

CHALLENGES FOR THE SAFETY OF NAVIGATION AND ENVIRONMENTAL SECURITY IN THE BLACK SEA

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Your Excellencies,
Dear Ladies and Gentlemen,

It is with great pleasure and an honor for me to deliver a talk to such distinguished guests, about the Black Sea environment. On behalf of the Black Sea Commission, I would like to take this opportunity to express my gratitude to the *Organisation for Security and Cooperation in Europe* as well as to the *Ministry of Transport and Communications of Ukraine* for organizing this meeting aiming to improve the environmental security in the Black Sea region.

As the Permanent Secretariat of the BSC, I appreciate the very close cooperation of OSCE, in setting up the Agenda of this meeting, which is mainly prepared considering the urgent shipping related environmental issues in the Black Sea.

As I will be mentioning this evening during my next talk, the Black Sea Commission and its Permanent Secretariat is the focal point for coordinating the environmental efforts of the Black Sea coastal countries within the framework of the Convention for the Protection of the Black Sea Against Pollution. However, considering the very limited personnel and resources available to the Permanent Secretariat, I believe that the organization of meetings like this is a good example of concerted action by different responsible institutions to deal with the challenges of the Black Sea.

The title of my talk this morning is “Challenges for the safety of navigation and environmental security in the Black Sea”. I would like to start by giving some introductory information about the Black Sea.

THE BLACK SEA AND ITS ECOSYSTEM

The Black Sea is one of the most interesting seas in the world due to many aspects; e.g. geological, hydrological, anthropogenic, political and historical. Its entire history is full of dramatic events.

Perhaps firstly I should tell you that it is probably the youngest sea in the world. Only 4-5 thousand years before the birth of Jesus, the Black Sea was a freshwater lake, when Mediterranean waters started to invade its basin through the Istanbul strait. Because of the massive flow, some scientists claim that Noah’s Flood took place in the Black Sea.

Since Mediterranean waters are more saline and much denser, they accumulated at the lower section of the water column. Because of the immense depth of the Black Sea (its

average depth is 2 km), such a density difference prevented aeration of deep waters. Thus, the Black Sea contains the largest volume of permanently anoxic waters in the world.

However, the thin oxygenated layer of surface waters of the Black Sea are very fertile and sustain a rich fishery. In fact, its total fish production is equal to that of the entire Mediterranean, despite being 3 times smaller in size.

ENVIRONMENTAL THREATS AND CHALLENGES RELATED TO MARITIME TRANSPORT

As results of Transboundary Diagnostic Analysis show, the major environmental problems in the Black Sea are transboundary. One or two countries' efforts alone will never be sufficient to protect the Black Sea ecosystem, or even their own exclusive economic zone.

The strong, basin scale anticlockwise currents in the Black Sea transport any kind of pollution from one region to all other regions. This pollution could be nutrients (e.g. as in the case of the Danube river impact to the entire ecosystem), marine litter, or oil pollution. Not only pollution but also invasive species could be easily transported from one region to another. Indeed, the Black Sea is one of the worst affected marine regions of the world impacted by the ship-mediated transfer of invasive species. Therefore, transboundary problems require basin wide actions.

There has been a substantial increase in the amount of oil and other goods transported through the Black Sea and Turkish Straits over the past decade. The increase in shipping traffic, amplified with the transport of Caspian oil, creates a potential risk for oil spills or other hazardous material in the Black Sea.

Regarding the key environmental challenges, I would like to focus on the following four issues, which will be discussed in detail in this meeting:

- a) Regional co-operation towards oil pollution prevention, preparedness and response
- b) Transfer of invasive species with the ballast waters
- c) Development and implementation of a Black Sea strategy for port reception facilities for ship-generated wastes
- d) Ship surveillance and monitoring for oil spill detection and prevention (and for improving navigation safety)

Regional co-operation towards oil pollution prevention, preparedness and response: A success story

In September 2007, the Under-secretariat for Maritime Affairs of Turkey, with strong support from the Oil Spill Preparedness Initiative (OSPRI) and BSC successfully led the first regional exercise for accidental oil spill prevention. The specific preparations for the Exercise SULH extended over nine months and incorporated a series of technical

workshops, seminars and planning meetings¹. Over 250 people took part in the exercise during three days. The exercise included deployments of Turkish resources and equipment brought from the Russian Federation and Romania. This event represented a major milestone and investment in the region's readiness to combat emergency situations.

Transfer of invasive species with the ballast waters

The Black Sea is one of the worst affected regions by the invasive species transported in ballast waters. A jellyfish scientifically known as *Mnemiopsis leidyi*, which is a native species of the western Atlantic, arrived via ballast waters to the Black Sea in the 1980s. This species caused a near-collapse of the Black Sea fishery, whilst significantly affecting the ecosystem. The arrival of another jellyfish in the mid-1990s, was beneficial as the latter specifically fed only on the first alien jellyfish.

In fact, transport of invasive species is not only problem for the Black Sea but many regions of the world, and that is why IMO took the responsibility, to conclude the BWC which was adopted in 2004.

The acceding of all coastal countries to the new Convention on Ballast Waters and agreeing on regional "harmonized procedures" will help prevention of another catastrophe.

Important to note; one of the Centers for the Globallast Program (2000-2004), aiming to prepare countries for the BWC, was Odesa.

Development and implementation of a Black Sea strategy for port reception facilities for ship-generated wastes

According to MARPOL 73/78, Annex I (Regulation 1), Annex II and Annex V (Regulation 5), the Black Sea is a "special area" due to its recognized oceanographic and ecological conditions. Under the above Convention these "special areas" are provided with a higher level of protection than other areas of the world oceans and more stringent requirements towards ships apply. These requirements can only become effective when adequate reception facilities are provided for ships in accordance with the provisions of MARPOL 73/78.

In order to be successful in reducing and eliminating illegal discharges of ship-generated wastes a relevant policy should be in place consisting of legal restrictions on one side and incentives to encourage ships to deliver waste ashore on the other. This proved to be true in the case of the Strategy for Port Reception Facilities for Ship-generated Wastes and Associated Issues (the Baltic Strategy), initiated by HELCOM in the late 1990s. The main components of the Baltic Strategy are adequate reception facilities in ports, mandatory delivery of ship-generated wastes and a "no-special-fee" (or harmonized fee/cost) system for waste delivery. A similar strategy, adjusted to the regional specificities, should be put in place in the Black Sea region.

¹ Taylor & Velikova 2008

Ship surveillance and monitoring for both oil spill detection/prevention and for improving navigational safety

The Automatic Identification System (AIS) is a primary tool to monitor maritime traffic in the sea. It decreases the risk of collision as commercial vessels could see each other in any conditions of weather or visibility. At present some live information on ship movements in the Black Sea is available on the internet (e.g. www.marinetraffic.com).

Not surprisingly, heavy shipping lanes coincide with the most oil spills observed from the satellite images. Indeed, satellite imagery is an important tool for assessing an oil spill, as in the case of the Kerch incidents that resulted with a minimum of 1300 thousand tons of heavy fuel spills in November 2007.

The information from satellite and AIS could be combined to identify the polluter and this combined technology could be used to deter intentional oil spills occurring in the Black Sea, similar to Western Europe.

In the Baltic Sea, there has been a centralized shore-based AIS network since July 2005. Its aim is to provide competent authorities with a monitoring tool for supervision, statistics, risk analyses, search and rescue (SAR), port state control, security and other safety related tasks to ensure safe navigation in the crowded waters of the Baltic Sea. It also provides the basis for future risk assessments and identification of needs for additional measures.

In the Black Sea, the pilot project VTOPIS undertaken with the support of UNDP/GEF Project is a good step towards a centralized AIS network for the Black Sea region. As it is mentioned in its final report, AIS data sharing between Black Sea countries greatly improves the possibilities for taking measures in case of oil spill or other incidents. Other benefits from exchange of AIS information between Black Sea countries are:

- ✓ . Increasing the safety of navigation
- ✓ . Increasing the efficiency of joint SAR and antipollution activities
- ✓ . Receiving additional information at VTS centers and improvement of the organization of the ship's traffic
- ✓ . Statistical analysis of the marine transport in Black Sea

The development of an AIS network in the Mediterranean Sea has been ongoing since the beginning of 2008.

Shipping accidents may still occur due to collision. Fishing vessels do not usually have AIS system and there is a higher risk of collision between a commercial vessel and a fishing vessel. In the past, there were some reported cases of such collisions in the Black Sea. Turkey is now planning to gear fishing vessels also with AIS equipment. Extending such technology to the entire region, by using Turkish experience, will be very beneficial to increase the safety of shipping and environmental security in the Black Sea.