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***	**Code:** ***BKLBG*** **№ of measure: 16**
Measure title	Setting up and implement of a common action plan for early detection and mitigation and impact assessment of non-indigenous species.	
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". The following legislative international and European documents as the International Convention for the Control and Management of Ship Ballast Water and Sediments and Regulation 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species (already entry in force from 1 January 2015) require inspection of ballast water of ships visiting Bulgarian ports. Ballast water is one of the main, but not the only source for the spread of non-indigenous species between different maritime regions. The aim of the measure is to provide timely and well - organized prevention of introduction of non- indigenous species and to prevent / reduce the potential negative consequences for marine ecosystems. The measure will follow internationally agreed "three-stage hierarchical approach" in CBD and Regulation № 1143 / 2014: 1) prevention, 2)early detection and eradication and 3) control and long-term limitation.The measure contains two phases, the first (during the first cycle of MSFD) will focus on developing an action plan, which should be based including on the research studies carried out related to a better understanding of the introduction and spread of non-indigenous species. **Phase 1 (first cycle MSFD) will contain the following actions:** 1. Establishment of working groups at national (interministerial) and bilateral level between Bulgaria and Romania. 2. Development of an Action plan. 3. Presentation and discussion of the Action plan developed by the Advisory groups to the Black Sea Commission (BSC).	

	4. Presentation for discussion of the Action plan at the annual meeting of the Black Sea Commission (BSC). The action plan should address the following aspects: 1. Sources / pathways for introduction of non-indigenous species and ways of limitation; 2. Provision of vessel equipment for ballast water treatment to destroy pathogens, cysts of non-indigenous invasive species. 3. Necessity of increasing capacity of persons performing inspections (increasing the number of inspectors); 4. Necessity of strengthening the technical capacity of the supervisory authorities (available sufficient number of roadworthy condition vessels for carrying out regular and sudden inspections and proper sampling equipment, including for indicative sampling and analysis). 5. Equipment and accreditation of laboratory(ies) for analyses of ballast water samples. 6. Others. **Phase 2 (second cycle MSFD):** Implementation of the developed common action plan for early detection and mitigation, and impact assessment of non-indigenous species. The implementation of this stage requires ensuring of the necessary financial, administrative and technical provision.
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 34 Measures to reduce the introduction and spread of non-indigenous species in the marine environment and for their control** **Other relevant KTM under Directive WFD 2000/60/EC:** KTM 14 - Research, improvement of knowledge base reducing uncertainty KTM 18 - Measures to prevent or control the adverse impacts of invasive alien species and introduced diseases
Environmental targets	*Categorisation of the measures in accordance with the nationally defined operational environmental objectives.* **Descriptor 2 – Non – indigenous species** Target on Criterion 2.2, indicator 2.2.1: Communities dominated by indigenous species. No newly introduced species. The GES indicators defined according to Art. 10 of the MSFD need additional development in the period up until 2018. The limited knowledge of the impact of non-indigenous species on the environment, targets and thresholds need

	confirmation.
Descriptors	*Categorisation of the measures to the descriptors in lined with Annex 1 MSFD. The descriptors are identified by their short form:* **D2 – Non-native species**
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:* - H / Biological disturbance/Introduction of non-indigenous species and translocation
Main drivers	*The sectors/activities targeted by the measure* • shipping • port operations • aquaculture • fishery • tourism • submarine cable and pipeline operations
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":* - Fish - Benthic habitats - Pelagic habitats **Biological features** - A description of the biological communities associated with the predominant seabed and water column habitats. This would include information on the phytoplankton and zooplankton communities, including the species and seasonal and geographical variability, - information on angiosperms, macro-algae and invertebrate bottom fauna, including species composition, biomass and annual/seasonal variability, - information on the structure of fish populations, including the abundance, distribution and age/size structure of the populations, - a description of the population dynamics, natural and actual range and status of other species occurring in the marine region or subregion which are the subject of Community legislation or international agreements, - an inventory of the temporal occurrence, abundance and spatial distribution of nonindigenous, exotic species or, where relevant, genetically distinct forms of native species, which are present in the marine region or subregion.

Link to other directive/legislation/policy	*Aligning objectives with other legal commitments* International Convention for the Control and Management of Ship Ballast Water and Sediments (IMO), 2004 Regulation (EC) No 708/2007 concerning use of alien and locally absent species in aquaculture Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species Guidelines by International Maritime Organization (IMO) for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species (Resolution MEPC.207(62))
Necessity for transnational regulation	*Information as regarding the necessity for regulations at EU, regional and international level to achieve MSFD environmental objectives.* It is necessary common principles and harmonized actions at regional level to be applied within the framework of the Convention for the Protection of the Black Sea Against Pollution and its Protocols regarding early detection and mitigation of the impact of the introduction of non - native species in the Black sea.
Mode of implementation	*Stating the implementation process in line with the „PoM Recommendations"; multiple options possible:* • Legislative • Technical • Policy driven
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 (WFD) waters, Territorial waters and Exclusive Economic Zone (EEZ) of the Republic of Bulgaria
Contribution of the measure to achieving the target	*– using technical information* The implementation of the measure is expected to have positive effect on the Black sea ecosystem by reducing the introduction of invasive alien species and where possible, prevention or mitigation of their impact on the Black sea ecosystems. The measure addresses mainly the targets under Descriptor 2 (non - indigenous species), Descriptor 1 (Biodiversity) and Descriptor 4 (Food webs). Prognosis of its contribution could hardly be made at this stage due to following reasons: - due to the limited knowledge on the impact of non - native species on the structure and functioning of marine ecosystems, the targets and indicators on GES under Descriptor 2 defined in accordance with Article 10 of MSFD need further development in the period up to 2018. - regarding Descriptor 4, at this stage there are not defined environmental targets yet due to the lack of knowledge / information; - still insufficient knowledge on the impact of non - indigenous species on marine

	biodiversity. At this stage it is early to make any prognoses. The monitoring programme of Descriptor 2 – Non- indigenous species will start in 2016 and there is a need of at least 2 years collecting data.
Transboundary impact	*Information on the impact of the measures on transboundary neighbours* The implementation of the measure is not expected to have negative transboundary effects on the marine environment of neighbours. Instead of this it will have positive effect.
Costs	**Phase 1** The measure will require the following costs: 1. Operational costs for bilateral meetings for discussion and coordination on the development of a common Action plan for early detection and mitigation, and impact assessment of non-indigenous species. 2. Costs for the development of the Action plan (procurement of a contract or a project if necessary). **Phase 2:** 3. Costs for ensuring the implementation of the Action plan: this will be determined after the development of the Action plan. **Total one off costs within MSFD cycle (6 years): not possible to assess (probably < 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* The effectiveness of the measure to reduce the introduction and spread of non - native species is also determined by the fact that the measure has a wide geographical application (Black sea marine region). For that reason, it is estimated that the overall environmental effectiveness of the measure will be **potentially strong** if this measure be implemented at a regional level with support by the Black sea Commission (BSC) (Black sea marine region).
Indicator(s) to measure effectiveness	*Should be based on existing indicators*. 1. Reduce the number of cases of registered new non-indigenous species / invasive species in the Black Sea ecosystem over the next six years; 2. Reduce the number of registered cases of negative impact caused by introduced non- indigenous / invasive species on native species or non-indigenous species already introduced in the Black Sea ecosystem over the next six years; 3. Number of inspected vessels per year; 4. Number of samples from ship's ballast water per year; 5. Number of samples from ship's ballast water found to be in non-compliance with the legal requirements for microbial content per year; 6. Number fines imposed to ships per year

Socio-economic assessment	***Cost Effectiveness Assessment:*** **Cost effective** ***Cost Benefit Assessment:*** **Medium** **Benefits:** 1. It is expected to reduce the cases of irregular change of ballast waters of ships sailing in the territorial waters of the Republic of Bulgaria; 2. Limiting the introduction, spread and the negative impact of invasive non-indigenous species on the Black Sea ecosystem; 3. Improving the state of the marine environment by Descriptor 2 "Non - indigenous species" and related Descriptor 1 - Biodiversity **Other type of effect:** The measure will have effect on the shipbuilding business and shipping by the need of using more investments in equipment of ships with special systems for ballast water treatment to destroy pathogens, cysts of non-native invasive species and others.
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 at bilateral level at regional level
Technical feasibility	Options: • Applied; limited experience / uncertainties
Body responsible for the measure implementation	Ministry of Transport, Information Technology and Communications and Executive Agency "Maritime Administration" (Directorates in Varna and Burgas), Ministry of Agriculture and Food, National Agency for Fisheries and Aquaculture (NAFA), state and private laboratories for analysis of microbial content in ballast waters, port operators, shipbuilders
Financing opportunities	European Maritime and Fisheries Fund (EMFF), other European funds by the following programs in Bulgaria - National Programme for Maritime Affairs and Fisheries (2014-2020) - Operational Programme (OP) "Environment" 2014-2020; - Operational Programme "Transport" (OP) 2014-2020
Temporal coverage	**Starting: 2018**
Difficulties in implementation	*Provide information on the potential challenges that could likely faced in implementation.* Lack of knowledge related to the pathways/vectors of NIS introduction, spread, etc.