments, namely for foreign direct investments and intellectual property).

> Improve the exploitation of research through patents by fostering increased co-operation between national patent authorities in the BSR with the aim of achieving a more harmonised and efficient handling of applications for patents in the region. 'Sector specialisation among the different authorities' in the BSR and the ability to assist applications to other BSR countries are ideas that could be part of such deepened co-operation. Support should be provided to SMEs, individual inventors and public research organisations to integrate Intellectual Property Rights (IPR) into their business strategies.

> Continue activities on transnational collaboration between clusters (operating in the same sector or in different sectors) and on innovations systems in the BSR with a dual focus on strengthening transnational relations inside and outside the region. Efforts should be focused on areas where there is most value-added from transnational collaboration. The clusters participating in such projects are expected to use their competence to find activities of mutual interest that will, in five years, give evidence of economic growth in the BSR.

> Further improve transnational collaboration on services innovation and clusters by implementing the Transnational Innovation System and Cluster Support Programme to be developed in accordance with priorities concluded in the BSR InnoNet project[64] on clusters and further developed by the Strategic Forum. Strong linkages should be maintained with similar EU initiatives, such as the EPISIS EU project on services innovation as well as with the European Cluster Alliance (managed by the TACTICS EU project), the European Cluster Excellence initiative, and the European Cluster Observatory[65] on clusters to further explore synergies by testing and validating new promising outcomes in each of their areas.

### 4.2.4. ENTREPRENEURSHIP

#### CHALLENGES

In the BSR, the general conditions for growth need to be strengthened. There should be increased and more effective support for entrepreneurship and SME development, as well as strengthened co-operation between business support institutions. The level of trade and investments in the region could be increased through better co-operation between trade and investment bodies and development of supportive measures aimed at further economic integration.

To secure the long-term prosperity of the BSR, entrepreneurship needs to be included in all levels of education, teachers should be provided with appropriate economic knowledge, and innovative teaching methods should be developed. The notion of starting your own business should be better promoted among young people.

Institutional barriers substantially restrict the activities of SMEs in the BSR. If development in the region is to be based on those enterprises, it is, therefore, necessary to lift restrictions hampering them as swiftly as possible. The first priority is to create an institutional framework defining coherent rules for the functioning of entrepreneurship (in practice those rules are frequently too restrictive or complex). The quality of the institutional and legal framework in which enterprises operate in the BSR differs much between individual states.

64 Further information can be found online (www.proinno-europe.eu).

65 Further details can be found online (www.clusterobservatory.eu).

### PROPOSED RESPONSES

The scope of the measures designed to support entrepreneurship should be further developed on the basis of best practice in the region.

> Promote trade and attract more investments into the BSR through better co-operation between trade and investment promotion bodies in order to further enhance the tools provided by the MS in this area. Further enhanced collaboration between trade and investment agencies in the region would be of benefit for intra-regional trade, as well as for the trade of companies from the region with countries outside.
> Secure access to capital for SMEs, for instance by promoting and introducing new and innovative tools that facilitate access to capital in the region, particularly at an early phase of their development. Examples could involve cross-border venture capital funds and cross-border guarantee schemes that would make it possible to exploit economies of scale and scope when investing in SMEs or guaranteeing their lending. The EU financial instruments of the Competitiveness and Innovation programme, as well as the Structural Funds, should be used extensively and in an effective way to secure finance for SMEs where current market conditions are difficult. The EU sources for SME finance should be complemented by national and regional financing.
> Encourage and promote female entrepreneurship to support economic growth and jobs in the BSR. There is a need to enhance women's entrepreneurship through targeted actions to young women and second-career women that are starting up or thinking about changing their professional activities. Policymakers and SME stakeholders in the BSR should be encouraged to increase and promote the spirit of enterprise among women. To create a favourable climate for female entrepreneurship, contextual, economic and soft factors that hinder start-ups and the growth of women's enterprises need to be addressed.
> Include entrepreneurship at all levels of education including at university level, teachers should be provided with appropriate knowledge and innovative teaching methods, and an entrepreneurial culture should be established. This should be done with the involvement of local business. Universities in the BSR should be encouraged to increase the spirit of enterprise and to create a favourable climate for entrepreneurship, not only addressed at business and economics students. Measures should include support for university start-up companies, spin-offs and specific teacher training.
> Facilitate rural entrepreneurship by establishing programmes for education and cross-border exchanges, making full use of funding available in the European Agricultural Fund for RD in support of SMEs.

## 4.2.5. LABOUR MARKET

### CHALLENGES

Given the diversity of labour market practices and conditions across the BSR, the principal challenge for the Strategy is to enable the weaker regions to reach the standards of the best.

A second challenge is to find ways to exploit the potential created by these differences in ways that bring the maximum benefits, in terms of competitiveness and social conditions, to the whole region.

The first challenge relates mainly to the conditions within the labour sub-markets of the region – i.e. countries and regions – while the second concerns opportunities across regions. As the improvement of labour sub-markets relates mainly to the better implementation of existing policies, especially in areas such as 'flexicurity' and active labour market policy, the EUSBSR has relatively little to add. Nevertheless, the increase in transregional linkages that should be developed by the Strategy will surely lead to an overall raising of standards through the power of example.

A recent study commissioned by the European Foundation for the Improvement of Living and Working Conditions (Dublin, 2007) on flexicurity models[66] identifies Denmark,

66 www.eurofound.europa.eu/pubdocs/2007/11/en/1/ef0711en.pdf



Finland and Sweden as countries which are often used as benchmarking models, and which show top scores for most of the indicators involved. The Baltic States score high on flexibility, but not security, while Germany and (to some extent) Poland are the reverse.

The Strategy has a stronger role to play in the creation of transregional opportunities. Labour migration around the BSR is low despite good cultural and transport links, even when compared with the Union as a whole. The exception is migration to Norway, which has been higher than expected. However, there is evidence that real mobility has been much higher than indicated by the registered figures for individual job-seekers.

Three elements can be identified as contributors to the optimising of opportunities from the employment market: the quality of human resources on offer; the economic opportunities and incentives available; and the administrative environment that allows transregional and transnational employment to take place.

### PROPOSED RESPONSE

Regarding the quality of human resources, national and European policies and instruments are already active in seeking to improve education, qualifications and experience. The Strategy can clearly contribute to this effort, in particular by exchanges of curricula and the development of regional centres of excellence in various types of higher education. As mentioned above, increased interchange and contact between relevant stakeholders will surely also lead to a better awareness and wider adoption of best practice.

The effort to raise performance in entrepreneurship and innovation around the BSR to the level of the best performing countries will certainly have positive effects on the labour market. The existence within the region of some of the best performers and some of the weaker of the NMS underlines the potential for this area of action.

So far as administrative measures are concerned, a number of countries (Denmark, Sweden and the three Baltic countries) are relatively close to the condition that can be described as 'balanced job mobility'[67], i.e. appropriate levels of job mobility coupled with high employment. This form of mobility is characterised by a combination of the following: levels of job mobility that are conducive to growth and productivity; a high share of voluntary job shifts; a high share of employees in voluntary temporary employment; and upward occupational mobility indicated by a high share of job shifts that require new or different skills.

It should be noted that the renewal of the economies of Poland and the Baltic States is already having an effect on local labour demand, with both the quantity (until the start of the current recession) and the quality of labour demanded increasing markedly.

## 4.2.6. CUSTOMS CO-OPERATION

### CHALLENGES

The challenge is to support and facilitate the development of legitimate trade and economic co-operation, and to combat customs fraud and enhance security and safety of the supply chain throughout the region. This requires, for example, strengthened co-operation between customs authorities of the EU MS and third countries, in particular with Russia, and removal of procedural, human resource and infrastructural bottlenecks.

The European Commission has long supported and financed customs co-operation in the BSR (under Customs 2002 and 2007 programmes respectively). Since 1995 within the framework of the CBSS Baltic Sea Customs Conference, a number of multilateral initiatives have been taken and actions carried out aimed at facilitating customs control procedures and enhancing co-operation in the field of combating customs fraud. The Conference concluded its work with the accession of almost all countries in the region to the EU, and abolishment of customs controls at the internal borders between them.

67 Danish Technological Institute, Job Mobility in the European Union: Optimising its Social and Economic Benefits, 2008.

However, the problem of border control procedures and delays remains at the external EU border with Russia. Until recently, long queues of lorries formed regularly at crossing points on the EU-Russian border in Estonia, Latvia and Finland. This phenomenon was one-way, only concerning traffic from the EU to Russia. The main reasons were the growth of EU-Russia trade as well as inefficient procedures and inadequate infrastructure on the Russian side. In addition, slow, cumbersome and bureaucratic control procedures applied by Belarusian customs have forced numerous transport and trade operators to choose alternative routes to Russia via Baltic States and Finland, bypassing Belarus. Although the congestion has decreased due to the economic crisis since the beginning of 2009, streamlining customs legislation and improving infrastructure in Russia will help avoid similar problems in the future.

#### PROPOSED RESPONSES

The Commission proposed a Community approach to this issue in 2006, including short, medium and long-term actions. The approach also addresses Russia's request for advanced information exchanges on goods crossing the border.

This strategy was adopted at the meeting of the EU-Russia Subcommittee on Customs and Cross-border Co-operation on 26 April 2007 and reconfirmed on 19 June 2008. It encompasses the three following priorities:

(a) implementation by Russia of legislative, administrative and procedural measures to improve the situation at the border;
(b) implementation of a pilot project on EU-Russia information exchanges;
(c) implementing and developing border-crossing and customs infrastructure.

To ensure follow-up, a working group on EU-Russia border customs issues was set up. It is composed of representatives of Russia's customs authorities, the Commission and interested MS. The Working Group meets half-yearly to discuss and monitor progress in the three priorities, and to identify and recommend actions needed. The Working Group co-ordinates the implementation of specific projects related to the monitoring and evaluation of the strategy, such as 'Laufzettel' and joint evaluation projects under the Common Space Facility.

### 4.2.7. FISHERIES

#### CHALLENGES

Fisheries management is governed by the CFP with the overall objective to ensure exploitation of the living aquatic resources that provide sustainable economic, environmental and social conditions. Recent analysis of the policy has demonstrated that the CFP is not achieving its goal due to overcapacity, centralised top-down management, decision-making focus on short-term benefits, lack of political will to ensure compliance by MS, and lack of compliance and insufficient responsibility by the industry. Addressing the failures in the current policy will be crucial in the reform of the CFP in 2012.

For the Baltic Sea, the main failures of the CFP are reflected in the overfishing of certain stocks such as herring and cod in the western Baltic, misreporting of catches and lack of control in particular in the eastern cod fishery, as well as indications of overcapacity and low profitability in certain parts of the fleet. Moreover discarding – which used to be a minor issue in the Baltic – is increasing due to strong recruitment of the eastern cod stock.

The current approach to the sector isolates fisheries from many related maritime activities. 'Reconversion' efforts to integrate fisheries and diversify work opportunities are being undertaken, but these remain piecemeal.

#### PROPOSED RESPONSES

While the development and implementation of fisheries management in the Baltic Sea under the current CFP continues, the strategy offers an opportunity to develop and test new approaches that can contribute to the overall reform process of the CFP and support the development of sustainable fisheries in the Baltic Sea.



The Baltic Sea has a low number of commercially exploited stocks and rather clean, single-species fisheries, of which about 90% are within the Community and with only one external partner (the Russia Federation) with whom a bilateral agreement on co-operation in fisheries management is in place. It is, therefore, a suitable candidate for piloting new concepts in preparation of the reform, such as a more regionalised management and decision-making approach with stronger stakeholder involvement in the policy and its implementation. Moreover, already existing principles can be developed further, such as the implementation of an ecosystem-based approach to fisheries management with, for example, reduced or eradicated discard levels of both commercial and non-commercial species. The medium and longer-term effects of such an approach should be higher catch quotas as well as ecologically and economically healthier fisheries.

The EFF does provide support in many of these areas and can be used to develop interregional and transnational co-operation in line with the strategy.

Efforts to achieve capacity reduction, and the conservation and restoration of fish stocks, must also go hand in hand with improving the social well-being of those active in the sector. The integration of fishermen into the broader maritime economy can be beneficial, both for their job prospects and for the overall development of the conditions under which they work and under which their sector operates, especially as the well-being of traditional fishing communities is an important part of the quality of life in coastal areas. The EU's joined-up approach to maritime policy is needed to ensure that the necessary linkages are developed.

## 4.2.8. AGRICULTURE AND FORESTRY

### CHALLENGES

The CAP and especially its RD policy aim at enhancing the competitiveness of agriculture and of rural areas. The RD policy, and the Community Strategy linked to it, aim at improving competitiveness in agricultural and forestry practice (axis I); improving the environment and the countryside (axis II); and improving the quality of life in rural areas and encouraging diversification (axis III and IV). This is in line with the Lisbon Agenda including the Göteborg Conclusions.

In the BSR agriculture, forestry and fishing are important to the economy and sustainable development. Keeping these sectors profitable and competitive will be a key factor in securing the future sustainable development of the region. Co-operation across the BSR among these sectors has so far been relatively modest. Many advantages could be gained if it were increased.

Wide divergences in the implementation of RD policies across the region suggest that there may be scope for more co-ordination and awareness of best practice. Spending could be more balanced between the three priorities, in order to overcome the environmental and competitiveness problems in the region and thereby contribute to economic development and new challenges such as renewable energy production and combating climate change. Today almost 50% of the total RD funding spent in the region[68] is spent on axis II (land management) while only 16% is spent on axis III (wider RD) and 5% on axis IV (bottom-up measures). The share for cross-border co-operation is €67.15 million – just 4% of axis IV. There is very little tradition of voluntary co-operation over borders.

### PROPOSED RESPONSES

Information and promotion actions co-financed within the CAP include information campaigns and other public relations activities aimed at raising awareness about the quality of EU agricultural products. These add value to national and private initiatives, both within the EU and in third countries. The funds are mostly used for national projects: of the 19 ongoing projects only one includes more than one country.

The CAP has other tools that may have an impact on two important issues: eutrophication and biodiversity. In particular the proposal made in the Health Check – to add,

68 €34 801 million – the figure includes the whole envelope for Poland.

under the Good Agricultural and Environmental Condition framework, standards on buffer strips along water courses and specification of landscape features – should mitigate the impact of agriculture on these two issues. The cross-compliance system more generally consolidates farmers' compliance with these and other environmental requirements.

There are still differences between the relevant MS and regions in the support given to farmers and the achievements. One solution would be to encourage voluntary co-operation within the region, sharing experiences and carrying out regional analysis.

The region should encourage the creation of multinational promotion projects and thereby make use of the budget means available.

Existing instruments, and in particular the RD programmes, should be adequately targeted to tackle unwanted environmental effects, halt biodiversity losses and foster a competitive forestry sector and a competitive agricultural sector and thriving rural areas. Voluntary co-operation between MS and regions through, for example, the EU co-financed national rural network, offers a promising way forward.

# 4.3. A strategy to make the Baltic Sea Region an accessible and attractive place

For the BSR to be dynamic, it has to be accessible and attractive. This means that it should have good transport links both internally and to the rest of the world. It also means that energy supplies – essential for quality of life and for development – should be secure, affordable and efficient. In addition, the human capital (education level, demography and health) should remain strong, making full use of the information society. Finally, cultural and tourism assets are key elements for development of the region.

## 4.3.1. TRANSPORT

### CHALLENGES

In the BSR, transport is particularly important as the distances – internally, to the rest of Europe and to the wider world – are very long and the conditions for traffic are often difficult (forests, lakes, snow and ice in the winter, etc.). This region, which is located on the periphery of the economic centre of Europe, depends strongly on foreign trade in goods and needs well-functioning transport infrastructure for its economic growth. Moreover, the Baltic Sea is a sensitive ecosystem, which makes environmental considerations important in the development of transport infrastructures.

The main challenge for future transport development in the BSR is to reduce it's the region's remoteness by improving links within the region and to the rest of the EU. East/west linkages are needed to overcome the infrastructure shortfalls of the eastern and south-eastern sides of the sea. The north is very remote. Better connections to Russia and other neighbours are needed, and further on to Asia as well as to the Mediterranean region. This would further increase the region's potential as EU's gateway to Asia.

The BSR countries are dependent on trade. So it is very important to develop sound logistical solutions for freight, especially for maritime transport. To achieve this, there are specific challenges which must be taken into account: location on the northern periphery of the EU, long distances and dispersed population centres, a harsh climate and restricted accessibility. Moreover, increased trade means increased traffic volumes, with extra pressure on the marine environment. Ninety percent of all iron ore mined in the EU



comes from the north of the BSR. By 2020, Baltic freight transport is expected to rise by between 60 and 80%, with more coming from Russia, Central Asia and the Far East. This also means that border delays must be reduced, which will require better co-operation on police and other security matters, e.g. through EUROPOL.

Short Sea Shipping (SSS) differs from deep-sea shipping, since it competes fiercely with land transport. However, SSS has lower externalities than land transport and has a high potential for maintaining European technological know-how in maritime transport. However, trips by ship from a port in one EU Member State to another are always considered international – even when the cargo transported is internal market-cleared goods. A vessel is considered to leave the customs territory when it leaves a Community port as part of the external border. This has implications for the efficient operation of shipping and business around the EU; for example, in terms of the time taken to complete the necessary clearances, with additional costs for operators. This also impacts the development of SSS and Motorways of the Sea (MoS) as an alternative to road transport, for trips within the Community.

## PROPOSED RESPONSES

### > Establish better links within the region (especially to the north and east/west) and to the rest of the EU

These links should be improved by implementing the agreed Trans-European Networks – Transport (TEN-T) projects such as the Rail Baltica and the Fehmarn-belt link of the Nordic Triangle. Furthermore, future transport projects (TEN-T, but also national and regional ones) should be better co-ordinated to ensure that investments bring benefits to the entire region.

The TEN-T policy promotes better functioning of the internal market as well as economic and social cohesion in the EU, by realising a number of strategic priority projects. Within this framework, Community action focuses in particular on the interconnection of national networks and their interoperability, links between peripheral and central regions of the Union and access to the TEN-T. The BSR is particularly concerned with the MoS and the northern Axis that connects the Nordic and Baltic States as well as Germany and Poland from the EU with Belarus, Norway and Russia.

The recommendations of the TEN-T policy group have since been endorsed under the EU-Russia Transport Dialogue as well as by the European Community and Norway.

### > Establish better connections with Russia

For the transport links with Russia (and further on to Asia), the ND Ministers made a decision to establish the Partnership on Transport and Logistics. The main goal of the new Partnership will be to improve, in compliance with the ecological needs of the region, the major transport connections and logistics between the ND partners in order to stimulate sustainable economic growth. The policy could also be seen as the external dimension of the broad TEN-T policy in the BSR.

### > Promote efficient freight transport

The EU freight transport agenda is of major importance for the promotion of sustainable, efficient and competitive transport in the BSR. Well-functioning transport logistics, supported by appropriate logistics infrastructure, are essential for the creation of a sustainable and competitive transport system in the Baltic, with innovative systems and cost-effective processes contributing to the reduction of $CO_2$ emissions while strengthening the global competitiveness of the European transport industries.

### > Promote maritime transport and ports

Naturally, maritime transport plays a key and still increasing role for the region. The Baltic Sea is mainly used for transportation into and out of the region – about 75% of total maritime transport on the sea starts or finishes outside the region, and this accounts for about 50% of all foreign trade in the region. A strategic vision for this transport mode, looking at the development of shipping, ports and related sectors over the short, medium and long term, is therefore essential, especially at a time when sustainable and competitive alternatives to road transport need to be

developed. The Community legislation on maritime safety and pollution prevention will be reinforced with the adoption of the measures included in the third maritime safety package. In addition, constant monitoring, with the assistance of the European Maritime Safety Agency, of the measures in place will be essential to maintain a high level of maritime safety.

Ports and port cities are part of the worldwide logistics chain. They are also confronted with problems undermining their good functioning, such as insufficient inland connections, inadequate service quality, administrative bottlenecks, and a lack of adaptation to new forms of transport organisation. To achieve growth, ports and port cities need to adapt and expand their capacity at the same time; this is both a challenge and an opportunity. The planning process, public policy and the legal framework will have to facilitate sustainable port expansion and better use of the European ports network, against a background of increasing competition for space in and around ports. There is a need to see how sustainability and environmental protection can be ensured while allowing port capacity to develop in line with these requirements.

### 4.3.2. ENERGY INFRASTRUCTURES AND MARKETS

#### CHALLENGES

For the internal energy market to function well, countries need to be interconnected. However, the three Baltic States (Estonia, Latvia, Lithuania) are isolated from the wider energy networks of the region and the rest of the EU. This creates risks for securing their energy supply at reasonable prices.

In addition, the three Baltic States' energy markets (electricity, gas, oil, etc.) lack appropriate infrastructures and are too nationally oriented instead of being linked and co-ordinated (although some co-operation was initiated on energy issues under the BASREC[69], while the Nordic electricity market is one of the most integrated markets in comparison to other regions within the EU). Levels of market opening and competition in certain MS are not sufficient to provide the right incentives for investments, for instance in the gas sector. This creates higher risks in terms of energy security and higher prices. The problems that can arise when a country's energy networks are insufficiently linked to neighbours and the wider continent have been highlighted in recent supply crises. Infrastructures needed for wider use of low carbon energy sources, particularly Carbon Capture and Storage (CCS)-equipped power plants, will have to be developed from scratch. There is a risk that individual MS will develop their own infrastructures, foreclosing new markets and making it impossible to take advantage of possible synergies.

#### PROPOSED RESPONSES

> Build more and better energy infrastructures to reduce the isolation of the Baltic States

All EU/EEA countries in the region are part of the internal market for electricity and gas. However, the electricity markets are still in widely different stages of liberalisation. It is this and the infrastructure gaps that have impeded the physical integration of the three Baltic States (considered as 'energy islands'). Further physical integration of the grids in the region is needed to bring benefits in overall efficiency, and to improve security of energy supply through increased diversification, including renewable energy resources. Improved security of energy supply should also be promoted by other means, such as energy efficiency.

To reduce the isolation of the Baltic States, the idea of a Baltic Interconnection Plan has already been agreed among the MS concerned. A first major step has been taken: the European Council backed the plan in its conclusions of 16 October 2008. This plan incorporates gas and electricity interconnection projects, development of gas storage and LNG terminals in order to integrate the BSR's energy networks, to create a well-connected internal energy market and enhance security of supply. More recently, the European Recovery Package offers substantial sums to specific agreed projects in the

69 BASREC (initiated in 1999) includes the governments of Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden. The European Commission is represented by the Directorate-General for Transport and Energy. This work also involves the CBSS and the NCM.



Region[70]. This is also true for infrastructures needed for wider use of low carbon energy sources, such as fossil fuels with CCS. Regarding CCS, some countries have sufficient storage capacity while others do not. Therefore, in this case, particular attention should be paid to the possibility of transboundary pipeline projects for the transport of $CO_2$.

> Integrate the energy markets

Fragmented electricity markets lead to the following problems: (a) access to the power generation capacities in the region is difficult (insufficient cable linking producers and consumers, different electricity standards); (b) higher prices in the absence of economies of scales and competitors; and (c) few incentives or opportunities for infrastructure investment, especially in renewable energies. There is also a lack of gas interconnections with the rest of the region. This situation results in a lack of cross-border trade and market liquidity, higher prices and lower levels of diversification of energy sources.

To integrate the energy markets, there is a need for more regional co-ordination on technical matters (e.g. in electricity there are three synchronous areas in the BSR: the ex-UCTE system covers Germany, Poland and western Denmark as well as the continental part of the EU; the ex-Nordel system covers Norway, Finland and eastern Denmark; and the IPS/UPS system covers Russia, Lithuania, Latvia, Estonia as well as Belarus and eastern Ukraine), on energy infrastructures to link the markets, and on access to markets by energy companies.

## 4.3.3. ENERGY EFFICIENCY AND CLEAN ENERGIES

### CHALLENGES

The BSR has a vast potential to improve energy efficiency and the use of renewable energies. The Action Plan for Energy Efficiency has set a goal of reducing EU energy consumption by 20% by 2020. The EU has adopted mandatory targets for renewable energies by 2020, namely an overall binding target of 20% share of energy from renewable sources in the gross final energy consumption and a 10% binding minimum target for renewable energy in transport to be achieved by each MS.

The promotion of renewable energy will contribute to climate change mitigation through the reduction of greenhouse gas emissions, enhance security of energy supply and technological development in the field, and create jobs and foster regional development especially in rural areas. Therefore, the challenge is to continue the work already started on promoting a more efficient use of energy, a higher share of renewable energy sources and more co-operation on these issues.

### PROPOSED RESPONSES

> Establish plans for policies and actions for energy efficiency and renewable energy sources

Recent EU legislation on energy efficiency and renewable energy requested that MS should prepare a number of strategic planning documents, such as National Energy Efficiency Action Plans or National Renewable Energy Action Plans. Especially in some larger countries of the region (Germany, Poland, Sweden, Finland), such national plans can be further enhanced by the development of regional plans.

Most of the countries have prepared first National Energy Efficiency Action Plans and started the work on drafting the National Action Plans for Renewable Energy. The successful implementation of these plans will contribute substantially to the achievement of the EU targets for energy efficiency, renewables and $CO_2$ reduction. An enhanced, continuous exchange of views on the implementation of such actions in the BSR, in relation to EU policy and legislation framework, would strengthen energy co-operation in the region.

General co-operation on energy issues around the Baltic Sea was initiated under the BASREC in 1999. It still continues with the governments of Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia

70 http://ec.europa.eu/commission_barroso/president/pdf/Comm_20081126.pdf

and Sweden. The European Commission is represented by the Directorate-General for Transport and Energy. Also participating in this work are the CBSS, the NCM and the CBS.

> Transfer knowledge on CHP and DH

CHP and DH are of major importance to meet European needs for energy efficiency and environmental protection. Although CHP is already in place in many cities and towns of the region, it is still important for energy efficiency improvement. There is firstly a need for CHP support, because market transformation and energy market liberalisation have a serious influence on the economic, legal and political framework for CHP and DH. Secondly, there are many opportunities for DH system rehabilitation and CHP capacity expansion. There is also a need to organise an exchange of knowledge and to provide information and training to the relevant decision-makers in order to support and develop high-efficiency CHP and DH.

CHP and DH have been already recognised by BASREC as one of the key common priorities for the entire BSR. Within the BASREC Working Group on energy efficiency, an institutional handbook on CHP and DH was developed already in 2002. But since then the development of EU legislation on energy efficiency (e.g. a proposal for a directive on CHP) has resulted in new challenges for the EU MS around the Baltic Sea. Up to now, an important task for the MS has been the transposition and full implementation of the EU CHP Directive, which has been completed successfully by the Baltic MS. Further actions are welcomed to develop CHP and DH, such as actions facilitating co-operation of EU MS around the Baltic Sea as well as other important stakeholders (e.g. national CHP/DH and cooling associations, national/regional associations of local authorities who usually own DH plants and municipal distribution networks receiving heat from CHP/DH and cooling).

> Improve energy efficiency

Policies aimed at improving energy efficiency can help reinforce energy security in the region. In the buildings sector for instance, which is responsible for around 40% of energy consumption, there is significant room for co-operation between the countries of the BSR. Countries like Germany or Finland could share with others their long experience in the development of energy-efficiency measures for buildings. In EU countries, progress is triggered by the Directive on Energy Performance of Buildings and its new recast, which is estimated to achieve a 5-6% saving in the EU's total energy consumption by 2020 and to reduce by 5% the EU's total $CO_2$ emissions by 2020.

> Co-operation on low-carbon technologies

Many countries around the Baltic Sea depend on fossil fuels for their energy needs, electricity and transport in particular. Considering the above and the EU ambitious climate change policy targets, low-carbon technologies including carbon capture and storage (CCS) should be further discussed within the framework of the Strategy. CCS is a promising technology for sustainable and cost-effective production and use of fossil fuels.

## 4.3.4. EDUCATION

### CHALLENGES

The BSR states are good performers in education and training. They generally show stronger results than the EU-27 average on reading literacy, upper secondary completion rate, early school leaving and public investment in education. The main differences among the countries in the region are in adult participation in lifelong learning, tertiary attainment of the population and participation rates in early childhood education and care.

The BSR has highly developed bilateral and regional co-operation in the field of education. The Nordic Council is the most active organisation at the regional level, focusing on exchanges of best practice, networks and mobility programmes. Recent initiatives include setting up Nordic Masters programmes. From 2008, the Baltic countries have been included in the educational co-operation activities of the Nordic Council. Nordplus is the NCM's major educational programme, with a budget of €8.5 million in 2008, financing co-operation in the field of education between Denmark,



Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden. Its aim is to contribute to the establishment of a Nordic-Baltic educational area by means of common projects, exchanges, networking and mobility programmes. Another regional initiative has developed within the CBSS, which implements an Agenda 21 for Education in the BSR, focusing on education for sustainable development.

The challenges are to keep the quality of the education system and to promote exchanges between the west and the east of the BSR.

## PROPOSED RESPONSES

### > Link the universities in the regions

There are already networks of universities and joint programmes, for example, the 'Baltic Sea University Programme' with almost all universities of the region and the 'BSR University Network' with 40 members. However, the potential for co-operation between universities in the western part of the BSR and those in the eastern part has not been sufficiently exploited. Therefore, it would be worth considering joint curricula where the education resources would be shared between different institutions. One of the aims would be to create standards of excellence similar to the 'Ivy league' in the USA.

### > Promote the 'Erasmus' programme

The Erasmus programme supports mobility actions and co-operation projects in the field of higher education in the 31 countries. Its budget in 2009 was some €450 million. At the national level, 'decentralised actions' are managed by national authorities. These actions consist of support for student mobility for studying and doing enterprise placements abroad as well as support for staff from Higher Education Institutions (HEIs) to teach or receive training abroad or for enterprise staff to teach abroad. Approximately 18 000 students, a number that is steadily rising, studied abroad with Erasmus in the academic year 2007/08. The biggest challenge set for the programme is to achieve a cumulative number of Erasmus students of three million by 2012 since its inception in 1987. In mid-2009, the two million mark was reached. Erasmus students can also benefit from Erasmus intensive language courses preceding their period abroad. Universities and other institutions can work together through intensive programmes, academic and structural networks, multilateral projects such as curriculum development and accompanying measures.

### > Use the 'Erasmus Mundus' programme

The overall aim of the Erasmus Mundus programme is to contribute to the quality of education in the EU, in particular by fostering co-operation with third countries. The long-term impact sought by Erasmus Mundus is, firstly, to better prepare citizens in Europe, but also in third countries, to live and work in a global, knowledge-based society. Secondly, the programme seeks to ensure Europe's position as a centre of excellence in higher education and therefore to ensure that Europe becomes an increasingly attractive destination for higher education. Thirdly, through people-to-people exchanges and structural co-operation concentrating on young people with a potential for future leadership roles within the economy and society, the programme seeks to improve mutual understanding between peoples and cultures, thus aiming to contribute to world peace and stability as well as to Europe's legitimate aspirations to be a major player on the international scene.

Concretely, the Erasmus Mundus programme comprises four concrete actions: courses at masters level offered by a consortium of at least three universities in at least three different European countries; scholarships especially for third-country graduate students; partnerships with third-country HEIs; and support to activities that improve the profile, visibility and accessibility of European higher education as well as issues crucial to the internationalisation of higher education, such as the mutual recognition of qualifications with third countries.

A financial envelope of €230 million was set aside for the five-year duration of the programme (2004-08). In addition, €65 million from the Commission's external relations budget and €4.8 million from the ninth European Development Fund have been injected into the programme's budget to fund additional student scholarships for individuals coming

from specific third countries (the 'Asian Windows', the 'ACP Window' and the 'Western Balkan Window'). The total budget for the programme thus amounted to approximately €300 million.

> Use the 'Tempus' programme with Russia

The Tempus programme was established in 1990. The programme supports the modernisation of higher education and creates an area of co-operation in countries surrounding the EU. The scheme now covers 27 countries in the western Balkans, eastern Europe, Russia and Central Asia, north Africa and the Middle East.

The programme's overall objective is to promote voluntary convergence with EU developments in the field of higher education deriving from the Lisbon Agenda and the Bologna Process. The total budget for Tempus in 2008 was around €50 million. Some 140 Russian institutions are involved in a total of 144 project proposals, and Russia is by far the largest Tempus partner country. More than 100 proposals involve several partner countries while over 40 are targeted at Russia only. The institutions are spread all over the Russian Federation. If Russia and Baltic countries from the EU develop joint activities, they do so on their own initiative.

> Strengthen education in the maritime sector

Given the cost structure in the industry, European sailors cannot compete in terms of wages with those from Asia or Africa. However, given the increasingly high-tech nature of the shipping industry, there are significant benefits for employers in recruiting highly qualified personnel whose skills can guarantee the safe running of today's complex ships and the protection of the environment. Recruitment of highly educated sailors will also contribute to developing the ship-owners' reputation for quality. It is, therefore, important to raise the quality and skills of European seafarers, to ensure safety at sea and the protection of the environment, take account of the prerequisites and needs of the industry, and raise the status of the seafaring professions. Furthermore, European seafarers would be able to compete on the job market despite their higher wages.

The human element is a key factor in maritime safety and the protection of the environment. This should be reflected the training and certification of seafarers and appropriate labour conditions for those working aboard ships.

### 4.3.5. HEALTH

#### CHALLENGES

Good public health is essential for a good economic development. Many economic sectors rely on a sound health infrastructure: the production of goods and services, investments from abroad, tourism, etc. In the BSR, there are still considerable differences between the 'old' and 'new' MS. Citizens are looking for high-quality and affordable healthcare. In particular, primary healthcare – the first qualified contact point for the individual within the health system for issues of prevention and diagnostics and treatments – should be available everywhere and offer good standards.

Health concerns in the region are not very different from those in other parts of the EU, but nonetheless a certain number of topics may need to be addressed. These include better treatment and prevention of HIV-AIDS infections, opportunistic infections especially resistant strains of tuberculosis, and the spread of multiply-resistant antibiotics. These risks have in common a combination of mixing of communities and pockets of poverty where treatment is insufficient for whatever reason. In addition there are considerable pressures arising from the diseases associated with advanced development – cardiovascular and circulatory diseases and cancers, for example.

The nature of the challenges, particularly as concern infectious diseases, makes close co-operation with neighbouring countries, and particularly with Russia, essential.

#### PROPOSED RESPONSES

The need is to make better use of the existing co-operative and partnership frameworks to address patients' presenting problems in timely and efficient ways. So existing structures

could be improved to establish a framework partnership for public health in Baltic countries that, after careful needs assessment, could consider surveillance of communicable diseases, promotion of healthy lifestyles focused on life without tobacco, and healthy and stable nutrition in the fight against non-communicable diseases and inadequate nutrition.

In addition to the above, the EU Baltic States participating in such a framework could refer for information and assistance to the European Centre for Disease Prevention in Stockholm for relevant assessment of disease health status in the Baltic Sea area. The Centre can provide scientific and technical expertise to the MS in the development, regular review and updating of preparedness plans and also in the development of intervention strategies in the fields within its mission.

In addition it could be proposed to have reinforced co-operation on health security issues such as pandemic preparedness, vaccination issues and sharing information on alerts.

The NDPHS is a co-operative effort of 13 governments (the eight MS around the Baltic Sea plus Canada, France, Iceland, Norway and Russia), the European Commission and eight international organisations (including the World Health Organisation, the International Labour Organisation, the UNAIDS, the BSSSC and the CBSS). The NDPHS provides a forum for concerted action to tackle challenges to health and social well-being in the ND area and especially in north-west Russia. Limited funding for appropriate projects in the region is available.

The Partnership has two main priority fields in which it aims to support co-operation and co-ordination.

> The first priority is to reduce the spread of major communicable diseases and prevent lifestyle related non-communicable diseases. These diseases include HIV/AIDS, tuberculosis, sexually transmitted infections, cardiovascular diseases, resistance to antibiotics, as well as other major public health problems that arise from the use of illicit drugs and from socially distressing conditions.

> The second priority is to enhance peoples' levels of social well-being and to promote socially rewarding lifestyles. Here, an emphasis is placed on encouraging proper nutrition, physical exercise, safe sexual behaviour, ensuring good social and work environments, as well as supporting alcohol-, drug- and smoke-free leisure activities. Within this priority field, special attention is placed on youth as the primary target group.

### 4.3.6. CULTURE AND TOURISM

#### CHALLENGES

Culture can be considered a strategic factor contributing to the development of the BSR in several aspects as a value in itself, as a factor of the region's development and as a factor for developing and building society's identity, both at the national and transnational level. Culture and creative industries generate GDP and contribute to prosperity growth, thus serving as development multipliers.

Employment has been growing due to investments in culture and creative industries, affecting in particular the SME sector. Employment growth results in the rise of household income, which in turn translates into increased demand. The impact of culture and creative industries on sustainable economic growth can be thus considered positive. Moreover, the subjective effects of a strong regional culture can be highly positive, although impossible to measure, leading to better social awareness and cohesion, a stronger sense of identity and ultimately improved well-being.

However, the divisions that have characterised the region in the relatively recent past have erected walls that are not so easy to tear down as the physical frontier fences. There is, therefore, room for efforts to rebuild the sense of belonging to a region, without artificial or exaggerated narratives, in a way that respects current realities but opens citizens to wider horizons.

Tourism is an essential driver and user of cultural assets. The BSR is a region with tremendous assets in both 'natural' and cultural tourism. The exceptional expanses of unspoiled

countryside as well as the historical and cultural traces of past interactions, linked by the Sea itself, provide an opportunity for co-operation, which can bring considerable advantages to all concerned.

Tourism contributes already significantly to the economy of the BSR. In 2007, there were 57 million arrivals to the region, which means 6.2% of the world market share for tourism with a 2% yearly increase. Tourism depends very much on other sectors such as transport infrastructure, conservation of natural assets and leisure facilities. In addition, tourism enables direct contacts between inhabitants of the BSR and promotes the discovery of their natural, cultural and historical assets. Thus tourism is an important for making citizens feel that they belong to a common macro-region.

The challenge is to use the level of the macro-region to provide opportunities for promoting culture as well as tourism.

## PROPOSED RESPONSES

### > Develop 'people-to-people' actions

Culture is an expression of citizens and there is a lot to gain by promoting 'people-to-people' actions whereby citizens would exchange directly on cultural issues. This would improve their mutual understanding and facilitate a joint management of cross-border cultural events.

The Culture 2007-13 programme (with a budget of €400 million) supports three strands of activities: cultural actions; European-level cultural bodies; and analysis and dissemination activities. The European Capital of Culture and the EU awards for culture are among the special measures of the Culture programme. The MS entitled to host the European Capital of Culture event are ranked in a chronological order laid down in a specific decision regarding the Capitals (Decision No 1622/2006/EC). In the coming years, several MS in the BSR will host a Capital: Lithuania with Vilnius in 2009, Finland with Turku in 2011, Estonia with Tallinn in 2011, and Latvia and Sweden in 2014 (the selection of cities within these two countries is ongoing). Each of these capitals should receive €1.5 million from the Culture programme, provided they comply with the requirements mentioned in Decision No 1622/2006/EC.

### > Improve the co-operation with Russia

Building upon the results of the so-called Kajaani process, the first Ministerial meeting of the revised ND policy, which took place on 28 October 2008 in Saint Petersburg, acknowledged cultural co-operation as a possible new sector for co-operation within the ND Policy, and instructed the Steering Group to set up an ad hoc working group to assess the feasibility of creating an ND Partnership on Culture. The results of this Working Group, chaired by the NCM, were discussed at the Nordic Cultural Forum on the ND Partnership on Culture held on 11 and 12 September 2009 in Finland. The Forum endorsed the establishment of the Partnership and agreed that it should function as a focal point for networks, projects and other cultural activities in the ND region, as well as a facilitator for assessments of the financial viability of projects for the mobilisation of public-private funding for cultural projects and enterprises.

The BSR has a potential for tourism as a whole, which could be better exploited through for instance the mapping of tourist locations (cultural heritage, landscapes, etc.) and the development of a joint strategy to attract more tourists (harmonisation of standards, development of similar projects, joint marketing, joint projects, etc.). Another action could be to cluster the stakeholders of the tourism industry.

### > Use 'RD' measures to attract tourists

The EU RD policy foresees several ways of enhancing cultural facilities/activities and of developing tourism in rural areas. All EU MS around the Baltic Sea have made it possible for rural citizens to benefit from the culture/tourism aspect of programmes. The total budget of public support for encouragement of tourism activities is over €300 million[71] and for village renewal, development and rural heritage

71 This sum includes the whole envelope for tourism and heritage in Poland, since the programme is nationally implemented.



over €1 billion for the programming period. In eight of the 10 RD Programmes, there is an indicator measuring the development of tourism.

It is often difficult to find information about the methodologies and experiences of projects once they have terminated. Thus the lead partners of the tourism sector of BALTIC 21 with its existing network prepared project Agora. This builds on existing results, knowledge and experience to compile tools and information on sustainable tourism, which is made accessible for interested users. The sources for this information are the Agora partners representing all three dimensions of sustainability, all levels of administration and tourism management and different thematic interests, projects, actors and stakeholders of tourism.

### 4.3.7. INFORMATION SOCIETY

#### CHALLENGES

The expansion of broadband access to communication networks has been widely recognised as an important element for economic development and growth and a crucial factor for social and economic cohesion. As the basic infrastructure of a modern knowledge-based economy, broadband and its deployment raise several coverage-related issues. Hence, broadband policy also addresses the territorial cohesion of the EU.

Access to broadband Internet and the strategic use of ICT by individuals, enterprises and public administrations can help to reverse the trends of depopulation and relocation of economic activities from these areas. The i2010 initiative provides a framework for action for the development of the information society at local, regional and national levels. The implementation of i2010 in the countries that are part of the BSR is characterised by the following features.

> Data on broadband coverage and ICT penetration (including domain name registrations) shows that, in general, the implementation of the information society is progressing well for the most-developed BSR countries. In Denmark, Finland, Norway and Sweden many communities, both rural and urban, are becoming aware of the benefits of self-provisioning in terms of communications infrastructure. This can be seen both in city councils putting 'dark fibre' (privately operated optical fibre networks) into the infrastructure they already own, such as sewers, and small rural communities taking private initiatives to install their own fibre. Data on the adoption of ICT in households, use of online public services and ICT penetration in enterprises confirms the good progress made by these countries

> Other BSR countries including Latvia, Lithuania and Poland still suffer from a large gap in broadband coverage between urban and rural areas. The low ranking of these countries in terms of ICT penetration in households and enterprises is partly a reflection of their different level of socio-economic development. Most of these countries have devoted a substantial part of their respective allocation of EU CFs for 2007-13 to tackle these problems.

#### PROPOSED RESPONSES

##### > Bring high-speed broadband Internet access to all

This can be done through the mobilisation of all available instruments – including telecoms legislation, Cohesion Policy and RD policy – to bring high-speed broadband Internet access to all. The idea is to promote the adoption of a strategic approach to territorial cohesion that would rely on the synergy among different policies, in particular for ensuring the sustainability of remote and rural areas. Such an integrated approach should emerge from an in-depth investigation of local handicaps, exploit existing potential and reflect the actual needs of regional and local players (who are in the best position to evaluate these needs) and avoid a one-size-fits-all solution.

New wireless technologies will be a cost-efficient way of deploying broadband in rural areas, but require spectrum to be available. In November 2007, as part of the review of the electronic communications regulatory framework, the Commission made proposals for greater flexibility and more efficient use of radio spectrum. The Commission published

a strategy for a co-ordinated EU approach to the digital dividend, which by 2012 should make spectrum resources available, as TV across Europe becomes digitalised. This will in turn unleash many innovative convergent services including wireless broadband, which is particularly suitable for addressing territorial cohesion for those European regions where difficult geography, population spread and other factors often discourage investments by various market players.

> Use the funding available under the ERDF, ESF and CF

Regulation, however, is not the only instrument to use to increase the benefits linked to the development of the information society. When markets fail to operate, EU funding such as Structural and RD funds can play an important role in bridging that gap. The European Commission looks favourably on the use of these funds to extend broadband coverage, provide online services and improve social capital.

The European Commission has estimated that the 2000-06 programming period of Structural Funds provided about €7 billion in funding for information society projects. About 20% of this sum co-financed ICT infrastructure projects in underserved areas. Earmarking of expenditure for the 2007-13 programming period of structural funds reveals that this programming period is expected to provide about €15 billion for the information society, which represents about 4.4% of total cohesion spending. Most of these investments, about €12.3 billion, will take place in the regions covered by the convergence objective. Poland is among the biggest spenders on ICT with €3.7 billion (5.7% of total cohesion spending) for the information society under the convergence objective. The evaluation of EU cohesion spending on ICT also shows that Lithuania will devote €240 million, Latvia €189 million and Estonia €74 million. ICT allocations of cohesion expenditure in Finland, Sweden and Denmark are €143 million, €102 million and €33 million respectively.

The EU-wide picture in terms of the spending on the specific priorities is changing compared with the previous programming period. There is a move from supply-measures, mostly concerned with increasing access through infrastructure investments, to demand-related measures mostly concerned with the provision of services and increasing the efficient use of ICT. Support for ICT infrastructure measures is higher in absolute terms compared with the previous period: about €2.2 billion for 2007-13 against €1.2 billion in 2000-06, but lower in percentage terms, 15% against 20% for the previous period.

### 4.3.8. FINANCIAL PARTNERSHIPS

#### EIB

Transport, navigation, energy, education, culture, tourism, health and IT are all areas that will need to be developed and where the EIB has experience to share. The Bank has provided loans for about 80 projects with an energy objective, for a total amount of €8.7 billion, including TEN-E. Another important area is the Trans-European Networks for Transport (TEN-T), an area which has received €15.6 billion for some 100 projects.

The eastern and southern rim of the region – Estonia, Latvia, Lithuania and Poland, and the new Länder in Germany – count as convergence regions and stand to benefit from some €85 billion of grants from EU Structural Funds alone in the programming period 2007-13. The EIB can provide Structural Programme Loans (SPLs), allowing the Bank to finance operational programmes in the MS under the Structural Funds. The operational programmes usually have target sectors and most national and regional programmes typically cover transport, energy and environment, but can also include components that support R&D, SMEs, education, health, etc. The newly created co-operation schemes with the Commission and other international financing institutions, JASPERS, JEREMIE and JESSICA further assist in supporting the absorption of the Structural Funds. JASPERS primarily supports the preparation of grant applications for large projects in the transport and environment sectors in the NMS. JEREMIE, which is a joint EIB, European Investment Fund (EIF) and European Commission initiative, aims to improve access to finance via holding funds for seed and risk financing to SMEs. Finally, JESSICA will support investment in urban development.



# 4.4. A strategy to make the Baltic Sea Region a safe and secure place

Public authorities must tackle the risks faced by citizens in their daily life. The protection of the life and the property of citizens is a core task for public authorities and public policies. Regions are exposed to hazards and threats in varying degrees, placing them in different risk positions. EU policy instruments should aim to even out these differences as a matter of European solidarity.

The BSR faces some common challenges. A major tanker disaster would affect several if not all the coastal countries of the Baltic Sea; winter storms and storm surges are not unusual; crime, trafficking and migratory routes cross the region, and geographic proximity easily makes national health problems regional.

## 4.4.1. CROSS-BORDER CRIME PREVENTION AND CONTROL

### CHALLENGES

> Prevention and control of crime are of the highest importance in ensuring sustainable social and economic prosperity. Criminal activities can also be detrimental for the environment. Strengthening inter-institutional and cross-jurisdictional co-operation is particularly necessary for policy areas where the EU has already developed common policies, and for policy areas with strong cross-border implications such as environmental crime, smuggling, trafficking, high-tech crime, corruption, etc.

> The region's crime patterns are influenced by its position between EU and non-EU criminal environments, the variation in economic and social conditions in the region, along with the openness and ease of access that is a feature of intra-Community relations. These factors put special responsibilities on those MS with external borders, especially since the abolition of checks at internal borders. All MS need to take co-operative measures to safeguard internal security.

### PROPOSED RESPONSES

> Improve inter-jurisdictional and cross-sectoral co-operation in crime prevention

Crime prevention must address the root causes of crime, such as demand, as well as social, economic, political and gender inequalities. Thus, it must be firstly addressed at the local level. The principle of subsidiarity has to be applied. Yet there are sufficient common areas between national criminal issues to draw up a common approach to the problem. In parallel to pursuing the long-term objective of achieving a harmonisation of the legal frameworks, the Commission is currently working to put in place functioning structures for public-private co-operation in MS in the prevention of crime. Co-operation between relevant actors such as police, customs, prosecutors, the judiciary, migration, social and health authorities and concerned businesses, NGOs and international organisations must be enhanced.

> Improve inter-jurisdictional and cross-sectoral co-operation in border management

A European Border Surveillance System (EUROSUR) should support the MS in reaching full situational awareness at their external borders and in increasing the reaction capability of their law enforcement authorities. EUROSUR should provide the common technical framework for streamlining the daily co-operation and communication between MS' authorities and facilitate the use of state-of-the-art technology for border surveillance purposes. A key operational objective should be the sharing of information, excluding personal data, between existing national and European systems.

> Improve inter-jurisdictional and cross-sectoral co-operation in law enforcement

Joint customs, police and/or judicial operations should become a frequent tool of practical co-operation. Common structures of co-operation in internal border regions of the EU should be fostered. Also, the external dimension of the EU's response to organised crime and other security threats has developed considerably over recent years. Bilateral, regional and international initiatives need to be further refined.

The EU should promote and support the development of regional approaches and co-operation to combat organised crime, particularly in those regions bordering the EU[72].

### 4.4.2. MARITIME SAFETY AND SECURITY

#### CHALLENGES

Together with legislative tools to improve ships' standards, maritime surveillance is of the highest importance in ensuring the safe use of the sea and in securing Europe's maritime borders. Surveillance activities are carried out by MS, but most of the activities and threats that they address are transnational. Within most MS, surveillance activities concerning fisheries, the environment, policing of the seas or immigration fall under the responsibility of several different enforcement agencies operating independently from each other[73]. This often results in suboptimal use of scarce resources.

The improvement and optimisation of maritime surveillance activities, and interoperability at European level, are important for Europe to meet the challenges and threats relating to safety of navigation, marine pollution, law enforcement, and overall security. The Commission promotes improved co-operation between MS' coastguard services and appropriate agencies and is taking steps towards a more interoperable surveillance system (common information-sharing environment initiative) to bring together existing monitoring and tracking systems used for maritime safety and security, protection of the marine environment, fisheries control, customs, defence, control of external borders and other law enforcement activities.

#### PROPOSED RESPONSES

> Improve cross-border and cross-sectoral integration of maritime surveillance

Further actions will be taken to encourage the progressive development of an integrated network of maritime reporting and surveillance systems in sea areas under the jurisdiction of the MS and in adjacent high seas into a broader network. In the network information from different systems set up to meet European and international organisations, as well as from national surveillance systems, jointly operated surveillance services and intelligence sources would be collected, fused, analysed and disseminated in a structured manner at local, MS, sea-basin or European level as appropriate.

> Ensure quality of navigation

Navigation is increasingly based on state-of-the-art technologies. But the increasing intensity of maritime traffic and transport of large volumes of freight and large numbers of passengers underscore the necessity of ensuring maritime safety based on quality human capital. The BSR has a potential to become a model in this area for maritime universities in other countries. Of particular concern is training of the Vessel Traffic Services (VTS) operators. It could be more cost efficient and more interesting for training institutions to train operators from all BSR countries in one centre, instead of each country having its own training system.

### 4.4.3. RADIOLOGICAL SAFETY

#### CHALLENGES

The BSR is a base for several existing NPPs While some countries do not have any nuclear power and some have decided to shut down their NPPs, others are building new reactors. Besides NPPs, nuclear and radiological material is used in several other applications, for industrial, medical, scientific and military purposes. In this context, nuclear and radiation safety – i.e. technical safety of installations, radiation protection and radioactive waste management,

72 'Developing a strategic concept on tackling organised crime', COM(2005) 235 final of 02.06.2005.

73 See e.g. Working documents on offshore activities of coastal EU MS and Cross-Border Co-operation, European Commission/Directorate-General for Maritime Affairs and Fisheries/Maritime Policy Task Force, November 2007.



both civil and military – have been identified by the CBSS as a concern for the Region[74].

PROPOSED RESPONSES

> Establish plans for policies and actions for radiological safety

The BSR countries are very interested in exchanging necessary information about and improving the nuclear and radiation safety in the region. Even if much has been done, closer co-ordination and planning of co-operation projects in the field of nuclear and radiation safety is continuously needed.

## 4.4.4. CIVIL PROTECTION

CHALLENGES

Major disasters – natural, man-made or a mix of both – have led to increased calls to improve the effectiveness of existing EU and MS' disaster response capacity. EU civil protection policies have strong links with regional policy initiatives and/or regional projects. An integrated view of these actions is thus crucial, improving speed, effectiveness and cost-efficiency of civil protection efforts. Flooding can be caused by storms that occasionally raise the level of the Baltic Sea. Economic damage can be substantial, especially in coastal urban regions. Transport by sea is expected to increase dramatically in the coming years in the Baltic Sea and with that comes a higher risk of accidents.

PROPOSED RESPONSES

> Better co-ordination and exchange of experience

The effectiveness of civil protection in the BSR could be improved through synergies and better co-ordination of preventive and preparedness measures, such as the exchange of experience on spatial planning, an early warning mechanism, and public awareness. In addition, the mapping of logistical capacity to tackle the main hazards of the BSR should be launched.

The upcoming European Disaster Management Training Arrangements could be designed so as to enable the participation of the BSR countries. Actual participation will need to be discussed on a case-by-case basis as soon as the tasks and structures of the training arrangements have been decided.

> Further pooling of resources

The BRISK project aims to address the growing risk of accidental pollution from shipping, including pollution by oil, connected to increasing maritime transportation in the Baltic. The BSR already has some resources to respond to pollution at sea and the riparian states co-operate, e.g. through HELCOM RESPONSE, in order to be prepared for joint response operations. However, there has been no comprehensive Baltic-wide analysis so far to check whether the existing emergency and response capacities are sufficient to tackle medium-size or the largest spills of oil or hazardous substances. The overall objective of the project is to substantially contribute to the development of an appropriate level of preparedness in the whole Baltic Sea area to tackle such accidental spills. The project will implement the provisions of the HELCOM BSAP concerning stepwise actions to fulfil the requirements of HELCOM Recommendation 28E/12 on strengthening of subregional co-operation in response field.

## 4.4.5. HEALTH THREATS

CHALLENGES

Most health problems in the region are marked by considerable social and geographical differences in morbidity and mortality. Current variations across the EU in terms of resources, the access to and quality of prevention, screening, diagnosis and treatment, as well as outcomes of health services show that there is enormous scope for improvement.

74 Working Group on Nuclear and Radiation Safety (WGNRS), Terms of Reference.

Hazardous and harmful use of alcohol is a leading cause for premature death and has enormous costs to society in terms of reduced productivity, healthcare and social welfare expenses, as well as costs associated with reduced job productivity, lost earnings, and costs of the law enforcement system. Together with drug use and mental disorders, hazardous and harmful use of alcohol results in the highest rates of suicide in the region.

In some countries in the region's eastern part, the tobacco-attributable death rate in young and middle-aged men is the highest of all EU countries and the smoking prevalence is still increasing.

In the Baltic States, Poland and the Russian Federation, lung cancer and cardiovascular epidemics closely associated with smoking continue to kill far more people in one year than all infectious diseases together over a period of 10 years.

There are significant disparities in HIV/AIDS and tuberculosis rates between the western and eastern parts of the Baltic region. In some countries and regions on the eastern coast, the number of newly reported HIV cases is the highest in Europe, and tuberculosis rates are more than threefold the EU average. As communicable diseases do not respect national borders, the issue needs to be addressed at the macro-regional level.

## PROPOSED RESPONSES

- Containing the spread of HIV/AIDS and tuberculosis through building partnerships and international collaboration in prompt and quality TB care for all. Focus should be on TB/HIV co-infection and ensuring early diagnosis of HIV infections and access to treatment and counselling with a special focus on youth and vulnerable groups such as migrant population, prisoners, etc.
- Fighting health inequalities through the improvement of primary healthcare by assessing differences in accessibility and quality in the region; through assessments of the situation of health professionals including their deployment, mobility and training possibilities; and through the promotion of e-health technology as a way of closing gaps in healthcare access and quality.
- Preventing lifestyle-related non-communicable diseases and ensuring good social and work environments by developing comprehensive policies and actions in the entire region to prevent and minimise harm from tobacco smoking, alcohol and drugs use to individuals, families and society. Actions will contribute to the implementation of the Framework Convention on Tobacco Control and the 'NDPHS Strategy on Health at Work' ensuring good social and work environments and preventing lifestyle-related non-communicable diseases using the workplace as an effective arena for promoting a healthy lifestyle.
- Organisation of resources and the development of a sustainable approach for injury prevention for the future. Understanding and tackling the injury issue requires sustained co-operation between the national, regional and local authorities of the MS, their public health and research communities, businesses and interest groups such as consumer organisations. Stakeholder groups such as academia, business and civil society play a key role in making knowledge and expertise available for exchange at national, regional and Community level. They should be engaged in the research process, as well as in the implementation of models of good practice.

# 5. AN OVERALL, COMPREHENSIVE STRATEGY

To facilitate the move from words to actions, this section sets out a number of practical and methodological considerations important for securing the coherence, efficiency and success of the EU Strategy for the Baltic Sea Region.

# 5. AN OVERALL, COMPREHENSIVE STRATEGY

As stated at the start of the preceding chapter, the Commission considers that the best response to the range of challenges, problems and potential responses listed above will be a macro-regional strategy for the BSR. This Strategy will not, at this time, involve additional EU funding, nor will it require legislation at EU level. This is because it is essential to ensure that available resources are used in the most effective manner before employing new funds, while the actions proposed above should be seen as contributing to the strengthening of EU legislation and not under any circumstances as reducing its impact.

On the other hand, by addressing the issues of the region in an integrated manner, the Strategy should allow all stakeholders and partners to identify positive impacts for their own interests, thus reducing the risk of blockages arising from asymmetric interests in specific areas. This is a key reason for adopting this unified approach, and also explains the difficulty in using existing, sectoral-based approaches and institutions to resolve the region's problems.

## 5.1. A proposal to enable coherent and effective implementation of the European Union Strategy for the Baltic Sea Region

For the proposed Strategy to have meaning however, it is essential that the effect moves 'off the page' and into specific actions. The Commission, in close co-operation with the governments and other stakeholders concerned, has therefore made a number of proposals to ensure effective implementation of the actions and projects that can really make a difference in the region.

This starts with the preparation of an action plan, drawn from proposals made by Commission services, national administrations, regions, NGOs and other stakeholders. The actions are selected on the basis of being ready for rapid implementation, or at least launching, involving a number of partners from different MS in the region, and most importantly taking advantage of the opportunities or countering the threats identified as significant in the region.

The action plan is not viewed as definitive; it will need to be modified as projects are completed or – if necessary – adapted to revised circumstances. Projects not included may still be implemented and may contribute to the Strategy. Even the larger objectives, represented by Priority Areas in the Strategy, may be adapted as the circumstances change.

The challenge here is to identify ways of allowing this natural adaptation while maintaining partnership and accountability. The sections below discuss how this might be done.

### 5.1.1. ENGAGING MEMBER STATES

It is very important to ensure that the Strategy and its associated actions are validated and controlled in a transparent manner, with responsibility for where it should lie in the hands of democratically accountable Ministers. It is however equally important that the Strategy should not be divisive for the EU, creating splits among MS between the 'ins' and the 'outs'.

Overall control of the EU Strategy should therefore be placed firmly in the Council of Ministers, bringing together all MS, to ensure that it remains an asset to the European process and not a distraction. However, to ensure that the Council can



operate effectively and to maintain consistent awareness and information flows about the Strategy, the Commission will have to continue to be involved. This will be through a number of channels, but in particular through the convening of a High-Level Group for the EUSBSR. This group will be drawn from all MS and will advise the Commission, at its request, of the progress of the Strategy and the Action Plan. In particular, the Commission may informally consult this group when changes to the detail of the Action Plan are proposed.

### 5.1.2. ASSOCIATING NON-MEMBER STATES

The approach set out here is clearly a European strategy focused on the MS and territory of the EU. However, it is absolutely clear that the Baltic Sea is not EU property and the region extends beyond the Union to include, at the least, Belarus and Russia and also, in certain contexts, parts of Norway and the Ukraine.

The Strategy will require input from these non-MS, especially Russia, if the goals are to be achieved. This is most evident in the environmental field but applies to all sectors. In order to respect the status of all participants and clarify channels of communication, it has been agreed that Russia will be associated primarily, but not exclusively, through the ND. This allows Russia to be fully informed of the progress of the Strategy and Action Plan, without being obliged to take a position on it. There will be a time when it will be necessary to address specific issues that have been identified as requiring co-operation from third countries to achieve success, and it will then be required to take the dispositions of the Strategy and Action Plan as starting points rather than conclusions.

### 5.1.3. INVOLVEMENT OF STAKEHOLDERS

Stakeholders – defined as those partners who have specific interests and involvement in the implementation of the Strategy – are by definition essential to its success. The strength of civil society and the community in the BSR has been demonstrated by the remarkable commitment of stakeholders to participate in the preparation of the Strategy. The Commission considers it a very high priority to maintain this commitment and is therefore proposing concrete means of ensuring the active involvement of stakeholders and partners in the implementation phase.

The widest level of involvement proposed is the Annual Forum, inspired by the Stakeholder Conferences held during the consultation phase. These events allowed groups from different levels and domains to come together, identify and seek to resolve issues of common concern. The multi-disciplinary nature of the Stakeholder Conferences proved to be a considerable strength and will be maintained in the Annual Forum. It will be an opportunity to report on progress, to identify and resolve weaknesses in implementation and to prepare for new challenges in the region.

The Commission is also proposing an innovative approach to the implementation of the actions identified via the Strategy and included in the Action Plan. Fifteen Priority Areas have been identified, covering topics such as 'to reduce the use and impact of hazardous substances' or 'to improve internal and external transport links' and each area has one, sometimes two, administrations acting as Priority Area Coordinator. This decentralisation will clarify the responsibility for stimulating and facilitating actions, reporting on progress and identifying delays and difficulties. As this is a novel approach, the precise activities of a Priority Area Coordinator cannot be too closely defined in advance. But the Commission stands ready to support the administrations in question and ensure that there is a network to share experience about the most successful approaches.

Finally, it is important to reiterate that merely identifying tasks is not enough to ensure results. Each task must also have an assigned leader who is responsible for its implementation. This is why the Priority Area Coordinators, together with the Commission, have identified lead organisations for each of the flagship projects selected as key to the implementation of the Strategy. Again, the role and function of these lead organisations will vary depending on the nature of the project, but in general they will be expected to ensure that all participating organisations are fully committed to the project, assist in identifying sources of funding and report to the Priority Area Coordinator on the progress of implementation.

# 6. WHAT ARE THE NEXT STEPS?

Looking ahead, this section outlines the next steps in the implementation process of the EU Strategy for the Baltic Sea Region.

# 6. WHAT ARE THE NEXT STEPS?

## 6.1. Agreement on the overall strategic approach

The European Council, in its meeting on 29 and 30 October 2009, adopted the EUSBSR and called on all relevant actors to act speedily and ensure full implementation of the Strategy.

## 6.2. Agreement on the specific strategic objectives

The General Affairs Council meeting on 26 October 2009 adopted detailed conclusions on the EUSBSR. These endorsed the approach presented by the Commission in its Communication of 10 June 2009 and invited the Commission:

(a) to play a leading role in strategic co-ordination of the key delivery stages of the Strategy, in partnership with the MS and in accordance with the subsidiarity principle,
(b) to review the Strategy and update it as appropriate on a regular basis, and seek endorsement from the Council on the amendments made,
(c) to take the Strategy into account in relevant policy initiatives and programme planning,
(d) to actively facilitate, on the basis of the usual EU procedures, the implementation of the agreed actions and the co-ordination of existing EU funds and instruments, and to co-operate closely with relevant financial institutions necessary for the realisation and funding of the Strategy,
(e) to report on the implementation of the agreed actions and the evaluation of results, and make necessary updates of the Action Plan, as well as inform the Council on a regular basis of the progress made,
(f) to ensure the involvement of stakeholders concerned from all levels in the region, for example, through an annual forum with the aim of helping the Commission in its tasks above,
(g) to set up a high-level group of officials from EU MS in order to assist the Commission in the task of facilitating the implementation of the Strategy. The high-level group should be consulted about amendments of the Strategy and the Action Plan.
(h) to disseminate to all MS information, best practices and lessons learned, on the basis of experiences of implementing the EUSBSR, in view of the forthcoming EU Strategy for the Danube region and possible other future macro-regional strategies.

The Commission's response is clearly positive but detailed actions will depend on the availability of resources for this initiative.



# 6.3. Agreement on the method of implementing the Strategy

The Council Conclusions above give clear guidelines to the Commission. Of course the detailed approach will be for the Commission to decide, but it is clear that the approach chosen will continue to emphasise subsidiarity, consultation, partnership and a consensus-driven style.

A – perhaps the – key link in the mechanism to transform the words of this Strategy into action on the ground is the establishment of a network of Priority Area Coordinators – administrations at national or regional level that agree to act as facilitators, encouragers and reporters for the 15 Priority Areas of the Strategy. These coordinators will work with the lead organisations identified for each flagship project to ensure that actions are launched without delay and proceed smoothly. A very important part of the work of the coordinators will be to provide a system of early warning for the Commission and other stakeholders, so that any specific project or action that is in difficulties can be addressed with a view to resolving the problems as rapidly as possible.

# 6.4. Timetable and milestones

A very broad but integrated approach like the EUSBSR requires regular flows of information to ensure an integrated and holistic approach. The Commission, with the agreement of the MS in the Council, has therefore proposed to establish a system of annual reports and an annual forum. There will also be an early review for 2011.

### 6.4.1. ANNUAL REPORTS

The annual reports will be compiled by the Commission on the basis of reports from the Priority Area Coordinators and other partners. They will be extensive, with every flagship project in the Action Plan featured, but concise. In particular, the absence of specific financial instruments eliminates the need for detailed financial reporting. The timing of the annual report is still to be determined but it will likely appear in the second half of each year to allow for the incorporation of relevant material from the Annual Reports of the Structural Funds Operational programmes. The Commission will seek the advice of the High-Level Group on the format and content of the annual reports.

### 6.4.2. ANNUAL FORUM

In the light of the success of the Stakeholder Conferences held in preparation for the Strategy, the Commission will organise an Annual Forum to be held in the region around the middle of each year. The function of the forum will be twofold: to inform stakeholders of the progress of the Strategy and to create a direct channel of consultation among the stakeholders and between the wider partnership and the Commission.

### 6.4.3. REPORT TO COUNCIL JUNE 2011

The Council Conclusions quoted above call on the Commission to report to Council no later than 2011. This report will obviously be based on the Annual Reports, as well as on more qualitative inputs from both the Commission and the stakeholders designed to show not only what is happening but how the scope and impact of the Strategy can be better focused on the needs of the region.

# 7. ANNEXES

# 7.1. Additional data

Table 3: Sectoral employment, labour productivity and GVA

| | Agriculture | Industry | Construction | Trade | Finances | Public administration |
|---|---|---|---|---|---|---|
| | | | Growth of employment, 2000-05 | | | |
| BSR | – 2.4 | – 1.3 | – 2.0 | 0.2 | 3.0 | 1.1 |
| BSR_E | – 2.4 | – 0.9 | – 1.5 | 0.2 | 4.2 | 0.6 |
| BSR_W | – 2.3 | – 1.8 | – 2.4 | 0.2 | 2.4 | 1.4 |
| EU-27 | – 3.9 | – 1.1 | 1.3 | 1.0 | 3.3 | 2.2 |
| CEECs | – 5.6 | – 0.6 | 1.2 | 0.4 | 4.4 | 0.9 |
| EU-15 | – 1.8 | – 1.3 | 1.3 | 1.2 | 3.2 | 2.4 |
| | | | Growth of labour productivity, 2000-05 | | | |
| BSR | 3.7 | 3.8 | 0.3 | 2.9 | – 0.9 | – 0.4 |
| BSR_E | 5.6 | 5.6 | 1.1 | 4.2 | – 0.1 | 1.7 |
| BSR_W | 2.7 | 3.9 | 0.4 | 2.5 | – 0.7 | – 0.9 |
| EU-27 | 4.1 | 2.3 | – 0.1 | 1.2 | – 0.8 | – 0.7 |
| CEECs | 10.3 | 5.5 | 0.2 | 4.6 | 0.0 | 1.3 |
| EU-15 | 1.4 | 2.3 | – 0.1 | 0.9 | – 0.7 | – 0.9 |
| | | | Growth of GVA, 2000-05 | | | |
| BSR | 1.2 | 2.5 | – 1.6 | 3.1 | 2.0 | 0.7 |
| BSR_E | 3.0 | 4.7 | – 0.4 | 4.4 | 4.0 | 2.4 |
| BSR_W | 0.4 | 2.1 | – 2.0 | 2.7 | 1.7 | 0.5 |
| EU-27 | 0.1 | 1.2 | 1.3 | 2.3 | 2.5 | 1.5 |
| CEECs | 4.1 | 4.9 | 1.4 | 4.9 | 4.4 | 2.3 |
| EU-15 | – 0.5 | 0.9 | 1.2 | 2.1 | 2.4 | 1.5 |
| | | | Share of total employment | | | |
| BSR | 9.5 | 19.2 | 6.6 | 23.3 | 11.0 | 30.3 |
| BSR_E | 16.3 | 22.8 | 6.5 | 22.8 | 7.6 | 24.0 |
| BSR_W | 3.1 | 15.8 | 6.7 | 23.9 | 14.1 | 36.4 |
| EU-27 | 6.1 | 19.8 | 7.7 | 24.4 | 12.0 | 29.5 |
| CEECs | 15.9 | 25.0 | 7.0 | 22.5 | 6.9 | 22.7 |
| EU-15 | 3.7 | 18.5 | 7.9 | 24.9 | 13.2 | 31.1 |
| | | | Level of productivity, EU-27 = 100 | | | |
| BSR | 57.4 | 102.3 | 78.8 | 88.6 | 77.1 | 83.0 |
| BSR_E | 28.1 | 33.0 | 39.0 | 44.4 | 32.7 | 32.1 |
| BSR_W | 205.0 | 197.3 | 115.5 | 128.7 | 100.0 | 114.9 |
| EU-27 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| CEECs | 29.6 | 30.6 | 34.2 | 39.0 | 34.7 | 32.0 |
| EU-15 | 174.7 | 123.1 | 114.3 | 113.6 | 108.4 | 112.2 |
| | | | Share of total GVA | | | |
| BSR | 2.0 | 24.2 | 4.9 | 21.9 | 23.4 | 23.7 |
| BSR_E | 4.5 | 24.2 | 6.2 | 28.1 | 18.1 | 18.9 |
| BSR_W | 1.5 | 24.2 | 4.6 | 20.5 | 24.6 | 24.7 |
| EU-27 | 1.9 | 20.2 | 6.0 | 21.4 | 27.5 | 23.0 |
| CEECs | 4.9 | 26.1 | 6.2 | 25.7 | 18.3 | 18.9 |
| EU-15 | 1.7 | 19.8 | 6.0 | 21.2 | 28.1 | 23.2 |

Source: Eurostat, DG REGIO calculations

# 7.2. Report on the consultation of stakeholders by the Commission

## EUSBSR

*Report on the public consultation*

## CONSULTATION PROCESS

The EUSBSR is based on a series of consultations.

> Consultation of MS, regional and local authorities and stakeholders (intergovernmental and non-governmental bodies, experts and representatives from the private sector) in the BSR (through many meetings, two conferences, four roundtables and official position papers presented to the Commission).
> Consultation of the public through the Internet. This consultation was launched on the Internet on 3 November 2008 and closed on 31 December 2008. This public consultation was supported by a scoping paper prepared by the European Commission and presenting the main issues and main questions.
> Consultation of 20 Directorates-General of the European Commission and of the EIB which all contributed in their field of expertise.

## MAIN RESULTS

The main results are as follows.

*Process*

> In total 109 authorities, institutions or individuals responded to the consultation and presented their views. Of these, eight were MS (every MS presented a position paper), three non-MS (Belarus, Norway, Russia), 31 were regional and local authorities, 48 were intergovernmental and non-governmental bodies, 19 were representatives from the private sector – of which two were experts/researchers, and three were individuals.
> The expectations of the MS and stakeholders are very high.

*Governance*

> There was also an overall agreement that there are merits in having the European institutions, including the European Commission, involved both in the design and implementation of a strategy for the BSR. One of the reasons is that the existing intergovernmental and non-governmental bodies do not have the authority needed to ensure actions are implemented in practice.
> In addition, the general view is that no new institution should be created at the level of the BSR, but that the existing ones should be somehow involved in the decision-making process as well as in the implementation process.
> Many stakeholders indicated that the decisions taken at the level of the BSR should be binding and that instruments to do so should be created.
> There is an understanding that there will be no new regulations or additional funding from the EU, although this would be desirable for several stakeholders.

*Priorities*

> There is an overall agreement that the four objectives identified by the European Commission (to make the BSR an environmentally sustainable place; to make the BSR a prosperous place; to make the BSR an accessible and attractive place; and to make the BSR a safe and secure place) are, indeed, the main ones.
> Regarding the objective 'to make the BSR and environmentally sustainable place', the main priorities are the reduction of nutrient inputs to the sea to acceptable levels, the preservation of natural zones and biodiversity, the reduction of the use and impact of hazardous substances, the limitation of the risk of oil spill pollution, the reduction of the pollution from the ships, and the mitigation/adaptation to climate change.
> Regarding the objective 'to make the BSR a prosperous place', the main priorities are the better implementation of the single market, the fostering of innovation, the promotion of entrepreneurship, the integration of the labour market (including education issues),



the reinforcement of relations with Russia (including the improvement of customs procedures), the sustainability of fishing, and the good use of agriculture and forestry.

> Regarding the objective 'to make the BSR an accessible and attractive place', the main priorities are the end of the energy isolation of the Baltic States, the improvement of the functioning of the energy market, the improvement of internal and external transport links, and tourism.

> Regarding the objective 'to make the BSR a safe and secure place', the main priorities are the cross-border law enforcement activities, the maritime surveillance and safety activities, the maritime accident response, the preparedness and response to storms, and the response to major health threats.

## CONCLUSION

The information and positions from the consultation process have been analysed by the European Commission and in general were taken on board in the design of the EUSBSR.

# Maps, figures and tables

## Maps



## Figures



## Tables

# List of Abbreviations

| | |
|---|---|
| AC | Arctic Council |
| AIS | Automatic Identification System |
| B7 | Baltic Islands Network |
| BASREC | Baltic Sea Region Energy Co-operation |
| BASTUN | Baltic Sea Trade Union Network |
| BDF | Baltic Development Forum |
| BEAC | Barents Euro Arctic Council |
| BONUS | Baltic Organisations Network for Funding Science |
| BSAP | Baltic Sea Action Plan |
| BSPAs | Baltic Sea Protected Areas |
| BSR | Baltic Sea Region |
| BSRAC | Regional Advisory Council for the Baltic Sea |
| BSSSC | Baltic Sea States Subregional Co-operation |
| CAP | common agriculture policy |
| CBS | Council of Baltic States |
| CBSS | Council of the Baltic Sea States |
| CCB | Coalition Clean Baltic |
| CCS | Carbon Capture and Storage |
| CF | Cohesion Fund |
| CFP | common fisheries policy |
| CHP | Combined Heat and Power |
| DH | District Heating |
| EAFRD | European Agriculture Fund for Rural Development |
| EBRD | European Bank for Reconstruction and Development |
| ECHA | European Chemicals Agency |
| EEA | European Economic Area |
| EFF | European Fisheries Fund |
| EIB | European Investment Bank |
| EIF | European Investment Fund |
| EIS | European Innovation Scoreboard |
| ENPI CBC | European Neighbourhood and Partnership Instrument Cross-Border Co-operation Programs |
| EPO | European Patent Office |
| ERA-NET | European Research Area Network |
| ERDF | European Regional Development Fund |
| ESF | European Social Fund |
| EUROSUR | European Border Surveillance System |
| EUSBSR | EU Strategy for the Baltic Sea Region |
| GDP | gross domestic product |
| GVA | gross value added |
| HEI | Higher Education Institutions |
| HELCOM | Helsinki Commission |
| ICT | Information and Communication Technology |
| ICZM | Integrated Coastal Zone Management |
| IMO | International Maritime Organisation |
| IMP | Integrated Maritime Policy |
| IPR | Intellectual Property Rights |
| IUU | Illegal Unreported and Unregulated |
| LNG | Liquified Natural Gas |
| MoS | Motorways of the Sea |
| MS | Member States |
| NB8 | Nordic-Baltic Co-operation |
| NCM | Nordic Council of Ministers |
| ND | Northern Dimension |
| NDEP | Northern Dimension on Environmental Partnership |
| NDPHS | Northern Dimension Partnership in Public Health and Social Wellbeing |
| NGO | non-governmental organisation |
| NIB | Nordic Investment Bank |
| NMS | New Member States |
| NORIA | Nordic Research and Innovation Area |
| NPP | Nuclear Power Plant |
| NUTS | nomenclature of territorial units for statistics |
| PPP | Purchasing power standards |
| PSSA | Particularly Sensitive Sea Area |
| R&D | Research and Development |
| RD | Rural Development |
| RTD | Research, Technology and Development |
| SECA | $SO_x$ Emission Control Area |
| SME | small and medium-sized enterprises |
| SSS | Short Sea Shipping |
| SWOT | Strengths and weaknesses, opportunities and threats |
| TACs | total allowable catch |
| TEN-E | Trans-European Networks for Energy |
| TEN-T | Trans-European Transport Network |
| UBC | Union of Baltic Cities |
| VASAB | Vision and Strategies around the Baltic Sea 2010 |
| VTS | Vessel Traffic Services |
| WGCB | Working Group on Customs Co-operation and Border Crossing Aspects |
| WWF | Worldwide Fund for Nature |

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