STATE OF THE REGION REPORTTM

2012

The Top of Europe Bracing Itself for Difficult Times: Baltic Sea Region-Collaboration to Sustain Growth







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sustainable growth · innovation · competitiveness

Key messages

- The Baltic Sea Region's solid economic performance in 2011 has been a reward for its strong response to the 2008/2009 global crisis. Both exports and domestic demand contributed to growth.
- A few months into 2012, the data suggest significantly more difficult times ahead; risks are squarely focused on the downside. The Baltic Sea Region's deep linkages with the rest of Europe tie its performance to the path the European economy will take.
- The crisis has led to a step-change in the structural evolution of the global economy. The Baltic Sea Region has lost export market shares but solid foreign direct investment suggests that this is a reflection of firms choosing to internationalise differently, not the result of lost competitiveness.
- Country-specific differences within the Region are significant, and have grown during the recovery. While there are signs of solid catch-up between the Region's less and more advanced economies, policy challenges within these groups differ widely.
- Competitiveness fundamentals are broadly in line with prosperity levels, and parts of the Region continue to be global leaders in competitiveness. Priorities in upgrading competitiveness differ from country to country and are related to both individual policy areas and the integration of activities across them. Regional collaboration is an important tool for specific competitiveness challenges.
- The EU Baltic Sea Region Strategy has significantly enhanced co-ordination across existing organisations, networks, projects, and financing tools. This has been achieved be 'repurposing' the existing structure of institutions and policies that were mostly developed in a different context. If the ambition is to accomplish more, more fundamental changes in this institutional architecture are needed.
- Transportation infrastructure and green growth are two topics of specific importance for the Baltic Sea Region and its future competitiveness. In both areas, regional collaboration, given the nature of the Region, is critical for making full use of existing opportunities.

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Sponsors' foreword

Europe needs sustainable economic growth, investments, and higher competitiveness in order to exit the present economic crisis. Cross-border (infrastructure) projects are high on the agenda in Europe in order to kick-start the economy, and the Baltic Sea Region has its role to play in this regard. The EU Strategy for the Baltic Sea Region could provide an interesting, novel framework and it needs to be fully used.

Decision-makers need facts, transparent data, and economic analysis to decide on the projects of common interest that also have the highest return on investment. The State of the Region Report is indeed a very useful instrument for most decisionmakers on regional development and regional projects, including those responsible for implementing the EU Strategy for the Baltic Sea Region. We therefore again this year welcome the analysis of Dr. Christian Ketels and his colleagues. The region's competitiveness and public-private partnerships in upgrading the performance of the region should be at the heart of most initiatives.

Transport and logistics are crucial for the region's competitiveness and it is very timely to

address this subject in the report, not least when the report is released at the Baltic Development Forum Summit in Copenhagen. The Summit focuses on infrastructure projects where the future Fehmarn Belt fixed link between Denmark and Germany stands out as the biggest regional project at the moment.

Green Growth – another special topic in this year's report – is also very essential when the European economy needs to be kick-started. In particular, projects related to energy efficiency are highly relevant since they quickly affect the economy and the job situation.

All in all, there are many good reasons for decision-makers who are interested in regional economic development to study this year's State of the Region Report carefully.

As convincing as Christian Ketels's analysis is, it must be stated that the views of the report do not necessary reflect the views of the sponsors.

On behalf of the sponsors, Baltic Development Forum, Nordic Investment Bank, and European Investment Bank, I wish wish you a good read and fruitful discussions!

Copenhagen

June 2012

Haves Bragk

Hans Brask Director Baltic Development Forum

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Executive Summary

The 2012 State of the Region Report, the ninth in this series of annual evaluations of competitiveness and co-operation across the Baltic Sea Region, tracks the Region's emergence out of the crisis during 2011 and assesses its position as the outlook has become increasingly more fragile during the first months of 2012.

Part A of the Report tracks different indicators of competitiveness in the Region, much as in previous Reports. The Report includes the latest economic and competitiveness data that has become available since the last State of the Region Report was launched in the fall of 2011. There are a number of boxes discussing selected topics, like the Region's position in the Chinese market, and the lessons from country-specific studies on Estonia, Latvia, and Sweden. Part B focuses on collaboration across the Region, tracking the activities of key cross-regional institutions and networks. It also discusses the progress of the EU Baltic Sea Region strategy process, commenting on the recent EU Communication on the Strategy and the broader lessons learned after three years of active work. Part C looks in more depth at two specific issues important for the Region's competitiveness trajectory: in the first part, Olli-Pekka Hilmola (Lappeenranta University of Technology) provides some overall perspectives on transportation infrastructure investments in the Region, using the Rail Baltica project as a specific example. In the second part, Ryan Weber and Patrick Galera-Lindblom (NordRegio) explore the concept of Green Growth and how the Baltic Sea Region is positioned to take advantage of this new policy direction, looking at three aspects of bioeconomy as an example.

Competitiveness in the Baltic Sea Region

2011 was a good year overall for the economies of the Baltic Sea Region. The recovery was generally solid, and in many dimensions better than what had been expected. Exports are part of the reason, but domestic factors played a positive role, too. Higher employment rates and a more stable fiscal outlook supported private demand. In its wake, public cutbacks could be less severe and had fewer negative repercussions than in other parts of Europe. However, 2011 was also a year in which the differences across the Region were markedly felt, not just between the more developed economies in the Northwest and the less developed ones in the Southeast.

2012 has started out as a more difficult year, with future developments more uncertain than in most periods in the past. The European crisis lingers on, creating the potential of a renewed slow-down in key markets for exporters from the Region. One challenge is the potential for further severe financial market disruptions driven by developments in Greece and other euro zone countries. The other challenge is getting to a coordinated policy response across Europe: finding the right combination between putting fiscal policies on a sustainable path and shoring up demand during an economic slowdown is the difficult task European policy makers still have to solve. In the Baltic Sea Region, the mood has shifted from pride about being in a better position than the rest of Europe due to the policy choices made in the past to deep concerns about the impact a weakened European economy will have on countries across the Region.

In the medium to long term, structural changes in the global economy are going to dominate. The key question is how these changes will affect the relationship between underlying patterns of competitiveness and the economic outcomes that they lead to. There are few signs that the Baltic Sea Region is losing overall competitiveness in any absolute sense. Competitiveness across the Region remains solid, and a few countries from the Region are among the global leaders in many relevant dimensions. Country-specific challenges exist in the still emerging economies in the southeast of the Region, as well as in the more advanced northwest. For all countries, the question is whether the weight of global economic activity shifting to Asia and other emerging economies, as well as the transformation of value chains and firm behaviour will reduce the benefits the Region will get from any given level of competitiveness.

While much of the action will have to take place at the EU or national level, the cross-border regional dimension of competitiveness is critical for finding the right answers in some policy areas, and could be helpful in others. Deeper market integration would make a significant contribution to all countries across the Baltic Sea Region, and can only be achieved by working together. Such market integration is more complex to achieve than politicians sometimes realise: it is driven by a combination of geographical proximity, cultural proximity, rules and regulations, physical infrastructure, and the legacy of existing market structures. Acknowledging these complexities and the need for an integrated set of actions would be a critical step forward. Apart from market integration, there are many areas in which policy learning and support can help countries in the Region make better choices and adopt better practices domestically. While the EU provides a broad platform as well, the Baltic Sea Region is a context in which such efforts are more likely to have a meaningful impact.

Collaboration across the Baltic Sea Region

The Baltic Sea Region continues to benefit from an exceptionally strong network of projects and institutions that span the Region. Many other regions, including other macroregions in Europe, are struggling to build such structures. As has been commented in the past, a weakness of the current structure is its overly public-sectordriven nature. There are examples of private sector engagement, but they remain relatively few. So far, the agenda setting within the Region remains in the hands of government agencies. Broader engagement will be critical to achieve impact and sustainability.

The EU Baltic Sea Region strategy has been a powerful tool to better align the activities of the many regional institutions and networks. With a number of years of experience, a better sense of the opportunities, but also the limitations of such a macroregional strategy, are now starting to emerge. The identification of a common set of priorities and objectives in a bottom-up process across the Region has clearly been very useful. It aligned expectations, actions, and created a lot of motivation. The implementation of the Strategy has been more of a mixed bag, because of the context in which it was done. Instead of developing new institutions and funding instruments, the decision was made to 'repurpose' existing structures. The outcome has been that projects already under way benefited from the overall context that the Strategy provided, but new projects defined in response to the Strategy have seemingly had a harder time getting traction.

Much of this has to do with finding the right structure for collaboration between the European Commission, national governments, and the many government agencies and governments of sub-national regions that drive implementation. A fair share of the cross-border institutions in the Region has been created in a political and economic context much different from today. These structures work well when the task is to negotiate between governments or create linkages. They are not always well-suited to reach out to a broader academic and business community, and to move from creating linkages to enabling common action.

The European Commission has, in its recent Communication on the EU Baltic Sea Region Strategy, made a number of very useful proposals on how to further strengthen the Strategy and its implementation. Behind this, however, is a larger choice that only the leaders in the Baltic Sea Region itself can make: what is our ambition with the Strategy? Do we want a tool that better co-ordinates the use of EU resources and the activities of networks and institutions active across the Region? Instead, do we want a common strategy to upgrade competitiveness in the Baltic Sea Region, mobilising the full range of EU, national, and sub-national policy instruments available? Both are worthy goals, but achieving them requires very different levels of change in the existing institutional architecture of collaboration across the Region.

The barriers inherent in the current structure seem largely a matter of the overall co-ordination and allocation of responsibilities between the EU, the national governments, and the agencies and sub-national regions driving much of the implementation. Clarifying these structures and the relations of the EU Baltic Sea Region Strategy to other EU strategies like Europe 2020, Vision 2020, and the Smart Specialisation Strategy at the operational level would be an important step forward. Importantly, this is not just a task for the European Commission. Ultimately, it is the countries in the Baltic Sea Region that have to decide whether and how the institutional architecture for collaboration should be changed.

Building the Foundations of Future Competitiveness

Physical transportation infrastructure and the concept of green growth both have an important influence on the future competitiveness of the Baltic Sea Region. Given its geographic position and profile, accessibility through all modes of transportation is critical for the entire Region. Funding is less of a deciding factor for such infrastructure investments than might be expected. The real issue is institutional: how to co-ordinate action and make decisions across the wide range of partners affected by transportation infrastructure projects. Because the Region is home to many relatively small countries, national or bilateral collaboration – already difficult enough – is not sufficient. Many of the benefits of large transportation infrastructure projects accrue to the wider Region. Collaboration structures across the Region need to reflect these benefits to make sure that sufficient investments are made.

Green growth is a key topic in the debate about the future path of competitiveness policy in the Baltic Sea Region and beyond. How should the different dimensions of especially microeconomic competitiveness be developed to position the Region well in a different global energy and environmental context? The necessary actions cut across many policy areas and, especially in the Baltic Sea Region, political boundaries. Fundamentally, the heterogeneous conditions across the Baltic Sea Region provide ample opportunities for mutually beneficial collaboration. Creating the right type of collaboration structures across the Region that can enable joint action under such conditions will be a critical factor shaping the Baltic Sea Region's competitiveness in the years to come.



Introduction

When analysts looked at the future of the global economy prior to the 2008 crisis, most of them failed to see what was coming. When they were asked to predict the economic trends following the downturn, most of them have been closer to the mark: the path from crisis to recovery continues to be long and difficult. Historically, crises that are driven by severe imbalances in the financial system are often prolonged. While in the past countries could export their way out of a crisis, the unprecedented level of global linkages now spreads the effects of downturns more widely and makes export-led recovery more difficult.

In the US, traditionally a locomotive of global growth, unemployment remains high. Demand-led growth of the pre-crisis type is clearly no longer an option. Although the business cycle situation is now more balanced, there are widespread concerns about the erosion of the supply-side competitiveness of the US economy: in a recent survey of Harvard Business School alumni, close to half expected US competitiveness to fall over the near to mediumfuture, and about two thirds expected US firms to be less capable of maintaining even current levels of benefits and worker compensation. Emerging economies are still pushing ahead, but while their contribution to global growth has increased substantially, they cannot compensate for the weaknesses in the advanced economies. In China, rising wages and falling current account balances are finally visible alongside moderate growth. In Brazil and Russia, a combination of high natural resource rents and severe weaknesses in competitiveness hamper any sustained development of the economic base.

What about Europe? While the collapse of the euro zone has been averted for now, some EU member countries remain in a very difficult economic situation. Others, primarily Germany, are for now plowing ahead with solid growth. The reduction of Greek debt, but more importantly, the creation of liquidity in the financial system by the European Central Bank, had provided some stability until now. With the political situation in Greece in the balance, and Spain's banking system becoming a concern of much larger proportions, uncertainty is now firmly back on the agenda. In addition to that, it is becoming ever more obvious that there are serious disagreements across Europe and key European institutions about the mix between fiscal consolidation and growth support to get Europe back on a sustainable path.

Politically, the Baltic Sea Region stands to some degree on the sidelines, significantly affected by the events elsewhere, especially in Brussels and Frankfurt, but with limited leeway in affecting these decisions. Economically, the Region continues to be in better shape than the rest of Europe. However, while 2011 was a good year by many metrics for the economies of the Region, the weaker figures coming in for 2012 are a clear reminder that the Region is not shielded from what is happening elsewhere in Europe. If there were any sense of superiority, it is now being replaced by a focus on the significant challenges that individual countries in the Region are facing. Regional collaboration continues, with the EU Baltic Sea Region Strategy providing a highly useful organizing framework and a role model for the rest of Europe. However, despite the many improvements that the Strategy continues to drive,

it is not amounting to a step-change in regional integration.

The 2012 State of the Region Report, the ninth in this series, continues to provide a datarich foundation for decision-makers across the Region to ponder these questions. Its purpose is to provide facts, a framework for analysis, and commentary that suggests implications, not to provide answers or recommendations. The Report is also a window into the Region, for companies or investors contemplating doing business with the Region and for politicians and government officials that want to learn from its experience. It aims to provide a balanced perspective on strengths and weaknesses of the "Top of Europe", not to be a marketing tool.

What is the Baltic Sea Region? For our analysis, we define the Baltic Sea Region to include the Baltic countries (Estonia, Latvia, and Lithuania), the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden), northern Germany (Hansestadt Hamburg, Mecklenburg-Vorpommern, and Schleswig-Holstein), northern Poland (Pomorskie, Warminsko-Mazurskie, and Zachodnio-Pomorskie), and most parts of Russia's Northwestern Federal District (excluding the four regions least connected to the Baltic Sea Region: the Republic of Komi, Arkhangelskaya oblast, Nenetsky AO, and Vologodskaya oblast).

This Region is home to 57.3 million people, another 60,000 less than last year. The Nordic countries—together representing 43.5% of the Region's inhabitants—have continued to gain population at a rate of 50,000 annually, but the decrease elsewhere in the Region, especially in Russia, where the population continues to drop by 0.5% per year, was even greater. The Region's labour force reached 27.7 million employees in 2011, about 250,000 more than the year prior. As the economies of the Region came out of the crisis, a larger share of the working-age population returned to the workforce. The total size of the workforce remains about 2% or 600,000 below the peak reached in 2008. Over the last decade, however, the rise of the labour force has been an important factor, with 1.3 m more people in the labour force than in 2001.

The Region created in 2011 an annual GDP (PPP adjusted) of around €1,350 billion (\$1,826 billion). This new record for the Region is similar to about 11% of the EU-27 economy, or roughly the size of the Italian economy. The Nordic countries account for 60.5% of the total (3% less when including only the Norwegian mainland economy). Northern Germany and Northwestern Russia account for roughly 13.5% each. The Baltics contribute close to 6.5% and Northern Poland the remaining 5.3%. Overall, the crisis has shifted the Region's economic balance further towards the Nordic countries.

There is no scientific way to precisely determine the boundaries of the Baltic Sea Region. We proceed conservatively, including only those regions that appear closely integrated with other regions around the Baltic Sea. Iceland and Norway are included because they have close relations to many countries around the Baltic Sea and are eager to participate in regional co-operation. Regions in Germany, Poland, and Russia not bordering the Baltic Sea are not included, because their economic ties with the Baltic Sea Region are limited. This makes the definition used here more restrictive than the ones used by other institutions.

The geographic coverage of the Council of Baltic Sea States most closely matches the Region as defined here, but has as an intergovernmental agency no official limitation on the relevant sub-regions of Germany, Poland, and Russia. The EU Baltic Sea Region Strategy focuses on the eight EU member countries in the Region, but includes partners from adjacent countries in specific activities. The Nordic countries have a long-standing collaboration with an institutional base in the Nordic Council and the Nordic Council of Ministers. In a number of areas, the three Baltic countries, which have created some similar structures amongst themselves, have become an official part of this collaboration. To the north, the Barents Euro-Arctic Council (BEAC) includes a platform to facilitate collaboration betweenNorway, Sweden, Finland, and NW Russia. The Arctic Council's scope stretches even further, including Denmark (Greenland) and Iceland from the Baltic Sea Region, as well as Canada and the US, in addition to the countries represented in the BEAC.

For comparisons, the Report looks – depending on data availability – at the EU-15 (more developed Western European), the EU-8 (Central European member countries in catch up mode, excluding Bulgaria and Romania because of their still significantly different economic conditions), regions within Europe (Iberian Peninsula [Spain, Portugal], British Isles [UK, Ireland]), NAFTA [US, Canada, and Mexico], Oceania [Australia, New Zealand], the Asian Tigers [Hong Kong, Singapore, Taiwan, and South Korea], and occasionally the OECD. Where possible, the Danube Region – stretching from southern Germany to the Black Sea – has been included in the comparisons as well.

The structure of the State of the Region Report

Broadly following the structure developed since 2004, **section A** provides a discussion of the recent trends in competitiveness across the Baltic Sea Region. The first part looks at the current economic climate in the Region, an important influence on the policy environment for long-term competitiveness upgrading. The second part provides competitiveness diagnostics, covering data on economic outcomes, intermediate indicators, and competitiveness fundamentals.

Section B gives an update on the profile of collaboration across the Baltic Sea Region. The first part tracks the activities of the main regional organisations and projects over the last year. The second part looks at the way the EU Baltic Sea Region Strategy has been implemented in specific projects, but also takes a general look at the broader activities of countries and sub-national regions across the Baltic Sea Region.

Section C looks at two issues that will have an important influence on the future competitiveness of the Baltic Sea Region economy. The first part, with Olli-Pekka Hilmola from Lappeenranta University of Technology as the lead author, discusses the broader landscape of transport infrastructure investments across the Baltic Sea Region. He takes a particular look at the Rail Baltica project as an example of the opportunities and challenges of collaboration across multiple countries. The second part, written by Ryan Weber, Patrick-GaleraLindblom and Rasmus Ole Rasmussenfrom NordRegio, looks at Green Growth. With the reorientation of economies towards sustainability providing both significant opportunities and challenges to companies, their piece looks at the concept of Green Growth, the policy efforts related to this concept across the Region, and the implications for the way forward.

The Report closes with some overall reflections on the current state of the Baltic Sea Region. Economically, the Region remains in solid shape, certainly if compared with many of its peers elsewhere in Europe. However, there is no reason for exuberance, and none of that is visible looking at the behaviour of investors and consumers in the Region. With the strong growth in 2011 being, at least partly, a cyclical reaction to the deep downturn experienced before, the signs for 2012 are much more ambiguous. The economic environment in the rest of Europe, still by far the most important influence on the Region, is difficult. The risk of a serious escalation of the crisis affecting the euro zone remains significant. Politically, the EU Baltic Sea Region strategy has laid a solid foundation for co-ordinated action across the Region. On many dimensions, the Strategy has been more effective than one could have expected, but after three years of experience with the implementation of the Strategy, the limitations of the Strategy's current institutional architecture are also becoming apparent. Now, the choice is between addressing these architectural weaknesses or aligning the ambitions with what the current set-up can deliver.



Section A: Economic performance and competitiveness in the Baltic Sea Region

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This section of the State of the Region Report describes the economic performance the Baltic Sea Region has currently achieved and the Region's underlying competitiveness, which drives these outcomes. It provides data and analysis on the current economic climate in the Region and on indicators of competitiveness – from economic outcomes to competitiveness fundamentals.

The State of the Region Report annually tracks the competitiveness of the Baltic Sea Region, measuring both outcomes like prosperity and trade, and fundamental drivers, like skills and the dynamism of clusters. This simple structure is based on an underlying conceptual framework that defines competitiveness as "the expected level of output per working-age individual given the overall quality of a country as a place to do business".¹ This definition captures two important aspects:

First, what ultimately matters to policy makers is the standard of living that a large share of the population can enjoy. Any meaningful definition of competitiveness thus has to be related to prosperity. The academic research shows that this outcome is closely related to the productivity of an economy. Productivity here captures both the productivity of employed workers in their job and the productivity of the economic system to mobilise the available working age population. The State of the Region Report tracks prosperity as the final outcome, and labour productivity and labour mobilisation as its key components.

Second, what policy makers ultimately can and should do to raise prosperity is to improve those underlying fundamentals, or 'root causes', of prosperity. Trying to tinker with the symptoms, rather than the root causes, usually affects how wealth is distributed but does improve how much wealth is created in society. The academic research shows that many factors matter as root causes, and that these factors often interact in complex ways. This is why more recent analyses have emphasised the need to look at the specific situation a location is in when giving policy advice. Generic recommendations, whether based on findings about what matters most 'on average', or on ideological views alone, fail to help locations identify their specific action priorities. The State of the Region Report tracks a wide range of issues that have been shown to impact economic outcomes in a fundamental way, from the quality of institutions and macroeconomic policies to the strength of factor input conditions, the dynamism of market competition, and the presence of clusters.

This broad and inclusive notion of competitiveness is well aligned with the use of the term by policy makers across the Baltic Sea Region. Looking outside of the Region, however, the dis-Mercedes Delgado, Christian Ketels, Michael Porter, Scott Stern (2012), The Determinants of National Competitiveness, mimeo. cussions about the definition of competitiveness continue. The key points of contention are which of the root causes matter most, and how one can most effectively upgrade them.

In Europe, the debate is centred on the best approach for returning fiscal policy back onto a sustainable track. Some, especially in Germany but also in other parts of the Baltic Sea Region, argue for fiscal consolidation as the main tool. Others, both in southern Europe and in the US, argue for a policy mix that combines a more drawn out reduction of public deficits with a stronger focus on supporting demand, and thus growth in the economy. While the debate between these two positions is heated, both agree on one aspect: once macroeconomic stability has been achieved, future growth will then depend on other factors, essentially the ability to upgrade the microeconomic (also called 'structural' or 'supply side') dimensions of competitiveness.

The discussion about how to do just that – upgrade microeconomic competitiveness - is a global one and has not yet converged on a new consensus. Elements of what could become such a new consensus are becoming visible: first, there is a growing scepticism of the appropriateness of general rules applicable across all locations. What strong institutions and sound macroeconomic policies generally look like is not different across countries, but for microeconomic competitiveness, the sheer number of factors and policies requires the identification of those that are critical in a specific situation, not only what is beneficial in general. That's why a country-specific analysis of what some call 'binding constraints'² and others call 'a national strategy'³ is critical.

Second, microeconomic upgrading requires a look at sector-specific circumstances and, most likely, sector-specific policies. Traditional industrial policies, which aim to create winners (but often ended up backing losers) through intervention have clearly failed, but upgrading productivity and innovative capacity requires an engagement with companies at the level at which they compete and operate. That's why analysis and policy

Ricardo Hausmann, Dani Rodrik and Andres Velasco (2005), Growth Diagnostics, Working Paper, Boston: Harvard University – Kennedy School of Government.
 Michael Porter in, for example, Michael Porter, Jorge Ramirez-Vallejo, Adolofo Chiri, and Christian Ketels (2011), Peru: A Strategy for Sustaining Growth and Prosperity,

engagement at the industry⁴ or cluster⁵level is important.

Third, upgrading competitiveness is not just a matter of analytically identifying the right actions. It is also a matter of aligning action plans with the (limited) capacity of governments to drive forward change. There is also the matter of the political will to do so, even when some interest groups would benefit from the status quo.⁶ This is why there is an increasing realisation that the institutional structures that drive capacity and political decision-making are of fundamental importance.

Building on the notion of competitiveness prevalent in the Baltic Sea Region, this section of the Report covers three different dimensions of the performance of the Region, following the methodology developed over the last few years.

The first part provides an overview of the current economic climate. The Baltic Sea Region came out of the 2008 crisis stronger than many of its peers, leveraging generally better fundamentals and a robust policy response. Last year's Report discussed the impact of the anaemic recovery in the US and the prolonged public debt crisis in Europe. Both of these continue to matter, but have stabilised for the moment. More visible in the short-term is the natural slowdown of economies across the Baltic Sea Region that had, last year, benefited from the strong recovery post-crisis. This temporary drag is now increasingly gone.

The second part tracks the competitiveness of the Baltic Sea Region. It discusses data on economic outcomes, components of economic prosperity as well as other indicators of economic activity, particularly of trade, investment, and innovation. These data are then put into the context of an assessment of the competitiveness fundamentals across the Region. The outcome indicators for 2011 continue to track the strong recovery that started in 2010, after the previous collapse. During this period, the Baltic Sea Region has done considerably better than most parts of Western Europe, especially the southern parts of the EU. The early indications from 2012 data suggest that, compared to last year's positive performance, the risks are now squarely on the downside. The competitiveness indicators for 2011 show overall a slightly negative trend, but there is significant variation across countries and dimensions of competitiveness. However, the real worry is clearly not competiveness; it is a possible deterioration in the external environment that could hurt the Region in the short but possibly also the long term.

The third part summarises key observations from the analysis, and develops implications for policy. Competitiveness upgrading remains key; neither export-driven strategies nor domestic demand management are likely to be able to sustain growth in the future, and regional collaboration continues to be an important tool to create the necessary capacity and willingness for action.

Governments, and Institutions", in: On Competition, Chapter 7.

⁴ Hausmann, R. and Klinger, B. (2006), Structural Transformation and Patterns of Comparative

Advantage in the Product Space, Working Paper No. 128.Cambridge, MA: Harvard University Center for International Development and Justin Y. Lin (2011), *New Structural Economics: A Framework for Rethinking Development, Policy,* Research Working Papers, no. 5197, Washington D.C., World Bank.

⁵ Michael Porter (2000), "Clusters and Competition: New Agendas for Companies,

⁶ Daron Acemoglu, James Robinson (2012), Why Nations Fail.

1. Current economic climate in the Region

The State of the Region Report does not aim to provide an in-depth assessment of the current economic climate in the Region. Many government agencies, research institutions, and banks are focused on this task. Instead, the Report discusses medium-term data related to the level of economic performance that the Baltic Sea Region countries will be able to achieve over time. Shortterm economic fluctuations provide only limited information on these trends. Instead, they create the context in which many policy decisions with longer-term implications are being made. The Baltic Sea Region had, until 2008, grown at rates close to the global average, significantly above the level of the North American and the Western European economies. After a dramatic drop of economic activity during the crisis, the Region recovered in 2010 more quickly than peer regions. In 2011, growth continued to be strong, only somewhat lower than previously expected. Towards the end of the year, however, the pace of growth has slowed, and the 2012 outlook is significantly more negative in many parts of the Region.



The quite significant slowdown over the last few months has been driven by two main factors: first, the temporary growth spurt following the deep recession in 2008/2009 has come to an end. This was not a surprise; as capacity utilisation approached normal levels and expansionary policies were withdrawn, growth rates were bound to move back to their longer-term equilibrium levels. The second factor was the unexpectedly severe slowdown of the European economy. Growth in southern Europe has stalled, as severe public spending cuts have been announced to address the prevalent fiscal imbalances. Bank lending has been slow, despite the significant amount of liquidity that the ECB made available. This has also affected countries like the UK, where the economy registered negative growth in the last two quarters. Germany still benefits from stronger domestic demand and solid exports, but then saw growth slow down significantly at the end of 2011, too.

Inflation picked up again in 2011, reversing the downward trend that had existed since the 2008/2009 recession. The solid growth during the year has been one important driver; rising energy prices have been another. Central Banks are facing a dilemma in how to react: on the one hand, it is easier to battle inflation in its early stages, and the huge amount of liquidity pushed into the financial system could create significant



Economic Growth Baltic Sea Region countries

inflationary pressure in the future. On the other hand, growth is slowing down and unemployment levels remain relatively high. The power of monetary policy as an instrument to stimulate the economy might be muted under current circumstances anyways, as central bank rates are already historically low and banks have been seen using additional liquidity to safeguard their capital positions with a view towards new regulatory standards rather than boost lending.

Within the Baltic Sea Region, the Baltic countries, led by Estonia, came roaring back to the top of the regional growth league. Compared to the predictions made when the last State of the Region Report was published last fall, Estonia and Latvia, but also Iceland, were the most positive surprises in terms of the growth rates registered for 2011. Sweden and Finland saw their growth rates experience around a -1% decrease - the most during 2011. Denmark and Germany also saw a growth slowdown; Denmark's growth in real GDP was only slightly above 1%, the slowest in the Baltic Sea Region. For 2012, all countries in the Region are projected to experience a slowdown in growth. Estonia, Sweden, and Lithuania are expected to slow down the most, between 4% and 5.3% points. In Germany and all Nordic countries except Norway, growth could drop below 1% annually.

Growth in the Baltic Sea Region continues to be driven more by domestic demand than elsewhere in Europe and the OECD. Domestic consumption and investment have been stronger than expected, while exports have been weaker. In the EU-27, the pattern has been the opposite: slow growth of domestic activity but higher growth in trade. This reflects the solid growth that the Baltic Sea Region has been able to deliver, while the larger EU has struggled with the effects of concretionary fiscal policies and uncertainties surrounding sovereign debt and the common currency. In the OECD, the overall pattern is similar to the EU-27, but growth in private consumption and investment are generally higher. The US has seen private demand stabilise, although the end of the US stimulus package has had a dampening effect on public demand. The outlook for 2012 indicates difficult times ahead, especially in Europe. Domestic demand will generally remain subdued, and there is little support to be expected from export markets.

Across the Region, private consumption in 2011 increased the most in Russia, the Baltic countries, and Norway, but was essentially flat in Finland. Denmark was the only country in the Region where public consumption growth outpaced private consumption growth, if only

	Baltic Sea Region		EU-27		OECD	
	2011	2012e	2011	2012e	2011	2012e
Consumption						
Private	2.7%	1.8%	0.3 %	-0.5 %	1.4%	1.1%
Public	1.1%	1.1%	0.1 %	-0.4 %	-0.1%	-0.1%
Investment	6.4%	2.8%	1.3 %	-0.7%	3.0%	2.2%
Trade						
Export	5.2%	1.5%	6.6 %	0.9%	5.9%	1.8%
Import	8.0%	3.3%	3.6 %	0.4 %	5.0%	2.0%
Source: EIU (2012)					State of the R	egion -Report 2012

Growth Rates of GDP Components Selected Regions

by a small margin. The Baltic countries have experienced the strongest increase in private consumption growth, following a period of declining private demand since 2008. Gross fixed investment grew at a solid rate in most parts of the Region; in the Baltics even by around 20%. Outliers were Finland, where investment rates stayed flat, and Norway, where they increased by only 2%. For 2012, the outlook is for investment growth to converge on positive, but small, rates across the Region. Export growth slowed across the Region, with Estonia and Finland being the only exceptions. In Sweden and Iceland, real exports were flat. For 2012, export growth is expected to be low across the entire Region, even in the Baltic countries, which have had two years of annual export growth rates between 10% (Latvia) and 20% (Estonia). Import growth is, for most countries in the Region, following similar trends as exports. Russia is a significant outlier, with import growth still much higher than export growth. The gap was 20% points in 2011, but is expected to shrink to 7% points in 2012.

Against the backdrop of these changes in economic dynamics across the Region, economic sentiment, i.e. the perceptions that companies and consumers have about the state of the economy, has fluctuated significantly. When the last State of the Region Report was published in the fall of 2011, views had already started to cool off significantly after the strong recovery in the wake of the 2008/2009 crisis. This negative trend continued until early in 2012, driven by worries about the sovereign debt crisis and the impact it might have. As the European Central Bank provided large amounts of liquidity to the European banking system, and the likelihood of a Greek debt deal was increasing, the trend started to slow and, eventually, more positive views started to emerge. For most of the past period, sentiments in the Baltic Sea Region have broadly tracked those in the EU-27. Since early 2012, however, perceptions of economic conditions in the Baltic Sea Region have started to diverge more significantly from the EU-27 average: in the Baltic Sea Region, the GDP-weighted average has moved upwards and crossed the 100 mark, the dividing line between positive and negative growth expectations. In the EU-27, sentiments have in the meantime stabilised, but remain at 93.2 - in recessionary territory.

Across the Baltic Sea Region, national trends in economic sentiment reflect increasing uncertainty about the near- to medium-term outlook. Up to the 2008/2009 crisis, economic sentiment across countries in the Region developed in close



Evolution of Economic Sentiment

lockstep. After the crisis, the direction of change remained similar, but the differences in level increased. Since late 2011, countries in the Region have seen sentiment change upwards and downwards repeatedly, with less of a common pattern among them. The most recent data from April shows Sweden again up as the country in the Region with the most positive opinions about the economic climate. While Sweden has traditionally been in this position, perceptions about the outlook had dropped dramatically in late 2011 and have only very recently recovered. Germany, Estonia, and Latvia are the other countries in the Region that currently report positive economic sentiment significantly above the 100 mark. For Germany, this reflects stabilisation at a level much lower than in 2011. For Latvia, it is a reflection of having been the only country in the Region to avoid a sharp cooling off of sentiments in the second half of last year. Lithuania, Finland, and Denmark report close to neutral economic sentiments, while Poland remains farther behind after a drop in April. Denmark and, to a slightly lesser degree Finland, have sentiment pick up after reaching low points around the end of 2011. However, these positive trends have not been stable, signalling significant uncertainty about the path ahead.

An important factor driving near-term economic trends is capacity utilisation. Higher

degrees of utilisation signal higher levels of economic activity, and can lead to both inflationary pressure and investment demand. Across the business cycle, utilisation rates tend to vary between 70% and 85%, with significantly lower levels in developing economies. Over the last two years, capacity utilisation in the Baltic Sea Region has generally tracked the EU-27 average. Only recently has the Region done somewhat better, in line with the more positive evolution in economic sentiment reported above.

Across the Region, differences in capacity utilisation generally track overall levels of economic activity. Germany, Sweden, and Estonia have recently seen manufacturing activity cool off, while it continued to grow in the other parts of the Region. In Denmark and Finland, capacity utilisation remains between 2% and 2.5% points below the historical average. Lithuania, followed by Latvia, is close to the highest levels of capacity utilisation it has registered historically.

Unemployment and public debt, two of the key casualties of the global crisis, remain critical concerns. On unemployment, the Baltic Sea Region saw average rates drop in 2011, while they continued to rise in the rest of Europe. With its significant follow-on effects on private consumption and public expenditures, unemployment is a critical lever affecting the different economic trajectories across Europe. In 2011, unemploy-



Capacity Utilisation in Manufacturing

ment in the Baltic Sea Region even dropped slightly below the level in the NAFTA countries, a region that has traditionally had much lower levels of unemployment. While the 2011 trends in the Baltic Sea Region were in line with the predictions made last year, the outlook for 2012 has been significantly downgraded: unemployment rates in the Region are expected to stabilise at current levels rather than drop further, which was previously projected. For the EU-15, unemployment in 2011 was already higher than expected, and this negative trend is likely to continue. NAFTA, a region where the reduction in unemployment did not meet expectations in



2011, is in the meantime projected to do better this year. The European crisis is taking its toll on the EU-15 and the Baltic Sea Region.

On government debt, the Baltic Sea Region continues to outperform its peers. Debt levels have increased by 1% of GDP, compared to 2.5% points for the NAFTA region, and close to 3% points in the EU. According to current projections, debt levels will grow at a slower rate in 2012 for both the Baltic Sea Region and the EU-15, before starting to drop in 2013. For the NAFTA region, where there is no fiscal compact similar to the one that has been agreed upon in Europe, debt levels are in the meantime expected to grow further.

For individual Baltic Sea Region countries, the picture is again quite different. In the Nordic countries, Sweden's unemployment dropped, but not by quite as much as expected. For 2012 and 2013, there is now an expectation that unemployment rates may increase again. Public debt levels are at around 33% of GDP, which is very low compared to its peers. The 2012 spring budget projected further significant reductions in public debt over coming years, despite some increase in spending in 2012. In Finland, labour market developments were similar to Sweden. Finnish public debt levels are significantly higher, expected to stabilise at 49%. The Finnish government recently proposed budget cuts intended to achieve steady reductions in the public deficit over the next few years. This would lead public debt levels to fall as a share of GDP after 2016. Denmark and Norway continue to report much lower unemployment rates than their Nordic neighbours. In Denmark, low growth is expected to lead to a slight increase in unemployment. In 2011, the level of public debt rose above 45% of GDP and is expected to increase further in the next two years. The 2012 budget, recently announced by the Danish government with the ambition to 'kick start the economy', increased the planned deficit to more than 13bn Euro. Norwegian unemployment rates are the lowest in the Region, at 3.25%. Public finances remain solid on the back of robust income from oil and gas exports. Iceland has achieved relative stability, but both the roughly 8% unemployment and, to a greater extent, the public debt of 130% of GDP are the scars of the 2008/2009 collapse.

In the Baltic's, strong export-led growth drove improvements in the labour market and in fiscal balances. In Estonia, unemployment dropped by 4.5% points in 2011. Expected to now stabilise at 12%, the unemployment rate is lower than in the other Baltic countries. Estonian public debt dropped to 5.8% of GDP, as the government was one of only three in Europe to run a public surplus in 2011. The slowdown in the European economy is now projected to push the 2012 budget into deficit of about 0.5% of GDP. In Latvia, unemployment is still high, at around 15%, but has been falling and is expected to drop further. The public deficit is stabilising at 45% of GDP as the IMF/EU emergency support package is coming to a close. Stronger than expected growth helped the 2011 deficit to drop to 3.5% of GDP, compared to 8.2% in 2010. The 2012 budget adopted by the Latvian parliament in mid-December 2011 forecasts the deficit falling further, to less than 2.5% of GDP. Lithuania's labour market performance has been similar to Latvia's. The country's deficit dropped to 7.5% of GDP in 2011, compared to 7.2% in 2010. Public debt is currently at 38% of GDP. The 2012 budget targets a deficit of 3% of GDP, meeting the euro-zone target.

In Germany, strong growth has driven a solid reduction of unemployment rates, but job creation is expected to slow down in 2012. Debt levels are stable, at slightly above 80%. Strong tax returns pushed the German 2011 deficit to 1% of GDP, and plans exist to meet the constitutional debt limit introduced in 2009 by 2014, two years ahead of plan. In Poland, unemployment is still high, at above 11%. There was a slight increase in 2011, but better development is forecasted for 2012 and 2013. Public debt is slowly falling, and is now at a rate of slightly above 50% of GDP. The budget deficit in the recently adopted 2012 budget is just below the 3% target rate set by the EU, compared to 5.6% in 2011. Russian unemployment continues to drop towards pre-crisis levels of around 6.5%. Oil and gas revenues have been used to bring down public debt to less than 10% of GDP. High oil and gas prices are now expected to drive the budget deficit to close to zero in 2012.

Overall, the Baltic Sea Region remains in a significantly better position than the rest of Europe. The Top of Europe remains on top in more

ways than geography. Despite this, the direction the Region will go from here is becoming much less clear. The most likely scenario for the near future is a period of slower growth, with economic activity stabilising at current levels. But the outlook has become much more uncertain: if the rest of the European economy remains stuck in a reinforcing circle of low growth and fiscal retrenchment, the Baltic Sea Region will be deeply affected.

In such an uncertain environment, differences in national circumstances will loom large. Norway and Russia remain special cases, benefiting from the windfall of high oil and gas prices, but also struggling to keep their dependence on natural resources exports. Germany's strong but also relatively export-dependent economy provides the country with an opportunity to finally tackle its high debt levels. This will require a difficult balance, especially at times when demands are high from other parts of Europe to create more 'drag' through German demand. Poland has done better than most of its neighbours during the crisis, but now the difficult realities of high unemployment and a significant budget deficit are firmly back on the agenda. Sweden did the hard fiscal policy work already a decade ago; its weak spot is a labour market where structural rigidities are now combining with weakening demand. Denmark has a more structurally effective labour market, but budgetary conditions are significantly worse. Finland is facing challenges in both dimensions. The Baltic countries have experienced a recovery that was stronger than many observers had expected, but with external demand slowing down, the next steps will again be difficult. While the budget consolidation of the last few years was harsh and painful, the course was well defined. Now there is a need to develop strategies that can support sustainable growth, keeping fiscal policy balanced while continuously upgrading the competitiveness fundamentals underpinning growth and prosperity.

2. Foundations of sustainable prosperity: Competitiveness of the Baltic Sea Region

The State of the Region Report aims to provide policy makers in the Region with data and analysis that support fact-driven policies designed to raise the level of prosperity that the Region can sustain in the medium term. It also aims to provide investors and analysts looking at the Region with key metrics to understand its economic potential.

Effective policies to increase levels of sustainable prosperity need to be based on a robust framework that draws on the available knowledge of the drivers of medium-term prosperity levels. The competitiveness framework applied here defines competitiveness as the expected output per working age inhabitant that a location can sustain based on its quality as a place to do business. Its focus on explaining a broad measure of national productivity, covering both the productivity of employees (labour productivity) and the productivity of the economic system to mobilise the available labour force (labour mobilisation),



Competitiveness Fundamentals

is driven by the consensus view in the academic literature that differences in productivity are the critical driver of long-term differences in prosperity levels across locations.

The notion of "quality as a place to do business" in the definition of competitiveness integrates a broad literature on the drivers of productivity differences across locations. There is wide consensus that many things matter, even when researchers differ in the relative weight to give to individual factors. The approach used here distinguishes between macroeconomic and microeconomic competitiveness. Macroeconomic factors, covering both the institutional context and macroeconomic policies, set the context in which economic activity takes place. The policies that affect these factors are set by central government or other central agencies, even when implementation is sometimes more localised. Microeconomic factors, covering the quality of the business environment, the presence of clusters, and the sophistication of companies, set the levels of labour productivity and mobilisation in a much more direct way. They are influenced by policies and decisions made by a wide range of government agencies at all levels, companies, and other institutions, like universities.

Effective policies to increase levels of sustainable prosperity also need to be based on a data-driven analysis of the specific factors that currently restrict the level of competitiveness that a location can reach. There is an increasing view in the academic literature that the impact of a policy depends on the current quality of many other competitiveness factors in this location. Only a comprehensive diagnostic of location-

Prosperity Outcomes	 Measures of the standard of living and of their direct components Objectives and ultimate success indicators of economic policy
Intermediate Indicators	 Measures of economic activity that tends to reflect competitiveness Indicators of specific economic dynamics, not ultimate objectives
Competitiveness Fundamentals	 Measures of underlying drivers of intermediate indicators and prosperity outcomes Policy levers for government action

The Three Layers of Competitiveness Assessment

specific conditions can thus identify the most urgent policy actions. This view has, over the last few years, been increasingly reflected in policy practice. The EU 2020 process, for example, asks EU member countries specifically to identify key bottlenecks keeping back productivity based on such a diagnostic.

As in previous years, the State of the Region Report provides data and analysis at three levels to support the competitiveness diagnostics for the Baltic Sea Region: prosperity outcomes give a sense of how competitiveness is reflected in the standard of living, the ultimate objective of economic policy. Intermediate indicators are analytical indicators that track the translation of competitiveness through economic activity and structural patterns into ultimate prosperity outcomes. Competitiveness fundamentals are the root causes of the higher level outcomes and indicators observed, and are the level at which economic policy can most effectively intervene. Because the relationships between individual fundamentals, indicators, and outcomes are multifaceted and complex, an integrated view of all three layers provides more robust insights than overreliance on one individual dimension of data.

The final step of the competitiveness diagnostics is the explicit analysis of linkages across the three different levels to identify action priorities. Such an analysis needs to connect specific prosperity outcomes to unique patterns of intermediate economic activity and particular dimensions of competitiveness fundamentals. While a full-scale diagnostics along these lines is beyond the scope of this Report, the data and analysis provided enable policy makers across the Region to get a better understanding of the action priorities for improving competitiveness through collaborative action at the Baltic Sea Region level. It also gives investors and analysts much deeper insights into the opportunities that exist in the Region.

2.1 Prosperity outcomes

The central measure of prosperity we use is gross domestic product (GDP) per capita, adjusted by purchasing power parity. Additional insights into the drivers of prosperity can be derived from a decomposition that separates the impact of labour productivity and labour mobilisation on overall GDP per capita.

Prosperity

The Baltic Sea Region remains one of the more prosperous regions in Europe. Its GDP per Capita (PPP adjusted) level reaches 98% of the EU-27 average, compared to just above 90% in 2005 and 85% in 2000. The dynamics in comparison to the EU-15, the more prosperous economies in the European Union, are roughly similar. Heterogeneity across the Region remains high: the Nordic countries and Germany are among the most prosperous countries in Europe and globally. The Baltic countries, Poland, and Russia register at the lower range of the EU, with Latvia as the poorest country in the EU, apart from Bulgaria and Romania, reaching a prosperity level similar to Chile, Malaysia, and Mexico.

In 2011, the Region fully recouped the GDP per Capita losses it had incurred during the 2009 crisis. The EU-27 and the NAFTA region have both still not caught up to their pre-crisis prosperity highs. The heterogeneity of prosperity change across regions within Europe during 2011 has been significant: the Baltic Sea Region registered the strongest growth rate at 3.4%, followed by the Central and Eastern European EU-8 at 3.3%, the Danube Region (economically dominated by Southern Germany but stretching deep into the Balkans) at 2.6%, and the Core Euro Zone (the euro zone excluding Portugal, Spain, Ireland, and Greece) at 2.3%. In relative terms, the EU-8 has now moved further beyond its pre-crisis prosperity level than the Baltic Sea Region. This is driven by a less severe recession in 2009; growth since then has been consistently smaller than in the Baltic Sea Region. The EU-15 registered modest positive growth at 1.1%, with large differences between the North and Centre, and the worst performers, in the South. The worst performers in Europe where the British Isles (+0.1%), the Iberian Peninsula (-0.1%) and the broader group of PIGS (Portugal, Ireland, Greece, Spain) countries (-0.9%), both adding to the losses of around 4% the previous year. Outside of Europe, ASEAN

Accounting for oil and gas in Norwegian and Russian GDP measures

Overall GDP measures the total output of an economy, and in this respect provides an important indicator of both total productivity (labour productivity multiplied by labour mobilisation) and prosperity. Large oil and gas sectors, however, complicate the interpretation of this data. From a production/productivity perspective, the sale of oil and gas represents the exchange of an asset, i.e. natural resources, into capital, not the production of anything that did not exist before. This exchange is not free; it is capital intensive. However, it employs only a very small share of the labour force, meaning that measures of average labour productivity are substantially affected by the presence of a large natural resource extracting sector. From an income/prosperity perspective, many countries, including Norway and Russia, put a share of their natural resource export revenues into a fund. This reflects the nature of natural resources exports as an asset swap, rather than the generation of wealth. It also means that this part of GDP is not available for current consumption. Both of these factors suggest that one has to be careful in the treatment of oil and

and the Asian tigers saw growth fell back to 4.0% and 3.9%, respectively, after last year's dramatic growth push. Growth in the NAFTA and Ocegas activities in GDP when making cross-country comparisons.

For this Report, we have decided to adjust the total GDP (PPP adjusted) for both Norway and Russia to have more comparable data on prosperity and labour productivity. In Norway, there is both data on the share of the oil and gas sector in GDP, and a distinction between the mainland economy and total economy. We used the mainland economy data, which accounts for about 80% of total GDP, and adjusted the data in the Conference Board's main Total Economy Database accordingly. For Russia, the adjustment is more difficult. Direct revenues from oil and gas were around 10% of GDP, but there has been an ongoing discussion of the possibility that the official numbers for the oil and gas share in GDP might be underestimating their true importance, because companies in the sector shift a lot of their profits to related service providers in other sectors. We adjusted the total GDP data in the Conference Board's main Total Economy Database by a conservative 15%. For both countries, we keep the adjustment fixed over time; growth rates reported are thus unaffected.

ania saw their growth slow down significantly as well, to 1.1% in North America and 0.6% in Oceania.



Prosperity over Time

The data for the Baltic Sea Region now indicate a return to the process of a significant effort to catch up to average EU level; this process has been visible over the last 15 years. The pace at which the prosperity gap has closed is, in fact, remarkably high relative to standard rates found in the literature. In the Nordics, a part of the Region that has a prosperity level above the EU-27 (and EU-15) level, the prosperity advantage relative to the rest of Europe has been increasing over time, but at a decreasing rate. This is consistent with the Nordics having fundamentals that allow it to support a higher level of prosperity, but not a permanently higher prosperity growth rate. The Baltics, a much smaller part of the overall Region, with prosperity levels significantly below the EU level, had been on a fast and accelerating catch up path leading up to the crisis, but that catch up trajectory has significantly slowed, but not come to a halt, over the last five years. This is consistent with a region on a traditional catch up path that overheated, but is not fundamentally broken. The rest of the Region, a heterogeneous mix of Northern Germany, Northern Poland, and Northwestern Russia, is somewhere between the other parts of the Region in terms of average prosperity levels. Its catch up rate has significantly increased over

European integration and catch up

With the European Union in one of the most challenging periods in its history, serious questions are being asked about the appropriateness of its broader economic policy structures. For macroeconomic policy, the imbalance between full integration of monetary policy within the euro zone and relatively limited effective co-ordination of fiscal policy has contributed to the current sovereign debt crisis in Europe.

The macroeconomic policy challenges have obscured the powerful positive effects that the European Union and its policies have had on microeconomic fundamentals. A recent World Bank study traced how the integration of Eastern and Central European countries in the EU has allowed a powerful catch up process to get under way. EU accession triggers a transformation in the rules and regulations affecting business, has a dramatic impact on economic policy making – even in many areas in which the EU is not setting the rules – and provides access to the significant programs and funding tools offered by the European institutions. the last 15 years. This was initially driven by Russia starting to move on a stable growth path in the mid-1990s, but in the last five years it has been pushed by both Poland and Germany. For the period since 2005, the faster growth in this part of the Baltic Sea Region has more than compensated for the slow-down in the Nordics and Baltics.

Within the Baltic Sea Region, Norway, Sweden, and Iceland continue to register the highest prosperity levels, followed by Denmark, Germany, and Finland. Poland leads the group of lower prosperity countries in the Region, followed by Estonia, Lithuania, and finally at similar levels Russia and Latvia. Prosperity dispersion across the Region remains significant. Nonetheless, the overall pattern of catch up continues to reduce prosperity differences. Before 2000, prosperity levels in the richest country in the Region, Norway, were more than five times as high as in the poorest country, Latvia. This ratio has constantly dropped and is now down to slightly more than three times. The 2009 crisis has slowed this process, but does not seem to have fundamentally changed its direction.

Interestingly, these dynamics are different from the rest of Europe. In the EU-27, the catch-up process started later, once Bulgaria and

In the macroeconomic area, the challenges to the European Union are stark. There are both short term issues in terms of stabilising those economies that are currently shrinking, and long term issues in terms of a more robust architecture for macroeconomic policy-making in Europe. Many of the relevant answers will have to be found jointly at the EU level. In the microeconomic area, the short term challenges are much less dramatic and much more related to what happens at the level of member countries. For the economies on a catch up path, the main issue is whether they are able to make the appropriate policy choices that help their economies leverage the opportunities that the common framework conditions EU membership will provide. For the more advanced economies, membership in the EU is important to prosperity, but is on its own unlikely to provide new growth dynamics.

Further reading: Indermit Gill, Martin Raiser (2012), *Golden Growth: Restoring the lustre of the European economic model,* World Bank: Washington.



Romania (now the least prosperous country in the EU) took more visible steps towards EU accession. After the crisis, however, this catch up process seems to have become derailed, at least for now. In the EU-15, a smaller and more heterogeneous group of countries, prosperity diversion is much smaller, but has been edging upwards over time. Austria, now the most prosperous EU member country on a per capita basis (excluding Luxembourg, for which GDP per capita numbers are distorted by the huge daily inflow from employees living in Germany and France) has double the prosperity of Portugal, up from an 80% advantage in the late 1990s.

In terms of the growth rate of GDP per capita, the Baltic countries, led by Estonia, returned in 2011 to the top of the regional rankings. They have seen a strong recovery following the deep crisis of 2009, but remain between 6% (Estonia) and 15% (Latvia) below the levels of prosperity reached before then. The next group, at around 4% current annual prosperity growth, included Russia and Poland. In both countries, growth rates have been roughly similar to the previous year, although their experiences with the crisis were dramatically different. Sweden, Finland, and Germany registered a slightly slower, but for these countries historically still high growth rate of 3% to 4%. For all three of them, this represented a clear slowdown to last year, when the rebound after the crisis had temporarily pushed up growth rates. Sweden and Germany have moved now beyond the pre-crisis levels of GDP per capita, Finland has not quite yet. Norway, Iceland, and Denmark followed, with prosperity growth rates between 1% and slightly above 2%. Denmark registered the lowest 2011 GDP per capita growth of all Baltic Sea Region countries. It dropped further from the already low levels of the previous year, and has now fallen behind a slowly recovering Icelandic economy. Denmark and Russia are the countries for which growth is the lowest, given what would be expected at their current levels of prosperity.

Last year's State of the Region Report discussed additional perspectives on inequality and life satisfaction that give further insights in the quality of life across the Baltic Sea Region. We reproduce the inequality data below; no new data has become available since last year. While economic activity, as measured by GDP per capita, is important, there are many non-income-related factors that matter as well. Overall, it turns out that, across the Baltic Sea Region, these other data sources confirm, rather than qualify, the relative ranking of countries based on GDP per capita. More prosperous countries in the Region also tend to have lower inequality and higher life satisfaction. If anything, the inclusion of these two measures suggests that the differences in the quality of life across the Baltic Sea Region are larger than a pure GDP analysis would suggest.



Inequality Across European Countries



Learning from inequality data – the case of Latvia

Data on inequality qualifies the impression that average GDP per capita data provides on the actual standard of living that large segments of the population in a country actually enjoy. Additionally, inequality is a diagnostic tool to better understand particular strengths and weaknesses in the competitiveness fundamentals of an economy. The drivers of inequality are not identical to the drivers of GDP per capita, and that is fundamentally why inequality data can provide additional information.

In the case of Latvia, the data on inequality played a significant role in the overall analysis of country competitiveness conducted for the country's first competitiveness report.¹ Latvia registers a high degree of inequality. This is in itself not remarkable, since inequality tends to fall in the process of economic development, and Latvia remains still far behind the prosperous European and Baltic Sea Region countries. What is remarkable is that Latvia registers high inequality even compared to other countries at a similar stage of economic development. This suggests that there are specific features in the underlying quality of Latvia as a place to do business that drive this outcome.

The next step in the analysis tries to identify possible root causes for the high level of inequality observed. The literature suggests many possible drivers of inequality. Inequality could reflect a more unequal distribution of abilities, and thus productivity. Inequality could also reflect an economic system that provides much more unequal rewards, either because it rewards differences in abilities much more dramatically, or because it rewards based on characteristic unrelated to ability, for example based on political power. Either (or both) of these areas could be critical in any particular location reporting high inequality.

For Latvia, a more in-depth assessment of these different possible drivers highlighted the need to tackle the large grey economy and the weaknesses in the education system. Both of these hold back average GDP per capita and lead to higher inequality. While the inequality data had been known before, the analysis added two new perspectives to the debate:

- Inequality is not only a social problem; it is also a symptom of underlying competitiveness weaknesses the country needs to address. This added to the conviction that the grey economy and education system reform have to be addressed as key priorities of competitiveness reform
- The competitiveness strategy for the Latvian economy needs to be broad based, i.e. not only focused on the export sector. Both for short term (demand) and long term (supply) reasons, upgrading efforts need to include also the lagging parts of the economy.

A stronger focus on tackling inequality as an economic and not just a social challenge will also help Latvia to better meet the ambitions for `inclusive growth' laid down in the Europe 2020 strategy.

Prosperity accounting

Prosperity can be mathematically decomposed into labour productivity and labour mobilisation. In this Report, we operationalise these concepts through GDP per hour worked (PPP adjusted) and hours worked per capita. The data on hours worked is not very reliable, especially for Russia and the Asian countries, but gives a directionally interesting perspective.

Compared to other regions, the Baltic Sea Region continues to do better on labour mobilisation than on labour productivity. Oceania remains the only peer region that outperforms the Baltic Sea Region on both dimensions; the EU-8 joined the Danube region in 2011 to perform worse on both. The EU-8 continues to lag significantly behind on labour productivity, whereas it virtually tracks the performance of the Baltic Sea Region on labour mobilisation. All other regions are strong in one, but weaker in the other dimension. The British Isles dropped behind the core euro zone in terms of average prosperity due to consistently weaker productivity growth over the last three years. The PIGS countries fell behind the Baltic Sea Region on the overall outcome measure; in relative terms they lost most ground on labour mobilisation. For the Baltic Sea Region, both labour productivity and mobilisation improved in 2011. Labour mobilisation is,

¹ The English version of the Latvia Competitiveness Report will soon be published. The Latvian version is available at http://www.sseriga.edu/download.php?file=/files/news/ konkuretspejas_novertejums_lv.pdf.



Prosperity Decomposition

Selected Cross-national Regions in 2011

Note: Working hours for Russia are estimated

Source: Groningen Growth and Development Centre and The Conference Board (2012), authors' calculations

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Prosperity Decomposition

Baltic Sea Region Countries in 2011

Note: Working hours for Russia are estimated

Source: Groningen Growth and Development Centre and The Conference Board (2012), authors' calculations

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however, still below pre-crisis levels, whereas labour productivity has moved beyond its earlier highs.

Within the Baltic Sea Region, Germany continues to report the most diverse performance across the two components of prosperity. It ranks second in the Region on productivity, although it performs worst in terms of labour mobilisation. The Nordic countries combine equally strong productivity with a much more solid labour mobilisation record. Iceland continues to stand out, having exceptional levels of labour mobilisation. Russia, Poland, and Latvia have low labour productivity, but relatively high labour mobilisation. Lithuania ranks relatively poorly in both dimensions. The main difference between the Baltic countries is labour mobilisation; in productivity, their performance is much more similar. Labour productivity across the Baltic Sea Region, measured by GDP (PPP adjusted) per hour worked, increased by 2.4% in 2011. Among the other regions included in the comparison, only the Asian tigers (2.9%) reached a higher level of productivity growth. The EU-8 and the Danube regions came closest, at 2.2% and 2.1%, but regions in the rest of Europe grew between 0.3% and 1.3%. Although volatility is high, the data suggest that the Baltic Sea Region could get back on a path of relatively high productivity growth compared to other regions.

Within the Baltic Sea Region, Norway continues to register the highest level of labour productivity, measured by GDP per hour worked. Its labour productivity growth has picked up in 2011, but has over the last decade been the lowest across all countries in the Region. Russia has taken the lead, with labour productivity growth accelerating. The strong Russian data could be the result of rising oil prices pushing up GDP; this is not captured in the static adjustment for oil and gas revenues this Report uses (see the box early in this section). Apart from Russia and Norway, Germany and Iceland registered an increase in labour productivity growth. In Iceland, the crisis first triggered a massive adjustment in the labour market, where average labour productivity initially even rose as many less productive activities

in services disappeared. Last year, productivity also started to drop. With the economy now stabilising, labour productivity is again growing, although labour mobilisation remains below previous years' levels. In Germany, labour productivity growth in 2011 has been surprisingly robust. When the crisis hit, the German economy reacted largely by accepting lower labour productivity and reducing working hours, keeping employment levels up. The recovery was bound to lead to strong labour productivity growth; it is a sign of strength that this solid level of labour productivity growth continued last year. In the Baltic countries, productivity growth declined to between 2.0% and 2.5%, as companies started to serve growing demand increasingly through more labour input. Poland's labour productivity growth fell by much less and remained over 3.0%. Sweden's productivity dynamics in 2011 tracked that of the Region's average, falling by about 1% point to slightly above 2%. Finland and Denmark registered the lowest productivity growth across the Region in 2011. For Denmark, this was the result of a drop in the growth rate by more than 2.5% points. Denmark has also had the second lowest average labour productivity growth in the Region, just slightly better than Norway. The Danish government had, in early 2012, announced the launch of a Productivity Commission to develop ideas





Productivity Level and Growth

for strengthening Danish productivity. The nine members of this Commission are largely academic experts, but also individuals with experience from companies and the public sector.

Labour mobilisation in the Baltic Sea Region, measured by annual hours worked per capita, grew slightly in 2011. The Region continues to rank second in hours worked per capita among the regions tracked, closely together with the EU-8 Central European countries. While the PIGS countries and the British Isles saw a further deterioration of labour mobilisation levels, all other regions covered in the analysis saw improvements or, in the case of the EU-15, stability. Following the standstill in 2010, there were signs that the labour growth machine was starting to sputter into action, even when the speed of job growth remained moderate compared to previous recoveries. Outside of Europe, the NAFTA region remains far below precrisis levels of labour mobilisation. Traditionally characterised by high labour mobilisation, the recovery has so far clearly been too fickle to generate jobs at the rate they were lost in 2008 and 2009.

Within the Baltic Sea Region, differences across countries in terms of labour mobilisation were very high prior to the crisis. They then dropped disproportionally in the countries with the highest labour mobilisation rates, and now seem to stabilise at these more similar levels. In 2011, the Baltic countries saw labour markets recover the most, with Estonia being the most dynamic performer by far. Sweden, Finland, and Germany reported solid growth, which was for Finland a significant improvement over the flat trend of the previous year. In Iceland and Denmark, the trend continued to be negative, even when the reduction of hours worked per capita was less than before. Sweden, Germany, and Poland registered new highs in labour mobilisation during 2011. Latvia is at 80% of its historic high; Iceland and Estonia around 85%, and Lithuania and Denmark around 90% of their respective maximum labour mobilisation level.

Labour mobilisation, as defined in this Report, is affected by a number of structural factors, from demographics to labour market conditions to the type of employment contracts most prevalent. Last year's report discussed in some more detail the differences across the Region in terms of demographics, labour participation rates across different groups, and the nature of employment contracts.

The most visible measure of labour market conditions is the overall unemployment rate. In the Baltics and Poland, unemployment is at between 10% and 15% – still much higher than in the rest of the Baltic Sea Region, despite the significant improvements the Baltics have experienced. Conversely, unemployment in Norway is below 4%. Relative to their traditional performance, Germany and Poland have seen the strongest improvements in the unemployment rate. In Germany, current unemployment is almost half of what it was in 2005, the year in which it reached at 11.2%, its highest level in the last decade. In Denmark and Sweden, unemployment is relatively high in comparison to historical values; here the highest unemployment was reached only in 2010, as the crisis showed its full impact. For 2012, all Nordic countries, with the exception of Norway, expect a deterioration of the labour market situation. In the rest of the Region, unemployment is expect to fall, albeit at a slower pace than before.



Labour Utilization over Time Selected Regions

Note: Russia data estimated at 2000 hours per employee and year Source: Groningen Growth and Development Centre and The Conference Board (2012), authors' calculations

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Labour Utilization over Time Baltic Sea Region Countries



Unemployment Rate Dynamics

Assessment

The Baltic Sea Region has continued its post-crisis recovery in 2011. Many companies in the Region had, in 2010, served the stabilising demand at home and abroad with a stable labour force, pushing up measures of labour productivity. In 2011, many of the one-time opportunities for increasing output were exhausted. Labour productivity growth fell back to more sustainable levels, while labour mobilisation began to increase. Compared to other regions, the robust development of labour mobilisation is one of the features distinguishing the Baltic Sea Region from its peers. The lacklustre performance of labour markets in the US and the further deterioration of labour markets in southern Europe are key symptoms of the overall weak recovery. Labour mobilisation is not only important because of its direct contribution to prosperity. It also has a major influence on private consumption and thus demand dynamics.

With the data now available, it at least seems possible that the catch up process in countries within the Baltic Sea Region has resumed. The deep crisis of 2008 in the Baltic countries had raised questions as to whether the fast catch up earlier had been an unsustainable growth path, with underlying competitiveness and prosperity having, in fact, not improved. It is still too early for a final assessment; the current recovery is to some degree clearly a natural reaction to the deep recession before. At least, the current data are also consistent with the more positive view: the speed of Baltic development was clearly unsustainably high in the run-up to the crisis, but the underlying dynamics of the catch up process are visible and are much more robust that in other parts of the European Union that are also lagging behind in terms of their economic development.

The crisis has increased the importance of country-specific developments relative to the overall trends across the Baltic Sea Region. This remains the case during the current recovery. Of the Nordics, Sweden registered very strong performance in 2011. Unemployment remains a weakness, and could worsen as the speed of the recovery wanes. Finland shares many of the same labour market problems, and has had weaker economic dynamism overall. Denmark struggles with low productivity growth, and its difficult cyclical situation has pushed its unemployment rate above its long term average. Norway's economy is on its own course, with limited dynamism, but high levels of employment and productivity. Iceland continues to adjust after the implosion of its financial system, with levels of prosperity and unemployment much higher than those experienced
by other countries that had similar crises during the global recession.

In the Baltics, 2011 was a year of robust recovery. Exports played an important role in driving the economy, while domestic demand remained low. The labour market made significant improvements, stabilising domestic demand. Despite these positive signs, the absolute level of unemployment remains high, and productivity growth is clearly below the level necessary to sustain the average growth rate of the last decade. Among the Baltic countries, Estonia accelerated the most during 2011, but now shows the clearest signs of slowing down. Latvia, which experienced the deepest crisis, remains behind, but may as a result of that deep fall also have some more time left on the current path of recovery.

Germany delivered a strong performance in 2011, largely driven by strong improvements in labour market conditions. This has helped to stimulate domestic demand, alongside the impressive export performance that German companies have achieved. In Poland, the only country in the Region that came through the crisis with growth intact, the recovery has been much more moderate. Prosperity and productivity growth continue on a stable path. Unemployment picked up slightly in 2011, but seems to have stabilised at a level that remains high, but is also much lower than what Poland has seen historically over the last decade. Russia, finally, has strongly recovered from the sharp slow-down in response to the global crisis. A key factor has been the high oil price in 2011, which hovered between \$100 and \$115 per barrel, compared to \$75 to \$90 the year before.

2.2 Intermediate indicators of economic activity

Prosperity is created when competitiveness fundamentals give rise to economic activities that ultimately result in wealth. This section includes an analysis of five groups of intermediate indicators of economic activity to gain insights into the underlying competitiveness of allocation. As in previous years, the Report looks at indicators of trade, domestic and foreign investment, and innovation. A new perspective is added through a discussion of macroeconomic imbalances and the structural composition of the Baltic Sea Region economy.

Trade

The Baltic Sea Region is dominated by small, open economies with relatively high levels of trade intensity (the ratio of exports and import values relative to GDP). Total trade reached 88% of GDP in 2011, roughly 10% points higher than during the crisis in 2009, but still slightly below the 89.5% mark reached in 2008.

The total value of exports from the Region in 2011 (including cross-border trade within the Region) reached close to \$1trn; measured in current US Dollars, it was up 17% in 2011. After an increase of 13% in 2010, and the massive -25% contraction in 2009, this brings the Region back to within 1.5% of its pre-crisis record in terms of annual exports. The current growth rate is within the range of annual growth rates: between the 15% and 20% registered during the last few years before the crisis. Goods exports continued to grow during 2011 at about twice the rate of services, just as in 2010. While the trends up to and during the 2009 global trade collapse had suggested that services were an increasing part of global trade, the relative share of services is now back to its pre-2005 level. The Baltic Sea Region continues to be somewhat more oriented towards services than global trade overall, where services account for less than 20%, compared to the 25% in Baltic Sea Region exports.

Despite the strong increase in exports, the Baltic Sea Region has, in 2011, continued to lose global market share. The speed of market share loss has, however, been significantly lower than in previous years, particularly during the crisis. The data so far suggest that the global trade collapse of 2009 led to a step change in the pattern of global trade flows. The quick resumption of trade after the crisis has led to total trade volumes growing beyond pre-crisis levels. However, new trade is not simply replacing trade between traditional trading partners lost during the crisis; new locations that have gained ground in 2009 and 2010 have defended their positions and gained proportionally.

In terms of individual countries in the Baltic Sea Region, the three Baltic countries registered the highest export growth at +38% (Estonia) and+33% (Latvia and Lithuania), followed by Russia at +29%. Most other countries in the



Region saw their exports grow by between 14% and 18%. Only Finland's export growth was +8% – significantly lower. In 2010, Finland was also the country in the Region with the lowest export growth rate. The country's exports would now be \$15.7bn higher if it had reached the average rate of export growth in the Region over the last two years. While many countries

in the Region have again reached their pre-crisis trade level (in current prices), Finland's trade is only at 82% of its 2007 level. Norway (93%) and Denmark (95%) are the other two countries still below their historic export records. The Baltic countries, conversely, exported in 2011 between 17% (Lithuania) and 27% (Estonia) more than in their best year before the crisis.



Over the last decade, the most developed economies in the Baltic Sea Region have all lost ground in international markets. Sweden, the largest exporter from the Region, gained position until 2004, but lost all market share gains experienced in the decade leading up to 2008. It lost more than 10% of its market share during the crisis, but seems now to have stabilised. Denmark reached its highest market share in 2003, and has since lost market share at a relatively stable rate. In 2010, however, its market share dropped by more than 10%. Norway's export position is significantly driven by the evolution of the oil price. It dropped early on in the decade, then increased in the run-up to the crisis, before falling back in 2009 (-12%) and 2010 before now stabilising. Germany, for which only the three northern most states are included in the aggregate figures for the Baltic Sea Region, has lost market share at a moderate pace since 2003, with one exception in 2007. During the 2009 crisis, Germany was one of the only countries in the Baltic Sea Region to keep its world export market share, but it has lost position since then. Finland gained market share only twice over the last decade, in 2001 and 2004. Since the start of the global crisis, Finland has lost more than 25% of its global export market share. Iceland's world export market share has fluctuated from year to year, with no sustained changes over time.

The Baltics, Poland, and Russia have gained world export market position over the last decade, but are still significantly smaller in terms of overall export values than their peers in the Baltic Sea Region. The Baltic countries have all gained market share in almost all years, with the exception of 2009 and, for Estonia, 2004 and 2010. Poland's market share gains were even more solid, but have come to a halt in the last two years. For Russia, which, like Norway, is largely affected by changes in the oil price as well as volume growth in oil production, world market shares increased by 8% or more in seven of the last ten years.

Baltic Sea Region Exports to China

The increasing role of the BRICS, especially of China, is widely discussed as a key symptom of the changing patterns in the global economy. China is not only an increasingly central competitor for locations anywhere in the world; it is also a major market. The ability to capture some of the market is often seen as critical to sustain growth and a solid position in the global market.

For the Baltic Sea Region, China has – as for many other locations in the world – quickly grown as a destination for exports. Over the last decade (2000 – 2010), the China's share of Baltic Sea Region exports doubled from 1.6% to 3.2%. While growth has been relatively steady, a major jump was in 2009, when China's share in BSR exports increased by 0.8%, presumably in response to the low growth in advanced OECD markets during the crisis. There is significant variation in the importance of China as an export market across countries in the Baltic Sea Region. Germany, Russia, and Finland all sell more than 5% of their exports to China; for both Germany and Finland, this resulted after a decade of rapid export growth to the country. For Sweden, China accounts for about 3% of exports, for Denmark and Norway, about 2%. For Latvia and Lithuania, less than 0.5% of all exports go to China. These figures are driven partly be the specialisation patterns of the different economies, but partly they are also a reflection of where companies from different countries operate in the value chains. Exports to China are most likely for final products, industrial goods, and natural resources.

In absolute terms, the value of exports to China has increased more than five times since 2000. This is impressive and makes China an import export partner. However, the 3.5% share of Baltic Sea Region exports must be seen relative to the nearly 20% of exports that originate from countries in the Region going to other parts of the Region, and 70% going other advanced European countries (including those located in the Region). Over the last decade, China has replaced some exports to parts of Europe outside of the Baltic Sea Region, but while there is clear potential to increase exports to China, other parts of Europe and the Region itself will remain as the dominant trading partners for the Baltic Sea Region.

Exports from the Baltic Sea Region to China have

grown, but how successful does that make exporters from the Region on Chinese markets? The data give an alarming answer: over the last decade, the market share of exports from the Baltic Sea Region to the Chinese market has almost halved. Most of the market share loss occurred early in the decade, with the more stable market position since 2005 only shortly interrupted by the 2009 crisis. The experience has been highly varied across the Region: Finland and Sweden lost about two thirds of their Chinese market share over the last decade, Germany gained 0.7% points (or 15%), and Estonia, Latvia, and Poland all gained strongly in relative terms, but started from very low absolute levels. Again, differences in industrial specialisation and value chain position are likely drivers of these different outcomes. At least for Sweden, it also seems plausible that the country's large multinationals have aggressively substituted exports to China from Sweden with investments in China and exports from their operations elsewhere in the world.



Baltic Sea Region Exports to China

Most exports from the Baltic Sea Region are destined for nearby markets. Roughly 70% of all exports go to markets in Europe, a share that has dropped slightly over the last decade. Iceland and Poland send more than 80% of their exports to European markets. For Russia, the ratio is 52%, for Finland 58%. The other countries range between 65% and 70%, with Estonia and Latvia being somewhat higher.

The share of intra-Baltic Sea Region trade has stayed relatively stable at roughly 19% of exports over the last decade. The relative importance of trading partners elsewhere within the Region differs significantly across countries. The Baltic countries, Estonia and Latvia in particular, rely heavily on trade with other countries in

the Region. Latvia has seen the share of exports to the rest of the Region go up by 14% points over the last decade, while it has stayed relatively stable in Estonia and Lithuania. Of the larger economies in the Region, Sweden has the largest share of intra-Region exports, slightly ahead of Denmark and Finland. Over the last decade, the share of Swedish exports to other economies in the Baltic Sea Region has increased from 21% in 2000 to 25.5% in 2010. The only other country in the Region which has become more oriented towards the Baltic Sea Region in its trading patterns is Finland, where the respective share has grown from 20% in 2000 to 21.5% in 2010. In all countries, intra-Region trade has become slightly less important.



The Role of Within-Region Trade



Share of 2010 Exports to

Foreign Direct Investment

Foreign direct investment (FDI) continues to be an important way through which the Baltic Sea Region participates in the global economy.7 FDI intensity (inward and outward FDI stocks relative to GDP) is now at roughly 90%, still up historically, but sharply down compared to the record mark set in 2009. Total FDI inflows increased in 2011 by more than 50% compared to the previous year, to \$41bn. Outflows grew by about 28% to reach \$86bn. A net outflow of more than \$40bn has now been registered for the last three years, breaking from historical trends, where in- and outflows tended to be more balanced. The Baltic Sea Region now attracts less than 3% of global FDI flows. While FDI data is volatile, the trend over the last decade seems to indicate a slow erosion in the relative position of the Baltic Sea Region as a destination for FDI as other parts of the world economy attract more capital. As an

investor, the Region remains important as a stable source of almost 6% of all global FDI flows.

This gap in FDI flows is also starting to show up in FDI stocks, where the gap between outward and inward stocks is starting to grow. In this respect, the Baltic Sea Region is now becoming more similar to the EU and the NAFTA region, which both have a similar pattern of higher outward than inward FDI.

Among Baltic Sea Region countries, there are three groups of countries with distinct patterns of FDI activity: Poland and the three Baltic countries remain largely active as destinations for inward FDI. Estonia has in 2011 seen a dramatic drop in both FDI flows and in the value of FDI relative to GDP. Poland's inward FDI stock dropped relative to GDP, but inflows started to grow again in 2011 relative to previous years. In Iceland, Norway, Russia, and Sweden, inward and outward FDI are roughly balanced. Sweden has in 2011 seen a dramatic drop in the value of its inward and outward FDI stock relative to GDP. Part of this might be explained by a currency effect; the rise in the Swedish Krona has significantly increased Swedish GDP measured in US Dollars, so the assessment of FDI stocks

⁷ Due to the early release date of this year's State of the Region Report, UNCTAD's comprehensive FDI data set that provides the backbone of the annual World Investment Report is not yet available. The Eurostat data has also not yet been updated to include 2011 values. The OECD data used this year instead covers most countries with significant FDI activity, but has some missing values. For the Baltic Sea Region, Latvia and Lithuania are not covered and Norway and Russia have reported only partial 2011 data.



Baltic Sea Region FDI Flows

will be less affected by these nominal changes. Compared to 2010, FDI flows have been picking up during 2011. Denmark, Finland, and Germany have foreign FDI stakes that are significantly larger than the inward FDI that they have attracted. Denmark has seen the smallest drop in the value of inward FDI stock relative to GDP, and increased the relative share of its outward FDI stock. Here, more sluggish domestic GDP growth is likely to be a key determining factor.

Domestic Investment

Upgrading of the capital stock remains an important way to improve productivity. Higher capital intensity is one important factor, and changes in technology and operational practices driven by new equipment are another. The share of capital investments tends to be high when countries still have a relatively modest capital stock, but have created conditions in their economies where the profitability of adding new equipment is high.

The Baltic Sea Region has, for many years, had an investment rate below the level of the EU-15. This was despite a lower GDP per capita level that signalled the potential for catch up driven by increasing capital intensity. Since 2006, however, the Region's investment rate has surpassed its advanced European peers, if only by a small margin. The gap increased in 2011, and is scheduled to grow even larger in the current year. While the Baltic Sea Region might not reach an increase in the investment rate relative to 2011, it seems likely that it will see more robust investment than for the EU-15 overall, where the economic sentiment remains weaker and the outlook is more difficult.

Among Baltic Sea Region countries, Latvia, Estonia, and Lithuania registered the highest increase in investment rates in 2011. Now, Estonia and Latvia again have, at 22% and 23% respectively, the highest share of investment in GDP, slightly ahead of Russia, Norway, and Poland. For most other countries in the Region, their investment share is close to the average of the last decade. Denmark at 17.3%, Lithuania at 17.7%, and particularly Iceland at 12.7% are the countries where investment is still significantly below that benchmark. For Iceland a combination of the difficult economic climate in the wake of crisis, and a political blockade hampering new large scale investment projects are likely drivers of the low current investment activity. The Economist Intelligence Unit (EIU) expects the share of investment to increase in 2012 in all parts of the Region except Germany, but there is significant downward risk to this positive scenario.



Innovation

Creating new products, services, and ways to provide them to consumers is critical for future value generation, increasingly so as countries become more prosperous and move to the global knowledge frontier. Innovation, upon which productivity growth is based, stretches from academic invention to new patents and, ultimately, new types of business activity. While many of the indicators used to track innovation are biased towards academic research, they still contribute to the understanding of the competitiveness profile of a location.

The EU's Innovation Union Scoreboard provides a broad range of data on innovation outcomes. While the data comes with a time lag (depending on the indicator, the latest data now available is from between 2007 and 2010), the time series indicates that the outcome patterns are highly stable over time. The Baltic Sea Region (excluding Russia, which is not covered by this source) excels in generating revenue from licensing its knowledge and patents. Its patent intensity is very high relative to the size of its economy. This is the case for patenting in general, but even more so for patents in areas related to what the EU calls 'societal challenges', here largely issues related to energy efficiency and the environment. In most other dimensions of innovation performance, here measured in terms of the quality of scientific publications as well as the use of trademarks and designs, the Baltic Sea Region only matches the EU average. In the sales share of innovations, it even underperforms.

Across the Baltic Sea Region countries, Denmark, Germany, and Sweden stand out with strong performance across all the outcome indicators measured. They rank among the top five countries in Europe in almost every dimension of innovation performance. Finland comes close, but falls outside the top ten for trademarks, patents in areas related to societal challenges, and publication quality. Norway and Iceland tend to rank just outside the top ten, but much lower on the use of community designs and, in the case of Norway, also community trademarks. While this is clearly related to both countries being outside of the EU, it is not a full explanation: Switzerland ranks within the top five European countries on both of these indicators.



Structural composition

Last year's State of the Region Report took, for the first time, a closer look at the structural composition of economies in the Region. The sectorial composition of the economy, the size distribution of firms, and its economic geography provide in-

Learning from sectoral composition data - the case of Latvia

In the case of Latvia, the data on sectoral composition indicates that the country has a relatively low share of industry, in particular manufacturing, in the economy. Latvia has a long tradition as a logistical hub, connecting Russia and other parts of the former Soviet Union with Europe and the global market. Given the country's geographic location, this is a natural role for it to play. At the same time, countries at Latvia's stage of development often go through a phase where the economy attracts labour-intensive manufacturing to take advantage of relative moderate labour costs. Given Latvia's location close to other relatively high-wage locations in the Baltic Sea Region and its recent policy of `internal devaluation' that has led to a downward adjustment of wages, this, sights into the underlying competitiveness trends of the past, influence the economic outcomes of today, and shape the path-dependent steps that the economy will be able to take tomorrow. Because indicators of structural composition provide a perspective of the cumulative impact of past trends on a location's economy, they change only

too, seems like a feasible path.

For Latvian policy makers, this type of analysis highlighted the need to make clear choices about the type of actions to undertake:

- If an export-led manufacturing strategy is chosen, there is a limited installed base to build on. Government then needs to work with domestic companies, as well as existing and potential foreign investors, to create the kind of business environment conditions that can attract and sustain dynamic manufacturing activities.
- If an alternative growth path is selected, there needs to be both a clear strategy on how to enhance the competitiveness of the logistical industry, and a sense on whether additional steps are needed to create sufficient growth for the Latvian economy in the future.



Sectoral Composition

European Economies

slowly over time. Three key findings are worth emphasising:

First, there are significant differences in sectoral composition and firm size distribution across the economics in the Baltic Sea Region. Sectoral composition is influenced by a country's stage of economic development; higher levels of prosperity usually go hand in hand with a higher share of services in the overall economy. This relationship is not deterministic: causality potentially runs both ways. Firm size distribution is even more complex: a high share of small companies, like in the Baltics, can indicate entrepreneurial dynamism, a large stock of multinationals like in Sweden can be a huge driver of global economic reach, and solid medium-sized companies, like in Germany, can be the backbone of job creation. Both factors are important diagnostics and set the stage for the economic opportunities and challenges a country is facing; they are not easy-tointerpret performance measures.

Second, natural resources continue to play a large role in the export portfolio of the Baltic Sea Region. The share of oil and gas exports has grown over time and accounted for 22.5% in 2010, by far the single largest export category. Metal mining and manufacturing (which includes iron ore from Sweden), forest products, and agricultural products are other product categories with a strong relation to natural resources.

Third, urbanisation levels in the Baltic Sea Region are close to the European average, despite the low average population density across the Region. There is a clear relation between concentration of population and economic activity in urban centres, and the level of economic development in an economy, both generally and in the Baltic Sea Region in specific. The relatively high level of urbanisation in Russia, partly a result of targeted political action in the past, is another factor that matters.

Assessment

With the immediate impact of the global economic crisis receding, the data on intermediate indicators reveals insights into the changing position of the Baltic Sea Region. First, the global crisis has led to an accelerated step change in the Baltic Sea Region's position in the global economy. While exports have recovered, market shares seem to



Leading Baltic Sea Region Exports (Non-Oil)

Note: Only goods cluster categories with more than \$10bn exports; oil and gas exports are excluded Source: ISC (2012)



Modes of Internationalisation

Source: OECD (2012), EIU (2012), author's analysis.

have been lost for good. The Region is participating less than proportionally in those parts of the world where trade is growing the most, like in Asia and between emerging economies. Instead, companies from the Region are using foreign direct investment as an increasingly important mode of internationalisation to tap into these markets.

Second, while the Baltic Sea Region's position as a source of FDI remains stable, its ability to attract additional FDI is being challenged. While the absolute inflows of FDI might not fall, much of the future growth in FDI activity is going to take place elsewhere in the world economy. The robust domestic investment levels – supported by a better economic climate than in other advanced regions – indicate that the Baltic Sea Region remains a good place to invest. Despite this, its share in the global economy is gradually falling. This does not have to lead to lower levels of prosperity, but higher absolute growth and winning market share often do make just that easier.

Third, if the Baltic Sea Region is becoming less important in absolute size and as an export platform, its innovative capacity's becoming even more important. Innovation activities will need to

Dealing with a changing global economic structure - an analysis for Sweden

The Swedish economy has done well in the global economy after the course of its economic policy was fundamentally altered in the wake of the country's own financial crisis in the early 1990s. However, as a new report indicates, Sweden, too, is exposed to the structural changes that are transforming the global economy and affecting the way global competitiveness translates into domestic prosperity:

 Swedish companies retain a strong position in global markets, but export market share are falling relative to FDI activity. Policy support for exports and FDI, outward as well as inward, has traditionally been provided through different entities. This structure might not be effective any more, as companies now perceive them as integrated choices in their overall internationalisation strategy.

 Small- and medium-sized companies are gaining in importance in Swedish exports and innovative activity. For a country traditionally characterised by the dominance of large multinationals, this requires a new look at the policy toolkit in innovation and internationalisation to align it with the needs of SMEs.

Source: Christian Ketels (2012), *Sweden's Position in the Global Economy*, Entreprenörskapsforum: Stockholm, available at http://entreprenorskapsforum.se/

provide the value added in the past generated by production for exports, and it needs to create the competitive advantages that allow firms from the Region to be successful investors abroad. Here the data provides a mixed view: patenting is high and results in significant income from licensing. Sales and other indicators of the use of new knowledge in the domestic markets are only average. Worryingly, the quality of publications is also not exceptional.

2.3 Competitiveness fundamentals

Prosperity outcomes and the economic activity measured by intermediate indicators are ultimately driven by the competitiveness fundamentals in an economy. The complex mix of fundamentals can be organised in two broad categories: macroeconomic and microeconomic factors. Macroeconomic factors set the general context for firms but do not affect productivity and innovation directly. This group includes both the quality of social and political institutions and the quality of macroeconomic policy. Microeconomic factors have a direct impact on the productivity with which companies can transform inputs into economic value. This group includes the quality of the business environment, the presence and dynamism of clusters, and the sophistication of companies.

Overview

The Baltic Sea Region remains a highly competitive part of the European and global economy. Sweden, Denmark, and Finland all rank among the top five countries, according to the WEF Global Executive Opinion Survey data.⁸ Norway and Germany follow close behind, with Estonia at around 25th place. Poland, Latvia, and Lithuania are ranked between 40th and 50th. The Russian Federation remains far behind, ranking as 106th in 2011. Rankings impose an ordering between countries, even though their actual competitiveness might be very similar. The comparison of



Overall Competitiveness 2011 Selected Countries

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

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8 The latest available data has been collected in the first half of 2011. We use the country-averages for that year and for the aggregation the method outlined in Delgado, Mercedes, Christian Ketels, Michael Porter, Scott Stern (2012), The Determinants of National Competitiveness.





The Baltic Sea Region's Competitiveness Profile 2011

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

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the underlying competitiveness scores shows the three leading Nordic countries to be in one group, with Norway and Germany at very similar levels. Further down, the score difference between Latvia and Lithuania is also very low. Between these groups, however, there are significant differences.

Changes over the last few years have been modest, with a slight decrease in both 2010 and 2011. In 2011, Latvia was the country with the highest move, gaining 22 ranks. Coming in the wake of a huge decrease during the crisis, the net gain of 4 ranks over the last five years is much more modest. Over this longer period, Poland and Sweden have improved the most, while Iceland, Russia, and Germany lost relative position.

The Region has, on the aggregate level, a relatively balanced portfolio of strengths and weaknesses. The only areas with more significant problems are the context for strategy and rivalry and some dimensions of factor input conditions. Looking at more narrow dimensions of competitiveness, more important differences emerge. Particular strengths are the innovative capacity of firms, high internet penetration, a larger degree of tertiary enrolment, and low nominal tariff rates. Among the weaknesses are a number of factors shaping the context for strategy and rivalry, including taxation, business regulation, barriers to trade and investment, and labour market rules. Other challenges are the soundness of banks, the quantity of available suppliers, and the quality of road infrastructure.

This overall profile hides the important differences that exist across countries in the Region. Sweden, the most competitive economy in the Region overall, has strengths across the board. Denmark, Finland, Norway, and Poland are all strongest on macroeconomic policy, followed by institutional factors and then the aggregate of microeconomic fundamentals. Germany and Lithuania register the opposite pattern, with distinct relative advantages in microeconomic competitiveness. Estonia benefits most from its strong institutions; Russia suffers from its weak institutional structures.

Macroeconomic competitiveness: Institutions

The Baltic Sea Region gets traditionally solid marks on the quality of its institutional structures. It ranks strongest on the basic health and educational services that public institutions provide. This is particularly important where income inequality is high, as these services are critical to enable poorer segments of society to participate in the economy. The rankings on the rule of law and on political institutions are a bit lower.

Many indicators of institutional quality change only slowly over time, especially those related to human development. Political institutions are the area where perceptions are most volatile. This is also the area where there has been a slightly more negative view on the performance of the Baltic Sea Region recently. Over the last decade, however, the Region has received broadly stable rankings in all three areas.

Within the Region, there continues to be a great deal of heterogeneity in terms of institutional quality. While the Nordic countries are global leaders in this area, Latvia and Lithuania are in the bottom group of EU countries, and Russia is even globally in the bottom quintile of countries. Apart from the level, there is also a difference in profile: most Nordic countries rank relatively

better on political institutions and the rule of law than on human development. This is largely driven by the performance on human development being very similar across a large number of advanced economies. Iceland remains an outlier, with the perception of its political system still in turmoil. The recent court case against the former Prime Minister Geir Haarde was a symbol for frustration with the political system that many in Iceland blame for the meltdown of the country's financial sector. Germany has seen a more gradual erosion of its position on institutional quality, largely because of an increasing frustration with the realities of the political process. The emergence of the Pirate Party, a Baltic Sea Region import from Sweden, is one symptom of this frustration.

In most parts of the former Soviet bloc, the situation is the opposite, with human development relative better than the legal and political system. That Estonia has broken away from this pattern might be another symbol of its ambition to be Nordic, rather than Central-Eastern European. The huge gap between Russia on the one hand and the Baltics and Poland on the other owes a significant deal to the process of EU integration. While country-specific factors certainly play a role as well, other countries from the former Soviet bloc that are not EU members rank much

	Denmark	Sweden	Finland	Norway	Iceland	Germany
SIPI	1	2	3	10	12	13
Political institutions	2	1	4	9	30	21
Rule of law	1	4	3	9	14	16
Human development	9	12	5	14	7	10

Social Infrastructure and Political Institutions Ranking of Baltic Sea Region Countries, 2011

	BSR	Estonia	Poland	Latvia	Lithuania	Russia
SIPI	24	24	43	51	52	104
Political institutions	27	18	53	60	61	117
Rule of law	27	26	43	52	55	124
Human development	22	34	46	48	45	69

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.



Corruption Perception Index 2011

more like Russia than their former peers that are now part of the EU. Poland is the country in the Region that has seen its institutional quality improve the most over the last five years. Latvia has made up most of its ground since last year, especially by the political system regaining much of the credit it had lost during the crisis. Latvia's political system still does get relatively poor grades, but it has eliminated or greatly reduced the gap to its direct neighbours in the Region. Russia had gained some ground over the last few years, but the views, especially on the political system, have again worsened over the last year. Here the controversies around the recent position swap between President Putin and Prime Minister Medvedev might have played a role.

An important indicator of institutional quality is the presence of corruption. The pattern revealed in the WEF executive opinion survey data is reflected here as well: the Nordic countries and Germany are among the global leaders, with the rest of the Region being more heterogeneous, and Russia lagging far behind. There is some movement in the rankings, but the comparison across years suggests that very few are sustained over time. Russia made some progress in 2011, more than compensating for a drop in 2010. For Lithuania, the gains made last year were lost in 2011. Overall, institutional quality remains a regional asset, but is also more associated with the Nordics than with the Baltic Sea Region. Where problems exist, they are driven by country-specific conditions, not by a region-wide challenge. Regional efforts could, however, help to improve institutions in countries where that remains a need. For the EU countries, such programs were in place during the accession period, but have been largely terminated since then. While Russia has to chart out its own course, the appetite in Russian society for more transparent, effective, and open institutions is clearly rising. Wherever support from neighbours is viewed as helpful, it is in the self-interest of the other countries in the Baltic Sea Region to provide it.

Macroeconomic competitiveness: Macroeconomic policy

The Baltic Sea Region's solid overall macroeconomic policy has been one of the key assets it was able to build on in its robust response to the global economic crisis. The underlying quality of macroeconomic policy remains hard to capture; the indicators used instead are outcomes, driven to a large extent by the forces of the crisis. This is why the Region is not ranked stronger overall. Underlying monetary policy regimes differ significantly across the Region. Germany, Finland, and Estonia are part of the euro zone, where the European Central Bank (ECB) sets monetary policy based on an inflation rate target of "below, but close to, 2% over the medium term." Denmark, Latvia, and Lithuania set monetary policy to keep the exchange rate to the Euro stable, essentially shadowing ECB policy. Iceland, Norway, and Sweden follow different versions of inflation targeting, using slightly different targets and inflation measures. The Bank of Russia, too, has shifted towards inflation targeting. Central Banks are independent in all parts of the Region except Iceland.

Inflation rates across the Region edged upwards throughout 2011 as the economic climate was more robust than in other parts of Europe, and global energy prices increased. Monetary policy has been in difficult territory. During the first couple of months of 2011, the intention was to slowly roll back to highly expansionary monetary policy implemented during the crisis. However, in the later part of 2011 and the first few months of 2012, the sovereign debt crisis undermined the resumption of growth in many parts of Europe, and posed significant risks to the stability of the European banking system.

Monetary policy changed course in response: the ECB raised interest rates until the summer of 2011, and then lowered rates again in November and December. These cuts were immediately matched by the Danish Central Bank and the Lithuanian Central Bank. Sweden and Norway followed with interest rate cuts in December 2011, and February and March 2012. Apart from slowing momentum in the economy, both countries were reacting to upward pressure on their exchange rates due to the interest rate differential with the euro zone. Russia's Central Bank cut its overnight interest in December 2011 and has left it unchanged since then. Latvia (since March 2011) and Poland (since June 2011) have kept their key policy rates stable. Iceland is the only country in the Region where interest rates increased in November 2011 and then again in March 2012, sparking concerns about long term inflation and the weakness of the exchange rate. In addition to interest rate policy, central banks have also used open market operations to provide liquidity to the banking system. Around the beginning of 2012, the ECB provided roughly EUR 1trn with three

Macroeconomic Policy Indicators 2011

	Denmark	Estonia	Finland	Germany	Iceland	Latvia	Lithuania	Norway	Poland	Russia	Sweden
Fiscal Policy											
Government budget balance (in % of GDP)	-2.50	0.10	-0.50	-1.00	-4.80	-4.50	-5.00	12.70	-1.60	0.80	1.40
Government debt (in % of GDP)	46.20	5.80	48.60	81.70	130.80	45.30	36.30	57.50	52.00	8.30	35.90
Monetary Policy											
Inflation (annual change in %)	2.76	4.98	3.33	2.30	4.00	4.37	4.10	1.24	4.27	8.42	2.62
	BSR	EU-27	NAFTA								
Fiscal Policy											
Government budget balance (in % of GDP)	1.43	-4.37	-3.21								
Government debt (in % of GDP)	45.97	81.85	64.93								
Monetary Policy											
Inflation (annual change in %))	3.46	3.08	3.34								

Source: EIU (2012), author's calculations

year maturity through this channel. The Danish Central bank had already channelled EUR 72.6bn in late September 2011 to the Danish banking system, followed by another EUR 3.4bn in March 2012.

The outlook continues to be difficult. The large amount of liquidity creates inflationary risks, even if inflation remains at modest levels. However, energy prices are already increasing for structural reasons, and in parts of the Region, pressure to raise wages after years of only modest real wage growth are rising.

On fiscal policy, the position of the Baltic Sea Region remains solid overall, with average public sector deficits and debt levels remaining moderate compared to other countries. However, the heterogeneity in terms of fiscal policy challenges has increased substantially over the last two to three years, and individual countries in the Region continue to face serious difficulties.

Most countries in the Region have a formal fiscal policy framework to guide medium-term policy planning and anchor expectations about the course of fiscal policy. The majority of the Nordic and Baltic countries have a target for the average public sector deficit over a business cycle, ranging from -0.5% of GDP in Denmark to 1% in Sweden. The governing coalition in Denmark reached agreement in March 2012 with the opposition on a new budget law, setting out public spending limits for a four-year period. Norway aims for a deficit in its budget before returns from its oil fund of no more than 4% of GDP. Russia has a target for spending related to the revenues from oil exports. Germany has recently accepted a constitutional ban for public sector deficit that will come into effect first at the federal, then the regional levels over the coming years. Poland has set itself an upper limit for public sector debt at 60% of GDP. It also has a short term target for expenditure growth to be below CPI + 1%.

The Swedish government has provided some modest stimulus in its latest spring budget, but primarily focused on keeping fiscal policy tools available should the economic situation worsen. The Finnish government has raised taxation and pushed through a package of spending cuts in defence, municipalities, and also parts of innovation policy. Denmark's newly elected government promised to kick-start the economy through bringing forward a number of public investment projects and introducing new social initiatives. The package also included some rate increases in a number of taxes and cuts in the public administration. Iceland continues to stabilise its fiscal position; in November 2011, Standard & Poor's raised its assessment of Icelandic public debt from negative to stable. Latvia continues to wind down the emergency credit program from the IMF and its European partners. It has not raised any new debt since returning to the financial markets in mid-2011. Russia saw a surge in public spending towards the end of 2011, but ultimately reached a balanced budget due to high oil revenues.

Microeconomic competitiveness

The Baltic Sea Region benefits traditionally from its strong position in company sophistication and generally solid business environment, with particular strengths in demand conditions and a number of factor input conditions. The latest data confirms this view.

Physical infrastructure (Logistical, Energy, Communication)

Physical infrastructure, both for transport and communication, remains overall solid across the Baltic Sea Region, despite some slight slippage over recent years. The position is somewhat weaker for logistical infrastructure, where there is also significantly more heterogeneity across the Region. The Region's natural conditions, particularly its relatively low overall population density, are one reason for the lower rankings. However, in some countries there have also been debates about the processes for making large scale infrastructure investments. Part C of this Report takes a further look at these issues.

The information and communication infrastructure is well developed across the Region. This has become an area of intense competition between largely privately-owned companies. There is also a large degree of regional integration, with the leading Nordic operators active across most parts of the Region. While there is variation in terms of access and usage of ICT

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	PO	RU
Logistical infrastructure	42	56	35	4	8	24	31	11	7	87	84
Quality of roads	53	92	30	5	17	31	84	19	10	121	124
Quality of railroads	46	35	23	6	11	113	49	20	10	74	31
Quality of port infrastructure	19	49	40	7	8	9	23	12	11	100	95
Quality of air transport infrastructure	80	54	96	6	17	18	7	9	8	101	99
Quality of electricity supply	50	68	41	2	8	7	19	10	12	47	77
ICT infrastructure	18	40	33	12	19	10	14	1	16	46	49
Quality of telephone infrastructure	30	73	27	4	9	6	12	2	35	64	100
Internet access in schools	1	35	23	2	9	6	22	3	48	47	65
Mobile phone subscribers per 100 population	2	56	8	19	11	47	43	27	24	36	6
Personal computers per 100 population	36	32	37	20	23	21	14	4	12	46	56
Internet usersper 100	25	29	34	7	9	1	3	4	15	35	52
population											

Physical Infrastructure

Baltic Sea Region Countries

Note: Numbers in red and green indicate a change of ten ranks or more down resp. up since 2010. Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

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ICT Development Index

IDI Score, 2010

infrastructure as measured by, for example, the ITU's ICT Development Index, the differences across countries in the Region are smaller than in other areas.

Energy has been a topic of previous State of the Region Reports. In aggregate, the Region has ample supply of energy sources, but these sources are unequally distributed across countries, and there are some emerging strains on electricity generation capacity in parts of the Region. Germany's decision to abandon nuclear energy will continue to have significant repercussions throughout the Region. In the Nordic countries, price setting for electricity, a notoriously difficult to regulate market, continues to be an issue. In the Baltics, the discussions about new nuclear capacity and further interconnections with the Nordic and Central European grid continue.

Skills and education

There is a wide perception that a highly skilled labour force is critical for the economic future of the Baltic Sea Region, and that high skill levels have been an important foundation for the solid economic performance of the Region so far. The data on the state of education systems across the Region indicate concerns as to whether current conditions are sufficient to sustain a skill advantage for the Region in the future. The survey data indicate significant scepticism among business leaders about the quality of skills that the education system currently delivers.

Overall spending on education is quite high across the Region. The ratio of teachers' pay to the pay of other workers with similar education is relatively high in Germany, Sweden, Finland, and Denmark, while this ratio is below the OECD average in Estonia, Poland, and Norway. The data on learning outcomes, in particular the last round of PISA assessments undertaken by the OECD in 2009, confirms at least some of these concerns. Finland continues to be in the group of global leaders in terms of educational attainment. Many other Baltic Sea Region countries rank above the OECD average, but their advantages relative to leading peers is small, and the relatively modest results for Sweden, the Region's largest economy, are a clear concern.

Educational reform is on the agenda in a number of countries across the Baltic Sea Region. In Sweden, increasing choice for students and parents has been a focus for some time. Reacting to the low attainment data, quality has now become an increasing concern. In Latvia, the new government has made educational reform a key item on its agenda. In Germany, where education falls within the authority of the states, the often emphatic debate about the future of the tracked system, with different types of schools, seems to have gradually moved towards a compromise. For both Germany and Sweden, the issue of how to better integrate

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Skills and education	38	50	38	21	6	16	43	16	52	51	62
Quality of math and science education	15	38	16	25	3	21	75	29	49	50	51
Quality of management schools	47	55	61	19	16	15	35	12	41	76	110
Availability of scientists and engineers	65	88	64	25	1	12	45	7	66	59	74
Tertiary enrolment	24	20	9	13	2	14	15	17	52	18	12

Skills and Education

Baltic Sea Region Countries

Note: Numbers in red and green indicate a change of ten ranks or more down resp. up since 2010. Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.



Learning Outcomes Across Countries

Source: OECD, Pisa 2009 database

children from migrants continues to be a key concern. Another challenge is the wage structure in the Nordic countries that, through its low returns for education, creates little incentives to invest in education or choose areas of high economic value.

Innovation infrastructure

The quality of the innovation infrastructure across the Baltic Sea Region continues to be high. The Region ranks high on many input conditions, including the level of R&D spending. It also reports very high performance on measures of firm level R&D, in terms of spending as well as collaboration.

Across the Baltic Sea Region, there is significant heterogeneity in terms of innovative capacity. The Nordic countries and Germany all rank high. Norway tends to be an outlier in many

innovation statistics, which is seen as the result of the country's specific industrial structure. Recent analysis suggests that in its leading clusters, Norway has been able to move towards increasingly innovation-driven competitive advantages.⁹ Estonia has been able to create a remarkably strong innovation system, given its overall stage of economic development. The other Baltic countries and Poland lag behind. Russia possesses legacy assets in its scientific system, but struggles to connect them to its company base. A particular issue across the Region is the level of cross-country linkages. Iceland, Denmark, Sweden, and Finland all rank among the top five countries in terms of international scientific co-publications, one indicator of such linkages. Lithuania, Poland, and Latvia lag far behind on these measures.

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9 See Torger Reve, Amir Sasson (2012), Et kunnskapsbasert Norge, Universitetsforlaget: Oslo.

Innovation in the Baltic Sea Region

BSR Rank among European countries

Enablers		Firm Activities	Outputs				
Human resources New doctorate graduates per 1000 population aged 25-34 Percentage population aged 30- 34 having completed tertiary education Percentage youth aged 20-24 basing attained at least upper	9 (-2) 13 (-1)	Firm investments Business R&D expenditures (% of GDP) Non-R&D innovation expenditures (% of turnovei)	6 (±0) 20 (-7)	Innovators SMEs introducing product or process innovations (% of SMEs) SMEs introducing product or process innovations (% of SMEs)	12 (-2) 13 (-6)		
secondary level education	(-1)	Linkages & entrepreneurship		Economic effects			
Open, excellent and attractive research system International scientificco- publications per million population Scientific publicationsamong top 10% most cited publications worldwide Non-EU doctorate students as % of all doctorate students Finance and support	12 (±0) 14 (-1) 9 (+1)	SMEs innovating in-house (% of SMEs) Innovative SMEs collaborating with others (% of SMEs) Public-private co-publications per million population Intellectual assets PCT patents pplications per billion GDP PCT patent applications in societal challenges per billion GDP	10 (-2) 9 (+1) 8 (±0) 6 (±0) 4 (±0)	Employment in knowledge- intensive activities (% of workforce) Medium-tech and high-tech exports (% of total exports) Knowledge-intensive services exports (% of total service exports) New-to-market and new-to-firm sales (% of turnover)	15 (+1) 16 (+4) 10 (-3) 20 (±0)		
Public R&D expenditures (% of GDP)	5 (+1) 6	challenges per billion GDP Community trademarksper billion GDP	(±0) 15 (+1) 10	Licence and patent revenues from abroad (% of GDP)	(±0) 6 (+5)		
Venture capital (% of GDP)	(+1)	Community designs per billion GDP	(-1)				

Note: Coloring indicates relative strengths and weaknesses; numbers in brackets are changes relative to last available year Source: Innovation Union Scoreboard (2012), author's analysis. State of the Region-Report 2012

Innovation Infrastructure

	Human resources	Research systems	Finance and support	Firm investments	Linkages & entrepre- neurship	Intellectual assets
Sweden	1	6	2	2	3	3
Denmark	9	3	6	7	1	2
Finland	2	12	3	5	6	7
Germany	12	14	12	3	12	4
lceland	31	9	1	4	2	16
Estonia	18	21	7	6	10	19
Norway	7	7	9	33	9	21
Poland	15	30	23	17	31	23
Lithuania	11	33	16	29	27	29
Latvia	26	34	31	18	34	22

Ranking of Baltic Sea Region Countries

Source: Innovation Union Scoreboard (2012), author's analysis.

Aligning innovation system and economy – lessons from Estonia

Estonia has been remarkably successful in creating a modern innovation system that mirrors the practice of leading peers in Europe. A recent peer review of Estonian research and innovation system conducted as part of the European Research Area Committee (ERAC) provided interesting lessons on how Estonia can build on its achievements so far:¹

First, the analysis confirmed the achievements of Estonia in terms of creating a research system that is compatible and competitive, at least in a Europe context. This is no small feat for a country of Estonia's size and overall development level.

1 ERAC Expert Group Report (2012), Peer-Review of the Estonian Research and Innovation System Steady Progress Towards Knowledge Society, European Commission: Tallinn.

The policy focus on innovation is intense in the Baltic Sea Region: Denmark and Sweden are in the final phase of developing a new innovation strategy. Russia is investing large amounts of resources in the Skolkovo research and innovation hub at the outskirts of Moscow, which is intended to be a spearhead for the government's modernisation strategy. Last year's State of the Region Report provided more detail on policy initiatives across the Region. Second, the analysis identified the challenges of connecting a well-performing research system with an economy that is largely competing on low costs and efficiency, not innovation. While Estonia has some well-known commercial success cases related to this research system, particularly Skype, the role that these activities play in the overall economy in terms of employment, exports, and other broad indicators of value generation is small.

Third, Estonia is struggling to implement a research and innovation policy following a framework developed in much larger European countries. The many demands of such a sophisticated system are hard to meet for a public administration of the small Estonian size.

Financial Markets

The overall ranking on financial market infrastructure for the Baltic Sea Region identifies this as an area of slight disadvantage. Key weaknesses are concerns about the soundness of banks in parts of the Region, and some weaknesses in the regulatory environment. Access to credit has improved, according to the survey data from early

Financial Market Infrastructure

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Financial market infrastructure	35	47	82	12	13	76	5	3	36	48	113
Venture capital availability	30	32	89	26	12	65	5	4	36	74	83
Regulation of securities exchanges	34	53	49	11	6	84	4	7	55	28	112
Domestic credit to private sector	33	29	51	2	36	27	41	15	27	57	68
Ease of access to loans	67	49	98	27	7	80	2	4	51	76	82
Financial market sophistication	30	72	83	19	18	89	22	8	26	53	104
Financing through local equity market	60	84	95	24	35	105	6	12	37	45	90
Protection of minority shareholders' interests	46	73	91	5	4	57	9	2	43	92	127
Getting Credit Legal rights index (WB)	60	6	74	6	39	39	39	74	39	6	99
Soundness of banks	40	96	78	72	8	128	10	16	75	53	123

Baltic Sea Region Countries

Note: Numbers in red and green indicate a change of ten ranks or more down resp. up since 2010.

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.



Financial Center Score, 2012



Financial Centers Ranking

Source: Global Financial Center Ranking (2012) 11th edition, author's analysis

2011, but remains a constant topic in the business community across the Baltic Sea Region. This overall assessment obscures a number of different strengths and weaknesses, as well as significant differences across countries within the Region.

Sweden has a financial sector that is strong but large relative to the size of its economy. This has led the Swedish government to push for higher capital requirements to manage the risk that banking sector exposure generates. In Denmark, a very dense banking market with a large number of smaller banks continues to pose significant challenges to regulators and the Central Bank. In March 2012, a new set of measures, called bank package V, restructured the struggling FIH Erhvers bank and provided new financing tools for agriculture and exports. In Iceland, the financial sector is slowly regaining its footing, but now with much smaller size and a dedicated domestic focus. In the Baltic countries, the Nordic-dominated banking sector remains stable. Cross-country collaboration was put under strain when the bankruptcy of Bankas Snoras, the third largest Lithuanian bank, forced the Latvian government to take Latvijas Krajbanka, Bankas Snoras' daughter company.

In Russia, the financial markets continue to be dominated by a small number of governmentowned financial institutions.

In terms of the Baltic Sea Region as a financial centre serving other economies, the situation is largely unchanged. Stockholm remains the Region's financial capital, but has limited clout beyond the Region. Its venture capital industry is active across Europe, but is currently facing a difficult debate on taxation in Sweden. All other financial centres lost some position last year, following a number of years of gains.

Administrative efficiency

The efficiency of the public administration and the bureaucratic burden imposed through rules and regulation remains overall a slight disadvantage for the Baltic Sea Region. The more detailed analysis provides a far more nuanced perspective: in the Nordic countries, government efficiency is relatively high, considering the large share of the public sector in GDP. Institutions are solid and, in countries like Sweden, there is considerable openness to let private companies provide public-

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Administrative infrastructure	8	32	68	6	9	16	18	11	60	73	117
Paying Taxes (Low) Payments number	25	7	32	17	11	72	2	1	45	92	30
(Low) Burden of customs procedures	17	65	45	5	3	23	21	7	42	38	127
(Low) Number of procedures required to start a business	21	21	53	13	6	21	21	6	83	32	83
Ease of starting a new business	1	41	104	7	18	39	42	8	75	80	124
(Low) Time required to start a business	18	57	79	12	48	9	18	52	61	93	88
(Low) Burden of government regulation	11	47	97	13	12	19	66	27	79	108	122

Administrative Infrastructure

Baltic Sea Region Countries

Note: Numbers in red and green indicate a change of ten ranks or more down resp. up since 2010. Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

State of the Region-Report 2012

	Overall	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Resolving Insolvency
Denmark	5	31	10	13	11	24	29	14	7	32	9
Norway	6	41	60	12	8	48	24	27	9	4	4
Iceland	9	37	34	1	11	40	46	35	81	3	11
Finland	11	39	45	25	25	40	65	28	6	11	5
Sweden	14	46	23	8	19	48	29	50	8	54	19
Germany	19	98	15	2	77	24	97	89	12	8	36
Latvia	21	51	112	84	32	4	65	67	15	´17	32
Estonia	24	44	89	48	13	40	65	51	3	29	72
Lithuania	27	101	47	81	7	48	65	62	28	15	40
Poland	62	126	160	64	89	8	46	128	46	68	87
Russia	120	111	178	183	45	98	111	105	160	13	60

Doing Business in the Baltic Sea Region

Source: World Bank (2012)

State of the Region-Report 2012

ly paid services. Because there is little ideological debate about the size of government, it is easier to push for efficient government. Nevertheless, a strong government does generate a significant number of rules and regulations for companies to deal with. Germany has a large government, too, but has made less headway in improving efficiency. In the Baltic countries, Poland, and Russia, the historical legacy is a fundamentally different one. Estonia has gone the furthest in replacing this legacy with a new vision of lean government. Latvia registered a strong improvement in the relevant parts of the 2011 WEF Executive Opinion Survey; it remains to be seen whether these gains prove sustainable. Poland still has some way to go. In Russia, the gap between its more advanced European peers is even larger.

The World Bank's Doing Business report tracks regulatory rules and procedures in a number of key business activities. Three countries from the Baltic Sea Region are among the top ten in the 2011 Doing Business ranking; eight are among the top 25. The rankings are best for rules and regulations affecting trade across borders – central for a Region of mostly small, export-oriented economies. In other areas, there is significant heterogeneity between countries with very efficient rules and others with high levels of bureaucracy. Most countries in the Region have registered slight improvements in their overall Doing Business rank in 2011; only Estonia and Lithuania reported a small deterioration as other countries introduced further reforms.

Competition

Most markets in the Baltic Sea Region are open but also relatively small. Formal trade barriers in the Baltic Sea Region are low. The EU's internal market covers most of the Baltic Sea Region, including most of the trade with the EFTA members Iceland and Norway. Low legal entry barriers per se are, under such conditions, not enough to create intense competition in local markets. By many indicators, Sweden is the most open economy in the Baltic Sea Region, followed by Denmark. Estonia has removed most formal barriers, but lacks robust instruments to ensure competition in its small domestic market. Russia remains far behind the EU/EFTA countries on all indicators of rivalry and openness. WTO accession will make some difference, but is alone not sufficient to close the gap that exists.

Competition: Rivalry and Openness	
Baltic Sea Region Countries	

Indicator	EE	LV	цт	DK	FI	IS	NO	SE	GE	РО	RU
COMPOSITE RANK	23	53	58	9	16	65	24	5	27	41	121
Rivalry											
Low market disruption from state-owned enterprises	36	56	75	3	6	44	45	2	10	25	120
Effectiveness of antitrust policy	42	54	95	6	7	27	19	1	33	44	111
(Low) Extent of market dominance (by business groups)	39	43	95	2	27	67	28	17	5	33	105
Intensity of local competition	31	71	56	50	77	79	33	14	17	35	116
Openness											
(Low) Tariff rate	7	7	7	7	7	6	4	7	7	7	66
Prevalence of foreign ownership	53	61	84	31	51	128	30	5	57	73	121
Prevalence of trade barriers	11	41	61	18	4	121	116	5	44	64	126
Quality of FDI rules	10	93	107	36	50	130	82	12	85	97	115

Note: Numbers in red and green indicate a change of ten ranks or more down resp. up since 2010.

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

Governance of State-owned Enterprises in the Baltic States – a new report

State-owned enterprises (SOEs) remain a relevant aspect of the economies across the Baltic Sea Region. This remains especially the case in the Baltics and Poland, where some of these SOEs are a historical legacy. While the policy focus has traditionally been on privatisation, more recently there has been a growing interest in the governance of SOEs. In some cases, privatisation lacks majority support in the political system. In others, current market conditions make privatisation a less attractive option. Either way, there is consensus that good governance of SOEs is a central concern. In the Baltic countries, the Baltic Institute of Corporate Governance (BICG) has played a central role in working towards improving SOE governance through developing performance standards, providing data, and other activities to raise awareness. Arminta Saladžien, Head of Nasdag OMX Baltics and, until March 2012, Chairman of the BICG, received the Swedbank Baltic Sea Award at the Baltic Development Forum Summit 2009 for her work in developing the BICG.

BICG recently published a study on the Governance of State-Owned Enterprises in the Baltics. The study, based on a survey as well as an in-depth analysis of the legal context in each of the three countries, provides insights into the public perception of SOEs and assesses their governance relative to international standards. It reveals the considerable public dissatisfaction with SOE governance and SOE performance across the Baltic countries. Achieving better SOE governance is clearly not only economically important, it is a political necessity.

Overall, the quality of SOE governance across the Baltic countries is surprisingly diverse. The regional leaders, identified as Citadele Bank (Latvia), Eesti Energia (Estonia), Lattelecom (Latvia), and Elering (Estonia), are approaching world-class standards of governance. Others remain far behind. Within companies, there are issues with, for example, the selection of board members, the structure of the audit committees, and the quality of financial reporting procedures. The need for more independent board members, but also for representatives of the public owners that are better resourced to implement effective oversight and a transparent ownership strategy are some of the lessons learned from international experience.

Weaknesses in the legal and regulatory framework are an important factor in the quality of SOE governance. The report finds a significant gap between these rules and their implementation in the Baltic countries, especially Latvia, and the OECD benchmark. The report documents the political action underway to address some of the issues identified.

Source: Baltic Institute of Corporate Governance (2012), *Governance of State-owned Enterprises in the Baltic States*. Available at http://www.corporat-egovernance.lt.



Economic Freedom in the Baltic Sea Region

Source: Heritage Foundation (2012), author's analysis.

The Heritage Foundation's Economic Freedom index gives a broad, but also quite ideological perspective on the ability of the private sector to compete freely on the markets of the Baltic Sea Region. The low overall level is largely a reflection of the large size of government in the Region, not of limitations to private enterprise.

Labour Markets

Labour markets in the Baltic Sea Region have highly heterogeneous structures. The Nordic countries – with the exception of Denmark – have often been singled out as inflexible in international assessments, a view which is under intense

Labor Markets: Regulation and Incentives

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Regulation											
Cooperation in labor employer relations	29	51	71	1	23	10	5	8	27	93	117
Pay and productivity	6	22	23	72	29	39	75	62	42	37	70
(Low) Rigidity of employment	119	106	86	10	100	47	109	86	104	61	86
Incentives											
(Low) Distortive effect of taxes and subsidies on competition	21	56	73	31	10	82	45	9	108	51	124
(Low) Impact of taxation on incentives to work and invest	15	81	109	122	105	119	63	97	83	98	114

Baltic Sea Region Countries

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

State of the Region-Report 2012



Employment Protection OECD Countries

Source: OECD Employment Database (2010)

debate. The WEF Global Executive Opinion Survey indicates the complexity: while the formal rules and regulations provide significant mobility barriers, the high level of collaboration in laboremployer relations often enables a highly flexible response to shocks.

The labour market is also affected by the nature of the taxation system. In the Nordic countries in particular, taxes are high, especially on labour. Capital taxation has tended to be much lower, reflecting the view that capital is mobile and needs to be attracted with competitive tax rates. In the rest of the Region, the differences in tax rates between capital and labour are much less pronounced.

The OECD data on employment protection provides additional perspective on labour markets. Here Russia, Denmark, and Sweden are ranked as the countries in the Region with the least restrictive labour markets. Norway, Germany, and Poland have conversely higher barriers; a view that is more in line with the perception of many business leaders. In some countries, Sweden in particular, this data reveals significant differences in terms of the regulation for permanent and temporary employees. Sweden has created a flexible labour market for temporary staff while the barriers to hire permanent staff remain high. This could be an important factor in explaining the still high unemployment for groups that are trying to enter the labour market, but tend to find only short term, project-based employment.

Demand Sophistication

Demand conditions, in particular the sophistication of demand, are a critical driver of innovation. The Baltic Sea Region continues to rank high on buyer sophistication and the stringency of environmental and consumer regulation, despite some modest weakening compared to last year. The Region continues to be a leader in terms of environmental regulation, one important element of a broader strategy to support green growth (see Section C of this Report). It is less well-positioned in terms of government procurement of innovative products and services. This is an important area of policy action, and one where regional collaboration could play an important role.

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Demand sophistication	23	50	48	4	7	24	17	3	14	65	102
Stringency of environmental regulations	22	45	39	1	4	18	10	3	6	34	98
Presence of demanding regulatory standards	37	46	44	8	3	34	17	6	7	43	102
Buyer sophistication	89	58	99	5	7	45	33	6	29	66	59
Government success in ICT promotion	7	52	36	3	16	12	10	2	24	95	112
Laws relating to ICT	4	50	35	3	9	25	18	6	31	84	101
Government procurement of advanced technology products	22	64	85	29	8	25	54	11	31	94	97

Sophistication of Demand

Baltic Sea Region Countries

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

Cluster presence

Research over the last decade has provided robust statistical evidence that the presence of clusters, i.e. regional agglomerations of companies and other institutions in industries connected through different types of linkages and spillovers, are associated with higher levels of overall regional economic performance.

Last year's Report detailed the presence of regional clusters across the Baltic Sea Region in comparison to the Region's overall position in Europe. With roughly 50 regional clusters that meet some benchmark criteria for size and specialisation, the Region is somewhat underrepresented among the list of leading European clusters. Further analyses done for this year's Report provides additional insights into the role of clusters in the Baltic Sea Region economy:

First, compared to the sample of 11 EU countries for which consistent time series data are available, most Baltic Sea Region countries have a higher share of their total employment in the cluster sector. 'Cluster sector' here captures all industries that exhibit clear patterns of geographical concentration in their employment distribution across regions. This has an impact on economic outcomes because these industries tend to have higher wages, productivity, and levels of innovation than the local activities that are distributed more equally across regions.

In many countries for which comparable data are available, the employment share of the cluster sector is shrinking over time. This is driven by the higher productivity growth in this part of the economy and the growth of local services as economies develop. In the Baltic Sea Region, this trend is clearly visible in Iceland, Finland, Russia, and Sweden. In Latvia, Lithuania, Denmark, and Norway, the downward trend was partly reversed in the years prior to the crisis, when some cluster categories registered very fast growth. Germany, with its large manufacturing industry, is the only large economy that has registered a stable cluster sector employment share over the last decade.

Second, regions within the Baltic Sea Region are not particularly focused on cluster categories that across Europe have higher than average wages. Using the available national-level industry wage it is possible to calculate an average wage





Share of Total Employment, 1998-2008

Source: European Cluster Observatory (2012), author's analysis.

index for every European region, i.e. the average regional wage in the cluster sector it should have if all industries paid exactly the European average wage. In the Baltic Sea Region, Hamburg has a clear focus on such high-wage activities, followed by Stockholm, Schleswig-Holstein, Denmark, and the Southern Finnish region, including Helsinki. In the short term, most parts of the Region have to focus on high performance in activities that do

not deliver high wages automatically. In the longer term, they also have to enable structural change towards higher value-added activities in existing clusters and in related clusters.

The conditions for the emergence of strong cluster dynamics in the Baltic Sea Region are mixed. On the one hand, the general business environment conditions are often solid and more advanced skills and capabilities are available. On



Cluster Composition Effect Across European Regions

Source: European Cluster Observatory (2012), author's analysis.

Related and Supporting Industries

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Related and supporting industries	41	75	69	12	6	37	24	4	5	56	97
Local availability of specialized research and training services	38	60	56	8	10	29	20	5	6	28	77
Local availability of process machinery	43	47	50	17	6	46	38	11	2	27	62
Availability of latest technologies	33	72	37	3	4	9	6	1	24	87	115
Local supplier quality	33	58	45	7	16	27	32	4	5	41	115
State of cluster development	66	84	102	13	2	44	20	7	16	98	97
Extent of collaboration in clusters	72	88	110	10	2	42	30	5	11	100	97
Local supplier quantity	79	98	52	29	85	101	62	18	4	20	116

Baltic Sea Region Countries

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

the other hand, the limited size of the economies in the Region limits the breadth of suppliers that are located in the Region. Despite the good number of cluster and network programs in the Region (last year's Report provided a more in depth discussion), the state of cluster development and the level of collaboration within clusters is still perceived as limited in many parts of the Region.

Company Sophistication

Prosperity is ultimately created in companies. While the business environment conditions discussed above define the context in which companies operate, this is where the value creation happens. While this process occurs on its own in the market, it does not always happen quickly or without detours. Creating competitive companies takes time, often more time than reforming the business environment once the right type of political choices have been made.

Four countries from the Baltic Sea Region rank in the global top ten in terms of company sophistication and strategy. While this assessment is based on survey data, it is broadly confirmed by data on the use of modern management techniques and rankings of company performance. Four companies headquartered in the Baltic Sea Region are, for example, among the global top 100 firms in terms of R&D investments. Many more are ranked among the top 1000. While Sweden has most of truly large multinationals, Denmark in particular has a significant number of slightly smaller companies with global reach. A key challenge for countries like Poland and Russia is to transform some of their leading companies into globally competitive firms.

Indicator	EE	LV	LT	DK	FI	IS	NO	SE	GE	РО	RU
Company operations and strategy	34	65	46	4	5	25	23	2	7	59	110
Strategy and operational effectiveness	34	62	45	7	5	21	24	3	6	66	113
Firm-level technology absorption	25	91	55	9	12	6	11	1	15	99	127
Company spending on R&D	41	48	53	8	4	24	26	5	6	83	78
Nature of competitive advantage	52	36	60	1	4	33	28	13	6	73	114
Value chain breadth	59	61	46	14	8	39	54	3	4	56	118
Capacity for innovation	31	37	53	7	5	18	20	4	3	44	42
Production process sophistication	44	63	52	7	4	24	18	3	5	49	106
Extent of marketing	47	66	45	8	20	29	30	2	11	63	109
Degree of customer orientation	27	86	33	11	13	14	36	2	24	53	124
Organizational practices	28	66	48	1	4	27	13	2	17	56	103
Extent of staff training	49	57	63	2	6	22	9	5	24	55	78
Willingness to delegate authority	27	61	69	1	8	14	4	2	19	53	115
Extent of incentive compensation	24	70	27	33	11	73	61	16	7	57	76
Reliance on professional management	25	72	56	4	3	26	5	1	17	63	108
Internationalization of firms	52	77	45	6	7	20	21	4	5	65	91
Prevalence of foreign technology licensing	52	93	72	3	5	23	15	6	29	89	113
Control of international distribution	57	71	35	7	12	4	32	17	6	80	113
Extent of regional sales	37	72	52	2	11	36	23	7	9	58	59
Breadth of international markets	68	67	35	26	12	41	21	1	3	45	58

Company operations and strategy

Source: Unpublished data from the Global Competitiveness Report (2012), author's analysis.

Assessment

The competitiveness of the Baltic Sea Region remains solid and largely unchanged compared to previous years. At a time when many other countries in Europe have seen the robustness of their economic foundations seriously tested, this is no small achievement. The economic outcomes, in particular the level of prosperity reached, are well supported by current competitiveness fundamentals.

Company sophistication, innovation infrastructure, and institutions stick out as advantages, while the degree of actual market rivalry, the level of administrative efficiency, and some other dimensions of factor input condition are relative disadvantages.

More importantly, the data continue to reveal strong differences across the overall quality and particular pattern of competitiveness fundamentals across the Region. Many of the key observations from last year's Report still apply: for the Nordic countries, the challenge is related to the ways they can sustain and better leverage their existing positions as the global competitive environment changes. For the Baltic countries, the impressive performance in dealing with the 2009 crisis must now be followed by a more long term effort to put their economies on a sustainable growth track. Germany's northern regions benefit from the strong performance of the country's overall economy, but continue to lag behind their southern peers. Poland's Baltic regions have to define new strategies as Poland opens up more for regional economic development efforts. And for Russia's northwestern region, the challenge is largely the same as for the entire country: how to make headway in improving competitiveness without getting tripped up in the seemingly intractable institutional weaknesses of the Russian system.

Iceland's EU membership negotiations

Iceland applied for EU membership in July 2009, and the formal opening of the accession negotiations took place in July 2010. All in all, 33 policy areas need to be negotiated between Iceland and the 27 EU member states. The EEA agreement fully covers 10 and partially covers 11 policy areas, and in these Iceland is already mostly in line with EU requirements. The EEA agreement does not cover 12 policy areas, and there the preparatory work and negotiations are likely to take more time.

Including the fifth Iceland-EU meeting in June, about 17 policy areas will be opened, and 10 provisionally closed. By the end of 2012, an additional 10 or 11 policy areas could be opened and some more provisionally closed. The most challenging areas will be fisheries, agriculture, regional policy, and economic and monetary policy. Capital controls were re-imposed in Iceland in late 2008 as an integral part of an IMF-supported economic programme following a severe banking and currency crisis. In May 2012, Iceland and the European Commission agreed to establish an expert group to advise on the removal of Iceland's capital controls.

3. Summary

The Baltic Sea Region remains in a position that is much better than that of its southern European peers. The most prosperous economies lead the European Union on a wide range of indicators. The economies in the less advanced parts of the Region seem to be returning to a solid catch up path.

The short term outlook, however, is now difficult, and that is largely a matter of the external conditions the Baltic Sea Region is exposed to. The European sovereign debt crisis lingers on, creating uncertainty and the potential of a renewed slow-down in key markets for exporters from the Region. One challenge is the potential for a financial market contraction. Should the situation in Greece spiral out of control, there is a significant danger of the contagion affecting larger economies, especially Spain. While the underlying economic drivers were quite different - Spain had a housing bubble, but quite conservative fiscal policies, at least at the national level, and Greek public sector spending was clearly unsustainable - the financial markets now view their situations as similar. The other challenge is the impact of the reforms pushed through to convince markets that a similar crisis will not happen in the future. While there is broad agreement that public deficits have to be brought down, it is also quite clear that the severe budget cuts in many countries have a strongly contractionary effect. Where neither domestic private demand nor external demand provide much support, this can lead to a negative cycle of lower economic activity. Finding the right

combination between stabilising demand and making credible changes to achieve sustainable fiscal policies is the difficult task policy-makers are now facing.

The economies in the Baltic Sea Region are affected by the volatility on financial markets, but demand conditions are clearly much more healthy than in Europe overall. In the financial markets, even better capitalised Nordic banks are less likely to lend, as regulations are changing and their integration in global financial markets exposes them to the difficult conditions elsewhere. In some countries, especially Denmark, but also Germany, the financial system also has some home-grown weaknesses that affect the availability of credit. On the demand side, the generally better labour market performance has provided important support for domestic final demand. Exports in the trade-oriented economies of the Region also made a positive contribution. In such an environment, it is easier to implement more restrictive fiscal policies; tax revenues are more robust, social security spending is lower, and cuts in discretionary public spending have a less dramatic effect on overall economic activity.

Despite the more benevolent conditions within the Baltic Sea Region, the crisis in the rest of Europe poses serious risks to the economic development at the 'top of Europe'. The rest of Europe remains by far the Region's largest export market. Further volatility in European financial markets would not only affect credit conditions across the Baltic Sea Region, but could also lead to serious exchange rate realignments. While the countries in the Baltic Sea Region all have reasons to be proud of their stronger economic performance, they have a very real self-interest in seeing conditions in the rest of Europe fundamentally recover.

In the medium to longer term structural changes in the global economy, rather than business cycle concerns, are going to dominate. They key question is how these changes will affect the relationship between underlying patterns of competitiveness and the economic outcomes that they lead to. There are few signs that the Baltic Sea Region is losing competitiveness overall in any absolute sense. But challenges exist for individual countries: in the Baltic countries, Poland, and especially in Russia, competitiveness levels still have to raise significantly to support further prosperity catch up. Even advanced economies have important issues to consider, such as the education system in Sweden.

In addition, the same level of competitiveness might not suffice to support the current level of prosperity and prosperity growth: other economies are improving their competitiveness faster, and the overall economic benefits from narrow competi-

A new look at the innovation paradox

There is a clear perception in parts of the Baltic Sea Region that the considerable innovative capacity that exists is not being translated into sufficient economic value. While the instinctive response from policy makers has been to focus on improving the linkages between academia and business, the data presented here suggests a broader view on what drives these outcomes:

- First, while the science system has been strong traditionally (researchers call this a high 'stock of knowledge'), the quality of publications from authors located in the Region is only average, and the position of its leading research institutions not exceptional.
- Second, while there has always been a concern about low levels of business orientation in the Region's science system, the data on this being a driver of weak economic impact is more mixed: companies spend strongly on R&D, presumably a reflection of using scientific results. Survey responses on the quality of linkages are positive, but are much less encouraging when asking

tiveness strengths might be waning. Among the changes in the global economy, a few are particularly noticeable: first, the growth of global economic activity is shifting towards emerging economies and so-called south-south trade. This is natural, as these economies are catching up after implementing a wide range of reforms, transforming their competitiveness fundamentals. It creates new markets for companies from the Baltic Sea Region, but given geographic distance to these new markets, the economic health of the European neighbourhood will be much more important to Baltic Sea Region prosperity.

Second, globalisation and technological change continue to transform the organisation of value chains within and across companies. Companies outsource, connect with networks of suppliers and service providers in specific locations, and internationalise through an integrated mix of export and FDI activities. This exposes much narrower parts of the value chains to competition from other locations. For the Baltic Sea Region, this has the potential to reduce the amount and type of economic activity that stays in the Region as a consequence of its relatively high level of

about cluster dynamics. Linkages are not generally poor, but might need to be better aligned with the new patterns of open innovation in clusters and science-driven knowledge hubs.

 Finally, even where the science system is solid and well connected with firms, firms might leverage the knowledge they can tap into locally through economic activity abroad, not through creating operations and jobs domestically. The limited dynamism and size of local markets can be one of the barriers. Weak leading demand, including through innovation-driven procurement by governments, could be another.

Each one of these three perspectives seems somewhat plausible given the data presented here. Importantly, they all require quite different policy responses. An exclusive focus on pushing publicly funded research activities closer to the market seems at least too limited. A strong focus on global excellence in science and on the creation of sophisticated lead markets that can attract local pilot activities in development and production are equally important. competitiveness. The falling export shares relative to FDI are consistent with such a pattern. They indicate that, more quickly than ever before, companies from the Region are taking ideas generated in the Region to serve markets abroad through economic activities located elsewhere in the world.

Third, increasing global competition has the potential to change the relative importance of different dimensions of competitiveness. The Baltic Sea Region, in particular the economically central Nordic countries, have traditionally benefited from strong institutions that, in turn, allowed solid framework conditions to emerge, both in terms of input conditions, like skills and infrastructure, and in terms of open and competitive markets. For the Baltic countries and Poland, EU membership strengthened the quality of framework conditions much faster than institutional upgrading can usually happen. Many of these dimensions of competitiveness can, however, be matched by emerging economies if their political leaders pursue decisive reforms. The Baltic Sea Region has to build more complex competitive strengths to stay ahead. This requires an integrated view of how different dimensions of competitiveness interact to create a distinct positioning for allocation in competition with other parts of the world. It likely requires a willingness to engage in policy dialogue at the level of specific clusters or sectors, not just at the level of cross-cutting framework conditions.

What does all this imply for collaboration on competitiveness upgrading across the Baltic Sea Region? The analysis has repeatedly pointed out the significant heterogeneity of economic circumstances and underlying competitiveness across the Region. This heterogeneity provides significant 'benefits from trade' through the integration of economies with different relative strengths and weaknesses; the recent growth in exports from the Baltics to the Nordics is a sign of such trade happening. For collaboration on competitiveness upgrading, it suggests a focus on three categories of activities:

- Activities with significant cross-border externalities; this includes areas like market integration, large scale investments in transportation and science infrastructure, and networks of clusters. Successful action requires the co-ordination of activities at the level of the Region.
- Knowledge exchange and common learning; this includes areas like education policy, labour market policy, administrative reforms, anticorruption measures, and innovation policy. Here successful action needs to be driven by country-specific circumstances. The cultural proximity of neighbouring countries makes the experience across the Region an important source of knowledge and ideas.
- Shared knowledge infrastructure; the countries in the Baltic Sea Region are all exposed to the same changes in the global economy. They all face the need to devise fact-driven economic strategies that focus their policy actions on developing distinct competitive advantages for their country. A common competitiveness observatory and an exchange on how to organise policy design and implementation in this context could be an important area for collaboration across the Region.


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This section of the State of the Region Report describes the patterns of regional collaboration across the Baltic Sea Region. Following the tradition of past Reports, it profiles the activities and current plans of key regional organisations and networks based on material they have provided. It then comments on the further evolution of the EU Baltic Sea Region Process, including information on the progress made in some of the flagship projects.

2.

3.

Is it the best of times or the worst of times for collaboration in Europe? The economic crisis in different parts of the Union has dramatically increased the awareness of how connected the European economies are, especially within the Euro-zone. Market sentiments travel quickly from one part of Europe to another. And while there is no legal commitment to support EU member countries in financial trouble, the political commitment is strong. If the current crisis triggers an institutional strengthening of integration, which so far remains relatively weak in the area of fiscal policy, it would have led to a step change in European integration.

At the same time, the public sentiment towards European collaboration is challenged and the power of European institutions seems to be weakening relative to that of member states. While general support for the European Union and the Euro remains solid, the specifics of how financial support is being provided and under what conditions is unpopular in both the countries that put up and that receive the support. The critical decisions are increasingly taken among a few heads of government, before then being acknowledged in the European Council. Overall, collaboration in the EU context remains a discussion about trade-offs, package deals, common rules, and penalties for those that do not follow them.

In the Baltic Sea Region, the context for collaboration remains fundamentally different. The political stakes are much lower, and the entire collaboration project more driven by a focus on practical benefits. The focus is on activities to upgrade the microeconomic foundations of competitiveness, not coordinate macroeconomic policy or provide fiscal support. Collaboration is driven by the voluntary opting-in of those entities that are interested to engage in a specific topic or project, not by the adherence to rules. Collaboration takes place where common action can add clear value. This is the case in areas where countries can learn from the experience of neighbors tackling similar problems, where policy actions or investments have strong crossborder effects, or where national borders are not well aligned with the boundaries of integrated markets.

While the context for collaboration in Europe and in the Baltic Sea Region is different, the two are intimately connected. Politically, the European Union provides much of the structure in which Baltic Sea Region collaboration takes place. Organisationally, the EU Baltic Sea Region Strategy and many other EU policy tools, from structural funds to maritime policy and neighborhood policy, are central instruments in Baltic Sea Region collaboration. And economically, the state of the European economies overall has deep repercussions on the state of the Baltic Sea Region economies and the context in which they collaborate.

This part of the 2012 Report gives an update on the state of collaboration on competitiveness upgrading across the Baltic Sea Region.The first section provides an overview of activities that have been pursued by regional organisations over the last 12 months. The second section tracks the evolution of the EU Baltic Sea Region strategy process, commenting on some of the proposals recently made by the EU Commission.

1. Regional networks and initiatives

This section provides an overview on the activities that have been pursued by key regional organisations over the last year through individual and collaborative initiatives. It is based on material provided by the organisations, giving them a chance to communicate their goals and efforts. Given that this year's State of the Region Report is launched already a few months earlier than usual, there is some overlap with the material covered last year. We have decided to keep some of that material in to allow for new readers to get an overall impression of the organisations' activities, not just a snapshot of the last few months.

1.1 Governmental organisations



The **Council of the Baltic Sea States** (CBSS; www. cbss.org) was created in 1992. CBSS provides an intergovernmental platform for regional cooperation between the eleven countries of the Baltic

Sea Region as well as the European Commission. It works through network and project based activities and aims to improve the competitiveness of the region. Environment and sustainability, economic development, energy, education and culture, and civil security and the human dimension are the five priority areas for the organisation.

Germany, one of the driving forces behind the Council's creation, holds the CBSS Presidency for 2011-2012. The other founder, Denmark currently holds the rotating Presidency of the Council of the European Union for the first six months of 2012. Fresh off the back of the 17th Ministerial Session in February 2012, the CBSS celebrated 20 years since establishment in conjunction with an Extraordinary Ministerial Session on Energy Security in February. This was followed by Baltic Sea Days 23-27 April in Berlin with numerous events and a gathering hosted by the German Federal President. The final event of the German Presidency was the 9th Baltic Sea States Summit held in Stralsund in May hosted by the German Federal Chancellor.

Germany's Presidency Priorities for the year have been firstly centered on Energy Security – dealing with transparency, legal protection and confidence building, diversification of suppliers and buyers, the highest standards of nuclear safety and of the marine environment. Secondly Germany has prioritized Modernising the South-Eastern Baltic Region to overcome disparities between the northwestern and southeastern Baltic Region in terms of economy and infrastructure. The CBSS is working on a modernisation program that places special emphasis on Kaliningrad and its surrounding area called SEBA.

Building on the recent reform of the CBSS, the Germany Presidency is devoting special attention to "coherence", i.e. the improvement of cooperation between the various actors in Baltic Sea Cooperation, and the gradually emerging "division of labor" between them. One of the major developments that have had an impact on the structure and operations of the CBSS is the EU Strategy for the Baltic Sea Region. The CBSS and its various expert groups and network bodies are increasingly utilized as facilitators of cooperation among EU and non-EU Member States for some of the strategy's actions - notably in the fields of sustainable development, economic development, and civil security.

In November 2011 the CBSS Secretariat signed a technical support agreement and started acting on behalf of the Priority Area Coordinator of the European Union Strategy for the Baltic Sea Region (EUSBSR) Priority Area 14. In January 2012 the CBSS Secretariat became Lead Partner of the EUSBSR Flagship project 14.3 on Macro-Regional Risk Scenarios and Gaps Identification. The Secretariat is responsible for the management and reporting to the European Commission, assisted by the Swedish Institute. The Secretariat also functions as Lead Partner in coordination and communication. The first meeting of the project partners took place under the framework of the BSR Civil Protection Senior Expert Meeting (1-2 February, 2012) in Stockholm. The project has four main task areas focusing on flooding, forest fires, radiological matter and macro-regional risk analysis. The expertise of the CBSS Expert Group on Nuclear and Radiation Safety is also crucial here amongst other entities. The CBSS will work closely with the Danish Defense Command as Priority Area Coordinator for 14 of the EU BSR Strategy and will be responsible for communication.

One of the strengths of the CBSS is the close family of civil security networks - one of which consists of Baltic Sea Region Border Guards. Last year CBSS worked together on a feasibility project to enhance the cooperation. Baltic Sea Maritime Functionalities (BSMF) is a flagship project of the EUSBSR priority area 13 - even making a short film at last year's BDF Summit and 2nd EUSBSR Annual Forum in Gdansk, Poland. The project aims to develop information sharing environment for the maritime domain in the coastal countries of the Baltic Sea Region. The idea is to connect existing concepts and to harmonise them with already functioning operations of national entities. The project also presents some good practices in the management of the national surveillance entities and their work to address the need of further cooperation in increasing an awareness of safety, security and defense situation in the Baltic Sea Region.

During the recent Ministerial Session at Plön, the Modernisation Partnership for the South Eastern Baltic Area (SEBA), a two-year framework project supported by the present German and the incoming Russian Presidencies, was presented. SEBA is intended to facilitate modernisation through regional cooperation in areas such as tourism, youth exchange, sustainable development, higher education and private-public partnerships (PPP). A SEBA Project Coordinator has already been employed in Kaliningrad in close cooperation with the Office of the Nordic Council of Ministers in the city.

The regional cooperation components of the Strategy for Socio-Economic Development of the North-West Federal District of the Russian Federation will also play a role in the future, especially as Russia will take over the Presidency of the CBSS on July 1st 2012.

The Expert Group on Maritime Policy was part of a dialogue with other Baltic Sea Organisations with Maritime policy competence as well as held a Workshop on Clean Shipping.

The Baltic Sea Labour Network Project, EU BSR Flagship Project in Priority 8.7 (BSLN), where the CBSS participated in the steering committee, contributed to the promotion of a pan-Baltic labor network. It aimed to enhance awareness on the importance of labor market issues, and aid the development of the transnational dimension in labor market policies with joint innovative strategies, concepts and actions that address mobility and demographic changes. Since January 2012 the successor of the BSLN project, the Baltic Sea Labour Forum, has been given Secretarial function by the CBSS Secretariat and contributes to its EU financed project Forum Social Dialogue BSR. The first roundtable was held in November 2011.

The CBSS has also continued further implementing the EuroFaculty Project in Pskov (2007-2011), which has now entered into its second phase (2012-2014). The aim of the first project was to upgrade university education in Business Economics at two institutions of higher education, the Pskov State Polytechnic Institute and the Pskov Volny Institute. In the second phase this will continue in the new Pskov State University complex through curriculum development and through new teaching and examination methods, all aiming at bringing economic studies at these institutions in line with recognized international standards.

SECTION B

The CBSS Expert Group on Sustainable Development– Baltic 21 moving forward with its Strategy has 7 funded Lighthouse Projects of which 5 are within EUSBSR Flagship projects.

- Agora 2.0 uses heritage tourism based on principles of sustainability to strengthen the Region's identity (www.agora2-toruism.net)
- BaltAdapt develops a Baltic Sea Region-wide climate change adaptation strategy (www. baltadapt.eu)
- Bioenergy Promotion 2 project the work, started during the Bioenergy Promotionproject, will be continued in the framework of the "extension stage" instrument of the Baltic Sea Region Programme (http://www. bioenergypromotion.net/project/news/bioenergy-promotion-2-2013-from-strategies-toactivities/?searchterm=None)
- EcoVillages aims at helping our society to get closer to nature again and to develop new ways of living together on the land in a genuinely more sustainable way (http://gen-europe. org/activities/projects/ecovillages/index.htm)
- Baltic Green Public Procurement focuses on capacity-building and pilot implementation of innovative and Eco-efficient approaches towards GPP. Baltic GPP is a project within the flagship 8.4 Network on GPP within the EUSBSR. Link to the Lead partner: http:// www.msr.se/en/

Finally under the field of Civil Security and the Human Dimension, the Baltic Sea Task Force on Organized Crime (BSTF-OC), affiliated to the CBSS, is coordinating the EUSBSR Flagship project 15.3. The CBSS Task Force against Trafficking in Human Beings (TF-THB) will be working with the Lead partner in Lithuania on the protection and assistance of victims of trafficking under 15.5.

The strategic strength of the priority area of Civil Security and the Human Dimension stems from the large potential of cross-cooperation of the various networks and Task Forces within the priority area either integrated in the CBSS or affiliated to the organisation.

The Task Force against Trafficking in Human Beings (TF-THB) for example presented at the Prosecutors Network, gave a presentation at a meeting of the BSRBCC Baltic Border Committee and was subsequently asked to participate in their analytical seminar on trafficking in human beings with a focus on ferries and cruise liners. It has held a workshop with the Baltic Sea Labor Network and participated in hearings of the Baltic Sea Parliamentary Conference. In spring the Expert Group for cooperation on Children at Risk and the TF-THB had a joint meeting to discuss potential cooperation in assisting young adults. The TF-THB is currently focused on developing the ADSTRINGO project, a follow up to the recently finalized DEFLECT project that was aimed to enhance local capacity to counter trafficking in human beings for forced labor and trafficking for Labor Exploitation.

The main current focus of the Expert Group for Cooperation on Children at Risk (EGCC) and the Children at Risk Unit that services the Expert Group is the finalization of its project ROBERT -Risk-taking Online Behavior Empowerment Through Research and Training, which focuses on understanding of how young people come to harm in the online world in order to devise prevention programmes that correctly target situations that may lead to harm and AudTrain. This is an adaptation and revision of the only existing training of staff auditing child residential care. The EGCCs new project focuses on protection of children in forced begging and exploited in criminality and the prosecution of those organizing the trafficking behind it.



The Nordic Council of Ministers (NCM; www. norden.org) is the platform for inter-governmental cooperation between the Nordic countries. NCM has a broad range of activities within 11 different Ministerial Councils. Traditionally, the areas of Education & Research, Culture, and Innovation cover over half of the total budget of about 1 000 million Danish kroner yearly (approx. 130 million Euros). Over the last few years, collaboration on competitiveness issues, in particular research and innovation, has become an ever more prominent part of the agenda.

A high priority is the Nordic cooperation effort to better meet the challenges and opportunities of globalisation. Since the Prime Ministers identified globalisation in 2007 as a new priority, a total of 22 initiatives have been launched and most of them have been completed. These initiatives are intended to develop the Nordic model, increase competitiveness, and to promote the Region as a pioneer in tackling globalisation. For example, the Nordic countries take global responsibility for the climate, the environment and energy, not least through the development of a unique sustainable energy system, and focus on the construction and transport sectors. Nordic culture is given more focus, for example by promoting creative industries. The largest ever joint venture in Nordic research and innovation has been launched. At the same time there is extra attention on promoting freedom of movement for individuals and business between the countries. In addition, extra efforts are being made for new innovative measures for health and better ways of including vulnerable groups in the workforce. Totally 340 MDKK has been allocated from the NCM budget to the Globalisation initiatives in the period 2008-2012 and at least the same amount have been allocated from other financiers.

After the Nordic globalisation forum in October 2011 the Nordic prime ministers commissioned the ministerial councils to develop a number of tangible areas in which the Nordic countries can work together to generate green growth and prosperity. The prime ministers' proposal priorities Nordic test centres for green solutions; education, training and research for green growth; flexible consumption of electricity; green-technology norms and standards; green procurement in the public sector; techniques and methods for waste treatment; the integration of environmental and climate considerations into development aid, and funding for green investment and companies. The Secretary General of the Nordic Council of Ministers will submit the first progress report back to them at their annual summer meeting in 2012.

While the NCM focuses on collaboration among the Nordic countries, it works very actively with its neighbors in the Baltic Sea Region. The areas of priority in the cooperation with Estonia, Latvia, Lithuania and with Northwest Russia are education, research, innovation, environment, climate, and energy issues. NCM is strongly committed to the Northern Dimension and contributes actively to the implementation of the Action Plan for the EU Baltic Sea Strategy. Both policies are integrated parts and priorities of the policy of NCM for the cooperation with its' neighbors in the Baltic Sea regions and are seen as important frameworks for making the North of Europe 'the top of Europe'. In addition, the NCM's cooperation with Poland and Germany is being developed.

The NCM has taken the lead in several flagship projects of the EU Baltic Sea Region strategy and is keeping the strategy high on the political agenda. The flagship projects led by NCM are focused on cooperation in the areas of forestry, plant genetic resources and veterinary contingency planning. A feasibility study on infrastructure for the free movement of knowledge (the fifth freedom) has been carried out and a flagship project in this field is now being prepared. In other areas of the Action Plan, NCM is discussing with relevant partners the development of additional flagship projects and how the NCM's regional network and experiences could be utilized, for instance on bioenergy and multilevel governance. In addition, NCM plays an active role in involving Russian partners in the projects, for instance in a project on cross-border marine pollution response cooperation. It is our hope that this work will both strengthen the Nordic region and the Baltic Sea Region as a whole.



VASAB is an intergovernmental co-operation providing a ministerial platform and expert network for 11 Baltic Sea Region countries

to coordinate spatial planning and development - the EU countries Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden as well as Norway, Russia, and Belarus. It is guided by the conference of ministers and steered by the Committee on Spatial Planning and Development of the Baltic Sea Region where German countries adjacent to the Baltic Sea and Russian North West Oblasts and city of St. Petersburg are also represented. Germany is the current chairing country of VASAB. More information can be found at www.vasab.org

On 19 March 2012, VASAB Committee on Spatial Planning and Development of the Baltic Sea Region has acknowledged the BaltSeaPlan Vision 2030. VASAB finds that BaltSeaPlanVision 2030 is an important input towards common understanding of maritime spatial planning (MSP) in the Baltic Sea Region (BSR). Based on the assumption that MSP will be established practice in 2030, the Vision lays out a possible roadmap on the steps to be taken between now and 2030 in order to achieve a jointly agreed framework on MSP in the Baltic Sea Region.

With a view to likely future developments, the "BaltSeaPlan Vision 2030 – Towards the sustainable planning of Baltic Sea Space" shows the transnational and spatially relevant elements that are inherent in many topics. Four topics were identified that require a common approach: 1) a healthy marine environment, 2) a coherent pan-Baltic energy policy, 3) safe, clean and efficient maritime transport and 4) sustainable fisheries and aquaculture. The development of these topics affects the entire Baltic Sea Region; moreover, they are driven by international policy objectives.

A key lesson of the Vision 2030 is therefore that maritime spatial planners and the stakeholders involved in the process need to regard the Baltic Sea as one planning space and ecosystem. Moreover, the vision puts forward "spatial efficiency" and "spatial connectivity" as guiding principles for each planning exercise. In other words: space should be used as sparingly as possible, with multiple use of sea space promoted wherever uses are compatible with one another and the environment. Also, connections need to be ensured between the different elements and structures of sea use, resulting in a coherent concept from the transnational all the way to the local level.

In order to turn it into a living practice, it is not only necessary that all BSR states establish the appropriate structures that allow them to successfully use MSP. The vision also suggests to the BSR states to agree on common objectives and targets for Baltic Sea space and suggests establishing a transnational MSP coordinating body, which ensures adequate data management, the development of MSP methods as well as tailored monitoring.

This BaltSeaPlan Vision results from a work of a partnership of 14 partners from 7 Baltic Sea Region countries in the INTERREG IVB BSR project "BaltSeaPlan – Planning the future of the Baltic Sea - 2009-2012". This project was part-financed by the European Union under the European Regional Development Fund.



The Baltic Sea States Sub-regional Co-operation (BSSSC) is a political network for regional authorities in the Baltic Sea Region. The BSSSC

co-operates closely with other Baltic Sea and European organisations in order to promote the common interests of the regions around the Baltic Sea towards national authorities, EU institutions and others. In 2011-2012 the chairmanship of BSSSC is held by the West Pomeranian Region, Poland with the main priorities: the EU Strategy for the Baltic Sea Region, the Cohesion policy and the Maritime policy.

BSSSC has been an active player in the development of EU Baltic Sea Region strategy and in the implementation process of the strategy. The BSSSC member regions actively take part in the strategy as the priority area coordinators, the project leaders and the project coordinators, and also by commenting the process of the Strategy in order to ensure better adjustment of the Strategy to needs and expectations of the regions all over the BSR.

At the Baltic Development Summit in Gdańsk, Poland, organized along the Second Annual Forum of the Strategy for the Baltic Sea Region, the BSSSC presented the regional approach and views towards the implementation of the Strategy. Also other occasions - such as the Open Days in Brussels, Conference of Polish regions The Strategy for the Baltic Sea Region -Future, Innovation and Transfer of Knowledge in Brussels, the 19th BSSSC Annual Conference in Szczecin in October 2011 were used as a tool for promoting and lobbying the regional view on the EUSBSR. The key messages of the BSSSC statements concerning the Strategy have been included in the Joint position on the implementation of the EU Strategy for the Baltic Sea Region adopted by the Baltic Sea States Subregional Cooperation, B7 Baltic Islands Network, Baltic Development Forum, CPMR Baltic Sea Commission, Euroregion Baltic and Union of the Baltic Cities, in April 2012. The main recommendations are as follows:

All actors of governance should be considered while facilitating EUSBSR national coordination committees. In order to develop a real multilevel governance system, there should be more focus on involvement of these actors in the overall design and review as well as in each priority areas (where applicable) and in the projects. The Strategy objectives should be taken into consideration while designing of the European Territorial Cooperation Programs for 2014-2020. In the Cohesion Policy for the next period, the role of the Strategy should be clarified when it comes to the regional Structural Funds Programs.Baltic Sea Region networks involving relevant regional partners from the third countries, in particular the Russian Federation and Norway should be encouraged and supported in the process. Implementation rules for the European Territorial Cooperation and the forthcoming European Neighbourhood Instrument (ENI) programs should be harmonised in order to facilitate the cooperation of partners from the third countries with regard to the shared objectives. All information related to the reviewing of the EUSBSR and updating of its Action Plan should be easily attainable in order to make the process more transparent, which in turn will result in a better involvement of local and regional actors in developing and implementing the Strategy and Action Plan.Information should be made available on-line for the stakeholders involved in the EU-BSR, including access to documents, publication of newsletters and news of important stakeholder meetings at all levels (MS, EU, sub-regional and NGO etc.).

The new information strategy should be rethought in such a way that it provides easy access for all kinds of potential actors to contribute to the EUSBSR implementation. In addition, local organisations and/or groups should be offered manageable opportunities to support concrete targets in some key areas such as environment. This will broaden the scope of participation and help to promote the common goals.

The task of branding the Baltic Sea Region should be continued and conducted both internally towards the "Baltic Sea Region citizen" and externally towards the outside world. This process should involve a variety of relevant actors, among others branding specialists and tourist organisations.Regardless of the political recommendations the BSSSC Baltic Sea States Subregional Cooperation (BSSSC) recognizes the need for developing practical tools for multilevel governance in the Baltic Sea Region.

The BSSSC Working Group on Maritime Policy (WGMP) contributes to develop multilevel governance in the field of maritime affairs the WGMP organized a joint event together with the CBSS Expert Group on Maritime Policy and the Working Group on Integrated Maritime Policy of the Baltic Sea Parliamentary Conference (BSPC) in the framework of the official program of the European Maritime Day on 20 May 2011 in Gdansk. The title of the session was "Common vision - linking efforts - strengthening visibility" and is at the same time the agenda of the newborn cooperation. The three working groups stressed the value of cooperation between the national, the regional and the parliamentary level in maritime affairs. The common goal is to contribute to the development of the BSR into Europe's maritime best practice region with bundled forces and coordinated aims and activities. The three bodies expressed their will to have a regular dialogue and to aim at involving further Baltic Sea organisations in the dialogue. A first proposal for further joint activities has been coordinated between the parties. The three working groups also contribute to the European Maritime Day in Gothenburg 2012.

The BSSSCs WGMP five-point action plan -Clean Baltic Shipping- the proposal for a flagship project within the Action Plan of the EUSBSR contributes to the target of turning the Baltic Sea region into Europe's maritime best practice region by 2015.

The BSSSC became an associated partner of the project, which is a response of regions towards the deficit of power for especially regional and local levels to play a strong and active role in implementation of the EUSBSR. The project INVOLVE looks to establish a dialogue amongst actors at all levels of governance in the Baltic Sea Region (a Baltic Dialogue) in order to consolidate findings and disseminate good methods and experiences. The aim of this dialogue is to ensure the involvement of all levels of governance, including the European Commission, national ministries and authorities, local/regional authorities, macroregional organisations, financial institutions and HELCOM. A second component is to work with showcases building on the regions' special field of expertise, spatial (strategic) planning and water management, and through this work establish good examples and methods that allow generalisation. A third component is a "Local signal panel" enabling the Priority Areas and Flagship Projects the possibility to reach out and get input from all levels.



SECTION B

The Union of the Baltic Cities (UBC; www.ubc. net) is a network of over 100 cities that collaborate on a wide range of political, economic, social, cultural, and environmental issues. UBC promotes the

exchange of know-how and experiences between the cities through seminars, courses, and publications. Its many projects are carried out through thirteen different Working Commissions. UBC has over the last years implemented its Strategy 2010-2015 adopted in 2009. UBC strategy task forces on communication/marketing and on expert exchange were established. A Commission on Local Safety has been created. The UBC consolidated its network, launched new projects and political initiatives, and organized a number of conferences, seminars and events.

One of the main strategic aims of the UBC is to represent cities in the EU Baltic Sea Region strategy process. In 2011, the UBC presented a joint position paper with BSSSC and B7 on the European Union budget for Cohesion Policy 2014-2020, emphasizing the fact that the EU strategy for the Baltic Sea needs to be backed up financially. The UBC and UBC member cities participated actively in the EU Baltic Sea Region process, including the first Annual Forum of the EU Strategy for the Baltic Sea region in Tallinn in October 2010. The UBC is actively involved in a number of projects of the EU Baltic Sea Region strategy, including the following flagship projects:

- "Anticipate regional and local impacts of climate change through research" (BALTA-DAPT) with Umeå as a UBC representative
- "Promote young entrepreneurs" with the Commissions on Education and Business Cooperation as UBC representatives
- "Make the Baltic Sea an Eco-efficient region" (EcoRegion) with the Commission on Environment as a UBC representative
- "Complete the agreed priority transport infrastructures" with Liepaja as a UBC representative
- "Create a network of sustainable cities and villages" with the Commission on Environment as a UBC representative
- InnoShip with the Commission on Environment as a UBC representative

The UBC has been working to strengthen the cooperation with other Baltic organisations, namely BaltMet and Baltic Development Forum. To strengthen the member city participation in the UBC activities, the creation of a new political platform of the local authorities, the Baltic Sea Urban Forum, is under development.

The UBC Executive Board adopted at its meeting in Brussels on 14 February 2012 the UBC Communication and Marketing Strategy. The Strategy shall help the organisation to foster an efficient exchange and to make its voice heard in the BSR, Europe and beyond. The document defines the goals, target groups, main stakeholders, messages to be communicated, channels to be used, etc.

Baltic Metropoles

The Baltic Metropoles Network (BaltMet; www. baltmet.org) represents ten capitals and large metropolitan cities from around the Baltic Sea region. In the years 2011-2012, the Chairmanship rests with the City of Warsaw. In the previous years, 2009-2010, the works of the network were supervised by the City of Stockholm. The main goal of the network is to promote innovativeness and competitiveness in the Baltic Sea region by engaging cities, as well as academic and business partners, into close cooperation.

BaltMet's 2011-2012 action plan identifies four areas as strategic priorities: Innovation as a source of prosperity; Competitiveness and cohesion; Accessibility and logistics, and Sustainable development in a healthy/safe environment. In line with the Baltic Sea strategy, BaltMet has initiated various projects in the past few years. Partners from BaltMet and from outside the network have realized the project Creative Metropoles¹, which has showcased the key elements of what makes a well-functioning, focused, flexible, and efficient public support system for creative industries in the 11 participating cities. The project has focused on experience exchange among the involved municipalities in order to increase understanding of the elected decision-makers and the executive level about creative industries - their role in the overall economy, how they work - as well as increase awareness about different policies and approaches that have a positive impact on the growth and development of the creative sector. The results of the project have been e.g. a portfolio of best practices in the field, in all partner cities, support strategies for the CI in partner cities, emergence of new cooperation locally and among partners or increased knowledge about the sector. Most project partners, together with new cities, have begun in 2012 a follow-up project called Cross-Innovation, focusing on enabling cross-innovations and creative spillovers between the creative sector and other industries.

Another significant project connected with innovativeness has been BaSIC - Baltic Sea Inno-NetCentres.² BaSIC identified, selected, trained and coached more than 200 fast-growing innovative SMEs, aiming at providing them harmonised access to markets and enabling their access to finance for internationalisation and growth. The project has furthered the regional links among enterprise support centres, science parks, and clusters in the Baltic Sea region metropolises. The networking and the developed services will be expanded to new partners and to other regions. The main activities and results of BaSIC are the following: provision of Market information instruments regarding legal aspects, tax regulations, company 1 www.creativemetropoles.eu

2 www.basic-net.eu

2 www.bdsic-net.eu.

forms, etc. for companies that want to settle in the Baltic Sea regions, provision of technology information by developing cluster reports showing the potential in the BSR markets, organisation of four Road Shows in order to promote the project and to reach a better visibility of the hosting regions, organisation of Brokerage events (b2b meetings) as well as Cluster events, especially for companies in order to find cooperation partners, strengthening twinning activities of partner regions and establishment of Market Access Points (MAP) one per each BSR region - for piloting fast growth innovation companies into new markets. The project consortium consisted of leading science parks, incubators and innovation facilitators, having a strong support by the 10 Baltic Sea Capital Regions.

BaltMet Promo, realized in the scope of the 2nd focus area, was a major flagship project aimed at contributing to the regional branding and identity building. Helsinki launched preparations for the project in the autumn of 2007. In September 2009, the project was granted EU funding of EUR 2.8 million from the BSR Program for a two-year pilot phase, 2010-2011. The project was carried out in partnership of the cities of Helsinki, Berlin, Riga, Vilnius and Warsaw, together with their local partners from development agencies and universities. The project was supported by associate organisations from Copenhagen, Malmö, Oslo, St. Petersburg and Tallinn. In addition, 25 other associate organisations - including Baltic Sea Region networks, national investment and tourism promotion agencies and cultural institutions - have expressed their interest in supporting the project. BaltMet Promo coordinated horizontal activities related to "regional identity building" as part of the EU Strategy for the BSR. This means in practice working for the project goals and finding actively synergies with other regional stakeholders. The collaborative working method of BaltMet Promo³ was based on multilevel governance between actors of the Commission, state level and local level; and on the involvement of private actors, both people and businesses. The working method can become a model to be applied also in other European co-operation cases. A follow-up project - ONE BSR lead by Helsinki, also aiming at increasing the region's competitive-

³ www.baltmetpromo.net

ness by branding it as one identity and building identity - will begin in 2012.

Since 2010, BaltMet partners carry out, in the scope of the 3rd focus area, the project Rail Baltica Growth Corridor.⁴ The project aims to improve the competitiveness and accessibility of cities and regions in the Eastern Baltic Sea Region through increased interaction and cooperation. RBGC creates a cooperation and transport service platform that observes the needs of both transport sector and customers in line with the green growth corridor principles. RBGC brings benefits for cities and regions, transport sector and citizens by improving the competitiveness and economic potential of the Region. Project partnership consists of 21 Partners representing cities, regional authorities, and research institutes, as well as e.g. ministries and national railways as associated organisations. RBGC is linked to the wider concept of Rail Baltica – a railway that will connect the Eastern Baltic Sea Region from north to south branching from St. Petersburg, Helsinki, Tallinn, Riga, Kaunas, and Warsaw to Berlin. The Region gains new economic potential as the major business hubs will be connected with North-West Russia and the EU core.

Carried out in the scope of the 4th focus area, Clean Baltic Sea Shipping aims at actively reducing the negative impact on the environment caused by an increase in sea traffic in the Baltic Sea especially from cruise vessels. The project is formally borne by a consortium of 21 partners representing stakeholders along the triple helix concept, i.e. local and regional governments, port organisations, universities and NGOs. The partnership covers political interests, strategic needs for harmonisation, technical generalisation and pilot projects as well as the need for supporting investigations.



Euroregion Baltic (ERB, www.euroregionbaltic.eu) is a platform for cross-border cooperation of eight regions from Denmark, Lithuania, Poland, Russia and Sweden in the southeast of

the Baltic Sea Region. The ERB was the first Euroregion to have formally included a partner from the Russian Federation.

4 www.rbgc.eu

Euroregion Baltic has implemented strategic initiatives involving all of its member partners and aiming at the sustainable development of the regions involved in the cooperation. In 2005 ERB partners adopted a long-term development strategy based on four strategic priorities: economic and social development, implementation of the EU policies on environmental protection and promotion of renewable energy sources, as well as improving the infrastructures providing better access to the Trans European transport networks. In 2010 ERB stakeholders reviewed the cooperation priorities, which resulted in the adoption of the ERB 2020 Agenda under implementation and monitoring ever since.

The Euroregion Baltic has taken active part in the implementation of the EU Strategy for the Baltic Sea Region (EUSBSR) from the outset. Since the 2nd EUSBSR Forum last October ERB has continued its support to Water Users Partnerships around the ERB area, i.e. local partnerships involving municipal authorities, environmental protection services, and industrial companies located within the river's basin, water management systems, NGOS, agricultural companies, fishing and water sports organisations, teachers, professors and students. The work takes place within the framework of the MOMENT UP project which in 2012 implements storm water treatment investments in the pilot area of Rivers Akmena and Dane in Lithuania, develops techniques for increasing water depths and water sanitation in Kalmar in the pilot area of the Snarje Stream in Sweden, and investigates the potential of water quantity management in the Grisstream catchment area in the pilot area of River Bruatorp in Sweden;

Euroregion Baltic has taken active role in the preparation of the application of the Involve project submitted to the 5th call of the Baltic Sea Region Programme 2007 – 2013, specifically designed to address the EUSBSR topics of multi-level governance and Baltic Sea Region identity. The project background is a commission to the Regional Councils in Kalmar and Västerbotten to act as Horizontal Action leaders for "Strengthening multilevel governance, place-based spatial planning and sustainable development" in the Action Plan of the EU Strategy for the Baltic Sea Region.

The EU Baltic Sea Region Programme 2007-2013 (the Programme; www.eu.baltic.net) was set up as one of 13 European transnational cooperation programs. The strategic objective of the Programme is to strengthen the development of a sustainable, competitive and territorially integrated Baltic Sea Region by connecting potentials over the borders.

The Baltic Sea Region Programme has committed most of its currently available funds. The majority of its projects are in the mid stage of their implementation. After four calls of applications 220 million EUR have been allocated to 80 transnational cooperation projects. The first 25 projects have finalized their activities. In the 5th and final call of the Programme 2-3 further projects will be selected.

The Programme with its unique character covering the overall Baltic Sea has played a major role in supporting the initial implementation phase of the EU Baltic Sea Region Strategy and Action Plan. By their nature, most of the projects co-financed by the Programme contribute to one of the priority areas addressed by the EU Strategy. In the two previous calls of the Programme special focus was given to the flagship projects of the Strategy. The final call was open for projects contributing to two horizontal actions of the Action Plan; branding the region and multi-level governance. Currently the Programme is co-financing 17 flagship projects set out in the Action Plan. In addition, it is co-financing 25 projects that are a part of larger flagship projects and two horizontal actions of the Action Plan.

The flagship projects co-funded by the Programme are dealing with topics like innovations in SMEs for sustainable production, e-health, e-navigation, pollution of Baltic Sea waters and bioenergy. The limited Programme resources do not allow for a contribution to major investments described in the EU Strategy. Instead the projects funded by the Programme often present a preparatory phase or supporting actions for such investments. The flagship project COHIBA for example identified 11 sources of hazardous substances contaminating the Baltic Sea waters and proposed measures to mitigate the effects. The flagship project EfficientSea developed prototypes for e-Navigation services feeding into development of a future global standard for e-Navigation within the International Maritime Organisation. As a strategic action of the EU Strategy the JOSEFIN project developed a system of bank guarantees for credits offered to entrepreneurs, which shares the risk between a bank and other financial institutions. Such guarantee funds are so far established in five Baltic Sea Region countries.

A renewed Cohesion Policy could make better use of this already existing transnational financial instrument as one of the tools to implement the actions of the EU Strategy. The preparation of the next funding period post-2013 has already started.



Following a government decision, on January 1, 2012, the Sida Baltic Sea Unit merged with units of the Swedish Institute

(SI) working with Baltic Sea Region activities. The aim is to coordinate and strengthen Sweden's overall work in the region. The new organisation at the Swedish Institute will be Sweden's expert authority on international cooperation in the Baltic Sea Region. It will, as one of several Swedish government agencies, facilitate the implementation of the EU Strategy for the Baltic Sea Region. The Baltic Sea unit has a staff of 20 people in Visby and Stockholm. The total annual budget for project financing is approximately 90 million SEK (EUR 10m).

The new organisation will continue to support a wide range of collaborative initiatives in the Baltic Sea Region. Support will also be provided for regional cooperation with the EU's Eastern Partnership countries. The new organisation will allow for an approach that promotes synergies and cross-sector solutions. It will also facilitate implementation of the EU Strategy for the Baltic Sea Region and participate as an active partner in strategic flagship projects. The objective of the SI Baltic Sea Unit's work in the Baltic Sea Region will be to:

- Facilitate an enhanced partnership between Sweden and other countries around the Baltic Sea
- Actively contribute to developing relationships and partnerships that promote economically, environmentally and socially sustainable growth and development in the Baltic Region and its vicinity
- Increase the participation of Swedish stakeholders in Baltic Sea Region cooperation in these priority areas
- Assist and complement the activities of Swedish stakeholders in the EU Strategy for the Baltic Sea Region

• Provide additional support for regional cooperation under the EU's Eastern Partnership

The SI Baltic Sea Unit participates as a partner in a number of EU Baltic Sea Region strategy

An intergovernmental network and the EU Baltic Sea Region Strategy-HELCOM

The Helsinki Commission, or HELCOM,¹ works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental cooperation between Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden. HELCOM naturally plays a critical role across many of the EU Baltic Sea Region Strategy projects related to the environment. The following list of flagship projects with significant HELCOM involvement provides a short impression of the many ways in which HELCOM has engaged with the Baltic Sea Region Strategy:

- Flagship project 2.1 'Create marine protected areas', deals with the potentially conflicting demands of fisheries and marine protection. The HELCOM BALTFIMPA project aims to assist HELCOM Contracting States (to comply with their obligations to fulfill conservation objectives of marine protected areas in the Baltic Sea.
- Flagship project 2.2 'Restrict the introduction of new alien species by ships' aims to enhance the cooperation of coastal countries cooperate in reducing the spread of non-indigenous species to the Baltic Sea via ships' ballast water and sediments. The main objective is to adopt voluntary risk-prevention measures, building scientific knowledge and solving challenges related to the implementation and ratification of the IMO Ballast Water Management (BWM) Convention.
- Flagship project 2.3'Establish measures to facilitate migration and reproduction of migratory fish species' covers a number of species, including salmon, eel, and trout. Itresulted in several reports and maps as well as an official HELCOM recommendation.
- Flagship project 3.4 'Development of HELCOM Core Set Indicators" establishes core indicators for tracking the Baltic Sea Action Plan. The CORE-SET expert group on hazardous substances has proposed 13 core indicators for concentrations of hazardous substances and their biological effects. The March 2012 interim report presented

1 http://www.helcom.fi/

projects, including Baltic COMPASS (sustainable agriculture), Inclusive Europe (competence about transnationality), Inno-Heat (District heating), and East West Transport Corridor II (green transport corridor).

the selection process and describing the draft indicators.

- Flagship project 4.1 'Promote measures to collect ship generated waste' aims to minimize the nutrient pollution loads originating from waste water discharges from passenger ships into the Baltic Sea. The project develops new regulations for discharges of sewage from passenger ships operating in the Baltic to the International Maritime Organisation (IMO) under the International Convention for the Prevention of Pollution from Ships (MARPOL)
- Flagship 4.3 'Introduce differentiated port dues depending on the environmental impact of ships' is co-lead with Sweden and Finland. A number of potential economic incentives have been identified, including differentiated port and fairway dues, emission trading schemes, fees on air emissions (NOx and SOx), state purchase of emission rights combined with investment subsidies, environmentally differentiated subsidies to the shipping sector, environmentally friendly procurement, and tax exemption for land-based electricity in ports
- Flagship 13.3 'Speed up re-surveying of major shipping routes and ports' aims to ensure safe navigation and support protection of marine environment by updating information on sea depths in the shallow and confined waters of the Baltic Sea. The Re-survey database (metadata only) has been developed.
- Flagship14.2 'Map existing marine pollution response capacities and make sub-regional plans for cross-border response cooperation' aims to increase the preparedness of all HELCOM countries to respond to major spills of oil and hazardous substances from shipping and enhance subregional co-operation. It is implemented through HELCOM projects BRISK and BRISK-RU.

In addition, HELCOM is involved in more than twenty other flagship projects as well as the horizontal action `Encourage the use of Maritime Spatial Planning in all Member States around the Baltic Sea and develop a common approach for cross-border cooperation.'

1.2 Non-governmental and publicprivate organisations



ScanBalt[™] fmba (www. scanbalt.org) promotes th development of ScanBalt BioRegion as a globally comperie scanbalt.org) promotes the BioRegion as a globally competitive macro-region within Health and Life

Sciences. ScanBalt is a not for profit member driven association of clusters, networks companies, research institutions, public authorities, and other organisations. The aims of the BSR regions and the regional public-private triple helix networks constitute the basis for ScanBalt. ScanBalt promotes suitable policy framework conditions for ScanBalt BioRegion and its private and public stakeholders; provides support and service to the members; promote public-private collaborations and partnerships, and strengthen ScanBalt BioRegion as an open innovation market in order to enhance innovation, employment, and economic growth; assists to educate train and attract talent, and facilitate the mobility of people and ideas; and is a forum for discussions of the impact of health and life sciences on society.

ScanBalt's strategy for 2012 – 2015 "ScanBalt BioRegion: Smart Growth, Sustainable Development and Specialisation on Top of Europe towards EU 2020" defines three focus areas to promote the development of the ScanBalt BioRegion as a globally competitive macro-region and innovation market:

- EU BSR Strategy and EU2020
- Visibility and Internationalisation
- Member Services and Organisational Development towards triple helix 3.0 and cluster excellence

Each focus area is supported by action lines, which are revised according to needs and opportunities. The strategy intends to further strengthen support and service to the members; enhance decentralisation, regional involvement and specialisation and strengthen ScanBalt BioRegion as a leaver to implement the EU Baltic Sea Region strategy and EU2020 objectives.

Health Economy provides an opportunity to make BSR a global front-runner. In October 2009, the ScanBalt Health Region (SBHR)⁵ became a flagship project within the EU Baltic Sea Region strategy. Its mission is to promote health of the citizens, reduce costs of the health care systems and strengthen health economy in BSR.

SBHR has launched the project "Baltic Sea Health Region - Business acceleration support and training bridging innovative SMEs and health care organisations to strengthen BSR Health Economy" (acronym "BSHR HealthPort"). BSHR HealthPort is focused on the following challenges of the Health Economy:

- Insufficient exploitation of ideas from health care researchers and practitioners
- Procurement practices that limits access of SMEs to the BSR health care market
- Insufficient innovation competencies of health care providers and SMEs and cultural differences across the Baltic Sea Region

The BSHR HealthPort, coordinated by ScanBalt, is co-funded by the Baltic Sea Region programme 2007-2013 and encompasses 9 partners together with 15 associated partners. A HealthPort Innovation Competition was launched in May 2011 to boost the commercial utilization of ideas arising from the clinical environment and healthcare research. Awards were granted to the winning ideas at the 10th ScanBalt Forum in September 2011. BSHR HealthPortnow works to deliver support to competitive ideas in order to bring them closer to the market and promote innovation training to students, researchers and clinicians in order to facilitate development of new commercially competitive ideas. A key delivery at the end of BSHR HealthPort is a Health Economy Innovation agenda for ScanBalt Health Region.

Baltic Amber "Baltic Alliance against Multi-Resistant Bacteria" is related to the HICARE project based in the North German state of Mecklenburg-Vorpommern. Baltic Amber promotes exchanges and cooperations to more effectively combat the spread of multi-resistant bacteria on a transnational level. The approach rests upon the understanding that multi-resistant bacteria do not stop at country borders. They rather present a serious danger to health care systems worldwide. With this approach, Baltic Amber is one of the grassroot projects pilot-

5 www.scanbalt.org/projects/scanbalt+health+region

ing the comprehensive intention of a Baltic Sea region-wide health initiative.⁶

Another project working within the SBHR umbrella is Eco4Life. Partners from Szczecin in Poland, Klaipeda in Lithuania and Greifswald in Germany as well as the associated partners promote the regional potential and bundle their strengths to create a strong and competitive South Baltic Region by mobilizing cross border cooperation in science and business (www.eco4life.info/). Promoting Green Hospitals is one key issue in Eco4Life.

ScanBalt is partner in the project "Submariner" having the task to ensure that a stable network is available after the project financed by the Baltic Sea programme 2007 – 2013 has been finalized. The project evaluates and leverages new technologies and knowledge about the use of marine ecosystems in an environmentally friendly and economically attractive way for the Baltic Sea Region to become a model region for sustainable sea management. Submariner is coordinated by the Marine Institute of Gdansk.⁷

ScanBalt in 2011 released together with Scan-Balt Health Region position papers⁸, on the EU cohesion policies and the importance of macroregions and regional clusters for smart growth and smart specialisation, on Healthy Ageing: from biological fundaments to clinical solutions, and on the EU Framework Program 8 and the role of macro regions".

In order to strengthen ScanBalt Health Region/ScanBalt BioRegion a thematic Scan-Balt liaison office within Healthy Ageing was launched 2011 at the Healthy Ageing Networks of Northern Netherlands (HANNN). Other liaison offices are located in Gdansk (Biobaltica), Tartu (Tartu Biotechnology Park) and Copenhagen (Biopeople). The role of the liaison offices is to strengthen direct regional involvement and outcome, promote decentralisation and target specific thematic issues.

ScanBalt Academy (SBA)⁹ continues to connect distinguished and prominent life scientists from academia, industry, and government. SBA acts as an external advisory board to ScanBalt and has an important ambassadorial role. May 2011 SBA became an independent network with its own statutes, governance and financing in order to strengthen its role and importance. The EU Baltic Sea Region Programme 2007-2013 (the Programme; www.eu.baltic.net) was set up as one of 13 European transnational cooperation programs. The strategic objective of the Programme is to strengthen the development of a sustainable, competitive and territorially integrated Baltic Sea Region by connecting potentials over the borders. SBA has proposed a Northern European research project called ALERT (Arctic LEarning, Research and Technology). ALERT will promote better European collaboration about the challenges pollution and climate changes create for biology and health in the High North.

The 11th ScanBalt Forum is organized by the Baltic Institute of Finland and Tampere University of Technology, Department of Biomedical Engineering and BioMediTech. The Forum will be held in Tampere Hall, Scandinavia's largest congress and conference center.



The Baltic Sea Chambers of Commerce Association (BCCA) is an organisation of 50 Chambers of Commerce across the Baltic Sea Region. Since 2002 the Presidency and General Secretariat of the BCCA has been with the Chamber of Commerce and Industry of Southern Sweden in Malmö. Its main task is to give the business community of the region a common voice.

In 2012 a project focusing on a new digital agenda of the BSR has been developed in collaboration with BDF. It will result in a report during the BDF Summit and will contain an issue analysis and proposals for specific areas where BSR governments can pursue the development of a digital agenda.

⁶ www.hicare.de/hosting/bcv/website_en.nsf/urlnames/hicare_

index?OpenDocument&nav=hicare_index

⁷ www.submariner-project.eu/

⁸ ww.scanbalt.org/press/news+archive/view?id=2611

⁹ www.scanbalt.org/about+scanbalt/scanbalt+academy



sustainable growth · innovation · competitiveness

The Baltic Development Forum (BDF; www. bdforum.org) is an independent networking organisation for business, governments, regional organisations, academia, and the media to discuss and collaborate on issues of regional importance. BDF has members from large companies, major cities, institutional investors and business associations in the Baltic Sea Region. Over the years BDF has proved its vital role as a meeting platform between top politicians and private sector representatives, most notably occurring during the annual Summits. In addition, throughout the year, conferences and smaller roundtable meetings are organised regularly in order to get a close and private exchange of views on important developments and topics in the region.

BDF continues to strengthen the dialogue with the private sector and major industries in the Baltic Sea Region. On 1 November 2011, Hans Skov Christensen, fmr. CEO of Danish Industries became the new Chairman of BDF not least allowing BDF to further ensure a stronger business perspective within the network.

As in previous years, the EU's Baltic Sea Region strategy process is a key priority for BDF. Impressive progress towards closer integration has been achieved, which was demonstrated at the 13th BDF Summit and 2nd Annual Forum in 2011 in Gdansk, Poland, where the review of the EU strategy for the Baltic Sea Region was discussed. The Baltic Sea Region has profited from the EU's increased focus on the region which represents today the most advanced regional co-operation in Europe with many cross border projects under implementation.

The 14th BDF Summit is once more organised together with the European Commission's 3rd Annual Forum on the EU Strategy under the heading Connecting Europe – Smart and Green Partnerships and takes place 17-19 June in Copenhagen, Denmark. The Danish Presidency of the EU Council is a co-host of the meeting along with the Capital Region of Denmark, Region Zealand and Region Skåne. The agenda will focus on growth and competitiveness in the Baltic Sea Region, with the spotlight on infrastructure devel-

opment and investment projects, not least publicprivate co-operation. To become smarter and greener, public-private partnerships are essential. By improving framework conditions, these partnerships can for instance help to focus and optimise sustainable infrastructure investment, which is key to kick-starting wider economic growth in the Region, benefitting the European economy at large.At the 2012 Summit, BDF will host a business matchmaking event - Baltic Business Arena (BBA) which will bring together approximately 100 small and medium sized companies. The concept has been developed together with the Swedish Agency for Regional and Economic Development (Tillväxtverket) and should be a more integrated part of the 2013 Summit.

BDF is increasingly being recognized as one of the best think-tanks in the world in the field of regional economic development. This position is further being established and improved during 2012 with the second edition of the Political State of the Region Report, which is built upon the contributions and recommendations from the Baltic Sea Region Think-tank *DeepWater* representing a wide network of academics from all parts of the Baltic Sea Region. The idea is to complement this State of Region Report with a political dimension. The report was launched at the 2011 Summit and it is being presented and discussed during several seminars and conference during first half of 2012 (Brussels, Vilnius, Warsaw).

BDF is diversifying its structure in terms of establishing a Competitiveness Council and smaller advisory groups of which the Advisory Group on the Digital Agenda is a first of its kind. The aim of the BSR Competitiveness Council is to be agenda setting as regards to regional and European economic growth. The Competitiveness Council should improve the ability to articulate and launch initiatives/proposals for economic growth and improved competitiveness. The Council will consist of top CEOs from the private sector, influential politicians, distinguished economists and researchers from the region.

Together with regional and private partners, BDF has developed proposals on how the EU's digital agenda can be promoted on a regional level and provide inspiration to the wider EU in implementing this important growth initiative. A Digital Agenda Action Plan for the Baltic Sea Region will be presented and discussed at the 14th BDF Summit/EC's 3rd Annual Forum in Copenhagen June 2012. It will give direct inputs to the Danish EU Presidency and the European Commission on the further development of a Digital Single Market in Europe, confirming that the BSR has the potential to take a leading role in the deepening of a European Single Market. The Digital Agenda is one of the flagship initiatives of the EU 2020 strategy to create growth and jobs in Europe. One of the top priorities in the strategy is the creation of a digital single market, whereby barriers between Member States in the digital area are reduced or removed.

Currently, BDF is actively taking part in developing an EU project, One BSR, which will address some of the horizontal dimensions of the EU strategy for the Baltic Sea Region (followup of BaltMet Promo Project). It includes also cooperation between the Baltic Sea Region's investment promotion agencies (BSR IPAs) where BDF intends to play the role as "honest broker" to identify the common interest between otherwise competing agencies that each wants to attract more investments. In 2011 BDF made efforts to improve its communication effort and proposals were developed to the EU and regional partners on how communication and information exchange could be improved through an independent media platform. These efforts will continue not least in connection with this year's Summit. The project also includes regional identity and branding, and policy dialogue.

BDF maintains and develops close links to Russian partners in the Baltic Sea Region. In December 2011 the European Commission approved BDF of an energy efficiency project in Kaliningrad entitled Rensol. As project leader BDF will ensure best possible implementation. The project began in early 2012 and is included in the framework of the Northern Dimension Environmental Partnership. BDF will continue to developed closer links with Russia not least at a moment when the Russian Federation is taking over the presidency of the Council of the Baltic Sea States. BDF will propose projects and activities which could be useful and of help to the Russian CBSS Presidency.

Among the reports presented at the 14th BDF Summit will be: the State of the Region Report 2012, the Political State of the Region Report 2012, Digital Agenda Report. The annual BDF autumn conference in Copenhagen will take place in October 2012 and will focus on the water footprint.



SUOMEN ITÄMERI-INSTITUUTTI THE BALTIC INSTITUTE OF FINLAND

The Baltic Institute of Finland (BIF; www.baltic. org) is a leading collaborative body for the Baltic Sea Region in Finland. Since its launch in 1994, the institute has promoted cooperation in the Baltic Sea Region and contributed actively to the international network of collaborators in the region. BIF promotes collaboration projects in the Baltic Sea Region and facilitates the participation of Finnish organisations. The Baltic Institute of Finland is a network-based organisation, and its principal focus is on planning and coordinating tangible collaborative projects and maintaining an extensive network of collaborators in the Baltic Sea Region.

In 2011, BIF was involved in fifteen collaborative projects in the Baltic Sea Region, and organized close to 100 events in the Baltic Sea Region and in Brussels. In recent years, BIF has concentrated on innovation-related projects like BSR InnoShip and BSR InnoRegInterreg projects.

BIF has been involved in the EU Baltic Sea Region strategy process since 2005. BIF is strongly involved in the implementation of the strategy and its flagship projects. It is leading one flagship project (BSR InnoShip) and is involved in three innovation and SME development related flagships: BSR Stars, BSR QUICK and Baltic Supply. The EUSBSR flagship projects have provided a stronger policy framework, better EU level dissemination channels, and better coordination between different actions and stakeholders.

A BIF-lead EUSBSR Priority Area 4 (clean shipping) flagship "BSR InnoShip - Baltic Sea cooperation for reducing ship and port emissions through knowledge and innovation-based competitiveness" combines environmental and economic aspects. It aims to decrease atmospheric emissions of shipping and port operations. Leading maritime stakeholders from all BSR countries are represented among the project's 19 partners and 24 associated partners. The EUR 3.6m project is funded by the EU Baltic Sea Region Programme 2007-2013 and will be implemented in 2010-2013.

In its proposal for a revised sulphur directive on 15 July 2011 the European Commission emphasizes the need for innovative solutions and incentives in implementing the sulphur directive revision. Without the solutions, the shipping as well as economies around the Baltic Sea that depend on shipping could be facing very high costs after the directive enters into force on 1 January 2015. BSR InnoShip aims to tackle this concern through BSR-wide cooperation.

In 2011, a web-based best practice manual that will later channel good practices and investment guidance information for decision makers was being developed in BSR InnoShip. BSR InnoShip partners collaborate in the development and adoption of innovative low emission technical solutions. The information will be used to iteratively create a web-based investment decision support tool as part of the best practice manual. The first patents have been granted for BSR Inno-Ship work. The knowledge base for cost-efficiency analysis has been strengthened by measurements of actual engine emissions equipped with modern emission reduction equipment. The BSR InnoShip solutions have been promoted in connection with various major BSR events, including BDF Summit, as well as through the political processes of HELCOM.

In the EUSBSR Priority Area 4, BIF is also in charge of a European Commission funded project "Strengthening stakeholder engagement, dissemination and coordination of joint activities in the EU Strategy for the Baltic Sea Region Priority Area 4." The idea is to support the ongoing actions in the Priority Area 4 in their common goal to make the Baltic Sea Region a model area for clean shipping. The project was launched with a stakeholder meeting during the European Maritime Day in Gothenburg, Sweden on 21-22 May 2012.

In connection with Baltic Supply flagship, together with its North Sea Region sister project "North Sea Supply", the European Business Support Network was launched in March 2012 as one key project output. The European Business Support Network provides services that help SMEs to improve their market position and visibility to larger companies. Moreover, the network helps businesses to develop the skills and competencies they need to engage in tendering procedures that will open up the European supply market for them. The services include B2B matchmaking, tender support, brokerage events, self-assessment and tailored training and coaching advice. The services are offered offline, as well as online at eubizz.net.

BIF contributes to European-wide promotion of the EUSBSR and dissemination of BSR good practices on innovation policies and instruments by partnering in two new projects approved in the fourth and final call of the EU INTERREG IVC programme. The project "TRES - Towards Regional specialisation for Smart growth spirit" is led by Fundación TECNALIA Research & Innovation, Spain. TRES aims to mobilize the innovation potential and capacity of regions towards smart growth. TRES will also foster a clearer understanding of the role regions have to play in EU2020 and to better face new opportunities inter-creating together and pushing clusters for change. TRES brings together a good representation of the EU's diverse innovation geography and multiple ways of addressing the innovation challenges and paradigms.

The second approved INTERREG IVC fourth call project partnered by BIF, "SMART EUROPE - Smart strategies to create innovation-based jobs in regions of Europe ", is led by Province of Flevoland, Netherlands. In SMART EUROPE, project partners from 11 European countries will exchange policies and instruments for identifying and supporting the main regional economic actors that can generate job opportunities in the innovation based sectors of their economy. Both 36-month projects will be implemented in 2012-2014.

One of the key 2012 BIF activities contributing to the EUSBSR will be the hosting of the 11th ScanBalt Forum in Tampere, Finland on 20-23 November 2012. The Forum will be held at Tampere Hall, Scandinavia's largest Congress and Concert Centre.The event brings together key figures in biotechnology and life sciences representing the 11 countries of the ScanBalt BioRegion. For diverse organisations from business and industry to research and public policy, the annual ScanBalt Forum provides an invaluable platform for collaboration and international networking, fostering the innovation and competitiveness of the region. The programme is built on ongoing ScanBalt projects, which are strongly connected to the EUSBSR. The new EU Programming Period 2014-2020 and the EUSBSR and its BSR Stars flagship, as well as BioLifeScience cluster collaboration with Russia are among the key themes of the forum.

pan-european institute

SECTION B

The Pan-European Institute (PEI), founded in 1987, is an academic research center at the Turku School of Economics, University of Turku, Finland. PEI analyses the economic development in the Baltic Sea Region and in the neighbouring countries of the European Union, with a particular focus on Russia, Belarus and Ukraine.

In 2012, the Pan-European Institute celebrates its 25th Anniversary by organizing the jubilee seminar "The Baltic Sea Region 2025" on the 25th of October 2012 at the Turku School of Economics, Turku, Finland.

PEI's research activities have recently concentrated on issues such as FDI, regional development, innovation, and energy in the Baltic Sea Region. The PEI staff has frequently acted as experts for both Finnish and foreign institutions, such as the Prime Minister's Office, several Finnish ministries and the Parliament of Finland, the European Commission, the European Parliament, and the United Nations.

PEI provides some half dozen courses in English at the Turku School of Economics under the subject heading of international business. The courses are particularly related to the Baltic Sea Region and Russia, such as "Business in the Baltic Sea Region", "Managing R&D and Innovation in the Baltic Sea Region", "The Development of EU-Russian Economic Relations", and "Investment Opportunities in Eastern Europe".

Since 2004, PEI has published the quarterly Baltic Rim Economies (BRE) review, which focuses on the development of the Baltic Sea Region. Over 1000 leading experts, including EU commissioners, ministers, members of parliaments, CEOs of leading corporations, academics, and researchers, have contributed an article to the review (www.tse.fi/pei).

CENTRUM BALTICUM

Centrum Balticum (http://www.centrumbalticum.org/en/) is Finland's premier think tank on the Baltic Sea Region. The Centre was established by the City of Turku together with four other Finnish cities, three universities based in Turku, and the Regional Council of Southwest Finland in 2007. Centrum Balticum together with the main Finnish research institutes and researchers specializing in the Baltic Sea Region form a national network, in which the Centre disseminates information and organizes events related to the region.

In 2012, Centrum Balticum opens interactive webpages and a databank in order to help the dissemination of the Baltic Sea Region-related information in Finland and abroad. The Centre continues to publish a weekly Baltic Sea Region column, called Pulloposti, in Finnish. Currently, over 5000 Finns interested in the Baltic Sea Region affairs receive these columns written by the top professionals in their fields. Moreover, the Centre has recently started to sponsor the Baltic Rim Economies review, which is distributed to 80 different countries.

Centrum Balticum organizes annually the Baltic Sea Forum, which gathers hundreds of Finland's leading experts on the Baltic Sea region. In 2012, the Baltic Sea Forum is arranged for a fifth time, and this year the forum focuses on the future challenges the region may face by 2020. In addition to the national forum, the Centre organizes smaller events, such as luncheon seminars with the ambassadors of the Baltic Sea region states and the Baltic Sea region brainstorms with the Finnish researchers and media.

The Centre participates in international projects as a coordinator, a disseminator of information and an organizer of events. At the moment, for instance, Centrum Balticum co-ordinates on the behalf of the City of Turku the Baltic Sea Challenge initiative, which is a collaborative environmental effort with the City of Helsinki. In the near future, the Centre will join an international consortium, which starts to develop the competitiveness of the region in general and shipbuilding in particular. The Centre supports the activities of its sister organisation, the Protection Fund for the Archipelago Sea. Centrum Balticum also contributes to the Turku Process, a process aiming at bringing Russia's Baltic regions into closer interaction with the EU's Baltic Sea region policy.

Nordic Investment Bank (NIB)

The Nordic Investment Bank (NIB) is firmly rooted in the Baltic Sea Region through its eight member countries: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden. The main part of NIB's lending is targeted at the bank's member countries, as well as at the neighbouring area, with annual commitments in support of investments in the Region on the level of EUR 1.5 - 2 billion over the last three years.

Approved	2008	2009	2010	2011
Denmark	373	196	137	271
Estonia	58	0	39	0
Finland	502	484	658	460
Latvia	170	0	21	14
Lithuania	59	135	20	21
Poland	150	0	74	130
Sweden	782	394	642	283
lceland	25	0	0	51
Norway	337	235	120	545
Russia	100	0	150	68
TOTAL	2556	1444	1861	1843

NIB provides long-term complementary financing, based on sound banking principles, to projects that strengthen competitiveness and enhance the environment. All project proposals are evaluated against the mandate outlined in the bank's strategy, announced in 2006. Only those that obtain a high enough mandate rating are accepted for further consideration.

High mandate fulfilment is, in NIB's experience, often achieved in particular sectors, namely environment, energy, transport, logistics and communications, and innovation. In addition, the bank also lends to projects in the manufacturing and service sectors, as well as provides financing through financial intermediaries to smaller projects. In 2011, environment represented one fourth of new commitments, reflecting a weighted share of environmental loans also pertaining to other sectors, such as energy, transport, R&D, manufacturing, and services. The Bank also provided loans to local banks as intermediaries for on-lending to small and medium-sized companies, or to finance investments in smaller-scale projects, such as local renewable energy.

The implementation and development of renewable energy systems and technologies is a priority area for NIB. The most important renewable energy sources with regard to their energy potential are biomass (usually with a combined heat and power output), wind power (both land-based and offshore), geothermal power, and hydropower. Hydropower development is mainly focused on increasing the efficiency of existing plants.

Security of supply and environmental sustainability are key challenges for the energy sector in the Baltic Sea Region. Enhanced integration of regional energy transmission is a necessity, not only to enable a further increase of the share of renewable energy, but also substantial long-term investments are needed in interconnectors and distribution systems. NIB is participating in a number of priority projects, among others in the context of the Baltic Energy Market Interconnection Plan.

In the area of climate change, NIB has set up a special lending program: the Climate Change, Energy Efficiency, and Renewable Energy facility (CLEERE). Originally established in 2008 with a framework of EUR 1bn, the facility has been expandedtwice to EUR 3bn. The continued rapid allocation of loans for projects addressing climate change mitigation and adaptation, primarily in the energy sector, but also in industry and transports, has resulted in the facility being fully allocated in 2011.

NIB takes part in the regional co-operation forums with a view to supporting the implementation of priority projects. In all strategy and program frameworks, the key issue from the financing perspective is to be able to identify bankable investment components. As experience shows, the road from the strategy level to concrete implementation is frequently long and arduous. At best, strategies and policies provide clear guidance and help to set priorities, which in turn create a good basis for investment decisions and resource mobilisation, but this requires constant attention and effort.

The EU Strategy for the Baltic Sea Region has established a new framework for this co-operation, laying down priority areas and identifying flagship projects. The priorities set out by the strategy, with its strong emphasis on the fields of environment, energy and transport, correlate well with the aims of NIB, providing a good basis for the bank to be involved in supporting the implementation of the strategy. NIB is cooperating closely with EIB and other partners in this respect.

In the wider regional context, the Northern Dimension, based on an equal partnership between the European Union, Iceland, Norway and Russia, creates an important platform for co-operation. In particular, the specific partnerships established under the Northern Dimension provide a framework for concrete activities. NIB plays an active role in the Northern Dimension Environmental Partnership (NDEP), which is coordinating the financing of environmental projects with cross-border effects in the Baltic Sea region, the Barents region and Northwest Russia, with projects benefitting from grants from the NDEP support fund. Until recently, all projects had been located in Russia, but Belarus has now also been approved as a country of operations for the NDEP and the first emission reduction projects with EBRD and NIB as lead institutions are being prepared.

A recent initiative is the establishment of the Northern Dimension Partnership on Transport and Logistics (NDPTL). The purpose of this partnership is to facilitate co-operation on and implementation of regionally important transport infrastructure and logistics projects, with a focus on removing bottlenecks from relevant corridors. Implementation of such projects is expected to benefit from close collaboration with the IFIs, including in relation to PPPs that can provide an effective mechanism for harnessing private sector competence and funding capacity in support investments.

NIB supports the work of HELCOM to implement the Baltic Sea Action Plan (BSAP), which has been included as one of the priorities in the EU Strategy for the Baltic Sea Region. The aim of the plan is to restore the ecological health of the Baltic marine environment by 2021. NIB has set aside EUR 500 million in a special Baltic Sea Environment Financing Facility (BASE) to provide loans supplementing the financing through national budgets and EU structural and cohesion funds, in order to finance measures that reduce pollution. Close to half of this envelope has so far been allocated.

To support the preparation of BSAP related projects, NIB and the Nordic Environment Finance Corporation (NEFCO) took the initiative to establish a new trust fund, the "BSAP Fund", which was set up in 2009 with donor contributions, initially from Sweden and Finland, amounting tosome EUR 11 million. The purpose of the fund, managed jointly by NIB and NEFCO, is to assist, through grants for technical assistance, the development of bankable projects that support the implementation of the BSAP. Several projects are currently in implementation.

The EIB Contribution to State of the Region Report 2011

EIB's lending activities in the Baltic Sea Region

The European Investment Bank's lending volumes in the Baltic Sea Region increased significantly in 2008-2009, as the EIB responded to the financial crisis. In 2010 and 2011, the volume of lending started to decrease towards a level corresponding to the pre-crisis level. The aggregate lending volume in the region over the past five years amounted to EUR 44.4bln. The total volume of approved loans in 2011 to the BSR was EUR 8.9bln (it was EUR 11.3bln in 2010).

The single most represented country was Poland, which received almost 42% of the EIB loans granted in the Baltic Sea Region in this period,

Signatures	2007	2008	2009	2010	2011		
EU							
Denmark	209.1	379.5	421.7	387.0	155.0		
Estonia	0	87.0	841.5	75.0	183.0		
Finland	613.0	710.0	1,145.0	1,000.8	1,403.2		
Germany 1)	781.0	1,620.0	1,615.0	1,249.0	746.0		
Latvia	35.0	860.0	285.0	100.0	36.0		
Lithuania	20.0	10.0	1,169.0	47.0	10.5		
Poland	2,280.6	2,837.0	4,783.9	5,563.9	5,279.1		
Sweden	712.9	1,311.4	1,135.0	2,607.8	707.6		
Candidate Countries							
Iceland	146.0	0	170.0	0	70.0		
EFTA							
Norway	0	0	0	50.0	100.0		
Eastern Europe							
Russia	0	0	132.5	250.0	100.0		
Total	4,797.6	7,814.9	11,698.6	11,330.5	8,790.4		

EIB lending in the Region 2007-2011

¹⁾ The German Bundesländer included in the Baltic Sea Region were Berlin, Brandenburg, Hamburg, Mecklenburg-Western Pomerania, and Schleswig-Holstein.

followed by Sweden at 15%, and the concerned *Bundesländer* in Germany, which collectively received 14%. The most significant sector in Poland was the transport sector, which received 38% of the EIB loans to Poland. The remaining part was evenly distributed among the other sectors. In the other Baltic Sea Region countries, i.e. in the three Nordic countries, Denmark, Finland, and Sweden, the most dominant sector was industry. The EIB's lending objectives support the activities in the region, in line with the objectives of the EUSBSR, to make the Baltic Sea Region

- environmentally sustainable;
- prosperous;
- accessible and attractive;
- safe and secure.

Most of the EIB-financed projects in the region support the EU Strategy for the BSR, many projects being classified as flagship projects or projects directly supporting the EU's key objectives of the Strategy.

EIB supporting Co-Financing with EU Structural Funds

An important part of the EUSBSR is the reorientation of existing EU funded programmes in the

region to make them support the strategy. The EIB co-financing of EU-funded programmes has been an important vehicle for promoting a number of important investments in this quickly growing region. The EIB has approved a number of projects or programmes that are fully or partly co-financed with EU Structural Funds. For the 2007-2013 programming period, EIB has approved 15 Structural Programme Loans (SPLs), with a total amount of EUR 5.7bln, in the BSR to date. As the EIB finances on average 13% of the total project cost in the case of SPL, EIB financing supports a total investment cost of EUR 42bln in the region, which is a major contribution to growth and employment in the BSR. Many of the public investments included in these programmes have been essential to counteract the economic and financial crises. In a period with a weakened private sector, investments in public infrastructure have created new employment and spurred competitiveness in the region.

In the 2007-2013 programming period, the key objectives of the European Fund for Regional Development (ERDF), the European Social Fund (ESF) and the Cohesion Fund are to contribute to (1) convergence, (2) regional competitiveness and employment, and (3) European regional cooperation in the EU.

2007-2013 programming period						
Country	Name of operation	Project cost EUR mln	Approved EIB loans EUR min	Signed EUR mIn	EIB loan's share of total project cost (%)	
	Approved programmes					
Estonia	EU Funds Co-Financing 2007-2013 (EST)	4,331	550	550	13%	
Latvia	EU Funds Co-Financing 2007-2013 (LV)	5,834	750	750	13%	
Lithuania	EU Funds Co-Financing 2007-2013 (LT)	9,564	1,132	1,132	12%	
Poland	EU Funds Co-Financing 2007-2013 (PL)	19,305	2,000	2,000	10%	
Poland	National Environmental Protection Fund	300	150	121	50%	
Poland	Mazovia Regional Infrastructure*	400	180	88	45%	
Poland	Poznan Municipal Infrastructure*	209	81	81	3900%	
Poland	Poznan Municipal Infrastructure III*	333	145	145	44%	
Poland	Gdansk Municipal Infrastructure II*	368	145	64	39%	
Poland	Lodz Regional Infrastructure *	323	106	106	33%	
Poland	Lodz Municipal Roads*	240	71	18	30%	
Poland	Lublin Municipal Infrastructure*	386	126	126	33%	
Poland	Malopolska Regional Infrastructure*	318	72	38	23%	
Poland	Szczecin Municpal Infrastructure III*	185	75	75	41%	
Poland	Zachodiopomorske Regional Framework*	284	84	84	30%	
	Total approved projects	42,380	5,667	5,378	13%	

Table. EU Funds co-financing in the Baltic Sea Region and EIB support

* Partly co-financed with the Structural Funds regional and municipal investment framework operation.

The rationale of the convergence objective is to promote growth-enhancing conditions and factors leading to real convergence for the least developed member states and regions. In EU terminology, those regions eligible for such support are referred to as "convergence regions". In the Baltic Sea Region, Estonia, Latvia, Lithuania, Poland, and two German *Bundesländer* (Mecklenburg-Western Pomerania and Brandenburg-Nordost) are defined as convergence regions.

Outside the convergence regions, the regional competitiveness and employment objective aims to strengthen competitiveness, attract investment and boost employment. Development programmes help regions to anticipate and encourage economic change through innovation and promotion of a knowledge society, entrepreneurship, environmental protection and improved accessibility. More and better jobs are being supported by adapting the workforce and by investing in human resources.

In the EU member states of the Baltic Sea Region, the EIB also provides financing to small and medium-sized enterprises (SMEs) through credit lines extended to local financial intermediaries. The EIB funds are on-lent by these intermediaries to eligible SMEs to help cover their capital expenditure and working capital requirements.

Supporting Environment and Infrastructure Investment and Green Growth

In a communication from the European Commission in 2012, the new overall objectives of the EU Strategy for the Baltic Sea Region have been reformulated, each objective accompanied by indicators and targets:

- to save the sea;
- to connect the region; and
- to increase prosperity.

These three objectives closely match most of the priorities given to the EIB by the 27 EU member states. As the Bank's mandate is to support EU policy, the EIB has a special responsibility to contribute to the success of the EU Strategy for the Baltic Sea Region. It does so by supporting the implementation of the Baltic Sea Strategy in various ways, such as by financing wastewater treatment plants in places that were classified by the Helsinki Commission as hot spots, that is, point sources of massive pollution. Within the framework of the Northern Dimension Environmental Partnership, the Bank has co-financed several high-priority projects to clean up pollution in the St. Petersburg region.

The EIB has likewise financed infrastructure to integrate parts of the Nordic-Baltic area into a larger Baltic Sea Region. EIB loans have gone to bridges, tunnels, port facilities and railway links. Improved and safer energy production and energy transmission lines have also been high on the agenda.

The EIB has also supported a large number of research, development and innovation projects in the Baltic Sea Region. In some countries of the region, RDI has become one of the most important sectors for EIB financing.

All these factors brought together are generally believed to pave the way for green growth in the region. The Bank's firm intention – while contributing to the implementation of the EU Strategy for the region – is to remain the single most active multilateral financing institution in the area and one of the leading lenders to flagship projects.

EIB as provider of financial services

A number of special initiatives are of particular relevance in the context of the Baltic Sea Strategy. These are the JASPERS (Joint Assistance to Support Projects in European Regions) programme, the JESSICA (Joint European Support for Sustainable Investment in City Areas) initiative, the JEREMIE (Joint European Resources for Small and Medium-sized Enterprises) initiative, and the activities of EPEC (the European PPP Expertise Centre). The European Investment Fund, EIF, the risk-financing arm of the EIB Group, is active in the Baltic Sea Region, providing equity instruments, SME guarantees and financial engineering products for SMEs.

JASPERS

JASPERS (Joint Assistance to Support Projects in European Regions) is a partnership between the European Commission (DG Regional Policy), the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and KfW Bankengruppe (KfW). JASPERS supports the implementation of cohesion policy in the 2007-2013 programming period by providing the twelve countries that joined the EU between 2004 and 2007 with specialist expertise for the preparation of projects to be submitted for grant financing from the Structural and Cohesion Funds. Approximately EUR 354bln is available in grants for the 2007-2013 budgetary period.

JASPERS activities in the Baltic Sea Region concern the three Baltic States and Poland. Under the Baltic Sea Strategy, JASPERS is willing to provide support in preparing flagship projects to be co-financed with EU funds, at the request of a Member State and if agreed upon by DG Regio. JASPERS has over 25 staff members in the EIB Office in Warsaw, working in the Baltic Sea Region's new member states, in addition to those working in the Vienna and Bucharest external offices and at headquarters in Luxembourg, for a total of over 100 staff members.

JESSICA

Launched in 2006, JESSICA is an initiative aimed at supporting a new way to use 2007-2013 Structural Fund allocations: as loans, guarantees or equity, rather than grants, for urban development projects. In order to use JESSICA, Member States are expected to include an urban agenda in their operational programmes and can consider using JESSICA to fulfil this agenda. Member States can allocate part of their Structural Funds to JESSICA Urban Development Funds (UDFs) that invest through equity, loans or guarantees in public-private partnerships and other projects included in an integrated plan for sustainable urban development. UDFs may combine funding from the 2007-2013 Operational Programmes with other financial resources, such as those provided by international financial institutions, commercial banks, other public and private investors, as well as the cities concerned.

The Baltic Sea Region also makes use of JES-SICA. The EIB has two roles in the region. First, it assists Member States and national authorities on request through JESSICA evaluation studies to assess the potential for loans, guarantees and equity for urban development. This work also involves assisting the authorities in preparing the framework for the implementation of JESSICA. Secondly, it acts as the JESSICA holding fund, to channel Structural Funds into Urban Development Funds on behalf of national authorities in support of urban projects. For example, in Lithuania the JESSICA holding fund supports, via local banks, an energy efficiency programme in multi-apartment buildings. In Poland, JES-SICA is implemented in five regions: Wielkopolska, Westpomerania, Pomerania, Silesia and Mazovia, with approx. EUR 260mln in investments in urban regeneration, energy efficiency and renewable energy, as well as cluster development projects. By the end of 2011, six agreements were signed with Urban Development Funds that launched calls for urban projects and proceeded with their first investments. In addition, the EIB can act, if requested to do so, as adviser on implementing UDF-type structures in countries and regions where it does not operate as a holding fund.

JEREMIE

The JEREMIE initiative offers EU member states, through their national or regional Managing Authorities, the opportunity to use part of their EU Structural Funds allocations to finance small and medium-sized enterprises by means of equity, loans or guarantees, through a revolving holding fund which acts as an umbrella fund. This initiative was developed by the European Commission and the European Investment Fund, which is part of the EIB Group. In the Baltic Sea Region, Latvia and Lithuania decided to allocate part of their resources from the EU Structural Funds into a JEREMIE holding fund that is being managed by the EIF. The EIF has signed 11 contracts with financial intermediaries that on-lend to and invest in local SMEs in line with targets laid down in the respective holding funds. The Latvia holding fund is for EUR 91.5mln, and the amount dedicated to the holding fund in Lithuania is up to EUR 290mln. In addition, as a result of regional and national Evaluation Studies conducted by the EIF in Poland, the local authorities are proceeding to implement six different JEREMIE holding funds, at present without further EIF involvement.

EPEC

EPEC was launched by the EIB and the European Commission in September 2008, and its mandate was renewed in January 2011. The Centre endeavours to strengthen the organisational capacity of the public sector to engage in public-private-partnership (PPP) transactions. EPEC offers a platform to PPP task forces in EU member and candidate countries to share experience and expertise, analysis and best practice relating to PPP transactions. A 'helpdesk' service complements the network activities to provide a demand-led, rapid response facility for members. From 2012, EPEC will focus particularly on best practices in PPP investment planning and project preparation, and on new financial instruments for the PPP market. In the Baltic Sea Region, public authorities in Denmark, Finland, Latvia, Lithuania, Poland and Germany are EPEC members. They actively participate in EPEC work streams, which include good practice in procurement and risk distribution, statistical treatment of PPPs, PPPs for trans-European Networks, and for energy efficiency.

Project Examples, loans recently approved by EIB

Lahti Waste-To-Energy Plant, Finland

High energy demand during long winters and tough environmental standards pose severe challenges for the city of Lahti's energy company. That is why it is building one of the world's most modern plants for converting waste into heat and electricity, with the support of the EIB.

Surrounded by vast forests, the city of Lahti shares an inland climate with eastern Finland's picturesque and sparsely populated thousand lakes region. Cold winters with abundant snowfall make the area a prime location for winter sports.

At the same time, Lahti is a modern, prosperous city, whose population of 100,000 is situated an hour's journey from the Greater Helsinki region. A centre for renewable energy research, Energon, forms the core of a strong environmental cluster. It is thus no surprise that municipalowned Lahti Energy aims to provide a reliable supply of energy while continuously reducing emissions. What is more unusual is that, since the late 1990s, Lahti Energy has become an international centre of excellence in combined heat and power (CHP) technology. Conventional thermal plants release excess heat from the power-generating process into rivers, lakes or the atmosphere. The CHP process works differently. It makes productive use of the heat by pumping it into district heating networks, which are common in the Nordic countries.

On a bright September day, Lahti Energy took a further step in CHP technology and launched the world's most advanced waste-driven CHP facility. "Finland is a world leader in CHP technology. About a third of all electricity is produced in such plants, compared with 10 percent or less in Europe as a whole. And the city of Lahti is at the forefront," Finnish state radio announced on the occasion.

Using waste from businesses and households in Lahti and Helsinki as fuel, the new facility



will process 250,000 tons annually, generating 90 megawatts of heat and 50 megawatts of power. This is considerably more than in existing plants thanks to a new process of gasification and incineration at high temperatures and high steam pressure. The EIB is financing close to half the investment (EUR 75m) with the remainder being provided by the Nordic Investment Bank, the Finnish government, and Lahti Energy.

"This is the world's first energy-from-waste power station to operate with gasification technology," said Lahti Energy's managing director Janne Savelainen, adding that it will curb emissions by partially replacing a coal-fired plant and sharply reduce landfill disposal in the region. "The amount of waste needs to be reduced and recycling and reutilisation of material needs to be maximised. From the materials left over, it is in everyone's interest to separate that part which can be burnt and use it as efficiently as possible in energy production, just like Lahti Energy does," Savelainen said.

The Lahti project, which will be completed in 2012, is contributing to the Europe 2020 goals for smart, sustainable, and inclusive growth by supporting energy efficiency, waste reduction, reduction of CO_2 emissions, R&D and innovation.

Electronic Tolling System, Poland

The Electronic Tolling System project in Poland concerns the design, delivery and installation of an Electronic Toll Collection (ETC) System for vehicles of more than 3.5 tonnes and all buses on a basic network of about 680 km of motorways, 690 km of expressways, and 380 km of national roads spread across Poland. The national road network currently covers about 14,000 km. The system has been branded "viaTOLL" in Poland. The motorways, expressways and highways to be covered by the project are mostly on the TEN-T network. The project will facilitate the expansion of distance based charging for road use in Poland. This will allow a more refined application of user pays, and eventually polluter pays, principles forming part of the sustainable mobility solutions set down in EU policy. The project is expected to result in savings in travel time and vehicle operating costs by reducing delays and permitting smoother traffic flow during the collection of tolls. Although the project is the first of its kind to be implemented in Poland, the technology and system architecture to be used is well-proven elsewhere in the European Union. The selected solution is consistent with the requirements (inter alia, related to interoperability, security and privacy) set down in Decision 2009/750/EC concerning the definition of the European Electronic Toll Service (EETS). The project will facilitate the future introduction of smarter pricing for infrastructure provision as well as the internalisation of external costs. This in turn could allow pricing to be used in a more refined way to promote a more environmentally sustainable transport system. The EIB has provided a loan of EUR 120mln to finance this project.



2. The EU Baltic Sea Region Strategy

This section tracks the implementation of the EU Baltic Sea Region Strategy. At the end of 2007, the European Council invited the European Commission to develop a strategy for the Baltic Sea Region.¹⁰ In October 2009 this strategy was then adopted, including a regularly updated action plan of about 80 flagship project. Following an interim report in 2010 and the first implementation reportin the summer of 2011, the European Commission has in March 2012 published a Communication that responds to a request from the EU's General Affairs Council to review the EU Baltic Sea Region Strategy by early 2012.



The role of the EU in the Region and of the EU strategy for the Region has been repeatedly discussed in previous State of the Region Reports. This year, we focus on two elements. The first part will track the progress in implementing the EU Baltic Sea Region Strategy. It will profile selected flagship projects, and discuss the proposals the Commission has made in its Communication to strengthen the Strategy given the experience of the last few years. The second part will look beyond the Strategy process itself, and discuss how these efforts are integrated with broader policies at the national and EU level.

2.1 Progress in implementing the EU Baltic Sea Region Strategy

The EU Baltic Sea Region Strategy was launched three years ago, with four overarching goals supported by flagship projects and horizontal activities organized into fifteen priority action areas. The revised action plan from December 2010 contained 92 such flagship projects and 75 horizontal activities. The decision had been made at the outset to create no new institutions and no new budget lines for the implementation of the Strategy. Instead, existing structures and funding mechanisms were used in a flexible manner.

Organisationally, the EU Baltic Sea Region process is guided by a high-level group representing all EU member countries and a number of key EU institutions like the European Investment Bank (EIB). National contact points within the EU member countries part of the Baltic Sea Region provide overall coordination on the activities within each country. Priority area leaders from the countries that have taken the initiative in the respective areas lead the overall implementation planning. Flagship project leaders and horizontal action leaders then are in charge of individual projects. Reference groups from the European Parliament, the European Commission, and interested subnational regions represented in

¹⁰ For more background see the website of the Commission devoted to the EU Baltic Sea Region strategy at http://ec.europa.eu/regional_policy/cooperate/baltic/ index_en.cfm as well as the own website of the Strategy at http://www.balticsearegion-strategy.eu/

Brussels provide additional support and feedback mechanisms.

Financially, the INTERREG IV Baltic Sea programme has turned out to be the central tool for funding projects within the Strategy. Starting with the 3rd call in the 2007 – 2012 budget period, flagship projects with otherwise equal quality were systematically favored in the allocation of funds. More than 50% of the overall budget has in the meantime been used to implement the Strategy. The Commission's proposal for the 2014-2020 programming period for the structural funds provides the basis for a much closer integration of macroregional strategies like the EU Baltic Sea Region Strategy with INTERREG and national structural fund programs.

A second funding source is the European Neighborhood Policy Instrument (NEPI). In 2011, the European Parliament took the initiative to allocate about EUR 20m NEPI funds to support the participation of partners in Russia and Belarus in activities of the EU Baltic Sea Region strategy. Since Russia has not signed the related financing agreement, the funding has only been available to Belarusian partners. Most Russian partners with concrete project proposals have, however, been able to find alternative funding mechanisms.

In its Communication from March 2012, the European Commission made a number of proposal to the strengthen the strategy, related to enhancing the strategic focus of the Strategy, improving the alignment of policies and funding instruments, clarifying the roles and responsibilities of different actors, and strengthen the communication of objectives and achievements. The Commission suggests focusing the EU Baltic Sea Region Strategy on three areas:

- To Safe the Sea
- To Connect the Region
- To Increase Prosperity

Compared with the previous structure, this proposal eliminates a fourth point ("a safe and secure Region"). The new approach signals a clearer focus on competitiveness and the environment as key objectives for the Strategy. These two are clearly areas that are of central importance to the future of the Baltic Sea Region. And they are connected in many ways, which makes addressing them as part of one overall Strategy particularly important. "Saving the Sea" and "Connecting the Region" clearly highlight areas in which cross-border elements are central. "Connecting the Region" is one of the ways in which the foundations can be created to "Increase Prosperity." Organizing the two as separate pillars presumably reflects the different policy tools in focus, i.e. infrastructure investments versus investments in innovation, skills, and cluster development. The final revision of the EU Baltic Sea Region Strategy would benefit from a transparent motivation of why these three areas where chosen, and how they are connected to each other. The previous fourth area, "safe and secure", is presumably a topic for which the CBSS collaboration is the more natural venue.

The Commission also makes proposals on the alignment of policies and funding. A 2011 study found that more than 20 different EU-funding instruments were used to finance the activities related to the EU Baltic Sea Region Strategy.¹¹ EU Structural funds, in particular the INTERREG

¹¹ Sweco (2011), Analysis of needs for financial instruments in the EU Strategy for the Baltic Sea Region, delivered to DG Regio in October 2011.

program, were the most widely used. The study identified a number of weaknesses in the current financing structure that were related to the nature of the EU funding tools used across the life cycle of projects:

- In the *start-up phase*, there is a need for more 'seed funding' to organize project teams and define specific action proposals. While the Baltic Sea Region has a rich tradition of crossregional networks and institutions, getting these linkages mobilized for specific projects still requires time and money.
- In the *implementation phase*, there is a need for funding structures that allow the feasibility studies and platform activities financed by current EU funding instruments to be translated into large scale investments. At this level there are still difficulties in connecting the then often national funding mechanisms to support cross-border investments. The fourth INTERREG funding already had some tools for further financing of projects in an 'extension stage'.

The higher quantity and complexity of regional projects triggered by the EU Baltic Sea Region Strategy has also increased the need for technical support. There are a number of tools and service elements, including the INTERACT Point Turku,¹² the EIB managed JASPERS program¹³ (discussed in a previous State of the Region Report), and the NEFCO/NIB Baltic Sea Action Plan Trust Fund,¹⁴ providing valuable to draw on further.

The Communication identifies the need to align individual projects with overall strategic objectives through systematic follow-up in the relevant EU institutions, including the Parliament, the Council, and the Commission. It also discusses the need to connect the available EU funding tools like the European Regional Development Fund, the European Social Fund, the European Agricultural Fund for Rural Development, the European Fisheries Fund, the Connecting Europe Facility, the LIFE-program, and research and innovation, as well as educational, culture and health programs with the macro-regional strategies. For the Structural Funds, a large number of EU member countries support the inclusion of macroregional strategies in the planning documents for the new programming period. No final decision has been taken yet, but the Commission's current proposals follow this approach.

The Commission also highlights the need to clarify the roles and responsibilities of different actors. One important issue is that of leadership. While the EU Commission has played a central role in developing the Strategy, the implementation sees the focus naturally shifting towards actors in the Region. The current organisational structure provides ample opportunity for engagement and participation, but seems less clear about leadership and political accountability. Previous State of the Region Reports commented already on the need to keep political leaders involved; the Strategy process would lose important momentum if it becomes primarily an effort of public servants.

The other issue related to organisational structure is the active development of linkages across different activities within the Strategy. An interesting example for enhancing such linkages is the project cluster approach, i.e. the creation of networks of related projects. Such a structure has been introduced for a pilot in the energy efficiency field in the fall of 2011, with a simplified tender process to identify a lead partner for the project cluster. The opportunities for such collaboration across projects are presumably much larger, but they will require specific action to unlock. The overall potential of the EU Baltic Sea Region Strategy will only be reached when these linkages are actively mobilized.

Finally, the Commission stresses the importance of communicating the Strategy more forcefully. Part of this is related to creating more awareness about the Strategy beyond the narrow group of (mainly) public officials involved in the Strategy. Involving the business community, the academic community, the relevant NGOs, and the broader public is critical for the Strategy to have its full mobilizing effect. It is also necessary to create a context in which political leaders have an incentive and opportunity to pursue Baltic Sea Region collaboration as an important political priority.

Transparent targets are a critical tool to communicate the objectives of the EU Baltic Sea Region Strategy and the progress made in achiev-

¹² http://www.interact-eu.net/ipturku/ipturku/127/632

¹³ http://www.jaspers-europa-info.org/

¹⁴ http://www.nefco.org/en/financing/bsap_fund

ing them. The Commission makes a number of concrete proposals for such targets, documented in the figure below. They are an important step in the right direction, combining a number of very specific quantitative outcome goals with sensible, more process-oriented objectives for collaboration. Importantly, they highlight areas in which regional collaboration is naturally essential but also make a connection to the broader goals of EU policies like the Europe 2020 strategy.

CLEAN

- Achievement of good environmental water status by 2020
- Improvements in biodiversity status and ecosystem health by 2020
- Full implementation by 2021 of the updated HELCOM BSAP
- Elimination of illegal discharges and 20% reduction of accidents by 2020
- Creation of a ecosystembased Maritime Spatial Plans throughout the Region by 2015
- Adoption of an integrated coastal protection plan and program by 2020.

CONNECTED

- Completion of all seven TEN-T land and sea priority projects involving the Region, for example the FehmarnBelt fixed link by 2020 and Rail Balticaby 2024
- Full and environmentally sustainable interconnection of the gas and electricity markets by 2015
- Increased cooperation in joint cross-border management and infrastructure planning and implementation, including across marine areas

PROSPEROUS

- 15% increase in the volume of intra-regional trade by 2020
- 20% increase in the number of people participating in exchange programs by 2020
- Reaching broader Europe 2020 goals
 - Reduction of GDP per capita differences
 - 75% employment rate of 20-64 year-olds
 - 3% of GDP spend on R&D and innovation
 - Achievement of national climate and energy targets

Three flagship projects

The EU Baltic Sea Region Strategy action plan includes a wide range of projects across the different dimensions of the Strategy.While previous State of the Region Reports have focused on projects with a narrow focus on infrastructure and competitiveness, this year's Report tracks one of the projects previously profiled but gives also an impression from two projects focused on environmental issues.

BSR Stars¹, a project already profiled in a previous Report, aims at fostering sustainable growth and prosperity through innovation. A major new step for BSR Stars will be taken in 2012, when launching an innovation call for the region together with BONUS². A number of projects want to join the BSR Stars umbrella programme and financing possibilities for this are currently investigated. Work within the five subprojects of StarDust, a BSR Stars project part-financed by the ERDF Baltic Sea Region (BSR)

Programme, is proceeding: Comfort in Living is a good example of smart specialisation, the concept underlying the new EU Regional Policy, linking Polish wood technology with Danish design and Swedish furniture entrepreneurs. The project develops products and services that improve the quality of life for elderly people in their homes, and has developed a strategic action plan until 2020 with three prototypes targeted for 2012. Active for Life aims to create and provide innovative, globally competitive and effective transnational service models and business concepts to maintain and improve the quality of life of the ageing population. Clean Water aspires to create a dynamic Baltic Sea Region Clean Water Cluster, achieving water protection with new and innovative technologies, products and services. The network has organized a study tour for the new management of Russia'sVodokanal and has arranged a water conference in St. Petersburg to explore opportunities in Russia. MarChain connects the national maritime clusters in the Baltic Sea Region focusing on trans-

¹ www.bsrstars.se

² www.bonusportal.org

port and logistics and leisure boats. *Mobile Vikings,* finally, is about joining strong clusters and innovation milieus within Telecom/mobile applications into new ways of innovation activities. Knowledge sharing workshops on open innovation have been organized and new financing through connected projects has been mobilized.

The Baltic21 EcoRegion Project³ aims to contribute to develop the Baltic Sea Region into the world's first Eco-Region, where economic growth goes hand in hand with environmental integrity and social justice. Led by the Federal Ministryfor the Environment, Nature Conservation and Nuclear Safety of Germany and, as BSR Stars, co-financed by the BSRProgramme, the project broughttogether experts and organisations from eight key sectors-agriculture, education, energy, forest, industry, spatial planning, tourism and transport - as well as ten regions from all Baltic Sea Region countries.Over the course of the last three years these partners have actively engaged in anintensive inter-regional, crosssectoral and sectoral-regional dialogue in orderto discuss and promote suitable measures for promoting sustainabledevelopment within the Baltic Sea Region. This process resulted in the publication series "EcoRegion Perspectives", the "Database on EcoRegionGood Practices", numerous "EcoRegion Studies and Measures", and background documents for the Baltic 21 mandate and the "CBSS Strategy onSustainable Development 2010-2015".

Baltic Deal⁴gathers farmers and farmers' advisory organisations around the Baltic Sea in a unique effort to raise the competence concerning agri-environmental practices and measures. The aim is to support farmers to reduce nutrient losses from farms, with maintained production and competiveness. The project has established a network for knowledgeexchange and organizes study trips within the Baltic Sea Region.Good practices for improved water management are tested in everyday farming and adjusted to farmingconditions in each country. In pilot areas, such as at the B7 islands, the sevenlargest islands in the Baltic Sea, farmers test howto apply good agri-environmental practices. The project maintains a network of 100demonstration farms around the Baltic Sea.

3 http://www.baltic-ecoregion.eu/

4 http://www.balticdeal.eu/

2.2 Moving beyond the scope of the EU Baltic Sea Region Strategy

The success of the EU Baltic Sea Region strategy is not only driven by the success of the individual projects that are part of the action plan associated with the Strategy. From the outset, the Strategy was seen as a tool to align relevant national policies across the Region. With the explicit decision to create no new budget lines or institutions, this was critical to create any real traction. In the process of involving the full set of government agencies active in policy areas included in the Strategy, the need to clarify the relation of the EU Baltic Sea Region Strategy to other broad-based EU strategies like Europe 2020 has become apparent.

The National Contact Points in the countries covered by the EU Baltic Sea Region Strategy tend to play a critical role in engaging a broader set of agencies and ministries in the activities related to the Strategy. Countries like Denmark and Sweden have created networks within the public sector to connect the Strategy with authorities in subnational regions and national agencies in charge of a particular policy area; a box insert provides detail on the Swedish example. These networks provide a platform to inform a community of public sector officials about the activities and opportunities presented by the Strategy and its implementation. They can become a launching pad for institutions at the national level to identify, alone or with partners from the same country, project ideas to pursue within the context of the Strategy. Finally, these networks can also be used to aggregate the experience with the Strategy into a common feed-back that the National Contact Points can communicate to the Commission and the High Level Group providing overall governance to the Strategy.

Concrete actions are then usually driven by individual ministries, national government agencies, or subnational regions. Different countries in the Baltic Sea Region have taken different approaches, partly as a result of differences in country size and government structure. The Swedish Region of Skåne has even taken the lead in one of the Strategy's flagship projects, as well as being involved in a number of other Strategy-related activities. The project to create a Baltic Fund for Innovation and Research was well aligned with the region's new innovation strategy. This is a typical example where a subnational region or agency uses the Strategy to leverage an objective it has, hoping to create more traction and larger impact.

The Swedish structure for the implementation of the EUSBSR

By Christina Skantze and BjorneHegefeldt, Tillväxtverket (the Swedish Agency for Economic and Regional Growth)

Since the EUSBSR was adopted the Swedish Government has assigned 37 government agencies and 21 County Administration Boards to contribute to the implementation of the Strategy.Tillväxtverket (the Swedish Agency for Economic and Regional Growth) was given the task to establish a network, coordinate and follow up the implementation of the Strategy in Sweden in consultation with the relevant Ministries and the Prime Minister's Office. Each organisation shall annually submit a report to their respective ministries with a copy to the Swedish Agency for Economic and Regional Growth concerning activities during the preceding calendar year. Tillväxtverket shall annually prepare a consolidated report for those authorities that have got a formal assignment to contribute to the implementation of the EU Strategy for the Baltic Sea Region.

To fulfill the coordination mission Tillväxtverket continuously cooperates with officials in the secretariat of the Prime Minister's Office and the officials of relevant ministries. To create conditions for the important and necessary dialogue between the national and regional/local level, officials from government agencies, regions and county administrative boards have been invited 3-4 occasions yearly since 2010. Between 70 and 80 people attend the Network meetings each time. These meetings play an important role in exchanging information and experiences both between the authorities themselves and between the authorities, regions and county administrative boards. The meetings are attended by the Swedish National Contact Point from the Prime Minister's Secretariat and officials from relevant Ministries. They provide valuable information on ongoing work within the respective ministries in the implementation of the Strategy, bringing information from the "high-level group meetings" and other relevant meetings at EU level. Officials from the Swedish Institute (former SIDA Baltic Sea Unit) have informed about the options available to obtain "seed money" for projects in early stages. In order to get a connection to the municipal level, officials from the Swedish Association for Local Authorities and Regions participate in the above mentioned meetings. Furthermore the participants inform each other about the ongoing work within their respective organisations. They also present specific projects. In addition to the mutual exchange, there are discussions about; funding sources, definitions of flagship projects, roles and responsibilities etc.

Following requests from the Network participants, a number of sub-working groups are being established. So far, there are groups dealing with the social dimension, education and the Digital Agenda.Regarding water management issues, the County Administrative Boards concerned, which are also appointed as "Water Authority", have built up an integrated water management structure with a new network-like approach. In addition, they have built up, developed and participated in the Nordic and European network of water management issues. By initiating a comparative study of how the Nordic countries have implemented the Water Framework Directive, the Water Authorities have contributed to increasing the understanding of how water management is conducted in other European countries.

The Managing Authority for the ERDF (European Regional Development Fund) in Sweden has participated in a concrete way in the dissemination of the strategy to the local level. This has been done by informing about the strategy and its possibilities. In connection with the announcement of calls for proposals, a new selection criterion was added where applications must clearly state how the project contributes to implementation of the EU Strategy for Baltic Sea Region. In countries where only parts of the territory are actively involved in the Baltic Sea Region collaboration, subnational regions play a particularly important role in leveraging the Strategy as a platform for broader policy action. In Germany, the three states of Schleswig-Holstein, Hamburg, and Mecklenburg-Vorpommern have traditionally been the driving forces in the context of the EU Baltic Sea Region strategy. Schleswig-Holstein provides a good example for how these states have leveraged the Strategy.

One important element has been the alignment of the structural fund program with the overarching objectives of the Baltic Sea Region Strategy. The European Regional Development Fund (ERDF) provides about 50% of the financing for the state level economic development program "ZukunftsprogrammWirtschaft (ZPW)", with the remainder being covered by state and federal funds. When the EU Baltic Sea Region Strategy process was getting under way, the ERDF operational program for the 2007 – 2013 budgeting period had already been set. However, a significant share of the projects funded within the program was well aligned with the ambitions for regional collaboration outlined in the EU Baltic Sea Region Strategy. The revised ERDF operational program submitted by the state to the European Commission now includes a specific chapter on the coherence of the program with the EU Baltic Sea Region Strategy. The operational program related to the use of European Social Fund (ESF) financing, too, is well aligned with the overall objectives of the Strategy.

The Baltic Sea Region strategy is also an important reference point for the state in its collaboration within the south-western Baltic Sea Region. Schleswig-Holstein, is since 1999, together with Hamburg, the Swedish region of Skåne, and the Danish regions of Zealand and Copenhagen, partner in the STRING-collaboration.¹⁵In August 2011 the five regions set up a STRING secretariat in the Danish region of Zealand. STRING has defined its vision to be the driver behind a North European green growth corridor, acting as a green European powerhouse and a strong strategic axis contributing to knowledge, growth, welfare and sustainability in Northern Europe, including the Baltic Sea Region.The Feh-

15 http://stringnetwork.org/

marnbelt Committee (FBC) and the Fehmarnbelt Business Council (FBBC) are among the partners that the STRING cooperation closely cooperates with. In addition to the existing STRING-activities, the state government has in December 2011 launched a broader strategy for Schleswig-Holstein's collaboration with Denmark. This strategy covers collaboration in the Fehmarnbelt region as well as between Schleswig-Holstein and Jutland.

Finally, Schleswig-Holstein has gotten engaged in specific projects that are part of the EU Baltic Sea Region action plan. Two of the focus areas are the maritime industry, where Schleswig-Holstein has taken a leading role, and health care. In these areas there has been significant interest of different institutions in the state to get actively involved.

At the federal level, Germany's Presidency in the Council of Baltic Sea States (CBSS) provided a platform to raise the visibility of Baltic Sea Region collaboration. Among the key events were the 20th anniversary of ARS BALTICA in September 2011, the meeting of the CBSS foreign ministers at a special session of the Baltic Media Forum in February 2012 to commemorate the creation of CBSS twenty years ago, and the range of activities organized in Berlin during the Baltic Sea Days in April 2012. The CBSS Summit in Greifswald at the end of May is another key event before Russia will take over the CBSS Presidency for the 2012/2013 period. The challenge for Germany is now to keep up the momentum for Baltic Sea Region collaboration at the federal level as the immediate attention through the CBSS Presidency is waning.

Across the Region, the EU Baltic Sea Region Strategy is for many public authorities one additional perspective to consider when responding to the overall set of EU strategies and programs. This ranges from the Europe 2020 objectives of smart, sustainable and inclusive growth to many others, including climate change policies, the Horizon 2020 program in research and innovation, the Integrated Maritime Policy, and the European Transport Network (TEN-T) Policy. For subnational regions and other agencies, this combination of different strategies and plans can be confusing. Individual projects may in the future need to fit with a region's smart specialisation strategy, contribute to the EU Baltic Sea Region strategy, and maybe also connect to relevant functional EU policies.

At the overall level, this should not be a problem. The EU strategies are all consistent and often directly motivated by the overall Europe 2020 objectives. This is also true for the EU Baltic Sea Region Strategy. This Strategy, however, has grown from a largely bottom-up process; it was not designed directly as a macro-regional implementation plan for the Europe 2020 strategy. Because the needs across the Baltic Sea Region are fully consistent with the objectives defined in the Europe 2020 strategy, there is no inherent conflict between the two. But the parallel processes naturally result in outcomes that can easily be perceived as slight differences in emphasis and approach.

At the operational level, however, it can lead to confusion or diminish the impact of the EU Baltic Sea Region. Part of this has to do with organisation: at the national level, responsibilities for the EU Baltic Sea Region Strategy, for the Structural Funds, and for the Europe 2020 process are often dispersed across different units if not ministries. At the local and often also the subnational region level, however, 'European and Baltic Sea Region affairs' tend to be covered by one unit or a closely connected group of people. The Baltic Sea Region Strategy can then easily be perceived as another layer of political objectives (or even conditionally) that these regional authorities or functional agencies have to meet in their activities.

The projects in the action plan of the Baltic Sea Region are a good example of how these dynamics between different levels of government can play out. The overall objectives of the Strategy were derived in a bottom-up process and are widely supported across the Region. For the individual projects in the action plan the selection process was somewhat less transparent. In some cases, the flagship projects gave already existing efforts further political support. These projects tend to work well and clearly benefit from the context the Strategy provides. In other cases, national governments tried to mobilize agencies and subnational regions to address a specific topic. These projects seem to have found it harder to get traction and have suffered more from the lack of clear financing structures.

3. Summary

The Baltic Sea Region continues to benefit from an exceptionally strong network of projects and institutions that span the Region. This organisational fabric is not something to take for granted. Many other regions, including other macroregions in Europe that aim to follow the example of the Baltic Sea Region, are struggling to build such structures. As has been commented in the past, a weakness of the current structure is its overly public sector-driven nature. There are examples of private sector engagement, but they remain relatively few. The agenda setting within the Region remains so far in the hands of government agencies. Broader engagement will be critical to achieve impact and sustainability.

A fair share of the cross-border institutions in the Region has been created in a political and economic context much different from today. These structures work well when the task is to negotiate between governments or create linkages. They are not always well suited to reach out to a broader academic and business community, and to move from creating linkages to enabling common action.

Fundamentally changing an institutional structure, especially one that in many respects has proven successful, is hard. The EU Baltic Sea Region Strategy implicitly chose a different path, modifying the activities of the existing structures from within. To an impressive degree this has succeeded. The Strategy provides the focal point for the relevant efforts in the Region, and all networks and organisations have found it the natural platform to coordinate their individual activities. This has led to more coherence and more effectiveness in the way available structures and resources are being utilized. It has created a structure that sets a high standard to reach for other European macroregions that aim to follow its example.

While there are many achievements to be proud of, it is also clear that the choices made at the outset of the EU Baltic Sea Region Strategy process have left the effort with some structural weaknesses. The Commission's recent Communication provides a sound platform to address some of them. The critical question is what type of ambition the Strategy should be connected with. There is minimalist vision in which the Strategy essentially is an action plan for cross-regional projects, financed through INTEREG plus, i.e. the existing INTERREG funding structures plus additional national resources (including those from national structural funds). The main objective of such an effort is better coordination of these crossborder activities and their overall alignment with key priorities for the Region.

A much bolder vision sees the Strategy as an integral part of an overall competitiveness agenda to successfully position the Region and its parts in the global economy, ready to be prosperous, inclusive, and sustainable. In such an approach cross-regional projects are an important part, but they are only a fraction of the overall agenda. The real leverage occurs when national and subnational governments pursue their strategies and policies in the context set by the overall EU Baltic Sea
Region Strategy. The level of leadership, engagement beyond the public authorities, and organisation and financing that his requires is obviously significantly higher than for a Strategy that merely improves the efficiency of existing cross-border collaboration.

Neither one of these two approaches is inherently right or wrong. But confusion about what the level of ambition is can be detrimental to the success of the effort. And there are signs that more clarity is needed. There is broad-based agreement to the overall Strategy but there could be more progress in individual projects. Projects that were in the pipeline already before the Strategy was launched now move ahead within the context of the Strategy; they have raised their profile and visibility but are not fundamentally changed. Other projects that had no clear predecessors seem to find it harder to get traction. The reason seems to be structural difficulties in terms of organisation and financing, not so much the strategic direction. Flagship projects are by design intended to be pilots that translate a political objective into some real activity. This slightly top-down nature makes it harder to motivate those in regional government and other institutions to fully engage.

The experience in the current INTERREG Baltic Sea Programme and the national structural funds programs shows that this is not a matter of content. Regions' activities are to a large degree already well aligned with the objectives of the Strategy; adding this aspect to the funding calls is not a real barrier to access the funding available at the regional or national level. This also suggests that the explicit inclusion of macroregional strategies in the programming for the new structural funds budgeting period is important but not sufficient. If they are not included, it would clearly be a negative sign that makes the implementation of the EU Baltic Sea Region Strategy much more difficult. If they are included, however, it still does not remove the barriers the Strategy is facing to get more broad-based traction. These barriers are a matter of the overall governance structure between the EU, the national governments, and the agencies and subnational regions driving much of the implementation. Clarifying these structures and the relations of the EU Baltic Sea Region Strategy to other EU strategies like Europe 2020, Vision 2020, and the Smart Specialisation Strategy at the operational level, would be an important step forward. Importantly, this is not just a task for the European Commission. Ultimately, it is the countries in the Baltic Sea Region that have to decide whether and how the institutional architecture for collaboration should be changed.



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This section of the State of the Region Report provides more detailed information on two topics with significant influence on the competitiveness of the Baltic Sea Region in the future. They also are areas in which collaboration across the Region is an important driver of success.

The physical infrastructure for transportation is often perceived as a given, rather than a factor that is critical for competitiveness. For the Baltic Sea Region, however, it turns out to be a necessary condition to successfully compete in the global economy. Connectivity, including physical connectivity, is critical for a Region at the periphery of Europe. Achieving close transportation links can in a Region with relatively small countries only succeed if it is based on cross-border collaboration. Olli-Pekka Hilmola from the Lappeenranta University of Technology in Finland as the lead author provides some overall perspectives on rail and road infrastructure investments in the Region, using the Rail Baltica project as a specific example.

Green growth, a term used to collectively refer to the different policy approaches aiming to put the economy onto a more ecologically sustainable path, is high on the policy agenda in parts of the Baltic Sea Region, particularly the more advanced Nordic countries. The necessary transformation towards a less resourceconsuming economy also provides significant opportunities for other parts of the Region that have attractive natural assets and fewer legacies that might hinder the adoption of necessary changes. What is 'Green Growth', and how well is the Baltic Sea Region positioned to take advantage of this broader change in policy direction taking place in many other parts in the global economy, NordRegio's Ryan Weber, with contributions from Patrick-Galera-Lindblom and Rasmus Ole Rasmussen, provide their answers, looking at a few areas of the emerging bioeconomy sector in the Region as a particular example.

1. Transportation Infrastructure Investments in the Baltic Sea Region

By Olli-Pekka Hilmola¹ and Christian Ketels

1.1 Transportation infrastructure in the Baltic Sea Region

The quality of the transportation infrastructure is a critical dimension of microeconomic competi-

tiveness. Part A of this Report has indicated that the level of competitiveness of physical infrastructure – others include energy and ICT – in the Baltic Sea Region is broadly in line with its overall competitiveness. This implies significant differences across the Region in the quality of transportation infrastructure, ranging from Denmark, Finland, and Germany ranked among the global top ten,



Logistical Performance Index 2012

1 Lappeenranta University of Tech., Kouvola Research Unit, Email: olli-pekka.hilmola@lut.fi Source: World Bank (2012) State of the Region-Report 2012 to Poland and Russia, ranked 80th to 90th place. In some countries, like Russia, there are also huge differences by mode of transportation (Hilmola, 2011).

Physical infrastructure is not everything; studies like the World Bank's Logistical Performance Index point out the importance of related services and procedures to make efficient use of it. The countries of the Baltic Sea Region ranked well in the most recently released edition of this index. Compared to 2010, Finland, Denmark, and Iceland gained significant position, whereas Sweden, Norway, and the Baltic countries fell behind – changes in score were, however, more modest. The more specific rankings on infrastructure are broadly in line with the overall profile.

Infrastructure has recently also become more politically interesting because of its potential as a driver of demand. Although large infrastructure projects do have significant lead time, there is the perception that funding through, for example, the EIB for large scale infrastructure projects with cross-European importance could be an ele-



Transportation Infrastructure Spending

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ment in a growth pillar of a European economic policy package.

According to the data available from the OECD, investments in transportation infrastructure in the Baltic Sea Region gradually increased to about EUR 12bln annually in the years prior to the crisis. Another roughly EUR 5bln are spent on maintenance. Relative to its GDP, the spending on transportation infrastructure in the Baltic Sea Region is roughly similar to the EU average.

Sweden accounts for about 25% of infrastructure spending in the region, followed by Norway with close to 20%. Relative to their GDP, Estonia (by a significant margin), Iceland, and Norway spend the most. Denmark and, somewhat surprisingly, Russia, conversely spend less than the Region on average. For most of these countries, natural conditions are the most likely drivers of their relative infrastructure spending levels.

Roughly 60% of all transportation infrastructure investment is spent on roads, both in the Baltic Sea Region and in the EU. Railroads account for roughly one third of expenditures, with the rest devoted to ports and airports. The further analysis focuses mainly on road and rail infrastructure.² Within the Baltic Sea Region, there is significant variation in terms of how countries allocate their funds. Poland has focused strongly on upgrading the road system, while Sweden and Russia have made larger investments in railroad infrastructure. Latvia has a significant share of its spending allocated to ports, Estonia to both ports and airports.

Within Europe, the Trans-European transport network (TEN-T) policy provides the framework for supporting transport infrastructure investments with a broader European relevance. Through the Trans-European Transport Network Executive Agency (TEN-T EA), the European Commission provides EUR 7.2bn in the 2007-2012 budget period in co-funding to relevant projects, especially 30 projects selected as priority efforts. EU funds can usually cover 20% of the total investment need, in some cases up to 40%. Of the EUR 5.8bln allocated to the priority efforts, EUR 815mln were devoted to four projects in the Baltic Sea Region: the Nordic Triangle road and rail links in Sweden and Finland, the Fehmarnbelt railway axis connecting Denmark and Germany, the Motorway of the Seas maritime connections in the Baltic Sea, and the Rail Baltica project in the Baltic countries. A fifth priority project located in the Region, the Öresund bridge, was completed in 2000.



Transportation Infrastructure Investments by Category 2009

2 Maritime transport infrastructure is important for the Region and an important part of the EU Baltic Sea Region strategy. A more detailed discussion of the broader set of issues related to maritime policy might be a topic for future Reports.





Core and Comprehensive Network Infrastructure



In October 2011, the Commission launched the new Connecting Europe Facility, providing-EUR 31.7bln to upgrade Europe's transport infrastructure. This includes a EUR 10bln ring fenced in the Cohesion Fund for transport projects in the cohesion countries, with the remaining 21.7bln available to all Member States for investing in transport infrastructure. This funding will be made available for projects that are part of the so-called 'core network', the backbone of Europe's multi-modal mobility network. The next level of infrastructure will then be the so-called 'comprehensive network'. The maps above indicate the relevant infrastructure in parts of the Baltic Sea Region.

The EU Baltic Sea Region Strategy includes in its action plan under priority area 11 five flagship projects to improve internal and external transport links: the flagship project 11.1, funded through the TEN-T facility, was completed in December 2011 with four main recommendations. It advocated the establishment of a joint infrastructure planning process for strategic transport networks in the Baltic Sea Region, the development of a model of transportation flows that captures the specific conditions in the Region, the reduction of administrative and fiscal barriers at the external EU borders within the Region, and the establishment of a Baltic Transport Outlook (BTO) Forum as a platform for future dialogue and collaboration. Flagship project 11.2 is managed by the secretariat of the Northern Dimension Partnership on Transport and Logistics (NDPTL), hosted by the Nordic Investment Bank (NIB).³ It extends the collaboration on transport infrastructure beyond the EU to the partners of the Northern Dimension Partnership. Flagship 11.3 implements the Motorways of the Sea, one of the priority projects in the TEN-T framework, in the Baltic Sea Region. Flagship 11.4, managed by NEAP,⁴ works on improving air transport routes in Northern Europe. Flagship 11.5, financed through INTERREG, is part of the implementation of another TEN-T priority project, the Rail Baltica Growth Corridor.⁵

1.2 Selected infrastructure projects in Baltic Sea Region

This section provides information on selected current activities in transportation infrastructure in some parts of the Baltic Sea Region, focusing on road and rail infrastructure.

3 http://www.ndptl.org/home

5 http://www.rbgc.eu/home.html

⁴ http://www.neaproviders.com/magnoliaPublic/home

Denmark is currently taking important steps to develop its railway infrastructure, following Sweden with an increasing focus on railways for passenger transportation. Denmark's key challenge is the high amount of diesel used as traction in rail transport; only one third (e.g. World Bank, 2007) of the railway network is electrified (in Sweden nearly 80% is, and in Finland roughly half is). EUR 160mln will be invested in the electrification of railways, mostly on the Esbjerg-Lunderskov line (Transportministeriet, 2012). Other lines under discussion are Køge Nord-Næstved, Roskilde-Kalundborg, and Fredericia-Aarhus. The total electrification package of EUR 300mln also includes new railroad stations for large hospitals in Hillerød and Gødstrup. Similarly, Denmark has made the decision to upgrade its railway's old signalling/traffic management system to the most modern European standard (ERTMS) at a cost of EUR 2bln and a project duration of at least a decade (Søndergaard, 2010). These decisions have to be seen in con-

The Fehmarnbelt Fixed Link

The Fehmarnbelt Fixed Link between Germany and Denmark is a project of international dimensions. The construction's physical size alone makes it one of the world's unquestionably largest infrastructure projects. It will provide many new opportunities for the some nine million people and thousands of businesses in the Fehmarnbelt region, i.e. Northern Germany, Denmark and Region Skåne in Sweden.

September 2008, Germany and Denmark signed a treaty on realising a fixed link across the Fehmarnbelt with a twin-track railway and a four-lane motorway. Since April 2009, the Danish government-owned Femern A/S has worked on designing a project that both the Danish and German authorities will be able to approve pursuant to applicable national rules and legislation. In February 2011, the Danish politicians behind the project declared an immersed tunnel to be the preferred technical solution. The project is expected to be approved in 2014/2015, whereupon construction can commence. The aim is for the fixed link to be completed by 2021.

As the owner of the project, Denmark is responsible for financing the coast-to-coast link and the Danish hinterland infrastructure, while the German government is financing the German hinterland infrastructures associated with the project. The estimated costs in year 2008 prices are roughly EUR 5.5bn, nection with the inauguration of the Stockholm-Naples corridor, where Swedish, German, Austrian, and Italian partners have all agreed to increase interoperability of international railway traffic. These investments in long distance traffic are still relatively moderate compared to what has been invested in the Copenhagen region in the past (metro lines M1 and M2), and what is currently under construction (City Circle line). These short-distance investments have had budgets of a few billion each, and the city circle line is estimated to cost more than EUR 3bln (Metro, 2012). So, similarly with Helsinki and Stockholm, most Danish investments are made in the capital city with its populated regions and most important traffic points.

Denmark's single largest transportation infrastructure project under planning is the Fehmarnbelt tunnel, connecting Denmark with Germany, and enabling links to Sweden and Norway. Once opened, the Fehmarnbelt tunnel will ease traffic congestion in the Jutland area (OECD, 2010).

with an expected EU subsidy of up to EUR 1.2bn. User charges, to be set at a price comparable to the current cost of the current ferry crossing are expected to recover these costs over time, with the current estimate for the payback period being close to 40 years

In 2011, the average daily traffic on the Rødby-Puttgarden ferries amounted to 5,368 vehicles per day. When the fixed link opens in 2021, an average of approx. 8,000 vehicles as well as 78 goods trains and 40 passenger trains are expected to drive through the tunnel every day.

The Fehmanbelt Fixed Link will be built as a 17.6 km long immersed tunnel for combined road and rail traffic. At a speed of 110 km per hour, this would offer motorists a tunnel transit time of 10minutes. Train passengers will spend seven minutes travelling from coast to coast. The tunnel will be constructed from 79 standard elements 217 m in length and 10 shorter special elements spaced at 1.8 km intervals. The tunnel elements will be manufactured at a large production plant in Rødbyhavn and then towed to where they will be immersed in the tunnel trench. When the elements are in place, they will be covered by stone and sand. Based on the construction estimate for the coast-to-coast project, the total number of jobs is estimated to equate to 25,000-30,000 man-years over the period 2009-2021.





Proposed alignment between Puttgarden (left) and Rødbyhavn



The tunnel will be laid in a trench excavated in the seabed. Once the tunnel is complete, it will be covered with stone. Over the years, the natural seabed will regenerate itself.

Smaller investments are being made in upgrading parts of the road infrastructure (E20, E45 and E47, which are all part of TEN-T), for example, the recently opened motorway between Kliplev and Sønderborg (E45; implemented as public-private-partnership, 30 year agreement period), and motorways under construction in Riis-Ølholm-Vejle (E45) and Holbæk-Vig (both of these having costs of approx. EUR 200mln each, similar to the already finished one). Future projects are the Funder-Låsby motorway (similarly sized as two earlier mentioned) and in the Copenhagen region, the planned Frederikssundmotorvejen (more information, Danish Road Directorate, 2012) as well as ring road 4 (OECD, 2010).

In **Sweden**, railway transportation volumes and the amount of operators (in both the passenger and freight side) have increased considerably over the past decade. This has naturally started to create bottlenecks in the railway network. Therefore, it is natural to notice that numerous railway projects are now in the construction phase or just completed (e.g. Malmö tunnel), many of which require expensive underground tunnels. Swedish transportation infrastructure projects are also currently dominated by the railway sector due to an emphasis on sustainable growth (Trafikverket, 2012). However, rail dominance has raised concerns about forgetting road projects, like the improvement of the E20 road (Västra Götalandsregionen, 2012) through southern Sweden, connecting Malmö, Gothenburg and Stockholm.

Two major long-distance railway projects are now in the construction phase: connecting Trollhättan with Göteborg by enlarging the existing infrastructure (Bana Väg) and improving existing infrastructure in the Bothnia line from Sundsvall onwards (e.g. used speeds and axel loads). Both of these are large scale projects, Bana Väg having budget of EUR 1.5bln, and the Bothia line costing under EUR 1bln. It should be noted that in both cases, railway investment is nearly the same as Bana Väg and also includes a four lane highway (from the current two lanes) in the budget.

In terms of long-distance road projects, only the E18 and E4 projects are in the construction phase. The E18 project intends to improve the current road between Kista (near Stockholm) and Hjulsta by adding an additional lane to each direction, for a total budget of close to EUR 500mln. The E4 project concerns improving 20 km of Sundsvall-centred road, and includes e.g. building 33 bridges. The total budget is similar to E18 project.

For short-distance connections, railway and road projects are very much 'underground'. For example, in Stockholm, the City Line, which aims to reduce capacity problems of short and long distance traffic entering city centre, is under construction. The budget of this project is nearly EUR 2bln. A similar tunnel project with a long execution history is the Hallandsås tunnel, a railway tunnel between Gothenburg and Lund at an estimated cost of well over EUR 1bln. A third railway tunnel project, called West Link (Västlänken), is currently in planning. This will ease the access to Gothenburg city centre area, at a total budget of more than EUR 2bln. Stockholm has another major underground project in the planning phase, as the construction phase of the E4 Stockholm bypass is intended to begin in 2013. From the total 21 km of road, 18 km will be put underground to enable outer ring road completion and avoid road traffic unnecessarily entering city centre areas. The estimated total budget of this project is more than EUR 3bln. This large-scale project is coupled together with Norra Länk, which will complete the inner ring road by 2015.

In **Finland**, large-scale investments in transportation infrastructure are dominated by the railway sector (e.g. Paavola et al., 2012; Finnish Transport Agency, 2012). Roads (e.g. final parts of main way 1 (E18, Turku-Helsinki), as part of Trans-European Road Network, which included e.g. connections of Lohja-Muurla and Muurla-Paimio) and sea ports (green field investment of Vuosaari, but also considerably enlarging existing sea ports, like Naantali, Hanko, Hamina, Kotka and Kokkola) have received numerous investments in the previous decade.

Currently, the largest and most important site under construction is the railway connection between Seinäjoki and Oulu (Finnish Transport Agency, 2012). This work has been split into phases, and the first one began with an engineering and development phase in the middle part of the previous decade. The second construction phase started in 2011, and it is estimated that the whole project will be finalised by the year 2017. The total budget for the project is close to EUR 900mln. The investment amount has increased over time, mostly due to increased traffic estimates for both freight and passenger transport. In this region is the very important Russian raw material transit sea port of Kokkola, which is fed by this railway connection. Seinäjoki-Oulu is part of the Trans-European Transport Network (TEN-T).

The metropolitan area of Helsinki has three major construction projects, two of which are in the building phase, and a third one is likely to be started. The circle rail (Kehärata), which connects Helsinki-Vantaa airport to local and long-distance railway transportation networks, was launched in 2009. The total budget is more than EUR 600mln, and it is financed by the state and city of Vantaa (Finavia, the airport operator, contributes a small share). This railway connection is part of the TEN-T network and receives some EU funds, too. Espoo, in the western part of the metropolitan area, started construction work on the West Metro, which connects the population of Espoo with the rail-based public transportation system of Helsinki. The total budget is similar to that of the

circle rail, and it is being financed by the central government, the city of Espoo and the city of Helsinki. A feasibility study looked into the extension of the system into less populated parts of Espoo. A project likely to be started is called Pisararata (could be freely translated as 'water drop rail' – the name comes from its intended shape) in the city centre area of Helsinki. Its budget is even slightly higher than that for West Metro. The main idea is to ease access for short-distance railway traffic to the city centre of Helsinki.

SECTION C

The main future projects in transportation infrastructure are going to be eastward oriented. This basically means improvement of the railway connection from Luumäki/Lappeenranta onwards (as probably eastern railway traffic from freight side shifts to the Imatra-Svetogorsk border crossing point). It will also include the improvement of the main highway (E18) connection to Russia (at the border crossing point of Vaalimaa-Torfjanovka); the construction of the Koskenkylä-Kotka part has already started. This will most likely create a continuous connection from Hamina to the Vaalimaa border area; the Hamina bypass construction has already started. In addition, numerous railway and road projects have been proposed in the northern part of Finland due to significantly increased mining activity and plans to build additional mines.

In the Baltic countries, **Estonia** is currently in the process of upgrading the road linking its two biggest cities, Tallinn and Tartu. One project currently discussed would raise a budget of around EUR 200mln through a public private partnership. Another part of the Tallinn-Tartu connection is already being upgraded, with around 85% of the total budget cost of roughly EUR 55mln covered through EU funds. For the overall 2008-2013 EU budget planning period, Estonia has received an allocation of roughly EUR 415mln for transportation infrastructure.

In 2009, the Estonian Railways received EEK836mln (US\$79.44mln) in infrastructure financing from EU structural funds. Currently, there is 968km of broad-gauge track in the country. One of the projects outlined will be the reconstruction of the line between Tallinn and Tartu, Estonia's second-largest city, transforming it into a high-speed track that will allow trains to travel at speeds up to 120km/h. Another project under discussion is a sub-sea rail tunnel between Helsinki and Tallinn.

Estonia's main ports are all operated by the state-owned trading company Port of Tallinn, with Muuga being the main cargo port. Infrastructure quality reportedly remains problematic, but Estonian ports could in the future compete with St. Petersburg for shipments destined for the Russian interior and Central Asia. A key unresolved problem remains the difficult situation at the Narva-Ivangorod border crossing with Russia (Hilmola et al., 2007).

Lithuania government aims to leverage the country's geographic position as an important transit state for trade passing between Russia and the EU. The Port of Klaipeda is the principal sea cargo facility in the Baltics, with an annual cargo capacity of 40mln tonnes. A project to design new quays, a pier and a ramp for the Klaipeda port was awarded in late 2010. The Lithuanian Ministry of Transport is, according to industry reports, now looking for investors to finance a new deep

Project Name	Value (USmn)	Compa- nies	Time- frame	Status
Cargo Facility at Tallinn Airport	na	na	-2009	Planning Stage
Reconstruction of Tallinn- Narva Highway	8.74	Nordecon Infra	2009+	Announced
Vabaduse Bridge	10.6	OU Tils	-2009	Delayed
Parnu Bypass	51	na	2009-	na
Construction of Rail Track in Southeast Estonia	na	RKAS	2008-2011	Tender Released
Development of Muuga Harbour in Port of Tallin	12.58	EU funding	2009	Announced

Table: Major Projects - Transport

Source: BMI. na=not available.

Project Name Ports	Value (US mn)	Capacity/ Lenght	Compa- nies	Timeframe	Status
Modernisation at Klaipeda Port	74.7	31 mn tonnes	na	na	na
Rail					
Kaunas to Vilinius rail line	72.51 na	na	2010-2014	Tender due to be released	Delayed
Tramway in Vilinius	169	10.4km	Systra	2008-2015	Planning stage

Major Projects Table - Transport

Source: BMI. na=not available.

water port. In November 2011, Lithuania and Ukraine signed a Memorandum of Understanding to further develop the Viking container train link between the Port of Klaipeda and the Ukrainian Port of Illichivsk. Last year, 40,000 TEU were transported on this line which has been operational since 2003 (Hilmola, 2011). In 2011 the government announced plans to invest roughly EUR 110mln in the modernisation of the road and railway infrastructure, using EU funding. About 40% would go to upgrading the railway system, and roughly 10% to port and airport investment. The railways are operated by Lithuanian Railways (Lietuvos Gelezinkeliai), which had an EU-supported investment budget of EUR840mln between 2007 and 2013. The road sector has been the beneficiary of growing investment over recent years. One of the most important routes is the sec-

Project Name Value (US Capacity/ Compa-Timeframe **Status** Airports Lenght mn) nies Expansion of Riga 402.52 12mm pas-TAV, Skonto 2008-Investment announced Airport sengers Bruve (March 2009) Ports Riga Free Port 69.93 45mn tonnes Magnat Group 2006-2010 Currently underway Capacity expansion Grain terminal completed na 2006na na at the Port of Liepaja (2008) Rail Rail Baltica (first na 965 km Systra 2010-2013 Winnning bidder anphase) nounced (July 09) Roads & Bridges Upgrade of Latvia's 2000-2300 Latvijas Valsts 2006-2013 At planning stage na main highways Celi Northern Corridor 1900 30 km Riga City 2005-2018 Construction to begin in 2011/12 Development Department 100 2009 **Bidders Shortlisted** Motorway between na na Riga and Estonian border E77 (Riga Bypass) 38.72 km **Bidders Shortlisted** 348 2008-2014 na Kekava Bypass PPP documents being na na na -2014 prepared Riga Jelgava road na 43 km na 2009-2016 Initial planning stage Riga Koknese Initial planning stage 2010-2017 na na na Priedaine – Sloka na 19.4km na 2010-2017 Initial planning stage road Four – highway 2011-2018 Section of land for the na na na construction to be prepared (April 2011)

Table: Major Projects - Transport

Between western Latvia and Moscow

tion of the Via Baltica running through Lithuania. There are currently plans to upgrade the route to motorways. Lithuania has three international airports: Vilnius, Kaunas and Palanga. Vilnius International Airport is currently undergoing expansion and refurbishment of the passenger departure lounge, as well as the expansion of aircraft parking facilities. Kaunas International Airport has undergone expansion through the construction of a new passenger terminal.

SECTION C

In **Latvia**, railroads play a key role in the transit corridor for trade between the EU and Russia. Latvia's railways operator Latvijas Dzelzcels is planning to invest EUR2.1bn in upgrading and maintaining the rail network, including the modernisation of a 105km section of the East-West rail corridor and a second rail track linking Riga and Krustpils. The country will also improve rail links to ports. A second rail track is being constructed between Skriveri and Krustpils in the east of Latvia. The EUR95mln budget project is partly financed by the European Investment Bank (EIB) to the sum of EUR23mln (US\$30.78mln).

The road transportation network plan includes the Latvian government's overall strategy to improve the road system. A contract to rebuild a section of the Riga ring road was awarded in September 2011. Other current projects include the renovation of parts of the P-45 road in eastern Latvia and the renovation of streets in the city of Jekabpils. An asphalted road between Karksi-Nuia in Estonia and Rūjiena in Latvia was completed in October 2011 at a cost of just over EUR 3mln.

Transportation infrastructure in **Russia** is traditionally developed through very large scale projects. This has been the case in the Leningrad Oblast and St. Petersburg. In the recent decade, the following multi-billion euro projects (nearly each one by itself, not in total) have been completed or are near completion:

- Primorsk/Koivisto (northern part of Gulf of Finland) oil sea port, handling currently 75+ million tons of oil p.a. (opened in 2001-2002).
- Enlargement of St. Petersburg city area sea ports, especially for container traffic (currently handling amounts are nearly 2 million TEUs p.a., more than double of what Gothenburg is handling), but also for passengers.
- Ust'Luga sea port (southern part of Gulf of Finland), export of coal and metals, but also

import operations of containers and other general cargo, like cars (under construction, but some terminal parts are already in operation).

- Ring road around St. Petersburg, a long term project, which was finally opened during year 2011.
- Development of railway access to Finland in passenger side (to bordering station Buslovskaya), but also separating freight flows to other section (this part is still under construction).
- Development of railway access (high speed) to Moscow, basically meaning that parts of the railway connection needed to be renewed similarly with Finnish Allegro connection. The Sapsan connection was opened in 2010, and has been a major success from the very beginning.
- Highway investment connecting St. Petersburg with Moscow – enlarging current capacity to meet heavily increased traffic volumes.
- Construction of gas pipeline Nord Stream in collaboration with German partners, which proceeds to the sea bottom in the neighborhood of Vyborg, Russia (very near of Finland), and reaches North German Greifswald after more than 1200 kms journey in the bottom of the Baltic Sea.

All of these large-scale projects required improvements in connecting infrastructure, like the expensive pipeline system to Primorsk/Koivisto for oil transports. On the agenda has been a railway line to Murmansk (ice free northern sea port) to improve oil and raw material freight transportation capacity and capability. However, current investment levels are far from what is needed to assure regional growth. The high speed train from St. Petersburg to Moscow, for example, is already nearly fully utilised.

1.3 Cross-Border infrastructure projects in the Baltic Sea Region: Rail Baltica

The Rail Baltica project aims to connect the railway networks of Poland, Lithuania, Latvia, Estonia and Finland. It was first conceived in 2001 and has gained EU backing and funding, receiving EUR 2.7mln from the EU's Trans-European Transport Network funds. The first stage of Rail Baltica, a project that will connect the Baltic and Central European rail networks, was due to begin in 2010 and be finished in 2013. Once finished, the project will improve the freight facilities available to transport cargo across Central and Eastern Europe. It is hoped that Rail Baltica will help reduce the amount of freight carried by road, as the EU has pledged to move freight off its member states' roads and onto rail. When Rail Baltica becomes fully operational, more than 4mln tons of freight a year could be shifted from road to rail (AECOM, 2011).

Although Rail Baltica has been on the agenda and in the planning stage for the last two decades, its strongest operational parts remain located in the north. Since late 2010 daily connections between Helsinki (Finland) and St. Petersburg (Russia) have been available, using modern railway technology enabling roughly three and half hour connections between the cities. This has required massive investments. On the Finnish side, for example, the railway route connection to Lahti had total costs of EUR 311mln, while improvements of the railway line from Lahti to Vainikkala (border station) cost more than EUR 200mln. A freight corridor also exists, but has not been major success so far. In 2008, Vuosaari sea port (Helsinki) got straight railway connections from the loading docks - this connection is not a simple one, as it also includes a railway tunnel with a length of 13.5 km, which alone had final price tag of EUR 200mln. The Vuosaari sea port enables smooth and prompt connections to the main Rail Baltica railway corridor through its high frequency connections with Tallinn's Muuga sea port.

In passenger transport, the Helsinki-St. Petersburg connection has been successful. During 2011, this connection, operated by Allegro trains (rolling stock investment of more than EUR 100mln), attracted more than 300,000 passengers (fill-rate of roughly 40-50%). Passenger numbers increased nearly 50% year-to-year, but it should be remembered that the global credit crunch has had a significant effect on travel volumes. During the 'record' year of 2011, the total amount of railway journeys between Finland and Russia were slightly higher than during 2008. The new modern connection to St. Petersburg included significant investments from the Russian side as well. The railway line from Buslovskaya to St. Petersburg was entirely renewed to meet new standards. The Russian governmental railway company RZD jointly invested in rolling stock with its Finnish counterpart VR (Allegro trains). It is difficult to estimate the exact infrastructure investment on the Russian side, but it could be assumed to be at least EUR 500mln. The railway gauge between Finland and Russia differs by 4 mm, so the Allegro train was tuned as the best possible compromise with respect of travel comfort and speed. Different electrical currencies used in the two countries required that Allegro trains were equipped with two electrical systems. Other modern railway investments have, in general, been at the active implementation stage in Russia, as currently a traveller from St. Petersburg to Moscow could select a Sapsan high speed train and reach Russia's capital within four hours - the only problem is finding an available seat, as fill-rates in this connection were above 100 % in 2011.⁶

At the Planning Stage: Tallinn-Warsaw Corridor

Currently, the Baltic States do not have any international co-operation in railway passenger transportation to reach Poland from Estonia. Passengers need to use domestic connections and synchronise timetables to best suit their own purposes. From Tallinn to Warsaw, a traveller could spend more than two days (if everything goes as planned); the time required is much higher than in the 1930, when railways were a very popular alternative for international travelling. One reason for the long travel times is the state of railway lines, and the lack of modern rolling stock. However, based on our own research, a traveller spends nearly one third of their overall travel time waiting between different local connections (Laisi et al, 2012). Passengers have already made their choice: railway passenger transportation volumes in Baltic States are down by a factor of 80-90 % from the level of two decades ago.

⁶ Fill rates count the number of passengers using the train for part of the journey relative to the number of seats in the train. Fill rates above 100% indicate the same seat used by different passengers on different segments of the overall journey.

In this context, it is no surprise that Rail Baltica is one of the key projects included in the most recent priority funding list within the EU's TEN-T planning. Currently, the probability that the Rail Baltica investment will be realised is high: the three Baltic States have agreed at the highest political levels to work for the realisation of the project, and for the first time the Finnish Prime Minister has publicly supported this project, too. The executing organisation is also under establishment. Three separate studies have been made over the last five years to analyse the financial profitability of the Rail Baltica investment, and they all clearly show that the cost-benefit analysis having reached a positive level (from 1.75-3 CBA value; European Commission, 2007; Bröcker et al., 2010; AECOM, 2011). Benefits arise mostly from faster and more environmentally sustainable travel times of people and freight.

For Rail Baltica, there exist basically two different options: (1) enhancement of the current 1520 mm railway line in the Baltic States (Russian standard) or (2) building European gauge 1435 mm in the shortest possible manner through the Baltic States (see Figure 2 for details). The political will exists mostly for the latter option, but this does not mean that the old network would be forgotten. For example, some countries have already started fragmented investment activity. Lithuania has decided to invest hundreds of millions of euros already, improving the focal intermodal point of Kaunas (serving not only north, but also east, like the Kaluga industrial city in Russia, where numerous European car manufacturers are nowadays located). Estonia has improved the railway route between Tallinn and Valga (through Tartu). Poland plans improvements in the environmentally sensitive northeastern part of Polish Rail Baltica, at a cost of more than EUR 500mln.

Rail Baltica is going to be the largest transportation investment ever executed in the Baltic States: at a minimum, it will cost more than EUR 1bln to implement using existing structures and routes, but will increase to up to EUR 4bln with a new straight line. If Rail Baltica is realised with European gauge, it could be assumed that Germany and Poland will improve the existing, dieseloperated Berlin-Warsaw connection at a cost of



Figure 2. Rail Baltica alignment using old route (yellow) and the plan for atotally new straight railway line (red). Source: KarttakeskusOy/Aalto University, Cemat

another EUR 500mln. Passenger rail operations between Tallinn and St. Petersburg could also be reopened, especially if the development of a mega sea port called Ust'Luga in the Leningrad oblast creates spare capacity.

Freight is the Key for Rail Baltica Success: Growth Expected from Short Sea Shipping

Typically, large-scale railway investments aim to avoid the growth of road transports in passenger and freight. This is also the case for Rail Baltica, but the current focus on road infrastructure in the Baltic States makes it difficult to realise. Only Lithuania has some road transport payments for freight (vignette system), and if Estonia and Latvia are going to follow their southern neighbour's example, the overall cost for road transport with vignette payments may still not be high enough. Railway users are always required to pay for infrastructure use, but road freight pays only a small fraction out of its usage sum. As higher penalties for road transport arise from Poland onwards (the "via TOLL system" was recently taken into use in Poland, having similarity with Germany), it could be assumed that Rail Baltica will attract only very long distance cargo, having end points e.g. in Germany, Austria or Switzerland.

Higher growth potential for Rail Baltica exists in another very interesting place: short sea shipping! This is caused by the implementation of the ratified International Maritime Organisation (IMO) sulphur restrictions agreement during the year 2015 (Kalli et al., 2009; Delhaye et al., 2010). This new regulation basically requires shippers in the Baltic Sea to use sulphur-free fuel in their shipping operations. In the case of Finland, transportation of trailers or containers by sea to Central Europe will increase due to this new regulation by 30-40%. As shipping gets hurt, hinterland transports will become more competitive. Finnish exports and imports may start to seek more solutions for cargo transport through the Baltic States, and a much shorter transit to the main export-import areas compared to the alternative offered by Sweden and Denmark.

1.4 Concluding comments

The Baltic Sea Region has numerous large-scale transport infrastructure projects. However, many of these projects are domestic or bilateral (like Sweden-Denmark, Denmark-Germany, Russia-Germany, Finland-Russia etc.). Where the Region needs to do more is in integrated transportation infrastructure of a truly regional character. New, large scale investments should include more than two countries (preferably four or even more) as stakeholders, and possibly shareholders of established owners of new infrastructure.

Currently all countries run their own budgets for transportation investments and this leads to an overly narrow and eventually domestic and bilateral development view. This system should be opened up. One tool is to use more the public-private partnership model, where user charges are used to fund back investment in the operational phase. This would enable secured investments by foreign countries in distant (and foreign) transportation infrastructure projects. If countries were part of the owner base, we would expect it to also attract other private sector investors from the region. From this sort of action, we could say, as an example, that hypothetically Norway and Sweden would become major shareholders in the Fehmarnbelt tunnel, and e.g. Finland and Germany would do sousing Rail Baltica. The collection of user charges is relatively simple in the situation of a bridge or tunnel, but railway access fees in the current era of modern IT systems are not difficult either.

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2. Green Growth in the Baltic Sea Region

By Ryan Weber, Patrick Galera-Lindblom and Rasmus Ole Rasmussen⁷

Green growth is a broad, seemingly all-encompassing policy perspective emphasising the importance of, and ability to, achieve a new path of low-carbon, resource-efficient growth. Nowhere is this clearer than the fact that international institutions such as the OECD, UN, and EU have it at the heart of their policy agendas. However, what does it mean to translate such a wide concept into the context of the BSR? This chapter seeks to answer that question by giving a basis for how green growth can be perceived from a BSR perspective, both in terms of what types of interventions are warranted to make the region more competitive, and how collaboration and mutual conditioning can hasten its realisation in reality.

In this chapter, a short conceptual discussion will focus on how green growth is integrated into existing EU, BSR, and national policies. Following this, the aim will be to provide an evidencebased analysis of existing green growth performance in relation to its most traceable drivers: eco-innovation and dependence on fossil fuels. This will facilitate discussion on the patterns of existing BSR collaboration and a basic scoping of green growth potentials in relation to urban issues of planning, building and consumption, as well as rural issues of production related to the bioeconomy. Seen from the perspective of enhancing regional competitiveness, the ultimate aim is to show that green growth is less about "what we can we do for the environment?" and more about "what can the environment do for us?"

2.1 Conceptualising green growth

According to the IPCC, in order to limit climate change to manageable levels, we must reduce global CO₂ emissions by 50-80% during this century. Yet even with the threats of climate change on our horizon, the general approach still seems to be that plenty of fossil fuel resources are still readily available. 'Readily' is a relative term, however - it is dependent on the dynamic context between the physical availability of resources, the market's willingness to pay for them, and the availability of alternate, more cost-efficient solutions. An example of this context is oil, which at 42 % in 2009 was by far and away the dominant energy source for Europe (the next closest was natural gas at 23 %). By the end of 2010, proven reserves of oil totalled approximately 1.5 trillion barrels worldwide; In comparison, oil consumption averaged just less than 90 million barrels per day. Holding this rate steady, a quick calculation tells us that we have less than 50 years worth of proven supply still in the ground. That alone should be enough to convince us that alternate solutions need even more attention. Even more worrisome is the fact that since 1965 our consumption of oil has almost doubled per capita. If the current levels of con-

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Figure 1: History of oil prices 1970-2010.

sumption continue to grow at this rate, our proven reserves will be gone before 2040.

An oil company will refute these statistics by saying proven reserves do not even come close to accounting for all of the potential oil that is available. Here, they are not completely wrong, but they are misleading. In 2010 the International Energy Agency estimated that there could be the equivalent of 5 trillion barrels of oil available in shale, with approximately 1 trillion barrels technically recoverable. This would increase proven reserves by almost 70%, thereby dramatically extending our window of opportunity to rely on oil. However, oil shale is significantly more expensive to produce due to the energy and resources needed to extract oil from rock; and it certainly will not be the extraction and refining companies that will bear the additional costs – it will be the end users. This exemplifies how our supply of fossil fuels, including oil, is directly contingent on our willingness to accept higher costs. As seen in Figure 1, we have been willing to pay these higher costs while still increasing consumption.

A concept of green growth for the BSR

Although green growth has entered the mainstream policy discourse, there is still no clear consensus on what is actually meant by it; not only what is meant by green, but even what is meant by growth. As an example, some speak of an entirely new economic paradigm when discussing green growth - one where growth and prosperity are no longer the de facto indicators of growth, but where other drivers such as environmental performance or other non-monetary quality of life perspectives play a more central role. One of the problems with this perspective is that it does not place enough consideration on our current situation – our place in globally competitive and largely capitalist economy. For any green growth perspective to succeed beyond the conceptualisation phase, these underlying conditions must be engrained as the taken-for-granted basis for competitive development. This in turn reinforces the importance of innovation for delivering green technology solutions that not only lower the cost of emissions, but establish or solidify export competitiveness, and thus comparative advantage.

Perhaps most importantly, however, green growth is not meant as a replacement to sustainable development, but it is based on the realisation that achieving sustainable development will rely almost exclusively on getting the economy right. Rather than the widely held notion that the future cost of GHG emissions reductions will stymie economic development, green growth operates under the notion that, at the very least, these reductions can take place while maintaining economic performance. It also acknowledges the economic crisis as a point of departure, where our tendencies for misallocated investment have shown their weakness through repeated experiences of low or recessed growth.

A modest green growth perspective envisions that a fair emissions price and elimination of counter-productive subsidies on fossil fuels will incentivise the market for innovation-based investment in low-carbon technologies across all sectors. This justification mainly rests on the rationale that increasing fossil fuel uncertainties, coupled with market pressures, will set a price for energy that reflect these supply constraints and environmental externalities. However, this relatively laissez-faire approach fails to acknowledge at least three irrefutable arguments: higher energy prices alone will disproportionately affect those with the least ability to bear the cost; they will impose high costs on certain industries that will have disproportionate impacts in different regions (which would certainly affect competitiveness in the short term); and while a carbon price at the global scale is necessary, it is seemingly not feasible at this stage. Even in the EU, the ETS is still in its infancy and while it targets energy intensive sectors, it does not target the sectors with the greatest potential for emissions reductions: buildings and transport. Coincidentally, these are the sectors that have the closest connections with individual consumers: where the greening of consumer perspectives and positioning as "green" within existing markets is an important driver of green growth in general.

The very different levels of socio-economic development and the heterogeneous distribution of economic activities in the BSR also call such a modest and potentially unbalanced approach into further question. Here, green growth in a BSR perspective can have an even more ambitious and comprehensive policy approach by emphasising the importance of competitiveness, complementarity and collaboration. This can be perceived as advantageous on a number of fronts:

- It lends itself to the fact that there are many regions in the BSR with extensive experience in the environmental economy and ecoinnovation as a formidable driver of economic growth. Yet, with the the global market for green solutions showing signs of taking off, we can do more to stress the importance of green jobs and innovation as a driver of growth. For instance, targeted policy support in areas such as investment in green R&D and knowledge sharing will help to strengthen existing best practices and assist in transferring them to additional regions. Through economies of scale, it will also generate a larger market for the introduction and demonstration of new developments, thereby giving endogenous innovations a better opportunity for deployment on a European or global market.
- The BSR is rich in resources, but these are unevenly distributed throughout the region as a whole. As such, the territorial perspective is crucial for emphasising the potentials of these resources, both in terms of their physical po-

tentials as well as their wider socio-economic benefits.

- An emphasis on competitiveness and complementarity reflects the fact that many jobs in the BSR are in energy intensive and/ or resource-based sectors. Rather than leaving higher energy prices to simply weed out brown activities, an approach that aims to transition existing territorial capital and jobs can promote green growth without jeopardizing short term competitiveness.
- The territorial basis of the BSR is in itself a • strategic advantage that can help condition green growth. The fact that it is already institutionalised means that it is in a favourable position to take up additional consideration of ways to co-operate towards green growth. For example, Nordic co-operation has led to the development of a joint electricity grid and market, but the need to dramatically improve both energy efficiency and renewable energy production demands extremely capitalintensive investment in smart grid infrastructure. The BSR can be a relevant platform for structuring discussions on these very tangible issues, where decisions on investment can not only be a source of jobs, but can have a dramatic influence on international perceptions of the BSR leading in green growth.

2.2 Existing policy for green growth in the BSR

The BSR Programme consists of four priority areas: fostering innovation, accessibility, management of the BSR as a common resource, and promoting attractive and competitive regions. Given its broad and encompassing scope, it is possible to start building connections between these priority areas and green growth, particularly the latter, but the reality is that it is not a central priority of the current program. However, this should not come as a surprise, considering that green growth entered mainstream policy discourse well after the existing program was initiated.

At the same time, there has been a clear attempt to devise an on-the-go basis for green growth. For instance, the "Green Growth in the Baltic Sea Region" conference in Riga last year sought to identify opportunities and policy implications between green growth and programs and projects in the BSR. Likewise, this year's Baltic Development Forum Summit is based on the objective of connecting Europe through smart and green partnerships. It is certain that many of the inputs and discussions to be taken up this year will contribute as input into the basis of the BSR Programme after 2013, which is vital. With this in mind, it is also relevant to scope the manner in which green growth is integrated into European policy, both in general and in relation to European regional policy. This provides an indication of some of the key elements that ought to be up for discussion in a Baltic perspective of green growth. Likewise, a review of national policies in the Baltic also provides a scoping of the extent green growth has been institutionalised in the BSR.

The European Union

...When combined with enhanced consumer awareness toward the long-term economic benefits of green investment, the possibility of economic growth vis-à-vis an 80-95% reduction of emissions by 2050 is not only a conceivable thought, it is written into European policy...

Europe 2020 reiterates the common understanding that the economic crisis is a point of departure for action towards the three mutually reinforcing priorities of "smart, sustainable and inclusive growth". These priorities are rooted in five headline targets to:

- increase employment to 75% of the workingage population;
- invest 3% of the EU's GDP in research and development;
- ensure that the 20/20/20 energy and climate targets are met (with a potential to elevate emissions reductions to 30%);
- increase education rate to 90% high school and 40% tertiary;
- reduce the number of people at risk of poverty by 20 million.

The principle of the green economy is firmly rooted in these goals, most clearly by increased resource efficiency to adhere to the 20/20/20

energy/climate target, and to invest 3% of the EU GDP in research and development. Furthermore, one of seven "Flagship Initiatives" of Europe 2020, a "Resource efficient Europe", provides the connection between Europe 2020 and the Union's energy and climate objectives. Its stated aim is to decouple economic growth from the unsustainable use of resources through an increase in the use of renewable energy sources, modernisation of the transport sector, and improved energy efficiency across all sectors. As a key deliverable of this initiative, the EU has also published "A Roadmap for moving to a competitive low carbon economy in 2050". What's more, due to the clear connections between energy issues and achieving the goals of a resource-efficient Europe, the EU has essentially overhauled its entire energy policy package since 2010. New policy frameworks include: *Energy* 2020, Energy Roadmap 2050, Energy Infrastructure Priorities for 2020 and Beyond, and Energy Efficiency Plan 2011. These cover the spectrum of necessary interventions across all key sectors with development timetables, target outcomes, necessary investments, and mutual benefits for innovation and economic growth.

One of the standout messages of EU energy policy is that in order to be on track to meet the goal of a low-carbon economy by 2050, a dramatic increase in the scale of investment in energy issues is needed across all sectors. For instance, investment in renewable energy and transmission infrastructure alone must reach approximately EUR 1tln between 2010 and 2020. Even though the private sector is expected to provide much of the estimated amount, it is notable that EU financial schemes for the energy sector provide little in the way of financial support.

It turns out that the main instrument for developing sustainable energy solutions is via regional policy, which highlights the fact that overcoming territorial disparities through the right mix of national, regional and local governing structures will play critical roles in defining and implementing policy measures based on a place-based approach. During the 2007-2013 program, EUR 104bln of the EUR 344bln Cohesion Policy budget will be directed towards environmentally-related projects –EUR 44bln for direct environmental investments and EUR 60bln billion for indirect environmental improvements. Direct environmental investments are mostly for interventions that are legally required for regional compliance to EU environmental legislation, while indirect investments predominantly relate to transport, sustainable energy and urban rehabilitation. The indirect investments clearly show how Cohesion Policy helps integrate environmental issues into other policy areas, often with crosscutting and territorial-bound approaches.

In part to help facilitate the implementation of green growth in the 2014-2020 period of the Structural Funds period, the European Commission released the communication "Regional policy contributing to sustainable growth in Europe 2020". Some key highlights include:

- Cities and regions grasping innovative approaches to help frame sustainable growth through new partnerships that spur engagement and position public policy institutions as leaders of endogenous movements towards greener growth. Established networks include the EU Covenant of Mayors for promoting sustainable growth in urban regions, and the Smart Specialisation Platform for more co-ordinated investment in research and innovation. This type of engagement is absolutely crucial for one of the most important, but least tangible elements of implementing green growth - promoting pro-environmental behaviour to help condition the greening of consumer preferences.
- Eco-innovation not only promotes resource efficiency through the development of greener products, it also influences industry and manufacturing processes, as well as the way in which people live their daily lives. The eco-industry is now one of the biggest sectors in Europe; growing more than 8% between 2004 and 2008. It now employs more than 3.4 million people.
- Mainly through the principles of smart specialisation, regional governance has a strong role to play in supporting the development of eco-innovation. This has to do with their ability to account for unique local milieus that serve as the platform of development. Proactive regional policy facilitates the formation of local business clusters, comprised of local firms, education and research institutions, public agencies, and other innovation profes-

sionals. It also includes the intrinsic competency of regional bodies for understanding, accounting for, and utilising endogenous, territorial assets be they human, natural or already produced capital.

- Increased investment in green building and retrofitting; especially driven by public procurement to help transition existing jobs toward the objectives of green growth.
- Renewable energy development is explicitly based on in-situ natural resource assets and has clear connections with land use issues. While it can provide growth opportunities, especially for rural and isolated regions, it also relies on proactive regional governance for understanding potentials and overcoming constraints.
- Sustainable transport already benefits from high levels of regional funding, but it also has a high potential for further greening. Likewise, improved connectivity also has linkages that support other forms of development, such as firm attractiveness.

Each point stresses the importance of embedding green growth in regional policy to facilitate placebased sustainable growth opportunities. In this connection, it is promising that the ERDF has set out a priority to increase its priority of investing in strategies that support low carbon economies. It is an essential ingredient for nudging regional governance, especially in less developed member states that are eligible for Cohesion Funds.

Green growth policy in BSR nations

In providing a basic overview of the most relevant national policies aligned with the goals of green growth, the focus is on policies that either specifically mention green growth or describe how it is established in the context of energy and innovation policy. At a general level, the Nordic countries and Germany have more specific policy documents related to the fields of eco-innovation, renewable energy and energy efficiency. In these countries, there is longer history of integrating the environment and knowledge-intensive development, and green growth policy issues tend to be discussed comprehensively and are tightly connected to the countries' overall innovation strategies.

Scoping across these countries, there are some clear highlights in terms of proactive policy towards green growth. In Sweden, the "Strategy for development and export of environmental technology 2011-2014 "has three main objectives: ensuring good conditions for the development of environmental technology firms, promoting Swedish environmental technology exports, and supporting research and innovation to facilitate commercialisation of further innovations. Thematic priorities include sustainable urban planning, transport, energy, water, sewage and waste.

The Swedish government has also defined the objectives and implementation of the regional growth policies in the policy document "Strategic growth for regional competiveness, entrepreneurship and employment". It stresses the need for a stronger focus on environment, climate and energy within regional growth frameworks. Regional growth initiatives should facilitate environmentally-driven business development and the incorporation of environmental concerns as a means to strengthening the competitiveness of firms.

The Swedish Energy Agency manages the initiative "Regional energy and climate strategies" where County Administrative Boards are responsible for developing the strategies, which are intended to facilitate efforts towards reaching the targets of the national energy and climate policy at the regional and local level. Like similar agencies in each of the BSR countries, these have been gradually established and have become an irreplaceable partner for regional energy efficiency and climate initiatives.

Denmark's most recent political agreement on green growth came into force in April 2010 as a joint strategy between the Ministry of Food, Agriculture and Fisheries and the Ministry of the Environment. Its main objective is to ensure better conditions for the country's nature and environment while allowing competitive and innovative agriculture and food industries to develop. In addition, Denmark's "Action plan to promote environmental technology 2010-2011" was launched in order to promote environmental technology in the areas of water, waste, and air quality. A focus of the budget will be on development, testing and demonstration of new environmental technologies, and a minor share is allocated for initiatives to promote innovation in regulations and partnerships.

Denmark's "Innovation and Knowledge" provides recommendations for cluster-related activities, and a focus is placed on developing different types of renewable energy within areas of strength, such as water, industrial biotechnology, mega-wind turbines, bio-fuels, hydrogen fuel cells, wave and solar power. It is stressed in the program that development of energy and environmental technology provides socioeconomic potentials, such as new development opportunities for SMEs to strengthen business development and employment in regions outside the capital area.

A "Growth Strategy for Germany" was created by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in 2009. It serves to identify possibilities where investments in energy and eco-innovation can improve employment opportunities in Germany. As an extension of this, Green Tech concentrates especially on energy issues, waste and water management, and sustainable mobility, as well as international markets for environmental technology. Germany's Renewable Energy Act is perhaps the world's best example of the positive effects that a coordinated energy policy can have on economic growth. It clearly shows how political will for clean energy can be translated into economic growth. Germany is a global leader in renewable energy exports, which provided roughly 280,000 jobs and over EUR40bln in annual turnover last year.

In 2010, each of the EU member states drew up Renewable Energy Action Plans, establishing targets for the share of renewables in gross final consumption for 2020. Shares range from a high of 40% in Latvia to 18% in Germany, and differing levels are highly dependent on a number of factors, including existing energy intensity of the economy, existing renewable energy development, and perhaps most importantly, existing contributions of, and future considerations toward, nuclear energy development. Further, Denmark has the most ambitious goal of total independence from fossil fuels by 2050.

However, in contrast to the Nordic countries and Germany, comprehensive green growth strategies are less common for the remaining BSR nations. With that being said, Poland has launched "Green Evo - Green Technology Accelerator", that supports domestic firms in developing green technology who are promoting their products in international markets. While Estonia, Latvia and Lithuania may not have distinct national programs on green growth and environmental technology, development aid from Innovation Norway, in the form of the "Green Industry Innovation Programme 2009-2014", supports eco-innovation in each of the Baltic countries. The focus of this program is on green competitiveness in relation to existing industries and green innovation and entrepreneurship. It is an example both of collaboration in the BSR region, as well as the notion of shared responsibilities for the mutual benefit of both donor and candidate countries.

Country	Strategies and programmes	Main institutions	Focus areas		
Denmark	Agreement on green growth, 2.0 (2010-2015)	Ministry of Food, Agriculture and Fisheries; Ministry of the Environ- ment	Agriculture, food, and related industries: renewable energy, biogas, organic farming		
	Action plan to promote environ- mental technology 2010-2011		Water, air pollution, waste		
Green Gold Factbook (2007)		The Danish Growth Council	10 recommendations for profit- able green growth		
	National Renewable Energy Ac- tion Plan (2010)	Danish Ministry of Climate, Energy and Building	By 2020, 30% of gross final energy consumption from re- newables		
	Energy strategy 2050 – from coal, oil and gas to green energy (2011)	Ministry of Climate, Energy and Building	Fossil fuel independency by 2050		
	Our Future Energy (2011)	Ministry of Climate, Energy and Building	Specific measures for fstimulat- ing green growth		



	DK Energy Agreement (2012)	Ministry of Climate, Energy and Building	Policy initiatives related to e.g. energy efficiency, green growth, renewable energy, research, development and demonstration		
Estonia	Estonian National Strategy on Sustainable Development - Sus- tainable Estonia 21 (2005) (??)	Estonian Ministry of the Environ- ment	Goals: growth of welfare, coherent society and ecological balance. RD&I for user friendly technologies, biomedicine, mate- rial technologies		
	Green Industry Innovation Pro- gramme for 2009-2014	Norway Grants: National opera- tor in the Ministry of Economic Affairs and Communication	Increased competitiveness of green enterprises; green innova- tion and entrepreneurship		
	National Renewable Energy Ac- tion Plan (2010)	Responsible for the follow-up: The Ministry of Economic Affairs and Communications	By 2020, 25% of gross final energy consumption from re- newables The mission of the Estonian en- ergy sector is to ensure continu- ous, efficient, sustainable energy supply at a justified price and sustainable energy consumption. Dissemination on energy ef- ficiency in accordance with EU energy policy		
	National Development Plan for the Energy Sector until 2020 (2009)	The Ministry of Economic Affairs and Communications			
	The National Energy Efficiency Programme 2007-2013				
Finland	Environment-related business programme	Ministry of the Environment; Ministry of Employment and the Economy	Cleantech, renewable energy, energy efficiency		
	Green Growth Programme 2011- 2015	Tekes the Finnish Funding Agency for Technology and In- novation			
	Eco-innovation fund	Sitra - the Finnish Innovation Fund			
	National Renewable Energy Action Plan (2010)	Ministry of the Employment and the Economy	By 2020, 38% of gross final energy consumption from re- newables Land use, building, transport, agriculture, industry and the service sectors		
	Decision-in-principle on Energy Efficiency Measures (2010)	Ministerial Consotium			
	Long-term Climate and Energy Strategy (2008)	Ministerial Consotium	Renewable energy, energy ef- ficiency		
Germany	A growth strategy for Germany - New jobs through investments in energy and environment (2009)	Federal Ministry for the Environ- ment, Nature Conservation and Nuclear Safety	Employment and environmental innovation		
	GreenTech made in Germany 2.0 – Environmental Technology Atlas for Germany (2009)	Federal Ministry for the Environ- ment, Nature Conservation and Nuclear Safety	All areas of eco-innovation		
	High Tech Strategy 2020 for Germany (2010)	Federal Ministry of Education and Research	Eco-innovation in the areas of climate/energy, health/nutrition, mobility, security, and commu- nication		
	The Federal Government's Energy Concept of 2010 and the Trans- formation of the Energy System 2011	Federal Ministries of Economics and Technology; Environment, Nature Conservation and Nuclear Safety	Germany's energy policy until 2050. Measures for the develop- ment of renewable energy, smart transmission, energy efficiency and nuclear phase-out		
	National Climate Initiative	Federal Ministry for the Environ- ment, Nature Conservation and Nuclear Safety	Projects and programmes related to energy-awareness, the use of efficient technologies and renew- able energy.		

	National Renewable Energy Ac- tion Plan (2010)	Federal Ministries of Economics and Technology; Environment, Nature Conservation and Nuclear Safety	By 2020, 18% of gross final energy consumption from renewables			
	Coordination Platform for Energy Research Policy	Federal Ministry of Economics and Technologies	Research programmes on energy research, energy efficiency and bioenergy			
Latvia	Green Industry Innovation Pro- gramme for 2009-2014	Norway Grants: National Opera- tor is the Ministry of Economics	Increased competitiveness of green enterprises; green innova- tion and entrepreneurship			
	National Renewable Energy Ac- tion Plan (2010)	Responsible for the follow-up: Ministry of Economics	By 2020, 40% of gross final energy consumption from re- newables			
	Guidelines for Energy sector Development for 2007-2016	Ministry of Economics	Energy efficiency as one of the key priorities for the energy sec- tor development in Latvia			
Lithuania	Lithuanian Innovation Strategy for the Years 2010-2020	Ministry of Economy	Focus on general issues, men- tions clean technology and future energetic as focus areas			
	Green Industry Innovation Pro- gramme for 2009-2014	Norway Grants: National Opera- tor is the Ministry of Economy	Increased competitiveness of green enterprises; green innova- tion and entrepreneurship Energy security, sustainable de-			
	National Energy Strategy (2007)	Ministry of Economy	velopment of the energy sector, competitiveness. efficient use of energy.			
	National Renewable Energy Ac- tion Plan (2010)	The Ministry of the Energy of the Republic of Lithuania	By 2020, 23% of gross final energy consumption from re- newables			
Country	Strategies and programmes	Main institutions	Focus areas			
Norway	Business Development and Green Growth – the govern- ment's strategy for environmental technology 2011-2014	Ministry of the Environment; Ministry of Trade and Industry	Solar energy, CO2 management, hydropower, shipping, oil and gas efficiency			
	Grants for developing environ- mental technology	Innovation Norway, The Norwe- gian Research Council, Enova, Transnova	Eco-innovation and renewable energy; especially wind power			
	Energi21	Ministry of Petroleum and Energy, The Research Council of Norway	National Strategy for R&D, dem- onstration and commercializa- tion of new energy technologies (2011)			
	Clean Energy for the Future (RENERGI) programme (2004- 2013)	The Research Council of Norway	Solar cells, offshore wind power, smart grids, conversion of low- temperature heat into energy and CCS			
Poland	The National Environmental Policy for 2009-2012 and its 2016 Outlook (2008)	Ministry of the Environment	Focus on issues related to protection but some targets and measures on eco-innovation and research and development are also noted.			
	GreenEvo – The Green Technol- ogy Accelerator	Ministry of the Environment, National Fund for Environmental Protection and Water Manage- ment	Supporting Polish companies in developing green technologies and in promoting their products in international markets			

	Poland's Energy Policy until 2030 (2009)	Ministry of the Environment	Energy efficiency, RES utilization, security of fuel and energy sup- plies, introducing nuclear power, developing competitive energy markets, limiting environmental impacts		
	National Renewable Energy Ac- tion Plan (2010)	Responsible for the follow-up: Ministry of the Economy	By 2020, 15% of gross final energy consumption from renewables		
	Saving Energy and Promoting Renewable Energy Sources Pro- gramme for 2009-2014	EEA Grants and managed by the Ministry of Environment. Support from the National Fund for Envi- ronmental Protection and Water Management	Increased share of renewable energy		
Russia	"Bioenergy" technology platform	National Research Center "Kur- chatov Institute"			
	"Environmental Development Technology" platform	N/A			
	"Green technologies" platform	N/A			
	Energy Strategy of Russia for the period up to 2030	Ministry of Energy	Improvement of energy and environmental efficiency, mod- ernization, establishing a stable institutional environment, inte- gration into international energy system.		
Sweden	Strategy for development and export of environmental technol- ogy 2011-2014	Ministry of Enterprise, Energy and Communications	Sustainable urban planning; transport; renewable energy; water and sewage; and waste		
	Programme for Environmental- driven markets	Vinnova Innovationsbron			
	Pilot counties for green develop- ment	The Swedish Agency for Eco- nomic and Regional Growth			
	Regional energy and climate strategies	Swedish Energy Agency			
	National Renewable Energy Strat- egy (2010)	Swedish Energy Agency	By 2020, 50% of gross final energy consumption from re- newables		
	Funding for projects and support for investments on renewable energy	Swedish Board of Agriculture	renewable energy development		
	The road to a more energy-effec- tive Sweden (2008)	Ministry of Enterprise, Energy and Communications	Housing, services, industry, tranport		

Figure 2: Overview of national policies relating to green growth in the BSR

2.3 Diverse regions – different types of potentials, different types of needs, different responsibilities

Eco-Innovation performance

The Eco-innovation Observatory's Eco-Innovation Scoreboard is the first tool to assess performance in eco-innovation across the 27 EU Member States. It provides a quantitative assessment for a number of composite indicators, including: eco-innovation investments, activities, and output across a range of traditional and "new" technological sectors. Figure 3 reiterates the gap noticed during the policy analysis: the Nordic countries and Germany are clear high performers, and the Baltic countries and Poland lag somewhat behind. For the latter, persistent issues seem to be a lack of political awareness



Figure 3: The 2011 Eco-Innovation Scoreboard



of eco-innovation, overriding structural socioeconomic issues, planned phase-out of nuclear energy (Lithuania), dependence on fossil fuel imports, and especially, poor energy efficiency in sectors such as housing.

Finland, Sweden, Denmark, and Germany have overall eco-innovation ranks of first, second, third and seventh in the EU-27, respectively. Common characteristics appear to be the relatively high degree of politicisation of environmental management and its connection to growth opportunities. This has created a natural feedback loop, where greening of societal perspectives supports further development of green consumerism. This, however, can be a highly regionalised phenomenon that is dependent on a bottom-up process of developing eco-innovation within the local society and economy.

In Germany and Denmark, however, the processes in which eco-innovation has been incorporated into the economy have been highly path dependent on the availability of different types of capital. In Germany, the high performance of mechanical engineering has undergone a very successful transition into the development of environmental products, mainly due to resource pressures and the need to investigate development alternatives. This has resulted in global prominence in fields such as recycling management, sustainable water technology, and renewable energy. Denmark is also considered a world leader in terms of eco-innovation output, which is proven by the fact that over 700 firms are involved in eco-innovation; particularly in terms of clean water and energy systems, such as wind. Most telling for these two countries, Figure 3 shows that eco-innovation output scores are equal to or higher than eco-innovation inputs. This is indicative of a well-performing eco-innovation sector, where output performance is at least on par with input performance.

In contrast, both Sweden and Finland show high levels of eco-innovation input, but have lower output performance. In Sweden, this is due to the fact that while innovation is high, the export-based market for these technologies is not developing as expected. As mentioned in the Eco-innovation Country Report for Sweden, there is a lack of large-scale public and private investment schemes in cleantech. This shortcoming resulted in the aforementioned Strategy for development and export of environmental technology. In Finland, the relatively low output is indicative of a poor investment-growth turnover. The Eco-innovation scoreboard also shows that Finland has Europe's highest negative correlation between eco-innovation input and environmental outcomes. This is due to a very low material productivity, which is in turn challenged by an economy that is highly dependent on the export of natural resources, coupled with very low domestic resource consumption habits. It therefore seems clear that Finland's firm level eco-innovation support needs to be facilitated with policy that helps condition the domestic market for green products.

There is certainly a lot of heterogeneity in eco-innovation support and output in BSR countries. Even for top performers Sweden and Finland, there is scepticism over how investment and activities are being translated into production and improved ecological performance. Yet the fact that nations of the BSR dominate as such high performers implies that the region has established a good position for operationalising eco-innovation as a legitimate growth strategy. It also implies a vast potential for receiving the positive effects of collaboration, particularly in relation to the transfer of best practices of ecoinnovation policy development, investment and activities within the BSR.

Energy Profiles of the BSR countries

It is impossible to argue that alongside eco innovation, energy supply is a central pillar of green growth. With this in mind, perhaps nowhere are differences in the distribution of resources in the BSR more noticeable than in terms of energy. In terms of electricity and heat consumption, especially notable characteristics from Figures 4-6 include:

• The high levels of total consumption in Germany and the Russian Federation, owing mainly to the relatively high population levels in these countries compared to the others.

- The high share of electricity and heat coming from natural gas in Belarus, Latvia, Lithuania and Russia. This is based on Russian sources.
- The especially high dependence on coal in Poland and Estonia, and to a lesser degree in Denmark, Finland and Germany. The impact of this on the climate is indicated in Figure 6, where CO2 per unit of energy is markedly higher in Estonia and Poland than the other countries in the BSR. In contrast, the very low CO2 /Energy ratio in Sweden comes as a direct result on their use of renewables and nuclear as the predominant means of producing heat and electricity.
- The high share of hydropower in The Russian Federation, Sweden and Norway is evident, as is the development of bio-fuels in Sweden, Germany, Finland and Denmark. As will become evident below, this is quite clearly a resource that can be further developed throughout the BSR, but especially in Estonia, Latvia, Lithuania and Poland.
- The mix of renewables in Denmark and especially Germany is quite impressive. It is indicative of a proactive, complimentary energy strategy for countries that are often stigmatised as being naturally resource-poor.

The statistics show widespread differences in how much and what type of energy is consumed. This reflects the very different availabilities of natural resources, the path of development toward newer energy production methods, and not least, national guidelines on the use of nuclear energy throughout the BSR countries. Yet, interpreting the consumption of energy in terms of society and economy is even more important because it begins to give indications on the impacts of energy availability in the BSR, as well as the existing degree of resource efficiency that has been implemented in different BSR countries.

As shown in Figure 7, some of the socio-economic implications can be inferred through per capita consumption of energy. For instance, some of the following distinctions can be made:

 Per capita energy consumption is much lower in Latvia, Poland, Lithuania, Belarus, and to a lesser extent, in Estonia, mainly due to relatively low income levels, whereby many people are unable to afford material luxuries that



Source: IEA, 2012

Figure 4: Generation of electricity and heat by source in Baltic Sea countries 2009 (before losses, by gross level and share of total consumption)



SECTION C

Figure 5: Generation of electricity and heat by source from renewables in Baltic Sea Source: IEA, 2012 countries 2009



Figure 6: Emissions of Carbon Dioxide relative to the total primary supply of energy (TPES)

cause the consumption of additional energy. Further, comparatively low GDPs in these countries also imply that the energy intensity of the economy is quite high.

- The Russian Federation has by far the most energy intensive economy of any country in the BSR, although its relatively lower per capita consumption compared to Norway relates to the presence of poverty, especially in the Federation's vast rural and sparsely populated areas.
- For Sweden, Finland and Norway, an important reason for higher consumption is the presence of many energy intensive industries, such as oil extraction and refining, metallurgy, mining and pulp and paper. In contrast, Germany and Denmark are not active in these industries to nearly the same degree so their overall consumption levels are much lower.
- As noted in terms of the discussion on ecoefficiency output (Figure 3), the fact that Finland is plagued by high material consumption inefficiencies is reflected by a very high level of per capita energy consumption. In Norway, high consumption reflects the fact that the country has historically enjoyed a surplus of cheap electricity.

While the energy characteristics of different countries show diversity in both the production and consumption of energy, they also show clear patterns. For example, as the Baltic countries, Poland and Belarus develop, they can take insight from selected best practices, especially from evolving patterns in Germany, Denmark and Sweden. These countries have achieved relatively high levels of prosperity vis-à-vis relatively efficient energy consumption. This is at least in part due to an environmental consciousness in society and economy that has promoted energy efficiency as both a behavioural and technological asset. Similarly, relatively lower overall energy efficiency seems to be evident in Norway and Finland. This implies that more efficient energy solutions for energy - such as district heating - have not developed as extensively as in Sweden, Denmark or Germany. Local solutions and objectives of collaboration should therefore be especially focused on reducing frivolous consumption of key resources through the use of existing approaches in other BSR countries.



Figure 7: Total primary energy supply (TPES) in tonnes of oil equivalent (TOE) per capita Source: IEA, 2012

2.4 Improving performance through regional collaboration

It is clear that an incredibly dynamic mix of challenges and opportunities for activating greener growth are experienced in BSR regions. This not only reflects the breadth of the green growth concept – covering everything from greening agricultural production to innovation for renewable energy production – it also reflects the very different social, economic, political, and not least, natural resource contexts in each country. However, with this dynamism in mind, there are numerous outlets for collaboration based on notions of shared territorial dimensions and shared responsibility. One of the key elements of co-operation includes the fact that regions in the Nordic countries and Germany have an invaluable supply of experience-based knowledge that can be translated into strategies for overcoming challenges and mobilising opportunities in other regions. The Baltic States, Belarus, and Poland ought to be able to count on these good performers for insight. Financial support for less developed BSR countries, such as Norway's "Green Industry Innovation Programme" have important roles for scaling up green growth in a way that, through a larger market for the environmental goods and services sector, will serve to benefit all countries in the region. Further, better, evidencebased knowledge on regional resource production and consumption patterns and potentials - as is done for the bio- economy below - is also paramount for understanding where certain potentials of green growth should be prioritised.

The role of co-operation is only strengthened by the fact that a main source of public funding for investment in green growth initiatives comes via different arms of EU Structural Funds; especially the ERDF and the Cohesion Funds. In this connection, while mapping specific green growth potentials is needed to providing more precise overviews of what could become a reality in the future, looking into the distribution of collaborative efforts that have already been applied provides a first impression of what types of development perspectives are in focus for BSR collaboration. A first attempt to do this is shown in Table 1, which contains a summary of accepted projects in the INTERREG IVA 20072013 Cross-border Co-operation Programme, involving the Baltic Sea Region.⁸ 90 projects have been identified in various web sources, and for each of the projects, the lead partner country has been registered together with indications of which of the listed topics have been dealt with in the project description. A total of 165 topics have been addressed by the 90 projects.

A few observations in this connection should be elaborated on, both in relation to distribution on the different themes, and in relation to differences between the national representation in the list. Such an assessment not only shows the sectoral focus of collaboration, but also the differing levels of collaboration within each of the states represented in the overview.9 In terms of national representation, **Denmark** is only represented in 9 topics, mainly in relation to planning and technology/innovation, while Sweden leads in projects, being related to 63 of the topics represented. In Sweden, there is a clear focus on the topics on the top of the list, first and foremost in relation to planning and energy production, but Sweden also has a broad representation throughout most of the other topics. One of the interesting exceptions from this broad representation is agriculture and forestry, where no projects have been registered. This is, however, one of the key topics for *Finland*, in addition to planning, energy, and maritime issues being the main issues in the 57 topics for this country. *Estonia* is at a lower level, with 19 topics represented, and with a distribution that focuses on planning, energy, and building and construction. This is a positive attribute considering their energy patterns noted above (high emissions and very low existing renewable energy development). Germany is represented in 13 topics, mostly in relation to planning, transport, and energy. The relatively low number of topics in Latvia (3), Lithuania (2) and Poland (3) are mainly distributed in the upper part of the table, i.e. in relation to planning, energy, tourism and transport.

⁸ Included in the list are projects specified within the sub-programs on the South Baltic, Öresund-Kattegat-Skagerak (only including the sub-program Öresund), North, Botnia-Atlantica, and the Central Baltic, Southern Finland-Estonia Sub-programme, and the Archipelago and Islands Sub-programme.

⁹ It is important to take into account that the table shows topics, not projects. So when, for instance, Lithuania is represented through 2 topics, this is due to only one project.

Projects in the INTERREG IVA Programme 2007-2013 emphasizing cooperation Many of the project has focus on two or more ofthe topics below resulting addressing a total of 178 topics									
	Denmark	Sweden	Finland	Estonia	Latvia	Lithuania	Germany	Poland	Total
Planning	3	16	12	3	0	0	3	1	38
Energy	0	17	7	4	1	0	3	0	32
Maritime/Fish/Fish farming	0	7	7	1	0	1	1	0	17
Technology/Innovation	3	7	5	0	0	1	0	0	16
Experience/Tourism	0	3	3	3	1	0	2	2	14
Transport	2	3	2	1	1	0	4	0	13
Building/Construction	0	6	2	4	0	0	0	0	12
Agriculture/Forestry	1	0	7	2	0	0	0	0	10
Waste, Water & Recyling	0	4	7	0	0	0	0	0	11
Health	0	0	1	1	0	0	0	0	2
Total 9 63 53 19 3 2 13 3 165									

Table 1: Projects registered within the INTERREG IVA Programme 2007-2003 with focus on Green Development

Thematic distribution

Planning is a cross-cutting issue for a large number of the projects and thus is a topic included in 38 of the 90 project descriptions. This reflects the characteristics of the INTER-REG programme, as the involvement of different regions in a project would very often require a focus on regional differences and how to take advantage of different experiences in the planning process. It also stresses that existing planning and development structures are in need of new knowledge and experiences regarding green growth, which can be obtained by joining forces through concrete projects. This reiterates that, rather than 'cookie-cutter' development guidelines, procedural competencies on how to take advantage of endogenous resources from the bottom up are of critical importance. It emphasises questions that regions can, and should, be asking themselves, questions such as, "What kinds of resources do I have, and what kind of potential do they have for promoting green growth in an integrated way?" and "What other regions are facing - or have faced - similar challenges and opportunities as my region and how have they responded?"

Energy supply and development is the second largest group, represented through 32 of the 90 projects. On the supply-side, the focus is on how local/regional renewable resources such as biomass, wind, and biogas can be expanded

and improved through new approaches, and by joining forces in order to be able to improve the technical standards and develop new technologies, which can enhance potentials, especially in rural areas. In relation to wind energy, several cases of large on- and off- shore windmill parks are emphasised. On the demand side, the focus is on improving energy efficiency through district heating, both in cities and in small rural towns. In addition to these well-known approaches, the list includes examples of integrated projects, where combinations of water improvements through algae harvest and sludge collection also create bio-gas production.

Maritime/Fish/Fish farming is very relevant in a BSR perspective and is related to 17 projects. The Baltic Sea has been known for its high level of pollution, due to reasonably low currents to the Atlantic sea and due to the barriers created by Øresund, Storebælt and Lillebælt, and a high level of wastewater outlet. A focus on improving water quality during the last decade has shown some results, but these issues are still considered being crucial for the region; partly in order to make better use of the opportunities in relation to new types of fisheries, fish farming, mussel farming etc., and generally in order to make better use of the unique environment with the combination of sea, islands, historic towns and villages, and leisure time activities.

Technology/Innovation is, just as planning, a linking theme that is acknowledged in 16 pro-

jects. This is because new approaches to fisheries, biomass use, and improvements of existing energy generation based on renewable resources depend on technology to produce economically efficient approaches. In this connection, it is emphasised time and again that the region is able to take advantage of the fact that similar environmental conditions enables co-operation.

Experience/Tourism is clearly shown to have a green growth potential when looking into the project descriptions of the 14 projects it is emphasised in. In most cases, the emphasis is on the unique characteristics of the region, with a combination of sea, islands, agriculture, forestry, and old towns and villages showing the region's history. In this connection, for instance, restoration of historic buildings and thereby ensuring links to the past are emphasised as important issues. In addition, new approaches to tourism in connection with the access to the sea are among the mentioned issues.

Transport is a topic which is also represented in a total of 13 projects. The category includes several types of focus, for instance better use of local and regional means of transportation by improving the infrastructure for bicycling, use of ferries instead of lorries and cars for transport of persons and goods in the region. First and foremost, this means a focus on the development of a highly needed infrastructure that enables transport based on locally produced electricity and biogas.

Building/Construction is represented in 12 projects, where all projects relate to improved energy and resource efficiency through improved construction, use of local materials, better insulation, the importance of restorating of the existing building stock, and improved planning practices.

Agriculture/Forestry issues, mentioned in 10 cases, are issues related to organic farming in particular, energy production through better use of the generated bio-mass, and the potentials for combining primary production with leisure activities and tourism.

Waste/Water and recycling are issues brought forward in 11 of the projects, and in most cases combined with one or more of the aforementioned topics. For example, improved use of waste from households, industries and agriculture/forestry in connection with energy production is one of the dominant examples. Improved management of forestry enables both a better recycling of nutrients, and at the same time a higher production of biomass for energy production. Saving water through recycling of wastewater is another crosscutting issue connected to this topic.

Healtb is only directly mentioned in two of the projects, but it is quite clear that concerns regarding public health are underlying several of the projects. For instance, in connection with tourism/experience where activities relate to healthy food and a healthy environment are crosscutting themes.

Green building in urban areas

The analysis of existing regional co-operation provides a scoping of how to conceptualise green growth opportunities in a territorial dimension for the BSR. From this analysis, it is possible to delineate an urban-rural dimension relating to the potentials and opportunities for structuring green interventions. In an urban perspective, the planning theme reiterated the importance of place-based, integrated approaches that bring together the potentials of different themes within a functioning urban system. Furthermore, the issues of building and construction that had an explicit focus on resource efficiency and the transport theme highlighted integrated, non-car transport infrastructure in urban areas as being of high importance. Interpreted this way, it is clear that how we exist in urban areas is an increasingly important element of living sustainably.

Not surprisingly, statistics show that, at an increasing rate, urban regions not only contain the lion's share of research and innovation institutions needed to support eco-innovation job growth, but their concentration of population and economic activity means that they are responsible for a vast majority of resource consumption – and therefore carbon emissions – in the BSR. In fact, upwards of 80% of energy consumption is associated with urban activity, and over half of that takes place in buildings. What's more, buildings have the most potential in terms of low-cost emissions reductions of any sector in Europe.

To respond to this opportunity, government needs to lead by example through the greening of public procurement that displays innovation and kick start the supply of green jobs in the building sector, thus making green building tangible in reality. Only this can promote wider development of green buildings that, through branding and associated environmental nudging, has an unparalleled spin-off potential for developing the green consciousness of local citizens. Through on-the-job training, it also has the opportunity to provide an unparalleled number of green jobs in a relatively short period of time. Most importantly, however, the relatively rapid time-scale with which energy costs are rising versus the relatively slow time-scale with which building renovation and turnover takes place means that the sooner green building is prioritised, the sooner regions can reap the competitive benefits of an energy efficient building sector.

Again, however, it is stressed that co-ordinated urban planning is critical to make this happen in a way that is supported by local citizens, that compliments resource efficiency improvements in the transport sector, and structures an urban composition that is simultaneously desirable for carrying out everyday life in an resourceefficient way. To assist in this connection, the EU Covenant of Mayors is a network supporting local green governance that links cities and regions together based on their desire to improve local resource efficiency. If not done already, becoming a Covenant signatory should be on the agenda of all urban and regional governance institutions in the BSR, as it goes hand in hand with green growth.

Developing the rural bio-economy – bioenergy from agriculture, farms and forestry

In contrast to urban areas, the opposite conditions characterise many rural regions that are home to land-based resources needed to sustain urban growth. In the assessment of INTERREG projects, an underlying message of the agriculture, forestry, maritime, and experience/tourism themes is the need to find new means of improving competitiveness based on land and landscape, and marinebased resources. In many ways, this reflects a wider pattern of rural stagnation and recession caused by the drain of young, educated workers to cities for higher education and well-paid jobs. As post-war baby boomers retire, these regions face the double threat of overall shrinking and increasing dependency ratios, which presents enormous challenges for development regardless of local resource potentials. Ultimately, the rural-urban dichotomy may be considered as one of production versus consumption, or supply versus demand, and the two call for almost completely different approaches to achieving a transition to a greener economy.

In rural areas, all potential compatibilities between the mitigation of economic and demographic challenges and the need for increased renewable energy production need to be further investigated. The sustainable exploitation of these types of assets directly translates into increased energy security, improved environmental performance, and not least, much needed rural job opportunities. What's more, in the case of bioenergy, these opportunities are tied to traditional activities such as agriculture and forestry, but also to non-traditional activities linked with the development and maintenance of infrastructure for renewable energy production.

To be supported by evidence-based policy, the availability for land-based resources to be sustainably exploited for energy production calls on the need for a new understanding of their production potential. In light of this, a key area of research at NordRegio has been the potentiation of bioenergy production in the agricultural and forestry sectors in the BSR. One of the novelties of the work is that it provides an indication of regional potentials that do not imply tradeoffs with existing economic activities. For example, bio-energy production in the forestry sector is based on logging residuals, and in the agricultural sector it is based on residual manure that is still useable as fertilizer, as well as the production of bio-energy from residual straw.

A successful process of converting residual straw-to-energy has existed in Denmark since 1991. Today, approximately 30% of all straw is used as fuel for heat on individual farms or in district heating facilities. Due to good technological, political, economic and geophysical condi-
tions, the Danish model has been selected for the assessment of BSR potentials. Straw yields were estimated from average yields between years 2002-2010 by using a conversion factor of 0.625 Kg Straw/kg grain which corresponds to yield levels in Denmark in 2010.

Assessments on biogas potentials from pig and cattle manure were based on the regional average of head numbers of pigs and cattle for the period 2002-2010 and were estimated through established conversion factors. Assessments on energy potentials from forest residues were made for logging residues, stumps and waste from thinning for environmental management. Considering that the availability of forest residues is constrained by economic and transportation factors, harvest levels correspond to less than half of the recommended values for logging residues and stumps (35% for logging residues and 33% for stumps, with further limits set in some countries to consider additional constraints).

The results show that highest bio-energy potentials from straw are found in Mecklenburg-Vorpommern (Germany), Wielkopolskie (Poland), and Lithuania, each having a potential over 2 TWh/year. Relatively high regional potentials are also notable through a majority of Denmark, as well as central and east Poland. An important remark is that high potentials are often found in the proximity of large cities in the BSR. Since the model applied is based on current straw yields in Denmark, the potentials presented for this country are already considered as fully exploited.

The use of straw as an energy source has to compete with alternative uses; in particular, its important role as preserver of soil fertility. Studies show that depending on local climatic conditions, straw removals above 50 % for energy production can have adverse effects on the soil carbon storage and alter the general soil properties. Therefore, sustainable practices of straw removals need to be individually adapted according to local conditions. For example, approximately 40% of straw residue remains on the fields as a practice of sustainable agriculture in Denmark.

Potential for biogas production from pig and cattle shows a quite similar spatial dimension as regional potentials from straw and manure are found in southern regions in the BSR, particularly in Denmark, central Poland and Lithuania. Potential energy is higher for cattle (63 %, or 20.8TWh) compared to pigs (37 %, or 12TWh).

From an environmental point of view, this type of biogas production has several advantages promoting its efficiency as a renewable resource. By collecting manure prior to decomposition, the release of methane is prevented. Methane traps more than 20 times as much heat as CO2, which implies a very efficient combustion for heat or transport with relatively low emissions. It also requires very small amounts of process energy for production. Not least, given that manure is an important source of natural fertilizer, it is also notable that residues from the energy production retain their nutrients and can still be utilised as fertilizers. This implies theoretically that there will be no limitations regarding the share of manure which is utilised for biogas production as long as residues are returned back to agriculture as fertilizers.

Not only is the spatial distribution of bio-energy potential from forestry much different than in the agricultural sector, the overall potentials are much higher. Major energy potentials are found in Sweden and Finland, especially in Småland (14.5TWh), Northern Middle Sweden (13TWh), and East Finland (14TWh). Due to forest productivity and accessibility, these regions are most extensively exploited by forestry at the present time. In the case of Middle Sweden and Småland, harvesting of forest residues is already very extensive compared to regions in the north.

Based on the availability of existing bioenergy production potentials for Sweden, Finland and Norway, exploitation of these potentials implies an increase in energy production from forest residues by approximately four times for Sweden and Finland and eighteen times for Norway. Using this as a basis, it is safe to infer that a notable potential for further bio-energy production exists throughout the BSR.

The environmental implications of harvesting forest residues is a complex issue where some impacts are not yet entirely understood or are highly dependent on local conditions. Nevertheless, some of the key constraints relate to the role these residuals play in the recovery of recently logged areas. Some of these functions include: the regulation of the pH and nutrient balance in soils, prevention of erosion, and provision of



Map 1: Energy potential from grain straw residues in the BSR

food and habitat to different insects, animals, plants and fungi. For example, stump harvesting is constrained in many regions of Norway by the country's steep terrain and their need for preventing soil erosion. Another issue is potential conflict between forestry activities and their associated landscape impacts, especially where touristic and recreation areas have been established. Each of these potential issues reiterates that local characteristics need to be considered in a place-based and conservative decision making process of how to develop the bio-energy sector. Quite distinctive patterns are evident when considering the bio-energy potentials of all three sources together. In general, Norway has a relatively low potential in all three sources, and especially in coastal regions. Both topography and climate are clear constraints to bio-energy potential in these areas, and a focus should be on the continued development of offshore wind potentials, as well as the on-going development of solar technologies in specific areas. It is obvious that in Sweden, Finland, Estonia, Latvia and Lithuania the greatest potential lies in the forestry sector, with isolated regions in the south showing



Map 2: Energy potential from manure in the BSR

a potential for straw and manure residuals. These latter sources dominate in Denmark, Northern Germany and Poland, but large regional variations are evident. Nevertheless, it is evident by the research that at highly variable levels, some further potential exists for regions to capitalise on their land-based resources for the competitive production of bio-energy.

SECTION C

In practice, harvesting biomass from agriculture and forest residues usually becomes integrated in traditional harvesting processes. This implies that harvesting agricultural and forestry residues do not necessarily generate a significant number of jobs; not least due to the implementation of automated collection processes. However, the long term benefit is that it enables a number of farms, which are now in marginal positions of economic sustainability to complement their existing revenues with new, green production activities. Furthermore, some levels of new and permanent job opportunities will be related to the transport, processing and transformation process of raw materials into bio-energy, while the establishment of the necessary infrastructure will contribute short term employment opportunities.



Map 4: Energy potential from forest residues in the BSR

The establishment of production-based employment in centralised bio-energy transformation facilities will mainly take place in urban areas of various sizes. The exception to this rule exists in relation to biogas production and forest harvesting in remote areas, where the costs of the transportation from distant areas to larger centralised units limits profitability. In those cases, processing facilities are required to reduce the volume of raw materials through refining processes.

Regions, which already have well-developed district heating networks may not experience significant employment increases related to the increments in the utilisation of biomass. Instead, opportunities will be found in bio-refineries and process industries that produce diverse refined liquid and solid bio-fuels.

Eco-innovation related to bio-fuel production has been characterised by a decentralised structure and a high level of user-producer interaction. In its initial phase, production is rather low-tech and based on local knowledge, but the push for increased efficiency and commercialisation of technology companies' interest in commercialising bio-energy technology has increased the dependence on in-depth research activities. These are often provided by regional universities interested in contributing research 'know-how' to local and regional industries. As such, the initial knowledge base has been established in a BSR context and further development will only help these knowledge clusters evolve, for instance, in a European context. While bio-energy contributes only incrementally to an overall clean energy strategy for the BSR, it reiterates that no magic bullet is going to provide a means to achieve green growth. Instead, it is going to rely on complementarity and the scaling up of

SECTION C

Northern Dimension Partnership on Transport and Logistics (NDPTL)

local strategies through more official means of

collaboration and idea sharing.

At the first Foreign Ministers' Meeting of the revised Northern Dimension on 28 October 2008 in St. Petersburg, the Northern Dimension Ministers decided to set up a Partnership on Transport and Logistics no later than 1 January 2010. The Memorandum of Understanding establishing the Partnership was signed at the ministerial level by 11 countries in Naples on 21 October 2009, and the Steering Committee began its work. The Partnership consists of Denmark, Finland, Norway, Germany, Belarus, Sweden, Poland, Lithuania, Latvia, Estonia, the Russian Federation, and the European Union.

Among the agreed-upon objectives of NDPTL was working together to improve the major transport connections between the Northern Dimension partners in order to stimulate sustainable economic growth at the local, regional, and global level. The Partnership shall also work on accelerating the implementation of transport or logistics infrastructure projects along the major transnational connections, and facilitating the approval of projects of mutual interest. Furthermore, the Partnership shall work on accelerating the removal of non-infrastructure related bottlenecks, including in particular the horizontal measures on logistics problems.

The partners have already identified several important infrastructure projects that address major bottlenecks along these corridors. A Secretariat has been set up at the premises of the Nordic Investment Bank in Helsinki to provide administrative and technical support to the Partnership's governing bodies.

The capacity of the countries to mobilise necessary funding, both at the national level and internationally, is identified as a key factor for successful implementation of the Partnership and the investments along the transnational corridors. The involvement of International Financial Institutions (IFI), such as the Nordic Investment Bank (NIB), the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and the World Bank Group, as well as relevant National Financial Institutions (NFI), is seen as crucial in mobilising the necessary funding for advancing the prioritised projects.

2.5 Conclusion

Green growth is a comprehensive, hands-on policy perspective that couples the need for a short-term growth with a low-carbon development model; one that, through increasing energy prices and co-ordinated European and global environmental policy, will make us increasingly competitive overtime. It states that considering endogenous capital through the lens of resource-efficient growth can provide long term competitiveness and sustainability that does not need to come at the expense of short term stability.

As a central pillar of green growth, eco-innovation is an interface between the implementation of green technologies, both domestically and internationally, and receiving the economic benefit from their development. Investment in eco-innovation and research and development will emerge a green transitions across a range of traditional sectors, not least heavy industry, manufacturing, forestry, agriculture, buildings, energy and waste. While differences exist within the BSR, its overall territorial delimitation also infers that there will be areas for shared learning and co-operation.

The EU has essentially put green growth at the heart of European policy for Member States and their regions. The link to Europe's 2020 Strategy for smart, sustainable and inclusive growth was made explicit; just as it was for the EU energy policy, which provides the multi-sectoral framework for development of a low-carbon economy. Not least, it was shown that Cohesion Policy will increasingly seek to situate balanced and competitive development with environmental opportunities.

This report has used both a conceptual and a European policy reference to green growth and eco-innovation as a point of departure to not only justify the usefulness of a green growth perspective for the BSR, but more importantly show how it can begin to be operationalised in practice. Not surprisingly, the key messages emanating from this are as diverse as the concept itself.

While seemingly paradoxical, it is stressed that the benefits of co-operation mainly result from the fact that the BSR is characterised by a wide socio-economic heterogeneity. Nations such as Germany, Denmark and Sweden are considered to be global pioneers in green innovation and deployment, while others lag behind considerably. A vast potential exists for further transfers of experience, especially in terms of eco-innovation policy, where notable gaps are evident. Here, the notion of responsibility ought to be considered both in terms of financial support for development programmes in less-developed BSR countries, as well as the transfer of best practices from countries that have historical experience in successfully integrating green-ness and growth.

Co-operation is also vital for providing highly beneficial economies of scale that support the development of green technology by enterprise throughout the BSR. Joint efforts to support test markets, pilot projects or BSR niche market can be used to set standards that, in turn, provide market conditions for eco-innovation. Perhaps nowhere is this co-operation more important than in terms of the inevitability that success of a low-carbon economy rests closely on our ability to provide a modern, two-way energy grid. These smart grids provide the technologies that allow for decentralised energy production and increased efficiency by end users. At a European level, the magnitude of investment in smart grid technology and infrastructure needs to exceed USD80bln between 2010 and 2020 alone. Investment of this magnitude needs international co-operation, and this implies that the BSR has the opportunity to be a first mover and European leader. Smart grid pilot projects have been established, including on the Swedish

Island of Gotland, and as a first step these ought to be extended to other regions and broadened in their scope.

A crucial element of BSR co-operation should be the goal of providing a framework of understanding that motivates more genuine investment in tangible assets. There needs to be increased idea sharing on how regions can grasp their existing conditions of human, institutional and natural capital, and devise strategies for development. Networks, such as the EU Covenant of Mayors, and the EU Commission's Smart Specialisation Portal, provide valuable governance frameworks for structuring bottom-up, endogenous development, but the BSR provides an existing institutional arrangement where this type of knowledge can be developed much further.

On the other hand, it calls for new approaches that can provide an evidence basis for guiding decision making. This requires better co-ordination on collecting and analysing data that can be developed into accounts showing opportunities and challenges for different groups of regions. For instance, the national energy overview indicated that access to natural resources in the BSR is anything but even. However, a regional assessment, while being labour-intensive, would be extremely valuable for shaping policy decisions and potential areas for regional collaboration. Likewise, the Eco-Innovation Scoreboard is a useful innovative tool, but it is only available at the national level. The regionalization of this would be valuable for regional decision makers, but again requires further investment and co-operation among BSR countries to support the collection and harmonisation of statistics.

As an example of the potential insight from research, an initial analysis of bio-energy potentials from existing land based activities was undertaken specifically for this project. It highlights the ability for green growth to complement existing conditions with new opportunities for sustainable, competitive growth. It shows that significant potential is available for bio-energy production throughout the BSR, and through the provision of diverse types of jobs in rural regions, it can boost competitiveness of regions often plagued by job loss and shrinking populations. However, with these opportunities comes the need for proactive regional governance for understanding local potentials of endogenous resources.

The analysis of bio-energy helps reaffirm an underlying urban-rural dimension that contextualises general potentials and opportunities for regional investment in green growth. In contrast to rural areas, urban centres will continue to provide a bulk of the research and capital that drive eco-innovation, but they are also recognised as areas where a vast majority of people and consumption are located. This underscores a potential for wide-scale energy and material consumption improvements that must be implemented if urban areas are to be competitive in a low carbon economy. However, the fact that all scales of the producer-consumer chain must be acknowledged means that sustained policy and governance should come from a parallel range of institutional scales – from the EU to the local level.

European emissions trading policy aims at greening energy intensive sectors that are structured mainly around large firms, often operating on national or international scales. In contrast, greening the building sector requires action at the regional and local level, where land use development is co-ordinated, and where interaction with building users takes place. Here, greening public procurement – especially in buildings and transport – displays innovation, transitions existing jobs into green ones and begins to make greenness tangible in reality. Once this first big step is in motion, incentives, subsidies, and information and awareness campaigns condition the private sector into thinking in the slightly longer term perspective that is needed to realise an economic payoff that gets better with time.

Only when the incredible potential for increased consumption efficiency is acknowledged and activated in policy will decisively greener growth take place. This holds true for regions in the BSR just as it does for the rest of Europe. However, mobilising firms to produce green products and services is only half of the puzzle; the other half is convincing the private sector of the benefits of being a green consumer. It means that a vital part of any green growth policy approach must be the co-ordinated dissemination of how the private sector can either save money or improve their quality of life by actively considering the environment. While it places norms of individual consumers at the heart of the matter, it also implies that government cannot begin to persuade society on the benefits of green growth until their own economic plans actively consider the same thing.

Suggested further reading:

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Final observations

The Baltic Sea Region likes to think about itself as the Top of Europe. In many ways, it is: top in its economic performance over the last year, as in many years before; European and strongly exposed to what happens in the southern parts of the EU, now and in the years to come.

2011 was a good year for the economies of the Baltic Sea Region. The recovery was generally solid, and in many dimensions, better than what had been expected. Exports are part of the reason, both in terms of trade within the Region and in exports towards other parts of the world economy. Domestic factors played their role, too. Higher employment rates and a more stable fiscal outlook supported private demand. In its wake, public cutbacks could be less severe and had fewer negative repercussions than in other parts of Europe.

However, 2011 was also a year in which the differences that exist across the Region were markedly felt, not just between the more developed economies in the Northwest and the less developed ones in the Southeast. In the Nordic countries, Sweden has done well but struggled to push the unemployment rate backdown. Denmark is in a difficult cyclical environment, working through weaknesses in its banking system, and trying to set fiscal policy between ambitions to 'kick-start' the economy and the realities of tight public budgets. Finland, too, is dealing with difficult fiscal adjustments and the uncertainty of what a less dominant Nokia might mean for its economy. Norway remains on its oil and gas-fuelled course. Iceland recovers, but the anger about the meltdown remains deep-seated in society.

In the Baltics, Estonia recovered the most quickly, but struggles to connect its large, more traditional industry with the small spearhead of innovative new companies that has emerged. Latvia is starting to become more confident about the way it has handled its crisis, but the hard work of building the foundations of a new growth path has only just started. Lithuania follows similar trends, but with slightly less dramatic movements.

Germany is economically reaping the benefits of past reforms in policy and companies, but concerns about the exposure to external shocks are widespread. Psychologically, the country is immersed in how to meet its responsibilities in addressing the European crisis. Poland has established its place, now sometimes referred to as part of the 'North' rather than the 'East' of Europe. Its economy is stable, but what was sufficient to rank as top performance during the crisis now only puts the country in the middle. Russia, finally, is going through a difficult period of political evolution, with the Presidency now again occupied by Vladimir Putin. Institutional weaknesses bear heavily on the economic development, which still remains largely driven by oil and gas.

2012 started out as a difficult year, with future developments more uncertain than in most periods in the past. The European crisis continues and there is no quick resolution in sight. In the Baltic Sea Region the mood has shifted from pride about being in a better position due to the policy choices made in the past to deep concerns about the impact a weakened European economy will have on the countries around the Baltic Sea. The rest of Europe remains the Baltic Sea Region's largest economic partner; this year's Report again presents data that emphasise these deep linkages. As small, open economies, most of the Region is more dependent on these external connections than larger economies. While other parts of the world economy are doing somewhat better, they will not be able to compensate for what happens in Europe.

Competitiveness across the Baltic Sea Region remains solid. Here, too, the data clearly reveal how different the competitiveness profiles and challenges are across the Region. The Nordic countries and Germany benefit from strong institutions that have supported overall sound macroeconomic policies and generally solid business environments. Last year's Report also documented the wide range of policy efforts underway to support competitiveness in these countries. The Baltics have been able to use EU membership as a major boost, improving competitiveness and enabling their economies to catch up. They now need to develop more country-specific and comprehensive strategies to reach a new, more sustainable growth path. Poland has done better on many dimensions, but the extent of its competitiveness challenges is comparable to that in the Baltic countries. Russia needs to find a way to gradually improve the institutional conditions at the heart of many of its competitiveness problems, and in the meantime make improvements elsewhere that are robust to weak institutions.

The cross-border regional dimension of competitiveness is critical for some policy areas, and could be helpful for others. Deeper market integration would make a significant contribution to all countries cross the Baltic Sea Region, and can only be achieved by working together. Such market integration is more complex to achieve than politicians sometimes realise: it is driven by a combination of geographical proximity, cultural proximity, rules and regulations, physical infrastructure, and the legacy of existing market structures. Acknowledging these complexities and the need for an integrated set of actions would be a critical step forward. Apart from market integration, there are many areas in which policy learning and support can help countries in the Region make better choices and adopt better practices domestically. While the EU provides a broad platform as well, the Baltic Sea Region is a context in which such efforts are more likely to have a meaningful impact.

Collaboration across the Baltic Sea Region continues to be a significant asset compared to many other parts of the world, including those European regions next in line for an EU macroregional strategy. The EU Baltic Sea Region strategy has been a powerful tool to better align the activities of the many regional institutions and networks. With a number of years of experience, a better sense of the opportunities but also the limitations of such a macroregional strategy are now starting to emerge. The identification of a common set of priorities and objectives in a bottom-up process across the Region has clearly been very useful. It aligned expectations, actions, and created a lot of motivation. The implementation of the Strategy has been more of a mixedbag, because of the context in which it was done. Instead of developing new institutions and funding instruments, the decision was made to 'repurpose' existing structures. The outcome has been that projects already under way benefited from the overall context that the Strategy provided. In contrast, new projects defined in response to the Strategy have had a seemingly harder time getting traction. Much of this has to do with finding the right structure for collaboration between the European Commission, national governments, and the many government agencies and governments of sub-national regions that drive implementation.

The European Commission has, in its recent Communication on the EU Baltic Sea Region Strategy, made a number of useful proposals on how to further develop the Strategy and its implementation. Behind this, however, is a larger choice that only the leaders in the Baltic Sea Region itself can make: what is our ambition with the Strategy? Do we want a tool that better co-ordinates the use of EU resources and the activities of networks and institutions active across the Region? Or do we want a common strategy to upgrade competitiveness in the Baltic Sea Region, mobilising the full range of EU, national, and sub-national policy instruments available? Both are worthy goals, but achieving them requires very different levels of change in the existing institutional architecture of collaboration across the Region.

Physical transportation infrastructure is an important influence on the competitiveness of the Baltic Sea Region. Given its geographic position and profile, accessibility through all modes of transportation is critical for the entire Region. In the Baltic countries, Poland, and Russia there is a specific need to upgrade the existing infrastructure capital stock to enable further catch-up. Across the Region, the need to enhance cross-border connections is clearly visible, again especially with the countries in the southeast. The discussion in this Report indicates that infrastructure investments are less about funding than might be expected; financial institutions including the EIB and NIB are available to support bankable projects. The real issue is institutional: co-ordinating action and making decisions across the wide range of partners affected by transportation infrastructure projects. Because the Region is home to many relatively small countries, national or bilateral collaboration - already difficult enough - is not sufficient. Many of the benefits of large transportation infrastructure projects accrue to the wider Region. Collaboration structures across the Region need to reflect these benefits to make sure that sufficient investments are made.

Green growth is a key topic in the debate about the future path of competitiveness policy in the Baltic Sea Region and beyond. How should the different dimensions of especially microeconomic competitiveness be developed to position the Region well in a different global energy and environmental context? The necessary actions cut across many policy areas and, especially in the Baltic Sea Region, political boundaries. Fundamentally, the heterogeneous conditions across the Baltic Sea Region provide, as the piece in this Report argues, ample opportunities for mutually beneficial collaboration. However, they also make for a complex political environment, in which the short term evaluation of economic and environmental benefits differs significantly across countries. Creating the right type of collaboration structures across the Region that can enable joint action under such conditions will be a critical factor shaping the Baltic Sea Region's competitiveness in the years to come.

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