



WWF

REPORT

2011

The background of the cover is a photograph of a rocky coastline. In the foreground, there are large, light-colored rocks with some green vegetation. The water is a deep blue, and the sky is a clear, light blue. In the distance, there are more rocks and a small boat on the water.

Baltic Sea Scorecard 2011

WWF Baltic Ecoregion Programme



PHOTO: GERMUND SELLGREN / WWF

INTRODUCTION AND SUMMARY OF RESULTS

Although the situation is still critical, we are finally seeing some signs of hope in the Baltic Sea. Initiatives to save the sea are showing results. Industrial hot spots are being cleaned up; municipal waste water plants are being built and improved; farmers are looking for and implementing solutions to reduce excess nutrients; cod stocks are showing signs of recovery.

We therefore must not miss this chance – to build upon this momentum and restore a healthy Baltic Sea. The next few years will be crucial. Saving the sea is a fight against time and requires bold action more than bold words. With this Scorecard, WWF resumes an earlier tradition to track the nine coastal Baltic Sea countries' implementation of national, European and joint regional environmental measures and



agreements to assess if countries are honouring their commitments. It evaluates who is best in class and where further action is most urgent. The results of the 2011 Baltic Sea Scorecard are promising in some areas, but also demonstrate that much work is still left to be done. Countries must follow through on their promises to deliver the needed actions to save the Baltic Sea.

From words to deeds

Many tools to protect and restore the health of the Baltic Sea are already in place through agreements such as the HELCOM Baltic Sea Action Plan (BSAP) and EU directives like the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD) as well as the EU Strategy for the Baltic Sea Region (EUSBSR).¹ The countries around the Baltic Sea have committed themselves to using these tools and to taking the political decisions and actions necessary to effectively implement them. However, it is clear that these countries are not always living up to their ambitions and promises. Much has been said in discussions about how to save the Baltic Sea, but how much action has actually been taken by the nine coastal countries and what remains to be done?

WWF believes it is valuable to evaluate the degree to which governments live up to the promises they make, as no agreement – no matter how ambitious – can be successful without equally ambitious follow-through and delivery.

Despite efforts to tackle the environmental problems of the sea, the Baltic Sea continues to be one of the most polluted seas in the world. The problems facing the Baltic Sea are also threatening the quality of life for the nearly 90 million people living around it. Studies of future trends show that maritime activities in the sea area are likely to expand substantially over the next 20 years and will further increase conflicts between different human uses and between human uses and nature. A new approach is urgently needed – one that takes into account the total and combined pressure that different sectors are placing on the ecosystem.

Measuring progress

In 2007, when WWF launched its first scorecard, the results were heavily disappointing. They showed that all countries had performed poorly and were not living up to their ambitions or promises when it came to actions to save the Baltic Sea. The 2008 scorecard showed some minor improvements but still the overall performance was not at all satisfactory.

The 2011 Scorecard measures progress in relation to earlier scorecards but also takes new initiatives into account. Because of the difference in the choice of indicators, it is not possible to make a direct comparison between the scorecards but general trends can be discerned.

The indicators have been chosen to give a fair representation of each country's performance, including the implementation of international agreements. Special consideration has been taken to grade Russia on a similar scale, even though all agreements and policies do not apply, as Russia is not an EU Member State.

This Scorecard measures progress in five areas of crucial importance to the Baltic Sea: Eutrophication, Hazardous Substances, Biodiversity, Maritime Activities, and Integrated Sea Use Management – the last being an important tool to secure a holistic and coordinated approach to the way we are using our sea and its resources across sectors and countries to minimize environmental impacts from resource use while maximizing benefits to society. These five areas are all interlinked and dependent upon each other. Negative or positive trends within one area will have immediate effects on other areas as well.

¹ These agreements are described in more detail on page 28–30 of this report.

EUTROPHICATION
MARITIME ACTIVITIES
HAZARDOUS
SUBSTANCES
BIODIVERSITY
INTEGRATED SEA
USE MANAGEMENT

One area not included in the scoring, but that will have an indirect impact on all the others, is climate change. A rapidly changing climate will likely put an added pressure on the Baltic Sea ecosystems from e.g. increasing precipitation and thereby intensified run-off from agriculture, and through changes in water temperature and salinity adding further stress.

Incentives to act

The Scorecard includes a limited number of key indicators in each of the five focal areas, each providing a snapshot of the performance of the countries and of how well political commitments are being met. The intention is to continue to follow this up with similar scorecards on a regular basis, to measure and monitor progress by highlighting important steps forward as well as the lack of (or slow) implementation.

WWF hopes that providing a picture of the current situation will help encourage countries, governments, corporations and individuals to engage in and speed up the fight to restore the health of the sea. It is our collective responsibility to ensure that future generations also get the chance to enjoy and prosper from the unique marine ecosystem of the Baltic Sea.

The Baltic Sea Scorecard 2011

The final grading shows a slight, but noteworthy improvement compared to earlier scorecards in some areas. Even if not all indicators are the same as in previous scorecards, most countries score considerably better in the areas of Hazardous Substances and Maritime Activities. It should, however, be noted that the overall score for all countries together in both of these areas is still only a C.

Unfortunately, the situation looks even bleaker when it comes to Eutrophication, Biodiversity and Integrated Sea Use Management, all three with an overall score of F. This result reflects well the real dire situation out in the Baltic Sea.

Despite the overall poor performance, there are good examples in some of the investigated areas by individual countries – as illustrated in the following chapters. These examples demonstrate that action is possible and should be replicated by other countries.

The total score for the whole region is still only an F, indicating that the Baltic Sea countries are failing to deliver upon their commitments and take the actions necessary to protect and restore the Baltic Sea. This clearly demonstrates that there is a lot of work left to do before we can secure a healthy Baltic Sea again.

Germany and Sweden have earned the best grades in this year's Scorecard with 36 points out of 79 possible. Germany has worked particularly hard to reduce its emissions of nutrients and has done fairly well in the other areas too. Sweden has demonstrated progressive work with maritime activities and integrated sea use management and has higher than average scores in all areas except in the protection of biodiversity, where Sweden's scores are among the lowest.

Finland ranks third, with 29 points, mostly because of its good performance in the reduction of hazardous substances and its progressive work in the area of maritime activities.

Denmark scores 28 and **Estonia** 26 points. **Lithuania and Poland** are just below with 25 points each. The Scorecard shows that both **Latvia** and **Russia** will need to speed up their work to protect and restore the ecosystem of the Baltic Sea.

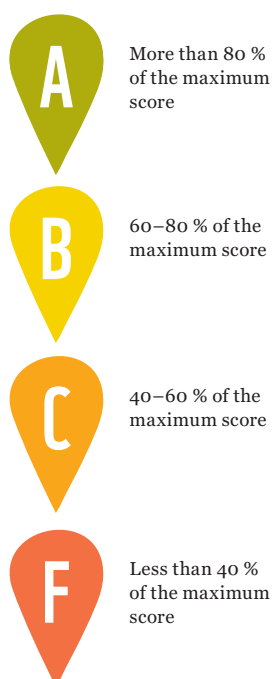


Table 1. Summary of results

Countries	Eutrophication	Hazardous substances	Biodiversity	Maritime activities	ISUM	Total Score	Grade
Denmark	8/24	7/12	4/15	6/13	3/15	28/79	F
Estonia	5/24	6/12	3/15	7/13	5/15	26/79	F
Finland	5/24	9/12	2/15	8/13	5/15	29/79	F
Germany	14/24	7/12	5/15	4/13	6/15	36/79	C
Latvia	4/24	5/12	5/15	2/13	3/15	19/79	F
Lithuania	6/24	6/12	4/15	6/13	3/15	25/79	F
Poland	7/24	6/12	3/15	4/13	5/15	25/79	F
Russia	8/24	1/12	1/15	5/13	3/15	18/79	F
Sweden	11/24	7/12	2/15	8/13	8/15	36/79	C
All Countries	68/216	54/108	29/135	50/117	41/135	242/711	F

Table 2. Total ranking

Countries	Ranking	Total Score	Grade
Germany	1	36/79	C
Sweden		36/79	C
Finland	3	29/79	F
Denmark	4	28/79	F
Estonia	5	26/79	F
Lithuania	6	25/79	F
Poland		25/79	F
Latvia	8	19/79	F
Russia	9	18/79	F

Grading

For each indicator, countries receive a score as a number of 'points', usually from zero to a maximum of three. A few important indicators, such as the total reduction of nutrients, have been given a higher maximum number of points.

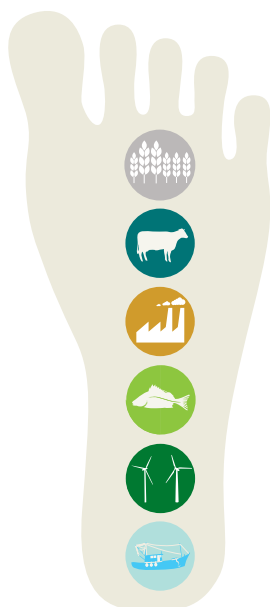
These points have then been added up for each area and as a total for the entire Scorecard. A grade, 'A', 'B', or 'C' has been awarded for each area and for the entire Scorecard, based on the total score compared to the maximum number of points available. More than 80 percent of the maximum score will earn an A grade; between 60 and 80 percent will earn a B; and between 40 and 60 percent of the maximum score will result in a C.

If less than 40 percent of the maximum number of points has been achieved, an F grade is given, indicating that the government has failed to take its responsibility in the work to improve the situation for the Baltic Sea.

In the tables, an 'A' is indicated with green; a 'B' is indicated with yellow; a 'C' is indicated with orange; and an 'F' is indicated with red.

THE WAY FORWARD

The rich history and dynamic constellation of the Baltic region is legendary. Bounded by nine countries with different cultures and traditions, the Baltic Sea has proved to be a powerful catalyst in moving these same countries towards ever-increasing integration and interdependence. This is, of course, due in no small part to the fact that the future of the region is wholly dependent on their shared resource – the marine environment of the Baltic Sea.



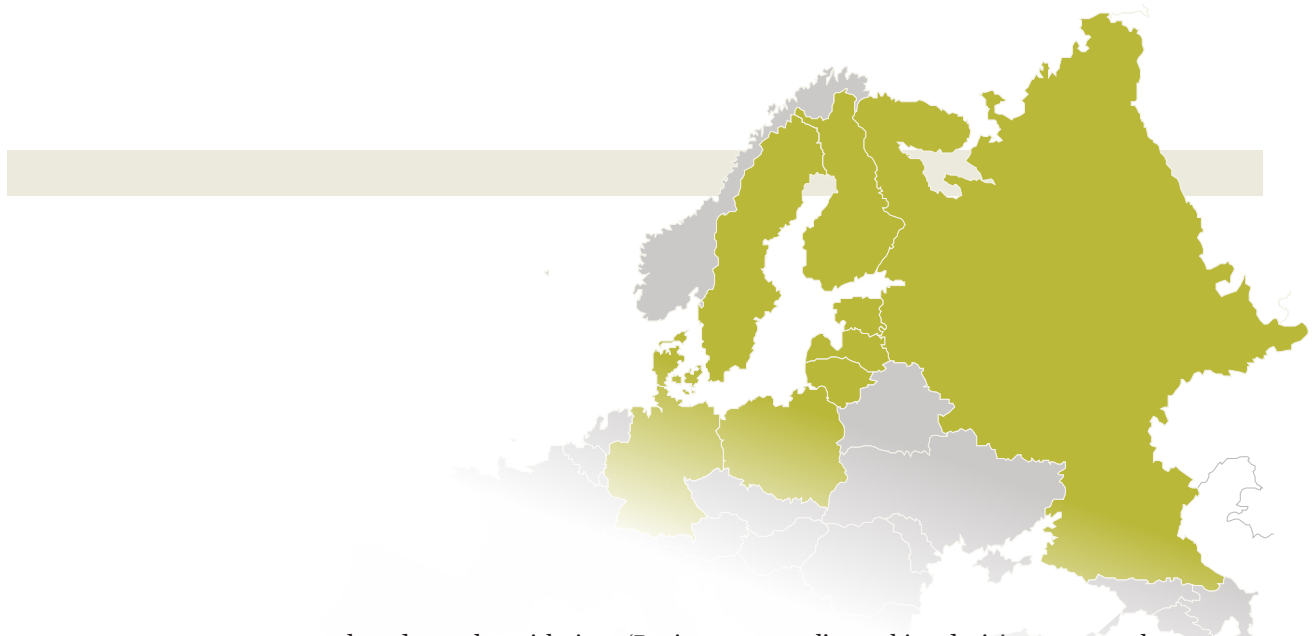
Given the projected growth in the region over the next 20 years – in some sectors by as much as several hundred percent – the challenges facing the Baltic will only become more difficult and complex with time. ‘Business as usual’ – making decisions country by country, sector by sector, issue by issue is no longer an option.

There has been a growing recognition over the last few decades about the uniquely sensitive nature of this shared resource and its fragility. This is why governments around the region have come together again and again, to state their commitment to protect and safeguard it for the future. Nevertheless, as the Scorecard demonstrates, words and agreements cannot ‘save’ the Baltic Sea from its current poor health without the delivery and follow-through of the collective promises made. Baltic Sea Governments must demonstrate their leadership and commitments with actions, not words. This and subsequent Scorecards will continue to highlight the difference – as it is this lack of which is today undermining the protection and recovery of the Baltic Sea.

Importantly, it is also time for governments to reform policies which render their stated commitments to protect and restore the Baltic Sea impossible to achieve. These include policies such as the EU Common Agricultural Policy (CAP) and the EU Common Fisheries Policy (CFP). By redirecting the CAP from supporting a highly intensive and industrialised agriculture sector to one that supports farmers with the production of shared benefits and ecosystem services such as clean environment, beautiful and thriving rural landscapes, and a living Baltic Sea, we could both save the Baltic Sea and make better use of taxpayers’ money. In the case of the CFP, WWF believes that it must be reformed to make ecosystem based long-term management plans mandatory for all EU fisheries, introduce effective regionalisation, while maximising the value from catch to consumer and thus ensuring that fish stocks recover and European fisheries return to prosperity.

Importantly, there are a number of other crucial EU policies that must be enforced and implemented, according to their time plan, if the Baltic Sea is to be ‘saved’ – not least of which is the Marine Strategy Framework Directive (MSFD) to achieve good environmental status of all European seas. Furthermore, these policies must work in harmony and not at cross-purposes, which is unfortunately too often the case today. As highlighted in the Scorecard, the EU Strategy for the Baltic Sea Region has potential but without clearer objectives and monitoring mechanisms it will be difficult for it to deliver upon its promise. And finally, the successful implementation of the HELCOM Baltic Sea Action Plan is absolutely critical to achieving a healthy Baltic Sea.

The needs and limitations of the Baltic Sea ecosystem cannot be negotiated. Securing ecosystem health, including ecological processes and services, should therefore be the underlying principle for managing, planning and using its marine resources. Given the projected growth in the region over the next 20 years – in some sectors by as much as several hundred percent – the challenges facing the Baltic will only become more diffi-



cult and complex with time. ‘Business as usual’ – making decisions country by country, sector by sector, issue by issue is no longer an option.

An Integrated Sea Use Management

WWF sees Integrated Sea Use Management as the solution – a strategic process to minimize environmental impacts from resource use and maximize benefits to society. WWF has worked for many years to promote a more efficient and integrated planning and management of the Baltic Sea in the hope of simultaneously reducing potential conflicts and supporting sustainable development within the capacity of the ecosystem.

This process requires that the **governance** of the sea is **holistic** and **coordinated** within and between sectors and countries as well as between agencies and ministries with different mandates – ideally consisting of one comprehensive national marine body that has the overarching responsibility and mandate to balance between different interests as well as to coordinate complex policies and jurisdictional arrangements (i.e. in cases where policies and jurisdiction overlap or are contradictory). These national bodies should also be represented in a regional platform responsible for ensuring effective regional planning and management.

The Baltic Sea governments must jointly define **integrated and realistic goals** for the future development and protection of the region, including all different sectors, based on the capacity of the Baltic Sea ecosystem. At the same time, scientists and experts need to help define and better understand these **capacity boundaries** to make sure we do not over-use its limited resources.

Strong support for a new approach

Fortunately, governments around the region are moving to address the need for a more effective and integrated approach to sea use management, including spatial planning. However, users of the Baltic Sea resources are, in many cases, only peripherally engaged in this process. And while **government leadership** and action are essential, it is not enough. Given the pressures threatening the region at ever-increasing levels, it is the **collective responsibility of ‘users’²** of the Baltic Sea’s resources: businesses, communities, individuals, and civil society representatives to come together, in partnership, with governments to secure the protection and sustainable development of this region. WWF believes that success in shifting the resource use management paradigm will depend upon the degree to which the broad involvement of users and civil society representatives can be secured.

Those of us lucky enough to live around the Baltic Sea understand what is at stake. Fortunately, there is a clear way forward – through actions that deliver a more effective and holistic integration, cooperation and management we can restore and protect the Baltic Sea, its dynamic nature and the progressive interdependence that this unique region is legend for.

²By ‘user’ we mean any individual or entity who interacts with the region’s resource base, for business or personal reasons. This includes, but is not limited to, a wide range of private sector actors.

ISUM
A STRATEGIC PROCESS
TO MINIMIZE ENVIRONMENTAL
IMPACTS FROM
RESOURCE USE AND
MAXIMIZE BENEFITS
TO SOCIETY



PHOTO: JUONILYTYINEN IITA-SANGOMAT / WWF

EUTROPHICATION

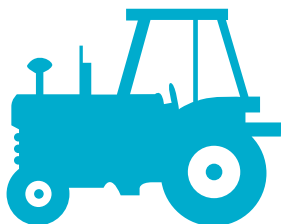
Eutrophication has been identified as the single biggest threat to the Baltic Sea.

It leads to excessive algal blooms and causes dead zones where the lack of dissolved oxygen disables reproduction of several species. To curb the trend, inputs of nitrogen and phosphorous to the sea must decrease significantly.

The slow renewal of water in the Baltic Sea exacerbates the sea's sensitivity to eutrophication. Major inflows of salt- and oxygen-rich seawater from the Atlantic occur rarely and once nutrients are discharged to the Baltic Sea, they remain there for a long time contributing to an accelerated growth of algae and plants. Anoxic bottom water has a severe impact on the reproductive success of commercial fish stocks like flatfish and cod, as well as on many other species. Reduced water transparency is another visible sign of eutrophication that can be seen in many places around the Baltic Sea, both at coastal and open offshore sites. The nutrients released in the Baltic Sea originate from a variety of human sources, including agriculture, municipal wastewater, industrial activities and nitrogen oxide from the combustion of fuels.

Agriculture a major source

Agricultural run-off accounts for around half of all man-made nitrogen and phosphorous inputs to the Baltic Sea and therefore farmers play a central role in combating eutrophication. Consumer choices also play an important role, for instance as it relates to the amount and type of meat consumed. In the coming years, the use of fertilizers and high-protein fodder, together with meat production, is expected to increase substantially due to intensification of agriculture in the region, which will further increase nutrients. In addition, climate change and the projected increase in precipitation are expected to cause more winter run-off and thereby more leaching of nutrients.



A positive trend

Studies confirm that measures taken to reduce nutrient inputs, such as the more stringent requirements for manure and fertilizer management within agriculture together with the construction of new and improved existing municipal wastewater treatment plants, are effective and show a positive trend on a long-term basis. However, most areas in the Baltic Sea are still classified by HELCOM as affected by eutrophication and further action is needed. With less eutrophication we are likely to see significant improvements in habitat quality and conservation status in many parts of the sea, as there is a strong link between eutrophication abatement and the health of the entire ecosystem, its species and habitats.

Measures needed

One of the easiest, quickest and least expensive measures to reduce inputs of phosphorus is to ban phosphates in dishwasher and laundry detergents. Such a ban could potentially reduce phosphorus loads with up to 24 percent if implemented by all of the Baltic Sea countries. A ban on phosphorus in household detergents is currently underway within the EU, but the Baltic Sea countries can speed up the process by implementing bans on a national level.

Another important step is the drawing up of river basin management plans, which is at the core of the EU Water Framework Directive (WFD), aiming to improve water quality throughout Europe. Although the directive mainly covers the improvement of water quality in freshwater systems and coastal waters, it is important also for the Baltic Sea since freshwater from the catchment area (which is four times larger than the sea area) eventually drains out into the sea.

A large number of wetlands around the Baltic Sea have been drained during the last century resulting in a loss of biological diversity, but also in a loss of important nutrient traps. Wetlands are effective by intercepting pollutant delivery, providing a buffer zone and can potentially clean up polluted water. They improve water quality by breaking down, removing, using or retaining nutrients, organic waste and sediment carried to the wetland with run-off from the watershed. Swedish studies show that wetlands can reduce the concentration of phosphorus in agricultural run-off with up to 90 to 100 percent and nitrates with 76 to 90 percent.³ Restoration and re-creation of wetlands are therefore important measures in the fight against eutrophication.

Assessment

Performance on reaching the targets agreed in the HELCOM Baltic Sea Action Plan (BSAP)

First we have looked at each country's *performance on reaching the targets agreed in the HELCOM Baltic Sea Action Plan (BSAP)*. If a country has reached its target for nitrogen or phosphorus reduction, three points are given respectively for each. If more than 50 percent is achieved, two points are given; if less than 50 percent is reached, one point is given; and if there is no reduction (or even an increase in emissions), zero points are given.

Total emissions over the last four years for which measurements exist (2005–2008)

The BSAP targets are very specific and only concern the most heavily polluted areas of the Baltic Sea. To provide a broader picture, the Scorecard also examines *the total emissions over the last four years for which measurements exist (2005–2008)*, (so that no single year's deviation will change the score), and compares this to a reference period of eight years (1997–2004). Three points are given if a country has managed to reduce its nutrient load with more than 20 percent; two points are given if the reduction is between 10 and 20 percent and one point if there is a reduction below 10 percent; zero points are given if there is no reduction at all. The results are presented in Table 3.

³ An example of measures for reducing phosphorus and nitrogen losses from agriculture, HELCOM, http://www.helcom.fi/BSAP/ActionPlan/otherDocs/en_GB/agri_measures/, 5 August 2011.

National bans on phosphates in detergents

The next assessment relates to the *national bans on phosphates in detergents*. The Scorecard assesses current and planned legislation in each country both for laundry and dishwasher detergents. If no national measures are taken, the country has received zero points. One point is earned if the country is in the process of implementing a ban; two points if there is a ban in place on phosphates in laundry detergents; and the full score of three points is given if the ban covers both laundry and dishwasher detergents. Only Sweden has received the maximum score. The results are presented in Table 4.

River Basin Management Plans (RBMPs)

The Scorecard also measures progress in drawing up *River Basin Management Plans (RBMPs)* in all of the countries surrounding the Baltic Sea (except Russia which is not covered by the Water Framework Directive). All EU Member States, except Denmark, have kept to the time schedule and adopted the required plans. For this accomplishment each country, except Denmark, has earned one point. The results are presented in Table 4. This indicator has been designed to be able to be easily followed up in future WWF scorecards, where implementation of these plans will be evaluated.

For Russia, the Scorecard looks at similar legislation, in particular the Water Code of the Russian Federation, adopted in 2006. The Water Code takes a basin management approach and envisages comprehensive management schemes for the purpose of integrated water management. The Water Code further demands that permitted impact limits and target water quality indicators are set for water bodies. Russia has received one point for its river basin management legislation.

Conservation, restoration and re-creation of wetlands

Although the *conservation, restoration and re-creation of wetlands* are important measures to reduce eutrophication, not much data exist on how countries are performing in this respect. The Scorecard therefore awards one point to each country that specifically mentions efforts to restore wetlands as a measure against eutrophication in their BSAP Implementation Plans. The results are presented in Table 4. Further points will be awarded in future scorecards as more data on the actual actions taken are provided by the countries.

Agricultural hotspots

In the BSAP, all countries are committed to deliver a list of '*agricultural hotspots*' by 2009, i.e. large animal production units for chicken, pigs and cattle that do not meet certain environmental standards. The Scorecard assesses the reporting and subsequent deletion of agricultural hotspots. At the time of writing the report, no countries had reported their hotspots. However, there are some positive developments as all countries have had a first round of initial assessments trying to identify potential hotspots and the work on further identification is still ongoing. Each country has therefore been given one point.

Conclusions

Given the fact that eutrophication is the biggest threat to the Baltic Sea, this section includes more indicators than the other areas. Effective measures to combat eutrophication will therefore carry proportionally more weight in the final scoring.

The final scores reflect well the present status of the Baltic Sea. Germany is clearly the country that has been most effective in reducing its emissions of nutrients. So far only Sweden has a total ban on phosphates in both laundry and dishwasher detergents while many of the other countries are taking a passive role by simply waiting for a change in EU regulations. Although there is a lot of work on-going to fight eutrophication of the Baltic Sea, the speed of progress is far too slow. More work is clearly needed in order to implement river basin management plans, conserve, restore and re-create, wetlands and identify and clean-up hotspots.

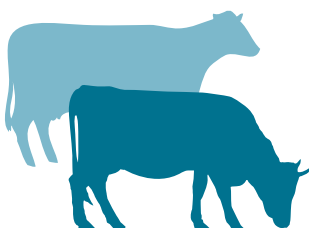




PHOTO: WWF / THOMAS ÖBERG

Table 3. Nutrient reductions

Countries	BSAP targets Nitrogen	BSAP targets Phosphorus	Total Nitrogen reductions	Total Phosphorus reductions	Total Score
Denmark	2	0	3	1	6/12
Estonia	0	2	0	1	3/12
Finland	0	0	0	1	1/12
Germany	3	3	2	1	9/12
Latvia	0	0	0	0	0/12
Lithuania	1	0	1	2	4/12
Poland	1	1	1	1	4/12
Russia	3	2	0	1	6/12
Sweden	1	2	1	1	5/12

Table 4. Total score - Eutrophication

Countries	Nutrient reductions	Phosphate ban	RBMPs	Wetlands	Hotspots reporting	Total Score	Grade
Denmark	6	0	0	1	1	8/24	F
Estonia	3	0	1	0	1	5/24	F
Finland	1	1	1	1	1	5/24	F
Germany	9	2	1	1	1	14/24	C
Latvia	0	2	1	0	1	4/24	F
Lithuania	4	0	1	0	1	6/24	F
Poland	4	0	1	1	1	7/24	F
Russia	6	0	1	0	1	8/24	F
Sweden	5	3	1	1	1	11/24	C

HAZARDOUS SUBSTANCES

The Baltic Sea is often referred to as one of the most polluted seas in the world. It has had an extensive exposure to chemicals since the beginning of industrialization in the region. The brackish environment and the long time-frame required for water exchange in the Baltic Sea, more than 30 years, make it uniquely vulnerable to the negative effects of hazardous substances.

Hazardous Substances originate from different sources, mainly industries and municipal wastewater treatment plants, run-off from agricultural land, shipping and other activities at sea, as well as airborne contaminants from all types of combustion sources. Hazardous properties are toxicity (causing harm to marine organisms), persistence (long lasting) and have the potential to accumulate in the marine food web. Substances that effect hormone and immune systems are also considered hazardous.

Large areas disturbed

According to HELCOM, all open-sea areas of the Baltic Sea are disturbed by hazardous substances and very few coastal areas have been classified as undisturbed.

A large variety of different substances exceed the threshold levels – most common are PCBs, DDT/DDE, cadmium, lead, TBT and cesium-137. Mercury also exceeds threshold levels in some areas as well as dioxins, furans and brominated substances.



PHOTO: ANDRÉ DE LOISTED

Cesium-137
Mercury
PCB
DDT
Cadmium
TBT

A common goal set by HELCOM is to achieve a Baltic Sea undisturbed by hazardous substances by 2021, including the aims of: reducing the concentrations of hazardous substances close to natural levels; all fish safe to eat; and healthy wildlife and radioactivity at pre-Chernobyl levels. HELCOM has set a zero-emission target for all hazardous substances in the whole Baltic Sea catchment area by 2020. Even though this goal is far off, scientific studies prove that the implementation of actions have been effective and that concentrations of some pollutants, including dioxins and PCBs, are decreasing. While it is encouraging to see the decrease in some of the 'old' pollutants, it is worrying to see the rapid increase in many new substances with hitherto unknown influence on the ecosystem and on human health.

The HELCOM list of hot spots, that was made to identify specific point polluters, originally contained 163 hot spots. By March 2010, 90 of these hot spots had been cleaned up and removed from the list.

Assessments and measures lag behind

A number of joint efforts and initiatives illustrate that the threat that hazardous substances represent is taken seriously by the countries surrounding the Baltic Sea. The EU regulation REACH⁴, on chemicals and their safe use, and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), are important tools to identify, classify and limit the use of hazardous substances enforcing the responsibility of the industries. However, as the rate of introduction of new substances is increasing, identification and knowledge on new hazardous substances tend to lag behind. Concentrations of, for example, bisphenol A and pharmaceutical substances in the Baltic Sea are increasing, and the understanding of their environmental impact is still poor.

Alarming levels

Studies on the levels of heavy metals in the Baltic Sea are cause for concern. Few areas show decreasing trends and in some places concentrations are even increasing. The concentrations of heavy metals in the Baltic Sea are up to 20 times higher than in the North Atlantic⁵. Heavy metals can have a devastating effect on ecosystems and on human health. Mercury and lead have been shown to decrease learning ability in children and chronic exposure to cadmium has been shown to cause kidney failure. A global mercury convention that regulates the use and emission of mercury is under way and some countries have already introduced a total ban on mercury in products.

Dioxins and furans are other hazardous substances that cause adverse effects in ecosystems, including health and reproductive problems in animals, especially top predators, with negative consequences on human health. Dioxins are unintentionally formed in various processes, often in combustion processes and in the presence of chlorine. In the Baltic Sea region, the pulp and paper industry, metallurgic industry and combustion processes are believed to have been the major dioxin emission sources during the last decades. Fish caught in some parts of the Baltic Sea, particularly fatty fish like herring and salmon, contain concentrations of dioxins that exceed the maximum allowable levels according to EU legislation. Sweden and Finland have an exception to this legislation but children and women of reproductive age are advised to restrict their consumption of certain fish species.



20

THE CONCENTRATIONS OF
HEAVY METALS IN THE
BALTIC SEA ARE UP TO 20
TIMES HIGHER THAN IN
THE NORTH ATLANTIC

⁴ REACH is the European Community Regulation on chemicals and their safe use (EC 1907/2006). It deals with the Registration, Evaluation, Authorisation and Restriction of Chemical substances. The law entered into force on 1 June 2007.

⁵ Baltic Sea Environment Proceedings No. 120B, Hazardous Substances in the Baltic Sea, HELCOM 2010.

Assessment

Ratification of three international conventions relating to reductions of hazardous substances.

To follow up on assessments made in earlier scorecards, the Scorecard assesses the *ratification of three international conventions relating to reductions of hazardous substances*: the Stockholm Convention on Persistent Organic Pollutants (POPs); the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes; and the AFS Convention on the Control of Harmful Anti-Fouling System on Ships. Countries received one point for each ratified convention. Compared to the scorecards of 2007 and 2008, there has been an improvement as all countries have now ratified all conventions, with the exception of Russia who only has ratified the Basel Convention. The results are presented in Table 5.

Table 5. Ratification of international conventions

Countries	POPs Convention	Basel Convention	AFS Convention	Total Score
Denmark	1	1	1	3
Estonia	1	1	1	3
Finland	1	1	1	3
Germany	1	1	1	3
Latvia	1	1	1	3
Lithuania	1	1	1	3
Poland	1	1	1	3
Russia	0	1	0	1
Sweden	1	1	1	3

A general ban on mercury in products.

Restrictions on levels of cadmium in fertilizers.

Ratification of the 1998 Aarhus Protocol on Heavy Metals.

For heavy metals, the Scorecard assesses if each country has introduced a *general ban on mercury in products* (1 point); whether it has implemented *restrictions on levels of cadmium in fertilizers* (1 point); and finally if they have *ratified the 1998 Aarhus Protocol on Heavy Metals* to the Convention on Long-range Transboundary Air Pollution (1 point). The Protocol targets emissions of mercury, cadmium and lead. The results are presented in Table 6.

Table 6. Heavy metal restrictions

Countries	Mercury product ban	Cadmium restrictions in fertilizers	Ratification of Aarhus Protocol on Heavy Metals	Total Score
Denmark	1	0	1	2
Estonia	0	0	1	1
Finland	0	1	1	2
Germany	0	0	1	1
Latvia	0	1	1	2
Lithuania	0	0	1	1
Poland	0	1	0	1
Russia	0	0	0	0
Sweden	1	1	1	3



According to HELCOM, all open-sea areas of the Baltic Sea are disturbed by hazardous substances.

Emissions of dioxins and furans

Concerning *dioxins and furans* the Scorecard assesses emissions from all the countries around the Baltic Sea and compares an average from the last five years of available measurement (2004–2008) with the ten previous years (1994–2003) and calculated the difference as a percentage. Some countries have managed to reduce their emissions while others have increased them. For the region as a whole, there is actually an increase of 1 percent for the period! If a country has achieved more than a 50 percent reduction they earned three points; between 25 and 50 percent they earned two points; for a reduction of less than 25 percent they earned one point; and for zero reduction or an increase in emissions countries earn zero points. The results are presented in Table 7.

Pollution hotspots

For the last indicator on hazardous substances, the Scorecard assesses the list of *pollution hotspots* that HELCOM established in 1992. For each country, the Scorecard calculates the percentage of deleted hotspots compared to the original list. In the (few) cases where a hotspot is shared between two countries, the Scorecard counts it twice, once for each country. If less than 50 percent of the hotspots have been cleaned up, the country earned zero points. If between 50 and 75 percent were cleaned up, one point was earned. If more than 75 percent but not all hotspots were taken off the list, two points were scored, and if all hotspots had been eliminated, three points were earned. The results are presented in Table 7.

Conclusions

Several countries have improved their efforts to reduce hazardous substances.

Hazardous substances are one of the few areas in the report in which more substantial action has been taken. This is reflected in the scoring. Several countries have improved their efforts to reduce hazardous substances since the earlier Baltic Sea Scorecards were produced. Finland has done particularly well in all the areas assessed. Russia is however far behind and needs to take urgent action. Even though there have been improvements in this area, most countries still only score a C, which shows that there is a lot of work left to do before we can secure a healthy Baltic Sea. The lack of progress in reducing dioxins, together with the growing amount of new chemical substances with unknown effects, are still challenges for the whole region.

It should also be noted that this Scorecard only assesses a small number of the most important and well known pollutants. There is a vast amount of known and unknown substances out there, some of which are included in existing agreements and regulations, many that are not.

Table 7. Total score - Hazardous substances

Countries	International conventions	Heavy metals	Dioxins and furans	Hotspot clean-up	Total Score	Grade
Denmark	3	2	2	0	7/12	C
Estonia	3	1	1	1	6/12	C
Finland	3	2	2	2	9/12	B
Germany	3	1	1	2	7/12	C
Latvia	3	2	0	0	5/12	C
Lithuania	3	1	1	1	6/12	C
Poland	3	1	1	1	6/12	C
Russia	1	0	0	0	1/12	F
Sweden	3	3	0	1	7/12	C



PHOTO: ALAN JAMES / NATUREPL.COM

BIODIVERSITY

The unique biodiversity of the Baltic Sea is under threat. Joint efforts to protect the Baltic Sea show some progress, but the process needs to

be faster and more collaborative. The pressure on the Baltic Sea's ecosystem is steadily growing and time is of the essence if we want to save its habitats, species and important ecological structures and processes.

59

**SPECIES ARE
CONSIDERED
THREATENED
OR DECLINING
RIGHT NOW**

Eutrophication, overfishing, physical exploitation, the degradation of habitats, releases of hazardous substances and illegal discharges of oil all have a negative impact on the biodiversity of the Baltic Sea. Currently there are 59 species that are considered threatened or declining, including harbour porpoise, ringed seals and a number of bird species like Steller's eider and long-tailed duck. Fish populations are out of balance in several areas and the eel stock is at a historical low and continues to decline. Up to 90 percent of southern Baltic wetlands have been drained over the last few decades and dead zones cover up to one sixth of the Baltic Sea bottom area as a consequence of eutrophication. On top of these alarming signs, the influence of climate change is becoming more apparent.

The Baltic Sea is inherently low in species, and therefore the protection of biodiversity is central to ensure the stability of the ecosystem, its structures, functions and ecological processes.

Continued economic growth a challenge for the ecosystem

High levels of biodiversity positively affect the natural ability of ecosystems to adapt to changing conditions. The Baltic Sea is inherently low in species, and therefore the protection of biodiversity is central to ensure the stability of the ecosystem, its structures, functions and ecological processes. Economic growth and the expansion of agriculture, maritime transport, offshore wind farms and other human activities can be positive developments but may put a further stress on the ecosystems of the Baltic Sea in the near future. Studies of future trends show that maritime activities are likely to expand substantially over the next 20 years⁶.

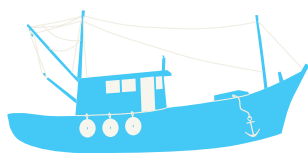
All of the countries surrounding the Baltic Sea have agreed on common goals for biodiversity through HELCOM's Baltic Sea Action Plan, in an effort to achieve natural marine and coastal landscapes, thriving and balanced communities of plants and animals and viable populations of species.

All species and habitats need protection

The establishment of networks of marine protected areas (MPAs) is an important tool for protecting biodiversity recognized both within the EU in the Birds and Habitats Directive (Natura 2000) and the EU Marine Strategy Framework Directive, and by HELCOM through the commitment to designate Baltic Sea Protected Areas (BSPAs).

Just designating a number of sites as MPAs, however, is not enough. In order to be effective in protecting ecosystems, a network of MPAs must be ecologically coherent. Criteria for ecological coherence, as defined by HELCOM, are adequacy, representativity, replication and connectivity of the network. Another key aspect is the presence and implementation of adequate management plans.

The results for the present status of marine protected areas in the Baltic Sea are encouraging. They cover about 12 percent of the Baltic Sea marine area. Thereby the goal to protect 10 percent of every ecoregion, set by the UN Convention on Biological Diversity, has been achieved for the Baltic Sea – at least on paper. However, many sites still lack management plans and are still threatened by human activities like fishing, shipping, tourism, wind farms, pipelines and cables. The network is also far from ecologically coherent with low representation of a number of habitats, species and bio-geographic regions – especially in the offshore areas. Moreover, scientific recommendations indicate that about 20 percent of each marine habitat and landscape need to be covered within MPA-networks to provide sufficient protection for the entire ecosystem. There is also a huge lack of knowledge about underwater habitats, landscapes and ecosystems. More and better underwater inventories will be needed to ensure efficiency in marine protection.



Fish stocks that lack long-term management plans, for example the Baltic Sea salmon, are in deep trouble.

Overfishing

Fish are an important part of biodiversity and, after eutrophication, over-fishing is seen as the biggest threat to the Baltic Sea marine ecosystem. Establishing Long Term Management Plans (LTMPs) for all commercial fish stocks in the Baltic Sea will be a central part of the solution and has been agreed by all the countries around the Baltic Sea to be developed by 2010, according to the Baltic Sea Action Plan. Still, progress is very slow and fish stocks that lack long-term management plans, for example the Baltic Sea salmon, are in deep trouble.

The situation is even worse for the European eel. The stock is at a historical low and continues to decline. Recruitment in 2008 and 2009 was especially low and a total decline of 99 percent has been estimated. Overfishing combined with habitat alteration, including river passage barriers and deterioration in water quality, contribute to the present situation. The International Council for the Exploration of the Sea (ICES) has repeatedly recommended that all anthropogenic impacts on eel should be reduced to as close to zero as possible.

⁶ Future Trends in the Baltic Sea, WWF Baltic Ecoregion Programme, 2010

Assessment

Percentage of sea areas designated either as a BSPA or Natura 2000

The Scorecard assesses how large the *percentage of each country's sea areas (territorial and EEZ) is designated either as a Baltic Sea Protected Area (BSPA) or Natura 2000*. No country has been able to show that its protected areas form an ecologically coherent network, according to HELCOM's criteria, and therefore no country has received the full score of three points. Two points have been awarded to those countries that have protected more than 20 percent of their sea area; one point if between 10 and 20 percent of their sea areas are protected; and zero points if less than 10 percent of their sea areas are protected. The results are presented in Table 8.

Percentage of the number of existing MPAs that have a management plan

To get a more qualitative assessment of each country's performance, the Scorecard also assesses the *percentage of the number of existing MPAs (in this case, only BSPAs) that have a management plan⁷*, existing or in preparation. Latvia is the only country where all BSPAs have management plans in place and has therefore received the full score of three points. Countries with plans in preparation for all BSPAs have received two points and those with at least 50 percent covered by management plans (existing or in preparation) have been given one point; countries with less than 50 percent have received zero points. The results are presented in Table 8.

Long Term Management Plans (LTMPs)

Long Term Management Plans (LTMPs) for commercial fish stocks are defined on a European level by the European Commission. The Scorecard has therefore given all EU Member States the same score. As the process of establishing LTMPs has been stalled in the political negotiations since the introduction of the Lisbon Treaty and only two out of 16 commercial fish stocks (the two cod stocks) listed by the International Council for the Exploration of the Sea (ICES) for the Baltic Sea have LTMPs, all EU Member States have received one point. When at least half of the stocks have management plans, they will receive two points in future scorecards and when all stocks have sufficient LTMPs, three points will be given. The results are presented in Table 8.

Through the agreement between the European Community and the Government of the Russian Federation 'on cooperation in fisheries and the conservation of the living marine resources in the Baltic Sea', Russia is equally committed to establish LTMPs – jointly with the EU Member States on migrating fish stocks, and autonomously on non-migrating stocks. Russia has not established any additional LTMPs on its own stocks so it has also received one point.

Eel Management Plans

To assess the performance on eel conservation the Scorecard has used the ICES assessment of the EU Member States' *Eel Management Plans*. A total ban on eel fisheries, such as Norway has introduced, would have earned a country three points, but no Baltic Sea country currently meets this criteria. An 85 percent reduction in fishing effort for eel (which has been deemed needed to maintain stocks at status quo⁸) would have earned two points. So far, no country has come close to that. Securing at least a 40 percent escapement back to the sea of mature eels (which is the minimum requirement according to an EU regulation⁹) earns one point – only Germany has achieved that. All the rest of the countries, including Russia that, at present, has no data, have received zero points. The results are presented in Table 8.

The EU Marine Strategy Framework Directive (MSFD)

The EU Marine Strategy Framework Directive (MSFD) has implications beyond biodiversity, but a successful implementation of the Directive will have tremendous importance for the ecosystems of the Baltic Sea and will help safeguard their biodiversity. Delays in implementing the directive will lessen the probability of such goals being achieved within a reasonable timeframe. As the Directive still is in its very early stages, the Scorecard measures whether the Baltic Sea EU Member States have informed the European Commission about the transposition of the Directive into national legislation, something that should have been achieved by 14 July 2010. Failure



PHOTO: RUDOLF SVENSSON / WWF-CANON

All countries need to speed up the process to deliver an ecologically coherent and well managed network of marine protected areas, including no-take zones.

to honour this commitment has resulted in zero points. Countries that have complied with their legal obligations have received one point. Later scorecards may give more points for successful implementation of the Directive. The results are presented in Table 8. Russia currently has no legislation of the same scope and therefore receives zero points.

Conclusions

Although Germany and Latvia have a slightly higher score than the other countries, protection of biodiversity is an area with a disappointing lack of progress in the Baltic Sea region. Russia, Finland and Sweden are far behind on all assessed indicators.

All countries need to speed up the process to deliver an ecologically coherent and well managed network of marine protected areas, including no-take zones. This is urgent to protect species and habitats and ensure ecosystem structures, functions and processes. Fisheries management is a sad story in the Baltic Sea region as it is in the rest of Europe. Except for some progress related to the management of cod stocks that allows for certification¹⁰ and a successful fight against illegal fishing, Baltic Sea fish stocks are still in a weak state.

Long Term Management Plans are a proven measure to protect and manage fish stocks sustainably. The science and the tools are there, only the political leadership is missing. The future reform of the EU Common Fisheries Policy, which will take effect in 2013, could provide a chance for a more effective and sustainable approach to the management of European fisheries, which will hopefully bring positive change to the Baltic region as well.

⁷ Unfortunately, not all MPAs (or BSPAs) have a management plan that covers the entire site thus failing to secure adequate protection. This Scorecard could not distinguish between sites with complete versus partial management plan as data on these are not reported.

⁸ Åström, M. and Dekker W. 2007. When will the eel recover? A full life cycle model. ICES Journal of Marine Science, 64: 1491–1498.

⁹ Council Regulation (EC) No 1100/2007 of 18 September 2007

¹⁰ Certification of a fishery provides traceability of fish from boat to plate and provides assurance for fishermen and consumers that the fish on the market is legal and sustainable.

Table 8. Total score – Biodiversity

Countries	MPA designation	MPA management	LTMPs	Eel ban	MSFD implementation	Total Score	Grade
Denmark	2	0	1	0	1	4/15	F
Estonia	1	0	1	0	1	3/15	F
Finland	0	1	1	0	0	2/15	F
Germany	2	0	1	1	1	5/15	F
Latvia	0	3	1	0	1	5/15	F
Lithuania	1	2	1	0	0	4/15	F
Poland	2	0	1	0	0	3/15	F
Russia	0	0	1	0	0	1/15	F
Sweden	0	0	1	0	1	2/15	F

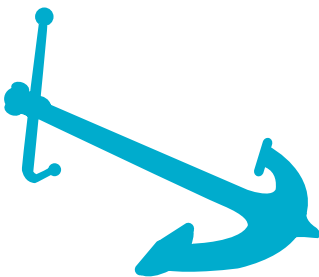


PHOTO: ANDREA LOTTI

MARITIME ACTIVITIES

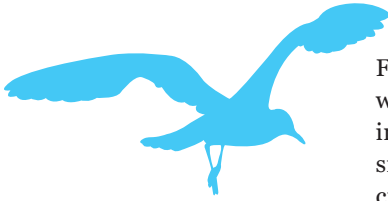
The Baltic Sea is one of the busiest seas in the world and shipping traffic is predicted to more than double in the next 20 years. Shipping is often an environmentally friendly way of transporting goods and people but can also constitute

a threat to marine ecosystems in several ways and carry a risk of both accidental and illegal pollution of the sea. Precautionary measures as well as preparedness for accidents must be improved if they are to match the needs of the future.



Oil spills

The Baltic Sea experiences on average one major shipping accident per year resulting in an oil spill larger than 100 tonnes. However, during most years, more oil is intentionally released by ships cleaning their oil tanks than is spilled accidentally. Even though releases of oily wastes or oily water from ships are prohibited in the Baltic Sea, ships persist in making illegal discharges – despite improvements in port reception facilities that have made it easier for ships to deposit their waste.



Birds are particularly vulnerable to oil slicks as even small amounts of oil can seriously harm bird populations.

Forecasts indicate that oil transports in the Baltic Sea will increase substantially, which also increases the risk of major accidents. Oil spills can have devastating impacts on nature and wildlife. Birds are particularly vulnerable to oil slicks as even small amounts of oil can seriously harm bird populations, especially if oil spills occur in important bird areas during migration or breeding periods. To ensure that oil discharges are detected, better surveillance is needed. Thanks to improved technical equipment, oil discharges are now more likely to be detected and current trends show that the number of oil spills in the Baltic Sea is decreasing. This Scorecard shows that countries around the Baltic Sea differ in their preparedness to handle oil spills.

Air pollution

Ship transport is also a significant source of air pollution. Emissions of sulphur dioxides from shipping, due to combustion of marine fuels with high sulphur content, contribute to air pollution in the form of sulphur dioxide and particulate matter, harming the environment through acidification as well as human health, particularly around coastal areas and ports. Nitrogen oxides emissions from ships, like sulphur emissions, cause acid depositions that can be detrimental to the natural environment and, most importantly, contribute to eutrophication.

Improvement in port facilities makes a big difference

Equally important is that the ports around the Baltic Sea have adequate reception facilities to handle waste water from passenger ships. Application of a 'no-special-fee system' is believed to be among the most efficient measures to ensure that waste water is not discharged into the Baltic Sea. Cruise ships annually carry some 3.5 million passengers around the Baltic Sea. The wastewater produced in these vessels is estimated to include some 74 tons of nitrogen and 18 tons of phosphorus¹¹. In addition to excess nutrients, ship borne wastewater also carries bacteria, viruses and other pathogens and leftover food. Even with the new requirements agreed this year by the IMO to ban the wastewater discharge from ferries and passenger ships in the Baltic Sea, a considerable part of this wastewater will still be discharged, as long as many of the major ports around the Baltic Sea still lack adequate sewage reception facilities to receive the large amounts of ship waste generated.

Ballast water

While ballast water is essential for safe, efficient and modern shipping operations, the discharge of this ballast water may pose serious ecological, economic and health problems due to the transport and release of alien species. Discharges of ballast water can have devastating effects since aquatic organisms from other regions can be introduced into a non-native ecosystem. The transferred species may survive to establish a reproductive population in the new environment, becoming invasive, out-competing native species and multiplying into pest proportions. Over 120 non-native aquatic species have been recorded in the Baltic Sea to date, and around 80 of these have established viably reproducing populations in some parts of the Baltic.

120

**OVER 120 NON-NATIVE
AQUATIC SPECIES HAVE
BEEN RECORDED IN THE
BALTIC SEA**

Assessment

International shipping agreements

There are many *international shipping agreements*, ratified or in the process of being ratified, that address environmental threats and impacts from maritime transport. The Scorecard uses the ratification of four of these agreements as indicators in this section. The conventions are the Ballast Water Management (BWM) Convention; the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention)

¹¹ European Cruise Council, *Estimated nutrient load from waste water originating from ships in the Baltic Sea area*, preliminary review of HELCOM research note 2370. February 2009.

of 1996; the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS) Convention of 2000; and the International Convention on Civil Liability for Bunker Oil Pollution Damage (Bunkers) of 2001. Each country has received one point for each convention ratified. The results are presented in Table 9.

Table 9. Ratification of international conventions

Countries	BWM	HNS	OPRC-HNS 2000	Bunkers	Total Score
Denmark	0	0	1	1	2
Estonia	0	0	1	1	2
Finland	0	0	0	1	1
Germany	0	0	1	1	2
Latvia	0	0	0	1	1
Lithuania	0	1	0	1	2
Poland	0	0	1	1	2
Russia	0	1	0	1	2
Sweden	1	0	1	0	2

Port reception facilities

The next indicator relates to *port reception facilities*. Each Baltic Sea country has a major cruise port and Germany has two. Each port has been assessed in relation to three criteria: 1) Are all relevant berths connected to a fixed sewage system? 2) Does the port apply the 'no-special-fee' system? 3) Can the port reception facilities receive at least 100 m³/hour? Countries have been given one point for each criteria met.¹² The results are presented in Table 10.

Table 10. Port reception facilities

Countries	Name of port	Fixed connections	No-special- fee system	Sufficient capacity	Total Score
Denmark	Copenhagen	0	1	0	1
Estonia	Tallinn	0	1	0	1
Finland	Helsinki	1	1	1	3
Germany	Kiel + Rostock	0	0	0	0
Latvia	Riga	0	0	0	0
Lithuania	Klaipeda	1	1	1	3
Poland	Gdynia	0	0	0	0
Russia	St. Petersburg	0	0	0	0
Sweden	Stockholm	1	1	1	3

¹² NB! These criteria do not ensure that port reception facilities are fully adequate. There is currently a process facilitated by HELCOM – HELCOM Cooperation Platform on Port Reception Facilities, which should agree upon shared criteria for defining adequate port facilities. This Scorecard uses criteria that are seen as 'standard' at the time of writing.



PHOTO: PER-ERIK ADAMSSON/STOCKHOLMS HAMN

Preparedness to deal with oil pollution

The Scorecard also assesses each country on three criteria relating to their *preparedness to deal with oil pollution*: 1) If more than 1 surveillance flight hour per 100 square kilometre (1 point); 2) If oiled wildlife response is a part of the national oil spill contingency plans (1 point); and 3) If coastal sensitivity maps have been developed (1 point). The results are presented in Table 11.

Table 11. Oil response preparedness

Countries	Surveillance flight hours	Oiled wildlife response	Coastal sensitivity maps	Total Score
Denmark	0	1	0	1
Estonia	0	1	1	2
Finland	0	1	1	2
Germany	1	0	1	2
Latvia	0	0	1	1
Lithuania	0	0	1	1
Poland	1	0	0	1
Russia	0	0	1	1
Sweden	1	0	0	1

Establishment of a harmonized surveillance system

The last assessment in this section concerns the *establishment of a harmonized surveillance system* in the Baltic Sea. One effective measure to improve maritime safety is a Ship Reporting System (SRS). There are currently four mandatory SRSs in operation in the Baltic Sea: BELTREP in the Danish Belts; SOUNDREP in the Sound between Sweden and Denmark (will become mandatory 1 September 2011); GDYNREP outside Gdynia in Poland; and GOFREP in the Gulf of Finland. A final goal for maritime safety in the Baltic Sea would be a pan-Baltic SRS covering the whole Baltic Sea maritime area.

The Scorecard has given two points to countries that participate in at least one international mandatory SRS, and one point to countries that have set up at least one national SRS. Countries that have neither of these have received zero points. In future scorecards, three points will be given to countries who participate in a pan-Baltic SRS. The results are presented in Table 12.

Conclusions

Sweden and Finland are ahead of the other countries in regulating maritime activities while Latvia, Poland, Germany, and Russia lag behind.

Sweden is the only country that has ratified the BWM Convention despite the fact that all HELCOM countries have committed to ratify it at the latest by 2013 through the Baltic Sea Action Plan. Another important convention, where the results are a bit more promising, is the Bunkers convention from 2001, which focuses on compensation following damage by spills of fuel oil. Compared to the first scorecard in 2007 when only Estonia, Germany and Latvia had ratified it, all HELCOM countries except Sweden have now ratified this convention.

The assessment shows that Germany, Finland and Estonia are comparatively well prepared for an oil accident. Finland and Estonia have both included oiled wildlife response in their national oil contingency plans and have coastal sensitivity maps for their shoreline areas. Poland, Sweden and Lithuania do not mention oiled wildlife at all in their national contingency plans. The number of flight hours per square kilometre varies substantially between countries around the sea and shows that Germany, Poland and Sweden have the most flight hours.

Although maritime activities is an area where many countries have shown significant progress, there are many commitments where governments still have to deliver, including those made in the Baltic Sea Action Plan, such as improving port reception facilities and increasing capacity for oil spill response.

Table 12. Total score - Maritime activities

Countries	Ratification of International Conventions	Port Reception Facilities	Oil Response Preparedness	Harmonized Surveillance Systems	Total Score	Grade
Denmark	2	1	1	2	6/13	C
Estonia	2	1	2	2	7/13	C
Finland	1	3	2	2	8/13	B
Germany	2	0	2	0	4/13	F
Latvia	1	0	1	0	2/13	F
Lithuania	2	3	1	0	6/13	C
Poland	2	0	1	1	4/13	F
Russia	2	0	1	2	5/13	F
Sweden	2	3	1	2	8/13	B



PHOTO: ALMGREN

INTEGRATED SEA USE MANAGEMENT

Increased activities in the Baltic Sea lead to increased competition within and between sectors as well as with nature. The lack of long term visions, goals and coordination

of the future use of the space and resources of the Baltic Sea threatens to exacerbate environmental degradation further. A sustainable use of our common sea requires better planning and management that involve all sectors and countries in a more holistic and integrated way.

Different interests such as maritime transport, offshore energy production, ports development, fisheries and other human activities, all compete for the limited marine resources of the Baltic Sea. Many sectors and countries do not have long term goals or strategies for the multiple uses of the Baltic Sea, and there is a deficiency of plans, even for the relatively short perspective of the next ten years. The plans that do exist are mainly for single sectors and in almost all cases are prepared country by country.

The lack of integrated planning and management by countries and sectors in the Baltic Sea often result in counteracting decisions that hinder sustainable development in the region. The relatively small Baltic Sea has to be seen as one single marine ecosystem and managed as a whole. A more holistic approach to planning and managing the use of the sea and its resources, based on what the ecosystem can sustain, is urgently needed to ensure that the ecosystem has the capacity to support the social and economic benefits on which we depend – both now and in the future. This new approach is called Integrated Sea Use Management (ISUM) and aims to manage marine uses and resources, based on the limits of the ecosystem, integrating all countries, sectors and administrative levels.

The governance challenge

There is still no coordinated approach to planning and management of marine uses in the Baltic Sea. No Baltic Sea country has a fully developed integrated sea use management system and only a few are developing maritime spatial plans, especially for their EEZs. The coverage and intensity of sea use management initiatives varies widely from country to country in the Baltic Sea region. Throughout the region, when sea uses are managed, they are managed mainly on a sector-by-sector basis. With few exceptions, no single or lead agency is responsible for planning sea uses, especially for the EEZs, of Baltic Sea countries.

Spatial planning is a central tool

One important component of sea use management is Maritime Spatial Planning (MSP) which is a tool used to help allocate space in a rational manner with the intention to minimize conflicts and maximize synergies between sectors and with nature. When planning and managing the uses of the sea, consideration must be given so that there is a just balance between the different user groups, between individual users and those of the international community. All activities need to be kept within the limits of the ecosystem capacity, to secure that we do not over-use the ecosystem. For this to be possible all sectors need to be involved and take an active role in a holistic and coordinated management and planning of our sea areas.

Assessment

Maritime Spatial Planning for their own territorial waters and for their EEZs

First the Scorecard assesses whether countries have developed *Maritime Spatial Planning for their own territorial waters and for their EEZs*, respectively. The Scorecard also assesses to what extent these plans have an integrated approach including all sectors and uses, or if they are made sector-wise. Where no MSP have been developed, zero points are given. Where there are some plans for individual sectors, and/or for some areas or where such plans are in the process of being developed, one point is given. If a country is in the process of developing integrated plans, including all sectors and all sea areas, they are given two points. Only when a country has fully adopted integrated plans that include all sectors and all sea areas are three points given.

Level of goals and projections for the future development of the various sectors

Next, the Scorecard assesses the *level of goals and projections for the future development of the various sectors* that 'use' the Baltic Sea (including fisheries, shipping, wind energy, tourism, mineral extraction etc.). It also assesses to what extent these projections are compiled and integrated or if they only are presented for some individual sectors. Countries without any projections are given zero points. Countries that included existing projections, but only for some sectors, are given one point. Countries that included existing projections, compiled for all sectors, are given two points; and if these projections were accompanied with integrated goals for the future development, the country is given three points.

Coordination of the management of maritime activities

Third, the Scorecard assesses how countries have dealt with the need to *coordinate the management of maritime activities*. The Scorecard assesses if there is one body in charge of all such functions, or if responsibilities are shared between several authorities. The assessment also checked whether planning and management are integrated in the same authority. Countries with no integration of marine authorities received zero points. Those with several authorities dealing with marine issues but with an established coordination function received one point. If a country has established one responsible marine management authority, it has been awarded two points. If both planning and management of the marine environment is also assembled within this marine management authority, it has been awarded three points. Only Sweden has so far been given three points.

PHOTO: VLADIMIR VITEK

Stakeholder engagement

Finally, the Scorecard assesses if there is a mechanism in place to *include stakeholders* in the process of planning and managing activities in the Baltic Sea. The assessment checked to what extent this process includes stakeholders from all groups of users and at what stages of planning and management stakeholders are involved. If there is no process to involve stakeholders, zero points are given. If a country has a clear process in place, but it does not include all groups of users – one point is given. If a country has a process where all user groups are invited to participate, two points are given. If there is a clear process in place and stakeholders are involved at all stages of planning and management, the country will receive three points.

Conclusions

Sweden and Germany are ahead of the other countries in the development and integration of maritime planning and management functions while Denmark, Latvia, Lithuania and Russia lag behind.

Integrated Sea Use Management is still an approach under development. Many governments have started to realise that this will be the only way to deal with an ever increasing crowded sea. The scoring shows that countries are making progress in the areas of maritime spatial planning and in creating relevant governance structures for integrated sea use management, but more work is needed. All stakeholders need to be engaged in the process and more cooperative action between countries is needed.

The recent cooperation between HELCOM and VASAB¹³ in developing joint principles for Maritime Spatial Planning in the Baltic Sea region as well as the EU roadmap on MSP¹⁴ and the recent discussion on the establishment of an EU legislative framework on MSP are clearly steps in the right direction.

Table 13. Total score - Integrated Sea Use Management

Countries	National MSP	Projections for development	One marine authority	Stakeholder participation	Total Score	Grade
Denmark	1	1	0	1	3/12	F
Estonia	1	1	1	2	5/12	C
Finland	1	1	1	2	5/12	C
Germany	2	1	1	2	6/12	C
Latvia	2	1	0	0	3/12	F
Lithuania	1	1	0	1	3/12	F
Poland	2	1	1	1	5/12	C
Russia	1	1	0	1	3/12	F
Sweden	2	1	3	2	8/12	B

¹³VASAB – Vision And Strategies Around the Baltic Sea, an Intergovernmental multilateral co-operation of 11 countries of the Baltic Sea Region in spatial planning and development.

¹⁴European Commission (2008) Communication from the Commission Roadmap for Maritime Spatial Planning: Achieving Common Principles in the European Union. COM(2008) 791 FINAL



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JOINT ACTION

A number of international agreements have been created aiming to help address the problems of the Baltic Sea. This Scorecard focuses on commitments and obligations in the HELCOM Baltic Sea Action Plan, the EU Water Framework Directive, the EU Marine Strategy Framework Directive and the EU Strategy for the Baltic Sea Region. The aim of this chapter is to provide a short introduction to the content of these.

The Baltic Sea Action Plan

The ambitious Baltic Sea Action Plan (BSAP), with its final version agreed in late 2007, is a joint effort by the contracting parties of the Helsinki Commission (HELCOM) and one of the most important agreements at hand to protect and restore the marine environment of the Baltic Sea. HELCOM's contracting parties include the nine coastal Baltic Sea countries together with the European Union.

The Baltic Sea Action Plan addresses the major environmental problems affecting the Baltic marine environment: eutrophication, hazardous substances, maritime activities and the on-going decline in biodiversity. These crucial areas are mirrored in the first four chapters of this Scorecard. The BSAP identifies the specific actions needed within a given timeframe for each area with the overarching goal to achieve a Baltic

2021

GOAL BY WHICH
TO ACHIEVE GOOD
ECOLOGICAL STATUS IN
THE HELCOM BSAP

Sea in good ecological status by 2021. A number of ecological objectives like clear water, an end to excessive algal blooms and viable populations of species, have set the base for the plan and define a shared concept of a healthy sea with a good ecological and environmental status.

Within each area, the contracting parties have a duty to report on their work and implementation of common actions. In spring 2010, all of the countries were to submit their national implementation plans describing the planned actions to be taken by each country to meet the objectives of the BSAP. The timely implementation of the BSAP on a national level is essential to meet the overall objectives of the plan. Therefore these efforts are also given great importance in this report.

The BSAP is not legally binding and relies completely on the goodwill of the governments of the countries surrounding the Baltic Sea. Within the EU there are other agreements that strengthen, enforce and complement the areas in the BSAP, and that are legally binding (but do not include Russia).

The Water Framework Directive

The Water Framework Directive¹⁵ is a European Union directive that commits European Union member states to achieve good qualitative and quantitative status of all water bodies, including marine waters up to one nautical mile from shore, by 2015. It was established in 2000 after recognizing the deficiencies in earlier water regulations within the European Union.

It is a framework in the sense that it prescribes steps to reach the common goal rather than adopting the more traditional limit value approach. It coordinates all the environmental objectives in existing legislation, and provides a new overall objective of 'good ecological status' for all waters, and requires additional measures to be taken where existing ones have not been sufficient.

The core of the WFD is the drawing up of river basin management plans as the river basin in this case is the adequate natural geographical and hydrological unit to work with. The directive addresses inland surface waters, transitional waters, coastal waters and groundwater. For the Baltic Sea the WFD is important although it mostly covers the treatment of freshwater, since this is the water that later runs out into the sea.

A river basin management plan (RBMP) is a detailed account of how the objectives set for the river basin, including ecological status, quantitative status, chemical status and protected area objectives, are to be reached within the timescale required. The plan should include the river basin's characteristics, a review of the impact of human activity on the status of waters in the basin, an estimation of the effect of existing legislation and the remaining 'gap' in meeting the objectives, and a set of measures designed to fill the gap. One additional component is that an economic analysis of water-use within the river basin must be carried out. This is intended to enable a rational discussion on the cost-effectiveness of the various possible measures. Special attention is given to public participation and to involving all interested parties in the discussion, and in the preparation of the river basin management plan.

Most river basins in the EU cross at least one national border. Under the WFD the Member States should coordinate the measures taken within a district with other Member States concerned. The river basin management plans were to be completed in 2009¹⁶. The performances of countries in designation and, in future scorecards, also the implementation, of these plans are also measured in this Scorecard as they are cornerstones for further action to save the Baltic Sea.

¹⁵ More formally – the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

¹⁶ Per Article 13 in the directive.

2020

GOAL BY WHICH
TO ACHIEVE GOOD
ENVIRONMENTAL
STATUS OF EUROPE'S
MARINE WATERS
IN THE MSFD

The Marine Strategy Framework Directive

The aim of the European Union's Marine Strategy Framework Directive (MSFD), which was adopted in 2008, is to more effectively protect the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. The MSFD constitutes the vital environmental component of the Union's Integrated Maritime Policy. The goals of the directive are in line with the objectives of the Water Framework Directive.

The Marine Strategy Framework Directive establishes European Marine Regions on the basis of geographical and environmental criteria. Each Member State – cooperating with other Member States and non-EU countries within a marine region – are required to develop strategies for their marine waters.

These marine strategies must contain a detailed assessment of the state of the environment, a definition of 'good environmental status' at the regional level and the establishment of clear environmental targets and monitoring programs. Each Member State must draw up a program of cost-effective measures. Where Member States cannot reach the environmental targets, specific measures tailored to the particular context of the area and situation will be drawn up.

The EU Strategy for the Baltic Sea Region

Another important initiative concerning the health of the Baltic Sea is the EU Strategy for the Baltic Sea Region, adopted in 2009. On the request from members of the European Parliament, and for the first time ever, a comprehensive strategy covering several community policies was targeted on a macro-region.

The EU Commission found that since the EU enlargement of 2004, challenges facing the Region had increased. Escalating environmental threats, gaps in economic development and limited transport accessibility were issues which needed to be tackled. Many of these problems require better coordination and joint action.

The aim of the Strategy is to coordinate action by Member States, regions, the EU, pan-Baltic organizations, financing institutions and non-governmental bodies to promote a more balanced development of the Region. The main objective of the Strategy is to make this part of Europe more environmentally sustainable, prosperous, accessible, attractive, safe and secure. It includes actions to improve accident response, transport links, innovation in small and medium enterprises and actions to reduce pollution in the Baltic Sea. Rather than being a tool to enforce legal obligations it promotes good initiatives and sets up flagship projects.

Other important policies

Two policies that are not included in the Scorecard analysis but that are nevertheless having a great impact on the state of the Baltic Sea are the **EU Common Agricultural Policy (CAP)** and the **EU Common Fisheries Policy (CFP)**. Both are right now undergoing review and the outcome of these processes may have a considerable, good or bad, impact on the Baltic Sea.

Another important initiative not included in the Scorecard but also of importance to the Baltic Sea is the **EU Integrated Maritime Policy**, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment. The Marine Strategy Framework Directive constitutes the vital environmental component of the Integrated Maritime Policy. The policy includes a roadmap for the establishment of Maritime Spatial Planning (MSP) and there are on-going discussions on the possibility of developing a new legislative framework on MSP.

List of Acronyms

AFS Convention – Control of Harmful Anti-Fouling System on Ships Convention
BSAP – Baltic Sea Action Plan
BSPA – Baltic Sea Protected Area
BWM – Ballast Water Management
CAP – Common Agriculture Policy
CFP – Common Fisheries Policy
DDE – Dichlorodiphenyldichloroethylene
DDT – Dichlorodiphenyltrichloroethane
EEZ – Exclusive Economic Zone
GHS – Globally Harmonized System of Classification and Labelling of Chemicals
HELCOM – Helsinki Commission (Baltic Marine Protection)
EUBSR – EU Strategy for the Baltic Sea Region
HNS – Hazardous and Noxious Substances
ICES – International Council for the Exploration of the Sea
ISUM – Integrated Sea Use Management
LTMP – Long-term Management Plan
MPA – Marine Protected Areas
MSP – Maritime Spatial Planning
MSFD – Marine Strategy Framework Directive
OPRC – HNS – Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances
PCB – Polychlorinated biphenyls
POP – Persistent Organic Pollutants
RBMP – River Based Management Plan
SRS – Ship Reporting System
TBT – Tributyltin
VASAB – Visions and Strategies around the Baltic
WFD – Water Framework Directive



WWF Baltic Ecoregion Programme

The following organizations are lead partners within the WWF Baltic Ecoregion Programme:

WWF Finland (wwf.fi),
WWF Germany (wwf.de),
WWF Poland (wwf.pl),
WWF Sweden (wwf.se),
Baltic Fund for Nature
(Russia – www.bfn.org.ru),
Estonian Fund for Nature (www.elfond.ee),
Lithuanian Fund for Nature (www.glis.lt)
and **Pasaules Dabas Fonds**
(Latvia – www.pdf.lv).

References

A technical background report with numbers, score calculations and references can be ordered from WWF.

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WWF Baltic Ecoregion Programme



DELIVERING RESULTS

WWF Baltic Ecoregion Programme is an active and effective agent of change in the conservation and sustainable management of the Baltic Sea

COOPERATION

We promote constructive interactions to create awareness, spread ideas and stimulate discussion among stakeholders and partners



INFLUENCE REGIONAL POLICY

We are and continue to be a watchdog that monitors how governments manage our common resource the Baltic Sea

REGIONAL NETWORK

WWF Baltic Ecoregion Programme represents the largest membership network in the region and is represented in all the countries surrounding the Baltic Sea

The WWF logo, featuring a black and white panda silhouette above the letters 'WWF'.	<p>Why we are here To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.</p> <hr/> <p>www.panda.org</p>
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Please contact us for more information!
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