Wadden Sea Board

WSB 29

19 June 2019

Vlieland, The Netherlands

Agenda Item:	**5.5**
Subject:	**Shipping Safety**
Document No.:	**WSB 29/5.5/1**
Date:	**12 June 2019**
Submitted by:	**Netherlands**

During its 28th meeting, WSB concluded that the Netherlands would review the recommendations from former approaches on shipping safety, with the aim to evaluate the potential for a common position of the TWSC on the further process. A corresponding document would be prepared for WSB 29. Germany also suggested including the WSF on this topic and Mr Rösner (WWF) recommended involving the green NGO and to make use of the PSSA nomination to foster relevant measures that could also be proposed to IMO.

The Dutch delegation has made a first proposal for the above-mentioned document.

Proposal: The meeting is invited to discuss the document and to consider how to proceed.

Draft Recommendation to WSB regarding MSC Zoë and other shipping incidents

At WSB 28 it was agreed to "review former recommendations on shipping safety with a perspective towards a common position of the TWSC on the further progress and use the PSSA nomination to achieve politically important measures that can also be proposed to IMO. During this process both the WSF and the green NGO's were involved.". See also the draft report of this meeting. The discussion in the WSB started, because of the incident with the MSC Zoë on the North Sea off the Dutch Wadden islands.

What has the WSB done when it comes to shipping and which recommendations have been made:

- **Toender Declaration**

Former recommendations regarding shipping safety have been made by the WSF and send to the WaddenSeaBoard and CWSS as input for the Ministerial Conference in Toender in 2014 (see appendix 1).
In the Declaration of Toender the Ministers "Encourage the national competent authorities to use the operational plans as in Annex 5 as the basis for reviewing and accordingly implementing the measures of the operational plans, e.g. stimulate where reasonable and feasible, the accelerated implementation of (bio)-LNG as transition fuel, in order to achieve its objectives."

The trilateral DGN MARAD-group has made an evaluation on the progress of these operational plans which has been discussed with the WSB in the meetings of 24th of March 2017 and 13th of June 2017 (see appendix 2). This evaluation made it clear that from the five operational plans four of them are being carried out for the most. The fifth operational plan regarding awareness and education has only been carried out for 1 measure, that is to make PSSA a part of the curriculum of nautical educations. The other 6 measures from this operational plan (see appendix 2, paragraph 3.3) have until now not being dealt with, because of the fact that the MARAD-group stated in the evaluation that these measures have to be dealt with by the CWSS and/or an expert group.

- During its discussions in the WSB regarding this evaluation in 2017 with the MARAD-group the WSB has requested the CWSS to organize a stakeholder workshop before the Ministerial Conference in 2018 in Leeuwarden together with the MARAD-group. Purpose of this workshop should amongst others be "to inform and to increase awareness on the PSSA". This workshop has until know not taken place, because of the lack of sufficient participants.

- In the **Declaration of Leeuwarden** 2018 the Ministers "Encourage the competent national shipping and nature conservation authorities to continue their dialogue in order to achieve an even higher level of safety and cooperation, inter alia by raising the general awareness and information level;".

In the first meeting of the new TG-M on the 24th of April 2019 a first discussion was held about the position of the WSB regarding this issue. In the discussion recommendations towards the WSB itself as well as to the maritime authorities were discussed. During the meeting it was noted that the outcome of the German and Dutch investigations into the incident with the MSC Zoë should be used.

The secretary of the WSF as well as the Waddenvereniging were informed about the way the issue was dealt with in the TG-M. Different German and Danish green ngo's like the NABU, BUND, DOF, DN, WWF and some others were asked about their ideas around this subject. At the moment no input for the discussion is received from their point of view, different green ngo's are working on a reaction at the moment.

Also the Dutch House of Representatives (Tweede Kamer) has spoken about the incident with the MSC Zoë on May 14th with the Minister of Infrastructure and Watermanagement and the minister of Agriculture, Nature and Food Safety. The Minister of infrastructure and Watermanagement made it clear to the House that she will wait the outcome of the different investigations into the cause of the incident with the MSC Zoë, before making recommendations about adjustments of shipping routes in IMO-perspective. The results of the main investigation is expected no earlier than spring 2020.

Ahead of the results of these investigations the Minister of Infrastructure and Watermanagement has started an investigation into the possibilities of the use of tracing devices on Sea containers. The results are expected in autumn 2019.

The WSB is proposed to:

1) **Use the former evaluation of the MARAD-group to explore which parts of the operational plans are still relevant to implement by the WSB. Focus should be on the operational plan Awareness and Education where parties like the WSF perhaps can support the implementation. TG-M can be asked to make a concrete proposal.**
2) **Express its concern to the MARAD-group on short notice in response to the incident with the MSC Zoë and ask the MARAD-group for an actual overview of the implementation of the other four operational plans with reference to the discussions in 2017 with the WSB.**
3) **Support measures like for example adjustment of shipping routes for containerships on IMO-level, if the investigations into the incident with the MSC Zoë give reason for such measures.**
4) **Ask the UNESCO World Heritage Marine Program if common recommendations can be formulated noticing recent shipping incidents, to guarantee a good protection of these special MPA's.**

Appendix 1. Recommendations WSF on shipping.

Main results, recommendations and statements of the WSF working group Shipping & Harbour

1. Introduction

The southern North Sea with its Wadden Sea is characterized by international and short sea shipping, recreational yachting, fisheries, ferry traffic and off-shore services. The traffic lanes directly north of the Wadden Sea, designated as Particularly Sensitive Sea Area (PSSA) and World Heritage Site, make this one of the busiest shipping areas worldwide.
The Wadden Sea Forum has been elaborating on shipping safety issues for a long time. In the recent past, measures like VTS and VTM came into a particular focus as options to increase safety standards. There is a growing concern about shipping intensity, in particular in the traffic separation schemes adjacent to the Wadden Sea area, in relation to safety and the environment.
Recent incidents like accidents and near collisions, loss of cargo (deck cargo and containers), the developments in the Eemshaven area and also the fast developing offshore wind farms require a re-evaluation of Vessel Traffic Management (VTM) and an assessment of what vessel traffic monitoring in the southern North Sea can provide with regard to shipping safety.
VTM can be described as a guidance advice system and global functional framework for all navigable waters, within which VTS may be the central instrument among various others. This framework should be supported by information management. The IALA definition of VTM is:
"…the functional framework of harmonized measures and services to enhance the safety, security and efficiency of shipping and the protection of the marine environment in all navigable waters".

2. Analysis of recent developments
2.a Shipping developments and cargo

The North Sea has about 260.000 ship movements (> 300 gross tonnages, GT) annually, making it one of the busiest seas in the world. Shipping is directed via interconnecting traffic lanes to and from Antwerp, Rotterdam, Amsterdam, Eemshaven, Emden, Wilhelmshaven, Bremerhaven and Hamburg, and also to the North (i.e. to pass Skagen) and North East.
The shipping intensity in the TE-route/ German Bight to these ports amounted in some 50.000 movements in 2010, of which the biggest share was generated by the port of Hamburg. According to the report of the policy document North Sea 2009-2015, the number of ship movements will increase by 14 % to 31% in the near future.
This busy shipping route is situated at a distance of approx. 12 miles north of the Wadden Sea, which has been designated as a PSSA, and of which the Dutch and German segments have been inscribed in the World Heritage list.
The developments and expansions in Eemshaven, Wilhelmshaven, Cuxhaven, Brunsbüttel and Hamburg will cause an increase in the number of tankers, bulk carriers and containerships approaching the ports.
The capacity of shipping lanes in the estuaries will grow to its limit without a sound vessel traffic management in outer waters.
The volume of container transport and shipment in the North Sea area is expected to increase, and so will contribute to traffic congestion in the area north of the Wadden Sea.

2.b Shipping routes

The main shipping lanes to the north of the Dutch and the Niedersachsen Wadden Sea are the so called TE-Route and the Deep Water (DW) Route. The DW-Route is mandatory for ships which are designated according the IMO regulations as Oil, Gas and Chemical tankers >10.000 GT and some chemical tankers >5000 GT.

Tankers should take the shortest route from the ports to DW-Route and these ships are not allowed to take the TE-Route. The development of Eemshaven will cause an increase in crossings between the DWRoute and the TE-Route.
Oil tankers and bulk carriers have to meet a tidal window because of the special conditions of the Wadden Sea area with shallow waters, sandbanks and tidal currents. These ships have to operate within a limited time window and will pass the TE-Route in such a way that they will arrive at Eemshaven at high tide.
Obviously, the risk is still too high and any additional risk would be unacceptable in the Wadden SeaThe implementation of off-shore wind farms near the main shipping routes will also add a considerable additional risk. This begs more careful consideration and the establishment of measures which would compensate for this additional risk (Sylt Declaration 2010, § 36: "Reaffirm the importance of shipping safety with respect to any offshore activity. The safety of shipping in the North Sea Area should be kept at least at the present level, irrespective of which kind of offshore development might occur, and where feasible be enhanced.").

3. Recommendations

Recognizing the present and future developments with envisaged increasing risks to the Wadden Sea, the working group Shipping & Harbour of the Wadden Sea Forum recommends addressing the further needs in shipping safety to the Trilateral Wadden Sea Cooperation.
It is recommended that the 12th Trilateral Governmental Conference on the Protection of the Wadden Sea on 5 February 2014 in Tønder adopts the document.
The working group recommends developing a trilateral system for vessel-traffic monitoring in the German Bight with the aims of: ensuring strict compliance with existing rules; preventing dangerous situations; immediate intervention when a dangerous situation develops despite all efforts to prevent it; and, overall contributing to the implementation of § 36 Sylt Declaration.
This system will build on best practices of vessel management in estuaries and harbour approaches for further voluntary use in the main shipping routes, to support safe and efficient vessel handling. A close cooperation between shipping and port authorities, coast guard and ship owners will contribute to the enhancement of the system.
An enhanced vessel monitoring system will enable the coastguards or any other competent administration, to monitor safety of navigation and adherence to the international rules and it will provide safety information to shipping, particularly in crossings of the DW and TE route of the TSS and in harbour approaches.
In particular, it recommends:

- A more comprehensive monitoring of ship traffic using and crossing the traffic separation schemes;
- Implementation of an area-covering AIS and VTS from Northern Denmark to the South of The Netherlands;
- Combining cooperative and non-cooperative monitoring systems at best technique standards to increase the control system;
- Establishing reporting or calling in points (CIP) at places where ships are leaving or entering a vessel traffic scheme;
- Establishing a north to south lane (v/v) between the Deep Water Route and the TE Route (v/v), which vessels have to use when leaving the Deep Water Route destined for, or leaving from ports in the Wadden Sea Region;
- Ensuring there will be ample room between wind farms, traffic separation schemes and anchorage areas;
- Management and monitoring of the tidal windows in the Wadden Sea area and agreement on a protocol between the relevant authorities for the admittance of approaching vessels.
- Expansion of emergency towing capacity in the Wadden Sea Region;

· Introduction of a trilateral vessel traffic management system (VTM) in the Wadden Sea Region as a pilot initiative for regional seas;

· Establishment of a transnational maritime operation centre for monitoring and control.

Besides monitoring and management in shipping safety, additional measures will increase environmental friendly shipping standards. Therefore, it is also recommended to actively strive for/support

· Application of the Bonn Agreement;

· Application of the EU Maritime Transport Policy (according to goals and recommendations of Commission);

· Application of the Ballast Water Convention;

· The Convention on anti-fouling systems, IMO regulations;

· An action plan to deal with micro plastic pollution.

4. Conclusions

With a sound trilateral Vessel Monitoring system and the introduction of a VTM system for the entire area, the safety level for man and environment can be improved. Guidance for shipping in the area should be carried out on a multidisciplinary level between the coastguards, other control stations and port and river authorities. It will have a positive influence on shipping and industry, will enhance safety standards and will acknowledge the protection of the vulnerable Wadden Sea nature reserve and World Heritage Site.

Appendix 2. Evaluation operational plans June 2017

I. Introductory chapter [of the DenGerNeth MARAD Group]

At the Trilateral Waddenzee Ministerial Conference in February 2014 the Tønder Declaration was signed by the Ministers of Environment in Denmark, the Netherlands and Germany. No 55-57 deal with Maritime Safety and Pollution Prevention of Shipping. In addition Annex 5 to the declaration includes the PSSA Wadden Sea Operational Plans including "Prevention of Accidents", "Operational Pollution", "Awareness and Education", "Preparedness and Response" and "Cooperation. In its 18th meeting on November 3, 2016 the Wadden Sea Board asked the DenGerNeth MARAD group to give a report of the implementation of the relevant provisions of the Tønder Declaration and its Annex 5.

The DenGerNeth MARAD group consists of members from different maritime authorities in the three countries being in charge of safety of navigation and/or directly of prevention of accidents and preparedness and response to accidents.

As the maritime world mostly operates on an international level, cooperation between the three countries has been firmly in place for a long time. From IMO- to EU-level to multi-lateral cooperation in IALA or in the North Sea area like the Bonn Agreement to operational level as agreed in the DENGERNETH cooperation all three countries are linked through their shared responsibilities to prevent accidents and in case an accident happens respond as fast and well prepared as possible. Preventing accidents and responding to accidents protect the EEZs, territorial waters and coasts of all three countries including the Wadden Sea area.

As requested by the Wadden Sea Board the group discussed the No 55-57 of the Tønder Declaration and its Annex 5 in several meetings and provides the following response:

II. Tønder declaration No 55-57

Emphasize the importance of the maritime activities and safety of the Wadden Sea Particularly Sensitive Sea Area (PSSA) and **welcome** the engagement of the stakeholders in implementing the agreements of the Sylt Declaration and **recognize** the developed operational plans relevant for the Wadden Sea PSSA

Encourage the national competent authorities to use the operational plans as in **Annex 5** as the basis for reviewing and accordingly implementing the measures of the operational plans, *e.g.* stimulate where reasonable and feasible, the accelerated implementation of (bio)-LNG as transition fuel, in order to achieve its objectives

Continue the dialogue between the competent shipping authorities and nature conservation authorities and stakeholders in order to achieve an even higher level of safety and cooperation

The DenGerNeth MARAD group recognizes the political significance of the Tønder declaration including Annex 5 and the importance of safety in and around the Wadden Sea area, taking additionally into account that the adjacent shipping lanes are not just only some of the busiest in the world, but are of uttermost importance for the economic growth in all three countries. It refers to the evaluation of the Operational Action Plans in Annex 5.

Taking into account the implementation of LNG as propulsion fuel for ships, the national relevant authorities have by negotiations for international regulations, primarily at the IMO, made it feasible for the industry to invest in a transition for LNG as propulsion fuel. Especially regional liner services have expressed an interest in using LNG where a supply chain has been established. Other initiatives have been launched to support the new technology, e.g. in Germany for every new vessel owned by the Ministry of Transport there has to be an assessment if the use of LNG would be compatible with the intended use of the vessel. It should be noted that bio-LNG has not yet been developed and is then not available for the use as propulsion fuel on ships.

The dialogue between the competent maritime authorities and nature conservation authorities and stakeholders takes place mostly as part of the daily routine on a national level between the competent authorities in each country. Depending on the respective national legal system stakeholders are involved through consultations and hearings. Within the Trilateral Cooperation a process was started to establish a dialogue on a trilateral level as well with a series of events. Taking into account this development the DenGerNeth MARAD group recommends to organize an event in 2017 where maritime authorities will inform nature conservation authorities and stakeholders about developments in the maritime world relevant to the Wadden Sea area through a number of presentations. In addition this event could be a platform to stakeholders and nature conservation agencies to inform about relevant developments in their area of expertise. As the necessity of such an event is rooted in the Trilateral Wadden Cooperation and the maritime authorities do not have any budget for events like these, it would be necessary for the Trilateral Wadden Sea Secretariat to organize such a meeting. The DenGerNeth MARAD group is prepared to assist the CWSS where required e.g. with the list of participants, topics for presentations, presenters etc.

Trilateral Waddenzee Governmental Council
Tönder Declaration - 5 February 2014

Annex 5 - PSSA Wadden Sea Operational Plans

1. Prevention of accidents	
1.3	**Measures**
1.3.1	*Continue to work on behalf of maritime safety on IMO and EU-level*
	The DGN MARAD agreed that it is an obligation for the maritime administrations to consider any requirements of routing systems, VTS and protecting the marine environment etc. Shipping is an international business which requires regulations developed and implemented internationally through the IMO. If two member States would apply for a protective measure having effect of the waters in common, it is then a requirement that a proposal is developed and submitted in cooperation to the IMO. An example of such an implementation is given in Appendix 1. Some regulatory requirements can be implemented on a regional level as in the EU, primary having effect for ships calling at EU ports. In regard of for example offshore wind farms, the Espoo (EIA) Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. These requirements are also included in the EU directives 2008/56/EF Marine Strategy Framework Directive and 2000/60/EC establishing a framework for Community action in the field of water policy.
1.3.2	*By taking into account the on-going technical development continue to improve existing VTS', including comprehensive monitoring, e.g. through IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities)*
	The IALA is a technical association established in 1957, and gathers marine aids to navigation authorities, manufacturers, consultants, scientific and training institutes from all parts of the world. The IALA develops recommendations and guidelines amongst others on markings for wind farms, radio navigation, VTS operations and training etc. The maritime administrations of the DGN MARAD all participate in the IALA. As an example, already between NL and DE an extensive cooperation exists with regard traffic control (VTS) and advise, best reflected by the way traffic is regulated and monitored in the Ems estuary. VTS center in Germany (Knock) is the responsible nautical authority. Technical developments are followed and discussed between the partners.
1.3.3	*In addition to constant national risk assessments using Bonn Agreement wide initiatives like the BE-AWARE project to cooperate between neighboring states in the wider North Sea area to increase the comparability of results and therefore the possibilities of cooperation.*
	Under the framework of the BONN AGREEMENT (BA), but also in wider EU network, not only risk analysis are produced, the assessment of environmental impact is an important outcome. The BONN Agreement will take into account the changes in maritime industry [DMA/cgj: Not sure of the proper understanding here??]. This doesn't only concern shipping, but also the offshore

	energy industry. The BONN AGREEMENT Action Plan plans to have regular reviews of the analysis. The recommendations from these risk assessments are discussed with competent authorities for implementation. Recommendations consists e.g. of new or amended routeing measures, such as traffic separation schemes (TSS); AIS transponder methods of displaying rings around renewable energy areas on a ships navigation display and other developments with regard modern E-navigation techniques. Details can be found on the Bonn Agreements' web-site: www.bonnagreement.org Following the work in the BA, parties can decide the way to submit a proposals to the IMO and/or EU.
1.3.4	*Study possibilities on the level of the competent authorities on how to improve the cooperation on the operational level, e.g. information exchange, between VTS-Cs from trilateral partners and establish a reporting system for certain commercial ships in the Wadden Sea PSSA*
	Possible aspects for which it is feasible to intensify the cooperation are e.g. **SafeSeaNet (SSN)** Maritime Authorities of the EU-member states and those dealing with shipping issues are involved and connected in the data network "SafeSeaNet". All information (static information, dynamic information and voyage related information of identified ships) of ships detected by AIS-stations are exchanged between the states by SSN. The maritime authorities responsible for maritime safety related matters as well as accident management and protection of the marine environment report any kind of incidents (incident report) to the EU (EMSA-European Maritime Safety Agency). The SSN-Server routes the received information to the maritime authorities of the affected States so that VTS are informed in advance about problems with determined vessels. **Safety@Sea** In addition to SSN the North Sea neighboring states supply the Safety@Sea – Server hosted by Norway with received AIS data. The Safety@Sea – Server is connected with the SSN-Server. **VTS cooperation** The Maritime Authorities realized the benefit of direct cooperation between VTS on international level. As an example it is mentioned that the Danish and German VTS-Centers are already in close verbal contact via telephone. DGN MARAD will discuss and consider: • Intensification of direct and close cooperation between neighboring VTS (verbal contact, direct data exchange) by technical equipment and operational procedures • Inclusion of developed operational procedures in the VTS operator education • Sensitization of existing VTS operators in close cooperation between neighboring VTS-Centers • Intensification of visiting possibilities for VTS Operators to colleagues in neighboring countries
1.3.5	*Continue on national level to review all preventive measures into account the on-going development, e.g. expected higher density of traffic, construction of offshore wind farms etc. in order to at least keep the current level of safety*
	Traffic analyses have shown that density of traffic is a constant factor with only minor annual variations. What has changed lately is the size of ships which has increased. In fact the current

	level of safety of navigation has been maintained with a rate of accidents that has been constantly very low.
2. Operational Ship Emissions (Pollution)	
2.3	**Measures**
	Throughout the cooperation in IMO, EU and OSPAR and at least for Denmark and Germany in HELCOM all of the suggested measures can be considered ongoing issues and projects on the international agenda. Progress is being made, e.g. since the last Trilateral Ministerial Conference the International Convention for the Control and Management if Ships' Ballast Water and Sediments adopted in 2004, will enter into force on September 9th 2017 due to the necessary number of countries having ratified the convention.
2.3.1	***Emissions**: The three countries will support appropriate IMO initiatives with the goal to further reduce ship emissions both on sea and in the ports as already stated in the Wadden Sea Plan 2010.*
	Implementation of the IMO MARPOL Annex VI sulphur ECA regulation is governed by the EU sulphur directive. Fuel oil sampling is part of the Port State Control. Further some of the North Sea Countries are also using dedicated sensors in aircraft as part of the control. Their information is shared in Thetis EU. Initiating legal procedures are established but there is still a need to settle fines etc.
2.3.2	***Emissions**: The three member states will support OSPAR and HELCOM countries in their initiative to apply for Nitrogen Oxide (NOx) Emission Control Area (NECA) status. The introduction of alternative energy, propulsion technologies and low draught hull designs in Wadden Sea World Heritage area and the wider North Sea should be promoted. Alternative energy supplies should be implemented in ports.*
	At the last meeting in IMO at MEPC, it was agreed to apply a nitrogen ECA in the North- and the Baltic Sea, this is expected to be approved in July 2017 at the next meeting in the Committee.
2.3.3	***Discharge**s: Promote European initiatives to support the implementation of an adequate system for ship-generated waste and support harmonization of a "no special fee" system similar to the corresponding HELCOM initiative 2010.*
	[Ongoing.]
2.3.4	***Discharges**: Existing obstacles (e.g. charges) for the fishermen to deliver marine litter found in their nets to a Port Reception Facility (PRF) should be investigated. * http://www.helcom.fi/Recommendations/en_GB/rec28E_10/*
	[Ongoing.]
2.3.5	***Discharges:** Prevention of oil spills and other hazardous substances, residual materials and litter to the aquatic environment and wildlife. Activities aiming at improving enforcement (surveillance and prosecution) of agreed regulations and policies to prevent illegal discharges will be continued and corresponding fines have to be adjusted where possible.* * *http://www.helcom.fi/Recommendations/en_GB/rec19_14/*
	This is a series of measures that consist of inspections in port (PSC); monitoring at sea (Remote Sensing Aircraft) and direct discussions with industry. Also waste collection in ports is simplified. Not only shipping industry is monitored, all human activities at sea fall under these measures and especially inside the PSSA Wadden Sea marina's and ports are checked regularly. This includes further discussions between Public Prosecutors, Regulators and Operational

	Enforces about the way MARPOL annexes are best enforced and ways to effectively start proceedings against offenders.
2.3.6	***Discharges:*** *Paraffin pollution is a problem for the beaches along the North Sea including the Wadden Sea. Denmark sent a submission to IMO (BLG/ESPH in October 2013). The measures could be both, more monitoring through authorities like Port State Controls (PSC), and stiffening of the regulations covering discharge of cargo-residuals. Research projects in this field like in Schleswig-Holstein should be supported.*
	In the North Sea area the washing ashore of solidified substance e.g. paraffin wax causes regular contamination of beaches. It is not easy to trace the polluter. Initiative have been taken to take a submission to IMO/MEPC to make the discharge regulations under ANNEX 2 more strict. This is still an ongoing issue at the IMO's MEPC. Other initiatives are supported, e.g. the research project in Schleswig-Holstein and the joint seminar with North Sea Network for Prosecutors and Investigators and Response experts from BA.
2.3.7	***Discharges****: Support the development of guidelines and technical and operational measures for the reduction of underwater noise currently under development within IMO.*
	Studies are ongoing to learn understand what the impact could be of underwater noise, but these are not conclusive yet. Within the PSSA Wadden Sea there are no activities that cause underwater noise other than general activities. It is considered to be a complex issue, involving many aspects varying from propulsion systems on vessels to construction of wind parks. At (inter)national level all developments are closely followed and supported if realistic. DGN MARAD will have a watching brief in this respect. The issues is also a part of the EU directive 2008/56/EF on Marine Strategy Framework.
2.3.8	***Ballast water treatment and anti-fouling****: Implementation of the IMO Ballast Water Management Convention when in force.*
	All parties follow these developments in IMO. The installation dates have not been decided yet, and therefore the PSC role will be difficult to describe, besides what Paris MoU has already agreed to.
2.3.9	***Ballast water treatment and anti-fouling****: Apply/implement IMO Marine Environment Protection Committee 2011 guidelines for control and management of ships' fouling and consider measures indicated in the trilateral Strategy for Alien Species.*
	New technics in hull conservations are a follow up on these IMO guidelines. Results are monitored.
2.3.10	***Prevention of container loss****: Following supporting initiatives like lashing@sea. The project is aiming to prevent lashings systems from failing. A second aim is to increase lashing efficiency where possible, incl. proper cargo handling.*
	Many initiatives have been taken to reduce the loss of containers. For commercial reasons this important as the customer likes to receive the ordered goods and for insurance reasons as it costs money to compensate for the loss. All parties closely monitor the loss of cargo and take initiatives to locate the lost containers and have those recovered on account of the ship-owner. <u>New regulations are in place for measuring the weight of containers in the port of loading in order for the ships' crew and stevedores to safely load a vessel with regard to the stability.</u>
3. Awareness and Education	

<table>
<tr><td>3.3</td><td>Measures</td></tr>
<tr><td></td><td>An important subject or the work in the PSSA Waddensea was and is the topic of Education and Raising Awareness that stretches to multiple areas in the PSSA Wadden Sea Area. Tourism, ports, marina’s and related industry may have ways to contribute to a safe and well protected marine environment. Especially during the workshops organised with the CWSS, many stakeholders became involved and noticed the importance of this subject. Some initiatives that can be taken may look small, but it is the overall awareness of “being in a world heritage area” that contributes at large.
In their deliberation it was then concluded that this subject required the direct involvement of media experts, specialist in publications.
Parties agreed that this subject of the Operational Documents was sensitive and required broad participation in further initiatives and this is in a way reflected in the different issues hereunder.

For some of the initiatives the DGN MARAD recommend the Wadden Sea Board to make budget available to the CWSS in order to contract expertise and recommends to form an expert group for this task.</td></tr>
<tr><td>3.3.1</td><td>Include appropriate information on the sensitivity and purpose of the PSSA in the Port Information Guides of all ports. The information must be targeted to mariners which are those with the greatest ability to protect the environment and exercise caution when they operate in or adjacent to the PSSA.</td></tr>
<tr><td></td><td>This action is to be followed up by CWSS with assistance of competent port authorities in the PSSA area. DGN MARAD parties understand the approach. However, none of the parties have any direct responsibility for Port Information. This subject therefore requires further deliberations with other parties.

An example of useful stakeholder involvement is the Danish “Stop Oil” campaign which on a voluntary basis uses pleasure crafts reporting</td></tr>
<tr><td>3.3.2</td><td>Include (Wadden Sea) PSSA in the curriculum of nautical education. The environmental awareness education including PSSA should become part of the new Standards of Training Certification and Watch keeping (STCW) Code at nautical colleges. Pro-Sea and standardized education material may support and promote education in this regard. In order to reach this the IMO has to be approached.</td></tr>
<tr><td>3.3.2 Supp.</td><td>Function: Controlling the operation of the ship and care for persons on board at the operational level

<table>
<tr><th>Column 1
Competence</th><th>Column 2
Knowledge, understanding and proficiency</th><th>Column 3
Methods for demonstrating competence</th><th>Column 4
Criteria for evaluating competence</th></tr>
<tr><td>Ensure compliance with pollution-prevention requirements</td><td>Prevention of pollution of the marine environment

Knowledge of the precautions to be taken to prevent pollution of the marine environment

Anti-pollution procedures and all associated equipment

Importance of proactive measures to protect the marine environment</td><td>Examination and assessment of evidence obtained from one or more of the following:

.1 approved in-service experience

.2 approved training ship experience

.3 approved training</td><td>Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed

Actions to ensure that a positive environmental reputation is maintained</td></tr>
<tr><td>Monitor compliance with legislative requirements</td><td>Basic working knowledge of the relevant IMO conventions concerning safety of life at sea, security and protection of the marine environment</td><td>Assessment of evidence obtained from examination or approved training</td><td>Legislative requirements relating to safety of life at sea, security and protection of the marine environment are correctly identified</td></tr>
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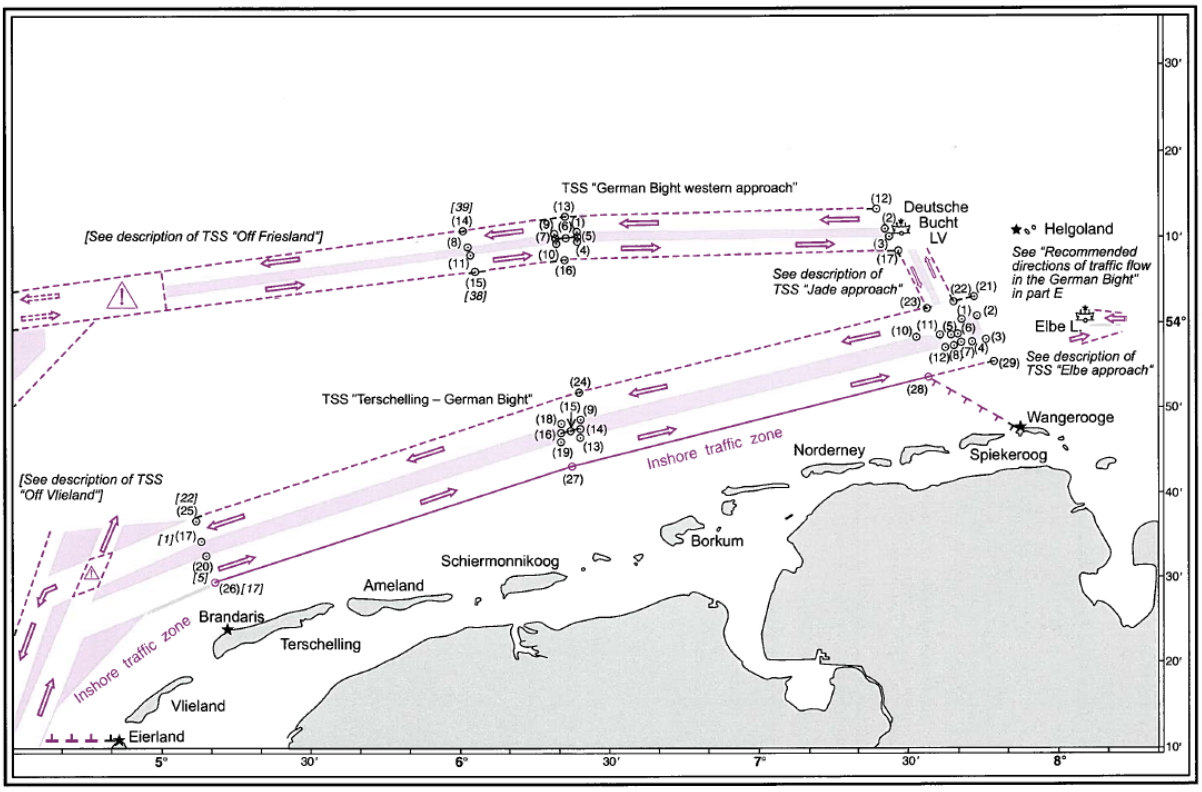
	In IMO training programs all around the world and also in education courses e.g. PRO SEAS special attention is paid to PSSA regulations and the requirements with regard behavior of humans when active in that area. The IMO has implemented standardized education in the STCW Code which is facilitating education of environmental competences. Ref.: STCW Code, table A-II/1 for navigation officers and table A-III/1 for engine officers. See 3.3.2 Supp.
3.3.3	***Establish a Wadden Sea PSSA Ambassadors Program.*** *Invite and educate a number of relevant persons with long term experience in and/or high profile in the maritime industry to act as ambassadors for the cause of the Wadden Sea PSSA during events, conferences, meetings etc. Such program should be related to the trilateral communication strategy.*
	This interesting initiative has to be further elaborated on in discussion with CWSS and stakeholders defining how and what this program should contain and a time planning for actions. Parties agreed that the purpose should be further defined; a list of competent persons has to be drafted and the activities have to be developed.
3.3.4	***Bi-/Tri-annual Progress.*** *Report A bi-/tri-annual progress report should be published on the PSSA Wadden Sea based on the data collected within the Trilateral Monitoring and Assessment Programme including incidents reported in the period ensuing from the incident reporting database.*
	This an ongoing task, the TMAP reporting and produced by the CWSS.
3.3.5	***Look at practices of other PSSAs worldwide.*** *Learn from practices of other PSSAs worldwide and clarify if those would make sense to be implemented to enhance the awareness on the Wadden Sea as well.*
	The DGN partners consider this to be a specific task of the CWSS, but will also maintain contacts with relevant authorities in other PSSA's around the world wherever possible.
3.3.6	***General awareness****. Efforts should be increased to inform the general public in the three countries on the Wadden Sea PSSA.*
	The General Awareness initiatives are part of the overall topic and may best result from actions taken under previous mentioned topics. It may find a form of a folder (brochure) that could be made available in all tourist accommodations in the PSSA area and/or a plasticized card for pleasure yachts. Again the production of such information carriers may require budget. Also a special page on the world wide web could satisfy the needs to reach a large public and a special PSSA app is a quick application to reach younger public. CWSS indicated that for a limited period of time a press officer is working at the secretariat. Main responsibility for the awareness in relation to the protection of the environment in the PSSA area is with the Environmental Ministries or Agencies. DGN MARAD is willing to contribute where possible.
3.3.7	***Communication of measures already in place****. An effort should be made to inform the general public and expert audience in the three countries on all those measures that have already been implemented within the past years (see Current status & Challenges 2030 of all 5 vision documents).*
	Again this is all to do with publications in various media for specific groups.
4.	**Preparedness and Response**

4.3	**Measures**	
4.3.1	*Continue to co-operate at the level of the BONN AGREEMENT on risk analysis, sensitivity mapping, pollution response capacity and response to polluted wildlife.*	
	The Bonn Agreement Action Plan that is followed and worked on in the OTSOPA working group of Bonn covers all these points. Especially the project BE-AWARE 1 and 2 have resulted in specific interest in the analysis of risks and required pollution response capacity. Also the cooperation in the framework of EU/DG-ECHO has brought forward a project to get more data and modelling available for incidents involving Hazardous and Noxious Substances (HNS).	
4.3.2	*Continue to obtain data on polluted wildlife (mainly birds) as the existing, internationally accepted, measurement tool on the status of pollution by hydro carbons in the marine environment.*	
	Especially through mr. Kees Camphuijsen in the Netherlands this information is annually published and is considered to be the basis for conclusions on the status of actual situation of polluted wildlife. Refer to BONN and EU work, through SEA-ALARM.	
4.3.3	*Continue to co-operate in the BONN AGREEMENT in the field of satellite and airborne Remote Sensing with the objective to detect and observe pollution and polluting sources.*	
	This topic comprises of two parts of which the Satellite part is covered by the EU/EMSA Clean Sea Net program applied by all three DGN partners. Between the partners there is an active exchange of flight programs for routine and ad-hoc monitoring of the EEZ areas and also official statements are exchanged and used for prosecution measures. Germany, The Netherlands and Denmark execute flights over each other's areas and find back-up capacity for situations that no aircraft is available. In addition to this routine programming, the BA and thus DGN partners actively study the further improvement of detection and observation technics for discharges from vessels. It is mentioned that the RS seminar in Middelburg 2015 has concluded several action points for this work. A seminar involving Public Prosecutors and Operational experts aim at further harmonization of legal proceedings.	
4.3.4	*Continue to study possible technical improvements on response strategies, measures and equipment also considering the principles of Net Environmental and Economic Benefit Analysis (NEEBA) approach.*	
	A subject of ongoing concern for the experts on computer modelling to advice response organisation when considering dedicated response measures with regard a specific pollution. The Wadden Sea parties participate in the Bonn Agreement OTSOPA. The OTSOPA is a standing forum for sharing information on technical issues including strategies, measures and equipment on the basis of both the Bonn partner countries and international partner countries of research and experience. Furthermore OTSOPA is in close coordination with i.e. Oil Spill Indicator Network (OSINET) on analysis of oil spills in order to improve both response and prosecution.] Torben to provide text	
4.3.5	*Continue to organize the annual equipment exercise in the PSSA area and the adjacent area according to DenGerNeth.*	

	It is a standard part of the BONN AGREEMENT Joint Action Program that is annually reviewed and updated.
4.3.6	*Study possibilities to extend the exercise participants with other stakeholders.*
	The general idea is that in exercises other partners may be invited but there are sometimes conflicting logistic issues or tight time schedules.
4.3.7	*Initiate research on new technical and pragmatic means to respond to oil pollution. Focus should be given to the specific PSSA Wadden Sea hydrodynamic conditions. Additionally the communication of the results of response measures with stakeholders should be improved. Additionally, improve the communication of the results into the shipping and conservation community.*
	The DGN partners have discussed the possibilities to organize a series of activities in near future to concentrate on response measures to oil in shallow waters, creeks, sand-banks etc. Exchange of information on available technics or considering further development of technics if deemed necessary. Other stakeholders will be consulted and/or informed. This subject is further worked on under the DenGerNeth Operational Plan within the Framework of the BONN AGREEMENT.
4.3.8	*Initiate discussion at (inter)national level to agree on common approach with regard loss of cargo or wrecks.*
	After being adopted on 18 May 2007 the Nairobi International Convention on the Removal of Wrecks entered into force n 14 April 2015. It provides the legal basis for states to remove or have removed shipwrecks that may have the potential to affect the marine environment. The convention includes inter alias the reporting an locating of ships and wrecks, criteria for determining the hazard posed by wrecks, including depth of water above the wreck, proximity of shipping routes, traffic density and frequency, type of traffic and vulnerability of port facilities and environmental criteria as damage likely to result from the release of oil or cargo oil into the marine environment. Furthermore the states may take action to facilitate the removal of wrecks including rights and obligations to remove hazardous ships and wrecks. The Nairobi convention defines a wreck in a wider sense meaning any part of a sunken or stranded ship including any object that is or has been on board such a ship and any object that is lost at sea from a ship and that is stranded, sunken or adrift at sea. Denmark, The Netherlands and Germany have all ratified the wreck removal convention and as a result have an excellent instrument in consistent actions when necessary. A large part of this issue is covered either under the BA or EU/EMSA and DG-MOVE where it concerns the International Wrecks Convention; Claims Management or Guidelines on Places of Refuge.
4.3.9	*Continue to co-operate at EU level on the issue of "Potentially Polluting Wrecks" and also on Claims Management.*
	The EU project on this issue was concluded and an inventory at national level is required to decide on relevant obstacles that may cause a pollution in the (near) future. DGN partners will exchange operational information. All new wrecks in most cases are immediately cleaned, all fuel oil will be removed to the best possible level. Also any cargo posing a threat to the environment, even at the long term, is considered.

4.3.10	*Initiate a trilateral harmonized approach for an inventory of PSSA sub-regions with regard to the environmental sensitivity to oil and HNS (sensitivity mapping) as a basis for further developments of emergency plans.*
	A project by Belgian and French organisations result in an improved database on substances and their possible behaviour when released into the marine environment. Another part of this project is to aim at linking this data-base to existing computer models. Although it would be an operational tool it is decided that special chemical background is required to provide the best qualitative advice to the Response Organisations. Parties agreed to discuss the way ahead in EU.
5.	**Cooperation**
5.3	**Measures**
5.3.1	*Trilateral parties and the CWSS will investigate the feasibility of making information available, defining what sources could be consulted and what information is required.*
	Information is available and published. Task of CWSS to collect the data support by DGN MARAD
5.3.2	*Facilities, such as internet links, will be used to simplify the exchange of data and information. E.g. link to Bonn Agreement web-site and national web-sites in order to be informed on actual accidents or annual reports.*
	Information is available and published. Task of CWSS to collect the data support by DGN MARAD. The CWSS will annual contact the BONN secretariat for updated information on e.g. pollution reports

Appendix 1: An IMO implemented routing system coordinated between Germany and the Netherlands.



TERSCHELLING–GERMAN BIGHT + GERMAN BIGHT WESTERN APPROACH

Source: The IMO publication Ships' Routing.

Appendix 2: List of abbreviations, including guiding information

Abbreviation	
Bonn Agreement	European environmental agreement by which the North Sea States, and the European Union (the Contracting Parties), work together to help each other in combating pollution.
CWSS	Common Wadden Sea Secretariat. The Wadden Sea Board (WSB) supervises the performance of the CWSS.
DenGerNeth MARAD	DenGerNeth (DGN) Maritime Administration Group. Trilateral cooperation between the maritime authorities in Denmark, Germany and the Netherlands.
ECA	Emission Control Area
HELCOM	Baltic Marine Environment Protection Commission
IMO	International Maritime Organization
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
MEPC	Maritime Environmental Protection Committee (IMO)
OTSOPA	
PSSA	Particularly Sensitive Sea Area (PSSA) is an area that needs special protection by the IMO.
TSS	Traffic Separation Scheme is a routeing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes.