No 4 September 2016

Project

BALMAS newsletter

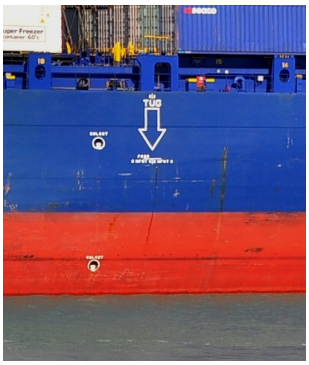

Fig. 1: Unloaded ship waterline.

Inside this issue:

Foreword

Dear reader

The BALMAS project is approaching the end and this is our last Newsletter. We hope that you've found our Newsletters interesting and useful.

During 35 months of a very successful cooperation among 16 BALMAS project partners from 6 different countries around the Adriatic Sea, we've followed and reached BALMAS project objectives to enhance the Adriatic Sea protection.

For the 20th of September 2016 we are preparing the BALMAS Capacity Building Seminar for relevant policy and decision makers and other stakeholders. On the 21st and 22nd of September we will proceed with the presentation of the main achievements and capitalization of the results of the BALMAS project at the Final BALMAS Conference. Both the Seminar and the Final Conference will take place at the Marine Biology Station (National Institute of Biology) in Piran, Slovenia. RUAG (Reference Users and Advisory Group) members will also be present at the Final BALMAS Conference.

Some outputs and results of the BALMAS project are already available on the BALMAS project website (www.balmas.eu) under the heading of the Knowledge Centre. Thus, readers are welcome to visit the BALMAS project website to follow our work and achievements.

I wish you a pleasant reading of the 4th BALMAS Newsletter!

Vesna Flander Putrle
BALMAS Project Communication Manager and BALMAS Project Coordinator for Final Beneficiary National Institute of Biology (Marine Biology Station), Slovenia

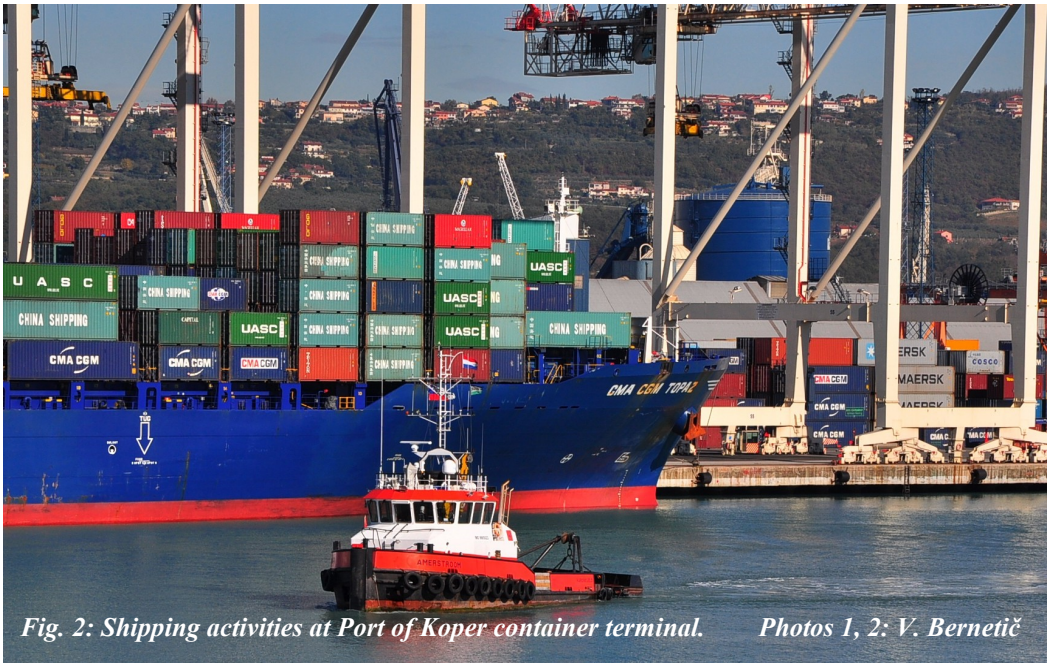

Fig. 2: Shipping activities at Port of Koper container terminal. Photos 1, 2: V. Bernetič

The BALMAS BW Management Decision Support System (BWM DSS)

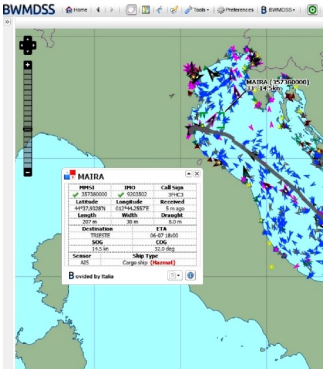

Fig. 1: GIS map screen captured from AIS tracking system.

"The alert addressed to vessels is aimed at preventing the uptake of water as ballast water, with high concentrations of harmful aquatic organisms or pathogens."

Since April 2016, an electronic cross-border BALMAS BWM Decision Support System in the Adriatic Sea, based on the BW reporting provided by the vessels, was implemented in order to help Adriatic States Authorities to enable safe and effective BWM measures according to the BWM Convention requirements. In particular, the system can support the Adriatic competent Authorities to carry out the surveys on the BW and the related Compliance Monitoring Enforcement (articles 7-11 and Regulations in section B and D of the BWMC) as well as to notify the warnings envisaged in the Regulation C-2.

BWM DSS consists of the following different software modules: BW Reporting information System (BWRS), Early Warning System (EWS), Decision Support System (DSS), Web User Interface (WUI) as well as provides some specific tools for the user management and the system monitoring.

The BW Reporting System (BWRS) information system manages the reporting in advance on BW operations from vessels and information storage. BWRS can support the Adriatic Maritime Authorities to implement a common operating procedure to gather and exchange information on management and operations related to the BWM conducted by the vessels which intend to call the ports of the Adriatic Sea. It is based on the information acquired by an agreed BW Reporting Form to be submitted by the vessels or by the related Agent.

The Adriatic Early Warning System (EWS) module provides an automated alert service for vessels and Authorities, relating to the timing and mode of transmission of information, able to enhance the response capabilities relatively to issue a warning to ships as well as to other potentially affected States according to the BWM Convention requirements. The alert addressed to vessels is aimed at preventing the uptake of water as ballast water, with high concentrations of harmful aquatic organisms or pathogens. The alert to environmental and health Authorities is needed to warn them of the presence of non-indigenous species or pathogens in waters under their jurisdiction, also in view of a timely and effective intervention, if deemed necessary.

The DSS module, interfacing with the BW reporting and the EWS modules, is aimed to guide and support the decision making process to be conducted by the Maritime Authorities on the BW Management operations on board the vessels intending to call the Adriatic ports.

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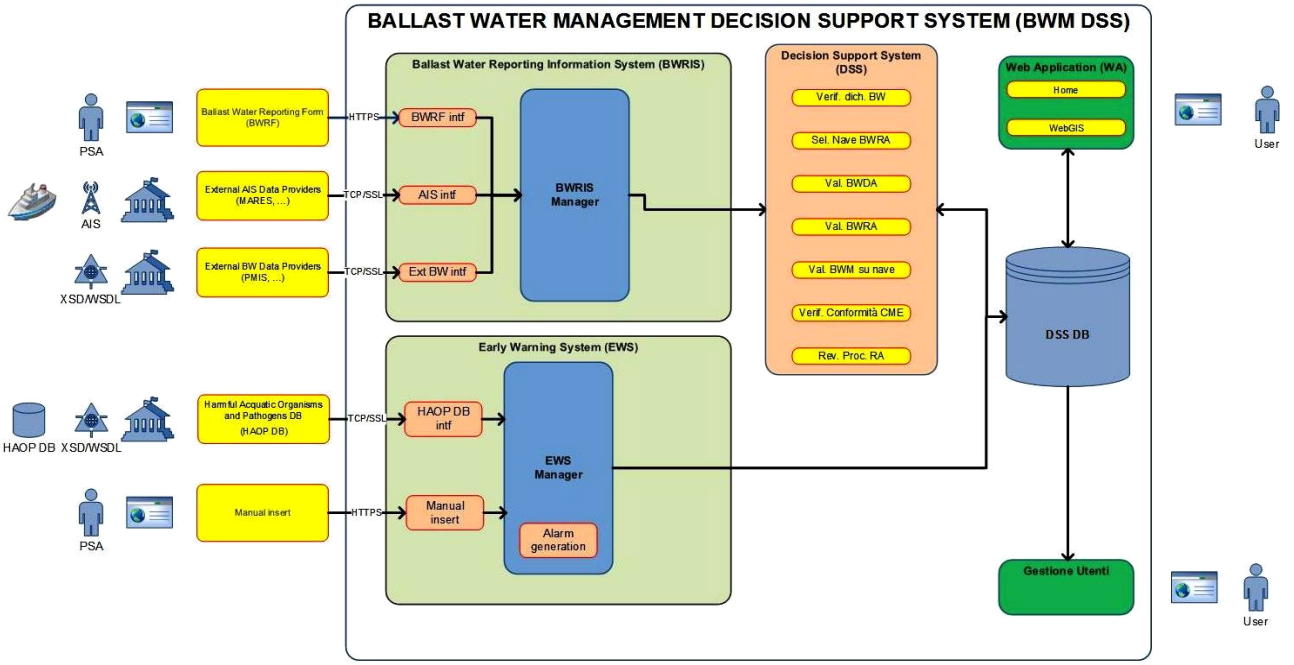

Fig. 2: BMW DSS block diagram.

...The BALMAS BW Management Decision Support System (BWM DSS)

(Continued from page 2)

That process, affecting primarily the Port State control activities, is based on the:

1. analysis of BWRF submitted by the ship to the Port State Authority;
2. BW discharge assessment conducted on the base of total BW capacity and the cargo operations (quantities and types of the goods which will be loaded and/or unloaded) which the ship intends to carry out in the arrival port;
3. Risk Assessment of the BW declared as retained on board;
4. analysis of the BWM conducted by the ship.

The results of those assessments and analysis could trigger the appropriate Control Monitoring Enforcement to be carried out by the competent Authorities. All data and information collected during the decision making processes as well as their results, will be stored in the DSS database in order to provide information on the historical BWC compliance of the ship also useful to select the vessels for the CME.

The BWM DSS is accessible on the web (url: https://bwmdss.guardiacostiera.gov.it/) for authorized users through the most common web browsers by a comprehensive Web User Interface (WUI) based on the open source PostgreSQL software.

BW Reporting Forms and other input data for EWS purposes may be collected both by a manual entering of the operators and by an automated request/deliver through a specific M2M web services to be provided by the related national/local system, if it exists (e.g. Port Management Information System and/or HAOP DB).

The BWM DSS is hosted and managed by the Italian Coast Guard Headquarters within the MAREΣ platform* which has been realized under the prevision of the Article 9 "Infrastructure for ship reporting systems, ships' routing systems and vessel traffic services" of the Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC.

Cosmo Forte
Italian Coast Guard Headquarters – Rome

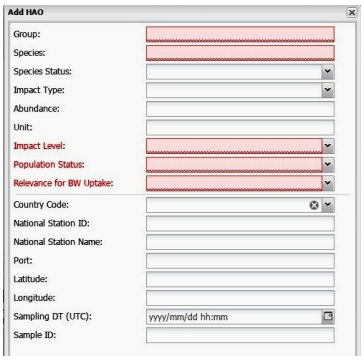

Fig. 4: Caption of HAO editor.

**Mediterranean AIS Regional Exchange Server hosted and managed, since 2009, by the Italian Coast Guard HQs in agreement with the European Maritime Safety Agency (EMSA), is the main Regional system for collecting, distributing, storing and visualizing of the AIS data collected by EU Mediterranean Countries' AIS networks.*

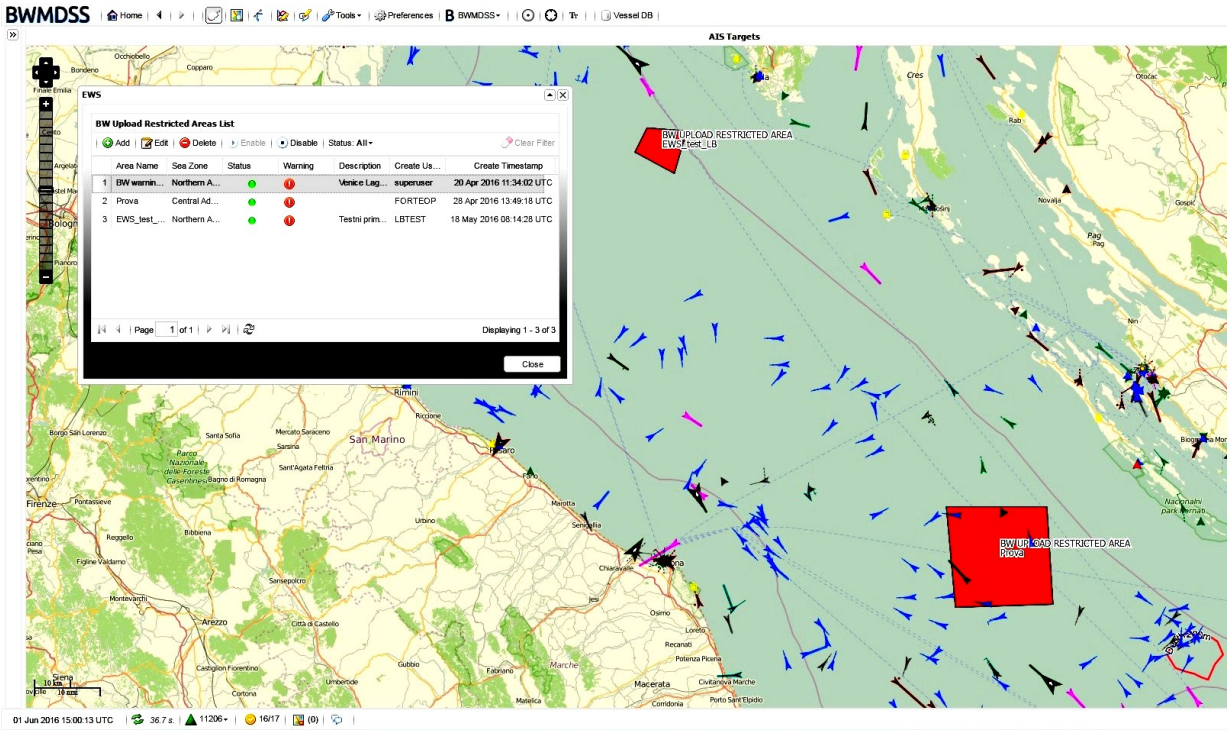

Fig. 3: Print screen of an hypothetical EWS BW restricted area.

Ballast water discharges in the Adriatic ports

Since the majority of ballast water discharges are made in ports (Figure 1), ballast water discharge profiles were carefully studied in selected relevant Adriatic ports (Bari, Ancona, Venice, Trieste, Koper Pula, Rijeka Šibenik, Split, Ploče, Bar and Durres) for years 2012 to 2015. Data about ballast water discharges were collected with Ballast Water Reporting Form (BWRF) and further Ballast Water Discharge Assessment (BWDA) was conducted.

Fig. 1: Ballast water discharge from a vessel in a port .
Photo: Matej David

Data about vessel calls and from BWRF were entered in the Ballast Water Discharge database. Data were checked to identify any missing or incorrect reported data. BWDA model (David et al., 2012 presented on Figure 3) was applied to assess ballast water discharge volumes per each vessel call. Ballast water discharge volumes reported in BWRF were compared with BWDA. Reported data with BWRF with no obvious mistakes have been considered as the most relevant. However experience has shown that there may be a substantial miss or false reporting. Hence, where BWRF has not been submitted or volumes of ballast water discharge were not declared, BWDA was considered as a final result. It should be noted that for some ports there were some missing data about vessels cargo operations and vessels Dead Weight Tonnage (DWT), which made it impossible to assess ballast water discharge for each vessel call.

Ballast water discharge donor ports were also assessed and analysed. Ballast water donor ports or areas declared with the BWRF were considered as source of ballast water discharges. Where these were not reported, the last port of call was considered as the donor port. The data collected and assessed were first analysed on a monthly and annual base to identify any possible specifics and seasonal trends, and later analysed all together to have a larger

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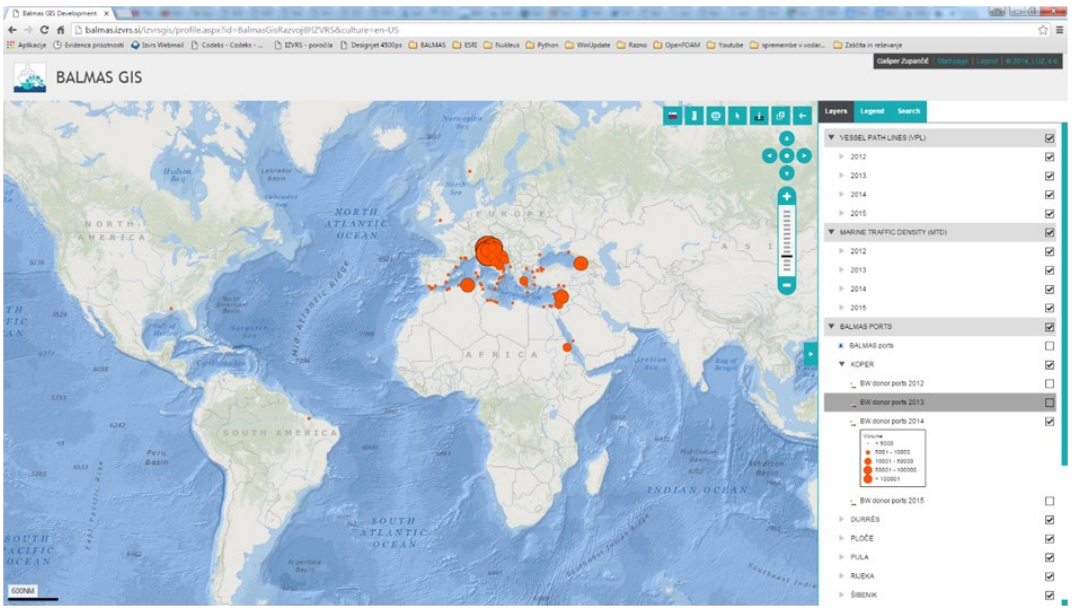

Fig.2: Display of BW donor ports including approximate volumes of BW being discharged yearly for the Port of Koper (Source: BALMAS GIS application, http://balmas.izvrs.si/izvrsgis/profile.aspx?id=BalmasGis@IZVRS&culture=en-US).

...Ballast water discharges in the Adriatic ports

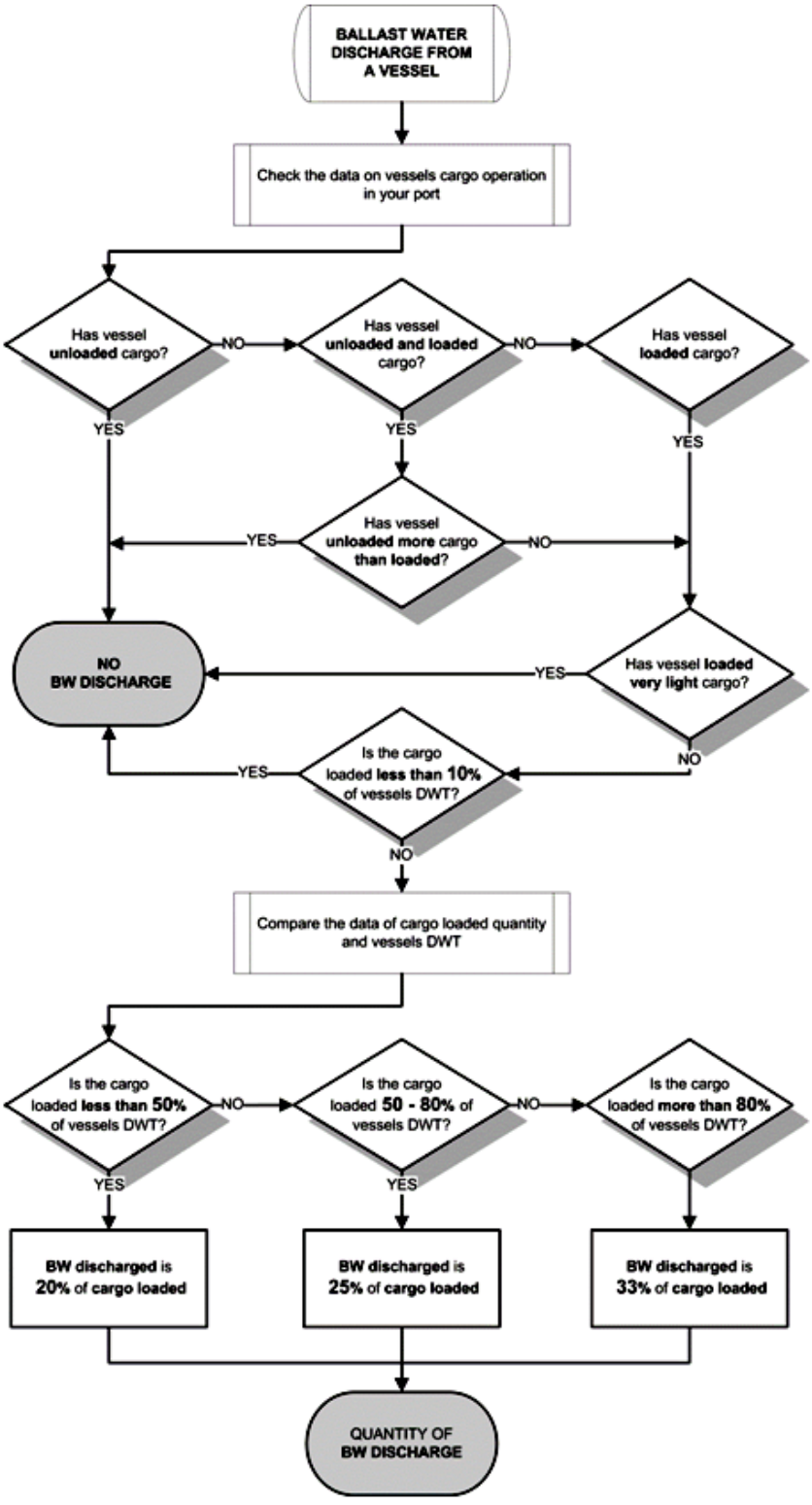

Fig. 3: Ballast Water Discharge Assessment (BWDA) model (David et al. 2012).

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data processed. Furthermore, analyses of ballast water discharge volumes per type of vessel as maximum, minimum and average volume were conducted.

This study allows detailed insight in ballast water discharges patterns in the Adriatic ports. It also provides important information for decisions about future ballast water management requirements in the Adriatic Sea, and for supporting the Adriatic Ballast Water Management Decision Support System (BWM DSS). More detailed information about ballast water discharges profiles of studied ports in the Adriatic is available in the act.4.2 report Ballast water discharge assessment methods and analysis of ballast discharge patterns in the Adriatic Sea, and on internet BALMAS GIS application (Figure 3), where several data layers may be displayed as well as downloaded.

Matej David[1], Ludvik Penko[2] and Gašper Zupančič[2]
[1]Dr. Matej David Consult,
[2]Institute for Water of the Republic of Slovenia

"Ballast water donor ports or areas declared with the BWRF were considered as source of ballast water discharges. Where these were not reported, the last port of call was considered as the donor port."

Fig. 4: Bulk carrier enters the Port of Koper aquatorium. Photo: V. Bernetič

Ballast Water Exchange Distances

*International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004. International Maritime Organization (IMO), 13th of February 2004. London: IMO.

Ballast water exchange (BWE) is exchange of ballast water at open seas as described in the D-1 standard of the Ballast Water Management (BWM) Convention*. It is a temporary measure for managing ballast water until vessels will be equipped with on-board BWM systems or in other ways comply with the D-2 regulation of the Convention.

Although BWE is a temporary measure, it will play an important role in minimising the possibility for transfers of harmful aquatic organisms and pathogens with ships ballast water in the first years after the BWM Convention enters into force. Currently only few vessels are equipped with on-board BWM systems and it is estimated that their number will grow gradually over time. Therefore some time will pass before BWE will be replaced with on-board BW treatment as the dominant BWM measure.

In order to better understand that BWE is not only a 'theoretical' option, BWE was studied and BWE distances were estimated. BWE distance equals the length of a vessel's port-to-port route traversed in open sea areas where BWE is allowed. BWM Conventions states that BWE is allowed only in open seas, specified as waters with depth over 200 meters, which are more than 50 nautical miles but preferably 200 nautical miles from closest shore.

The Adriatic Sea is a shallow enclosed sea where BWE according to the BWM Conven-tion rules is allowed only in a small area outside the main traffic routes. Therefore we at the lead beneficiary assessed that BWE (whithout an officially designated BWE area) is possible only outside the Adriatic and BWE distances were estimated only for extra-Adriatic voyages (vessels arriving to the Adriatic Sea from other world seas). For every port outside the Adriatic Sea found in our database consisting of 7146 ports, BWE distance was estimated along the traffic route connecting this port with the Adriatic Sea. The BWE distances data can be viewed within the BALMAS GIS (geographic information system) application (Figure 1), which can be accessed via the BALMAS website www.balmas.eu .

Based on BWE distances and other available data (vessel service speed, BW quantity and BW pump capacity), it will be possible to estimate whether any vessel arriving to an Adriatic port from ay extra-Adriatic port had the opportunity to conduct BWE along its route before entering the Adriatic Sea. This information can allow decision makers (e.g. port authorities) in taking appropriate BWM measures. This functionality was cosidered to be included in the BALMAS BWM decision support system.

Gašper Zupančič and Matej David
for the Lead Partner, the Institute for Water of the Republic of Slovenia

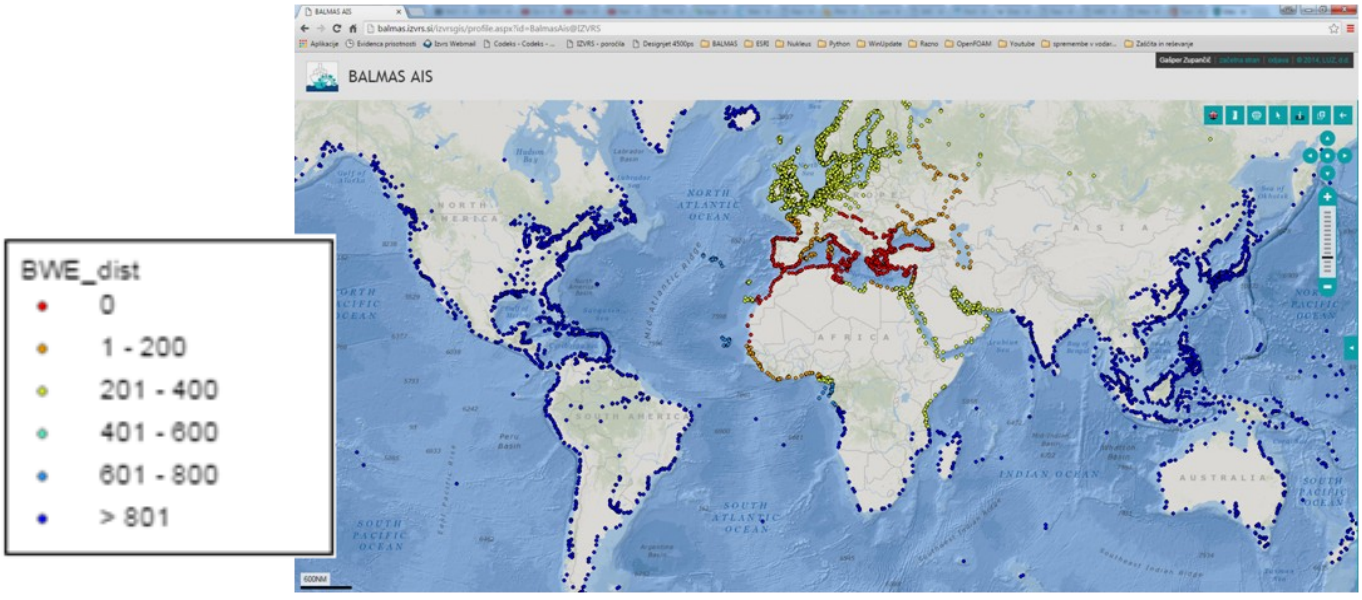

Fig. 1: Estimated BWE distances for world ports as shown on the BALMAS GIS application. The legend shows BWE distances in nautical miles.

Water salinity in world ports

Difference in salinity between ballast water (BW) donor and recipient ports plays an important role in the possibility of successful transfer of harmful aquatic organisms through BW. Therefore, salinity difference is an important parameter in the BALMAS risk assessment procedure. The basic logic is that when the discharged BW is of highly different salinity than the waters of the recipient port, the possibility for a successful transfer is minimal (e.g. discharge of fresh water into high salinity marine water).

Since salinity is regarded as the basic information on the marine environment, the lead beneficiary (LB) was quite surprised when a sufficiently large and 'ready to use' source of salinity in world ports was not found available. Since salinity data play such an important role in the BW management process, LB determined to use the available port salinity data and try to construct a substantial port salinity database.

The BALMAS salinity database was constructed using three data sources: World Ocean Atlas (WOA) data, Fairplay water density data and port salinity data from Keller et al. (2011). All three data sources were thoroughly checked and in case of conflicts (different salinities per source for the same port), the salinity was chosen based on expert judgement (Stephan Gollash and Matej David) or additional data found on the web. The database was also thoroughly checked in order to eliminate duplicate entries (different names used for the same port) and equipped with UN-LOCODE codes where found.

Thus prepared salinity database includes salinity data for 7146 world ports and is ready to be used in the BALMAS risk assessment procedure as a part of the BALMAS ballast water management decision support system. The salinity data can be viewed within the BALMAS GIS (geographic information system) application (Figure 1), which can be accessed via the BALMAS website www.balmas.eu.

Gašper Zupančič, Matej David, Leon Gosar and Stephan Gollasch
for the Lead Partner, the Institute for water of the Republic of Slovenia

"The basic logic is that when the discharged BW is of highly different salinity than the waters of the recipient port, the possibility for a successful transfer is minimal "

Fig. 1: Pilotage of cargo ship leaving port area.

Photo: Tihomir Makovec

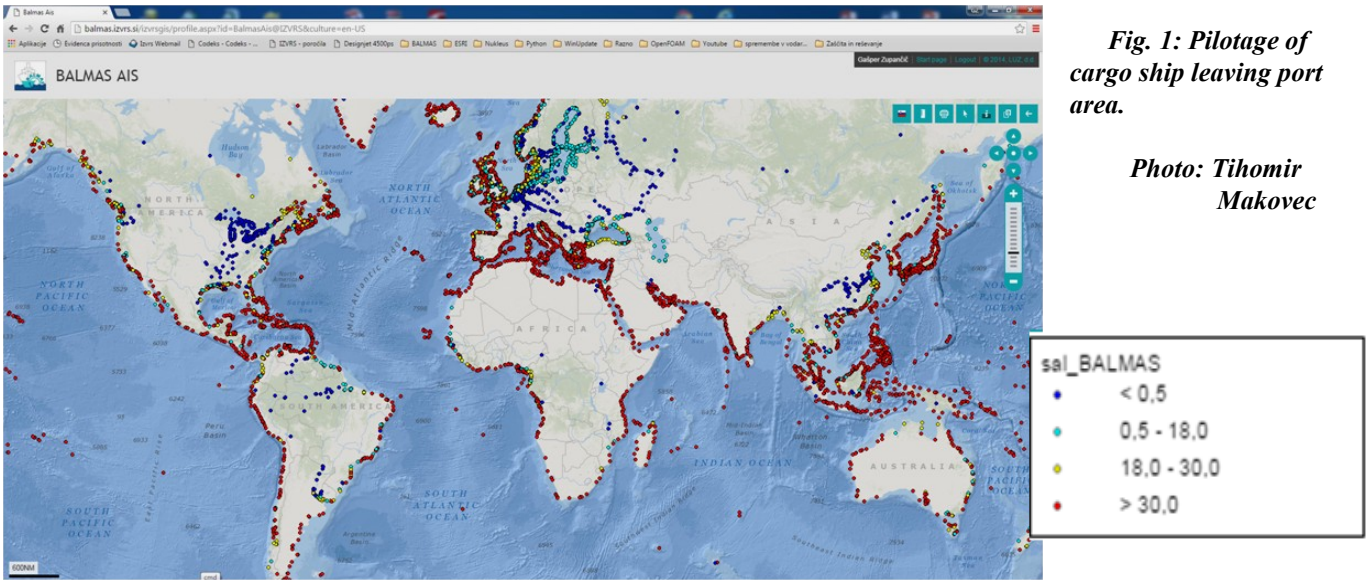

Fig. 2: Salinity in world ports as shown on the BALMAS GIS application. The legend shows values in PSU units.

Financial Sustainability of Ballast Water Management (BWM)

As one of the expected outputs in the BALMAS Project activity of Ballast water exchange is report containing an overview of self-financing Ballast Water Management (BWM) approaches used worldwide, this article focuses on short summary of one part of this report.

When country will ratify International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention) and successfully implement it, government will be obliged/responsible to provide services to a maritime sector (vessels affected by the BWM Convention). It is beneficial for government to predict activities and evaluate costs before the BWM Convention enters into force.

For establishing a self-financing mechanism, it is essential that costs of managing ballast water management system meet the revenue from fee/charge/levy.

The first step is to evaluate costs:

- Identification of activities.
- Evaluation of time needed to complete/process activity.
- Identification of number of staff needed (dependsalso on density of traffic, predicted inspection checks rate).
- Material costs/Equipment costs.

Secondly, analysing traffic in ports (type of vessels, total number of vessels calling to ports, amount of ballast water discharge) is important knowledge in order to define costs and also to identify potential payers of provided services.

Presented financial approaches from New Zealand, Oregon and Victoria are established and operational. Ukrainian approach is presented

Fig. 1: Port of Ancona.
Photo: Marine Research Centre Foundation, Cesenatico (Italy)

because it was interestingly designed, although legal basis was abolished and it is not operational anymore.

Ukraine

Note: Legal basis Regulation of Ship's Segregated Ballast Water at Ukrainian ports was abolished since the end of the year 2014 due to the common corruption schemes[1] and because it was not in line with the international laws[2] (contradicted the MARPOL 73/78 Convention[3]).

Most of the vessels visiting Ukrainian ports are scheduled for loading operations and therefore arrive in ballast.

Requirements of State Inspection for Protection of Black Sea (SIPBS)[4]:

- When entering the Black Sea vessels with segregated ballast tanks carrying ballast water from other seas must carry out ballast water exchange and this must be recorded in the Log Book (and in the ballast water management record, if the vessel has one).
- The Master must declare to the agent the quantity of the ballast water, which the vessel intends to discharge in port.

  After berthing, a representative of SIPBS visits the vessel and takes samples of the ballast water. These samples are examined in the SIPBS laboratory (or in one of the laboratories approved by SIPBS) for the presence of the following admixtures: oil products, metals, suspended substances.

(Continued on page 9)

"It is beneficial for government to predict activities and evaluate costs before the BWM Convention enters into force."

...Financial Sustainability of BWM

"Deballasting is only permitted where admixtures of oil products, metals or suspended substances do not exceed regulated levels. "

(Continued from page 8)

Deballasting is only permitted where admixtures of oil products, metals or suspended substances do not exceed regulated levels. If any of those levels are exceeded deballasting is prohibited. There are two options available[4]:

Fig. 2: Aerial view, Port of Koper container terminal.

Photo: courtesy from Port of Koper authorities administration

- Deballasting on a payment of a fine
  The SIPBS laboratory determines the concentration of admixtures in the ballast water. This figure is multiplied by total quantity of the ballast to be discharged. According to local regulations this penalty is subject to a maximum of US$ 5.000.
- Deballasting outside 12 mile zone
  This operation involves tug assistance, pilotage and mooring operations and is, therefore, very expensive. For a vessel of about 24.000 DWT the cost of moving outside the 12-mile zone ranged from US$ 6.000 to US$ 13.000.

"Pre-arrival documentation (BW declaration, Advanced notice of arrival and Master declaration) should be send to the Ministry for Primary Industry (MPI) at least 48 hours before the arrival"

New Zealand

Legal basis is Import Health Standard for Ship's Ballast water from all countries[5] pursuant to Section 22 of the Biosecurity Act 1993[6].

Pre-arrival documentation (BW declaration, Advanced notice of arrival and Master declaration) should be send to the Ministry for Primary Industry (MPI) at least 48 hours before the arrival[5]. The assessment will consider the records of compliance with this Standard in relation to the ship and crew, likely risks associated with the ship type, type of cargo carried and countries visited.

Eligible ships may however still be selected for the random audit inspection of 10 % of ships annually or may be subject to inspection if an alert is received[5]. MPI's costs are financed through a different sources than Quarantine inspectors and biosecurity advisers.

MPI's are financed through fees and levies (every ship pays Marine Safety Charges[7]).

Levy funds safety services for the general benefit of the maritime sector (aids to navigation, distress and safety radio, marine safety information and other related services). Levy is divided regarding foreign ships (foreign non-passenger ship – with or without a summer load line, passenger ship), New Zealand ships (non-passenger, passenger ship) and other new Zealand ships (fishing ship, other commercial ship). Basis on which levy are calculated are cents per dead weight, per gross tonnage, passenger capacity, grater of overall length in meters or gross tonnage.

Fees are intended to meet the costs of directly chargeable transactions, such as

(Continued on page 10)

...Financial Sustainability of BWM

(Continued from page 9)

seafarer and ship certification, licensing, permits approval, exemptions, audits and ship registration…

Quarantine inspectors and biosecurity advisers are financed through fees and charges based on hourly rate charges (or zone charge approach)[8]. Their work covers inspection of vessels on arrival at or on their way to a New Zealand port, to ensure that any biosecurity risk of goods on board (including those carried by passengers and crew) are treated in accordance with the relevant standards, and that ballast water is exchanged in accordance with relevant standards. A zone charge approach for quarantine inspectors and biosecurity advisors is simpler administratively, both for importers and MPI, and better suits the nature and frequency of the trips they undertake.

Sanctions for non-compliance

Providing incorrect information to an inspector is an offence under the Biosecurity Act, 1993[6]. It carries a penalty for individuals of up to 12 months imprisonment and/or a fine not exceeding NZ$ 50.000, and for corporations a fine not exceeding NZ$ 100.000. Failure to obey the directions of an inspector carries a penalty for individuals of a fine not exceeding NZ$ 5.000, and for corporations a fine not exceeding NZ$ 15.000.

Oregon (U.S. State)

Legal basis is Ballast Water Management Program[9] issued by Oregon's Department of Environmental Quality.

Pre-arrival documentation (BW management report – United States Coast Guard (USCG) approved BW form) should be send to Department of Environmental Quality (DEQ) at least 24 hours before arrival.

Approximately 1.600 commercial vessels per year visits Oregon while appointed Ballast Water Inspector (1,5 FTE) inspects 12 % of vessels[10].

Ballast Water Inspector costs are financed through a different sources[11]:

- 50 % from General Fund (GF) – Government.
- 50 % from Ballast Water Fund (Ballast Water Vessel Fee per arrival - currently 70 $, increased up to 88 $ from Jan 2016).

Program activities[12]:

- Monitoring vessel traffic for pre-arrival reporting compliance.

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Fig. 3, 4: Ballast water inspection visiting the moored ship.
Photos: BWS Ancona (BALMAS archive)

"Providing incorrect information to an inspector is an offence..."

...Financial Sustainability of BWM

(Continued from page 10)

- Screening reports for discharge activity and regulatory compliance.
- Managing and analysing reporting data for long-term trends.
- Inspecting vessels and sampling ballast tanks for compliance verification.
- Outreach and response for invasive species emergencies.

Sanctions for non-compliance[13]:

- Class 1 violation (3.000 $ - 12.000 $):
  1. Non-compliant discharge.
  2. Failing to report.
  3. Failure to follow Ballast Water Management Plan (BWMP) or maintain BW handling log.
- Class 2 violation (1.500 $ - 6.000 $):
  1. Late reporting.
  2. Failure to maintain BW handling log.

Generated funds from penalties are to be deposited to the State wide Invasive Species Control Account (not in GF)[14].

"The governmental funding of ballast water related activities is inevitable in the preparatory phase, when setting up a BWM system."

Fig. 5, 6: Port of Durrës. Photos: BALMAS archive

Victoria (State of Australia)

Legal basis is Environment Protection (Ships' Ballast Water) Regulations 2006 - S.R. No. 59/2006[15] were created to help implement The Waste Management Policy (Ship's Ballast Water).

Pre-arrival documentation (BW Report form and Ballast water log) should be send to Environment Protection Authority (EPA) at least 24 hours before entering Victorian waters in order to receive written authorization to discharge[16].

Compliance monitoring and verification inspections are performed by EPA Authorized officers on a random basis.

Costs of administering EPA's ballast water management framework are recovered from fees[15]:

- Fee for a normal visit (visit per visit basis) – 21 fee units.
- Reduced fee for ship with accreditation (visit per visit basis) – ship owner can enter into an Annual fee agreement[17] (to ensure that owner does not pay more than 200 fee units per annum).

Fee/penalty units are established under Monetary Units Act 2004[18] and the value of a fee/penalty unit is indexed annually. Currently 1 fee unit equals 13,60 AUD, 1 penalty unit equals 151,67 AUD[19]. Sanctions for non-compliance[15]:

- Violation of ballast water reporting requirements – 20 penalty units.
- Violation of discharging regulation – 50 penalty units.

Above summarised good practices of financial approaches are not all based on a full cost recovery system. Each country follows their own principles. In a majority of analysed countries, activities are partially funded by the government and partially by the fee/charges/levies collection. The governmental funding of ballast water related activities is inevitable in the preparatory phase, when setting up a BWM system. Lessons learned from these countries could be beneficial knowledge for the Adriatic countries in the future.

Urška Kocijančič
for the Lead Partner, the Institute for Water of the Republic of Slovenia

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...Financial Sustainability of BWM

(Continued from page 11)

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[2]http://www.forwarderlaw.com/library/view.php?article_id=931

[3]http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx

[4]https://www.steamshipmutual.com/publications/Articles/Articles/Ukraine_ballast0305.asp

[5]Import Health Standard for Ships' Ballast Water, 2015 (under Biosecurity Act, 1993)

[6]Biosecurity Act, 1993 (http://www.legislation.govt.nz/act/public/1993/0095/latest/DLM314623.html)

Fig. 7

[7]Marine Safety Charges Amendment Regulations, 2013

[8]http://www.transport.govt.nz/assets/Import/Documents/Appendices-Future-Funding-of-Maritime-New-Zealand-20Amendments-to-levies-fees-and-charges-cabinet-paper.pdf

[9]http://www.deq.state.or.us/lq/cu/emergency/ballast.htm

[10]http://www.deq.state.or.us/lq/cu/emergency/docs/STAIS_LegReport2015.pdf

[11]http://www.oregon.gov/deq/EQC/Documents/2014/BudgetBook0814/6pop.pdf

[12]http://www.deq.state.or.us/regulations/legbills/factsheets/SB261ballastWater.pdf

[13]Legislative Counsel Committee, *CHAPTER 783—Liabilities and Offenses Connected With Shipping and Navigation; Shipbreaking; Ballast Water.* 2013.

[14]http://www.deq.state.or.us/lq/cu/emergency/docs/STAIS_LegReport2015.pdf

Fig. 8

[15]Environment Protection (Ships' Ballast Water) Regulations 2006, S.R. No. 59/2006.

[16]http://www.epa.vic.gov.au/business-and-industry/guidelines/water-guidance/ballast-water-guidance/ballast-water-and-shipping-industry-obligations

[17]http://www.epa.vic.gov.au/business-and-industry/guidelines/water-guidance/ballast-water-guidance/ballast-water-accreditation-agreements

[18]http://www.austlii.edu.au/au/legis/vic/consol_act/mua2004202/

Fig. 9

Fig. 7: Port of Koper.

Fig. 8: Cargo ship in Port of Ancona.

Fig. 9: Port of Ancona.

Photos: BALMAS archive

An exciting France - Italy collaboration in the framework of the BALMAS project

Year 2016 started for me with an exciting 3-months (January – April) working period in Brest (France), at the IUEM (Institut Universitaire Européen de la Mer; www-iuem.univ-brest.fr). The main objective of my visit there was to study the meiofauna and macrofauna populations characterizing the Ancona port. The integrated approach, by using simultaneously different benthic components, will provide a more holistic assessment of environmental conditions. All the samples were collected during the BWM activity of the project, from the inner to outer area of the harbour and in different seasons.

The macrofauna organisms were identified in collaboration with **dr. Jacques Grall**, chief of the Observatoire de la Mer at the IUEM (Fig. 1) and **dr. Vincent le Garrec**, Ingénieur de Recherche at the IUEM. Their wide experience in the taxonomy and ecology of macrofauna organisms inhabiting shallow water systems, gave me the possibility to study and identify the macrobenthic organisms to the species level and to clarify their ecology.

To achieve the main goal of the Meiofauna Network (see BALMAS Newsletter n. 3) I investigated the meiofauna populations inhabiting the Ancona port with a focus on nematodes diversity. In this case **dr. Daniela Zeppilli**, Researcher at Ifremer (wwz.ifremer.fr) specialized on meiofauna and nematodes ecology and diversity helped me in my intent.

The preliminary results of this fruitful collaboration were presented on a poster at the international Meiscool 2016 event during the last week of June in Brest (http://meioscool2016.sciencesconf.org). For this event, I have the pleasure to be part of the Organization Committee, next to **dr. Grall** and **dr. Zeppilli** as members of the Scientific Committee.

Elisa Baldrighi
Institute of Marine Science (CNR-ISMAR), Ancona, Italy

Fig. 3: Sediment sampling in the port.
Photos 2a, 2b and 3: BALMAS archive

"The integrated approach, by using simultaneously different benthic components, will provide a more holistic assessment of environmental conditions."

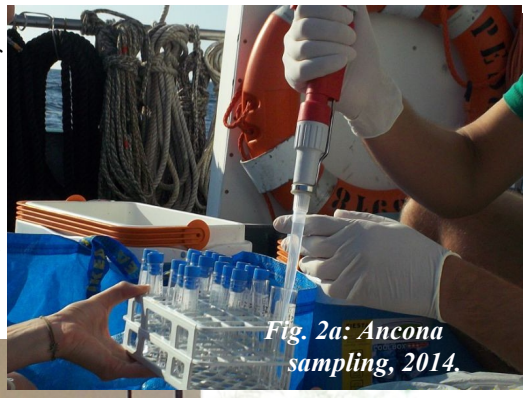

Fig. 2a: Ancona sampling, 2014.

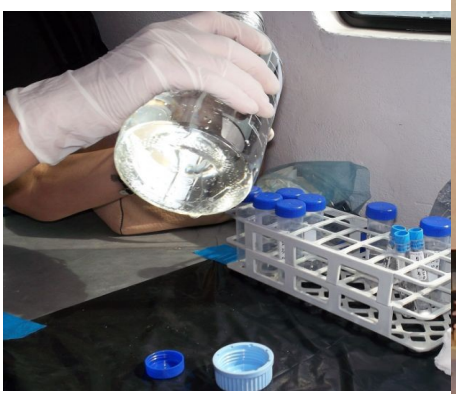

Fig. 2b: Ancona sampling, 2014.

Fig. 1: Dr. Jacques Grall and dr. Elisa Baldrighi at Grall's lab (IUEM, Brest). Photo: Marion Maguer (IUEM, Brest)

Current results of the BALMAS project implementation as well as the future activities published in media

The media were informed about the current results of the project implementation as well as the future activities. The analyzes that have been conducted so far in the port of Bar, have shown that there is no significant change in water quality nor in biodiversity.

At the Venince meeting it was announced that the project may exceed the previously scheduled deadline.

In the past few months we have promoted BALMAS* project in Montenegrian media**.

We have presented on several web portals a promotional video about the importance of protecting the Adriatic ecosystem from the ballast waters.

Dragana Drakulović from the Institute of Marine Biology (Kotor) informed the media about the future activities in the project. She announced that water sampling from the ship tanks will be conducted, since the necessary equipment has been provided.

Acting director of the Directorate for maritime transport and director of Maritime Safety Department **Vladan Radonjić** presented BALMAS project on Television of Montenegro. He explained the on-site process of the ballast water control.

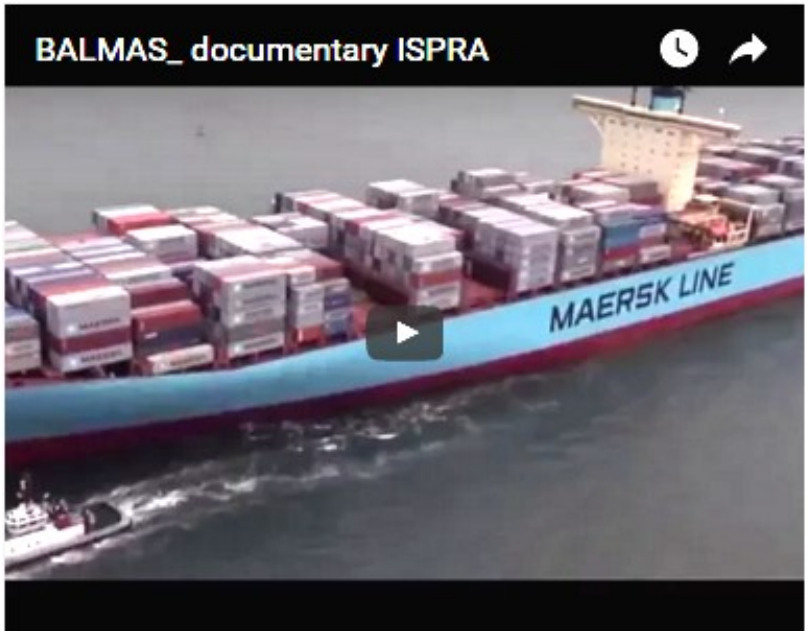

Fig. 1: BALMAS documentary on the web.

He said that equipment for this was provided by the IPA BALMAS project. Radonjić also spoke about the work of Institute of Marine Biology in Kotor.

Maja Lalić
Radio Television of Montenegro

BALMAS documentary ISPRA

*http://www.rtcg.me/vijesti/turizam-i-ekologija/117439/ovako-kontrolisu-balastne-vode-u-jadranu.html

**http://www.bokanews.me/vijesti/26050/

Fig. 2: Vladan Radonjić presented BALMAS project on Television of Montenegro. He explained the on-site process of the ballast water control.

BALMAS project presentation on National conference /Open day in Bar, Montenegro

On February 11th, in Bar (Montenegro) National conference/Open day was held, organized by the representatives of the Port of Bar, a partner of EA SEA-WAY strategic project.

In the first part of the meeting after opening speech, **Mr. Deda Đelović,** Director of Development Department in the Port of Bar, presented EA SEA-WAY project and Port of Bar activities with focus on pilot projects. In the second part of the meeting, **Mrs. Nina Joksimović** (Maritime Safety Department of Montenegro) presented BALMAS project (IPA ADRIATIC Programme) and the results of the project so far. Special focus was given to the ballast water management issues in connection to ports, and especially to the steps to be taken in the Port of Bar in order to satisfy the requirements set for ports in the Ballast Waters Management Convention once it enters into force.

"Special focus was given to the ballast water management issues in connection to ports, and especially to the steps to be taken in the Port of Bar in order to satisfy the requirements set for ports in the Ballast Waters Management Convention once it enters into force."

Following presentations were delivered by **Mrs. Milena Milačić** (Ministry of transport and Maritime affairs of Montenegro) about EASYCONNECTING project (IPA ADRIATIC Programme) and by **Mr. Boštjan Petelin** (Actual IT, Koper-SLO) who presented software solutions to support the logistics process in the maritime transport.

Darinka Joksimović
Maritime Safety Department, Bar, Republic of Montenegro

Fig. 1-3: National Conference / Open day. Photo: Darinka Joksimović

Training on BWS held in Bar, Montenegro in July

On July 26 and 27 training on ballast water sampling (BWS) and sample analysis was held in Port of Bar as part of BALMAS project activities. The training was organized by Maritime Safety Department with support of Harbour Master's Office Bar and Institute of Marine Biology Kotor.

Earlier in the project the equipment for indicative and detailed sampling of ballast water from tanks was purchased and this was the first time that it was used by those that will be performing both types of sampling in Montenegro once the Convention enters into force.

The two day training was held by **Jernej Uhan** from Marine Biology Station in Piran (National Institute of Biology); guest at the training was **Mladen Kustura** from Faculty of Civil Engineering, University of Mostar.

The first part of the training entailed taking samples from tanks on ships at anchor in the Port of Bar. During the training PSC officers from Bar and Kotor were instructed on how to use the equipment, collect and preserve samples. The indicative analysis of samples taken during the training showed that ballast waters were of low risk.

The second part was sample analysis, qualitative and quantitative determination of organisms, which was done in the laboratories of the Institute of Marine Biology and Faculty of Sciences in Podgorica. The results of detailed analysis were in line with the findings of indicative ones as they showed low count of organisms and sample diversity.

Darinka Joksimović
Maritime Safety Department, Bar, Republic of Montenegro

"The indicative analysis of samples taken during the training showed that ballast waters were of low risk."

Fig. 2: Sampling ballast water and preparing instruments for measuring salinity, etc.

Photo: Mladen Kustura

Fig. 1: BWS training group on a cargo ship moored in the Port of Bar.

Photo: Novica Mijović

Reprophoto of the Award plaque: V. Bernetič

BALMAS project awarded for its contribution to the environmental awareness

The BALMAS project was presented on the 21st International Boat Show INTERNAUTICA, which took place in Portorož - Portorose, Slovenia from May 4 to May 8, 2016. The BALMAS project was awarded for its contribution to the environmental awareness. On the exhibition space, the project was presented with the BALMAS documentary film and 2 roll up posters. The project was presented also in INTERNAUTICA catalogue and on their web-page.

Andreja Popit
Institute for Water of the Republic of Slovenia

Photos: V. Bernetič, Internautica, May 4th 2016

*Award in environmental awarness - to recognize outstanding contributions made toward the protection, conservation , and improvement of Adriatic's natural resources.

»BALMAS PROJECT« - ballast water management for Adriatic Sea protection

Reference:

* ***Internautica 2016 Catalogue:*** *http://www.internautica.net/wp-content/themes/internautica/Katalog.pdf*

INFO DAY in Rovinj, Croatia

ROVINJ INFO DAY

Where: *MMC, Rovinj, Croatia*
When: *29. 9. 2016, at 11:00*
Official language: *Croatian*
Expected duration: *2 hours.*
Entrance: *free of charge.*

With the last day in September, project BALMAS will be ending. One day before, on 29 September 2016, one of Croatian partners, Center for Marine Research of the Rudjer Boškovic Institute, situated in Rovinj, will present the project, aims and results, future prospects of Adriatic Sea protection from potentially harmful impacts of ballast waters, to wider audience interested in the issues concerning marine world. As appropriate, special emphasis will be on the Croatian northern Adriatic ports Pula and Rijeka.

We cordially invite you to come and find out all that you never knew about ballast waters. Afterwards, spend some time with the research team from Rovinj in informal conversation, ideal for more delicate questions, and enjoy in Istrian cocktail brunch.

ROVINJ INFO DAY will take place in Multimedia Center (MMC), Trg brodogradilišta 5, Rovinj, Croatia on Thursday, 29 September 2016, starting at 11:00
Official language: Croatian.
Expected duration of official part: approx. 2 hours.
Entrance: free of charge.

Compiled and edited at MBS - NIB Piran by dr. Vesna Flander Putrle, Jernej Uhan and Vlado Bernetič.

More about:
http://www.balmas.eu/
Project code: 1° STR/0005

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REPUBLIC OF SLOVENIA
GOVERNMENT OFFICE FOR DEVELOPMENT AND EUROPEAN COHESION POLICY

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