

Implementation in Poland of the EU Legislation on VTMIS and Reporting Formalities for Ships Operating to or from Ports of the EU Member States

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ABSTRACT: Article presents the EU legislation on Vessel Traffic Monitoring and Information System (VTMIS) and reporting formalities for ships operating to or from ports of the EU Member States, principles of its implementation in Poland and technical investments made in order to build the Polish National Maritime Safety System to ensure safety and security of shipping and economic activities inside the Polish maritime areas and meeting the requirements of these regulations.

1 INTRODUCTION

There are many mandatory ship reporting systems, vessel traffic services and ships' routing systems established in the European waters in accordance with the relevant rules adopted by the International Maritime Organisation (IMO), mainly in areas considered as congested or hazardous for navigation. They play an important role in the prevention of accidents and pollution. It ought to be ensured that ships comply with the reporting requirements in force under reporting systems, use vessel traffic services and that they follow the rules applicable to established ships' routing systems. Coastal states need to guard against the threats to maritime safety, to the safety of life at sea and to the marine and coastal environment created by incidents and accidents at sea and by the presence of polluting slicks or packages drifting at sea. Knowledge of the current position of the vessel in distress, its type and number of persons on board and the positions and parameters of other ships in the vicinity affects the efficiency of SAR operation. Information on dangerous or polluting goods being carried on ships and relevant safety data, such as information relating

to navigational incidents, is essential to the preparation of operation to tackle pollution or the risk of pollution at sea and its effectiveness. Efficient service in the ports of ships undertaking international voyages requires sufficiently early messages by these vessels with the information required by the port, customs, border and sanitary authorities and port services (pilot and tug services, etc.). Ships leaving or bound for ports must notify this information to the competent authorities of the port states. Due to their behaviour or condition, some ships pose potential risks to the safety of navigation and the environment. Coastal and port states should pay particular attention to the monitoring of such vessels, take the appropriate measures to prevent any worsening of the risk they pose, and send any relevant information regarding these ships to the other states concerned.

In order to comply with the above mentioned tasks, the coastal states shall build infrastructure needed for monitoring vessel traffic and communication with ships by means of the nets of coastal radars, AIS and radio stations. Each state shall establish local and national centres responsible

for monitoring, communication and exchange of information with ships and other centres and states. The obligations in this regard of the EU Member States and the central authorities of the European Community determine:

- Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC [7], as amended by the Directives: 2009/17/EC and 2009/18/EC of 23 April 2009 [10, 11], 2011/15/EU of 23 February 2011 [4] and 2014/100/EU of 28 October 2014 [5]; and
- Directive 2010/65/EU of the European Parliament and of the Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC [12].

2 EU LEGISLATION

2.1 DIRECTIVE 2002/59/EC AS AMENDED

The purpose of this Directive is to establish in the European Community a vessel traffic monitoring and information system (VTMIS) with a view to enhancing the safety and efficiency of maritime traffic, improving the response of authorities to incidents, accidents or potentially dangerous situations at sea, including search and rescue operations, and contributing to a better prevention and detection of pollution by ships. The Directive shall not apply to [7]:

- ships of gross tonnage less than 300;
- warships, naval auxiliaries and other ships owned or operated by a EU Member State and used for non-commercial public service;
- fishing vessels, traditional ships and recreational craft with a length of less than 45 metres; and
- bunkers on ships below 1 000 gross tonnage and ships' stores and equipment for use on board all ships.

According to the requirements [4, 5, 7, 10, 11]:

- 1 The operator, agent or master of a ship bound for a port of a EU Member State shall notify
 - ship identification (name, call sign, IMO identification number or MMSI number),
 - port of destination;
 - estimated time of arrival at the port of destination or pilot station, as required by the competent authority, and estimated time of departure from that port; and
 - total number of persons on board,

Notification shall be done to the port authority:

- at least twenty-four hours in advance; or
- at the latest, at the time the ship leaves the previous port, if the voyage time is less than twenty-four hours; or
- if the port of call is not known or it is changed during the voyage, as soon as this information is available.
- The operator, agent or master of a ship, irrespective of its size, carrying dangerous or polluting goods and coming from a port outside the Community and bound for a port of a EU Member State or an anchorage located

in a EU Member State's territorial waters or leaving a port of a EU Member State shall notify the following information to the competent authority designated by that Member State:

A. General information:

- ship identification (name, call sign, IMO identification number or MMSI number);
- port of destination;
- for a ship leaving a port in a EU Member State: estimated time of departure from the port of departure or a pilot station, as required by the competent authority, and estimated time of arrival at the port of destination;
- for a ship coming from a port located outside the Community and bound for a port in a EU Member State: estimated time of arrival at the port of destination or pilot station, as required by the competent authority;
- total number of persons on board.

B. Cargo information:

- the correct technical names of the dangerous and polluting goods, the United Nations (UN) numbers where they exist, the IMO hazard classes in accordance with the IMDG, IBC or IGC Codes and, where appropriate, the class of the ship as defined by the INF Code, the quantities of such goods and their location on board and, if they are being carried in cargo transport units other than tanks, the identification number thereof;
- confirmation that a list or manifest or appropriate loading plan giving details of the dangerous or polluting goods carried and of their location on the ship is on board;
- address from which detailed information on the cargo may be obtained.

The competent authority should have access to the above mentioned information at all times it may be needed. The port authority shall take the necessary measures to provide this information electronically and without delay to the competent authority upon its request, 24 hours a day.

- 2 The obligation to have AIS Class A is extended to fishing vessels with an overall length of more than 15 metres and flying the flag of a EU Member State and registered in the European Community, or operating in the internal waters or territorial sea of a EU Member State, or landing its catch in the port of that state.
- 3 EU Member State shall establish ships monitoring system using net of the coastal AIS base stations connected with the centre of the European VTMIS located in the European Maritime Safety Agency (EMSA). Additionally Baltic States shall participate in AIS monitoring system established according to the requirements of the Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area adopted on 10 September 2001 in Copenhagen by the HELCOM Extraordinary Ministerial Meeting (HELCOM Copenhagen Declaration).
- 4 All EU Member States and the European Commission shall cooperate in establishing and

work of the EU regional LRTT data centre conducted by EMSA.

- 5 State concerned shall monitor ships entering and sailing inside areas of mandatory ship reporting systems, vessel traffic services and ships' routing systems established in the European waters in accordance with the relevant rules adopted by IMO.
- 6 EU Member States shall cooperate to ensure the interconnection and interoperability of the national systems used to manage the information about ships and passengers and dangerous and polluting goods carried on board. Communication systems used to exchange of data between Member States must utilize SafeSeaNet, be electronic and allow information to be transmitted 24 hours a day.
- 7 Coastal stations holding information on the vessels considered being ships posing a potential hazard to navigation or a threat to maritime safety, the safety of life at sea or the environment shall communicate it to the coastal stations concerned in the other EU Member States located along the planned route of these vessels.
- 8 EU Member States shall monitor and take all appropriate measures to ensure that the master of a ship sailing within their search and rescue region, exclusive economic zone or equivalent, immediately reports to the coastal station responsible for that geographical area:
 - any incident or accident affecting the safety of the ship, such as collision, grounding, flooding or shifting of cargo, any defects in the hull or structural failure;
 - any incident or accident which compromises safety of navigation, such as failures likely to affect the ship's manoeuvrability or seaworthiness, or any defects affecting the propulsion system or steering gear, the electrical generating system or navigational or communication equipment;
 - any situation liable to lead to pollution of the waters or shore of a coastal state, such as the discharge or threat of discharge of polluting products into the sea;
 - any slick of polluting materials and containers or packages seen drifting at sea
- 9 The competent authorities designated by a EU Member States considering that the exceptionally bad weather or sea conditions or ice conditions create a serious threat to the human life at sea or to the environment of their or other states shipping areas or coastal zones, shall, where possible, fully inform the master of a ship which is in the port area concerned, intends to enter or leave that port, of the sea state and weather conditions and, when relevant and possible, of the danger they may present to his ship, passengers, crew and cargo. Additionally they may take any other appropriate measures, which may include a recommendation or a prohibition either for a particular ship or for ships in general to enter or leave the port in the area affected
- 10 EU Member States shall draw up and carry out plans for the accommodation of ships in order to respond to threats presented by ships in need of assistance in the waters under their jurisdiction,

including, where applicable, threats to human life and the environment.

- 11 EU Member States shall establish maritime information management systems, so called national SafeSeaNet systems, to receipt, process, storage, retrieval and exchange of information for the purpose of maritime safety, port and maritime security, marine environment protection and the efficiency of maritime transport and ensure that introduced information systems and networks comply with the requirements of described directive and are compatible with and connected to the European SafeSeaNet central system acting as a nodal point.

The SafeSeaNet system shall be used for the distribution of electronic messages and data shared or exchanged in accordance with the Directive 2002/59/EC as amended and relevant UE legislation, inter alia:

- Directive 2000/59/EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues [6];
- Directive 2005/35/EC of the European Parliament and of the Council of 7 September 2005 on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences [8];
- Directive 2009/16/EC of the European Parliament and of the Council of 23 April 2009 on port State control [9];
- Directive 2010/65/EU of the European Parliament and of the Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States [12].

The central and the national SafeSeaNet systems shall comply with the requirements of EU legislation concerning confidentiality and security of information in particular as regards access rights.

EU Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with the requirements of the described directive not later than by 18 November 2015.

2.2 DIRECTIVE 2010/65/EU

Now, there are in use a lot of online reporting systems not harmonized, often duplicated, and based on different formats and platforms. A SafeSeaNet system covering reporting requirements in relation to EU Directive 2002/59/EC as amended is now developed to cover Directive 2010/65/EU of the European Parliament and of the Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC (FAL directive) [12]. Directive 2002/6/EC of the European Parliament and of the Council of 18 February 2002 on reporting formalities for ships arriving in and/or departing from ports of the Member States of the Community required EU Member States to accept certain standardised forms (FAL forms) in order to facilitate traffic, as defined by the IMO Convention on Facilitation of International Maritime Traffic (FAL Convention) adopted on 9 April 1965, as amended. For the facilitation of

maritime transport and in order to reduce the administrative burdens for shipping companies and to achieve a European maritime transport space without barriers, the reporting formalities required by the international (IMO) regulations and by legal acts of the European Union and by its Member States need to be simplified and harmonised to the greatest extent possible. Reports shall be transmitted by ships in electronic manner to the place designated as a national single window only once and available for all interested authorities, institutions and services [12].

Directive 2010/65/EU concerns the transmission of data required upon arrival in and/or departure from ports under:

- described in the previous paragraph Directive 2002/59/EC, as amended [7];
- mentioned at the end of the previous paragraph Directives: 2000/59/EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues and 2009/16/EC of the European Parliament and of the Council of 23 April 2009 on port state control, as amended [6, 9];
- Regulation (EC) No 725/2004 of the European Parliament and of the Council of 31 March 2004 on enhancing ship and port facility security [14];
- International Maritime Dangerous Goods Code adopted in 1965, with the amendments thereto adopted and having entered into force (where appropriate).

According to the European Commission decision FAL forms should be accepted for providing information required by the above-mentioned legal acts. EU Member States should deepen the cooperation between the competent authorities, such as their customs, border control, public health and transport authorities in order to continue to simplify and harmonise reporting formalities within the Union and make the most efficient use of electronic data transmission and information exchange systems. Electronic means of data transmission for all ship reporting formalities should be implemented by 1 June 2015 at the latest. Within the EU, the provision of information in FAL forms in paper format should be the exception and should be accepted only for a limited period of time. Reporting formalities regarding information for solely national purposes should not need to be introduced in the SafeSeaNet system [12].

Directive on reporting formalities for ships arriving in and/or departing from ports of the EU member states should not affect: Council Regulation (EEC) No 2913/92 of 12 October 1992 establishing the Community Customs Code, Commission Regulation (EEC) No 2454/93 of 2 July 1993 laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code, Regulation (EC) No 562/2006 of the European Parliament and of the Council of 15 March 2006 establishing a Community Code on the rules governing the movement of persons across borders (Schengen Borders Code), national legislation in the area of border control for those EU Member States which do not apply the Schengen border control and Regulation (EC) No 450/2008 of the European Parliament and of the

Council of 23 April 2008 laying down the Community Customs Code (Modernised Customs Code). Ships operating between ports situated in the customs territory of the Union should be exempt from the obligation to send the information referred to in the FAL forms, where the ships do not come from, call at or are headed towards a port situated outside that territory. The access to the SafeSea-Net and other electronic systems used for reporting purposes should be regulated in order to protect commercial and confidential information [12].

3 IMPLEMENTATION OF THE DESCRIBED EU LEGISLATION IN POLAND

3.1 LEGAL IMPLEMENTATION

Requirements of the EU maritime directives were introduced in Poland by the Polish Act of 18 August 2011 on maritime safety [2] and of 24 July 2015 amending the act on maritime safety and some other acts [3] and the regulations of the Polish Minister of Transport, Construction and Maritime Economy (currently Minister of Maritime Economy and Inland Navigation) issued on the base of these laws. The main regulations implementing directives described in chapter 2 are:

- Regulation of 4 December 2012 on National Vessel Traffic Monitoring and Information System [15];
- Regulation of 8 February 2012 on the operation of an electronic database of ships of Polish flag [16];
- Regulation of 8 March 2012 on Maritime Telemedical Assistance Service [17]; and
- Regulation of 16 May 2012 on a plan to grant refuge to ships in need of assistance in Polish maritime areas [18].

According to these legal acts the National Vessel Traffic Monitoring and Information System, called the National SafeSeaNet System was established to ensure the collecting, storage and exchange of information about ships and events necessary to ensure the safety and security of the Polish maritime areas and the adjacent coastal zone, especially [2, 3, 15]:

- posing a potential hazard to shipping or a threat to maritime safety and security, the safety of people or the marine environment, the effects of which may extend to a Polish maritime areas or maritime areas in other Member States of the European Union; and
- necessary to effective organisation and conducting of the SAR operation, vessel traffic monitoring including management and surveillance of ships movement and affective work of the Polish ports and harbours.

National SafeSeaNet System consists of SafeSeaNet Coordinator, technical infrastructure and SafeSeaNet users - offices, institutions and services having a right of access to data from the vessel monitoring system and the information stored in an electronic databases of ships of Polish flag or calling at Polish ports, passengers and cargo carried on board such ships and the seamen having documents issued by the Polish maritime administration or the obligation to enter data into these databases [15].

The coordinator acts as the National Competent Authority (NCA) mentioned in the IFCD (Interface and Functionalities Control Document). He is responsible for maintaining the National SafeSeaNet Service operating around the clock, 7 days a week. The main tasks of the NCA include, among others [2, 3, 15]:

- providing information required by the competent authorities from other EU Member States; and
- immediate notification of the National SafeSeaNet users on received information from the European SafeSeaNet System on ships or events that create a potential danger to navigation or a threat to maritime safety or security, the safety of people or the marine environment, the effects of which may extend to the Polish sea areas or coastal zone.

An Electronic data base for ships of Polish flag contains information [2, 3, 15]:

- 1 For each vessel regarding
 - its identification;
 - recognized organisation involved in its classification and certification;
 - carried out flag state inspections: the body which carried out the inspection, date of the inspection, its results and issued certificates;
 - the body which carried out the inspection of the vessel in the framework of the Port State Control, date of the inspection and its results, in particular concerning deficiencies and ship's detention;
 - marine accidents and incidents involving the vessel in question;
- 2 Identifying vessels that changed their flag from Polish to the foreign in the past 12 months; and
- 3 Other data deemed relevant by the maritime authorities.

Database is administrated by the Director of the Maritime Office in Gdynia. Access to collected data has, through the National SafetyNet System, eligible employees, inspectors and officers of the Polish [15, 16]:

- maritime administration;
- State Commission on Marine Accident Investigation;
- Search and Rescue Service;
- Coast Guard;
- Customs Service;
- recognized organisations authorized to carry out the tasks of the Polish maritime administration;
- Maritime Chambers leading Polish register of maritime ships;
- sports association leading Polish register of maritime yachts; and
- Hydrographic Office and Maritime Operations Centre of the Polish Navy;
- marine fisheries authorities;
- entities managing sea ports or harbours;
- sea and port pilot stations;
- State Sanitary Inspection;
- the regional governmental authorities; and
- other entities, which the administrator provides access to the database because of their responsibilities related to the needs of the maritime administration.

Additionally, information collected in the database is available for the [15]:

- authorities of the EU Member State if it is necessary to ensure the safety and security of shipping and marine environmental protection of that country; and
- European Commission to ensure security and safety or protection of the marine environment of the Member States of the European Union.

SAR Service participates in the exchange of information about the threat to human life at sea, threat of pollution of the marine environment and information related to the received security alert. Naval Hydrographic Office participates in the National SafeSeaNet System as the National Coordinator for navigational warnings in the exchange of cartographic, hydrographic and nautical information [15].

Information is delivered to the database by ship-owners of Polish vessels, Flag State Control and Port State Control inspectors, inspectors of recognized organisations, Polish entities responsible for the investigation of marine accidents and incidents and entities leading Polish registers of maritime ships and yachts. The information contained in the database is updated continuously. Delivered information is introduced to the database within 7 working days from the date of receipt. Entering information into the database, its update, and delete those from the database are recorded. Information about entering the information into the database, their updating or removal from the database has to be kept for at least two years [16].

Information on ships sailing to the Polish ports is collected mainly from reports sent to the harbour masters by ships' masters, owners or their representatives. According to the regulations, the operator, master or agent of the ship heading the Polish port is obliged to provide the harbour master information concerning the identity of the ship, port of destination, estimated time of arrival at the port and estimated time of departure from port and the total number of persons on board [2, 3, 15]:

- at least 24 hours prior to arrival;
- no later than when the ship leaves the previous port, if the journey takes less than 24 hours; or
- when the port of destination is not known or changes during the journey - immediately after obtaining such information.

Additionally, the captain of a ship in the Polish maritime areas immediately inform the nearest coastal radio station or vessel traffic service (VTS) about all incidents which [2, 3, 15]:

- affect the safety of the ship, such as collision, stranding, damage or malfunction of the ship's equipment, flooding or shifting of cargo, damage to the hull or structural elements of the ship; and
- threaten maritime safety, such as equipment failure which may affect the ship's manoeuvrability or fitness for navigation, including affecting the propulsion system, steering system, power generation, navigation equipment or means of communication.

Transmitted information shall contain [2, 3]:

- ship's identification, position, ports of departure and destination;

- address data entity in possession of information on dangerous or polluting goods, if they are carried on the ship;
- number of persons on board; and
- event details and other information necessary to conduct rescue operations, in accordance with the requirements laid down by IMO on the reporting systems and reports from ships incidents relating to dangerous goods, harmful substances and pollutants.

VTS or coastal radio station, after receiving the notification about the threat to human life or the threat of pollution of the marine environment, shall immediately notify the MRCC (Maritime Rescue Coordination Centre).

In the cases referred to in the Act of 16 March 1995 on prevention of pollution from ships, director of maritime office with jurisdiction over the place where the ship is, in order to ensure the safety of life at sea, safety of navigation and protection of the marine environment may [1, 2, 3]:

- 1 Order master of the ship in distress or of the ship in need of assistance to execute commands, in particular:
 - restrict the movement of the ship or follow the specific course; the command does not affect the master's responsibility for the safe navigation of the ship;
 - take the necessary measures to stop or minimize the threat caused by the ship to the environment or maritime safety;
 - proceed to designated place of refuge; and/or
 - use pilot and/or towing service.
- 2 Examine on board vessel the level of hazard posed by the ship to maritime safety and safety of marine environment and provide the master of helping to improve the situation, informing about taking action the VTS Service.

Maritime Telemedical Assistant Service (TMAS) was established in order to perform tasks related to the granting of medical advice to the ships by radio. Service is performed by the University Centre for Maritime and Tropical Medicine in Gdynia. It performs its tasks without interruption 24 hours a day, 7 days a week, with the help of doctors on duty having [17]:

- experience as a ship's doctor or training in the basics of marine and tropical medicine;
- the ability of oral and written communication in Polish and English;
- knowledge about the principles of SAR service functioning and its fitting with drugs and medical equipment; and
- knowledge of medical equipment and drugs carried on ships in accordance with the recommendations of IMO, the World Health Organization (WHO) and the European Union and qualifications of ships' captains and crew members in first aid and medical care for patients as defined in the STCW Convention and Code.

Advice provided by TMAS shall assist and facilitate decisions that take the captain of the ship. It may include [17]:

- assisting the captain or crew member in the diagnosis, help in choosing medical practices and

- medical support of person sick or injured on board a ship;
- provision of advice relating to a decision to carry out a medical evacuation;
- provision of advice to help the master or a crew member of the vessel to take a decision on changing the port of destination in order to provide medical help to the sick or injured person; and
- assisting the SAR MRCC in making decisions related to planning and carrying out rescue operation of the sick or injured person depending on his condition.

The last of mentioned regulations issued on 16 May 2012 obliges directors of each of maritime offices to develop plans to grant refuge to ships in distress or in need of help located in the part of the Polish maritime areas under their supervision taking into account the IMO guidelines and sets out the elements which should be included in a these plans [18].

3.2 TECHNICAL SOLUTIONS

Technical infrastructure of the so called Polish National Maritime Safety System (KSBM) was created for many years. There are functioning:

- 1 Vessel Traffic Management Service (VTMS) Szczecin-Świnoujście established in the Polish inner waters by the Director of Maritime Office in Szczecin.
- 2 Established by IMO:
 - traffic separation schemas (TSSs) in the Polish waters of the Gulf of Gdańsk and between Słupska Bank and Polish coast;
 - ship reporting system (SRS) for ships in the Polish waters of the Gulf of Gdańsk;
 - VTS in the Polish waters of the Gulf of Gdańsk.
- 3 A data base system – Polish Harbour Information and Control System (PHICS) consisting of 5 components, established before 1998 and modernised several times:
 - data base of ships entering Polish ports (including ship preliminary declaration) working with Lloyd's Register of Shipping data base;
 - data base of dangerous, hazardous and pollutant cargoes on board ships and handled at Polish ports;
 - data base of passengers on board ships leaving Polish ports as required by the Council Directive 98/41/ EC of 18 June 1998 on the registration of persons sailing on board passenger ships operating to or from ports of the Member States of the Community;
 - data base of inspections conducted by the Port State Control (PSC) in Polish ports and Polish Flag State Control (FSC) connected with Paris MoU and Recognised Organisations (RO) data bases; and
 - data base of seafarers holding documents issued by the Polish maritime administration including data sub-base of the Polish Central Maritime Examination Commission (CMKE).
- 4 The Maritime Safety Information Exchange System (SWIBŻ) - the electronic system to exchange information required by EU directives and national legislations (introduced in January

2004 and modernised later) working as the National SafeSeaNet System and allowing data exchange:

- on international level - between Polish national server located in Gdynia and EMSA and other EU Member States administrations servers; and
 - on national level between authorities of the Polish maritime administration and cooperative institutions.
- 5 Polish national monitoring system using shore-based AIS stations established according to the requirements of the Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area adopted on 10 September 2001 (HELCOM Copenhagen Declaration).
 - 6 Long and short range coastal radars installed in ports and as VTMS and VTS technical equipment.
 - 7 Net of the shore radio stations enabling communication with vessels in the VHF band.
 - 8 National contact point of the Long Range Identification and Tracking (LRIT) System.
 - 9 Main users of the system are:
 - Polish maritime administration (ministry responsible for maritime economy, maritime and harbour masters offices);
 - Polish Maritime Search and Rescue Service;
 - Maritime Department of the Polish Border Guard (Polish Coast Guard);
 - Maritime Operations Centre of the Polish Navy;
 - Governmental Crisis Management Centre and its regional branches;
 - customs and police;
 - Hydrographic Office of the Polish Navy;
 - Maritime Branch of the Institute of Meteorology and Water Management;
 - port authorities; and
 - sanitary and veterinary services.

The data from the system is partly available for the European Maritime Safety Agency (EMSA) in Lisbon and NATO Management Centre in Northwood (UK).

According to the legal requirements ICT (Information and Communications Technology) systems operating within the National SafeSeaNet System shall [16]:

- have an availability of not less than specified in the Interface and Functionalities Control Document (ICFD) drawn up by the European Commission in cooperation with EU Member States and defining detailed requirements for the operation, technical standards and operational procedures of national SafeSeaNet systems and the central part of SafeSeaNet system;
- provide the ability to archive and recover data for the period specified in the document ICFD;
- allow the transmission of information 24 hours a day, 7 days a week;
- allow the transfer, immediately after receiving the request, to the competent authorities of the EU Member States, information on ship and dangerous or polluting goods carried on board the ship;
- constantly maintain required level of IT security; and

- provide access to the information to authorized users only.

Exchange of information using the telephone, fax or e-mail shall be ensured in the event of a failure or planned downtime if the ICT systems operating within the National SafeSeaNet System.

Currently, the system is modernized and expanded. Much of the work has been done in the last few years in the scope of project co-financed by the European Union. The direct beneficiary and the applicant of the project is the Polish maritime administration (Maritime Office in Gdynia in collaboration with the Maritime Offices in Słupsk and Szczecin) and Polish Maritime Search and Rescue (SAR) Service. The project was implemented in two stages: KSBM-I and KSBM-II. Project KSBM-I was located on the main list of individual projects of the Operational Programme "Infrastructure and Environment" for 2007-2013 and was realized with the support of EU funds financed in the Priority VII "Environmentally-friendly transport" under Measure 7.2 "Development of Maritime Transport". The amount of co-financing from EU funds was up to 85%.

The main goals of the projects were [13, 19, 20, 21]:

- 1 Increasing the coverage of the Polish national network of AIS base stations by installation of five additional AIS base stations, including one on the Petrobaltic platform "Baltic Beta" located to the north of Cape Rozewie and completion and ensuring homogeneity and monitoring capabilities of the system.
- 2 Establishing a system for monitoring and managing maritime traffic along the Polish coast (especially in sensitive areas) - Marine Traffic Surveillance and Monitoring System - consisting of operating already in the Polish waters VTMS and VTS along with their technical equipment (current and new installed) and new national and auxiliary centres located, respectively, in the Maritime Office in Gdynia - national centre cooperating with the European VTMS and regional centres in Gdynia, Słupsk and Szczecin. The investment included installation:
 - 28 shore based radars with tracking facilities, installed as VTS, port and shore remote controlled sensors;
 - 26 video cameras;
 - 5 radio direction finders (RDF) working in the VHF band;
 - 12 VHF shore stations; and
 - 14 hydro-meteorological stations.
- 3 Building a new system of operational communication for the Maritime Search and Rescue (SAR) Service: 8 VHF/DSC shore stations, 2 centres: RCC Gdynia and RSC Świnoujście.
- 4 Construction of telecommunications infrastructure along the Polish coast for maritime safety and monitoring systems and exchange of information, so called Pomeranian Telecommunications Bus (over 600 km of new fibre-optic cable and 21 km of new submarine cable).
- 5 Establishment of the Early Warning System (EWS) for marine areas of Poland (one national centre in Gdynia, two such sub-centres in Szczecin and

Słupsk or Ustka, four VTS centres in Gdynia, Szczecin, Świnoujście and Ustka and 12 harbour masters offices in Darłowo, Dziwnów, Elbląg, Gdańsk, Gdynia, Hel, Kołobrzeg, Leba, Szczecin, Świnoujście, Ustka and Władysławowo).

National maritime safety centre and sub-centres are responsible for: risk assessment, early warning, crisis management and exchange of information concerning safety and security of navigation and environmental protection (ISPS, SafeSeaNet, CleanSeaNet, etc.). They are equipped with the Electronic System for the Exchange of Maritime Safety Information (SWIBŻ) realizing in this respect following functions [13]:

- 1 Presentation of:
 - data received from KSBM inner sensors: VTS, VTMS, port radars, Polish AIS net, hydro-meteorological sensors, radio direction finders (RDF), database of vessels, e-inspection, etc.;
 - data from outer AIS systems (HELCOM, EMSA);
 - data from outer radars (Polish Coast Guard and Polish Navy); and
 - weather forecasts and navigational and hydro-meteorological warnings.
- 2 SafeSeaNet notifications.
- 3 Modelling the drift of oil pollution.
- 4 Risk assessment.
- 5 Supporting crisis management and exchange of information.

4 CONCLUSIONS

Built to implement the provisions of the EU legislations on Vessel Traffic Monitoring and Information System (VTMIS) and reporting formalities for ships operating to or from ports of the EU Member States, described in this paper Polish National Maritime Safety System (KSBM), after completion of its implementation and passing with positive results all SAT (Side Acceptance Test) procedures will meet all requirements for VTMIS presented in the Directive 2002/59/EC and will be able to meet the requirements for receiving reports of ships and transported them passengers and cargo as defined in the Directive 2010/65/EU. Its implementation provides the technical measures necessary Polish maritime administration to ensure safety and security of shipping and protection of the environment and economic interest of Poland in the Polish maritime areas by effective monitoring and control of maritime traffic and economic activities in these areas. It provides information necessary to make decision regarding granting place of refuge and enables increasing efficiency of the search and rescue operation, protection of the environment and action involving the liquidation of consequences of natural disasters and accidents with ships at sea. Data obtained from the system are useful to other services and institutions related to maritime safety and security, border protection, maritime economy and port activities.

Currently, work is underway to establish national and regional single windows in accordance with the European Union requirements that will meet future

tasks assigned to the single point of contact in the projects: e-maritime implemented by the EU and e-navigation developed by the IMO. Established in Maritime Office in Gdynia national single window has passed successfully test in the field of automatic data exchange with EMSA.

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