**Factsheet for new measures**

*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.*

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| **Measure characteristics**  | **Management area:*** ***Black Sea***

***Any other codes*** | **Code:*****MSFD reporting code*****No. of measure:****17** |
| **Measure title** | Amendment of existing legislation, where necessary, through introduction of a permit regime for activities in marine environment |
| **Short, precise description of the measure** | This measure is developed as common coordinated measure between Bulgaria and 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”.National actions (steps) required for implementation of the measure:1. Preparatory work for changing / adaptation national legislation, if necessary 2. Public and sectoral consultations.3. Legislative adaptations.Each competent authority performs an assessment of concrete plans and programs, projects or activities that may have significant negative effects on the marine environment and human health.This scope will cover all investment plans and actions in the coastal,territorialand Exclusive Economic Zone (EEZ) waters of Bulgaria and Romania.The measure refers to the human activities in the marine environment \ listed under Art 8 of the MSP Directive 2014/89/EU): fishery and aquaculture; research and experiment activities; shipping and transport (incl. port activities, ferry and cruise-ship); tourism, recreational and leisure activities; species control activities; industry (incineration, direct discharges or dumping, sand and gravel extraction); maritime energy activities (pipelines and cables, electricity power plants, offshore wind operations, offshore oil and gas prospection and operations). The measure doesn’t refer to military activities.  |
| **EU measure category** | **2a** |
| **Key Types of Measures** | KTM 15 Measures for the phasing-out of emissions, discharges and losses of priority hazardous substances or for the reduction of emissions, discharges and losses of priority substancesKTM 19 Measures to prevent or control the adverse impacts of recreation including anglingKTM 20 Measures to prevent or control the adverse impacts of fishing and other exploitation/removal of animal and plantsKTM 21 Measures to prevent or control the input of pollution from urban areas, transport and built infrastructureKTM 26 Measures to reduce physical loss of seabed habitats in marine watersKTM 27 Measures to reduce physical damage in marine waters KTM 28 Measures to reduce inputs of energy, including underwater noise, to the marine environmentKTM 29 Measures to reduce litter in the marine environmentKTM 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 sourcesKTM 30 Measures to reduce interferences with hydrological processes in the marine environmentKTM 32 Measures to reduce sea-based accidental pollutionKTM 33 Measures to reduce nutrient and organic matter inputs to the marine environment from sea-based or air-based sources KTM 35 Measures to reduce biological disturbances in the marine environment from the extraction of species, including incidental non-target catchesKTM 36 Measures to reduce other types of biological disturbance, including death, injury, disturbance, translocation of native marine species, the introduction of microbial pathogens and the introduction of genetically-modified individuals of marine species (e.g. from aquaculture)KTM 37 Measures to restore and conserve marine ecosystems, including habitats and speciesKTM 38 Measures related to Spatial Protection Measures for the marine environment |
| **Environmental targets** | *RO***Biodiversity - Birds**1.1.1 Maintain or increase in sustainable limits (to be determined) the distribution of migratory species Mediterranean shearwater (Puffinus yelkouan).1.2.1. The population abundance/size (number of migratory individuals) of Mediterranean shearwater (Puffinus yelkouan) remains within 95% of the natural abundance of migratory species in Romania and increases in the long term.1.4.1. Preserve the habitats of Mediterranean shearwater (Puffinus yelkouan) by decreasing the pressure from human and natural factors.1.5.1. The area of the habitats of the Mediterranean Shearwater (Puffinus yelkouan) is maintained or is increasing*.***Biodiversity – Mammals**1.1.1. Maintaining the distribution and frequency of species by implementing adequate management measures1.2.1 Maintaining positive trend in the number of marine mammals populations by implementing the Action Plan for the Conservation of Dolphins in Romanian waters of the Black Sea1.3.1 Diminishing natural mortality by maintaining the good condition of the environment and fishery resources. Reducing bycatch by adequate management measures.1.4.1 Maintaining the good condition of the marine ecosystem.1.5.1 Maintaining a good status of the marine ecosystem.1.6.1 Maintaining a good status of the marine ecosystem and implement appropriate management measures**Biodiversity – Fish**1.1.1 and 1.1.2 Distribution area is not adversely affected by human pressure and should be within the range of values in the last two decades and the selected species recorded over 50% attendance in the samples.1.2.1 The size of the analyzed population is not adversely affected by human pressure and should be within the range of values in the last two decades.1.3.1 The size of the analyzed population is not adversely affected by human pressure and should be within the range of values in the last two decades.**Biodiversity – Water column habitats**90th of phytoplankton biomass do not exceed the thresholds values in 10 % of the summer observations for the last 6 years.**Biodiversity – seabed habitats**6.1 Physical damage, having regard to substrate characteristics6.1.1 Type, abundance, biomass and extent of relevant biogenic substrate• Total ban any demersal fishery (trawl, honey), including the EEZ • Stopping any hydraulic or coastal protection works likely to destroy or lead to clogging natural rocky bottom• Stopping any hydraulic or coastal protection works of nature to destroy *Zostera noltei* grasslands or indirectly affect them; total ban on any kind of human activity in *Zostera noltei* meadows, except for scientific research and interventions for saving lives.• Stopping any hydraulic or coastal protection works of nature to destroy belts *Cystoseira barbata* or indirectly affect on them; total ban on any type of human activities *Cystoseira barbata* belts except scientific research and interventions to save lives.6.2 Condition of benthic community6.2.1 Presence of particularly sensitive species and / or tolerant • Coverage with *Z. noltei* ≥ 50%; decapod frequency *Palaemon adspersus* in 1 m2 = 100%; decapod frequency *Carcinus aestuarii* in transects of 50 m2 ≥ 30%• Coverage with *C.barbata* inside the belt ≥ 50%; frequency of *Colaconema thuretii* in 1m2 ≥ 80%; gastropod frequency *Gibbula divaricata* in 1 m2 ≥ 30%; gastropod frequency *Tricolia pullus* in 1 m2 ≥ 1%• Frequency of Lithothamnion, Phyllophora or Coccotylus in transect of 50 m2 ≥ 10% ; decapod frequency *Liocarcinus navigator* in transect of 400 m2 ≥ 70% • Polychaets frequency *Ophelia bicornis* in samples ≥ 1%; frequency of *Gastrosaccus sanctus* in samples ≥ 50%• Decapod frequency of *Eriphia verrucosa* in transects of 100 m2 ; densities of *Halichondria panicea* in the habitat ≥ 1 colonie m-2**Commercial fish**Criterion 3.1. Level of pressure of the fishing activity3.1.1 Fishing Mortality (F) \* Maintaining the fishing mortality F ≤ FMSY = 0.64 (sprat);\* Stable trend toward decreasing values of the fishing mortality at regional level in the range FMSY=Range (F0.1-FMAX) with levels between F= 0.07 and F= 0.15 - limit reference points (turbot);\* A stable trend of decreasing fishing mortality at regional level, FMSY not exceed the limit reference value of 0.54 (FMSY = F ≤ 0.54, recommended limiting point) when the value of the coefficient of natural mortality M 1-3 = 0.81 and level of service from E ≤ 0.4 (anchovy);3.1.1 Fishing Mortality (F) by reduced fishing effort referring to the concerned species:\* Reducing fishing effort to F≤ FMSY =0.4 (whiting)\* Drastic reduction in fishing effort, F ≤ FMSY = 0.15 (turbot)\* Reducing fishing effort in the wintering areas (horse mackerel)\* Reducing fishing effort to F≤ FMSY =0.54 (anchovy)\* Reducing fishing effort to F≤ FMSY =0.18 (dogfish)\* Reducing fishing effort to F≤ FMSY =0.46 (red mullet)3.1.2 Catch biomass ratio index referring to the concerned species:\* Maintaining the threshold value of catch/biomass ratio <= 0.082 (sprat)\* Maintaining the threshold value of catch/biomass ratio <= 0.033 (turbot)Criterion 3.2. Reproductive capacity of the stock3.2.1 Spawning stock biomass \* Increasing the SSB for the relevant fish species at regional level (whiting (Merlangius merlangus euxinus), turbot (Psetta maxima), horse mackerel (Trachurus mediterraneus ponticus), anchovy (Engraulis encrasicolus), dogfish (Squalus acanthias), and red mullet (Mullus barbatus ponticus).3.2.2 Biomass indices \* Maintaining the sprat stock at values of ~ 60,000 tones at the Romanian littoral \* Recovery of the turbot stock to value of 1500-2000 tones at the Romanian littoralCriterion 3.3. Population age and size distribution3.3.1  \* Increasing the percentage of specimens older than 1.5 – 2 years (sprat)\* Increasing the percentage of specimens older than 5 – 6 years (turbot)\* Increasing the percentage of specimens older than 3 – 4 years (whiting)\* Increasing the percentage of specimens older than 3 – 4 years (horse mackerel)\* Increasing the percentage of specimens older than 2 years (anchovy)\* Increasing the percentage of specimens larger than 120 cm (dogfish)\* Increasing the percentage of specimens older than 3 years (red mullet)**Eutrophication (state target):**5.1.1 The 75th percentile of annual mean concentrations of nutrients in marine waters no less than target values (set out in the Romanian revised GES report under Arts. 9 and 10 of the MSFD - Table 4-14, page 130)5.1.2 Nutrients level maintaining the N/P ratio higher than 105.2.1. 75th percentile of summer chlorophyll a concentration in marine waters not less than threshold values (threshold value: 90th percentile of summer chlorophyll a concentrations)5.2.2 The 95th percentile of transparency values should be more than the threshold values as set out in the Romanian revised GES report under Arts. 9 and 10 of the MSFD (Table 4-14, page 130)5.2.4. The 75th percentile of the biomass ratio Bac:Din (Bacillariophyceae:Dinophyceae) in spring is more than 10:1 based on monitoring routine5.3.2 The 95th percentile of bottom (up to 50 m due to the anoxic natural features of Black Sea) oxygen saturation values should be more than the threshold values as set out in the Romanian revised GES report under Arts. 9 and 10 of the MSFD (Table 4-14, page 130) **Eutrophication (pressure target):**DIP and DIN from anthropic input should be constant or decreasing, based on monitoring routine.**Hydrographical changes (D 7)**Minimization the impact as the result of the modifying hydrogeological conditions, of the activities in the marine environment which can interfere with the hydrological processes**Contaminants**- The 75th percentile of **heavy metal** **concentrations in water** is lower than the levels from which the adverse effects are expected to occur (WFD-EQS/ Directive 2013/39/EU; /Ord.161/2006)- The 75th percentile of **synthetic contaminants** **concentrations in water** is lower than the levels from which the adverse effects are expected to occur (WFD-EQS/ Directive 2013/39/EU)- The 75th percentile of **polycyclic aromatic hydrocarbons in water** is lower than the levels from which the adverse effects are expected to occur (ERL/US EPA; EAC/OSPAR; SQC)- The 75th percentile of **heavy metal concentrations in sediments** is lower than the levels from which the adverse effects are expected to occur (ERL/US EPA; EAC/OSPAR; SQC/Order 161/2006)- The 75th percentile of **synthetic contaminants concentrations in sediments** is lower than the levels from which the adverse effects are expected to occur (ERL/US EPA; EAC/OSPAR)- The 75th percentile of **polycyclic aromatic hydrocarbons concentrations in sediments** is lower than the levels from which the adverse effects are expected to occur (ERL/US EPA)- The 75th percentile of **heavy metal concentrations in Mytilus galloprovincialis** is lower than the levels from which the adverse effects are expected to occur (Commission Regulations (EC) no. 1881/2006 and 629/2008- The 75th percentile of **synthetic contaminants concentrations in Mytilus galloprovincialis** is lower than the levels from which the adverse effects are expected to occur (EAC/OSPAR)**Marine Litter**Reducing the amount of waste resulting from activities in coastal area and offshore..Reducing the impact of marine litter on marine species and their habitats.**Underwater noise***Strengthening capacities in the underwater noise field. By others, acquiring special knowledge on the key groups of species that may be adversely affected by this pressure and MSFD efficiency requirements in terms of underwater noise on licensing and authorization procedures.* |
| **Descriptors** | D1- BiodiversityD2 – Non-native speciesD3 – State of commercial fish and shellfish stocksD4 – Food webD5 – EutrophicationD6 – SeabedD7 – Hydrographic conditionsD8 – PollutantsD9 – Contaminants in foodD10 – Marine litterD11 – Energy lines |
| **Main pressures** | *Biological disturbances* *- selective extraction of species, including incidental non-target catches (e.g. by commercial and recreational fishing)**- introduction of non-indigenous species and translocations,**- introduction of microbial pathogens**Nutrient and organic matter enrichment**inputs of fertilizers and other nitrogen and phosphorus-rich substances (e.g. from point and diffuse sources, including agriculture, aquaculture, atmospheric deposition),**inputs of organic matter (e.g. sewers, mariculture, riverine inputs).**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, atmospheric deposition and biologically active substances),**introduction of non-synthetic substances and compounds (e.g. heavy metals, hydrocarbons, resulting, for example, from pollution by ships and oil, gas and mineral exploration and exploitation, atmospheric deposition, riverine inputs),**introduction of radionuclides**Systematic and/or international release of substances**Interference with hydrological processes**significant changes in thermal regime (e.g. by outfalls from power stations),**significant changes in salinity regime (e.g. by constructions impeding water movements, water abstraction).**Physical loss**smothering (e.g. by man-made structures, disposal of dredge spoil),**sealing (e.g. by permanent constructions).**Physical damage**changes in siltation (e.g. by outfalls, increased run-off, dredging/disposal of dredge spoil),**abrasion (e.g. impact on the seabed of commercial fishing, boating, anchoring),**selective extraction (e.g. exploration and exploitation of living and non-living resources on seabed and subsoil).**Other physical disturbance**marine litter**underwater noise* |
| **Main drivers** | *Fishery and aquaculture; research and experiment activities; shipping and transport (incl. port activities, ferry and cruise-ship); tourism, recreational and leisure activities; species control activities; industry (incineration, direct discharges or dumping, sand and gravel extraction); maritime energy activities (pipelines and cables, electricity power plants, offshore wind operations, offshore oil and gas prospection and operations).* |
| **Characteristics** | * Marine and coastal birds
* Marine mammals
* Fish
* Benthic habitats
* Pelagic habitats
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| **Link to other directive/legislation/policy** | *Environmental Impact Assessment (EIA) Directive**Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA)**CFP-DC-MAP**REGULATION (EU) No 1380/2013 of the EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on theCommon Fisheries Policy* |
| **Necessity for transnational regulation** | *No* |
| **Instrument for implementation/** **Mode of implementation** | * *Legal*
* *Technical*
 |
| **Spatial reference/implementation zones** | *Territorial waters/EEZ* |
| **Contribution of the measure to achieving the target**  | The measure will have a significant contribution to achieving the targets. |
| **Transboundary impact** | The implementation of the measure is not expected to have negative effects on the marine environment of neighbouring countries. |
| **Costs** | **First rough assessment:** low < € 50.000costs for the implementation 1) Legislative preparatory work: 17.000 €2) Sectoral and Public consultations: 3000 €3) Legislative adaptations: 25.000 €Total one off costs within MSFD cycle (6 years): 45.000 € Scoring:

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| --- | --- |
| **Score** | **total cost** |
| 1 | > € 1 million |
| 2 | € 500.000 - 1 million |
| 3 | € 200.000 - 500.000 |
| 4 | € 50.000 - 200.000 |
| **5** | **< € 50.000** |

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| **Effectiveness** | Strong |
| **Indicator(s) to measure effectiveness** |  |
| **Socio-economic assessment** | **Negative side effects on marine environment**:The implementation of the measure is not expected to have negative effects on the marine environment.**Negative side effects out of environmental ones:**Implementation of the measure could lead to conflicts between compliance with environmental legislation and investment intentions in specific areas in the marine environment (public and private investments). For instance, conflicts between investment plans in protected areas or near them.**Benefits:**Each competent authority perform an assessment of plans, programs or activities that may have significant negative effects on the marine environment and human health, such as the search for alternative energy sources in the marine environment as exploration and production oil and gas, marine wind farms, etc.**Cost effectiveness analysis:** cost effective**Cost benefit analysis:** medium |
| **Coordination** | Bilateral |
| **Technical feasibility** | * *Frequently applied; extensive experience / evidence of good practice*
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| **Body responsible for the measure implementation** | **Bulgaria:** Ministry of Environment and Waters (MoEW), Black Sea Basin Directorate (BSBD), Regional Inspectorate of Environment and Water - Varna (RIEW - Varna and RIEW Burgas), Ministry of Rural Development, Ministry of Transport, Information Technology and Communications and Executive Agency "Maritime Administration" - "Varna" Directorate and "Burgas" Directorates, port operators**Romania:** Ministry of Environment, Waters and Forests, Environment Protection Agency, Romanian Waters National Administration, NIRD “Grigore Antipa” |
| **Financing opportunities** | Public funds; EU projects (i.e Horizon 2020 Program) |
| **Planning of implementation/temporal coverage** | **2017** |
| **Difficulties in implementation** | *no*  |
| ***Supporting information for SEA*** |
| **Additional values for protection (outside MSFD)** |  |
| **Reasonable alternatives** |  |