**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.*

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

***Any other codes*** | **Code:*****MSFD reporting code*****No. of measure:****13** |
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| **Measure title** | Protection of non-breeding seabird species Yelkouan Shearwater (*Puffinus yelkouan*) and European shag (*Phalacrocorax aristotilis*) in coastal, territorial waters and EEZ of BS countries.  |
| **Short, precise description of the measure** | This measure is developed as 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”.Two main species of seabirds are subject to researches and spatial protection under this measure. They will be monitored by the monitoring program Descriptor 1,4 Seabirds of Bulgaria and Romania:- Non-breeding seabird species, Yelkouan Shearwater (*Puffinus yelkouan*). It is included in Annex I of the Bird Directive 2009/147/EO and Annex II of the Bern Convention as species of priority conservation status and defined as vulnerable („VU”) according to the International Union for Conservation of Nature (IUCN) Red List 2014. - European Shag (*Phalacrocorax aristotelis*). It is included in Annex I of the Bird Directive 2009/147/EO and Annex II of the Bern Convention as species of priority conservation status. This seabird is wintering and breeding species in Bulgaria (two breeding colonies are present on the BG Black Sea coast). These two species are chosen as common indicators for both Black Sea MS Bulgaria and Romania for the purposes of MSFD, because both are monitored on the Bulgarian and Romanian Black sea coast by Bulgarian Society for the Protection of Birds (BSPB) and the Romanian Ornithological Society (SOR) as partners of BirdLife International.Also both species of marine birds: Mediterranean Shearwater (*Puffinus yelkouan*) and European Shag (*Phalacrocorax aristotelis*) are included in Annex 2 of the Protocol for the protection of biological and landscape diversity of the Black Sea to the Convention on Protection of the Black Sea Against Pollution from 14.06.2002, the list of major Black Sea species. The first species is defined as rare, and the second one as endangered.The measure aims at gathering more detailed information on resting and feeding areas of both selected species and will support the monitoring program for Descriptor 1.4 - Sea birds of Bulgaria and Romania. Activities that might cause impact on the biodiversity of marine birds will also be monitored under this measure.Another aim of the measure is limiting pressure from tourism and coastal urbanization, fishing, oil spills, coastal erosion of coastal zones.**Scope of the measure:****Phase 1:** - Researches for determination of rafting/resting and feeding areas of non-breeding seabird species Yelkouan Shearwater (*Puffinus yelkouan*) and European shag (*Phalacrocorax aristotelis*) in coastal, territorial waters and EEZ of Bulgaria and Romania- Delineation of rest and feeding areas with aim of establishment of measures for further protection This will lead to the following information: **Indicative lists of characteristics, pressures and impacts**— identification and mapping of special habitat types, especially those recognised or identified under Community legislation (the Habitats Directive and the Birds Directive) or international conventions as being of special scientific or biodiversity interest,— habitats in areas which by virtue of their characteristics, location or strategic importance merit a particular reference. This may include areas subject to intense or specific pressures or areas which merit a specific protection regime.Biological features— a description of the population dynamics, natural and actual range and status of species of marine mammals and reptiles occurring in the marine region or subregion,**Phase 2**- implementation of spatial protection measuresThis measure is related to spatial protection actions under the Directive on the conservation of wild birds 2009/147/EC and the Directive on the Conservation of the habitats 92/43/EEC. |
| **EU measure category** | 2a |
| **Key Types of Measures** | KTM 14 - Research, improvement of knowledge base reducing uncertaintyKTM 20 - Measures to prevent or control the adverse impacts of fishing and other exploitation/removal of animal and plantsKTM 37 Measures to restore and conserve marine ecosystems, including habitats and species |
| **Environmental targets** | Environmental target on criterion 1.1. "Species distribution" on indicator 1.1.1: Maintain or increase in sustainable limits (to be determined, see. Section 6) the distribution of migratory species of Mediterranean shearwater (*Puffinus yelkouan*), the wintering species European shag (*Phalacrocorax aristotelis*) and the distribution of other migratory / feeding and / or wintering species of seabirds and waterbirds.RO1.1.1 The distribution of migratory species of Mediterranean shearwater (*Puffinus yelkouan*) along the Black Sea Romanian coast remains within its current limits, or there is expansion of the range.Environmental target on criterion 1.2. "Population size" indicator 1.2.1 and Criterion 4.3 "Abundance / distribution of key trophic groups / species" indicator 4.3.1: The population size (number of individuals / breeding pairs) of European shag (*Phalacrocorax aristotelis*) remains within 95% of the natural abundance of the species in Bulgaria long period. The population size (number of migratory individuals / number of migratory pairs) of Mediterranean shearwater (*Puffinus yelkouan*) remains within 95% of the natural abundance of migratory species in Bulgaria and increases in the long term.RO 1.2.1 and 4.3.1 - The population size of the Mediterranean shearwater (*Puffinus yelkouan*) remains stable and increases in the long term.Environmental target on criterion 1.3 "Condition of the population", indicator 1.3.1: The number of registered cases of injured and dead birds as a result of the negative impact of human activities decreases.Environmental target on criterion 1.4 "Distribution of habitat" indicator 1.4.1: Preserve the habitats of the Mediterranean Shearwater (*Puffinus yelkouan*), European shag (*Phalacrocorax aristotelis*) and other seabirds and waterbirds and / or increasing their extent in sustainable limits (to be determined) by reducing the negative impact of natural and human factors.RO 1.4.1 The area of distribution of the Mediterranean shearwater (*Puffinus yelkouan*) remains in the observed range or increases.Environmental target on criterion 1.5 "Size of habitat", indicator 1.5.1: The area of the habitats of the Mediterranean Shearwater (*Puffinus yelkouan*), and the European shag (*Phalacrocorax aristotelis*) is maintained or is increasing.RO 1.5.1 - The area of the habitats of the Mediterranean Shearwater (*Puffinus yelkouan*) is sufficient for the sustainable development of their populations.Environmental targets on criterion 1.6 "The condition of the habitat" and criterion 4.1. "Productivity (production per unit biomass) of key species or trophic groups" will be defined for the second cycle of implementation of the MSFD after further data. |
| **Descriptors** | D1- BiodiversityD4- Food web |
| **Main pressures** | **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 radionuclidesSystematic and/or intentional release of substances**Biological disturbances** — selective extraction of species, including incidental non-target catches (e.g. by commercial and recreational fishing)Physical lossPhysical damage |
| **Main drivers** | The sectors/activities targeted by the measure- Energy production/marine hydrocarbon( oil and gas) extraction- Waste disposal- Recreational activities;- Industry, urbanization (coastal and riverine from land – municipal waste water discharge, habitats loss/degradation);- Agriculture;- Activities associated with the extraction of living resources (fisheries, including fishing);- Activities related to the production of seafood (aquaculture);- Sea-based mobile activities: transport/shipping, including with - small boats), port activities. |
| **Characteristics** | * Marine and coastal birds
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| **Link to other directive/legislation/policy** | Birds DirectiveHabitats Directive |
| **Necessity for transnational regulation** | No |
| **Instrument for implementation/** **Mode of implementation** | * Legal
* Technical
* Policy
 |
| **Spatial reference/implementation zones** | Territorial waters/EEZ |
| **Contribution of the measure to achieving the target**  | The measure will have a high contribution for achieving the established state targets (by improving the knowledge, addressing to the most drivers/pressures whose impact on the progress towards GES/targets is significant) |
| **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 (phase I): medium € 50.000 – 1.000.000Phase 1: 1. Research project (2-year research programme): 100.000 €
2. Delineation of rest and feeding areas with aim of establishment of measures for further protection: 17.000 €

Total one off costs within MSFD cycle (6 years): preparation (research) minimum 117.000€ Scoring:

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

Phase 2- implementation of spatial protection measures* *Not possible to assess at this stage*
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| **Effectiveness** | Potentially strong |
| **Indicator(s) to measure effectiveness** | Indicators related to the GES/targets |
| **Socio-economic assessment** | **Negative side effects:**The implementation of the measure is not expected to have negative effects on the marine environment. The measure could have a negative effect on private business by limiting investment intentions in this area (construction of new or expansion of the area of mussel farms, fish farms or other intentions for growing alternative aquaculture, offshore wind farms) as well as on tourism (construction of resort complexes, recreational land and sea tourism, recreational sports)**Cost Effectiveness Assessment:** Moderate effective**Cost Benefit Assessment:** Low |
| **Coordination** | Bilateral |
| **Technical feasibility** | * *Applied; limited experience / uncertainties*
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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), Bulgarian Society of Protection of Birds (BSPB)**Romania:** Ministry of Environment, Waters and ForestsNGOs: Romanian Ornithological Society, Mare Nostrum |
| **Financing opportunities** | National budget, Environmental Protection Fund, EU projects (i.e.RO-BG CBC Program*,* Horizon 2020 Program) |
| **Planning of implementation/temporal coverage** | **2017** |
| **Difficulties in implementation** | Yes – lack of knowledge  |
| ***Supporting information for SEA*** |
| **Additional values for protection (outside MSFD)** |  |
| **Reasonable alternatives** |  |