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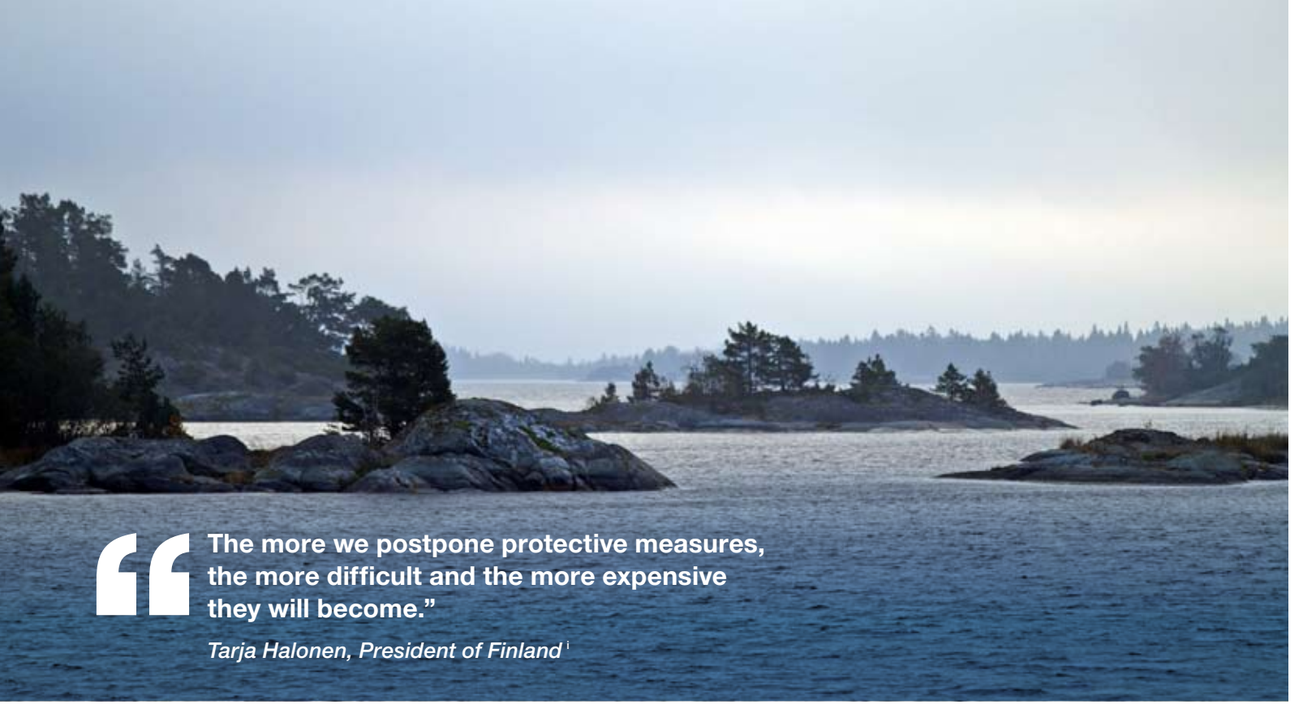
2008 Baltic Sea Scorecard

WWF Baltic Ecoregion Programme 2008



“The more we postpone protective measures, the more difficult and the more expensive they will become.”

Tarja Halonen, President of Finland[i]

Baltic Blues

The Baltic Sea is one of the most unique marine ecosystems in the world, and is also one of the most threatened. This is primarily due to poor management in the way we use the sea.

Eutrophication, overfishing, hazardous substances, and irresponsible shipping practices all encroach upon and threaten the health of this highly sensitive sea. Despite a long and rich tradition of environmental stewardship, access to vast scientific knowledge on the sea, and the world’s oldest regional seas convention (HELCOM), the situation only continues to get worse.

In November 2007, Baltic Sea states adopted the HELCOM Baltic Sea Action Plan (BSAP), intended to “drastically reduce pollution to the Baltic Sea and restore its good ecological status by 2021.” The BSAP had great ambitions which were successively narrowed in scope and weakened due to political and economic disagreements between contracting parties and sectors such as agriculture and fisheries. Sadly, the final document lacks many of the ambitious actions and commitments needed to save the Baltic Sea, even though these were the reason why the BSAP was originally conceived.

While the BSAP takes steps in the right direction, such as country quotas for nutrient reduction, the agreed plan in fact rarely goes further than negotiated agreements from other fora. Two of the biggest threats to the ecosystem of the Baltic Sea, overfishing and climate change, are barely addressed in the BSAP. Even the agreed actions are only non-binding recommendations, which means that there is no guarantee that contracting parties will ever act upon them. The original intention of the BSAP was to take a holistic and integrated approach to tackling the region’s challenges. However, this ambition was doomed to fail from the very beginning as only environmental ministers were involved in the process. In order to be successful, a plan like the BSAP requires strong support from the highest level of government of each contracting party, and commitment that it will be implemented in a coordinated and integrated way across all relevant ministries, departments and sectors.

An integrated approach is particularly important in a region like the Baltic Sea, where a multitude of different sectors, industries, and stakeholder groups are affected by, or affecting the Sea and where a myriad of international, regional, national and local governmental bodies from nine countries are responsible for governing the different players. This patchwork governance is a challenge, but no excuse. To reach the goals and objectives of the BSAP we urge the Baltic Sea states to develop a process to address the still urgent need to take dramatic and integrated action. Without strong leadership and immediate action, the Baltic remains in serious jeopardy.

[i]Said in a speech given at the Überseeclub in Hamburg, Germany on May 8, 2008.

“The Action Plan is not static. We have a possibility of following up the effectiveness of the actions that we have decided upon, and whether they will lead us to the desired status of the Baltic Sea.”

Anne Christine Brusendorff, Executive Secretary, HELCOM

MEASURING PERFORMANCE

Last year, WWF published its first Baltic Sea Scorecard. The 2007 Scorecard assessed how the nine nations bordering the Baltic Sea are trying to protect and restore this fragile ecosystem to health. It focused on countries’ efforts to ratify and implement existing international agreements and conventions to manage and protect the Baltic Sea. The indicators provided a snapshot that let readers see the performance of each of the nine countries and whether political commitments were being met. It showed which countries took the problems surrounding the Baltic Sea seriously and were making the best efforts to fulfill their promises. Less than half the Baltic Sea States (4) passed the test, only scoring a “C” grade overall. One of the key conclusions from the 2007 report was that the low overall grades were largely due to poor political leadership and poor integration, both nationally and internationally.

The 2008 Scorecard focuses more keenly on assessing whether concrete actions, necessary to achieve good environmental status for the Baltic Sea, have been accomplished. We have kept the same five key areas as last year – eutrophication, fisheries management, biodiversity, pollution from hazardous substances, and maritime transport. In addition, to address the main conclusion from last year’s analysis, we added a sixth area – integrated sea use management.

It should be noted that the choice of indicators for this assessment has been limited by the data available in all countries[ii]. In many cases, such as control and enforcement of fishing activities, countries often inspect and report on very valuable indicators, but do not make the information official. WWF hopes that all countries will attain greater transparency in the future. As access to information improves, so will the depth and quality of future Scorecards. WWF will continue to add and refine indicators that seem reliable measurements of activities affecting ecosystem health. At the same time, we will continue to give governments and their representatives the opportunity to present their view on how they are meeting Baltic challenges.

The result of the 2008 analysis is expressed in 10 grade levels, from the top A+ to the weakest C-. If less than half of required actions have been fulfilled, an F grade is given, indicating that the government has failed to take its responsibility in working to improve the situation for the Baltic Sea. WWF hopes that giving readers a picture of the current situation may help encourage nations, governments and individuals to increase their work to actively find solutions to ecosystem restoration, so that even future generations can enjoy all of the wonders of the the deep blue Baltic Sea.

[ii]Data for certain indicators are based on feedback from WWF and partner organization representatives in each country. While it is recognized that this methodology introduces a subjective component to the overall assessment, the indicators in question were kept as simple as possible and guidance was offered to minimize this risk.

What is Integrated Sea Use Management?[1]

- Works toward sustainable development, rather than simply conservation or environmental protection, and in doing so contributes to more general social and governmental objectives
- Provides a strategic, integrated and forward-looking framework of all uses of the sea to help achieve sustainable development, taking into account environmental, as well as social and economic goals and objectives
- Applies an ecosystem approach to the regulation and management of development and human activities in the marine environment by safeguarding ecological processes and overall resilience to ensure the environment has the capacity to support social and economic benefits (including those benefits derived directly from ecosystems)
- Identifies, safeguards, or where necessary and appropriate, recovers or restores important components of marine ecosystems including natural heritage and nature conservation resources and
- Allocates space in a rational manner that minimizes conflict of interest and, where possible, maximizes synergy among sectors.

Limited Action

The result of the 2008 Scorecard is extremely disappointing. While Germany is best in the class, this best is still only implementing 46% of the measures suggested. The 2008 Scorecard clearly shows that far too little is being done.

The only area where progress is clear appears to be fisheries management, though this conclusion is influenced by success in a few nations rather than success in all Baltic Sea nations. Lithuania and Latvia have strong control and enforcement measures, but are also small nations with few ports to monitor.

Within most individual sections, weak leaders do stand out. Germany should be commended for its considerable work protecting large areas of its marine territory, especially in its exclusive economic zone. Estonia scored highest in the area of hazardous substances, largely due to decreasing pollutant emissions throughout the studied years and maintaining low levels the last few years. Russia garnered highest scores for maritime transport issues in this Scorecard, being the only nation with a strategy for preventing invasive species introductions. No real leaders stand out in addressing eutrophication, however. Finland gets kudos for having a single cross-governmental marine policy. Sweden, Germany and Estonia also show promise in having a more integrated marine management as they are reviewing their current organization.

It is clear that each nation needs to be a leader or an extremely strong follower in all of these areas, or the continued outlook for the Baltic Sea is extremely dire. Important decisions have been made, and actions that move us in the right direction. Now an accelerated pace of integrated and concerted actions are urgently needed. We hope the examples in the Scorecard, where action has been taken, will inspire others to follow, and follow fast.

2008's Top 5 Actions for the Baltic Sea

1. Poland to pay for overfishing cod
European Fisheries Council sentenced Poland to reduced cod quotas over the coming four years as "pay back" for exceeding its quota in 2007 by 8000 tonnes. This is a huge demonstration of the Commission's strong will to reduce illegal fishing in the region.

2. REACH-ing toward safer chemicals management
The EU's REACH regulation, one of the most advanced chemicals management regulation in the world, came into effect in June 2008. Results for the Baltic Sea may take time, but work has begun as companies have started pre-registering their chemicals and substances of very high concern are coming under increased pressure.

3. Sweden bans phosphates in detergents
As of March 1st 2008, Sweden will be the first Baltic Sea state to have a legal ban on the use of phosphates in laundry detergents. Sweden is even considering enforcing a legal ban of phosphates in dishwasher detergents. This sets a strong precedent for other countries to follow.

4. Bye-bye organotin-based hull paints
The International Maritime Organization's Convention on the Control of Harmful Anti-Fouling Systems on Ships finally came into force this past year, which means highly toxic organotins are no longer allowed to be used in the Baltic Sea. A similar EU regulation went into force in January 2008.

5. Marine landscape maps arrive
Although this is not a management measure in itself, the development of regional coherent marine landscape maps for the entire Baltic Sea is an important step forward to enable the establishment of a representative network of marine protected areas as well as spatial planning of the Baltic Sea . However, real change for the Baltic Sea will not happen until the maps are used for management by all countries in the region.

Grading scheme

Percentage achieved	Grade allocated
96 – 100 %	A+
90 – 95 %	A
84 – 89 %	A-
79 – 83 %	B+
73 – 78 %	B
67 – 72 %	B-
62 – 66 %	C+
56 – 61 %	C
50 – 55 %	C-
Less than 50 %	F

Overall Ranking

Countries	Average percentage	Grade
Germany	46%	F
Denmark	41%	F
Estonia	40%	F
Finland	39%	F
Sweden	35%	F
Lithuania	34%	F
Latvia	30%	F
Russia	26%	F
Poland	25%	F
Total	35%	F

Summary of Overall Grading

	Denmark	Estonia	Finland	Germany	Latvia	Lithuania	Poland	Russia	Sweden	Total Baltic Sea Countries
Biodiversity	F	F	F	A-	F	F	F	F	F	F
Fishing	C	C	C-	F	B-	B-	F	N / A *	F	C-
Maritime Transports	C-	F	C-	F	F	F	F	C	F	F
Hazardous Substances	F	C-	F	F	F	F	F	F	F	F
Eutrophication	F	F	F	C-	F	F	F	F	F	F
ISUM	F	F	F	F	F	F	F	F	F	F
Average	41	40	39	46	30	34	25	26	35	35
Grade	F	F	F	F	F	F	F	F	F	F

* The fisheries assessment is based entirely on EU indicators. Russia is therefore excluded from this analysis.

Biodiversity

Biodiversity degradation is rampant in the Baltic. Up to 90% of southern Baltic wetlands have been drained over the past few decades. Dead zones are increasing due to eutrophication and permanently cover 42,000 km², or an area similar in size to all of Denmark[2].

THREAT

Environmental degradation remains a potent obstacle to the recovery of precarious salmon stocks, and other fish species like cod and eel are at the risk of extinction. Baltic harbour porpoise populations are now so threatened (some estimates put adult population at or around 100) that only urgent and extensive cross-boundary action will prevent extinction of this beautiful animal. Habitat–building species such as eelgrass and bladder wrack have also significantly dropped in many areas due to dreaded algae overgrowth[3].

Physical exploitation, such as ports, coastal development, pipelines, and wind power, all require space and compete with species and marine habitats for this limited space. On top of all of these threats, climate change's influence on biodiversity is becoming increasingly apparent.

Marine protected areas are a tried and tested method for protecting biodiversity, but despite the urgent need, still only about 7% of the Baltic Sea is protected.

ASSESSMENT

Last year's biodiversity assessment focused exclusively on the extent of marine protected areas (MPAs) in each country. The conclusion was clear - overall progress in designating MPAs falls far short of international commitments to establish an ecologically coherent and well-managed network of MPAs in the Baltic Sea by 2010.

The 2008 Scorecard's biodiversity assessment is broader and assesses not only designation of marine protected areas but also considers the range of marine landscapes protected, the representativeness of these, and protection measures necessary for particularly threatened marine species.

Marine Protected Area designation[8]

(Table 1) Many international frameworks, such as the Convention on Biological Diversity (CBD), OSPAR[iii], HELCOM and EU, have made strong commitments to establish coherent networks of MPAs. The World Summit on Sustainable Development, and subsequently the CBD, adopted a global target for 10 % of all marine ecological regions to be effectively conserved by 2012[4]. Both HELCOM's network of Baltic Sea Protected Areas[5] (BSPAs) and the EU's Natura 2000[6] network are far behind schedule. The Emerald Network is complementary to EU's Natura 2000 network in non-EU countries. Despite the fact that the regulating Bern Convention has been in force for over 25 years, Russia has still not ratified it[7]. This analysis looks at how much marine territory each country has protected under the auspices of these international agreements.

Representativeness of habitats protected[8]

(Table 2) In addition to area of MPAs, another vital aspect is the diversity and representativeness of species and habitats protected. In order for MPAs to efficiently contribute to the protection of the ecosystem, a sufficient amount of all habitats and species – rare, threatened and endangered as well as those considered common and unthreatened – must be protected.

The Baltic-wide BALANCE project has undertaken a preliminary assessment of the ecological coherence of the current Baltic Sea MPA networks. The project found that existing networks must be improved in order to achieve that coherence. Sand and hard bottom areas are better represented in the existing MPA networks, while mud and hard clay habitats are not, particularly in the deeper non-photic zones. Many scientific studies recommend that 20-30% of each marine habitat or landscape should be protected to ensure long-term viable populations[8]. This analysis looks at whether or not countries protect a minimum of 20% of each of their benthic marine landscapes.

Endangered or threatened species[9]

(Table 3) While protected areas are a highly critical component of programmes to protect biodiversity and halt its loss, additional measures are necessary, particularly for those species that are highly mobile or migratory such as birds, marine mammals, and some fish. As part of the commitment to reverse declines in biodiversity, many governments are producing management plans or recovery plans for specific species. Harbour porpoise, in particular, is one of the Baltic Sea's most threatened marine species. Extra focus is therefore placed on the management of these beautiful mammals to see if areas of specific significance have been designated for them in their home countries.

GRADING

The data for all MPA assessments (Table 1 and 2) reflect the situation in Spring 2007. The assessment of the Natura 2000 network focuses exclusively on Special Areas of Conserva-

[iii]OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic

Table 1: Percentage of Baltic Sea Territorial Sea (TS) and Exclusive Economic Zone (EEZ) protected as a BSPA and SAC/Emerald site[8]

Countries	Territorial Sea (TS)			Exclusive Economic Zone (EEZ)		
	Percentage of TS protected as BSPA	Percentage protected as SAC / Emerald site	Points scored* (maximum = 10)	Percentage protected as BSPA	Percentage protected as SAC / Emerald site	Points scored* (maximum = 10)
Denmark	10%	15%	6	0%	1%	1
Estonia	15%	14%	6	1%	0%	1
Finland	20%	11%	7	0%	0%	0
Germany	37%	27%	9	39%	34%	10
Latvia	9%	5%	4	0%	0%	0
Lithuania	22%	29%	8	0%	0%	0
Poland	40%	17%	8	5%	9%	4
Russia	5%	0%	2	0%	0%	0
Sweden	7%	6%	4	1%	2%	2

***For total area of TS or EEZ protected:**
> 30% = 5 points
20% = 4 points
10% = 3 points
5% = 2 points
1% = 1 point

Table 2: Presence and representativeness of benthic marine landscapes[8]

Countries	Presence of benthic marine landscapes in MPAs			Representativeness of benthic marine landscapes in MPAs		
	Total number present in each country	Percentage protected	Points scored* (maximum = 6)	Number with > 20% protected	Percentage with > 20% protected	Points scored** (maximum = 6)
Denmark	35	71%	3	9	26%	2
Estonia	16	81%	4	8	50%	5
Finland	23	87%	4	4	17%	1
Germany	27	89%	4	17	63%	6
Latvia	17	24%	0	1	6%	0
Lithuania	11	46%	0	3	27%	2
Poland	19	37%	0	1	5%	0
Russia	24	0%	0	0	0%	0
Sweden	58	81%	4	13	22%	2

***For percentage benthic marine landscapes at least partially protected:**
100% = 6 points
90% = 5 points
80% = 4 points
70% = 3 points
60% = 2 points
50% = 1 point
< 50% = 0 points

****For percentage benthic marine landscapes with > 20% protected:**
> 60% = 6 points
50% = 5 points
40% = 4 points
30% = 3 points
20% = 2 points
10% = 1 points
< 10% = 0 points

Table 3: National species management or recovery plans for endangered or threatened marine species[9]

Countries	Ringed seal	Sea eagle	Baltic salmon	Harbour porpoise		Points scored *
	Management plan	Management plan	Management plan	Management plan	Designated areas of special significance	
Denmark	--	--	--	Yes	No	1 / 2
Estonia	Yes	No	No	--	--	1 / 3
Finland	Yes	Yes	Yes	Yes	No	4 / 5
Germany	--	Yes	--	No	No	1 / 3
Latvia	--	--	No	--	--	0 / 1
Lithuania	--	--	Yes	--	--	1 / 1
Poland	--	Yes	--	Yes	Yes	3 / 3
Russia	Yes	No	Yes	--	--	2 / 3
Sweden	No	No	No	Yes	No	1 / 5

Countries are only scored for species for which the country is considered a range state.

*1 point is awarded for each positive response.

tion (SAC), aimed at protecting a range of habitats listed in the Annex to the Habitats Directive. As Russia is not a part of the EU, it is only assessed based on its designation of BSPAs and Emerald Network sites. Points on MPA designations (Table 1) were allocated based on the total coverage of marine protected areas (Natura 2000/Emerald sites and BSPAs) in the territorial waters and exclusive economic zones.

For MPA representativeness (Table 2), as many scientific reports suggest that a minimum of 20-30% of each marine landscape should be protected, points were allocated based on the percentage of marine landscapes present in MPAs as well as the percentage of marine landscapes with over 20% protection.

For the assessment on threatened species (Table 3), countries were only graded on those species for which the country is considered a range state.

CONCLUSION

Based on this assessment, only Germany can be identified as currently making any significant, quantitative contribution to protecting Baltic Sea biodiversity.All countries except for Germany are very poor at protecting areas in their larger EEZs. The European Commission has required the designation of additional sites in the marine environment by 2008. The process is ongoing. Sweden, for example, has recently designated 9 new sites. Germany's "A-" grade is due to strong leadership shown in establishing a large and relatively representative network of marine protected areas. However, there is no guarantee that leadership in establishing protected areas will be followed through with habitat restoration and proper management of biodiversity within the designated sites.

In terms of protecting threatened or endangered species, Poland is the only country to have designated areas of special significance for harbour porpoise. The recent ban on driftnet fishing in the Baltic Sea is a long-awaited and important victory for the harbour porpoise, which was often caught as bycatch. Other species, such as guillemots and wild salmon, are also benefiting by this decision. The future status of Baltic wildlife will also be influenced by other assessments, in particular those addressing environmental quality (toxics and eutrophication) and fisheries.

Table 4: Total grading - biodiversity

Country	Points MPA designation	Points MPA representativeness	Points threatened species	Total points	Percentage of maximum available	Grade
Denmark	7	5	1	13	38%	F
Estonia	7	9	1	17	49%	F
Finland	7	5	4	16	43%	F
Germany	19	10	1	30	86%	A-
Latvia	4	0	0	4	12%	F
Lithuania	8	2	1	11	33%	F
Poland	12	0	3	15	43%	F
Russia	2	0	2	4	11%	F
Sweden	6	6	1	13	35%	F

Fisheries

Besides a few recent lights of hope, the situation for the fish stocks of the Baltic Sea continue to give serious cause for concern, with most stocks at or near their all time low.

THREAT

For 20 years now, scientists have recommended reduced cod and other fish catches, and policy makers have not heeded the recommendations. For 5 of the past 8 years, scientists have recommended a complete stop to cod fishing! Instead, landings have regularly exceeded advice *as well as* agreed catch levels. Overcapacity of around 30-40% still remains a major obstacle in achieving sustainable fisheries.

To make matters worse, illegal, unreported and unregulated (IUU) fishing is rampant. With earlier estimates that every second Baltic cod sold has been caught illegally, it is clear that we are not even able to enforce current laws and regulations, let alone to the levels necessary to tackle the problems in the region. The few culprits caught and convicted are asked to pay a pitiful penalty. We need to stop the "crime pays" fishing policy! Not only does illegal fishing press down prices and negatively affect fishermen working legally, it also skews the scientific assessment of fish stocks, which are the basis for quota setting. Most importantly, it affects the entire ecosystem of the Baltic Sea.

ASSESSMENT

Last year's fisheries assessment focused on International Council for the Exploration of the Sea's (ICES) advice for fishing levels, accepted Total Allowable Catches (TACs) and landings. The conclusion was clear – landings exceeded the agreed TAC, which in turn exceeded the recommendations made by scientists. This year's assessment looks again at countries' abilities to influence the final TAC recommendation. In addition, this year's assessment starts looking into the ever important issue of control and enforcement.

The difficult situation of cod stocks in the Baltic Sea can be attributed, apart from the ecological causes, to illegal overfishing over years."

Government of Germany

Total Allowable Catch (TAC)[11,12]

(Table 1) Each year, research findings aid ICES in providing scientific advice on sustainable levels of catch for the coming year. Taking into account social and economic factors, the European Commission then issues its own tonnage advice for each fish stock via TACs. Finally, EU Member State Fisheries Ministers make a final TAC recommendation at the Council meeting, and then divide the TAC between Member States. At both of these stages, our decision-makers have the opportunity to influence the resulting TAC. This analysis looks at the collective decisions made by our decision-makers at each stage of negotiation leading up to the final TAC.

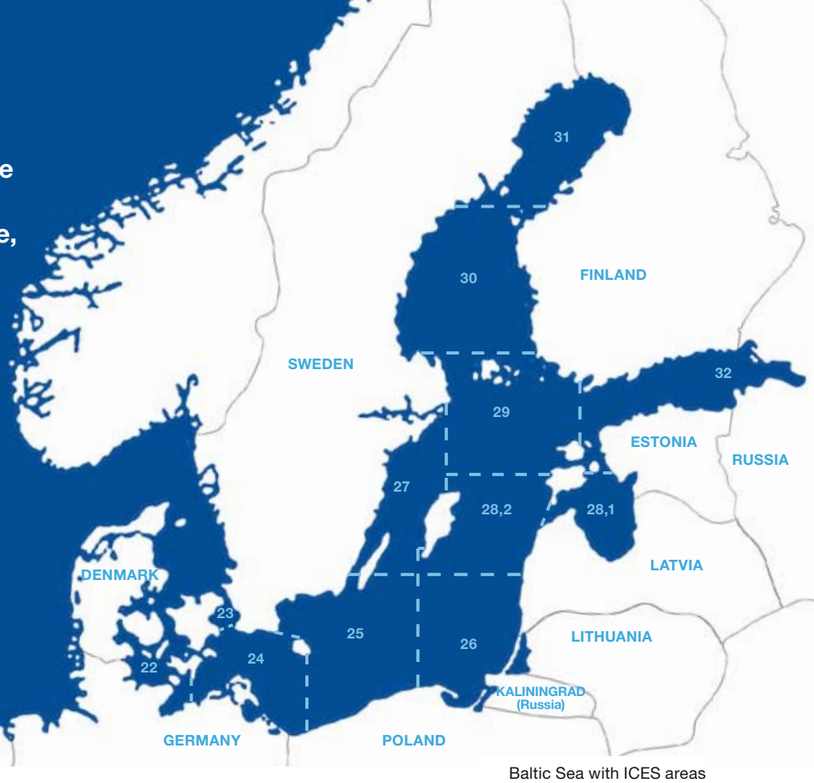
Control and enforcement[13]

(Table 2) As important as quotas are, they are meaningless if they can be exceeded without notice or reprimand. Using data collected by the EU during inspections on Baltic cod fisheries in 2005 and 2006, we have selected 5 indicators for control and enforcement. According to Council Regulation, all Member States shall have a national control action programme, including specific inspection benchmarks. Then in order to properly implement control, there must be sufficient means at the disposal of authorities to perform their tasks.

A well-coordinated organisation for inspection obviously increases effectiveness and efficiency in this work. Satellite monitoring systems (VMS) can be an aid to inspectors to verify logbook data. As a measure of the country's control and inspection system,

The Baltic Sea region can serve as an example in several areas of the Action Plan, for example, in regard to spatial planning, fisheries, as well as nature conservation issues."

Raimonds Vejonis, Minister of Environment, Latvia



Baltic Sea with ICES areas

Table 1: Changes in TAC recommendations from the original ICES advice to the final TACs for 2008[11,12]

Fish stock (ICES area)	ICES advice	EC advice	Agreed TAC 2008	Points awarded
Cod (25-32)	0	31561	38765	0
Cod (22-24)	13500	17930	19221	0
Herring (30-31)	70300	77860	87440	0
Herring (22-24)	49500	39600	44550	1
Herring (25-27, 28.2, 29, 32)	194000	148407	152630	1
Herring (28.1)	30100	36094	36094	0,5

1 point awarded if agreed TAC ≤ ICES advice
0,5 points awarded if TAC is unchanged after a negotiation round

Table 2: Control and enforcement of Baltic cod fishery[13]

Countries	National control		Inspection organisation and resources		Inspectors have direct access to VMS data *	Deviation in recorded landings **	Sanctions		Points scored
	Action plan	Benchmarks	Single authority	24 hour coverage			Sanction scheme	Immediate Enforcement *	
Denmark	Yes	Yes	Yes	No	Yes	12.79%	Yes	No	7 / 11
Estonia	Yes	No	No	Yes	No	N / A	Yes	Yes	5 / 9
Finland	Yes	Yes	N / A	No	Yes	N / A	No	No	4 / 8
Germany	Yes	No	No	No	Limited	13.59 %	Yes	Limited	5 / 11
Latvia	Yes	Yes	No	No	Yes	7.56%	Yes	Yes	9 / 11
Lithuania	Yes	Yes	Yes	Yes	Yes	15.64%	Yes	Yes	9 / 11
Poland	Yes	No	No	No	No	48.71%	Yes	Limited	3 / 11
Sweden	Yes	Yes	No	No	No	21.42%	Yes	No	3 / 11

N / A = No Answer

For national control, organisation and resources, and sanction schemes:
Yes = 1 point, No = 0 points

***For access to VMS data and immediate enforcement of sanctions:**
Yes = 2 points, Limited = 1 point, No = 0 points
****For deviation in recorded landings:**
< 8% deviation = 2 points, 8-15% = 1 point, 15+ % = 0 points

Commission Inspectors compared reported landings from vessels when inspected to when not inspected. Finally, a clear sanction scheme is important for fishers to understand the potential consequences of inappropriate action. To strengthen the credibility of the whole system, inspectors should be allowed to enforce sanctions immediately.

GRADING

Since the final TAC decision is made by consensus, our assessment (Table 1) allocates equal blame or reward for decisions made by all countries that commercially fish a certain stock. Sweden was awarded a bonus 0,5 points for its strong position during the negotiations for the Eastern Baltic cod TAC in 2008. Even though the final TAC is very high, Sweden's position throughout the negotiations was consistently that the ICES recommended moratorium should be followed.

It is important to note that in the control and enforcement assessment (Table 2), the Commission inspections looked exclusively at the Baltic cod fishery, which is not equally important for all Baltic Sea States. For this reason, Estonia and Finland do not have values for all indicators; their cod fisheries are too small.

CONCLUSION

As is obvious from our TAC negotiations analysis, when it comes to the threatened, but also commercially important cod, politicians are not willing to make the tough decisions, opting instead to address the short-term interests of the industry. This kind of short-sightedness will inevitably lead to a collapse of the stocks and with them the very industry and livelihoods that were supposed to be protected. Instead, politicians need to both follow scientific advice for TAC levels in order to ensure guaranteed sustainable harvesting, and reduce the number of vessels in order to ensure socio-economic stability for the industry. The European Fisheries Fund's newly increased support for scrapping of vessels fishing Baltic cod is an excellent opportunity for Member States.

Lithuania and Latvia scored highest in our assessment on control and enforcement, which is not surprising as they are both small fishing nations and have few ports that need to be monitored. Amongst the larger fishing nations, Denmark should be applauded for its verification system, the only one providing real time access to VMS data to all inspectors.

The weakest aspect across the region is that of sanctions. Latvia and Lithuania and Estonia have systems in place where inspectors can follow a predefined sanction scheme and, most importantly, enforce sanctions immediately. In all other countries, any larger infringements must first be reported and later enforced. Unfortunately, in most countries, the follow-up procedures are unclear. Even if an offender is convicted, sanction levels differ widely across the region and do little more than provide a light slap on the wrist. What are needed are increased and strictly harmonised controls and sanctions throughout the region.

Whereas neither EU policies nor national regulation seem to be doing enough, thankfully consumers and supply chains seem ready to fight unsustainable fishing. In Sweden, all major supermarkets recently undertook plans to stop selling threatened fish like Baltic cod[14]. Consumers must stand up and raise their voices that so politicians, fishermen and suppliers will follow through and act to save threatened fish.

Table 3: Total Grading - Fisheries

Countries	Points TAC negotiations*	Points Control & enforcement	Total points	Percentage of maximum available	Grade
Denmark	2 / 4	7 / 11	9	60%	C
Estonia	1,5 / 2	5 / 9	6,5	59%	C
Finland	1 / 2	4 / 8	5	50%	C-
Germany	2 / 4	5 / 11	7	47%	F
Latvia	1,5 / 4	9 / 11	10,5	70%	B-
Lithuania	1 / 3	9 / 11	10	71%	B-
Poland	2 / 4	3 / 11	5	33%	F
Sweden	2,5** / 5	3 / 11	5,5	34%	F

* Countries are only scored for those stocks that they commercially fish.

** Bonus 0,5 points for consistently maintaining throughout negotiations that the ICES recommendation should be followed.

Maritime Transport

The Baltic Sea is one of the oldest trading routes in Europe and today remains one of the busiest routes in the world with 15% of global traffic[15]. As well as fostering internal trade between states, the Baltic Sea is a strategic route for oil exports from Baltic Sea States to the rest of Europe and further afield.

THREAT

Over the coming decade, shipping traffic is predicted to increase by over 100% in the Gulf of Finland and by 80% in the Baltic proper[16]. Over the last 25 years, an average of one major shipping accident a year with more than 100 tonnes of oil spilled has occurred in the Baltic. While illegal discharges of oil have decreased, there were still 238 illegal spills observed in 2007[17]. Shipping has a direct impact on Baltic biodiversity.

In addition to oil spills and illegal discharges of oil and chemicals, ships' antifouling paints leach chemicals into the water, wastewater and air emissions make a significant contribution to eutrophication, and alien or invasive species can be introduced via ships' hulls or from ballast water discharges. Around 100 alien species have already been recorded in the Baltic Sea[18].

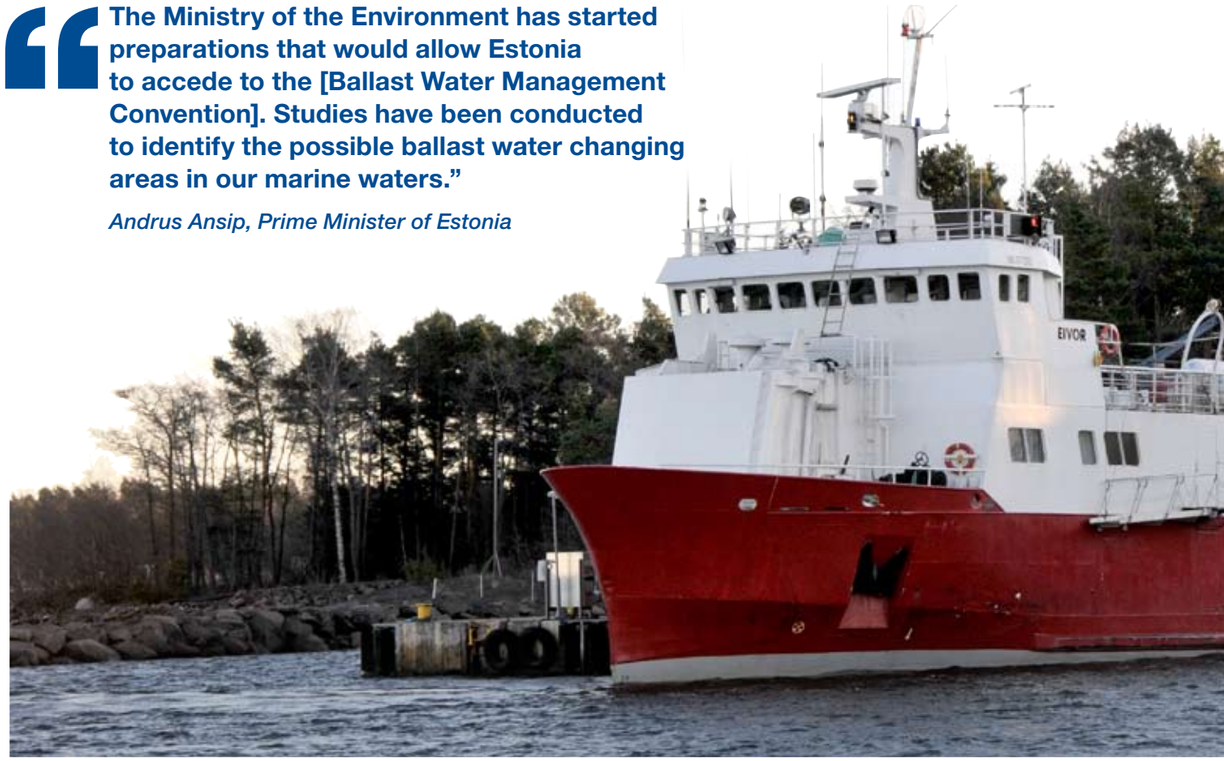
Improving shipping management is complicated by the fact that the majority of ships travelling in the Sea will not be flying a flag of a Sea state. Thus port control measures such as inspections, traffic monitoring, and prosecuting illegal dischargers of oil and chemicals are a top priority.

ASSESSMENT

Last year's Maritime Transport assessment focused on ratification of international shipping agreements. The conclusion was clear – only two countries Sweden and Latvia had ratified more than half of the agreements (4 out of 7). The rest had committed to even less than that. This year's assessment goes to the next level and looks at national action taken to address management objectives. Even though shipping is an international activity regulated by an international body, much action can be taken within the territorial seas to man-

"The Ministry of the Environment has started preparations that would allow Estonia to accede to the [Ballast Water Management Convention]. Studies have been conducted to identify the possible ballast water changing areas in our marine waters."

Andrus Ansip, Prime Minister of Estonia



age shipping safely in national waters. The Baltic Sea States have agreed on a number of management objectives relevant to maritime transport, including ensuring safe maritime traffic without accidental pollution, preventing the introduction of alien species from ships, and enforcing international regulations to prevent illegal discharges of oil and chemicals. This assessment aims to see which countries are taking on their responsibility.

Risk assessment[9]

(Table 1) Risk analysis is being increasingly used to understand the impact that shipping activity poses to sensitive environments. It involves an assessment of both the sensitivity of the environment and the vulnerability of an area to shipping activities. Through HELCOM, Baltic Sea States have committed to undertake an assessment of the risks of oil and chemical pollution and to finalise quantification of the emergency and response resources at the sub-regional level. Action is first required to assess the risk at a national level. Once potential risks have been identified, protection measures necessary to eliminate or mitigate these risks must then be identified and, ultimately, implemented.

Introduction of alien species[9]

(Table 2) The introduction of alien or invasive species is recognised to be one of the greatest threats to marine biodiversity around the world, and particularly to an enclosed sea such as the Baltic. The International Maritime Organization (IMO) adopted a Convention in 2004 to control and manage the discharge of ships' ballast water and sediments so as to ultimately eliminate the transfer of harmful aquatic organisms.

Four years later, the Ballast Water Management Convention has only been ratified by 14 states (representing 3.55% of the world's shipping tonnage[19]) and none of them a Baltic Sea nation. In the Baltic Sea Action Plan, commitment to ratify the convention is left open until 2013 – nearly 10 years after the Baltic Sea States adopted the international convention.

Illegal discharges[9]

(Table 3) Recognising that illegal discharges of oil and chemicals remain a problem, Baltic Sea nations reaffirmed in the BSAP their intent to continue to prosecute offenders of illegal discharges and to cooperate in the prosecution of illegal dischargers[20]. Effective national legislation is essential to bring the polluters to court and to ensure that the penalties, including imprisonment and hefty fines, are sufficient to act as a future deterrent.

CONCLUSION

The overall assessment for maritime transport is different from the 2007 Scorecard, as it places more focus on action measures introduced by Baltic Sea States instead of ratification of conventions. The result, however, is equally bleak. Three countries manage to squeak by with a C/C- grade. Russia managed to score the highest grade this year, being the only country to have a strategy for preventing species introductions. Critics argue that this is not so surprising as Russia is often good at writing official documents; implementation of these legislations and strategies, on the other hand, is a totally different story.

On the brighter side, IMO's Ballast Water Management Convention has spurred innovation in ship-based technologies to control invasive organisms through filtering and cleaning of ballast water prior the release. What remains is for nations to ratify the Convention and find new ways to monitor and control other discharges that threaten Baltic Sea health.

"Maritime safety is another key issue. Due to increasing maritime traffic the risk of accidents is increasing, and this risk must above all be reduced by developing the maritime awareness picture and the vessel traffic monitoring and information system."

Tarja Halonen, President of Finland

Table 1: National assessment of shipping risks and identification of protective measures[9]

Countries	Preparation of a formal risk analysis	Identification of protective measures	Points scored (maximum=3)
Denmark	Yes	Yes	3
Estonia	Yes	No	1
Finland	Yes	Yes	3
Germany	No	No	0
Latvia	No	No	0
Lithuania	No	No	0
Poland	No	No	0
Russia	No	No	0
Sweden	No	No	0

Formal risk analysis = 1 point
Identification of protective measures = 2 points

Table 2: Measures to address the threat of alien species[9]

Countries	Ratification of BWM convention	National strategy preventing species introduction	Ballast water port state control inspections	Points scored (maximum=5)
Denmark	No	No	No	0
Estonia	No	No	No	0
Finland	No	No	No	0
Germany	No	No	No	0
Latvia	No	No	No	0
Lithuania	No	No	Yes	2
Poland	No	No	No	0
Russia	No	Yes *	Yes	4
Sweden	No	No	No	0

Ratification of Convention = 1 point
Implementation of measures = 2 points each
* Russian regional strategy for Gulf of Finland

Table 3: National legislation for prosecution of illegal discharges of oil and chemicals into the Baltic Sea[9]

Countries	National legislation	Points scored (maximum=2)
Denmark	Yes	2
Estonia	Yes	2
Finland	Yes	2
Germany	Yes	2
Latvia	Yes	2
Lithuania	Yes	2
Poland	N/A	--
Russia	Yes	2
Sweden	Yes	2

National legislation = 2 points

Table 4: Total Grading - Maritime Transports

Countries	Points Risk assessment	Points Alien species	Points Illegal discharge	Total points (maximum=10)	Percentage of maximum available	Grade
Denmark	3	0	2	5	50%	C-
Estonia	1	0	2	3	30%	F
Finland	3	0	2	5	50%	C-
Germany	0	0	2	2	20%	F
Latvia	0	0	2	2	20%	F
Lithuania	0	2	2	4	40%	F
Poland	0	0	N / A	0*	0%	F
Russia	0	4	2	6	60%	C
Sweden	0	0	2	2	20%	F

* Maximum = 8 N / A = No Answer

Hazardous Substances

The Baltic's brackish environment and the long timeframe required for water exchange to the sea make it uniquely vulnerable to toxins. Hazardous substances are released into the marine environment through wastewater, air, urban and agricultural run-off, direct emissions from ship transport, harbour operations and offshore installations.

THREAT

Hundreds of hazardous chemicals including deadly dioxins, PCBs, brominated flame retardants, and DDT residues pollute Baltic waters. Organotins from hull paints have been noted in mussels and in the livers of flatfish, especially on the Polish coast[21]. Heavy metal concentrations are higher in the Baltic than in the North Atlantic[22]. In some areas, dioxin and PCB levels in fish, particularly salmon and herring, still exceed accepted EU food safety levels[23].

ASSESSMENT

The 2007 hazardous substances assessment focused on the ratification of international conventions and cleaning up polluting hot spots. The conclusion was that some progress and leadership could be seen in the region.

This year's assessment is quite different. It focuses on concrete results - the success of Baltic Sea States in reducing inputs of two of the most common and deadly heavy metals, as well as success in reducing inputs of dioxins and furans. We also follow-up on last year's indicator on the elimination of organotin-based antifouling paints on ships.

Toxic emissions[24,25]

(Tables 1 and 2) Cadmium and mercury, two highly toxic heavy metals, have been a particular focus of a number of regulatory agreements and reduction efforts in the Baltic in the past two decades. Further commitments to address emissions of cadmium and mercury were agreed on in the Baltic Sea Action Plan (BSAP). A similar commitment was given for the reductions in dioxins and furans (Table 2), with a particular focus on emissions from small-scale combustion appliances. Two analyses are made for each of these groups of toxins – the first looks at change in emission levels between 1990 and 2005. The second assessment zooms in on the last few years to see what the current trend is.

Anti-fouling systems[9]

(Table 3) The International Maritime Organization adopted an International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention) in October 2001. Thirty states - representing 49% of the world's merchant shipping tonnage - have ratified the Convention, which will come into force in September 2008[19]. This is an increase of seven states since last year, but sadly no new Baltic Sea states have ratified.

The AFS Convention prohibits the use of harmful organotins (one of the most toxic chemicals deliberately released into the marine environment) in anti-fouling paints - used on ships' bottoms to kill plants and animals which

Table 1: Change in heavy metal emissions from 1990 to 2005[24]

Countries	Mercury emissions			Cadmium emissions		
	1990- 2005*	2002-2005**	Points scored (maximum = 11)	1990- 2005*	2000-2005**	Points scored (maximum = 11)
Denmark	-61%	0%	5	-45%	0%	5 •
Estonia	-55%	0%	5 •	-86%	0%	7 •
Finland	-18%	29%	1	-79%	-7%	6
Germany	-86%	0%	6	-78%	13%	4
Latvia	-67%	▲	4	-67%	-38%	8 •
Lithuania	▲	33%	0	-89%	-71%	10 •
Poland	-40%	2%	3	-50%	-8%	6 •
Russia	-10%	37%	1	-25%	16%	2
Sweden	-56%	0%	5 •	-78%	0%	6 •

***For change between 1990 and 2005:**
100% reduction = 6 points
80% = 5 points
60% = 4 points
40% = 3 points
20% = 2 points
1% = 1 point
No change or increase = 0 points

****For trend between 2002 and 2005:**
> 50% reduction = 4 points
25% = 3 points
1% = 2 points
No change = 1 point
Increase = 0 points

▲ = Increase from 0%
• = Bonus point for 2005 level equalling lowest emission level

Table 2: Change in dioxin and furan emissions from 1990 to 2005[25]

Countries	Dioxin and furan emissions		Points scored (maximum=11)
	1990 - 2005*	2000 – 2005**	
Denmark	-63%	-22%	6
Estonia	-50%	0%	5 •
Finland	-13%	-16%	4 •
Germany	-27%	0%	3
Latvia	171%	36%	0
Lithuania	83%	175%	0
Poland	-21%	25%	2
Russia	-25%	18%	2
Sweden	-35%	18%	2

***For change between 1990 and 2005:**
100% reduction = 6 points
80% = 5 points
60% = 4 points
40% = 3 points
20% = 2 points
1% = 1 point
No change or increase = 0 points

****For trend between 2002 and 2005:**
> 50% reduction = 4 points
25% = 3 points
1% = 2 points
No change = 1 point
Increase = 0 points

• Bonus point for 2005 level equalling lowest emission level

Table 3: Ratification and implementation of provisions of the Antifouling Systems (AFS) Convention[9]

Countries	AFS Convention ratification	Sampling and procedures developed	Procedures in development	Points scored (maximum=3)
Denmark	Yes	No	No	1
Estonia	No	No	Yes	1
Finland	No	No	No	0
Germany	No	No	Yes	1
Latvia	Yes	No	Yes	2
Lithuania	Yes	Yes	No	2
Poland	Yes	N / A	N / A	1*
Russia	No	No	Yes	1
Sweden	Yes	No	No	1

1 point is awarded for each positive response.

* Maximum = 1

N / A = No Answer

Hazardous Substances

might slow a ship and increase its fuel consumption. In addition, the EU regulation banning the use and presence of organotins on ships (782/2003) came into force on 1 January 2008. In order to enforce the AFS Convention and comply with the EU Regulation, it will be necessary for Baltic Sea States to have systems in place to sample and test vessels.

GRADING

For all countries, emission data are from the entire country, except for Russia for which emission data are from the territory relevant to the European Monitoring & Evaluation Programme area.

CONCLUSION

The Baltic Sea States' scores on hazardous substances are extremely disappointing. Only Estonia was able to score even half of the available points. This is in stark contrast with the hazardous substances assessment in the 2007 Scorecard, which was the strongest of all the assessments, receiving an overall grade of B- in the region. This year's assessment shifts the focus from ratification and implementation of international agreements to real change, and the resulting scores are abysmal.

Between 1990 and 2005, annual emissions of cadmium dropped 45%, and mercury emissions dropped 46%. While significant total reductions occurred between 1990 and 2000 (due largely to increased use of lead-free fuels and use of cleaner production technologies[23]), the rate of decrease has levelled off in the last few years. Estonia's higher score is due largely to their success in decreasing toxic emissions throughout the studied years, coupled with their ability to maintain low levels during the last few years. While Latvia and Lithuania should also be commended for having low levels of emissions, the numbers appear to be on the rise again.

Progress in general has been slower with dioxins and furans, with only a 24% decrease in emissions during the 15-year period. Only Denmark has managed to continue reducing its dioxin and furan emissions in the last 5 years all other countries in the region show an unchanged or upward trend. From these results, it is clear that all Baltic Sea States have considerable work ahead if we are to enjoy "a Baltic Sea undisturbed by hazardous substances"[26].

Table 4: Total Grading - Hazardous Substances

Countries	Points Heavy metals	Points Dioxins and furans	Points Antifouling Systems	Total points (maximum=36)	Percentage of maximum available	Grade
Denmark	10	6	1	17	47%	F
Estonia	12	5	1	18	50%	C-
Finland	7	4	0	11	31%	F
Germany	10	3	1	14	39%	F
Latvia	12	0	2	14	39%	F
Lithuania	10	0	2	12	33%	F
Poland	9	2	1	12*	35%	F
Russia	3	2	1	6	17%	F
Sweden	11	2	1	14	39%	F

*Maximum=34

"REACH still contains many loopholes and uncertainties, and is very vulnerable to weakening in reviews and implementation. Monitoring and continuous pressure are therefore key for real improvements and a clean Baltic Sea."

Ninja Reineke, Chemicals expert, WWF

> **Buffer zones should be focused on the most problematic areas. It is also necessary to increase funding for establishing wetlands."**
>
> *Matti Vanhanen, Prime Minister of Finland*

Eutrophication

Eutrophication has been identified as the single biggest threat to the health of the Baltic Sea. The most easily witnessed symptom of these excessive inputs of nutrients is the algal blooms that plague large areas of the sea during warm summers.

THREAT

A more subtle, but more damaging result of eutrophication is the lack of dissolved oxygen leading to the increasing death of seabeds, with effects such as decreased reproductive success of commercial fish stocks such as flatfish and cod[27]. Dead zones have been measured to stretch over up to 100,000 km^2 of the Baltic Sea's bottom[2].

Agricultural run-off accounts for half of all nitrogen and phosphorus inputs to the Baltic Sea. Other sources include forestry, industrial and municipal wastewater, shipping, and car emissions. Problems are expected to get worse as fertilizer use and meat production are expected to increase substantially in the coming 10 years[28] and climate change further exacerbates the problem[29].

ASSESSMENT

Last year's eutrophication assessment focused on the implementation of three agreements. The conclusion was clear – none of the Baltic Sea States had come even close to implementing satisfactory measures to address the problem. This year's analysis follows up on some of last year's indicators, and starts to look at action taken to reach the HELCOM goal.

Waterborne nutrient inputs[30]

(Table 1) Last year's assessment looked at total change in waterborne inputs of phosphorus and nitrogen from 1994 to 2004. This year, we update this analysis with data from 2005[iv] and provide in-depth analysis by zeroing in on data trends for the last three years. The Baltic Sea Action Plan (BSAP) reaffirms the commitment to reduce nutrient load from waterborne and airborne inputs. However, the deadline for action has disappointedly been delayed to 2016, with the aim of reaching good ecological and environmental status by 2021.

[iv]Russia's nitrogen inputs data is limited to data from 2000 to 2004 due to incomplete or unavailable data

Table 1: Change in nutrient input per flow between 1994 and 2005[30]

Countries	Phosphorus inputs			Nitrogen inputs		
	Percentage change between 1994 and 2005	Number of years with decreased input from 2003 to 2005	Points scored (maximum = 10)	Percentage change between 1994 and 2005	Number of years with decreased input from 2003 to 2005	Points scored (maximum = 10)
Denmark	-26%	1	4	-32%	1	6•
Estonia	13%	1	1	23%	1	1
Finland	-20%	1	4	9%	2	2
Germany	-29%	2	6•	-30%	0	4
Latvia	60%	1	1	-33%	1	5
Lithuania	-29%	1	5•	37%	1	1
Poland	-20%	1	5•	-34%	1	6•
Russia	-2%	1	2	21% *	1*	1**
Sweden	-18%	1	3	-22%	1	5•

For change between 1994 and 2005:
> 75% reduction = 7 points
50% = 6 points
40% = 5 points
30% = 4 points
20% = 3 points
10% = 2 points
1% = 1 point
No change or increase = 0 points

For trend between 2003 and 2005:
1 point for each year the input has decreased

• Bonus point for 2005 level equalling lowest emission level

* Russia's analysis is limited to 2000 to 2004 due to incomplete or unavailable data

** Maximum = 9

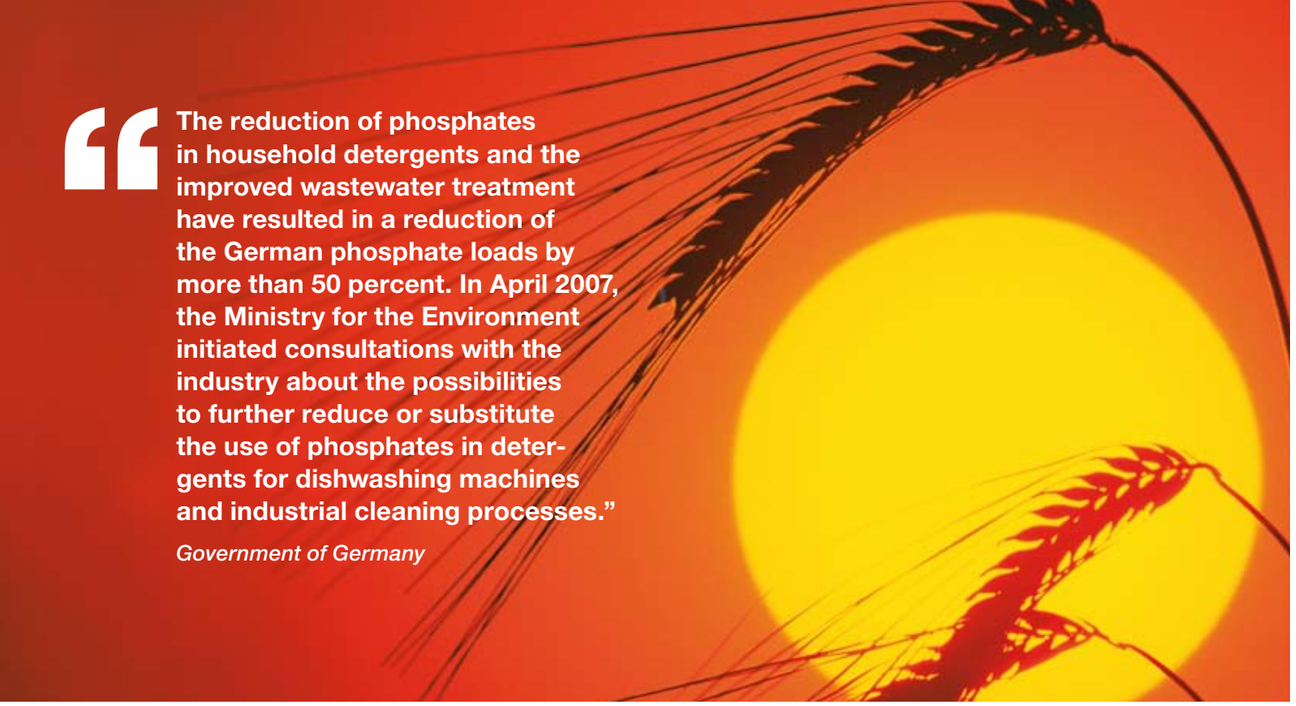
Table 2: HELCOM hot spots Assessment[31]

Countries	Municipal and industrial wastewater sites			Agricultural and coastal lagoon / wetland sites		
	Total number of hotspots	Percentage of hot spots cleaned up	Points scored (maximum = 4)	Total number of hotspots	Percentage of hot spots cleaned up	Points scored (maximum = 4)
Denmark	3	100%	4	3	0%	0
Estonia	5	60%	2	4	75%	3
Finland	1	100%	4	1	0%	0
Germany	7	100%	4	2	50%	2
Latvia	3	0%	0	2	100%	4
Lithuania	9	56%	2	2	0%	0
Poland	22	41%	1	4	0%	0
Russia	20	40%	1	4	0%	0
Sweden	2	50%	2	3	0%	0

For amount of hot spots cleaned up:
100% = 4 points
75% = 3 points
50% = 2 points
25% = 1 points
< 25% = 0 points

HELCOM hot spots[31]

(Table 2) Since 1992, 162 serious pollution areas or "hot spots" have been identified by HELCOM around the Baltic Sea and in its catchment. Of these, around half have been cleaned up and subsequently removed from the list. Hotspots are grouped into industry, municipal & industry wastewater sites, agriculture sites, and coastal lagoon / wetlands sites, according to the source of the pollution. Municipal and industrial wastewater sites are generally significant sources of nutrients and particularly phosphorus. Agricultural sites are also significant sources of both nitrogen and phosphorus. Originally 16 agricultural hot spots and five coastal lagoon / wetland hotspots were identified, of which only a disappointing five were deleted from the list by March 2008.



> **The reduction of phosphates in household detergents and the improved wastewater treatment have resulted in a reduction of the German phosphate loads by more than 50 percent. In April 2007, the Ministry for the Environment initiated consultations with the industry about the possibilities to further reduce or substitute the use of phosphates in detergents for dishwashing machines and industrial cleaning processes."**
>
> *Government of Germany*

New phosphorus-removal system for St. Petersburg's wastewater

St. Petersburg will soon be receiving a new, enhanced phosphorus removal process for its wastewater treatment plant. This has been identified as the single most cost-effective measure available for improving the ecological state of the Gulf of Finland. With co-funding provided by the Finnish Ministry of the Environment, the project has now been launched. It is estimated that the new system will reduce the phosphorus loads entering the Gulf of Finland by 300-500 tonnes per year, corresponding to some 5-8% of the current total phosphorus input into the Gulf[33]. Unfortunately, the increase in industrial farms in the Leningrad region and run-off from these facilities into the Gulf of Finland risk off-setting these improvements.

Phosphorus in detergents[9]

(Table 3) The removal of phosphorus from detergents has been identified as one of the most cost-effective measures available to reduce eutrophication of the Baltic Sea. A recent HELCOM report[32] estimates that if all Baltic Sea States were to completely ban phosphorus from laundry and dishwasher detergents, this could reduce phosphorus inputs into the Sea up to 24%. Baltic Sea Ministers adopted a new recommendation on measures aimed at the elimination of phosphorus in detergents by 2012 in the BSAP. However, no specific schedule or deadline is set as to when a total ban should come into force.

Agricultural run-off[9]

(Table 4) Agricultural run-off remains the biggest contributor to the nutrient problems faced by the Baltic Sea. Limits on the use of phosphorus in fertilizers and the restoration of buffer strips along waters courses to act as nutrient sinks have both been identified by HELCOM and endorsed by Baltic Sea States. Of equal importance is the restoration or recreation of lost coastal wetlands to act as sinks for nutrient run-off.

GRADING

Given the fact that the HELCOM deadline for eutrophication remains some years off, extra points are awarded to countries that have reduced their inputs by over 50% in the nutrient inputs analysis (Table 1).

Only Germany achieves a passing mark in this year's assessment. It is clear that significant improvement is required, not only in meeting existing commitments to reduce inputs of phosphorus and nitrogen, but also in creative ways to reduce other contributors to eutrophication. Failure to do so will undermine any future attempt to deliver holistic management of this fragile environment. A ban on phosphorus in laundry and washing detergents is a good start, but that must be followed up with legislation that enforces removal of phosphorus from wastewater for all municipalities over 10,000 inhabitants, creative solutions for wastewater treatment in rural areas, and stricter legislation for agricultural run-off.

CONCLUSION

A careful reading of the tables in this section reveals that while different Baltic Sea States have taken actions to avoid eutrophication, none have attacked the problem from all angles in order to achieve lasting improvement.

Table 3: Assessment of the elimination of the use of phosphorus in detergents[9]

Countries	Elimination of phosphorus in detergents	Points scored (maximum = 2)
Denmark	No	0
Estonia	No	0
Finland	No	0
Germany	Voluntary	1
Latvia	No	0
Lithuania	No	0
Poland	No	0
Russia	No	0
Sweden	Regulation	2

Regulation = 2 points
Voluntary ban = 1 point
No = 0 points

Table 4: Assessment of measures to reduce run-off of nutrients from agricultural land[9]

Countries	Maximum limit on Phosphorus amounts in fertilizers	Programme and financing scheme for buffer strips	Plans to restore/ recreate coastal wetlands	Points scored (maximum = 3)
Denmark	No	Yes	Yes	2
Estonia	Yes	Yes	No	2
Finland	Yes	Yes*	Yes	3
Germany	No	Yes*	No	1
Latvia	Yes	No	No	1
Lithuania	No	Yes	No	1
Poland	N / A	N / A	N / A	N / A
Russia	Yes	Yes	No	2
Sweden	Yes	Yes	Yes	3

1 point is awarded for each positive response.
* Voluntary
N / A = No Answer

Table 5: Total grading – eutrophication

Countries	Points Nutrient reduction	Points Hot spots	Points P-free detergents	Points run-off	Total Points (maximum=33)	Percentage of maximum available	Grade
Denmark	10	4	0	2	16	48%	F
Estonia	2	5	0	2	9	27%	F
Finland	6	4	0	3	13	39%	F
Germany	10	6	1	1	18	55%	C-
Latvia	6	4	0	1	11	33%	F
Lithuania	6	2	0	1	9	27%	F
Poland	11	1	0	N / A	12*	40%	F
Russia	3	1	0	2	6**	19%	F
Sweden	8	2	2	3	15	45%	F

* Maximum = 30
** Maximum = 32
N / A = No Answer

Integrated sea use management

The Baltic Sea seems to be sitting on a knife's edge, with its depleted fish stocks, encroaching eutrophication, endangered species and habitats, and pollution problems at the same time as there is increasing sea use.

THREAT

Wind turbines, energy cables and pipelines are being projected at many places on the sea floor while shipping routes, boat traffic, fisheries and other human activities may be affecting the same areas. As the Scorecard 2008 has amply demonstrated, these problems are all closely interrelated and need to be considered in an integrated way. There are a multitude of sectors and interest groups that impact on and/or use the resources from the Baltic Sea. Governing over them are a myriad of local, regional, and national governments and agencies in nine different countries.

While considerable scientific work has been done to try to conceptually define and understand how ecosystem-based management of marine areas would work, practical evidence of what does work (and what doesn't) is in shorter supply. In addition, delivering integrated sea use management requires strong leadership at the highest possible political level to ensure integration at both the national and international level. Unfortunately, most leadership witnessed today has deferred to national ambitions.

To save our joint sea there is an urgent need for better integration across sectors, across national boundaries and administrative borders. Also required is the development of an agreed marine spatial plan including an ecologically representative and coherent network of marine protected areas, ecosystem-based fisheries management, and regulatory standards and tools for specific sectoral activities permitted to take place in preferred development zones.

ASSESSMENT[9]

(Table 1) This analysis focuses on whether each Baltic Sea State has successfully implemented five measures necessary to have a more integrated management of the sea - governance, policy, spatial planning, legislation and stakeholder involvement.

Governance structures

The need for mechanisms to address vertical integration among different governance levels and horizontal integration among ministries and agencies with different mandates is essential[34]. Many countries have recognised that it might be necessary to review the administrative organization in place, and improve internal coherence. There are a variety of different national governance structures possible, including:

A. a single government department or agency
B. a cross-departmental committee or team made up of people from different government departments
C. multi-department responsibility with no clear lead body or leadership and where many departments have different responsibilities and there is little coordination

> **"The question of the preparation and application of the principles of spatial planning for the marine territory is becoming increasingly relevant in order to balance the commercial interests linked to the sea and the protection of natural values."**
> *Raimonds Vejonis, Minister of Environment, Latvia*

Marine policy

Marine policy in many countries has been developed over years or decades in an ad hoc and fragmented way, with each sector being addressed individually on an "as needs" basis, or in response to a major emergency, or a new demand. Various forms of marine policy include:

A. a published single cross-governmental policy
B. a primary sea-use management or marine policy with added-on sectoral policies
C. a multitude of sectoral marine policies which together cover the wide range of coastal and marine activities / developments

Marine spatial planning

Marine spatial planning is widely recognised as one of the most important tools in delivering an ecosystem approach to the management of human activities and has been described as a process by which sustainable exploitation of marine resources can be planned and managed. In November 2007, HELCOM adopted a new recommendation (28E/9) that Baltic Sea States jointly develop spatial planning principles, fill in data gaps, and identify and map interacting and/or conflicting interests, obligations and uses of the sea.

Marine spatial planning is a way of working across sectors to make decisions about the use of maritime resources and is seen as a way of proactively managing activities and developments in the marine environment to reduce impact on the resource and conflict between activities. Managing developments and activities in territorial seas and the exclusive economic zones (EEZs) can be delivered in a number of ways, including:

A. a single statutory spatial plan which identifies spatial designations, marine protected areas and prioritised areas for developments and activities to take place
B. a non-statutory spatial plan which provides guidance on developments and activities
C. a multitude of plans and guidance which sometimes overlap and where there is no clear indication of which plans take priority

Legislative instruments

An integrated ecosystem management approach across territorial seas and EEZs might also require the creation of new legislative instruments. As with the development of policy, legislation controlling activities at sea has generally been developed and introduced in an ad hoc and fragmented manner. Planning and licensing of marine developments and activities can be regulated in a number of ways, including:

A. a single act or regulatory framework to assist the management of existing and new developments and activities in the marine environment
C. a multitude of overlapping regulations under different pieces of legislation

Stakeholder involvement

Transparency and communication with stakeholders is increasingly considered fundamental to the successful implementation and enforcement of the management of the Baltic Sea.

Table 1: Assessment of components of integrated sea use management[9]

Countries	Governance		Policy		Spatial Plan		Marine Regulation		Stake-holder involvement	Total points (maximum = 13)
		Under review		Under review		Under review		Under review		
Denmark	C	No	C	No	C	No	C	No	No	0
Estonia	C	Yes	C	Yes	C	Yes	C	No	No	3
Finland	C	No	A	No	C	No	C	No	Yes	3
Germany	C	Yes	C	Yes	C	Yes	C	No	Yes	4
Latvia	C	No	C	No	C	No	C	No	Yes	1
Lithuania	C	No	C	No	C	No	C	No	No	0
Poland	C	No	C	No	C	N / A	C	N / A	No	0 *
Russia	C	No	C	No	C	Yes	C	Yes	Yes	3
Sweden	C	Yes	C	Yes	C	Yes	C	Yes	Yes	5

For all measures:
A = 3 points
B = 1 point
C = 0 points
Yes = 1 point
No = 0 points

* Maximum = 11
N / A = No Answer

CONCLUSION

The conclusion from this assessment is crystal clear – there is currently very poor coordination and integration in the management of the various uses of the Baltic Sea. Instead a patchwork of governance approaches and regulatory frameworks predominates. The result is equally poor on all five measures included in this analysis - governance, policy, spatial planning, legislation and stakeholder involvement. It is promising, though, that several countries are now reviewing their national marine management. These initiatives have resulted in a slightly higher score for Sweden, Germany, Estonia and Russia. Finland sets an example by being the first country in the region to have a single, cross-governmental marine policy.

Integrated Sea Use Management is a young (though not entirely new) concept. While commitments to develop broad-scale marine spatial planning in the Baltic Sea were only officially adopted recently in the Baltic Sea Action Plan, there has been considerable discussion and commitment in wider political frameworks on the delivery of an ecosystem approach by 2010, including at the 2002 World Summit on Sustainable Development[35].

The EU strongly encourages a more integrated approach to management of seas in its Marine Strategy Directive and future Maritime Policy. WWF welcomes the proposal for the Baltic Sea to serve as a pilot are for trying to achieve sustainable management of the marine environment.

In response to the recognition that the health and quality of the marine environment and its resources is deteriorating, a number of countries around the world have already begun to address the need for improved management of territorial seas and EEZs. In the UK, the government has adopted a draft Marine Bill[36] which sets out provisions for a new statutory system of marine planning, new tools for the conservation of marine ecosystems and biodiversity, streamlining and integrating of the licensing regimes, and a new Marine Management Organisation to help deliver marine policies. The Great Barrier Reef Marine Park is an example of large-scale planning and management of a marine area that involves many sectors, and where long-term health of the marine ecosystem is the underlying principle.

WWF's Vision for Integrated Sea Use Management is one in which the use of resources is managed through a holistic ecosystem-based approach. In order to succeed, such a new approach must include:

- one integrated governance framework for the entire Baltic Sea covering all governance levels
- a holistic, integrated, cross-sectoral and ecosystem-based process that includes all countries, sectors and relevant stakeholders
- a clear implementation plan with concrete and concerted actions identified, with secured budgets and ongoing review mechanisms in place
- real leadership secured through political commitment at the highest possible level

The Baltic Sea provides a fantastic opportunity to showcase a truly integrated approach to conservation and sustainable development. The need is great and the time to launch a new approach ripe. Success will require strong leadership, concrete action and honest commitment.

Table 2: Total Grading – Integrated Sea Use Management

Countries	Total points (maximum = 13)	Percentage of maximum available	Grade
Denmark	0	0%	F
Estonia	3	23%	F
Finland	3	23%	F
Germany	4	31%	F
Latvia	1	8%	F
Lithuania	0	0%	F
Poland	0 *	0%	F
Russia	3	23%	F
Sweden	5	38%	F

* Maximum = 11

Ongoing EU processes

The recently adopted Marine Strategy Directive is the environmental 'pillar' of the EU's future Maritime Policy. The directive "aims to achieve good environmental status of the EU's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend"[37]. The aim of the maritime policy is to encompass all aspects of the oceans and seas in a holistic approach. It has been proposed that the Baltic Sea be used as a pilot area for a more integrated approach to maritime affairs.

Baltic Sea Strategy - The European Council has invited the Commission to present an EU strategy for the Baltic Sea Region at the latest by June 2009. The strategy aims to make the region a model of marine environment best-practice within the EU. It will also address other regional challenges such as enhancing growth and competitiveness, and promoting deeper market integration.

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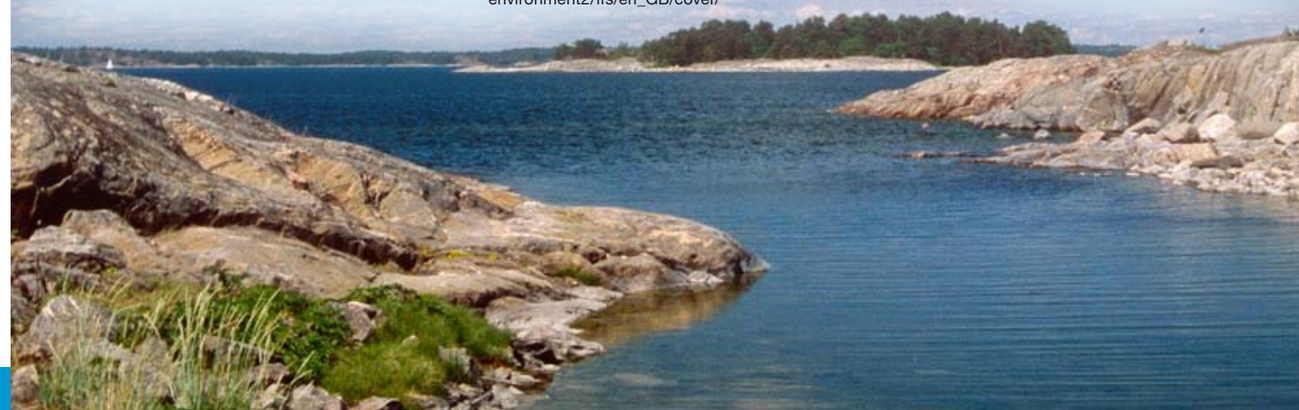

“The Baltic Sea is threatening to collapse, and the fishing industry is in desperate danger. We need a radical change in direction.”

Tarja Halonen, President of Finland[38]

WWF is one of the world’s largest and most experienced independent conservation organisations, with almost 5 million members and supporters and a global network active in some 100 countries.

WWF’s mission is to stop the degradation of the planet’s natural environment to build a future in which humans live in harmony with nature, by:

- conserving the world’s biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

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WWF Baltic Ecoregion Programme is part of WWF, set up to save the Baltic marine environment and restore vitality and beauty to the surrounding region.

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