**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*** |
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| **Measure title** | Define and re-evaluate spatio-temporal bans and closures for fish species - fish stocks |
| **Short, precise description of the measure** | This measure is developed as common (joint) measure between Bulgaria - 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”.This measure aims to re-evaluate and, where necessary, to change the existing spatial-temporal bans for fishery (prolonging, changing the periods, changing fishing areas, etc), considering the changes of the environmental conditions.The measure includes the following actions:1. Setting up Working Groups on spatio-temporal bans and closures for fish species representatives from the National agency for Fisheries and Aquaculture, other relevant state administration, research institutes, NGOs and fishery sector as Fisheries local action groups, FLAGs).
2. Review of existing spatio-temporal bans and closures in national marine waters
3. Research to specify spatio-temporal stock assessments/needs;
4. Designation of spatio-temporal zones;
5. Control for compliance with these prohibitions and restrictions in designated areas.
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| **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 35 - Measures to reduce biological disturbances in the marine environment from the extraction of species, including incidental non-target catches |
| **Environmental targets** | **D 1,4,6 – Seabed habitats****OPERATIONAL TARGETS**Target on the extraction of living resources – Ban non–precautionary fishing technologies (Black Sea Strategic Action Plan, Target 5);Target on the extraction of living resources – consider the designation of marine protected areas with a ban on bottom trawling;RO Descriptor 1 (non-commercial fish)1.1.1 and 1.2.1 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 study population is not adversely affected by human pressure and should be within the range of values in the last two decades.Descriptor 3Criterion 3.1. Level of pressure of the fishing activityMaintaining 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 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 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 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*).STECF EWG 13-12 (Sampson et al., 2013) does not offer reference points as regards SSB for the sprat stock but according to the results from the regional assessment SSB varied between 200 000 and 500 000 tons. The proposed trend according to this indicator is increasing of the SSB at regional level. The indicator needs additional development and will be operational at regional level toward 2018.3.2.2Maintaining 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 distributionIncreasing 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)) |
| **Descriptors** | D1- BiodiversityD3 – State of commercial fish and shellfish stocks |
| **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).

Biological disturbances - Selective extraction of species, including non-target catch |
| **Main drivers** | Activities extracting living resources (fisheries including recreational,). |
| **Characteristics** | * Fish
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| **Link to other directive/legislation/policy** | **D3 – State of commercial fish and shellfish stocks**CFP (Regulation (EU) 1380/2013) and its related legislations (e.g. Regulation 1967/2006, all technical measures, on fishing efforts)Convention on Biological DiversityHabitats DirectiveCFP-DC-MAPCouncil Regulation (EC) No 199/2008 of 25 February 2008Council Regulation (EC) No 1198/2006 |
| **Necessity for transnational regulation** | No |
| **Instrument for implementation/** **Mode of implementation** | * Legal
* Technical
* Policy
 |
| **Spatial reference/implementation zones** | Territorial waters/EEZ + Beyond MS Marine waters |
| **Contribution of the measure to achieving the target**  | Increasing of fish stocks; achievement of total allowed catch (TAC); decreasing of fish mortality; decreasing of discardsThe measure is expected to have a moderate contribution to the targets achievements. |
| **Transboundary impact** | The implementation of the measure is not expected to have negative effects on the marine environment of neighbours.  |
| **Costs** | **First rough assessment:** medium € 50.000 – 1.000.000Administration and implementation costs:1. Operational cost for WG elaboration dealing with on spatio-temporal bans and closures for fish species[[1]](#footnote-1) 12.000€).
2. Research to specify spatio-temporal stock assessments/needs: 50.000€
3. Designation of spatio-temporal zones: 17.000€;

*Total one off costs within MSFD cycle (6 years): 79.000 €* 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 |

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| **Effectiveness** | Potentially strong |
| **Indicator(s) to measure effectiveness** | Should be based on existing indicators. |
| **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 the fishing business by limiting and / or bans on fishing.**Cost Effectiveness Assessment:** Moderate **Cost Benefit Assessment:** high  |
| **Coordination** | Bilateral coordination between Bulgaria and Romania |
| **Technical feasibility** | * *Frequently applied; extensive experience / evidence of good practice*
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| **Body responsible for the measure implementation** | **Bulgaria:** Ministry of Agriculture and Food, National Agency for Fisheries and Aquaculture. **Romania:** Ministry of Environment, Waters and Forests,National Agency for Fishing and Aquaculture, and NIRD “Grigore Antipa” |
| **Financing opportunities** | Public funds; EU projects (i.e Horizon 2020 Program, EMFF) |
| **Planning of implementation/temporal coverage** | **2017** |
| **Difficulties in implementation** | Yes – possible reluctance of fishermen |
| ***Supporting information for SEA*** |
| **Additional values for protection (outside MSFD)** |  |
| **Reasonable alternatives** |  |

1. Representatives from the National agency for Fisheries and Aquaculture, other relevant state administration, research institutes, NGOs and fishery sector as Fisheries local action groups, FLAGs: [↑](#footnote-ref-1)