

# BALTIC SEA ENVIRONMENT PROCEEDINGS

No. 86

## PROCEEDINGS OF THE JOINT IMO/HELCOM/EU WORKSHOP “ENVIRONMENTAL IMPACTS DUE TO THE INCREASED DENSITY OF SHIPPING IN THE BALTIC SEA AREA – COPENHAGEN PLUS 1”

Rostock-Warnemünde, Germany  
11-12 March 2003



HELSINKI COMMISSION  
Baltic Marine Environment Protection Commission  
2003

For bibliographic purposes this document should be cited as:  
HELCOM, 2003  
Proceedings of the Joint IMO/HELCOM/EU Workshop “Environmental impacts  
due to the increased density of shipping in the Baltic Sea area – Copenhagen plus 1”  
Baltic Sea Environ. Proc. No. 86

Information included in this publication or extracts thereof  
are free for citing on the condition that the complete reference  
of the publication is given as stated above.

Copyright 2003 by the Helsinki Commission  
- Baltic Marine Environment Protection Commission -

Available only in electronic form on the HELCOM web site:  
<http://www.helcom.fi>

HELSINKI COMMISSION  
Baltic Marine Environment Protection Commission

Katajanokanlaituri 6 B  
FIN-00160 Helsinki  
Finland

Telephone: +358-9-6220 220  
Telefax: +358-9-6220 2239  
E-mail: [helcom@helcom.fi](mailto:helcom@helcom.fi)  
<http://www.helcom.fi>

Introduction .....	3
Conclusions.....	4
Mr. Peter Ehlers	
Programme .....	7
Welcome Address .....	11
Mr. Arno Pöker	
Opening Address .....	14
Mr. Hans-Jürgen Froböse	
Opening Address .....	16
Mr. Fritz Holzwarth	
Report and assessment on the implementation of measures by the Contracting Parties laid down in the Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area (HELCOM Copenhagen Declaration) .....	19
Ms. Anne Christine Brusendorff	
Topics of general interest already dealt with in the IMO –status quo report .....	24
Particularly Sensitive Sea Areas – a management tool for protecting sensitive sea areas.....	24
Transfer of invasive marine species in ballast water – perhaps the biggest environmental challenge facing the global shipping industry this century .....	25
Ms. Saara Lintu	
A traffic route investigation to find out one favored Baltic Transit Way proposal .....	28
Mr. R. Müller and Ms. A. Zölder	
Speaking note by the Danish Delegation .....	29
Mr. Niels Bagge	
Assessment on the improvement of the conditions within the marine environment in the Baltic Sea regarding HELCOM measures differentiating between sea- and land-based inputs in the last 5 years.....	31
Mr. Heinz-Jochen Poremski	
Risk assessment of oil spills including environmental impacts from oil terminals.....	32
Mr. Sergey Ovsienko	
Outcome of Session I "Assessment" .....	33
Possible need for revision of HELCOM Recommendations within the response field .....	35
Mr. Thomas Fagö	
Emergency towing capacity in the Baltic – National Policies .....	37
Mr. Kalervo Jolma	
Germany's Precautionary Measures against Marine Accidental Pollution in the Baltic Sea and its Coastal Areas - A Review and Perspective .....	39
Mr. Ulf Bustorff and Mr. Dirk-Uwe Spengler	

Shoreline clean-up .....	44
Mr. Olev Luhtein	
Outcome of Session II "Precaution and response" .....	47
Report and assessment on the experience made by the lately introduced new measures and surveillance activities in the Kadetrenden .....	49
Mr. Jörg Neubert	
Report and assessment of the experience in the Vessel Traffic Service (VTS) – system in the Gulf of Finland.....	53
Mr. Kari Kosonen	
Results of the HELCOM AIS Expert Working Group .....	54
Mr. Benny Pettersson	
The need for additional safety measures from Russia's point of view .....	55
Mr. Vladimir Isakov	
Extended Mandatory Pilotage in Baltic Sea Area .....	57
Mr. Uwe Jenisch	
Possible need for concerted action regarding unified application of rules for ice classification of ships and arrangement of icebreaker services during the winter period in the Baltic Sea area .....	61
Mr. Jorma Kämäräinen	
Outcome of Session III "Additional safety measures beyond the Copenhagen Declaration" .....	69
What is needed: new decisions or improved implementation? .....	72
Ms. Nina Munthe	
Improving the work towards prosecution of offenders of antipollution regulations at sea .....	74
Ms. Barbro Jönsson	
Port State Control of Latvia .....	76
Mr. Gunars Steinerts	
Outcome of Session IV "Compliance" .....	81
Coalition Clean Baltic (CCB) views on measures to avoid adverse "Environmental impacts due to the increased density of shipping in the Baltic Sea" .....	83
Mr. Piotr Gruszka	
List of registered participants .....	85
Baltic Sea Environment Proceedings (BSEP).....	91

## **INTRODUCTION**

At the kind invitation by Germany, a joint IMO/HELCOM/EU Workshop "Environmental impacts due to the increased density of shipping in the Baltic Sea area – Copenhagen plus 1", was organized in Rostock-Warnemünde on 11-12 March 2003.

The joint IMO/HELCOM/EU Workshop was a follow-up of the HELCOM Extraordinary Ministerial Meeting held on 10 September 2001 in Copenhagen, Denmark.

This meeting welcomed the offer of Germany to arrange a joint IMO/HELCOM/EU Workshop to assess the status of implementation of the measures decided on during the HELCOM Extraordinary Ministerial Meeting as well as their effect.

The conclusions of the Workshop as well as the statements/presentations made during the different sessions are contained in this publication.

## CONCLUSIONS

***Mr. Peter Ehlers, Chairman of the Workshop***  
**Federal Maritime and Hydrographic Agency, Hamburg, Germany**

The Joint IMO/HELCOM/EU Workshop (Joint Workshop) was arranged on 11-12 March 2003 following the HELCOM Extraordinary Ministerial Meeting on 10 September 2001 (HELCOM EXTRA 2001). The tasks of the Joint Workshop were three-fold:

- To assess the status of implementation and the effect of the measures agreed on during the HELCOM EXTRA 2001 meeting;
- To consider the possible need for concerted action regarding unification of rules for winter traffic/ice classification and ice breaker services arrangements during winter time as well as the possible need for revision of HELCOM Recommendations within the response field; and
- To consider the need for additional actions due to the rise in the maritime traffic in the Baltic Sea area.

### Status of implementation of the HELCOM Copenhagen Declaration

The Joint Workshop concluded that the implementation of the measures decided on in the HELCOM Copenhagen Declaration is well under way. For those measures for which a target date has been set the measures have either already been implemented or are in the process of being implemented within the set target dates.

The Joint Workshop however, also identified some measures for which additional activities have to be undertaken by the Contracting Parties to achieve a full implementation. These are:

- Agreements with the maritime industry to ensure; 1) that oil pollution is only carried in double-hull tankers, 1) that ships, posing a risk to the marine environment are only chartered if they carry Electronic Chart Display and Information System (ECDIS); and 3) that information in the EQUASIS database, accessible on the internet and containing safety-related information about the world's merchant ships, is being used to charter only safe ships;
- Establishment of national web-sites, linked to the HELCOM web-site, containing information on maritime safety within national waters;
- Promotion of the use of local pilotage services in Route T and the Sound, according to the adopted IMO Resolutions and as laid down in HELCOM Recommendation 23/3 "Enhancing the Use of Pilots in Route T and the Sound by Notification to Departing Ships and Establishment of an Early Warning System" (should have been operational by 1 January 2003).

### Navigation in ice-conditions

The Joint Workshop agreed that there is a need for unified action within HELCOM to obtain rules for winter traffic, i.e. ice classification and ice breaker services arrangements.

### Need for revision of HELCOM Recommendations in the response field

The Joint Workshop noted that work is already on-going within HELCOM RESPONSE to revise certain HELCOM Recommendations in the response field. Additionally the following was highlighted during the Joint Workshop:

- The use of a three-tier approach when elaborating HELCOM Recommendations outlining 1) the minimum national response capacity, according to the length of the coastline; 2) the need for sub-regional response arrangements; and 3) the need to establish an overall response capacity for the whole Baltic Sea area;
- The need for escort towing arrangements in specific parts of the Baltic Sea area;
- The importance of co-operation in beach cleaning, following a maritime incident;
- The importance of reflecting the Polluter Pays Principle (PPP) when recovering costs related to response operations;
- The importance of drift forecasting systems for use in risk assessments and actual operations, and the already existing models for this purpose;
- The importance of regular exercises; and
- The importance of sufficient aerial surveillance and the possibility of combining this with satellite images; to detect illegal oil discharges, for normal sea surveillance and for use during response operations.

### Need for additional actions

During the Joint Workshop additional items were identified for which there is a need to discuss the possible further steps to be taken within the HELCOM framework. These include:

- Compulsory pilotage in special high risk areas. The establishment of an Expert Working Group, to look further into this issue, was proposed;
- Transit route, throughout the Baltic Sea area, for deep draught ships carrying oil or other harmful substances. The establishment of an Expert Working Group, to look further into this issue, was proposed, with Germany acting as the Lead Country;
- Emphasized focus on implementation of existing measures, including; the use of aerial surveillance preferably in combination with remote sensing by satellite, possibilities to strengthen the effects of port state control; improved co-operation in investigation, prosecution and conviction of offenders;
- Enhanced involvement of the maritime industry (insurance companies, oil industries etc.), through the establishment of partnerships;

- Phasing out the use of single-hull tankers, for the carriage of oil in bulk and heavy oil products;
- Designation of the Baltic Sea area or parts hereof as a Particularly Sensitive Sea Areas (PSSA's);
- Management of alien species discharged via ballast water, taking into account the IMO convention being elaborated on this issue.

## PROGRAMME

### 11 March 2003

**12.30 – 13.00 h:** Registration

### **13.00 – 13.30 h**

Plenary – chaired by Mr. Peter Ehlers

- Welcome: **Mr. Arno Pöker**, Mayor of the City of Rostock
- Opening addresses:
  - **Mr. Hans-Jürgen Froböse** (Federal Ministry for Transport, Building and Housing)
  - **Mr. Fritz Holzwarth** (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)

### **13.30 – 15.30**

Plenary – chaired by Mr. Peter Ehlers

- *Report and assessment on the implementation of measures by the Contracting Parties laid down in the Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area (HELCOM Copenhagen Declaration)*  
**Ms. Anne Christine Brusendorff (HELCOM)**
- Role of the IMO, in particular
  - Topics of general interest already dealt with in the IMO –status quo report (e.g.)*
    - a) Ballast water management
    - b) PSSAs
  - Ms. Saara Lintu (IMO)**
- Power Point presentation on a tanker transit route in the Baltic Sea **(DE)**

### **15.30 – 16.00 h**

Coffee break

**16.00 – 18.00 h** (Parallel sessions)



**12 March 2003**

9.00 – 11.00 h (Parallel sessions)

<p style="text-align: center;"><b>Session III</b></p> <p style="text-align: center;"><b><i>Additional Safety Measures beyond the Copenhagen Declaration</i></b></p> <p><u>Chair:</u> <b>Mr. Niels Bagge (DK)</b></p> <p><u>Rapporteur:</u> <b>Mr. Peter Poulsen (DK)</b></p>	<p style="text-align: center;"><b>Session IV</b></p> <p style="text-align: center;"><b><i>Compliance</i></b></p> <p><u>Chair:</u> <b>Ms. Ingelore Hering (DE)</b></p> <p><u>Rapporteur:</u> <b>Mr. Rolf von Ostrowski (DE)</b></p>
<p><b>Top E</b></p> <p><i>Routeing measures for deep draught ships, especially tankers, covering the entire Baltic Sea</i></p> <p>including regional particularities such as</p> <ul style="list-style-type: none"> <li>• <i>Report and assessment on the experience made by the lately introduced new measures and surveillance activities in the Kadetrenden;</i></li> </ul> <p style="text-align: center;"><b>Mr. Jörg Neubert (DE)</b></p> <ul style="list-style-type: none"> <li>• <i>Report and Assessment of the experience in the Vessel Traffic Service (VTS) – system in the Gulf of Finland</i></li> </ul> <p style="text-align: center;"><b>Mr. Kari Kosonen (FI)</b></p> <ul style="list-style-type: none"> <li>• Results of the HELCOM-AIS-Expert Working Group</li> </ul> <p style="text-align: center;"><b>Mr. Benny Pettersson (SE)</b></p> <ul style="list-style-type: none"> <li>• <i>The need for additional safety measures from Russia's point of view;</i></li> </ul> <p style="text-align: center;"><b>Mr. Vladimir Isakov (RU)</b></p> <p><b>Top F</b></p> <p><i>Possible need for concerted action regarding unification of rules for winter traffic/ice classification and ice breaker services arrangements during winter time</i></p> <p style="text-align: center;"><b>Mr. Jorma Kämäräinen (FI)</b></p>	<p><b>Top G</b></p> <p><i>What do we need more: new decisions or improved implementation?</i></p> <p style="text-align: center;"><b>Ms. Nina Munthe (WWF)</b></p> <p><b>Top H</b></p> <p><i>Improving the work towards prosecution of offenders of antipollution regulations at sea</i></p> <p style="text-align: center;"><b>Barbro Jönsson (SE)</b></p> <p><b>Top I</b></p> <p><i>Port state control in the Baltic Sea area – need for further improvements?</i></p> <p style="text-align: center;"><b>Mr. Gunars Steinerts (LV)</b></p>

**11.00 – 11.30 h**

Coffee break

**11.30 – 12.30 h**

Plenary – chaired by Mr. Peter Ehlers

- Preparation of the Session Reports – Reports by the Session rapporteurs I and II

**12.30 – 13.30 h**

Lunch break

**13.30 – 14.30 h**

Plenary – chaired by Mr. Peter Ehlers

- Preparation of the Session Reports – Reports by the Session rapporteurs III and IV

**14.30 – 15.30 h**

Plenary – chaired by Mr. Peter Ehlers

- Discussion and Conclusions

**15.30 h**

Plenary – chaired by Mr. Peter Ehlers

- Closing of the Workshop

**WELCOME ADDRESS**

***Mr. Arno Pöker***  
**Mayor of the Hanseatic City of Rostock**

Dear Mr Froböse from the Federal Ministry for Transport, Building and Housing,

Dear Mr. Holzwarth from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety,

Dear Ladies and Gentlemen,

It is my great honour and pleasure to welcome you today as our guests in the Hanseatic City of Rostock for your important HELCOM Workshop on impacts from shipping on the marine environment of the Baltic Sea.

As you may know, only a few weeks ago another HELCOM – Meeting, the MARITIME-Group, was organized in Rostock. We are very proud that you have chosen our City for your conference, too.

So, Rostock is contributing in a concrete way to the protection and safety of our common Baltic Sea.

We hope to answer to your expectations. I wish, you could also share a few hours of your valuable time for getting known to the *Hanseatic City* of Rostock and to its citizens. Just now you are in of the old part of the city. The oldest written testimony that mentions Rostock with full city rights dates back to the year 1218. The development of Rostock was favourably influenced by the Hanse, a league of merchants in medieval times. It was founded with the purpose of protection of its members and to enhance the trading. The influence of the Hanseatic League reached from St. Petersburg to Antwerp and covered wide parts of the Baltic and the North Sea.

Today Rostock is called *Hanseatic City* again. This is, of course, due to its history for those times, when peaceful overseas trade was possible, like at the time of the Hanse, Rostock and its citizens were doing well. That's why the surname *Hanseatic City* is a symbol of peace, partnership and prosperity. During the past decade, Rostock managed to develop into an important commercial centre. Numerous ferry lines settled here. The city became a key location in the sea trade with Scandinavia and Northern and Eastern Europe.

Rostock is an important site of growing investment. During the last years, a lot of modern enterprises settled here. Modern conference and fair facilities were built.

As you might know, the International Gardening Exhibition takes place this year in Rostock. It starts in April and we are looking forward to welcoming numerous visitors from all over the world.

Just now we are applying for the Olympic Sailing Competitions in 2012 and the people are enthusiastic about the new challenges.

The University of Rostock, by the way the oldest in the Baltic Sea Region founded already in 1419, plays a very important role concerning the settlement of businesses and trades.

The University itself and several of its institutions deliver scientific and technical solutions for the building trade as well as for shipbuilding, for agriculture, environmental protection and medicine. There exist strong relations of co-operation between the University and many scientific enterprises, like Fraunhofer Institute for Graphic Data Processing or the Institute for Organic Catalyse Research.

Dear Ladies and Gentlemen,

Rostock is around 780 years old and I'm sure it was not only the fresh breeze from the Baltic Sea that has kept Rostock young but also the large number of young students.

The Baltic Sea and its shores are a very important tourist attraction and economic factor for our part of the land and for our city.

The Helsinki Commission plays a very important role in keeping our common Baltic Sea a clean and safe one. Following the rules and advises of the Helsinki Commission, Rostock did a lot to realise the sustainable aims of our time. The pollution by sewage has been reduced significantly. Our beaches are getting regularly the blue flag of the European Union to show all visitors: here you can bath and swim without any risks for your health.

Pollution by ships is still a serious challenge for the BalticSea but besides technical improvements the efforts have been increased to identify responsible persons so that they can finally be fined.

A lot has been done for the safety of our ship routes. For instance a newly safety system has been introduced lately. The equipment for and the management of emergency cases are being constantly modernised, for instance the fire brigade and the emergency rescue team. But of course a lot has to be done and improved. We are far away from a completely clean and safe environment and sea. Only recently an oil tank ship wrecked in North Denmark only a few kilometres away from our coast. 35 000 tons of oil were threatening our environment. And we only with luck escaped the catastrophe. The accident in the Atlantic Ocean near the Spanish coast showed us how devastating such accidents are.

So, your work is very important. Transboundary Regulations are necessary and their full implementation and monitoring are even more necessary.

The Baltic Sea is becoming an 'inland sea' for the Baltic Sea region and international co-operation across borders became possible and more effective after the political changes.

Our city is co-operating in several international organisations like the Union of the Baltic Cities with its 100 member cities around the Baltic Sea. Common interests and common projects are uniting our people and developing the area to a prosperous and healthy area.

Dear guests,

Welcome again and let me express my sincere thanks to the organisers of this important event. I hope you will have an interesting meeting and maybe your ideas

and a concrete action programme summarizing these days here in Rostock will become an important cornerstone for the further discussion of shipping issues in the framework of the Helsinki Commission, maybe spread as 'Rostock ideas' . That would involve our city even more with the international ship and sea-safety discussion.

For the days to follow I wish you a nice stay in our City.

Thank you.

**OPENING ADDRESS**

***Mr. Hans-Jürgen Froböse***

**Federal Ministry of Transport, Building and Housing, Bonn, Germany**

Ladies and Gentlemen,

On behalf of the Federal Ministry of Transport, Building and Housing, I would like to welcome you here in Rostock-Warnemünde to the Copenhagen + 1 Workshop, which we are staging together with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. I am delighted by the impressive response with which this workshop has obviously met here, and I would like to extend a particularly warm welcome to our numerous foreign guests from the Baltic rim countries. In our joint activities today and tomorrow at this workshop, which is a follow-up to the HELCOM Extraordinary Ministerial Meeting held in Copenhagen on 10 September 2001,

- we shall acknowledge what has already been achieved in improving environmental protection in the Baltic,
- we shall highlight action that still needs to be taken, as well as
- identifying additional possibilities for the evolution of an environmentally sound maritime transport policy in the Baltic and getting such schemes off the ground.

Maritime transport is an environmentally sound mode which moves large quantities of goods over long distances in a relatively short time. There is no doubt that neither road nor air transport can perform these enormous tasks in a more environmentally friendly manner. In addition, shipping is also responsible for the large-scale carriage of dangerous goods, especially petroleum, because here too, today's modern tankers pose a smaller potential threat to mankind and the environment than other means of transport. We should not forget this when we read all the negative headlines, especially those in connection with the sinking of the "Prestige" off the coast of Galicia. In the shipping sector, operations cause less pollution in global terms than other modes of transport. However, if a ship is involved in one single accident, or if it sinks, the environmental impact can be devastating in local or even regional terms.

Protecting the seas and the coasts, minimizing the risks associated with transport to the greatest extent possible – this is today one of the most important tasks of the maritime transport policies pursued by the coastal states. And here, our ambitions are exactly the same of those of environment policymakers.

At the end of December 2002, the Federal Minister of Transport, Building and Housing, Dr. Stolpe, presented the Federal Government's eight-point programme for the protection of the marine environment and the coastal regions and announced that it would be implemented as quickly as possible. I would just like to briefly mention a few of the points contained in this programme:

- a chain of places of refuge is to be created along the German coast in order to provide ships in distress with a safe anchorage;

- the safety of the transit routes in the Baltic is to be improved, in cooperation with all the Baltic rim countries;
- mandatory pilotage is to be introduced in waters where navigation is difficult, such as the Kadetrenden;
- the responsibility of port states and flag states is to be strengthened;
- there are also plans to enter into agreements with ports and the petroleum industry, under which the former would deny port entry to single hull tankers and the latter would agree not to use them for the transport of dangerous goods;
- the speedy and complete introduction of the shipborne automatic identification system (AIS) is planned, with which it will be possible to cover almost all waterborne traffic movements.

Most of these items can also be found on the agenda of the workshop starting today, because they are among the suggestions made for improving safety at sea that should be realized with the utmost urgency and as quickly as possible.

There is one item, however, to which I would urge you to give particular priority, namely improving the transit routes in the Baltic. It is true that the Baltic has not, unfortunately, been spared tanker accidents involving spills of heavy oil, but so far we have, fortunately, not experienced a major disaster such as the wreck of the "Prestige". And that is how things must remain in the future, because the Baltic, which has the character of an inland sea and is a particularly sensitive ecological region, is far less able to cope with large-scale oil pollution than the Atlantic. For this reason, everything should be done here, perhaps more than anywhere else, to keep the risk as small as is humanly possible, even if there might be one or two people who complain that a measure such as defining a tanker transit route is excessive. This is a view with which I, for one, totally disagree:

The definition of a transit route will not only make it easier to identify tankers, but will also make it possible to provide navigational advice – which is often essential – in order to prevent collisions. In addition, it will make it easier to monitor vessels to ensure that they keep the necessary distance from the coastline. I would be delighted if this German concern were to meet with approval here, and I would be even more delighted if this workshop could provide the initial impetus for speedy implementation of this project. A scientific study has already been published, which means that the most important preliminary work has already been done.

We, the Baltic rim countries, are in a position to determine whether "our sea" becomes an example of best practice in the sound stewardship of natural resources. This includes not only the discharges from shipping, which are relatively small-scale, but also, and above all, the discharges from rivers, which actually determine the quality of seawater. This important environmental aspect will also be addressed at the workshop, and I welcome this very much.

I hope you have interesting discussions and I very much wish that the workshop has a successful outcome, which could perhaps become a milestone for the future of the Baltic Sea region.

**OPENING ADDRESS**

***Mr. Fritz Holzwarth***

**Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Bonn, Germany**

Dear Ladies and Gentlemen,  
dear colleagues,

on behalf of the Federal Ministry for the Environment, Nature Conservation and Nuclear safety I welcome you here in Rostock Warnemuende to our important HELCOM Workshop, dealing with environmental impacts from shipping, in particular with the achievements as regards the implementation of the Copenhagen Declaration. Let me stress that HELCOM –the advocate of the Baltic Sea's environmental interests- might be the most appropriate framework for such an exercise.

The Workshop has been jointly prepared by the Federal Ministries for the Environment, Nature Conservation and Nuclear Safety as well as for Transport, Building and Housing.

My colleague, Mr. Froböse, has already made reference to that. In this context I would like to stress one aspect explicitly: Protection of the Marine Environment against environmental impacts from shipping and improvements in the field of Maritime Safety are two sides of the same coin. It is the marine environment of the Baltic Sea that already benefits and will benefit from the decisions of the HELCOM EXTRA meeting in September 2001 in Copenhagen and their respective implementation.

Holding this Workshop here with experts from all HELCOM Contracting Parties, being responsible for environmental aspects of shipping or different aspects of Maritime Safety is one more concrete contribution to the integrated policy approach.

That leads me to another observation as regards the actors being involved in policy development and implementation processes. Even if shipping is an international issue, concrete measures against environmental impacts have to be considered at the appropriate level, be it national, regional or international.

Dear colleagues,

allow me to quote some statistical material, only to underline the importance –and with regard to future developments- even the urgency of concrete policy measures and respective implementation activities. Right now round about 2000 ships are at sea at the same time, including oil tankers, ships carrying hazardous substances and –last but not least-50 large passenger ferries. The average growth in this traffic is estimated at 4 – 5 % per year.

In particular carriage of oil and related oil discharges represent a significant threat to the marine ecosystem. These discharges may occur during normal operation, may

be illegal or caused by accident. A number of serious accidents and large oil spills respectively have happened during the last years. We all remember names of tankers like "*Torrey Canyon*", off the coast of England in 1967, discharging 93.000 tonnes; the "*Amoco Cadiz*", off the coast of Brittany in 1978, discharging 260.000 tonnes; the "*Haven*" off the coast of Genoa in 1991, discharging 114.000 tonnes; the "*Erika*" off the coast of Brittany in 1999, discharging 25.000 tonnes and finally the "*Prestige*", off northwest of Spain in late 2002, discharging 7.000 tonnes directly to the marine environment and approximately 50.000 tonnes still remaining in the wreck. Even if these figures comprise several decades they reveal the urgent need for concrete action. This is in particular true with regard to the development in the eastern part of the Baltic Sea Area. New large oil terminals in the Baltic Republics and in the Russian Federation and as a consequence of that increasing shipping density from the Eastern part of the Baltic Sea along hundreds of kilometres of unique and highly environmentally sensitive coastal areas to the Northeast Atlantic pose a threat to the marine environment and , dear colleagues, to us.

But accidental oil spills are only one aspect as regards the impacts of shipping on the marine environment. Even if this Workshop today and tomorrow will in particular cover maritime safety measures one should not forget other possible impacts. Let me –for the sake of a balanced presentation- add the introduction of alien species through ballast water, the input of hazardous substances by cleaning tanks, permanent inputs of oil from shipping operation or illegally, losses of antifoulants and release of wastewater, garbage and litter. Furthermore emissions of sulphur and nitrogen have to be mentioned. Some of the issues will at least be *touched* during this Workshop.

Let me come back to the core issue to be discussed during the next two days here in Warnemuende: Maritime Safety Measures.

The Federal Minister for Transport, Building and Housing, Mr. Stolpe, has issued a programme, containing eight core actions to be considered and introduced in the near future.

Aspects like save havens, routing measures for tankers, double hull tankers, improved port state control, flag state responsibility, compensation for oil pollution damage, involvement of the oil industry and AIS have to be considered. The Kadetrenden, a narrow area, is one of the regions in our European Waters where *mandatory pilotage*, another key issue in our discussion concerning further improvements in shipping safety, might have a positive effect on the safety of shipping. We have to convince all riparian states of the Baltic Sea that such a measure could even more effectively minimize the environmental risk of sipping in this region. Talking about declaring the Baltic Sea or even parts of it as a *Particularly Sensitive Sea Area (PSSA)* leads to another important aspect that should be mentioned in this context.

Europe, in some cases even Germany or the entire Baltic Sea States have sometimes in the latest past been accused of intending to overrule the International Maritime Organisation (IMO).

Dear colleagues,

it goes without saying that the IMO is *the* relevant international organisation to deal with shipping issues. Let me in this context in particular welcome the representative of the IMO here in Warnemuende. I'm convinced that all experts will join me in my opinion that we can only succeed co-operatively. Regional Co-operations like HELCOM have the task to tackle regional threats at a regional level and they should, to a certain extent, also promote regional interests and needs in international forums.

But the relevant authority to come to final decisions as regards regulations for shipping worldwide is the IMO. Let me in this context express my deep concern about the European Commission's inability to join us here in Warnemuende, due to a lack in personnel resources and other urgent commitments.

It would have been very interesting to learn from our colleagues from Brussels about their approach for further measures in this field.

I'm deeply convinced that we can only achieve the best for the benefit of our common marine environment if we succeed in co-operation, cross-border and cross-organisational.

Let this be the introduction to my final conclusions:

- The Baltic Sea as a unique Sea Area needs particular and tailor-made solutions in the field of maritime safety;
- The IMO, the EU Commission and HELCOM have to act co-operatively in their respective frameworks to achieve the maximum benefit for the Baltic Sea;
- Apart from the need for additional measures States and relevant organisations have to take care for appropriate implementation activities of already existing regulations and agreements with the aim of safeguarding the credibility of our joint work;

Saying that I wish you a successful Workshop here in Warnemuende. The Federal Government would appreciate it very much if you, the experts in the said field, could provide us with concrete advice for further concrete measures. We are strongly convinced that your expertise is extremely helpful in setting the right targets and tackling the right problems in the future political decision-making process.

I thank you for your attention.

**REPORT AND ASSESSMENT ON THE IMPLEMENTATION OF MEASURES BY  
THE CONTRACTING PARTIES LAID DOWN IN THE DECLARATION ON THE  
SAFETY OF NAVIGATION AND EMERGENCY CAPACITY IN THE BALTIC SEA  
AREA (HELCOM COPENHAGEN DECLARATION)**

***Ms. Anne Christine Brusendorff***  
**Helsinki Commission (HELCOM)**

Ladies and Gentlemen,

Maritime transportation has been growing steadily in the Baltic Sea area – and a doubling in the amount within the next 15 years of the number of cargo being transported at sea from 500 million to 1000 million tonnes has been estimated.

With its semi-enclosed status the Baltic Sea places restrictions on ships navigation.

Narrow straits and shallow waters leads to traffic junctions – and in some cases to accidents.

Here you can see a map of accidents in the years 2000 and 2001 as well as a list of major oil incidents – the latest one being the collision between the bulk carrier "Tern" and the tanker "Baltic Carrier"

This collision resulted in the biggest outflow of heavy fuel oil in 20 years in the Baltic Sea area and the Helsinki Commission - at the request of Danish Government - arranged an extraordinary ministerial meeting on 10 September 2001 in Copenhagen (HELCOM EXTRA meeting).

During my presentation I will briefly outline the contents of the package of measures decided on at the HELCOM EXTRA meeting and the extent to which the Contracting Parties have implemented these measures.

During the preparations for the HELCOM EXTRA meeting it became clear that dealing with only the need for additional maritime safety measures would not be sufficient.

In addition there was a need to address:

- Compliance with existing and new measures;
- Adequacy of emergency and response capacity in case of new accidents;
- An instrument to assess future trends in maritime transportation and thereby the need for additional measures; and
- taking into account the short time available for the preparations of the HELCOM EXTRA meeting, it was decided to arrange a Workshop to assess the status and effect of the agreed measures as well as the need for additional ones. And this is the reason why we are gathered during these two days in Warnemünde.

At the HELCOM EXTRA meeting the Ministers responsible for the environment and the maritime transportation of the nine countries bordering on the Baltic Sea area as

well as a representative of the European Community adopted a "Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea area" – commonly referred to as the HELCOM Copenhagen Declaration as well as corresponding Amendments to the Annex of the Helsinki Convention dealing with shipping. These amendments entered into force on 1 December last year.

By amending the Helsinki Convention the Ministers showed not only their political commitment to the measures agreed on, but also their acceptance of the legally binding character of these.

A three-stage implementation of the measures was foreseen ranging from:

- Joint initiatives of the Baltic Sea States within the International Maritime Organization and the 1982 Paris Memorandum of Understanding;
- Implementation by the Baltic Sea States of regulations within the International Maritime Organization and International Hydrographic Organization, where possible with the strictest demands; and
- Initiation of regional actions, to make use of the possibility of HELCOM to act quicker than what is typically possible in the International Maritime Organization.

How have we succeeded then - in implementing the HELCOM Copenhagen Declaration?

As for the identified needs for additional routing measures a full implementation has been obtained – including the approval by IMO - for:

- An extension of the existing deep-water route north-east of Gedser five nautical miles into the traffic-separation scheme "South of Gedser". By this the traffic pattern for deep-draught ships has been made much clearer – and both groundings as well as collisions should be lessened in the future in this densely trafficked area, with more than 60.000 ships passing on a yearly basis, one-fifth of which are dependent on the deep-water route.
- Further amendments to traffic-separation schemes and a new deep water route have been established in the eastern part of the Gulf of Finland – following the opening of the oil terminal in Primorsk in Russia and the shipment of oil with tankers with a capacity up to 150.000 tonnes and a draught of up to 15 metres.
- The opening of the Primorsk oil terminal also highlighted the need for
  - A Vessel Traffic Management and Information System (VTMIS) in the Gulf of Finland to minimize the risk for accidents due to the increased traffic, including enlarged Traffic Separation Schemes (TSS) and a compulsory reporting system. IMO approval has been obtained and the system will be fully operational July 2004.
  - Further an alternative route off the island of Gotland, for southbound laden oil tankers, with a draught exceeding 13 metres, has been established to avoid groundings when using the existing traffic separation scheme south off the island of Gotland.
  - Lastly a recommendation for the use of specific passages for north-

bound and south-bound ships in the waters between the island of Bornholm and the Swedish mainland should lessen the risk for accidents.

Hydrographic surveys – to ensure up-to-date information on water-depths – and thereby to avoid the by far most frequent type of accidents; that is groundings - will also be initiated according to the agreed time schedule. Within the Baltic Hydrographic Commission a Joint Re-survey Plan was agreed by the end of 2002 with the aim to start implementation 2003.

The production of Electronic Navigational Charts (ENC) – ensuring that up-to-date nautical charts are available for the intended voyage – and making it possible to make use of Electronic Chart Display and Information System (ECDIS), whereby a ship is able to display in real time its own position – is also proceeding according to the agreed time schedule. Thus major shipping routes and ports are covered as of the end of 2002 and secondary will be by the end of 2004.

A joint initiative by the Baltic Sea states within the 1982 Paris Memorandum of Understanding has ensured that as a matter of priority Port State Control Officers will intensify the control of paper charts on ships posing a risk to the marine environment.

An execution of port state control by all Baltic Sea States – either on the basis of the relevant EC directive in this field or by full membership to the 1982 Paris MoU – is also within reach with the actions being taken by Estonia, Latvia and Lithuania.

As for the use of pilots by ships posing a risk to the marine environment – a joint submission by the Baltic Sea States to IMO has resulted in the extension of the coverage of ships which according to two IMO resolutions are recommended to make use of the local pilotage schemes when navigating through Route T and the Sound.

Lastly, work is progressing well in a HELCOM Working Group dealing with the establishment of a Common Baltic AIS monitoring system, which shall be operational by 1 July 2005. This system will enable not only regular monitoring of maritime traffic but also the elaboration of statistics on the nature and extent of shipping as well as the amount of cargo being transported in the Baltic Sea area.

And now I would like to take you from the fully implemented measures to the measures where there is still room for further actions.

As around 80% of all accidents at sea are due to human failure it is important to establish a common procedure for the investigations into marine casualties to promote a safety and environmental culture. With this as the aim it was decided:

- To make use of non-conformity procedures under the IMO International Safety Management Code (ISM code), including distribution of findings to the maritime industry via IMO
- To exchange data voyage recorders of involved ships, sailing the flag of a Baltic State; and
- To make use of the IMO resolution on marine casualty investigations to enable common use of the outcome of such investigations

While some Contracting Parties have fully implemented these measures others are still in the process of amending their legislation.

With the EC requirement that plans for the identification of places of refuge for ships in distress shall be established no later than 1 July 2003 and the up-coming IMO

Assembly resolutions on this issue work will be initiated for the Baltic as well. A need for regional discussions and co-operation can be foreseen.

In two out of three high risk accident areas, namely the South-western part of the Baltic Sea, including the Danish Straits and in the Gulf of Finland, sub-regional agreements have been concluded to increase the emergency capacity. With the increased amounts of oil being transported in the Baltic and the increased sizes of the used tankers this is a priority field to be further dealt with. A draft HELCOM Recommendation has been elaborated for this purpose, outlining the procedures to be taken into account by the Contracting Parties when ascertaining whether they have a satisfactory readiness of their emergency capacity.

Information from some Baltic Sea States point out that they do not fulfill the HELCOM Recommendations as regards operational ability to respond to spillages of oil or other harmful substances. More work is also needed related to response to heavy oils or oil in ice and the need for co-operation in shore-line clean-up operations should be stressed, be it by the use of the already established procedures or by amending the Helsinki Convention to cover this.

The possible designation of the Baltic Sea area – or parts hereof – as a Particularly Sensitive Sea Area (PSSA) is being investigated and by the end of March this year HELCOM will take a formal decision on whether or not to make a PSSA application to IMO.

Notifications to IMO have been or are on their way – pointing out that the Baltic Sea States will make use of the strictest possible regime under IMO for the phasing out of single-hull oil tankers.

Likewise the establishment of a Memorandum of Understanding with the European Maritime Safety Agency will be made – once the Agency has been set up.

And – now I will come to the measures where not much has happened.

To underpin the use of pilots – and thereby the IMO support to an extension of the recommendations on use of pilots in route T and the Sound – the Baltic Sea States adopted a HELCOM Recommendation, establishing a system:

- Informing ships about the recommendation to use pilot; and
- Surveying ships actual use of pilots.

Despite the fact that it was agreed to make this system operational by January 2003, the Danish Admiral Fleet has not yet received any information about ships leaving a Baltic port and covered by the IMO recommendations on use of pilots.

Several parts of the HELCOM Copenhagen Declaration as well as one of the amendments to the Helsinki Convention lay down measures for how to more actively involve the maritime industry – shippers as well as recipients – in ensuring quality shipping. This goes for the requirement to develop administrative agreements to ensure:

- Carriage of oil in double-hull oil tankers;
- That ships posing a risk to the marine environment are only chartered if they carry ECDIS; and
- That only safe tankers are chartered, by requesting the maritime industry to make use of the information in the EQASIS database.

Only one Contracting State has implemented these measures.

Likewise only one Contracting State has set up a national web-site containing information on maritime safety within its waters.

These are all important measures if we want to ensure that also the maritime industry takes responsibility to improve the safety of navigation in the Baltic Sea area.

From a psychological point of view it is probably wrong to end up with measures that have not been implemented – and which will leave you all with the feeling that much still remains to be done.

I would therefore like to stress that the Baltic Sea States have been very efficient and successful in their implementation of the HELCOM Copenhagen Declaration and the corresponding amendments to the Helsinki Convention.

This has shown the added value of regional efforts for ensuring safe navigation and a swift and coordinated response to maritime incidents.

There is however, a need to stress the importance of a continued commitment on a broad regional level, involving all stakeholders. And I take it that the participation in this Workshop is the sign of the existence of such a continued commitment.

Thank you.

The slide show is available (MS PowerPoint):

["HELCOM Copenhagen Declaration – on its way to successful implementation"](#)

**TOPICS OF GENERAL INTEREST ALREADY DEALT WITH IN THE IMO –  
STATUS QUO REPORT**

***Ms. Saara Lintu***  
**International Maritime Organization (IMO)**

***PARTICULARLY SENSITIVE SEA AREAS –  
a management tool for protecting sensitive sea areas***

A PSSA is a comprehensive management tool through which environmentally sensitive sea areas, which are vulnerable to damage from international shipping activities, can receive additional protection through the International Maritime Organization (IMO).

For an area to be designated as a PSSA it has to meet the following three criteria:

- 1) It must be important from an ecological or socio-economic or scientific point of view (one or more of these).
- 2) The area must be vulnerable to damage by international maritime activities.
- 3) There must be measures that can be adopted by IMO to protect the area from the identified maritime activities.

The measures adopted for PSSAs (called associated protective measures, APMs) are limited to actions within the purview of IMO and include the following options:

- Adoption of ships' routing and reporting systems near or in the area, under the SOLAS Convention and in accordance with the General Provisions on Ships' Routing and the Guidelines and Criteria for Ship Reporting Systems.
- Development and adoption of other measures aimed at protecting specific sea areas against environmental damage from ships, such as compulsory pilotage schemes or vessel traffic management schemes.

Alternatively the APMs for PSSAs could include measures which are not yet in existence, but that could theoretically be available through the IMO.

Sensitive sea areas which already have in place IMO protective measures and may not require any additional measures to be adopted, may, however, benefit from receiving a PSSA status as these are marked on navigational charts thereby alerting the international shipping community of the sensitivity of the area. Whatever protective measure is proposed, it must be considered in light of the impact on navigation, and the method of enforcing the measure needs to be planned.

IMO has adopted Guidelines under IMO resolution A. 927(22), which Governments are encouraged to follow when preparing and submitting PSSA proposals to IMO. IMO has also prepared a Guidance document for submission of PSSA proposals, which is under the cover of IMO/Circ. 398.

The PSSA is not, however, the only tool available for protecting sea areas. IMO's MARPOL 73/78 Convention contains the Special Area concept, which also provides protection to sensitive sea areas from international maritime activities. In Special Areas stricter, pre-determined discharge limits apply for oil, noxious liquid substances and/or garbage than in other sea areas, and these areas require coastal States to have in place adequate reception facilities. The PSSA concept can offer a more stringent tailor-made protection to an area than the Special Area concept, as the "shopping-list" of protective measures for PSSAs is wide and can go well beyond the pre-determined discharge restrictions of the Special Areas. Another way of protecting sea areas is by establishing Marine Protected Areas. These are established for marine nature conservation reasons outside the IMO forum and whilst they are an effective management tool, it is important to note that they do not protect areas from international shipping activities. Marine Protected Areas, which require protection from international shipping, should be brought to the attention of IMO for them to be proposed as PSSAs or Special Areas, depending on the type of protection measure that is needed.

Although the PSSA concept has been in existence for over a decade, it is considered as one of the "emerging" issues on IMO's environmental agenda. The importance of PSSAs as a useful management tool was further stressed at the UNEP Governing Council, held last month, which highlighted the need to promote marine areas and coastal zones that fulfil the criteria for designation of PSSAs and advocated the furthering of the process of IMO designation of such areas.

The slide show is available (MS PowerPoint):

["PSSA establishment procedures in IMO"](#)

***TRANSFER OF INVASIVE MARINE SPECIES IN BALLAST WATER –  
perhaps the biggest environmental challenge facing the global shipping  
industry this century***

***The Problem and IMO's response to it:***

It is estimated that around 10 billion tonnes of ballast water are carried around the world by ships each year (IMO 1999). While ballast water is essential to the safe operation of ships, it also poses a serious environmental threat, in that at least 7,000 to possibly more than 10,000 different species of marine microbes, plants and animals may be carried globally in ballast water each day (Carlton, 1999a). When discharged into new environments, these species may become invasive and severely disrupt the native ecology and have serious impacts on the economy and human health. The global economic impacts of invasive marine species have not been quantified but are likely to be in the order of tens of billions of US dollars a year.

The transfer of invasive marine species in ballast water is perhaps the biggest environmental challenge facing the global shipping industry this century.

IMO has responded to the ballast water 'problem' by:

- forming a Ballast Water Working Group under its Marine Environment Protection Committee (MEPC), which is developing a new international legal instrument (Convention) on ballast water management

- adopting IMO *Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens* Assembly Resolution A.868(20))
- joining forces with the Global Environment Facility (GEF) and United Nations Development Programme (UNDP) to assist developing countries to implement the IMO Guidelines and prepare for the Ballast Water Convention, through the *Global Ballast Water Management Programme* (GloBallast).

### ***Ballast water Guidelines:***

The IMO ballast water guidelines have often been referred to as *voluntary*, however they do have certain legal status under international law, having been adopted by consensus as a Resolution of the Assembly of IMO. Section 11 of the Guidelines provides for countries to implement and enforce the provisions through National legislation. According to the 1982 UN Convention on the Law of the Sea (UNCLOS), a Coastal state can only enact laws to protect the marine environment in its EEZ based upon generally accepted international standards. Without any doubt the IMO ballast water Guidelines can be considered as meeting this requirement.

Implementation of the IMO Guidelines by various countries to date has tended to focus on the section dealing with Ships' operational procedures, and in particular the use of ballast exchange at sea, and the section on Recording and reporting procedures. Unfortunately, very few countries have implemented the guidelines in their entirety, and the sections on Dissemination of information, Training and education, Port State considerations and Enforcement and monitoring by port States have not been given sufficient attention.

The IMO Guidelines provide a comprehensive set of practical measures that, if implemented fully, will do much to minimize the transfer of harmful aquatic organisms and pathogens in ships' ballast water. They provide a very sound, standardised, internationally endorsed basis for countries to implement ballast water control and management measures, until the new Ballast Water Convention comes into force.

### ***The New Convention:***

The new Ballast Water Convention will provide a uniform, standardized, global ballast water management regulatory regime. To a certain extent, it is based on the existing IMO Guidelines, but adopts a 'Two Tier' approach. Tier One is the base level requirement that would apply to all ships, including the mandatory carriage of a Ballast Water & Sediment Management Plan, Ballast Water Record Book and a requirement to carry out certain ballast water management procedures after a phase in period. Recognition is given that procedures may differ for new ships.

Tier Two would apply only in prescribed ballast water management areas. However, further work is required to determine the extent of the proposed areas and their requirements, including how the UN Convention on the Law of the Sea (UNCLOS) might apply. It is anticipated that the Convention will be adopted by an IMO Diplomatic Conference in early 2004.

### ***The GloBallast Programme:***

In anticipation of adoption of the new Ballast Water Convention, IMO has also joined forces with the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) to implement the Global Ballast Water Management Programme (GloBallast). The Development Objectives of this technical cooperation programme are to assist developing countries to:

- reduce the transfer of harmful aquatic organisms and pathogens in ships' ballast water,
- implement existing IMO Guidelines, and
- prepare for the implementation of a new Ballast Water Convention.

The programme is working to achieve these objectives in six initial Demonstration Sites, and it is intended that successes at the initial Demonstration Sites will be replicated through regional programmes. Further information on the Globallast activities can be found on their web site <http://globallast.imo.org>

The slide show is available (MS PowerPoint):

["Ballast water - perhaps the biggest environmental challenge facing the global shipping industry this century"](#)

**A TRAFFIC ROUTE INVESTIGATION TO FIND OUT ONE FAVORED BALTIC  
TRANSIT WAY PROPOSAL**

***Mr. R. Müller and Ms. A. Zölder***

**Shipping Institute Warnemünde at the Wismar University, Germany**

The slide show is available (MS PowerPoint):

["A traffic route investigation to find out one favored Baltic Transit Way proposal"](#)

**SPEAKING NOTE BY THE DANISH DELEGATION**

***Mr. Niels Bagge***

**Danish Maritime Authority, Copenhagen, Denmark**

"Safer shipping, cleaner oceans" is the motto of the IMO. If this motto is transferred to our part of the world, it should be reworded into "Safer shipping, a cleaner Baltic Sea". Safer shipping will not occur if we do nothing. Everybody has to work on all aspects and measures continuously. The entire spectrum ranges from qualified, educated and properly certified seafarers, qualified manning, the management and technical standards of ships and the quality of flag States to the standards of coastal States and the services they supply to the shipping industry. In short: "Quality Shipping".

For many years, the countries around the Baltic Sea have worked out and internationally accepted a vast number of measures:

- Notices to Mariners,
- Charts,
- Radio communication systems,
- Pilot services (mandatory and/or recommended),
- Routes, VTS, traffic separation schemes, radio reporting systems,
- Port states control systems,
- ISM, etc.

Following the tragic collision two years ago in the Baltic Sea east of the Danish island of Moen, where 2,700 tons of heavy oil was spilled into the sea, ministers from the states signatory to the HELCOM Convention adopted the Copenhagen Declaration dated 10 September 2001. Many of the measures agreed on that occasion have been carried out by now, and others will be carried out in the nearest future (AIS, ECDIS, use of double hull tankers, etc.). In the case of Danish waters, especially the adoption by the IMO of the revised recommendation on navigation through the entrances to the Baltic Sea is very essential (Res. MSC 138/76 dated 5 December 2002). According to this resolution, the recommended use of pilots now covers ships with a draught of 11 metres, which is a reduction from 13 to 11 metres; in other words, a large part of the "big" ships passing Danish waters. The said recommendation will enter into force in December this year.

The other measure I want to mention here is the extended deep-water route in the Kadetrende that entered into force on January last year. This is the result of an exemplary cooperation between the German and Danish maritime authorities who have worked out this measure and subsequently achieved the IMO's agreement to it.

From the Danish point of view, it is essential that all the measures agreed at the HELCOM Extraordinary Ministerial Meeting in Copenhagen on 10 September 2001 are implemented and accepted in detail by the shipping industry. In addition, this is very important in order to obtain satisfactory solutions to the following three issues

covering ships entering or leaving the Baltic Sea:

- No heavy oil to be carried by single hull tankers,
- the use of pilots by large tankers carrying heavy fuel or ships carrying certain kinds of dangerous goods, and
- the introduction of an early warning scheme.

I would like to use this opportunity to inform the distinguished delegates of the existence of an analysis of the Navigational Safety in Danish Waters, which has been made for The Danish Maritime Authority and The Royal Danish Administration of Navigation and hydrography. An English résumé of the analysis report is available in a limited number of copies here at this session, but it can be read and downloaded from our homepage at [www.dma.dk](http://www.dma.dk)

**SESSION I "ASSESSMENT" / TOP A**

**ASSESSMENT ON THE IMPROVEMENT OF THE CONDITIONS WITHIN THE  
MARINE ENVIRONMENT IN THE BALTIC SEA REGARDING HELCOM  
MEASURES DIFFERENTIATING BETWEEN SEA- AND LAND-BASED INPUTS  
IN THE LAST 5 YEARS**

*Mr. Heinz-Jochen Poremski*

**Federal Environmental Agency, Berlin, Germany**

The slide show is available (MS PowerPoint):

["Assessment on the improvement of the conditions within the marine environment in the Baltic Sea regarding HELCOM measures differentiating between sea- and land-based inputs in the last 5 years"](#)

**SESSION I "ASSESSMENT" / TOP B**

**RISK ASSESSMENT OF OIL SPILLS INCLUDING ENVIRONMENTAL IMPACTS  
FROM OIL TERMINALS**

***Mr. Sergey Ovsienko***

**State Oceanographic Institute, Moscow, Russia**

The results of the oil spill spreading risk analyses on the main transportation routes and oil terminals in the Baltic Sea were obtained in HELCOM project "An Updated Assessment of the Risk for Oil Spills in the Baltic Sea Area", in Finnish and in Russian projects. The results consist of the outcome of the mathematical modelling for about one hundred points with near 250 000 oil spreading scenarios.

The results include estimations of risk zones for oil spreading (areas, where oil can appear after oil spill), scales (degree) and probability of oil impact on shoreline and in water areas in the various parts of the Baltic Sea. The received results allow to determine the time available for localization and for response actions on possible oil spills and to estimate efficiency of planned response actions.

It seems useful:

- To take into account the results of the risk analyses at drawing up and updating of Contingency Plans;
- To carry out regular updating and addition of the risk analyses data when new information comes available;
- To consider an opportunity of creation of operative risk analysis system for the Baltic Sea on the basis of accessible operative meteorological, hydrological and other information.

The slide shows are available (MS PowerPoint):

["Risk assessment of oil spills including environmental impacts from oil terminals"](#)

["Updated assessment of the risk for oil spills in the Baltic Sea area"](#)

**OUTCOME OF SESSION I "ASSESSMENT"**

**Chair: Mr. Guntis Drunka (Latvia)**

**Rapporteur: Mr. Janis Krastins (Latvia)**

Two presentations were made during the Session I:

1. Topic A

Assessment on the improvement of the conditions within the marine environment in the Baltic Sea regarding HELCOM measures differentiating between sea – and land – based input in the last 5 years.

Speaker Mr. Jochen Poremski (DE)

2. Topic B

Risk Assessment of oil spills including environmental impacts from oil terminals.

Speaker Mr. Sergey Ovsienko (RU)

Main pollution sources were clearly pointed out during the presentation of Topic A. Both sea-based, land-based pollution sources were indicated.

Wide statistics were included in presentation to compare several inputs of pollution as well as compared between each other. Although statistics were different.

As the conclusion it can be said that input from shipping is still considerable and the society have to concern a lot.

Biological pollution becomes more efficient.

Taking into account all that further discussion to decrease pollution from shipping have to be done in order to minimise accidental operational and biological pollution.

Topic B touches issues concerning Risk assessment / analysis of oil spills in the Baltic Sea.

As the amount of transported oil has significantly grown very fast and also has an intent to increase in the future, more and more can be seen need for risk analysis of oil spills including impact from oil terminals.

More serious becomes need to look at national contingency plans and evaluate the efficiency of current response tactics and equipment.

To work out a Risk Analysis system some major issues must be pointed out:

- risk zones – areas of possible oil spills
- scale of impact – difficulties to predict
- probability of impact
- time available for response action
- form/ character of influence.

Analysis of about 1/4 million scenarios of oil spill in the Baltic Sea have eliminated time shortage for response actions.

As the conclusion can be said:

Such systems of Risk Analysis can be used not only to forecast behaviour of oil spills but also to investigate accidents. Systems must be frequently updated with the latest information.

There already are similar systems in use in whole Baltic Area.

**SESSION II "PRECAUTION AND RESPONSE" / TOP C**

**POSSIBLE NEED FOR REVISION OF HELCOM RECOMMENDATIONS WITHIN  
THE RESPONSE FIELD**

***Mr. Thomas Fagö (Chairman of HELCOM RESPONSE)***  
**Swedish Coast Guard Headquarters, Karlskrona, Sweden**

There are 16 Recommendations in the field of response. Those could be divided into three different categories dealing with administrative, operational or other matters.

Examples on administrative are calculations of costs or facilitation of border passage in an international operation.

With others I mean e.g. assistance in training or follow up studies after a major oil spill.

The most interesting category for today is however those dealing with operational matters like, oil drift forecasting ,aerial surveillance or ability to respond to oil.

There is no time today to go through them all, but let me give some general remarks on them as a whole, after having scrutinised them carefully.

- Some of them are obsolete, where USSR, DDR are mentioned or where the matter has been solved in another way. This goes e.g. for the recommendation on response zones or on a Pollution Reporting system, which nowadays is inserted in the response manual.
- Some of them are unclear, it is difficult to understand what is meant.
- Some of them are not fulfilled by all parties, although the target date has been past since long This goes for the Recommendation on aerial surveillance and for response to chemicals.

We have already started a process on revision of those recommendations and there are also a few new in the pipeline.

Today's item is however to look at our recommendations in the light of immensely increasing maritime transportation.

We are here talking about an increase of 20% of sea traffic in general and a 100% increase of oil transportation in the nineties.

We are also talking about perhaps another 50% to come until the year of 2015.

We are talking about big ships with large bunker tanks in their double bottom ,but most of all we are talking about large volumes of oil in big ships, partly navigation in

narrow waters, sometimes in heavy winter conditions.

Large volumes of oil in big ships require other solutions than **only** increased recovery capacity, because we will never be able to recover a 50 000 tons oil spill or more at sea, especially not during ice conditions. This must be prevented by e.g.

- Banning of substandard ships, regardless of single-or of double hull type.
- Big ships in narrow waters could require escort towing.
- Recommendations on sufficient ice classifications for ships transporting oil during ice conditions.

From the responders point of view it is important to underline the need for such kind of recommendations, especially as they are not in the scope of the RESPONSE group.

For the responder there are others tools. One of those is definitely Emergency Towing, in order to meet an incident at an early stage and thus preventing the oil from going out. Sometimes this has to be combined with considerable fire fighting capacity in order to prevent a total loss of the ship. Of course we need places of refuge to tow the ship to and where we can make safe emergency lightering operations. These options were already highlighted in the HELCOM COPENHAGEN DECLARATION and a draft recommendation on emergency capacity is in the pipeline. Also work is going on dealing with places of refuge.

What more could be done?

So far, all operational recommendations in the response field have built on a minimum of national capacity. Such a method is not satisfactory alone. We should not have system, where parties with a small response area should have the same capability as one with a very large. Such recommendations on capability will be too much for the small one, and to little for the large one.

I think we will have to build on a **three tier** system where:

- we have recommendations on national capability corresponding to the response area of a party
- we have HELCOM recommendations on sub-regional co-operation for different sea areas where neighbouring countries create a system where they together can meet a spill above the capability of one party (e.g. the SWEDENGER PLAN between Sweden, Denmark and Germany for the south western Baltic )
- we have a HELCOM recommendation on what volume of oil all the HELCOM parties together should be able to recover.

Finally, I would like to stress the need for co-operation in beach cleaning as in spills of those magnitudes we could be facing today, a lot of oil will end up at somebody's beaches, despite a quite successful recovery operation at sea.

The presentation is available:

["Possible need for revision of HELCOM Recommendations within the response field"](#)

**SESSION II "PRECAUTION AND RESPONSE" / TOP D**

**EMERGENCY TOWING CAPACITY IN THE BALTIC – NATIONAL POLICIES**

***Mr. Kalervo Jolma***

**Finnish Environment Institute, Helsinki, Finland**

"Too little - too late" is the most common nominator of the big maritime disasters of the past. Right things were done, perhaps, but too weakly and not early enough.

Improving maritime safety includes many different elements. Preventive safety is the best. However, eighty percents of accidents occur because of human failure, they say. Then, an efficient emergency response is the important factor in preventing the accidents from growing to big disasters. The key elements of the emergency response ability in ship accidents are early timing and capacity – the readiness and the resources.

HELCOM Ministerial meeting in Copenhagen in 2001 decided to include an adequate emergency capacity as a part of the obligations of the Contracting Parties in response to maritime pollution accidents. Lately we have got a new HELCOM Recommendation on that matter. Also the guidelines for implementing the Recommendation are under way.

How to fulfill that task, is now mainly national question and the recommendation and the guidelines advise on different ways to that. Even then it is not an easy thing to do.

Because of high costs of an emergency towing capacity and a permanent readiness, much consideration will be put to find the most cost-efficient solutions. "Polluter pays"– principle could also be followed, when considering practical ways to bear load of the services. That can be a matter of a national policy, but also a reason to put some obligations to the industry for the whole Baltic Sea area.

A big oil terminal needs to be prepared to serve its traffic by providing adequate towing assistance. That towing ability should be measured according to the biggest tanker, that can visit the terminal.

There are big oil terminals and other ports quite evenly distributed around the Baltic Sea. Basically the towing ability for the oil port could form also the backbone of the emergency towing capacity needed because of the passing traffic on the main oil transport route.

Then it could be helpful, if HELCOM could recommend, what kind of emergency

towing ability big ports should have, as HELCOM has recommended on the spill response ability of the oil and chemical terminals. In a similar way, also the Recommendation on national ability to response oil and chemical spills could include definitions of an adequate emergency towing as well as fire-fighting and emergency lightering capacity.

The new Recommendation proposal "The escort towing and other precautionary measures against accidents in transport of oil and other harmful liquid chemicals carried in bulk on the routes and in high traffic density areas" offers a way to have better capabilities for emergency towing in form of escort towing. However, natural conditions and maritime traffic patterns vary much from place to place. Escort towing is needed especially for long narrow routes through shallow waters. Also narrow straits, archipelago areas and ice cover during winter period are some other special features. The fact that there are big differences between various terminal routes in these respects shall be taken into account. Therefore the said proposal also includes an analytical tool of Formal Safety Assessment (FSA) to tailor-made national solutions.

Ship in distress needs prompt measures in order to prevent more damage to the vessel, sometimes even the loss of the casualty. Sad and huge environmental consequences of some accidents like MT Amoco Caditz, MT Sea Empress, MT Erika and MT Prestige have emphasized, that the crucial decisions cannot be taken on pure economical reasons.

The slide show is available (MS PowerPoint):

["Emergency towing capacity in the Baltic – National Policies"](#)

**SESSION II "PRECAUTION AND RESPONSE" / TOP D**

**GERMANY'S PRECAUTIONARY MEASURES AGAINST MARINE ACCIDENTAL  
POLLUTION IN THE BALTIC SEA AND ITS COASTAL AREAS  
A REVIEW AND PERSPECTIVE**

***Mr. Ulf Bustorff***

**Central Command for Maritime Emergencies (CCME), Cuxhaven, Germany**

***Mr. Dirk-Uwe Spengler***

**Environmental Emergency Response Unit (EERU), Hamburg, Germany**

**Content**

1. German response strategy
2. Technical and operational particularities
3. Adaptation into the framework of international, regional and bilateral agreements
4. Planned future developments

**1. German response strategy**

The German response strategy bases upon concept studies, initiated 1980 by the German Oil Pollution Response Committee ( ÖSK ), examining geographical and traffics structures, sea transport patterns of pollutants and analysing sea accidents and defining required response capacity along the German coasts in the North Sea and Baltic Sea following a risk evaluation. Actually organisational measures are brought into place by the partnership of federal and coastal state authorities laid down in a new Administrative Agreement of 2002 integrating the existing oil spill response organisation into the newly developed "Havariekommando" ( German Maritime Emergency Management Command ) constituting a strategic planning body, a decision committee, an integrated national reporting centre ( MLZ ) and six sections presenting different operative disciplines to be applied in major maritime emergencies including inshore and offshore response. The main purpose of this new body aims at the centralisation of command powers for all possible response disciplines like Search and Rescue, Emergency Towing, Salvage, Fire Fighting, Medical Care and Marine Pollution Response in one hand, combining executive powers of the Federal Government and the Federal Coastal States.

However, also the former joint marine pollution response co-operation of the Federal and Coastal States administration has proven within 25 years of its existence, that admittedly minor pollution incidents in German waters could have been managed quite effectively. Recovery rates in oil pollution incidents vary from 30% to almost 70%.

A major result concept studies initiated in 1980 were continued procurement

programs started at the same time, which have always been adapted to scientific and technological progress and up to now led to an overall response capacity along the German coastline which meets international standards, concentrating on locations with high risk potential.

With regard to the German strategy, that mechanical recovery at sea is the preferred response method, a fleet of at present 25 recovery vessels under governmental and private management, 7 equipment depots for onshore response and an aerial surveillance system operating two Dornier 228 remote sensing aircraft has been installed.

Until now the total investment has reached about 250 Mio €, annual running costs cumulate at about 5 Mio €. Comparably low running costs result from a high degree of multipurpose-operation of most of the high-cost vessels i.e. coastguard, towage, patrol, buoy tender, icebreaking, pollution response and water police tasks.

For the period 2003 - 2004 further investment is planned, including a new multipurpose vessel for Stralsund and the renovation of existing remote sensing aircraft.

German response strategy assumes within the German Baltic Sea waters outside the VTS- observed traffic patterns to the port approaches the maximum oil outflow to be in a range of about 10.000 cbm. Existing response capacity enables the recovery and intermediate storage of recovered oil at sea state Bft. 4 ( 40% probability ) within 48 hours based upon the existing theoretical recovery capacity.

According to the rule of the thumb 90% of oil accumulates in only 10% of the polluted sea surface. Therefore it is necessary to as soon as possible detect such areas of high oil and oil thickness concentration.

Aerial surveillance active and passive electronic sensors are tools to improve the recovery performance of response vessels and thus enable enhancement of recovery efficiency.

As a special precautionary measure three ( in 2004 four ) large multipurpose tasking spill response vessel are available at sea on a 24h-basis, patrolling along the main shipping routes as part of the German coast guard system.

However it is quite clear the factors like wind, temperature, tidal currents and the specific characteristics of accident and pollutant very much influence the recovery rate. Latest examples of such non- controllable but limiting factors are the "Erika"-and "Prestige" incidents at the French and Spanish coastline. Large volumes of high viscosity oil created problems especially when ageing, emulsification and tar ball distribution limited the efficiency of mechanical recovery. However, the "Prestige" offshore response activities already showed that lessons learned at the earlier "Erika"- incident significantly increased the recovered oil volume at sea and thus the efficiency of recovery vessels.

## **2. Technical and operational particularities**

The reasons for some technical and operational speciality of the German response vessels are basically:

- a diversity of special technical solutions for a maximum of pollution types, i.e. multipurpose carrier vessels, dredgers, catamarans, scissors ships, landing craft and special shallow-water units,
- a high degree of protective and automation measures on board of the present three high sea response vessels, that includes gas protection of accommodation and engine room against highly toxic and/or explosive gases by a special charcoal-filter system and GC/MS-intake and surrounding atmosphere sensors, automated crane controls and latest technology sweeping arm deployment and control equipment,
- high performance sonar for the detection of cargo lost at sea,
- satellite communication and data transfer systems that enables reception of sensor images from surveillance aircraft and data transfer to and from land base,
- the majority of vessels in service are designed for use in multipurpose tasks as partly described under 1.,
- protective and automation measures on board of the three main seagoing vessels,
- a centralised supervision and management of the response fleet by the new section 2 High Sea Marine Pollution of the German Maritime Emergency Management Command (Havariekommandol),
- an annual training, exercise and educational program comprising up to about 50 different events with average annual costs of 1 Mio € , supervised and adopted by the partners of the Administrative Agreement and managed by the special units,
- a computer aided marine accident management system ( ELIUS ) consisting of a complex diversity of modules, i.e. automated sitreps, forecasting, spill models, alarm plans, Ecdis-charts, pollutant lists, equipment inventories, environmental mapping and contingency planning programs etc. is now extended to other maritime emergency management command aspects.

### **3. Adaptation into the framework of international, regional and bilateral agreements**

Germany has since long decades integrated its contingency strategy into a structure of international, regional and bi- and trilateral co-operation.

In the Baltic Sea it is Party to the Helsinki Convention, the trilateral SWEDENGER-Plan and an Operational Agreement with Poland for the Pomeranian Bight.

It is signatory to all major IMO conventions, including all instruments for the protection of the marine environment like i.e. MARPOL 73/78, Fund Convention, OPRC etc. and an active member in all relevant IMO- committees and working groups.

As a founding member of the European Community Germany has always participated in EU fora for the protection and preservation of the environment.

Insofar it has supported the EU commission in their co-ordinating role for regional and international co-operation in the field of marine environmental protection

including the activities of the Community Action Program and Community Information System.

A joint system for funding pilot projects, training seminars, workshops and expert exchange programs led to an improvement in national contingency standards and Community support in major incidents ensures validated information on the crisis, the possibility of task force support by other EU-countries and the circulation of requests for assistance.

Germany's marine and coastal environmental interests are shared with its coastal neighbours, especially Denmark, Poland and Sweden. Above mentioned agreements with these countries ensure, that joint action can be immediately taken, when the extremely sensitive coastal sea or Bodden areas are threatened by accidental marine pollution.

Within the described systems of mutual co-operation an exchange of experience, scientific and technological know-how, statistical data, surveillance results, risk evaluation techniques are conveyed and meetings of experts, regular alarm and equipment exercises are carried out.

Regional and international co-operation has proven to be an important instrument in the response to major marine pollution incidents and even a highly industrialised coastal state can not afford contingency standards that could meet requirements of an incident of catastrophic dimension such as the Amoco Cadiz, Braer, Sea Empress, Erika and Prestige or the aftermath of the 1991 Gulf war.

The Baltic Sea area has recently seen oil discharges of only medium volume and ecological significance. Immediate co-ordinated action of existing well-trained Baltic Sea response community has in most of these cases limited the damage to the marine and coastal environment and accelerated the redemption process.

This is undoubtedly the positive result of regional co-operation and should be enhanced.

#### **4. Planned future developments**

In the aftermath of the 1998 Pallas incident in Germany a commission under the leadership of former Senator Grobecker has been set up to highlight shortfalls in the German contingency system. The Grobecker report proposed a number of recommendations and the new organisation has started its operations in the beginning of 2003 aiming at:

- Concentration of different responsibilities resulting from the German constitution as federation, formation of a joint response organisation in all fields of marine accident management,
- harmonising of response capacity in the North Sea and Baltic Sea,
- modernisation of the existing offshore and inshore response capacity,
- completion of network between response centres ( ELIUS, VPS ), recovery vessels and aircraft, scientific utilisation of regularly processed sensor and satellite data,
- further development in the subsea-identification of harmful substances and analysis of gas clouds,

- optimisation of the aerial surveillance system, modernisation of sensors, adaptation to the shore-bound accident management system,
- concentration and networking of different civil defence organisations for co-operation in major maritime emergencies,
- consolidation of emergency towing capacity and all-weather helicopter capacity,
- utilisation of the computer aided marine accident management system in the major vessel traffic services centres,
- combined PR and media networking by all institutions involved in response activities.

To improve Germany's capacity to fulfil obligations of international and regional agreements with regard to rendering assistance in cases of emergency, sea- and airborne detection, transportation logistics, legal and contractual provisions, organisation of manpower, transfer of know-how and supplies are to be improved. This is especially the case in accidents involving other harmful substances where operative experience is limited. Germany has been involved in the Erika-, levoli Sun- and Prestige- operations, focussing on the recovery of high viscosity oil in the open sea and on a chemical tanker accident with escaping hazardous material in the French part of the Channel.

The German multipurpose vessel NEUWERK has in all operations successfully recovered bulky parts of the emulsified oil at sea and protected expert teams on scene by her sophisticated gas protection system and special gauging devices.

We have in all cases gathered precious experience and will continue to try to strengthen the ability of the international community to respond to accidental marine pollution and reduce the impact of such accidents to the marine and coastal environment.

The slide show is available (MS PowerPoint):

["VPS System – Computer Aided Contingency Planning System of the German Coastal States"](#)

**SESSION II "PRECAUTION AND RESPONSE" / TOP D**

**SHORELINE CLEAN-UP**

***Mr. Olev Luhtein, Counsellor***  
**Ministry of the Environment, Tallinn, Estonia**

**General**

The Baltic Sea is a unique, enormous basin of brackish water.

The climate conditions and the shallowness of the sea also contribute to making its marine environment and ecological systems particularly sensitive to impacts. Following the shipwreck of the oil tanker Prestige last autumn, discussions in the Baltic Sea countries also came to focus on the possible consequences of a similar catastrophe on the Baltic Sea. During the past months attention and worry have focused on the risk to the whole of the Baltic Sea caused by the oil transports from Russian Primorsk (Koivisto) in the easternmost Gulf of Finland. The oil tankers Stemnitsa and Minerva Nounou, owned by a Greek shipping company, which have collected oil in Primorsk, do not have a sufficient ice classification, which means that their safety level is not satisfactory, bearing in mind the difficult ice conditions.

The economic and ecological consequences of a possible oil catastrophe on the Baltic Sea are impossible to foresee, but they may be even more serious than those resulting from the events off the Spanish and French coasts.

Increasing maritime transportation threatens fragile Baltic Sea ecosystems and the livelihoods of many people who depend on the sea. During the last decade shipping has steadily increased, reflecting intensifying co-operation around the Baltic Sea region, and economic prosperity. It is estimated that oil transportation, for example, will double compared to 1995 levels.

**Estonian coastline**

With a total length of coastline about 3800 km(1240 km on mainland and 2540 km on islands) Estonia is anyway the smallest of the three Baltic States.

Based on the tilt of the primary topography, geological character of initial rocks and dominant coastal processors, differentiated in Estonia the following shore types: Clifford (an erosional escarpment in the bedrock), scarp (an erosional bluff in unconsolidated Quaternary sediments), rocky (an erosional sloping shore in till with a typical protective cover of boulders), gravelly (an erosional accumulation shore with beach ridges of alongshore or onshore drift), sandy (an accumulation sandy beach with foredunes), silty (an accumulation shore with considerable accumulation of fine sediments) and artificial shore with man-made coastal protection structures).

Estonian beaches have a great touristic and recreational value. The best-suited areas are, of course, sandy beaches with beautiful pinewoods on the dunes. The narrow sections of shore in many places (Pirita, Kloogarand, Järve, Valgeranna, the

northern coast of Lake Peipsi, Pärnu), where the transport-geographical conditions are good, are already suffering from a heavy load of visitors.

### **Responsibility for counter-pollution measures at sea and on land**

The Estonian Ministry of the Environment has the supreme responsibility over law enforcement in management and supervision of the oil and other harmful substances pollution.

All activities concerning combatting pollution by oil and other harmful substances are delegated from the Ministry of Internal Affairs to the Estonian Board of Border Guard and to the National Rescue Board.

Delimitation of responsibilities regarding oil and chemical spill abatement:

	<u>At sea:</u>	<u>On land:</u>
Government level:	Ministry of Internal Affairs	Ministry of Internal Affairs
Central authority:	Board of Border Guard	National Rescue Board

The Estonian Board of Border Guard (EBG) is responsible for co-ordination of combatting oil and other harmful substances at sea and in three lakes - Peipus, Lämmi and Pihkva.

The National Rescue Board and local Authorities are responsible for oil combating on the beaches and on the land. Contractors may also be called in for assistance as necessary.

Port authorities are responsible for combatting pollution in port area.

The mechanical containment and recovery is the primary policy for response to oil spills. The use of dispersants and sinking agents is in principle prohibited. However, permits to use dispersants in an oil spill situation can be issued by the Estonian Environment Inspectorate.

Equipment including booms, skimmers, high-pressure washers, absorbents, etc. is mainly located in Tallinn.

All major ports and terminals are responsible for oil pollution control, including oil spills within the port area, and they have their own recovery equipment.

The ecological and socio-economic areas sensitive to marine spills have been identified and mapped (map 1:200,000).

### **Shoreline treatment**

Important is to protect the coastline from oil pollution. For this purpose is needed sufficient quantity of booms.

For shoreline clean-up operations usually is needed a lot of manpower. The traditional way to clean up oil spills in such difficult places is to use shovels, buckets, mops, pads etc.

Leading oil recovery equipment producers have some good solutions to oil pollution for instance:

- beach sealing booms ( Ro-clean Desmi)
- rock cleaner ( Lamor Corporation) is designed for oil spill clean-up operations on rocky shorelines
- sand washer ( Lamor Corporation) is designed to separate oil from polluted sand
- collapsible tanks designed for temporary oil storage
- high-pressure cleaner is the preferable machine for cleaning tasks, to remove oil pollution from different surfaces, e.g. rocky coasts and equipment
- ironhorse ( Lamor Corporation) is designed for the transport of oil recovery equipment in difficult terrain ( rocky strips on shore etc.)

and a lot of other equipment.

Some of the listed equipment is in Estonia in use for a long time.

A trilateral Finnish-Danish- Estonian project is started to further develop our national ability to combat pollution incidents.

## **Conclusions**

The sinking of the Prestige oil tanker in Spain has brought another tide of oil washing the shores of Europe, following closely in the footsteps of the Erika that spilt in the region of 20,000 tons in 1999 - polluting 250 miles of the French coastline. The Prestige sank on 19 November off the North West coast of Spain, she was carrying 77,000 tons of a heavy fuel oil. It is estimated over 10,000 has already leaked and there is a real risk that the rest of the cargo will enter the sea.

The increasing oil transport add to the risk of an oil catastrophe and this is particularly imminent in wintertime. The consequences of a possible oil catastrophe may become particularly serious for instance in the Gulf of Finland, on the Swedish east coast, in the southern Baltic proper and in the Danish straits.

We can act together to decrease the risks.

**OUTCOME OF SESSION II "PRECAUTION AND RESPONSE"**

**Chair: Mr. Dariusz Wojcieszek (Poland)**  
**Rapporteur: Mr. Tadas Navickas (Lithuania)**

**Presentations made during the Session II:**

1. Topic C

***Possible need for revision of HELCOM Recommendations within the response field***

Mr. Thomas Fagö (SE)

2. Topic D

***Emergency towing capacity in the Baltic-National Policies***

Mr. Kalervo Jolma (FI)

***Improvement of precaution and pollution response capacity***

Mr. Ulf Bustorff (DE) and Mr. Dirk-Uwe Spengler (DE)

***Shoreline Clean-up***

Mr. Olev Luhtein (EE)

**Main conclusions of the presentations and the discussions:**

- There might be a need for the revision of the HELCOM Recommendations in the Response field. The three tier system for the response capacity has been proposed:
  - The minimum national response capacity, according to the length of the coastline or the response area of the state;
  - The sub-regional response capacity, where neighbouring countries can meet the spill above the capacity of one party (sub-regional agreements);
  - Overall response capacity for the whole Baltic Sea area.

- There is a need for the development and adoption of HELCOM Recommendation on Emergency towing capacity.
  - Emergency towing is often the very first and crucial measure in the case of emergency. As it is quite an expensive issue, it is necessary to use the Polluter Pays Principle when considering how to cover relevant costs. The same principle should be used all over the response field.
  
- There is a strong need for sub-regional cooperation. Sub-regional cooperation gives a number of advantages:
  - Rational use of equipment and human resources;
  - Speedy exchange of information in a case of emergency;
  - Clear and agreed procedures on border passage- crucial for early response measures;
  - Joint exercises of neighbouring countries (there has been an opinion that one international exercise per year is not enough. Sub-regional exercises seem to be a good way out).
  
- The special emphasis has been put on the shoreline clean up operations. New, GIS based tools are available to simulate, plan and carry out the response operations. However, it is important to include shoreline clean up into response exercises to the greater extent.

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION" / TOP E**

**REPORT AND ASSESSMENT ON THE EXPERIENCE MADE BY THE LATELY INTRODUCED NEW MEASURES AND SURVEILLANCE ACTIVITIES IN THE KADETREN DEN**

*Mr. Jörg Neubert*

**Federal Ministry of Transport, Building and Housing, Bonn, Germany**

The deep-water route from the Great Belt into the Eastern part of the Baltic Sea where the Kadetrenden is situated is of particular importance. During the last 10 years, 12 vessels have run aground in the Kadetrenden. The primary reasons for these incidents were incorrect navigation and non-compliance with the deep-water channel marked on the official sea charts (Traffic Separation Scheme "TSS South of Gedser"). As a reaction to this, Germany and Denmark have, with the consent of the International Maritime Organization (IMO), extended the deep-water route from the North-East (DW 17) southwards into the traffic separation scheme of the Kadetrenden ("TSS South of Gedser") and buoyed it accordingly.

This new routeing entered into force in January 2002; it ensures that deep-draught vessels can more easily then before identify and follow the existing narrow channel, thereby minimizing the risk of grounding. Although there have not been any more accidents since the implementation of this measure, a certain risk will remain.

Currently, approximately 65,000 vessels per year pass through the area of the Kadetrenden, among them 32,800 tankers, 16,800 bulk carriers and 13,200 container and ro-ro ships. This means that the average number of vessels per day is 178. Forecasts predict a considerable increase mainly in the carriage of crude oil but also in ferry transport.

From July 2001 until September 2002, shipping was closely monitored by the German Waterways and Shipping Administration with the aim of analysing traffic flows and causes of accidents. Our vessels and our coast guard had instructions to monitor and document the traffic situation around the clock. A total of 17,287 vessels were monitored. During this period, 50 infringements of Rule 10 of the Collision Regulations were detected. Of these, 35 breaches of the rules happened during a period of 6 months before the realization of the measures to set new buoys in January 2002 and only 15 took place in the 9 months afterwards.

If possible, infringements of the Collision Regulations were immediately punished. Non-compliance with the rules could be observed for nearly all vessel groups. However, infringements were particularly obvious in the case of fishing vessels and pleasure craft navigating in the traffic separation scheme. Dangerous situations arose because deep-draught vessels could not pass undisturbed and had to change course thus getting into areas with an insufficient water depth.

When the extension of the deep-water route and the new, additional buoys became effective, the Warnemünde vessel traffic centre started transmitting a vessel traffic information service informing vessels via VHF about the characteristics of the Kadetrenden. Since September 2002, the Warnemünde vessel traffic centre has been able to receive signals from vessels equipped with AIS transponders. As soon as the international requirement to equip vessels with AIS transponders becomes effective, a better surveillance of this sea area will thus be possible.

In summary, it can be said that the routing measure carried out at the beginning of last year in the Kadetrenden has increased traffic safety.

Despite the implementation of the said measure, a certain risk will remain, not only in the Kadetrenden but also in the entire Baltic Sea. This is why consideration has been given in Germany to whether further routing measures could optimize the safety situation in the Baltic Sea.

A great number of IMO-approved routing measures already exist for the Baltic Sea. Masters may, however, basically make their own decision as to which route they choose to take between any two traffic separation schemes. A **thorough routing** for deep-draught vessels, in particular for tankers, through the entire Baltic Sea could substantially enhance the safety of navigation and, thereby, substantially reduce the risk to the environment. For example, the risk arising from a deep-draught tanker navigated by a shipmaster possibly not familiar with the conditions in the Baltic Sea would be reduced if such tanker used throughout its passage - from its departure from an oil terminal in the Eastern part of the Baltic through the entire Baltic Sea - a route prescribed or, at least, recommended by IMO. Monitoring ships and, where appropriate, giving advice to them would thus also be facilitated.

Following intensive talks among experts in Germany, we are of the opinion that the definition of a transit route for tankers in the Baltic, complete with collateral traffic-assisting measures, is indispensable if the safety of navigation and the level of environmental protection are to be increased. Such a measure will facilitate the identification of tankers and enable the provision of navigational advice and the monitoring of the itinerary of vessels. Moreover, it will help to ensure that vessels keep the required distance to the coastline and contribute to optimizing the positioning of emergency towing capacity.

Considering that the Baltic Sea is an ecologically highly sensitive area and that, in its coastal states, it is now mainly tourism that is developing next to the fishing industry, we should really do everything we can in order to prevent environmental disasters like the Prestige accident. Time is pressing: the volume of tanker traffic has grown in recent years and will probably continue to increase. Apart from the two above-mentioned branches of industry, this is another one that should be given the opportunity of developing further. This is why we have to make every effort humanly possible in order to reduce the risk of accidents before catastrophes occur.

All Baltic coastal states have to agree on the necessary measures so that we can jointly take the initiative at IMO.

We suggest that the use of a transit route be made compulsory for tankers and other vessels carrying dangerous cargo in order to achieve the following objectives:

1. To enhance the safety of navigation by preventing groundings and collisions.
2. To monitor the itinerary of vessels thus opening up the possibility of intervening and taking preventive measures in case of dangerous situations (engine or steering gear failures, fires, risk of collisions in the case of crossing traffic, deviation from the prescribed route).
3. To combat international terrorism in line with the IMO regulations on preventing and suppressing acts of terrorism against shipping, since AIS transponders are to be used also for the detection and monitoring of terrorist activities on board ships.

A scientific study was awarded by the Federal Republic of Germany to the Warnemünde Institute of Shipping with a view to defining, from the combined points of view of maritime safety, protection of the environment and economy, the optimum transit route in the Baltic Sea both for tankers and other vessels carrying dangerous cargo. The Institute of Shipping has reached the conclusion that all parties concerned would benefit from a transit route. The advantages and resulting possibilities to enhance the safety of navigation are listed in **Annex 1**.

Since, in terms of safety and the protection of the environment, the planned routeing measures are in the interests of all Baltic coastal states, the results of the study were already presented yesterday at the joint IMO/HELCOM/EU workshop. They are to form the basis of a proposal to be submitted to IMO.

Our objective is a joint initiative of the Baltic coastal states aiming at the definition by the IMO Maritime Safety Committee of a transit route for tankers throughout the Baltic Sea.

Based on the results of the above-mentioned study, **Germany proposes, as a first step, the definition of a deep-water route through the German and Danish exclusive economic zones (EEZ) without separate buoys, which should be marked on the sea charts and reserved for tankers and vessels carrying other dangerous cargo, which have a specific size.** The size criteria should correspond to those agreed by HELCOM for ECDIS. This approach is in line with the criteria discussed in Germany and corresponds to the most recent Swedish routeing measures. Germany would like to ask the other Baltic coastal states to support this initiative and to agree on proposals for their own EEZs so that they can all be submitted jointly to IMO.

## Annex 1

### ADVANTAGES OF THE TRANSIT ROUTE FOR ALL PARTIES CONCERNED

The definition of a transit route will bring about the following advantages for **shipmasters**:

1. Navigation made easier by the definition of a thorough routing
2. Maximum navigational support for shipmasters passing the Baltic Sea, particularly if they do not come from Baltic coastal states
3. Minimization of the risk of grounding
4. Safe navigation of other ships due to the separation of traffic

The implementation of a transit route can contribute to optimizing **shore-based navigational support** throughout the Baltic Sea, in particular due to improved conditions for Vessel Traffic Services (VTS). These result from:

1. A spatial separation of deep-draught vessels from other vessels
2. A concentration of deep-draught vessels and vessels carrying dangerous cargo on the transit route and thus a faster identification of these types of vessels
3. Improved possibilities for a targeted monitoring of dangerous goods vessels and deep-draught vessels

Our planned measures will entail the following **advantages for all Baltic coastal states**:

1. Potential reduction in the number of deep-draught vessels running aground
2. Maximum distance from the coastlines of potential locations of tanker groundings and collisions
3. Reduction in the potential risk of collisions for all vessels due to the prescribed routing
4. Targeted positioning of emergency towing capacity and other emergency response units along the transit route
5. Timely initiation of preventive measures if an inadmissible transport risk is detected after the vessel has left the port
6. Useful measure for the future establishment of a European Ships Data Bank

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN  
DECLARATION" / TOP E**

**REPORT AND ASSESSMENT OF THE EXPERIENCE IN THE VESSEL TRAFFIC  
SERVICE (VTS) – SYSTEM IN THE GULF OF FINLAND**

***Mr. Kari Kosonen***

**Finnish Maritime Administration, Helsinki, Finland**

The slide show is available (MS PowerPoint):

["Report and assessment of the experience in the Vessel Traffic Service \(VTS\) – system in the Gulf of Finland"](#)

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION" / TOP E**

**RESULTS OF THE HELCOM AIS EXPERT WORKING GROUP**

***Mr. Benny Pettersson (Chairman of HELCOM AIS EWG)***  
**Swedish Maritime Administration, Norrköping, Sweden**

The increased tanker traffic in the Baltic and the concern that many countries have regarding the safety navigation for those ships, there is a demand to monitor them. The new carriage requirement of AIS that IMO have decided gives the countries such a possibility.

The HELCOM Copenhagen Declaration worked out an agreement that: *requires the Governments of the Contracting Parties to establish national, land-based monitoring systems for ships, based on AIS signals. A full monitoring of the Baltic Sea Area within A1 sea area shall take place not later than 1 July 2005.*

An HELCOM AIS EWG cheered by Sweden was established to fulfil the requirements of HELCOM Copenhagen Declaration to build a network that joins the Baltic countries. This will give each country a possibility to monitor the rest of the traffic of SOLAS ships in the other countries.

The AIS EWG have seen that there is a demand from some authorities to see traffic in adjacent countries and sometimes beyond that. The EWG established a template which different authorities could have an interest of cross boarder information to be base for an agreement between the Baltic countries.

One of the tasks for the AIS EWG is to prepare statistic of how the ships are moving in the Baltic. Denmark is already looking on this task. With good statistics there will be possible to amend some of the routing systems already implemented and propose new ones for the future.

HELCOM AIS EWG have decided to build a demonstrator, which is based on the Internet with some firewalls towards the countries. With the demonstrator we will gain experience for the final network. The time between the messages for cross boarder messages from each ship will be reduced to every 6 minute for SOLAS ships to allow for all the traffic in the Baltic to be on the same link.

There is a timetable established for the implementation. The AIS EWG do not see any technical problem for the implementation.

The slide show is available (MS PowerPoint):

["AIS Monitoring"](#)

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION" / TOP E**

**THE NEED FOR ADDITIONAL SAFETY MEASURES FROM RUSSIA'S POINT OF VIEW**

***Mr. Vladimir Isakov***

**Central Marine Research and Design Institute (CNIIMF), St. Petersburg, Russia**

**Abstract**

- 1) Project of Recommendations was not created using statistic data on fails of main engines and steering mechanisms and resulted casualty.
- 2) Proposed tactics of tugs usage is not based on tugs usage practice and has no sufficient theoretical basis.

Attempts of tugs to transfer power effort to the ship's not under command fore, if it's rudder is "stuck" onboard in order to return it to initial course, if speed is about 10 knots certainly shall fail. Reasons are : water pressure, current force, water mass inertia - are to turn tug alongside of ship under escort irrespective of tug tactics. Tug acting 90 to midship, pushing, pulling is under those conditions equal to 10 knots side motion, which is unreasonable.

The probability of successful manoeuvre as mentioned in item 2 of section 3)j of Recommendations - using of one tug from stern is also very low. It takes time to shift the tug from stern to aft, and in emergency, when rudder is "stuck" onboard in narrow passage - time is main factor - an lack of it is certain to prevent recommended route deviation.

Thus we need at least two tugs to solve possible problem.

Linear characteristics of maneuvers as per section 3)j ) are also to be theoretically proven\estimated:

1. Admitted by the project run of the ship during stopping by tugs is two miles. Asp per IMO A.751(18) on interim standards for ships it is not to be more than 15 ship's lengths.(MSC Circ.1053 permits it to be 16-18 lengths. Using logics of Recommendations project and A.751(18), we can estimate tanker length 247 m. Thus tankers of 247 or more lengths must be stopped by tugs on distance less than 15 overall lengths. To do this tugs have to have power exceeding power of ship fitting international standards.
2. Proposed value of side shift from initial course line if not under control (350 m) is also problematic:
  - a) If we use understanding as per 751(18), ship's track is a track of it's center point. Applying this rule we can estimate that if 200 m tanker is navigating 700 m wide channel and is stopped with rudder "stuck" onboard by tugs in 350 m from channel centerline and is 90° turned it's fore can be 100 m off the channel. Thus proposed 350 m limitation really requires 250 m or less.
  - b) 350 of cross shift results from 700 m lanes. What about lanes which

are less than 700 m?

Piloting of ships with operating rudder and engine by two tugs via narrow channels as per 3)i) section would not have positive sense if ship's lanes would not correspond to ship's size.

Recommendations are made for areas with maximal traffic density. What about increasing of this dangerous density and navigation risk by using of two big tugs?

In stormy conditions within strong wind and swell when crewmembers are not recommended to be on open decks meeting of tugs, fixing of lines etc. are high risk operations to be avoided in good seamanship.

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION"**

**EXTENDED MANDATORY PILOTAGE IN BALTIC SEA AREA**

*Mr. Uwe Jenisch*

**Ministry for Economics, Transport and Technology of the Land Schleswig-Holstein, Kiel, Germany**

### **1. The Background**

Enhancing the use of pilots has been a long-standing problem in HELCOM discussions.

So far there exist (only) two IMO Recommendations A.579(14) and A. 620(15) for the Baltic Approaches, which "strongly recommend" optional pilotage. However, foreign ships are not required to do so. Apart from the Danish straits also the Kadet Renden and parts of the Eastern Baltic Sea (Gulf of Finland) may require mandatory pilotage for certain types of vessels or cargos.

The German Bundestag is among those voices that require mandatory pilotage.

Likewise the Governments and the Parliaments of the German Länder of Schleswig-Holstein and Mecklenburg-Vorpommern asked for initiatives to introduce mandatory pilotage for the whole system of Baltic Approaches, i.e. the Danish straits, the Fehmarn strait and the Kadet Renden.

### **2. The New Risks**

Deep draught vessels with 9 m depth or more are on the increase compared to previous years. Oil transports and other hazardous cargos grow in number and tonnage per ship and will continue to grow over the next years. Russian oil exports are the main reason while also other transports tend to make use of larger vessels. For the years 2000 and 2001 alone a total of 119 ship accidents have been registered by HELCOM.

Too many vessels rely extensively on an automatic pilot, also when navigating near the coast and in cases of poor visibility, for the simple reason of convenience and laziness. Watchkeeping is reduced to a minimum and fatigue of crew-members and captains create an additional problem. Communication in the English language is sometimes difficult. Minimum distances between ships proceeding in the same direction or ships passing each other are too often ignored. The vast majority of accidents occur among ships without pilots. The professional qualification of officers and seamen of many flags leaves much to be desired and **good seamanship** is vanishing.

However, the “**paper form**” of the vessel is normally beyond doubt: all necessary certificates, correct crewlists, check-lists and insurance certificates can be presented – and yet the vessel is a floating risk. About 80% of all marine accidents are due to human failure. Ship safety depends on the human element.

**The point is clear: Safe navigation on the bridge and safe management of the whole ship is the key answer. Therefore pilotage – apart from better training – represents an added value in maritime safety.**

Simple reason dictates that limits must be put on the exercise of free passage in certain waterways that are crucially dangerous to navigation and that may become the place for a catastrophic accident with the danger of major environmental damage with an impact on the safety of millions of inhabitants and their economic basis.

A completely different alternative would be to promote overland pipelines for oil to the Arctic Ocean (Murmansk) or to ports in Western Europe (Norway, Germany, Netherlands) with the consequence of closing the oil-exporting ports of the Baltic Sea in order to minimise tanker traffic here.

### **3. Rethinking Legal Question of Mandatory Pilotage**

Up to now the international law of the sea offers no explicit legal basis for mandatory pilotage in high seas waters or in international straits. As regards the Turkish straits (Bosphorus) a protracted legal conflict over navigational rights and pilotage between Russia and Turkey has to be recalled<sup>1</sup>The Baltic waters in question which may require a new pilotage regime are either **straits** under the transit passage system or **high seas** under the freedom of navigation. Under current international law of the sea no limitations may be placed on the freedom of vessels to navigate.

On the other hand, international problems evolve and emerge over time, under changing conditions. International conventions are living instruments and not made for eternity.

Unilateral regulatory action, although occasionally advocated by politicians and environmentalists, are not the best answer. What we need is a legally sound regime, based on consensus of the states of the region, i.e. all Baltic states. At the same time the regime has to be binding on all flag states.

Therefore, possible options for introducing mandatory pilotage have to be analysed. The legal instruments to be investigated are i. a.:

- ◆ UNCLOS (arts. 39-41, 94, 217, 219)

---

<sup>1</sup> Joyner/Mitchell, “Regulating Navigation through the Turkish Straits: A Challenge for Modern International Environmental Law” in: *Marine and Coastal Law*, Vol. 17, December 2002, p.521- 559.

- ◆ SOLAS (traffic separation, routing, pilotage, inspections)
- ◆ COLREGS
- ◆ LL (Loadlines, draught).

While a formal revision of the UNCLOS Treaty is possible under art. 312 after the year 2004 the other Conventions allow for a rapid "tacit acceptance" procedure.

#### ***4. The Costs of Mandatory Pilotage***

Admittedly pilotage fees are "relative" costs that must be seen in a larger context. For example the passage of the Suez Canal for a Panamax bulk carrier would be in the order of 320.000 US\$ while the passage of a strait like the Bosphorus or the Danish straits would cost about 16.000 US\$. The costs of pilotage do not disturb competition if the system is enforced on all relevant vessels and flags.

As a rule the costs of pilotage have to be carried by the vessel. In view of the enormous financial value of the cargo of oil-tankers the costs of pilotage are minimal. However, and only as a last resort, some kind of a "Baltic pilotage fund" could be discussed to keep the costs as low as possible. Contributions from insurance companies and the oil industry or, as the case may be, from the European Commission and from NGO's with vested interests in maritime transport could be examined.

#### ***5. The Way Ahead / How to Implement Mandatory Pilotage***

All Baltic Sea states and their maritime industries must recognize that it is in their own economic interest to minimize accidents and to guarantee a safe flow of transport to and from all Baltic ports. A major accident, say in the Great Belt, or in other narrow waters of the Baltic Sea, could easily lead to a blockade of access rights and to massive losses of profit. A temporary suspension of shipping or other unilateral emergency reactions are not completely out of scope. It has to be remembered that under the Convention Relating to the Intervention on the High Seas (INTERVENTION 1969) grave and imminent danger to coastline and related interests justify preemptive action of the coastal state. Moreover, the positive image of safe shipping is at stake at a point in time when the EU is reorganizing the European Transport Policy for the future.

Bringing all Baltic States together over environmental issues is by no means impossible. The success story of HELCOM serves as a mechanism to find solutions.

Therefore it is suggested to set up a new

**“HELCOM Pilotage Working Group”**

with the task to develop a concept for mandatory pilotage in certain parts of the Baltic Sea. Major topics to be elaborated are:

- 1. Creation of public awareness about pilotage and environmental safety**
- 2. Selection of sensible waterways in the Baltic Sea that justify mandatory pilotage**
- 3. Formulation of legal amendments, preferably of the SOLAS Convention (or other legal instruments)**
- 4. Evaluation of financial implications (costs of pilotage, organizational questions)**
- 5. Joint application of amendments within IMO.**

**SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION"/ TOP F**

**POSSIBLE NEED FOR CONCERTED ACTION REGARDING UNIFIED APPLICATION OF RULES FOR ICE CLASSIFICATION OF SHIPS AND ARRANGEMENT OF ICEBREAKER SERVICES DURING THE WINTER PERIOD IN THE BALTIC SEA AREA**

***Mr. Jorma Kämäräinen***  
**Finnish Maritime Administration, Helsinki, Finland**

1 Introduction

The increase of the maritime traffic in the Gulf of Finland has been rapid. The annual amount of cargo along the Gulf of Finland already exceeds 130 million tons. The figures of oil transportation are well over 60 million tons annually. In addition to the increasing freight and oil transportation there is busy passenger traffic between Helsinki and Tallinn, amounting to more than 6 million passengers annually. The traffic image consists of a variety of ships, tankers, fast passenger ferries, car ferries, ro-ro-ships, small coastal cargo ships, small crafts, military boats etc.

This winter 2002 - 2003 has been exceptionally cold in the Northern Baltic Sea area. The cold period started already in November 2002, and has continued ever since. January 2003 was the coldest one in forty years in Finland. The harsh ice conditions have turned out to pose big challenges to ships navigating in the area, especially if they have had no ice strengthening or only a light ice strengthening.

The long-term Finnish experience in winter navigation tells that ships entering the ports during winter season shall have adequate ice strengthening of the ship's structure and propulsion machinery approved by the Administration of the Port State, when the ice conditions require the use of an ice-strengthened vessel. This is especially important for ships engaged in transportation of oil and other hazardous cargo. For this reason we are making proposals for a unified application of rules for the ice classification of ships and arrangements of icebreaker services during the winter period in the Baltic Sea area.

In paragraph 2 ice conditions in the Baltic Sea area are first described. The Finnish – Swedish ice class rules are described in paragraph 3 and the Finnish icebreaker services are described in paragraph 4. Ice class requirements for ships are discussed in paragraph 5, conclusions are given in paragraph 6, and finally, proposals for further consideration are given in paragraph 7.

## 2 Ice condition in the Baltic Sea area

The ice conditions in the Baltic Sea vary rather substantially (see Figures 1 – 3). At its widest, the annual ice cover ranges from 52 000 km<sup>2</sup> to 420 000 km<sup>2</sup>, which is equivalent to 12 – 100 percent of the surface area of the Baltic Sea, The Kattegat and Skagerrak. On average, a 218 000 km<sup>2</sup> area is covered by ice. The annual ice cover is at its most extensive between January and March, usually in late February, early March.

The Bothnian Bay and the eastern Gulf of Finland freeze every year. Once a decade there might be a winter where only a small area in the Southern Baltic remains ice-free. It is impossible to predict the severity of the ice season at the beginning of the winter. Somewhat accurate forecasts are not achievable until the end of January.

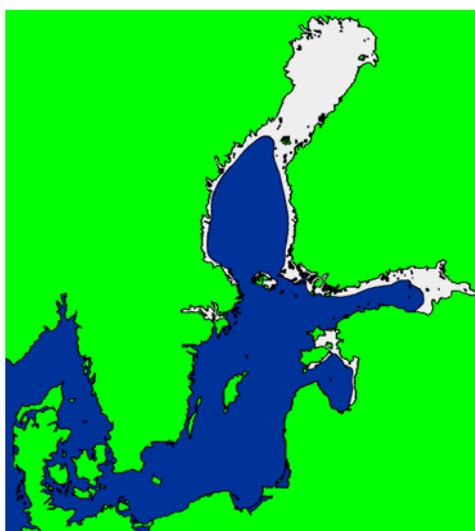


Figure 1. Extremely mild winter of 1991/92, max. extent of ice cover 66 000 km<sup>2</sup>.

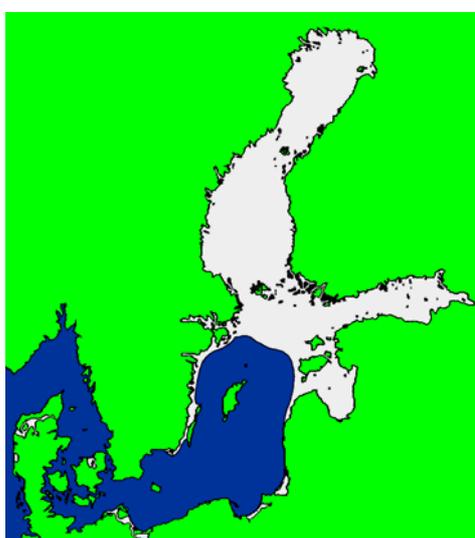


Figure 2. Average winter 1961-1990, max. extent of ice cover 204 000 km<sup>2</sup>.

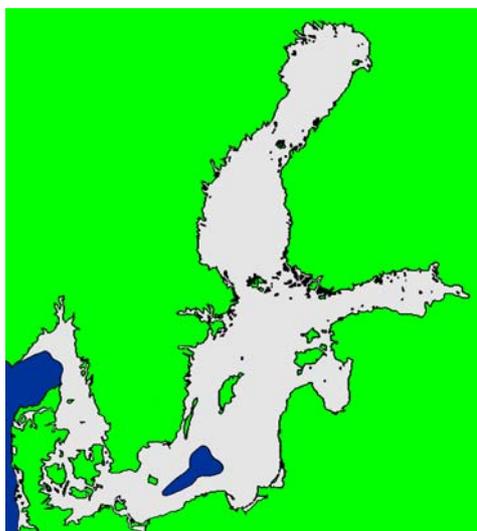


Figure 3. Extremely severe winter of 1986/87, max. extent of ice cover 405 000 km<sup>2</sup>.

### 1.1 Ice formation and break-up

Ice starts forming in the bayheads of the Bothnian Bay and the Gulf of Finland during November. The subsequent areas to freeze are the Quark, the entire Bothnian Bay and the coastal areas of the Bothnian Sea. During average winters, the entire Bothnian Sea, the Gulf of Finland and part of the northern Baltic Sea also freeze. During mild winters, the Bothnian Sea doesn't freeze at all, and the Gulf of Finland freezes only partially. During severe winters, the freezing extends to the Danish Belts and the Baltic Sea proper. The last area to freeze is the area north-east of Bornholm Island.

The break-up of the ice starts in the south and progresses to the north. The northern Baltic Sea first opens at the beginning of April. By the beginning of May, ice exists only in the Bothnian Bay, where the last ice melts during the first half of June at the latest.

The average duration of the ice season in the northern Baltic Sea is less than 20 days. Ice is prevalent in the northern Bothnian Bay for a period exceeding six months.

### 1.2 Types of ice conditions

The ice in the Baltic Sea occurs as fast ice and drift ice. As its name implies, fast ice is stationary attached to islands, rocks or shoals. It is found in coastal and archipelago areas where the water depth is less than 15 metres. Fast ice forms early in the season and remains stationary until it melts.

Sea ice in the open sea occurs as drift ice propelled by the force of the winds and currents. Drift ice can be level, rafted or ridged with a 0 – 100 percent coverage. Drift ice can be very dynamic. On a stormy day, a field of thin drift ice can easily move 20 – 30 km. The motion results in an uneven and broken ice field with distinct floes up to several kilometers in diameter, leads and cracks, slush and jammed brash barriers, rafted ice and ridges. The ridges and jammed brash barriers are the most significant obstructions to navigation in the Baltic Sea. Powerful, ice strengthened vessels can break through level ice up to 80 cm thick, but they are not capable of navigating through ridges and thick brash ice barriers without icebreaker assistance. The intense pressure of the ice field can be hazardous to vessels and, at minimum, can delay merchant vessels for days at a time.

### 3 The Finnish – Swedish ice class rules

The Finnish and Swedish Maritime Administrations have developed the Finnish – Swedish ice class rules in close co-operation with classification societies. The development of the rules started already in the 1930s. The rules have been amended several times during the past years, for example in 1971, 1985, and the latest version was published in 2002 (see Finnish Maritime Administration Bulletin No. 13/1.10.2002, available at [www.fma.fi](http://www.fma.fi)). Most of the members of IACS (International Association of Classification Societies) have adopted the Finnish – Swedish ice class rules and incorporated them in their own regulations.

#### 3.1 The ice classes

Ships are assigned to ice classes IA Super, IA, IB and IC as follows:

- 1) special ice class IA Super, ships whose structural strength in essential areas affecting their ability to navigate in ice essentially exceeds the requirements of ice class IA and which as regards hull form and engine output are capable of navigation under difficult ice conditions;
- 2) ice class IA, IB or IC according to ice strengthening and engine output, ships which meet the requirements for navigation in ice as regards structural strength and engine output and are strengthened for navigation in ice;
- 3) ice class II, ships which have their own propulsion machinery, are built of steel and structurally fit for navigation on the high seas, but are not strengthened for navigation in ice;
- 4) ice class III, ships which do not belong to any of the ice classes referred to under 1) – 3) above.

An ice-strengthened ship is assumed to operate in open sea conditions corresponding to a level ice thickness not exceeding  $h_0$ . The values for  $h_0$  for the Finnish – Swedish ice classes are given in table 1. The main regulations in the rules are regulations for minimum engine output, regulations for hull structural design, and regulations for strengthening of propellers, shafts and gears. In

principle, all parts of the hull and the propulsion machinery, exposed to ice loads, have to be ice-strengthened.

The regulations for minimum engine output can be considered to be operational type of regulations. The regulations for strengthening of the hull, propellers, shafts and gears are clearly related to safety of navigation in ice.

*Table 1. The ice classes and the corresponding design level ice thicknesses  $h_0$ .*

Ice Class	$h_0$ [m]
IA Super	1.0
IA	0.8
IB	0.6
IC	0.4

### 3.2 Equivalency of ice classification rules

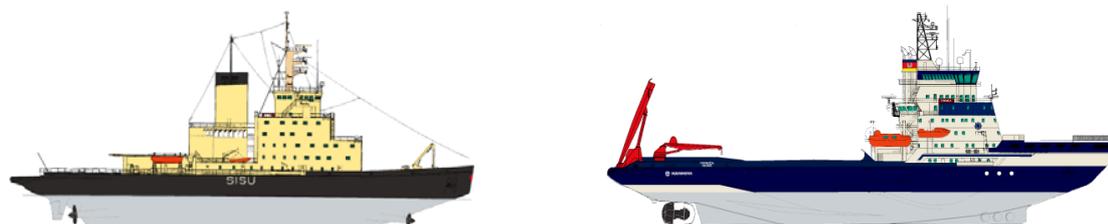
The Finnish Maritime Administration has confirmed the list of ice class notations of authorized classification societies and the equivalent Finnish-Swedish ice classes in Finnish Maritime Administration Bulletin No. 16/27.11.2002 (see [www.fma.fi](http://www.fma.fi)). Ice class certificates are issued by inspectors of the Finnish Maritime Administration for ships entering the Finnish ports based on ships' certificates.

## 4 The Finnish icebreaker services

The Finnish Maritime Administration is responsible for giving icebreaker assistance for ships entering the Finnish ports. The assistance service is free of charge. The icebreakers are owned by the Finnish Maritime Administration. We have nine icebreakers, six of which are conventional icebreakers and three modern multipurpose icebreakers. The multipurpose icebreakers can be engaged in e.g. offshore operations in summer. The Finnish icebreaker fleet is presented in table 2 and the icebreakers Sisu and Fennica are shown in Figure 4.

*Table 2. The Finnish icebreaker fleet.*

Name of the vessel	Year of built	Engine power [kW]
Voima	1954	10 200
Apu	1970	8 800
Urho	1975	16 200
Sisu	1976	16 200
Otso	1986	15 000
Kontio	1987	15 000
Fennica	1993	15 000
Nordica	1994	15 000
Bothnica	1998	10 000



*Figure 4. The conventional icebreaker Sisu and the multipurpose icebreaker Fennica.*

#### 4.1 The Finnish-Swedish winter navigation co-operation

Finland and Sweden have developed a joint method of operation for winter navigation. The basic principle is, that ships, which are on their way to, or leaving a Finnish or Swedish port, are given icebreaker assistance in winter. Icebreaker assistance is limited to ships which meet the given traffic restrictions and are calling at a "winter port". About half of the Finnish commercial ports are winter ports, used also during the ice season.

The principle is that all ships meeting the traffic restrictions are given icebreaker assistance from the outer edge of the ice field to the entrance of the fairway

leading to the port. From the entrance of the fairway the ship should be able to sail to the port on its own, although often the icebreaker has to escort, especially small ships, up to the port.

Long experience of setting traffic restrictions to ships, of implementing ice class rules, and of icebreaker assistance has indicated that the adequate ice class for the Gulf of Finland is ice class IA. In the Gulf of Bothnia an even higher ice class may be required during harsh winters.

## 5 Ice class requirements for ships

The Finnish Maritime Administration sets traffic restrictions for ships pending on ice conditions. The winter traffic restrictions for ships are set in order to ensure smooth winter navigation, and the safety of navigation in ice.

Finnish icebreakers assist only ships that meet the requirements on ice class set out in the Finnish – Swedish ice class rules. Assistance of vessels with inadequate engine output or ice strengthening would be both difficult and time consuming. It would not be safe to expose these vessels to ice loads and ice pressure, either. If a vessel built for a specific ice class turns out not to be technically or otherwise fit for navigation in ice, the icebreaker may refuse to assist it.

Traffic restrictions may also be set on the size of assisted ships. The number of icebreakers is limited, and they have to be able to assist all ships entering the winter ports.

Thus, the winter traffic restrictions favour ships, which have a high ice class and high cargo capacity. In this way the amount of cargo per assisted ship is as high as possible, and the icebreakers do not have to spend too much time in towing ships, which have a low engine power. The traffic restrictions are modified during the winter period pending on the ice conditions. A typical strictest traffic restriction for ships heading to the Finnish ports in the eastern Gulf of Finland is a minimum ice class IA and a minimum deadweight 2000 tdw. A typical strictest traffic restriction for the ports in the northern Bothnian Bay is ice class IA and a minimum deadweight 4000 tdw. On the other hand a lower minimum ice class is required for ships heading to the ports on the south-western coast of Finland, where the ice conditions are lighter. A typical minimum requirement is ice class IC and deadweight 3000 tdw.

## 6 Conclusions

The long-term Finnish experience in winter navigation tells that ships entering the ports during winter season shall have adequate ice strengthening of ship's structure and propulsion machinery approved by the Administration of the Coastal State, when the ice conditions require the use of an ice-strengthened vessel. This

is especially important for ships engaged in transportation of oil and other hazardous cargo.

## 7 Proposals for further consideration

Finland considers that there is a need for concerted action regarding unified application of rules for the ice classification of ships and arrangements of icebreaker services during the winter period in the Baltic Sea area.

### 7.1 Rules for the ice classification of ships

Finland has proposed that the Double Hull Regulation of EC should have a provision on a general requirement of an adequate ice strengthening of oil tankers navigating in ice conditions. The required technical provisions shall be transparent, internationally recognized, and approved by the Port State.

This proposal should be extended to cover all ice-going ships, and a bigger number of States, by adopting it in the Helsinki Convention. In this way, the safety of ships navigating in ice conditions in the Baltic Sea area could be improved.

### 7.2 Arrangements of icebreaker services in the Baltic Sea area

In the Baltic sea area there should be a unified winter navigation system in which all the Baltic countries agree on the application of rules and regulations for winter traffic in the area, and agree on common rules for icebreaker services and traffic restrictions during the winter months in icebound areas in the Baltic Sea. A unified winter navigation system could be developed by the Baltic Sea states within the framework of HELCOM.

The slide show is available (MS PowerPoint):

["Possible need for concerted action regarding unified application of rules for ice classification of ships and arrangement of icebreaker services during the winter period in the Baltic Sea area"](#)

**OUTCOME OF SESSION III "ADDITIONAL SAFETY MEASURES BEYOND THE COPENHAGEN DECLARATION"**

**Chair: Mr. Niels Bagge (Denmark)**

**Rapporteur: Mr. Peter Poulsen (Denmark)**

**Routeing measures for deep draught ships, especially tankers, covering the entire Baltic Sea including regional particularities**

1. Report and assessment on experience made by the lately introduced new measures and surveillance activities in the Kadetrenden introduced by Mr. Jörg Neubert (DE).

**Summary**

The extension of the deep-water route in the Kadetrenden has been established and buoyed accordingly in accordance with the Copenhagen Declaration. This new routing entered into force in January 2002; it ensures that deep-draught vessel can more easily than before identify and follow the existing narrow channel and thereby minimizing the risk of grounding. Although there have not been any more accidents since the implementation of this measure, a certain risk will remain, not only in the Kadetrenden but also in the entire Baltic Sea.

Germany are of the opinion that the definition of a transit route throughout the Baltic for tankers, complete with collateral traffic assisting measures, is indispensable if the safety of navigation and the level of environmental protection are to be increased. All Baltic coastal states have to agree on the necessary measures and bring the initiative jointly to the IMO Maritime Safety Committee.

Some of the expert delegates strongly supported the proposal and other delegates had considerations.

**Conclusion**

The discussion ended up with suggesting establishing a working group (WG) with Germany, Denmark and Sweden and with Germany as Chair. This WG task is to further discuss the proposal for establishing a transit route throughout the Baltic.

**During the discussion after the presentation a proposal for Extended Mandatory Pilotage in the Baltic Sea areas was raised by Mr. Uwe Jenisch (DE)**

It was suggested to set up a new HELCOM Pilotage Working group, with the task to develop a concept for mandatory pilotage in certain parts of the Baltic Sea.

1. Major topics to be elaborated are:
2. Creation of public awareness about environmental safety in the Baltic shipping,
3. Selection of sensible waterways that justify for mandatory pilotage,
4. Formulation of legal amendments, preferably of the SOLAS Convention (or other legal instruments as the case may be),
5. Evaluation of financial implications, (costs of pilotage, organizational questions),
6. Joint applications of amendments within IMO.

The proposal was approved by a number of delegates.

2. Report and assessment on the experience in the Vessel Traffic Service (VTS) – System in the Gulf of Finland by Mr Kari Kosonen (FI)

### **Summary**

Kari Kosonen introduced the VTS system established in the Gulf of Finland and the trilateral agreement between Estonia, Finland and Russia in mandatory Ship Reporting System (SRP) which will be operating from 1. July 2004.

3. Result of the HELCOM AIS Expert Working Group by Mr. Benny Pettersson (SE).

### **Summary**

The HELCOM Copenhagen Declaration worked out an agreement that: requires the Governments of the Contracting Parties to establish national, land-based monitoring system for ships, based on AIS signals. A full monitoring of the Baltic Sea area within A1 sea area shall take place not later than 1. July 2005.

The AIS EWG has seen that there is a demand from some authorities to see traffic in adjacent counties and some time beyond that. The EWG established a template with different authorities could have an interest of cross boarder information to be base an agreement between the Baltic Countries. One of the tasks for the AIS EWG is to prepare statistic of how the ships are moving in the Baltic. Denmark is already looking on this task. With good statistics it will be possible to amend some of the routing system already implemented and propose new for the future.

EWG have decided to build a demonstrator, which is based on the Internet with firewalls towards the countries. With this we will gain experience with the final network. The AIS are not only a ship to ship information system but also a information system from land stations to ships.

The EWG is still on the track for implementation of the system 1. July 2005 in

accordance with the Copenhagen Declaration.

**4. The need for additional safety measures from Russia's point of view, by Mr. Vladimir Isakov (RU)**

Mr. Isakov was unfortunately not able to be participating in the Work Shop. Therefore Isakov had issued a statement of the above mentioned topic. The statement was presented by Ms. Heike Imhoff.

**TOP F**

**5. Possible need for concerted actions regarding unification of rules for winter traffic/ice classification and ice breaker services arrangements during winter time by Mr. Jorma Kämäräinen (FI).**

**Summary**

The long time Finish experience in winter navigation tells that ships entering the ports during the winter season shall have adequate ice strengthening of ship structure and propulsion machinery approved by the administration of the Port State, when the ice conditions require the use of an ice strengthened vessel. In order to improve the safety of shipping in winter conditions, Finland is making a proposal for a unified application of rules for the ice classification of ships and arrangements of ice breakers services during the winter period in the Baltic Sea area

**Conclusion**

Finland has proposed that the double hull regulation of EC should have a provision on a general requirement of an adequate ice strengthening of oil tankers navigating in ice conditions. The required technical provisions shall be transparent, international recognized, and approved by the Port State.

This proposal should be extended to cover all ice-going ships, and a bigger number of States, by adopting it in the Helsinki Convention. In this way, the safety of ship navigating in ice conditions in the Baltic Sea area could be improved. Furthermore a unified winter navigation system should be developed by the Baltic coastal States within the framework of HELCOM.

The proposal was approved by a number of delegates.

**SESSION IV "COMPLIANCE" / TOP G**

**WHAT IS NEEDED: NEW DECISIONS OR IMPROVED IMPLEMENTATION?**

***Ms. Nina Munthe***  
**WWF Sweden**

WWF cordially welcomes the many recent initiatives taken to decrease the negative impact on the environment from shipping. At the same time it is obvious that much remains to be done. The Prestige accident illustrates the secrecy and chaos that still governs maritime operations. The polluter pays principle must be applicable also at sea and all parties involved in the chain of ownership, management or control of the ship and its cargo must be held liable and responsible for the damage they may cause. It is high time for concerted action and a new comprehensive approach with focus on prevention rather than cure and emergency action.

The Baltic Sea is one of the world's most extraordinary seas, sensitive due to a number of factors such as its mosaic of islands, many straits, low salinity with few species etc. At the same time the Baltic Sea has some of the densest maritime traffic in the world, which now rapidly increases.

The Baltic Sea states have already taken the most obvious measures to decrease the negative impact from shipping. The implementation of existing measures, is however, far from satisfactory and must be rapidly improved.

HELCOM is at present considering whether the Baltic Sea states should forward a PSSA<sup>2</sup> application to IMO. A PSSA is "an area which needs special protection through action by IMO because of its significance for recognized ecological, socio-economic or scientific reasons and which may be vulnerable to damage by international shipping activities". WWF wishes to highlight the importance of the process of preparing a PSSA proposal which provides the opportunity for a comprehensive analysis of the maritime traffic, the values and the threats, as well as measures to reduce the threats. At present much of the background material has been compiled and now the complex analysis requiring the input from and competence from various actors (including HELCOM HABITAT and HELCOM MARITIME) must be accomplished. A seminar should be organised to be able to develop joint visions and common approaches.

Apart from ensuring that existing measures are fully implemented new approaches should be tried. Some ideas on possible measures:

- Start cooperation with marine assurance companies, to make these promote safer maritime transports and a good code of conduct.

---

<sup>2</sup> PSSA – Particularly Sensitive Sea Area

- Initiate discussions with oil transporters and oil companies with the aim to quality assure transports. If consumers would place demands on the transports this would drastically improve environmental work.
- Increase the use of economic incentives.

Conclusions and recommendations to HELCOM:

- Apply for a PSSA status for the entire Baltic Sea, the Belt Seas and Kattegatt with carefully selected additional measures tailored for individual sites
- Focus more actively on implementation of existing measures, consider and redesign the role of HELCOM if necessary
- Develop regional measures to prevent alien species entering the Baltic Sea
- Ban the use of single-hull vessels in sensitive areas by 2010.
- Agree on ice-classification standards

Conclusions and recommendations to EU:

- Take concerted action within the framework of the UN to support a fundamental change in the way the shipping industry is operated and regulated.
- Speed up the implementation of the Erika I and Erika II packages
- Review the Erika I and II packages
- Consider the opportunity for concerted action within IMO to speed up the ban on single hull tankers

Other conclusions and recommendation:

- To governments: make use of the powers already available for action within the territorial waters
- To IMO: provide support for initiatives to ensure safe maritime transports

So, to conclude; improve the implementation of existing measures, apply additional carefully selected measures and reconsider the way shipping is operated on the global level.

The slide show is available (MS PowerPoint):

["What is needed: New decisions or improved implementation?"](#)

**SESSOPM IV "COMPLIANCE" / TOP H**

**IMPROVING THE WORK TOWARDS PROSECUTION OF OFFENDERS OF  
ANTIPOLLUTION REGULATIONS AT SEA**

*Ms. Barbro Jönsson*

**Office of the Prosecutor-General, Stockholm, Sweden**

**Abstract**

Ought in a way to be conviction of offenders because a mere prosecution is in no way the same as a conviction, especially in this type of cases. Nevertheless, it is a work, which has to take place at many different levels e.g. discovery of the offence, ID of possible offender, investigation and the prosecution itself.

*Discovery of the offence*

As much surveillance as possible. No need to word anymore on this topic here.

*ID of possible offender*

As much "live" surveillance as possible. See above.

Transponders. Coming.

*Investigation*

Improved knowledge among "detectors" of what happens later in a case makes them more observant on important information, on details and on documentation.

Improved knowledge among investigators of what happens earlier and later in a case makes them understand the documentation and able to ask the "right" questions.

Improved knowledge among prosecutors and other lawyers makes them understand the work of the detectors; the law and why an investigation has to be conducted the way it is.



More interchange of knowledge and information between different occupational groups domestically and internationally.

***Suggestions:***

1. Study visits and practical occupational experience exchanges.
2. A concise and clear "field manual" to aid officials from different professions who work with illegal oil spills. The work has already started within the OPC.

### *Prosecution*

Prosecutors knowing the law and being familiar with the specific problems connected with handling cases of illegal oil spills makes a better job deciding if they are going to prosecute or not and in court.

Means of presentation, a good presentation has great impact on the court



The better the physical material from the investigation is, e.g. samples, photos, videotapes, the better will the presentation be.

### ***Suggestion:***

A joint discussion between the occupational groups on how to secure evidence in the best way. Form for the discussion to be decided.

The slide show is available (MS PowerPoint):

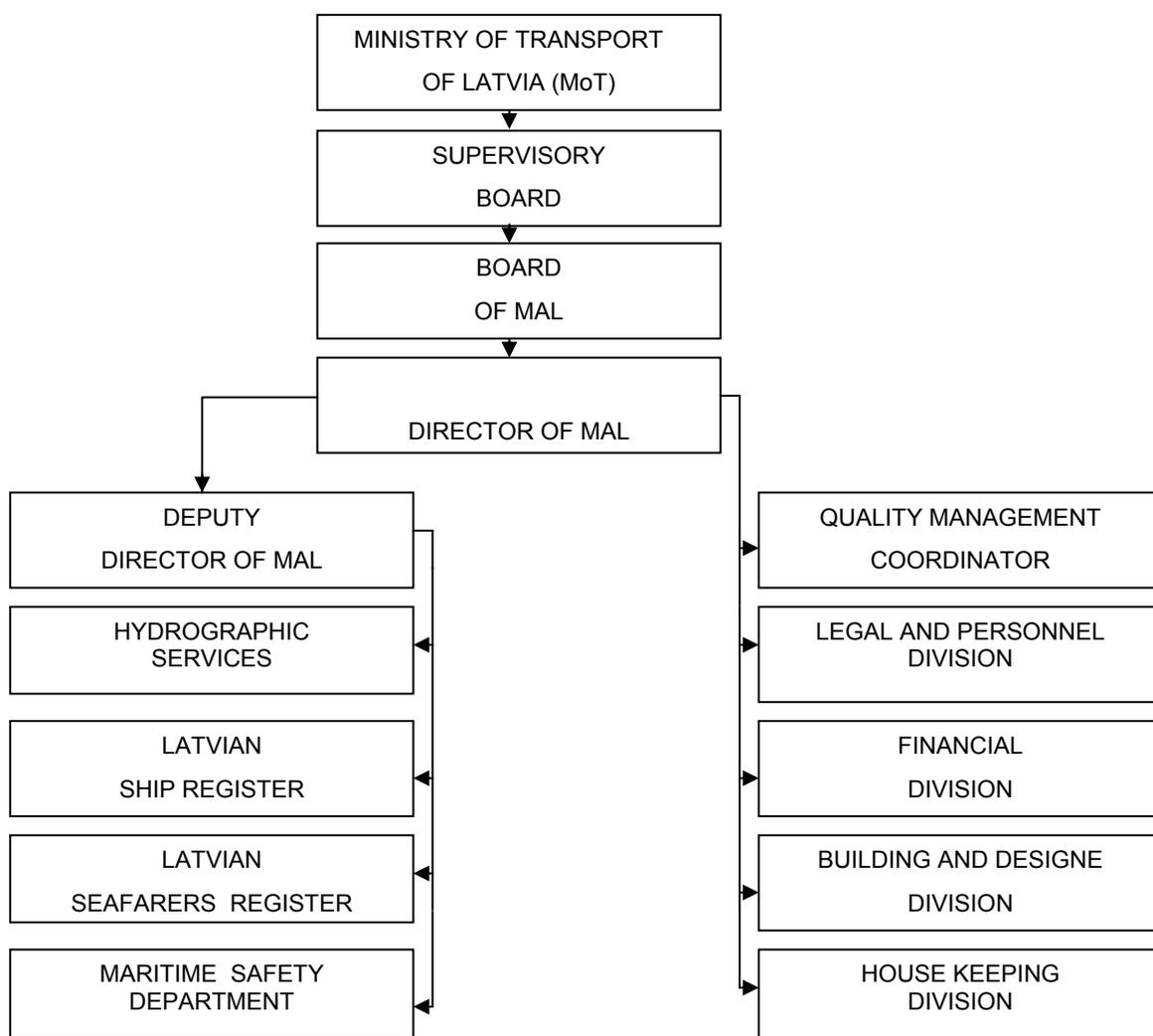
["Oil pollution at sea – improving the work towards prosecution"](#)

**SESSION IV "COMPLIANCE" / TOP I**

**PORT STATE CONTROL OF LATVIA**

*Mr. Gunars Steinerts*  
**Maritime Administration of Latvia, Riga**

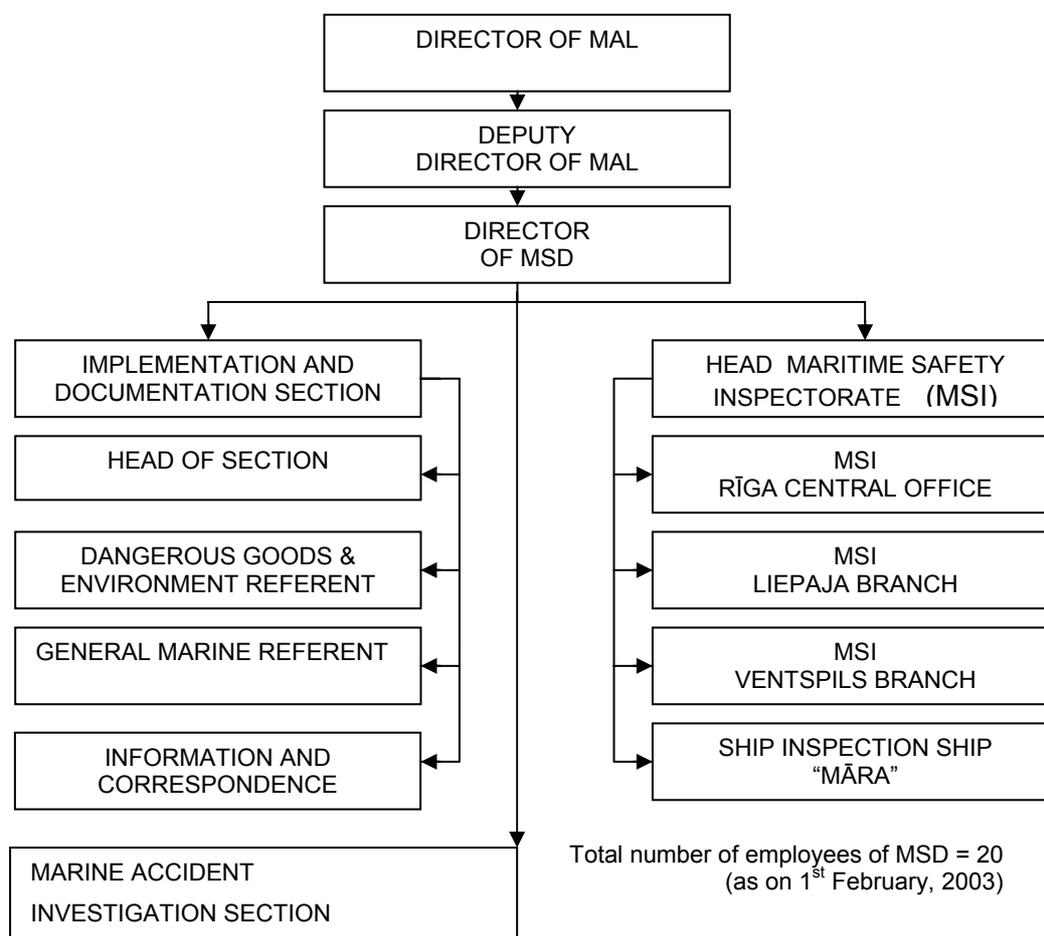
**ORGANIZATIONAL STRUCTURE OF  
 THE MARITIME ADMINISTRATION OF LATVIA (MAL)**



Total number of employees of MAL -102  
 (as on 1<sup>st</sup> February, 2003)

Ship control inspections in Latvia, both Flag State **and Port State Control** are performed by ship control inspectors of the Maritime Safety Inspectorate (MSI) of MAL, which is main part of the Maritime Safety Department (MSD). The organisation of MSD is shown on organizational scheme of MSD as below.

### ORGANIZATIONAL STRUCTURE OF THE MARITIME SAFETY DEPARTMENT (MSD)



Ship control inspectors of MSI perform both the Flag State Control and the Port State Control duties in all Latvian ports, including 8 local ports.

The qualifications of ship control inspectors of MSI comply with the Minimum criteria for Port State Control Officer according Annex 6 to the Paris MoU. All inspectors are able to communicate orally and in writing in Latvian, Russian and English languages.

#### **Port State Control performance**

More than 7000 foreign merchant ships are calling Latvian ports every year, some of them on liner service making regular calls. Therefore more than two thousand individual ships may be subject to Port State control inspections.

Maritime Administration of Latvia has been assigned by the Ministry of Transport to perform these duties and has started PSC inspections since 1996 based on IMO Resolution A.787(19).

By virtue of Regulations No.15 of 21 May, 1999 "Port State Control Regulations" the Ministry of Transport of Latvia has implemented EU Directives: 95/21/EC as amended by 98/25/EC and 98/42/EC, 96/40/EC.

Latvia has been applying for co-operative membership to Paris MoU since 1997. Following the longstanding training missions both IMO and EC supported and taking into account better PSC records since 1997 the co-operative membership to Paris MoU has been granted in May 2002.

Therefore the Maritime Administration of Latvia is now following fundamental principles and objectives established by the Memorandum as being extremely important for safety of navigation, environmental protection and the promotion of living and working conditions of seafarers. We have established and are maintaining the system of Port State Control with the view to insuring that, without discrimination as to flag, foreign merchant ships calling at Latvian ports, comply with the standards of relevant international instruments.

We have improved also the quality of Latvian Flag ships. The detention rate of our flag ships under Paris MoU is decreasing: from 14,7% in 1999 to 5,0% in 2001 and 6,2% in 2002.

The quality of Latvian Flag fleet is an important component also in connection with new shipping policy of Latvian Government based on Tonnage tax and relaxation of level of income and social taxes for seafarers serving on Latvian flag ships.

#### **Statistic on Port State Control in Latvian ports**

Year	Total number of ship calls Latvian ports	Number of individual ships calling Latvian ports	Number of ships inspected under PSC	Ships inspected in % of number of individual ships calling	Number of ships detained under PSC	Ships detained % of inspected
1998	7436	2018	400	19,5	2	0,4
1999	6556	1942	396	20,4	6	1,5
2000	5585	2236	411	18,4	10	2,4
2001	6861	2654	497	18,7	9	1,8
2002	7127*	2481	578	23,3	3	0,5

\* small ports not included

#### **Flag State Control performance**

##### Ships under Latvian flag

The registration of ships under Latvian flag has been assigned to the Latvian Ship Register (LSR) which is an integrated part of the Maritime Administration of Latvia. There are 498 ships registered in the Latvian Ship Register as on 1<sup>st</sup> January, 2003. All of registered ships in LSR are not eligible to FSC as far as the group of cargo ships are registered under so called "bare-boat out" registration which means that these ships are flying foreign flag. Most of Latvian flag by number are fishing ships, tugs and auxiliary vessels. The structure of Latvian flag ships by type and by size is shown in the table below.

Type of ships	Ships of all sizes			Ships of 100GT and over		
	Number	GT	DWT	Number	GT	DWT
Cargo ships	30	276784	416316	30	276784	416316
Fishing	221	40865	16346	97	33895	13743
Passenger	13	27580	6879	7	27391	6816
Tugs	60	7149	2111	26	5882	1813
Auxiliary	173	104136	81881	81	101881	75131
Icebreaker	1	4121	4968	1	4121	4968
Total	498	460635	528501	242	449954	518787

#### Recognized Organisations acting on behalf of the Maritime Administration of Latvia

There are six Recognised Organisations acting on behalf of the Maritime Administration of Latvia: Bureau Veritas, Lloyd's Register of Shipping, Russian Maritime Register of Shipping, Germanischer Lloyd, American Bureau of Shipping and Det Norske Veritas.

The Recognised Organisations are authorized carry out statutory certification services on behalf of the Administration with respect to 78 of the above indicated (498) vessels, registered in the Republic of Latvia.

The rest of these Latvian flag ships are under supervision of the Maritime Safety Inspectorate (MSI) of MAL. Therefore the quality of the Latvian flag is very dependent of the work of this Inspectorate. As far as the PSC records (see below) for Latvian flag ships under PSC inspections in foreign ports have improved steadily, it is apparent that the duties of Flag state control are effected by MSI at higher standard notwithstanding the better part of the merchant fleet has been flagged out for FOC registers.

#### **Port State Control records on Latvian ships in foreign ports**

Year	Number of inspections	Number of detentions	Detention %
1998	19	4	21.1
1999	41	6	14.6
2000	26	2	7.7
2001	20	1	5.0
2002	16	1	6,2

#### **PHARE Twinning Project "Maritime Safety"**

This project has been started on 1<sup>st</sup> September 2002. The Latvian counterpart in the Twinning is Germany.

The project has been organized in 11 packages covering the Legal framework development matters, Organizational and personnel training matters, Port State Control., Flag State Control, Marine accident investigation, Dangerous goods, Seafarers certification, IT and Quality Assurance matters.

Therefore the project is focussed on all aspects of duties of Latvian Maritime administration, both at ministerial level of MoT and on executive level of MAL . We appreciate good results on completion of this project.

### **Problems and possible solutions**

- **To reach the target of 25% ships inspected**

#### Solution (?)

To inspect more ships using all Paris MoU criteria possibilities and overriding cases

- **To increase the number/rate of ship detentions in Latvian ports**

#### Solution

Building of the professional ability of PSC officers – more training  
Full use of SIRENAC – 2000 system

- **To inspect the ships off Latvian ports**

#### Solution

Introducing clear definition of the term “off such a ports or such an installations”  
Applying similar procedure of selection ships for PSC inspection as in other PSC Authorities of Paris MoU

- **Is PSC a panacea in objective of drastically to reduce substandard shipping?**

Flag State Control & Classification Societies (RO) – first line of defence

Port State Control as last defence (but important)

**OUTCOME OF SESSION IV "COMPLIANCE"**

**Chair: Ms. Ingelore Hering (Germany)**

**Rapporteur: Mr. Rolf von Ostrowski (Germany)**

**TOP G: WHAT DO WE NEED MORE: NEW DECISIONS OR IMPROVED IMPLEMENTATION**

Speaker: Nina Munthe, WWF

In the light of the „Prestige“ accident:  
Prevention instead of cure and emergency

***Implementation***

- Most measures for safety already taken
- Still a lot to do
  - e.g. Baltic Strategy
- not quite satisfactory
- Focus on implementation
  - but also considering the need for improvement and specific additional regulations

***Chances arising from the development of a PSSA***

- Need for Identification of risks
- identification of measures leads to
  - revision time table for application to give the parties involved the possibility to elaborate on a differentiated proposal

***Suggestions***

- Focus on implementation
- EU
  - concerted action in the IMO
- Strengthening of national measures

**TOP H: IMPROVING THE WORK TOWARDS PROSECUTION OF OFFENDERS OF ANTIPOLLUTION REGULATIONS AT SEA**

Speaker: Barbro Jönsson

**•With the aim of deterrence**

–Putting stress on conviction of willful spills

–As much surveillance and conviction as possible

**The different levels of work**

- Discovery of the offence
- ID of possible offender
- Investigation
- Prosecution

***Suggestions***

- Study visits and practical occupational experience exchanges
- A concise and clear „field manual“
- A joint discussion between the occupational groups on how to secure and present evidence in the best way
- Need for improved information of all people involved

**TOP I: PORT STATE CONTROL IN THE BALTIC SEA AREA - NEED FOR FURTHER IMPROVEMENTS**

Speaker: Gunars Steinerts

- Need for improved training
- taking into account the specific situation in the Baltic Sea area
  - especially as far as the Paris MOU request of 25% controls and
  - the high amount of short sea traffic in the Baltic Sea area is concerned

**OBSERVER STATEMENT BY CCB**

**COALITION CLEAN BALTIC (CCB) VIEWS ON MEASURES TO AVOID  
ADVERSE "ENVIRONMENTAL IMPACTS DUE TO THE INCREASED DENSITY  
OF SHIPPING IN THE BALTIC SEA"**

***Mr. Piotr Gruszka***

**Coalition Clean Baltic (CCB), Uppsala, Sweden**

Coalition Clean Baltic welcomes the German initiative to organize a meeting of experts from around the Baltic Sea so as to actively contribute to the reduction of environmental risk posed by shipping in this unique and vulnerable sea.

The challenge to handle the new shipping situation in the Baltic Sea that has developed the last years, e.g. because of the expansion of oil-shipping for export of Russian oil through the Baltic Sea, is of crucial importance for the protection of the Baltic Sea environment.

**Baltic Sea as a PSSA**

The Baltic Sea is a sensitive sea area that needs stronger actions for environment protection than other sea areas. The whole Baltic Sea, also including the Belt Sea and Kattegat should be designated as a PSSA.

The political prerequisites for development of strong protection measures from impact of shipping and the oil-business have never ever been better. The possibility to make a joint application from all Baltic Sea Region countries for the Baltic Sea as a PSSA must now be made.

CCB especially welcomes the idea of designating the Baltic Sea as a Particularly Sensitive Sea Area (PSSA). We strongly support the proposal submitted by WWF to HELCOM HABITAT 4/2003, presenting the need for the whole Baltic to be included within the future PSSA. The developing system of Baltic Sea Protected Areas (BSPA), the proposed additional BSPAs, Important Bird Areas, Natura 2000 sites and other areas with designated nature conservation status should form core areas in future PSSA. Additional protective measures, supported e.g. by NGO Stockholm Declaration in 2001, such as improved routeing, mandatory pilotage, reporting system for certain vessels and increased emergency capacities in some parts of the Baltic could be introduced.

**Ballast Water Management**

We would like to highlight that the transfer and introduction of alien aquatic species poses a great threat to the biodiversity of the Baltic Sea. Over the past twenty years, a growing number of new species have been transported into the Baltic Sea, mainly introduced by release of ballast water from large ships entering the Baltic Sea. Because of the character of the Baltic Sea, as being the second biggest brackish

sea in the world, the Baltic Sea is a sensitive sea area that needs stronger actions for environment protection than other sea areas.

Creation of PSSA in the Baltic Sea forms a good possibility to adequately address issue of prevention of alien species introductions and be used to develop a legally binding ballast management strategy for the whole region.

There are already available international guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens, elaborated by the International Maritime Organisation (IMO Resolution A.686(20) and being developed into the new IMO convention.

Measures to minimise the risk of introducing harmful aquatic organisms and pathogens from ship's ballast waters and associated sediments should also be addressed at the workshop.

HELCOM and EC should take initiative for introduction of Regional Ballast Water Management Regimes for the Baltic Sea, within the MARPOL Special Areas concept.

The aim of such management should be to get a registration and control of all ships with ballast water entering the Baltic Sea

Such management could include components as:

- mandatory registration and reporting on ballast water status for all ships entering ports in the Baltic Sea
- mandatory permission procedures from national authorities, for ships that intend to release ballast water in territorial waters and in the economic zones (EEZ)

## LIST OF REGISTERED PARTICIPANTS

### CHAIRMAN

Mr. Peter Ehlers  
Federal Maritime and Hydrographic Agency  
Hamburg

### DENMARK

Mr. Ivan Andersen  
Ministry of the Environment  
Danish Environmental Protection Agency  
Copenhagen

Mr. Michael Bager  
Danish Maritime Authority  
Copenhagen

Mr. Niels Bagge  
Danish Maritime Authority  
Copenhagen

Mr. Jens Peter Hartmann  
Royal Danish Administration of Navigation  
and Hydrography  
Copenhagen

Mr. Peter Soeberg Poulsen  
Admiral Danish Fleet  
Maritime Environment Section  
Aarhus

Mr. Per Soenderstrup  
Royal Danish Administration of Navigation  
and Hydrography  
Copenhagen

### FINLAND

Mr. Harri Caven  
Ministry of Transport and Communications  
Helsinki

Mr. Kalervo Jolma  
Finnish Environment Institute (SYKE)  
Helsinki

Mr. Kari Kosonen  
Finnish Maritime Administration  
Helsinki

Mr. Jorma Kämäräinen  
Finnish Maritime Administration  
Helsinki

### GERMANY

Mr. Ingo Berger  
Innenministerium Schleswig-Holstein  
Kiel

Mr. Dieter Boedeker  
Federal Agency for Nature Conservation

	Isle of Vilm
Mr. Ulf Bustorff	Central Command for Maritime Emergencies (CCME) Germany Marine Pollution Control Cuxhaven
Mr. Henning Dierken	Wasser- und Schifffahrtsamt Lübeck Lübeck
Mr. Jürgen Ekat	Wirtschaftsministerium Mecklenburg- Vorpommern Schwerin
Mr. Mathias Fiege	Wasser- und Schifffahrtsamt Stralsund Stralsund
Mr. Hans-Jürgen Froböse	Federal Ministry of Transport, Building and Housing Bonn
Ms. Ingelore Hering	Federal Maritime and Hydrographic Agency Hamburg
Mr. Udo Hintze	Bundeslotsenkammer Hamburg
Mr. Fritz Holzwarth	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety Bonn
Ms. Heike Imhoff	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety Bonn
Mr. Uwe Jenisch	Ministry of Economy, Technology and Transport of Schleswig-Holstein Kiel
Ms. Dagmar Karsten	Waterways and Shipping Directorate North Kiel
Mr. Raven Kurtz	Waterways- and Shipping Directorate North Kiel
Mr. Hein Mehrkens	Bundeslotsenkammer Hamburg
Mr. Konrad Michaelis	Lotsenbrüderschaft Wismar/Rostock/Stralsund Warnemünde

Mr. R. Müller	Schiffahrtsinstitut Warnemünde Rostock
Mr. Jörg Neubert	Federal Ministry of Transport, Building and Housing Bonn
Mr. Klaus-Peter Nitsch	Wasser-und Schiffahrtsamt Stralsund Stralsund
Mr. Rolf von Ostrowski	Federal Maritime and Hydrographic Agency Hamburg
Mr. Jörg Peter	Directorate of Federal Waterways and Shipping Aurich
Mr. Heinz-Jochen Poremski	Federal Environmental Agency Berlin
Mr. Arno Pöker	City of Rostock
Mr. Rachow	Schiffahrtsinstitut Warnemünde Rostock
Ms. Gabriele Rutschke-Hamburger	Federal Ministry for Transport, Building and Housing Bonn
Mr. Andreas Röpke	Ministry of the Environment, Mecklenburg-Vorpommern Schwerin
Mr. Uwe Schell	Ministry for the Environment, Schleswig-Holstein Kiel
Mr. Peter Schlichting	Ministry of the Environment, Mecklenburg-Vorpommern Schwerin
Mr. Burkhard Schuldt	ARCADIS CONSULT GMBH Rostock
Mr. Rainer Siemens	Federal Border Police - Headquarters North Bad Bramstedt
Mr. Dirk-Uwe Spengler	Environmental Emergency Response Unit (EERU) Hamburg

Mr. Christian Subklew	Lotsenbrüderschaft Wismar/Rostock/Stralsund Warnemünde
Mr. Carsten-Sönke Wibel	Deutscher Nautischer Verein Hamburg
Mr. Frank Ziemer	University of Technology, Business and Design Warnemünde
Ms. A. Zölder	Schiffahrtsinstitut Warnemünde Rostock

#### **LATVIA**

Mr. Guntis Drunka	Ministry of Environment Marine Environment Board Riga
Mr. Janis Krastins	Maritime Administration of Latvia Riga
Mr. Gunars Steinerts	Maritime Administration of Latvia Riga

#### **LITHUANIA**

Mr. Valerij Gorbunov	Lithuanian Maritime Safety Administration Klaipeda
Mr. Tadas Navickas	Ministry of Environment of the Republic of Lithuania Vilnius
Ms. Ausra Pilibaityte	Lithuanian Maritime Safety Administration Klaipeda
Mr. Adomas Urnikis	Lithuanian Maritime Safety Administration Klaipeda

#### **POLAND**

Mr. Lech Auriga	Maritime Office in Szczecin Szczecin
Mr. Tomasz Cepinski	Maritime Office in Slupsk Slupsk
Mr. Marek Dziewicki	Maritime Office in Gdynia Gdynia

Mr. Juliusz Gajewski  
Maritime Institute in Gdansk  
Gdansk

Mr. Marcin Ochrymiuk  
Maritime Office in Szczecin  
Szczecin

Mr. Ryszard Wawruch  
Maritime Office in Gdynia  
Gdynia

Mr. Dariusz Wojcieszek  
Maritime Office in Szczecin  
Szczecin

#### **RUSSIA**

Mr. Sergey Ovsienko  
State Oceanographic Institute  
Moscow

#### **SWEDEN**

Mr. Thomas Fagö  
Swedish Coast Guard Headquarters  
Karlskrona

Ms. Barbro Jönsson  
Office of the Prosecutor-General  
Stockholm

Mr. Benny Pettersson  
Swedish Maritime Administration  
Norrköping

#### **OBSERVERS**

Mr. Bodo Bahr  
**Baltic Sea Parliamentary Conference**  
c/o Landtag Mecklenburg-Vorpommern  
Schwerin

Ms. Birgit Schwebs  
**Baltic Sea Parliamentary Conference**  
c/o Landtag Mecklenburg-Vorpommern  
Schwerin

Mr. Georg Strätker  
**Baltic Sea Parliamentary Conference**  
c/o Landtag Mecklenburg-Vorpommern  
Schwerin

Mr. Piotr Gruszka  
**Coalition Clean Baltic (CCB)**  
Uppsala

Ms. Nina Munthe  
**WWF Sweden**  
WSP Environmental  
Stockholm

**International Maritime Organization (IMO)**

Ms. Saara Lintu

**Helsinki Commission (HELCOM)**

Mr. Mieczyslaw Ostojski

Ms. Anne Christine Brusendorff

Ms. Teija-Liisa Lehtinen

## BALTIC SEA ENVIRONMENT PROCEEDINGS

- No. 1 JOINT ACTIVITIES OF THE BALTIC SEA STATES WITHIN THE FRAMEWORK OF THE CONVENTION ON THE PROTECTION OF THE MARINE ENVIRONMENT OF THE BALTIC SEA AREA 1974-1978 (1979)\*
- No. 2 REPORT OF THE INTERIM COMMISSION (IC) TO THE BALTIC MARINE ENVIRONMENT PROTECTION COMMISSION (1981)\*
- No. 3 ACTIVITIES OF THE COMMISSION 1980  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1980  
- HELCOM Recommendations passed during 1980 (1981)\*
- No. 4 BALTIC MARINE ENVIRONMENT BIBLIOGRAPHY 1970-1979 (1981)\*
- No. 5A ASSESSMENT OF THE EFFECTS OF POLLUTION ON THE NATURAL RESOURCES OF THE BALTIC SEA, 1980  
PART A-1: OVERALL CONCLUSIONS (1981)\*
- No. 5B ASSESSMENT OF THE EFFECTS OF POLLUTION ON THE NATURAL RESOURCES OF THE BALTIC SEA, 1980  
PART A-1: OVERALL CONCLUSIONS  
PART A-2: SUMMARY OF RESULTS  
PART B: SCIENTIFIC MATERIAL (1981)
- No. 6 WORKSHOP ON THE ANALYSIS OF HYDROCARBONS IN SEAWATER  
Institut für Meereskunde an der Universität Kiel, Department of Marine Chemistry, March 23 -April 3, 1981 (1982)
- No. 7 ACTIVITIES OF THE COMMISSION 1981  
- Report of the activities of the Baltic Marine Environment Protection Commission during 1981 including the Third Meeting of the Commission held in Helsinki 16-19 February 1982  
- HELCOM Recommendations passed during 1981 and 1982 (1982)
- No. 8 ACTIVITIES OF THE COMMISSION 1982  
- Report of the activities of the Baltic Marine Environment Protection Commission during 1982 including the Fourth Meeting of the Commission held in Helsinki 1-3 February 1983  
- HELCOM Recommendations passed during 1982 and 1983 (1983)
- No. 9 SECOND BIOLOGICAL INTERCALIBRATION WORKSHOP  
Marine Pollution Laboratory and Marine Division of the National Agency of Environmental Protection, Denmark, August 17-20, 1982, Rønne, Denmark (1983)

- No. 10      TEN YEARS AFTER THE SIGNING OF THE HELSINKI CONVENTION  
National Statements by the Contracting Parties on the Achievements in  
Implementing the Goals of the Convention on the Protection of the Marine  
Environment of the Baltic Sea Area  
(1984)
- No. 11      STUDIES ON SHIP CASUALTIES IN THE BALTIC SEA 1979-1981  
Helsinki University of Technology, Ship Hydrodynamics Laboratory, Otaniemi,  
Finland  
P. Tuovinen, V. Kostilainen and A. Hämäläinen  
(1984)
- No. 12      GUIDELINES FOR THE BALTIC MONITORING PROGRAMME FOR THE  
SECOND STAGE  
(1984)\*
- No. 13      ACTIVITIES OF THE COMMISSION 1983  
- Report of the activities of the Baltic Marine Environment Protection  
Commission during 1983 including the Fifth Meeting of the Commission held  
in Helsinki 13-16 March 1984  
- HELCOM Recommendations passed during 1983 and 1984  
(1984)
- No. 14      SEMINAR ON REVIEW OF PROGRESS MADE IN WATER PROTECTION  
MEASURES  
17-21 October 1983, Espoo, Finland  
(1985)
- No. 15      ACTIVITIES OF THE COMMISSION 1984  
- Report of the activities of the Baltic Marine Environment Protection  
Commission during 1984 including the Sixth Meeting of the Commission held  
in Helsinki 12-15 March 1985  
- HELCOM Recommendations passed during 1984 and 1985  
(1985)\*
- No. 16      WATER BALANCE OF THE BALTIC SEA  
A Regional Cooperation Project of the Baltic Sea States;  
International Summary Report  
(1986)
- No. 17A     FIRST PERIODIC ASSESSMENT OF THE STATE OF THE MARINE  
ENVIRONMENT OF THE BALTIC SEA AREA, 1980-1985; GENERAL  
CONCLUSIONS  
(1986)
- No. 17B     FIRST PERIODIC ASSESSMENT OF THE STATE OF THE MARINE  
ENVIRONMENT OF THE BALTIC SEA AREA, 1980-1985; BACKGROUND  
DOCUMENT  
(1987)
- No. 18      ACTIVITIES OF THE COMMISSION 1985  
- Report of the activities of the Baltic Marine Environment Protection  
Commission during 1985 including the Seventh Meeting of the Commission  
held in Helsinki 11-14 February 1986  
- HELCOM Recommendations passed during 1986  
(1986)\*

- No. 19 BALTIC SEA MONITORING SYMPOSIUM  
Tallinn, USSR, 10-15 March 1986  
(1986)
- No. 20 FIRST BALTIC SEA POLLUTION LOAD COMPILATION  
(1987)
- No. 21 SEMINAR ON REGULATIONS CONTAINED IN ANNEX II OF MARPOL 73/78  
AND REGULATION 5 OF ANNEX IV OF THE HELSINKI CONVENTION  
National Swedish Administration of Shipping and Navigation;  
17-18 November 1986, Norrköping, Sweden  
(1987)
- No. 22 SEMINAR ON OIL POLLUTION QUESTIONS  
19-20 November 1986, Norrköping, Sweden  
(1987)
- No. 23 ACTIVITIES OF THE COMMISSION 1986  
- Report on the activities of the Baltic Marine Environment Protection  
Commission during 1986 including the Eighth Meeting of the Commission  
held in Helsinki 24-27 February 1987  
- HELCOM Recommendations passed during 1987  
(1987)\*
- No. 24 PROGRESS REPORTS ON CADMIUM, MERCURY, COPPER AND ZINC  
(1987)
- No. 25 SEMINAR ON WASTEWATER TREATMENT IN URBAN AREAS  
7-9 September 1986, Visby, Sweden  
(1987)
- No. 26 ACTIVITIES OF THE COMMISSION 1987  
- Report on the activities of the Baltic Marine Environment Protection  
Commission during 1987 including the Ninth Meeting of the Commission held  
in Helsinki 15-19 February 1988  
- HELCOM Recommendations passed during 1988  
(1988)
- No. 27A GUIDELINES FOR THE BALTIC MONITORING PROGRAMME FOR THE  
THIRD STAGE; PART A. INTRODUCTORY CHAPTERS  
(1988)
- No. 27B GUIDELINES FOR THE BALTIC MONITORING PROGRAMME FOR THE  
THIRD STAGE; PART B. PHYSICAL AND CHEMICAL DETERMINANDS IN  
SEA WATER  
(1988)
- No. 27C GUIDELINES FOR THE BALTIC MONITORING PROGRAMME FOR THE  
THIRD STAGE; PART C. HARMFUL SUBSTANCES IN BIOTA AND  
SEDIMENTS  
(1988)
- No. 27D GUIDELINES FOR THE BALTIC MONITORING PROGRAMME FOR THE  
THIRD STAGE; PART D. BIOLOGICAL DETERMINANDS  
(1988)

- No. 28 RECEPTION OF WASTES FROM SHIPS IN THE BALTIC SEA AREA  
- A MARPOL 73/78 SPECIAL AREA  
(1989)
- No. 29 ACTIVITIES OF THE COMMISSION 1988  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1988 including the Tenth Meeting of the Commission held in Helsinki 14-17 February 1989  
- HELCOM Recommendations passed during 1989  
(1989)
- No. 30 SECOND SEMINAR ON WASTEWATER TREATMENT IN URBAN AREAS  
6-8 September 1987, Visby, Sweden  
(1989)
- No. 31 THREE YEARS OBSERVATIONS OF THE LEVELS OF SOME RADIONUCLIDES IN THE BALTIC SEA AFTER THE CHERNOBYL ACCIDENT  
Seminar on Radionuclides in the Baltic Sea  
29 May 1989, Rostock-Warnemünde, German Democratic Republic  
(1989)
- No. 32 DEPOSITION OF AIRBORNE POLLUTANTS TO THE BALTIC SEA AREA  
1983-1985 AND 1986  
(1989)
- No. 33 ACTIVITIES OF THE COMMISSION 1989  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1989 including the Eleventh Meeting of the Commission held in Helsinki 13-16 February 1990  
- HELCOM Recommendations passed during 1990  
(1990)\*
- No. 34 STUDY OF THE RISK FOR ACCIDENTS AND THE RELATED ENVIRONMENTAL HAZARDS FROM THE TRANSPORTATION OF CHEMICALS BY TANKERS IN THE BALTIC SEA AREA  
(1990)
- No. 35A SECOND PERIODIC ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT OF THE BALTIC SEA, 1984-1988; GENERAL CONCLUSIONS  
(1990)
- No. 35B SECOND PERIODIC ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT OF THE BALTIC SEA, 1984-1988; BACKGROUND DOCUMENT  
(1990)
- No. 36 SEMINAR ON NUTRIENTS REMOVAL FROM MUNICIPAL WASTE WATER  
4-6 September 1989, Tampere, Finland  
(1990)
- No. 37 ACTIVITIES OF THE COMMISSION 1990  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1990 including the Twelfth Meeting of the Commission held in Helsinki 19-22 February 1991  
- HELCOM Recommendations passed during 1991  
(1991)

- No. 38 THIRD BIOLOGICAL INTERCALIBRATION WORKSHOP  
27-31 August 1990, Visby, Sweden  
(1991)
- No. 39 AIRBORNE POLLUTION LOAD TO THE BALTIC SEA 1986-1990  
(1991)
- No. 40 INTERIM REPORT ON THE STATE OF THE COASTAL WATERS OF THE BALTIC SEA  
(1991)
- No. 41 INTERCALIBRATIONS AND INTERCOMPARISONS OF MEASUREMENT METHODS FOR AIRBORNE POLLUTANTS  
(1992)
- No. 42 ACTIVITIES OF THE COMMISSION 1991  
- Report of the activities of the Baltic Marine Environment Protection Commission during 1991 including the 13th meeting of the Commission held in Helsinki 3-7 February 1992  
- HELCOM Recommendations passed during 1992  
(1992)
- No. 43 BALTIC MARINE ENVIRONMENT BIBLIOGRAPHY 1986-1990  
(1992)
- No. 44 NITROGEN AND AGRICULTURE, INTERNATIONAL WORKSHOP  
9-12 April 1991, Schleswig, Germany  
(1993)
- No. 45 SECOND BALTIC SEA POLLUTION LOAD COMPILATION  
(1993)
- No. 46 SUMMARIES OF THE PRE-FEASIBILITY STUDIES  
Prepared for the Baltic Sea Joint Comprehensive Environmental Action Programme  
(1993)\*
- No. 47 HIGH LEVEL CONFERENCE ON RESOURCE MOBILIZATION  
Gdansk, Poland, 24-25 March 1993  
Compilation of Presentations and Statements  
(1993)
- No. 48 THE BALTIC SEA JOINT COMPREHENSIVE ENVIRONMENTAL ACTION PROGRAMME  
(1993)
- No. 49 THE BALTIC SEA JOINT COMPREHENSIVE ENVIRONMENTAL ACTION PROGRAMME  
Opportunities and Constraints in Programme Implementation  
(1993)
- No. 50 SEMINAR ON RECEPTION FACILITIES IN PORTS  
Turku, Finland, 16-19 November 1992  
(1993)

- No. 51      STUDY OF THE TRANSPORTATION OF PACKAGED DANGEROUS GOODS BY SEA IN THE BALTIC SEA AREA AND RELATED ENVIRONMENTAL HAZARDS  
(1993)
- No. 52      ACTIVITIES OF THE COMMISSION 1992  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1992 including the 14th meeting of the Commission held in Helsinki 2-5 February 1993  
- HELCOM Recommendations passed during 1993  
(1993)
- No. 53      BALTIC MARINE ENVIRONMENT BIBLIOGRAPHY 1991-1992  
(1993)
- No. 54      FIRST ASSESSMENT OF THE STATE OF THE COASTAL WATERS OF THE BALTIC SEA  
(1993)
- No. 55      ACTIVITIES OF THE COMMISSION 1993  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1993 including the 15th meeting of the Commission held in Helsinki 8-11 March 1994  
- HELCOM Recommendations passed during 1994  
(1994)
- No. 56      INTERGOVERNMENTAL ACTIVITIES IN THE FRAMEWORK OF THE HELSINKI CONVENTION 1974-1994  
(1994)
- No. 57      GUIDELINES FOR THE THIRD POLLUTION LOAD COMPILATION (PLC-3)  
(1994)\*
- No. 58      ICES/HELCOM WORKSHOP ON QUALITY ASSURANCE OF CHEMICAL ANALYTICAL PROCEDURES FOR THE BALTIC MONITORING PROGRAMME  
5-8 October 1993, Hamburg, Germany  
(1994)
- No. 59      HELCOM SEMINAR FOR EXPERTS FROM ESTONIA, LATVIA, LITHUANIA AND RUSSIA ON THE IMPLEMENTATION OF HELCOM ARRANGEMENTS, OTHER INTERNATIONAL INSTRUMENTS AND RELATED MATTERS  
30 August - 3 September 1993, Riga, Latvia  
(1994)
- No. 60      ACTIVITIES OF THE COMMISSION 1994  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1994 including the 16th meeting of the Commission held in Helsinki 14-17 March 1995  
- HELCOM Recommendations passed during 1995  
(1995)
- No. 61      RADIOACTIVITY IN THE BALTIC SEA 1984 - 1991  
(1995)

- No. 62      ACTIVITIES OF THE COMMISSION 1995  
- Report on the activities of the Baltic Marine Environment Protection Commission during 1995 including the 17th meeting of the Commission held in Helsinki 12-14 March 1996  
- HELCOM Recommendations passed during 1996 (1996)
- No. 63      COASTAL AND MARINE PROTECTED AREAS IN THE BALTIC SEA REGION (1996)\*
- No. 64A     THIRD PERIODIC ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT OF THE BALTIC SEA, 1989-1993; EXECUTIVE SUMMARY (1996)
- No. 64B     THIRD PERIODIC ASSESSMENT OF THE STATE OF THE MARINE ENVIRONMENT OF THE BALTIC SEA, 1989-1993; BACKGROUND DOCUMENT (1996)
- No. 65      OVERVIEW ON ACTIVITIES 1996 (1997)\*
- No. 66      BALTIC MARINE ENVIRONMENT BIBLIOGRAPHY 1993-1995 (1997)
- No. 67      WORKSHOP ON THE REDUCTION OF EMISSIONS FROM TRAFFIC IN THE BALTIC SEA AREA (1997)
- No. 68      THE EVALUATION OF THE RELATION OF ATMOSPHERIC DEPOSITION TO RIVERINE INPUT OF NITROGEN TO THE BALTIC SEA (1997)
- No. 69      AIRBORNE POLLUTION LOAD TO THE BALTIC SEA 1991-1995 (1997)
- No. 70      THE THIRD BALTIC SEA POLLUTION LOAD COMPILATION (1998)
- No. 71      THE FINAL REPORT ON THE IMPLEMENTATION OF THE 1988 MINISTERIAL DECLARATION (1998)\*
- No. 72      THE BALTIC SEA JOINT COMPREHENSIVE ENVIRONMENTAL ACTION PROGRAMME: RECOMMENDATIONS FOR UPDATING AND STRENGTHENING (1998)
- No. 73      OVERVIEW ON ACTIVITIES 1997 (1998)
- No. 74      AGENDA 21 FOR THE BALTIC SEA REGION, SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL SECTOR IN THE BALTIC SEA REGION (1998)

- No. 75 RED LIST OF MARINE AND COASTAL BIOTOPES AND BIOTOPE COMPLEXES OF THE BALTIC SEA, BELT SEA AND KATTEGAT (1998)
- No. 76 MARINE SEDIMENT EXTRACTION IN THE BALTIC SEA - STATUS REPORT (1999)
- No. 77 BALTIC LEGAL MANUAL - INFORMATION ON ANTI-POLLUTION REGULATIONS AT SEA AND THE PROSECUTION OF VIOLATIONS THEREOF IN THE BALTIC SEA AREA (2000)
- No. 78 GUIDELINES ON ENSURING SUCCESSFUL CONVICTIONS OF OFFENDERS OF ANTI-POLLUTION REGULATIONS AT SEA (2000)
- No. 79 TRANSPORT SECTOR INVESTMENT DECISION-MAKING IN THE BALTIC SEA REGION (2000)
- No. 80 INTERCOMPARISON OF SEDIMENT SAMPLING DEVICES USING ARTIFICIAL RADIONUCLIDES IN BALTIC SEA SEDIMENTS - THE MOSSIE REPORT - (2000)
- No. 81 SECOND ICES/HELCOM WORKSHOP ON QUALITY ASSURANCE OF CHEMICAL ANALYTICAL PROCEDURES FOR THE COMBINE AND PLC-4 PROGRAMMES  
21-23 October 1999, Helsinki, Finland  
(2000)
- No. 82A ENVIRONMENT OF THE BALTIC SEA AREA, 1994-1998; (Executive Summary)  
(2001)
- No. 82B ENVIRONMENT OF THE BALTIC SEA AREA, 1994-1998; (Background Document)  
(2002)
- No. 83 THEMATIC REPORTS ON HELCOM PITF REGIONAL WORKSHOPS HELD IN THE BALTIC REPUBLICS  
Riga, Latvia, 24-25 May 2000; Vilnius, Lithuania, 26-27 October 2000;  
Tallinn, Estonia, 1-2 March 2000  
(2001)
- No. 84 ACTIVITIES 2001 OVERVIEW  
(2002)\*
- No. 85 RADIOACTIVITY IN THE BALTIC SEA 1992-1998  
(2003)\*\*

\*) out of print

\*\* ) in print