Factsheet for new measures under Article 13 of Marine Strategy Framework Directive 2008/56/EO

This measure fact sheet is the result of coordination between the UBA project Implementation of the Marine Strategy Framework Directive (MSFD) in Bulgaria – Development of Programmes of Measures under Article 13', carried out by Fresh Thoughts/Intersus, and the EC project (DG Environment) 'Technical and administrative support for the joint implementation of the Marine Strategy Framework Directive (MSFD) in Bulgaria and Romania – Phase 2', carried out by ARCADIS-Belgium.

Measure characteristics	**Management area:** - ***Black Sea*** ***Any other codes***	**Code:** ***BLKBG……..*** **No. of measure: 4**
Measure title	**Improvement of management of ship generated waste**	
Short, precise description of the measure	This measure is developed as a common (coordinated) measure with Romania in the scope of EC project (DG Environment) "Technical and administrative support for the joint implementation of the Marine Strategy Framework Directive (MSFD) in Bulgaria and Romania – Phase 2". Generally this measure includes an assessment and enforced control of the activities of illegal dumping, collection and transportation of ship - generated waste (this includes garbage as domestic, food and plastics in term of MARPOL Annex V, and also oil waste (sludge & bilge) and wastewaters. The impact of shipping and the large ports on the marine environment is significant and includes issues related to illegal waste disposal, washing of vessels, the use of toxic chemicals and paints, and transportation of hazardous materials. The discharge of such materials, especially petroleum products, causes significant damage to the marine environment, economy (tourism, fishing, agriculture) and human health. According to the policy for waste management in Bulgarian ports waste are separated to the following categories: - ship - generated waste (garbage as domestic, food and plastics); - industrial waste (scrap, paper, wood, plastics, etc.). - hazardous waste (used batteries, fluorescent lamps, etc) and dangerous liquid substances. - oil waste (sludge & bilge) and wastewaters (sewage). The aim of the measure is to reduce the negative impact of improper management of ship - generated waste on the marine environment. The implementation of the measure includes: 1. Analysis of waste management in marine areas and ports, structures and quantities of waste, capacity and condition of port reception facilities. 2. Identification of main issues and recommendations for its solving.	

	3. Introduction and implementation of these recommendations. 4. Exchange of information and experience between Bulgaria and Romania.
EU measure category	*Categorisation of the measure in accordance with the "PoM Recommendations":* **2a**
Key Types of Measures	*KTMs as defined in the „PoM Recommendations". Measures can be categorised in one or multiple KTMs.* **KTM 29 Measures to reduce litter in the marine environment** **This measure also is related to:** KTM 31 Measures to reduce contamination by hazardous substances (synthetic substances, non-synthetic substances, radio-nuclides) and the systematic and/or intentional release of substances in the marine environment from sea-based or air-based sources
Environmental targets	*Categorisation of the measures in accordance with the nationally defined operational environmental objectives.* **Descriptor 10 Marine litter (pressure targets)** **10.1.1. Target: Decreasing trend in the amount of marine litter washed ashore and/or deposited on coastlines.** **10.1.2. Target: Decreasing trend in the amount of marine litter floating on the water surface, in the water column and deposed on the seafloor.** Regarding **micro particles** (criterion 10.1, indicator 10.1.3) and quantity and composition of waste consumed by marine animals (criterion 10.2, indicator 10.2), environmental targets and indicators will be established after sufficient data is available. **Descriptor 8 Contaminants in marine environment** Revised environmental targets in comparison with the reported ones under the national report of Bulgaria under Article 10 MFSD in 2013. These are described in the monitoring program under Descriptor 8 (Article 11 of the Directive) reported to the EC and EEA in January 2015. **Pressure targets on Criterion 8.1.:** - Limiting the pressure from point and diffuse sources of pollution, including from the atmosphere; - Tendency to reduce illegal discharges from ships of various pollutants such as oil and noxious liquid substances and harmful substances and other "marine pollutants" specified in the relevant Annexes I, II and III of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 and the Protocol of 1997 (MARPOL 73/78) and the International Code of hazardous sea freight to Annex III (IMDG Code) and accordingly included in the monitoring program for Descriptor 8. **Targets on state / impact:**

	Target for matrix "water" (indicator 8.1.1): Concentrations observed pollutants (priority substances and specific pollutants) in water are in accordance with their maximum and average annual values according to environmental quality standards for the marine environment, implemented under the Water Framework Directive 2000/60 / EC and Directive 2008/105/EC, as amended by Directive 2013/39/EU, transposed into national legislation by Ordinance EQS for priority substances and certain other pollutants, adopted by Decree 256/2010. **Target on matrix "sediments" (indicator 8.1.1):** the trends in concentrations of contaminants in sediments decrease in the long term, according to the WFD 2000/60/EC and Directive 2008/105/EC, transposed into national legislation by Ordinance EQS for priority substances and certain other pollutants, adopted by Decree 256/2010**.** **Target on matrix "biota" (indicator 8.1.1):** The concentrations of the observed contaminants (priority substances and specific pollutants) in biota are equal to or below the specified environmental quality standards for the marine environment, applied in accordance with Directive 2008/105 / EC, as amended by Directive 2013/39/EU. **Target on matrix "biota"** (**indicator 8.2.1):** establishment and evaluation of the links between the maximum levels of contaminants in the marine environment and possible biological effects on marine organisms.
Descriptors	*Categorisation of the measures to the descriptors in lined with Annex 1 MSFD. The descriptors are identified by their short form:* **D10 – Marine litter** D8 - Contaminants
Main pressures	*Using the analysis carried out in 2012 as a basis, categorisation of the measures in accordance with the pressures defined in Annex 3 MSFD, Table 2:* • Other physical disturbance/Marine litter • Contamination by hazardous substances - introduction of synthetic compounds (e.g. priority substances under Directive 2000/60/EC which are relevant for the marine environment such as pesticides, antifoulants, pharmaceuticals, resulting, for example, from losses from diffuse sources, pollution by ships); - introduction of non-synthetic substances and compounds (e.g. heavy metals, hydrocarbons, resulting, for example, from pollution by ships).
Main drivers	*The sectors/activities targeted by the measure* • Port activities • Shipping • Waste removal – other
Characteristics	*Using the analysis carried out in 2012 as a basis, categorisation of the measures in accordance with the characteristics defined in the "PoM Recommendations":*

	- Marine and coastal birds - Marine mammals - Fish - Benthic habitats - Pelagic habitats
Link to other directive/legislation/ policy	*Aligning objectives with other legal commitments* Waste Framework Directive 2008/9/EC; Urban Waste Water Directive 91/27/EEC; Bathing Directive 2006 /7/ EC) Port Reception Facilities Directive 2000/59/EC, as amended by Directives 2002/84/EC and 2007/71/EC and Regulation (EC) No. 137/2008 Convention for the Protection of the Black sea against pollution Protocol on cooperation in combating pollution of the Black sea marine environment by oil and other harmful substances in emergency situations Protocol on the protection of the Black sea environment against pollution by dumping
Necessity for transnational regulation	*Information as regarding the necessity for regulations at EU, regional and international level to achieve MSFD environmental objectives.* No
Mode of implementation	*Stating the implementation process in line with the „PoM Recommendations"; multiple options possible:* • Technical
Implementation zones	*i.e. the spatial impact of the measure: MS land/FW, WFD TW, WFD CW, Territorial waters, EEZ, CS (beyond EEZ), Beyond MS waters* coastal waters (WFD CW) and territorial waters of Republic of Bulgaria

Contribution of the measure to achieving the target	*– using technical information* The measure has a direct contribution for achieving the targets and GES under Descriptor 10 described in section "Environmental targets" above by: ✓ Improvement of waste management especially to waste originating from illegal discharges from ships (marine – base sources of pollution). ✓ Decreasing of introduced waste into marine environment from shipping, its accumulation on the beaches and sea-floor and floating on the sea surface, also decreasing of indirect negative effect on fish, marine mammals and birds in the short - and long - term aspect. The measure will have positive effect on decreasing of total amount of ship – generated waste entering into the Black sea marine environment. The measure will contribute to the reduction of contaminants in the marine environment and biota (indirect effect on Descriptors 8 and 9). A quantitative assessment of the contribution to achieve the targets, however, does not exist, as it is unclear how much contaminants are emitted into the marine environment by ships. In summary, the overall effectiveness of the measure „Improvement of ship - generated waste management" is expected to be medium, if the necessary activities are taken for strengthening the control functions of the competent authorities.
Transboundary impact	*Information on the impact of the measures on transboundary neighbours* The implementation of the measure is not expected to have negative transboundary impact on the waters of other countries shared the Black sea marine region. The measure will have positive effect on decreasing of total amount of waste entering into the Black sea marine environment especially the waste, originating from shipping in territorial and coastal waters and port operations.

Costs	**First rough assessment: medium (50.000 - 200.000 €)** The implementation of the measure "Improvement of management of ship generated waste" will need administrative cost from the state authorities from Bulgaria: 1) Costs for establishment of working groups at national (interministerial) level for analysis of waste management in marine areas and ports, structures and quantities of waste, capacity and condition of port reception facilities and for identification of main issues and recommendations for its solving. 2) Introduction and implementation of these recommendations made: additional staff for control (new working places, salaries, insurances) training of control staff; operational costs for control (fuel, material, boat, repair costs) 3) Exchange of information and experience between Bulgaria and Romania. In summary, total one off costs within one MSFD cycle (6 years) are assessed as medium: **50.000 - 200.000 €**
Effectiveness	*Effectiveness of the measure in reaching targets (either qualitative description, or according to indicators: indicators for environmental targets and for GES, proposal for statistical indicators in support of Art. 18 interim reports* Ship - generated waste and waste coming from port (cargo) operations are a significant source of pollution for marine environment, port and urban regions. Although the extended range of the measure (territorial waters, coastal waters including port areas), its effectiveness could be evaluated as **medium**. The measure has direct contribution for achievement of GES under Descriptor 10, but its effectiveness strongly depends from its implementation and further control actions.
Indicator(s) to measure effectiveness	*Should be based on existing indicators.* Number of regular and extraordinary inspections / yearly Number of signals received / yearly Number of taxes / yearly Weight of different categories of waste for further processing in ports / yearly
Socio-economic assessment	***Cost Effectiveness Assessment***: **Cost effective** ***Cost Benefit Assessment*: Medium** The implementation of the measure "Improvement of management of ship generated waste" has **medium effectiveness** in reaching MSFD environmental targets (with a high level of uncertainty, depending on the level of controls and enforcement activities accompanying the regulatory changes). At the same time, the **public costs of the measure are also medium high**

	(depending on the type and level of controls and of enforcement realized). **Hence, the cost-effectiveness of the measure, i. e. comparing costs with potential benefits in terms of reaching MSFD objectives, can be described as being of medium level**. Unfortunately, no quantitative assessment of the cost-effectiveness could be conducted, as especially the information on the benefits (in a quantified form) is not available. Additional socio-economic effects of the measure are: - the implementation of the measure is not expected to have negative effects on the marine environment; - less litter in the marine environment has other socio-economic benefits, such as reducing the direct costs of marine litter to the fishery sector (through loss of fish stocks due to ghost fishing, spoiled catches through contamination with debris, paint and oil, damage to nets and to propellers, entangled in litter, resulting in lost operating time and time spent cleaning nets); and improving the livelihood and health of local coastal communities.
Coordination level	*Selection of the governance level that will coordinate the implementation of the measures, i.e. Local, Sub-national, National, Bilateral, Sub-regional, Regional, EU level, International* at local level at national level Bilateral coordination with Romania Regional measure in the scope of the Black sea Commission
Technical feasibility	Options: • Frequently applied; extensive experience / evidence of good practice
Body responsible for the measure implementation	**Bulgaria:** Ministry of Environment and Waters (MoEW), Regional Inspectorates of Environment and Waters - Varna and Burgas (RIEW - Varna and RIEW Burgas), Ministry of Transport, Information Technology and Communications and Executive Agency "Maritime Administration" - "Varna" Directorate and "Burgas" Directorate, port operators
Financing opportunities	*Including EU-cofinancing* Public funds (budget)
Temporal coverage	**Starting time: 2017**
Difficulties in implementation	*Provide information on the potential challenges that could likely faced in implementation.*