**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:*****MSFD measure list*** |
| --- | --- | --- |
| **Measure title** | Designation of zones permitted for beam trawling and long-term observation of the impacts. When necessary, change usage requirements for beam trawling.  |
| **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”.At present beam trawling is allowed for *Rapana* fisheries and for scientific purposes. In order to reduce damaging to marine habitats due to beam trawling it is necessary to identify areas where trawling is permitted ((criteria used will be defined by common Working Groups). This activity should be banned in other areas such as protected areas in Natura 2000, other marine protected areas, mussel banks and others.The criteria for defining these areas should be establish within the framework of working groups with representatives from the Ministries of Environment and the Ministries of Agriculture and their subordinated l structures.These same criteria should be developed and agreed between Romania and Bulgaria, because the measure is defined as regional between the two countries.The measure has a control character, since after establishing the zones authorized for trawling and those that are prohibited, control should be carried out to monitor compliance with the provisions. Considering this assessment, the measure could be changed in terms of usage requirements, when necessary. |
| **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 27 Measures to reduce physical damage34 in marine waters (and not reported under KTM 6 in relation to WFD Coastal Waters)KTM 35 Measures to reduce biological disturbances in the marine environment from the extraction of species, including incidental non-target catches |
| **Environmental targets** | *RO**Descriptor 1**Crt. 1.4 Habitat distribution**1.4.1 Area distribution of benthic habitats* *1110-1: Maintaining existence of the three grasslands of Zostera noltei in Mangalia zone* *1110-8: Maintaining the current distribution in the area Costinești -2 Mai* *Sands with Donax trunculus: Maintaining the current distribution in the area Navodari - 2 Mai**1140-3: Maintaining the current distribution in the area Eforie Nord-Eforie Sud**1170-7 : Maintaining the current distribution in the area 2 Mai – Vama Veche**1170-8: Maintaining the current distribution in the area Cap Aurora – Vama Veche* *1170-10: Maintaining the current distribution in the point Agigea, Costinești și Vama Veche* *1170-2 Mytilus galloprovincialis biogenic reefs: Maintaining current distribution throughout Self Romania between 30-50m**1170-9: Maintaining the current distribution across the rocky circalitoral substrate**Crt. 1.5 Habitat extent* *1.5.1 Benthic habitat surface* *1110-1: The area occupied by habitat ≥ 2,43 ha* *1140-3: The area occupied by habitat ≥ 2,06 ha* *1170-7: The area occupied by habitat ≥ 1.8 ha* *1170-8: The area occupied by habitat ≥ 46 ha* *1170-10: The area occupied by habitat ≥ 1 ha* *Crt. 1.6 Habitat condition**1.6.1 Species state* *Leaf height of Z. noltei in june ≥ 70 cm; annual rhizomes extending of Z. noltei in growing areas ≥ 70 cm* *Height equities of Cystoseira barbata in cold season ≥ 100 cm; frequency of juveniles of C. barbata in 1 m2 ≥ 50%**The median size of specimens by Mytilus galloprovincialis (shell length) ≥ 50 mm SL* *Juveniles frequency of Pholas dactylus in 1m2 ≥ 50%; the maximum size of specimens P. dactylus (shell length) = 70mm SL* *The maximum size of specimens Donacilla cornea (shell lenght) ≥ 22-24 mm SL**The maximum size of specimens Donax trunculus (shell lenght) 45-50mm SL**The maximum size of specimens Arenicola marina (whole body length) 250-350mm TL**1.6.2 Relative biomass and abundance**Coverage with Z. noltei ≥ 50%; Foliar biomass of Z.noltei ≥ 1600 g•m-2**Coverage with Cystoseira barbata ≥ 50%; the wet biomass of C. barbata without epiphytic ≥ 3000 g•m-2**Coverage with Mytilus inside the habitat ≥ 50%; living biomass of Mytilus galloprovincialis ≥ 5000 g•m-2**The population density of Donacilla cornea ≥ 3300 ind•m-2**The population density of Donax trunculus ≥ 200 ind•m-2**Coverage with Corallina officinalis inside the fields ≥ 50%**The population density of Lentidium mediterraneum ≥ 9000 ind•m-2; living biomass of Lentidium mediterraneum ≥ 100 g•m-2**Coverage with Mytilus in the habitat ≥ 80%; living biomass of Mytilus galloprovincialis ≥ 8000 g•m-2**Living biomass Modiolula phaseolina in 1 m2 ≥ 16 g•m-2**Descriptor 4**Crt. 4.3 Abundance/distribution of key trophic groups/species**4.3.1 The abundance of certain groups / species functionally important**The population density of Lentidium mediterraneum ≥ 9000 ind•m-2**The population density of Arenicola marina ≥ 0,1 ind•m-2; the population density of Necallianassa truncata ≥ 1 ind•m-2**The population density of Mytilus galloprovincialis ≥ 500 ind. m-2;**The population density of Modiolula phaseolina in 1 m2≥ 200 ind•m-2**Descriptor 6**Crt. 6.1 Physical damage, having regard to substrate characteristics**6.1.1 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 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.* *Crt. 6.2 Condition of benthic community**6.2.1 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 in1m2 ≥ 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**6.2.2 Multimetric indices for assessment of benthic community condition and functionality, as well as species diversity and richness report opportunistic species / species sensitive**Index values EEI > 0.6**Index values EEI > 0.**Indices values :M-AMBI ≥ 0,55; AMBI ≤ 3,3**Indices values :M-AMBI ≥ 0,55; AMBI ≤ 3,3**Indices values :M-AMBI ≥ 0,55; AMBI ≤ 3,3**6.2.3 Proportion of biomass or number of individuals over a certain length or size**Specimens median size of Mytilus galloprovincialis (shell leght) ≥ 50 mm SL**Specimens median size of Mytilus galloprovincialis (shell leght) ≥ 70 mm SL* |
| **Descriptors** | D1- BiodiversityD3 – State of commercial fish and shellfish stocksD4 – Food webD6 - Seabed |
| **Main pressures** | Physical damage* 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).
 |
| **Main drivers** | Fishery |
| **Characteristics** | * Benthic habitats
 |
| **Link to other directive/legislation/policy** | COUNCIL REGULATION (EC) No 1198/2006 of 27 July 2006 on the European Fisheries Fund;Habitats Directive;Regulation (EU) No 1380/2013 of the European Parliament and the Council of 11 December 2013 on the Common Fisheries Policy. |
| **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 is expected to have a high contribution to the achieving the targets:* Maintenance of species distribution / pelagic and benthic habitats;
* Achieving and maintaining of maximum sustainable yield (MSY) for certain fish stocks;
 |
| **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:** high > € 1 million1) Implementation of beam trawling zones (one off): 17.000 €2) Training of control staff (one off): 1000 €3) Additional staff for control: 63.000 €4) Operational costs for control (fuel, material, boat, ...): 125.000 €5) Research on the activities: 100.000€6) Costs to fishery sector: -Not possible to determine sectoral costs in advanceTotal one off costs within MSFD cycle (6 years): not possible to assess (minimal 306.000 € but probably > 1 million € due high estimated sectoral costs)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 |

 |
| **Effectiveness** | Potentially strong |
| **Indicator(s) to measure effectiveness** |  |
| **Socio-economic assessment** | **Negative side effects:**The implementation of the measure is not expected to have negative effects on the marine environment.**Cost Effectiveness Assessment:** Cost effective**Cost Benefit Assessment:** high |
| **Coordination** | Bilateral |
| **Technical feasibility** | * *Applied; limited experience / uncertainties*
 |
| **Body responsible for the measure implementation** | **Bulgaria:** Ministry of Agriculture and Food, National Agency for Fisheries and Aquaculture (NAFA), scientific institutes, universities, specialized in field of the marine biology and ecology, NGOs**Romania:** Ministry of Environment, Waters and ForestsNational Agency for Fishery and Aquaculture, NIRD “Grigore Antipa”, NIRD GeoEcoMar |
| **Financing opportunities** | Public funds; EFF, EU projects (ex. HORIZON 2020 program) |
| **Planning of implementation/temporal coverage** | **2018** |
| **Difficulties in implementation** | Yes - fishermen fear on loss of jobs |
| ***Supporting information for SEA*** |
| **Additional values for protection (outside MSFD)** |  |
| **Reasonable alternatives** |  |