

BIODIVERSITY AND LANDSCAPE CONSERVATION PROTOCOL

ANNEX 2 LIST OF SPECIES OF BLACK SEA IMPORTANCE

Criteria used for compiling the ANNEX 2 List of Species of the Black Sea Importance:

- The 5 categories of species that fall under IUCN criteria: extinct (EX), critically endangered (CE), endangered (EN), (vulnerable VU), data deficient (DD) - species shall form these group of species if they are defined in the Black Sea Coastal States
- The species for which conservation status is legally defined. The National Red Data Books as one of the information source for species status are not available in all Black Sea Coastal states and have different legal status. In those countries where the Red Data Book does not have legal power the national legislation exists on protected species.
- Rare species inventory for which are available in the Black Sea coastal states could form another group of candidate species of the Black Sea importance
- Species that currently protected by international agreements, like Bern Convention, ACCOBAMS, etc.
- The Annex 2 List of Species of the Black Sea Importance shall be updated every five years according to Annex 3, Article 2, Paragraph 1 of the Black Sea Biodiversity and Landscape Conservation Protocol

Alga

1. *Coccotylus truncates* Pallas (M.J. Wynne&J.N. Heinne, 1992) (ex- *Phyllophora truncata*)
2. *Phyllophora crispa* (Hudson) P.J. Dixon, 1964
3. *Phyllophora membranifolia* (Goodenough & Woodward), J. Agardh, 1842
4. *Phyllophora nervosa* (A.P. de Candolle) Greville¹ accepted as *Phyllophora crispa* (Hudson) P.S. Dixon, 1964²
5. *Cystoseira barbata* (Stackhouse) G. Agardh, 1820
6. *Cystoseira crinita* Duby, 1830

Cormophyta

1. *Salvinia natans* L. All

¹ Inserted by Dragos Micu, RO

² Corrected by V. Abaza according to WORMS

2. *Trapa natans* L.
3. *Zostera (Zostera) marina* Linnaeus, 1753
4. *Zostera (Zosterella) noltei* Hornemann

Polychaeta

1. *Eteone siphodonta* Delle Chiaje, 1822
2. *Hesionides arenaria* Friedrich, 1937³
3. *Nainereis laevigata* Grube, 1855
4. *Ophelia bicornis* Savigny in Lamarck, 1818
5. *Phyllodoce nana* Saint-Joseph, 1906

Crustacea

1. *Anomalocera patersoni* Templeton, 1837
2. *Biancolina algicola* Della Valle, 1893
3. *Brachinecta orientalis*⁴
4. *Brachinectella spinosa* Schmankewitsch, 1873⁵
5. *Branchinectella media* Schmankewitsch, 1873⁶
6. *Pestarella candida* (Olivi, 1792)
7. *Callianassa truncata* – valid name *Necallionassa truncata* Giard & Bonnier, 1890⁷
8. *Caprella acanthifera* Leach, 1814
9. *Carcinus aestuarii* Nardo, 1847⁸
10. *Eriphia verrucosa* Forskål, 1775
11. *Hemimysis anomala* G.O. Sars, 1775
12. *Hemimysis serrata* Băcescu, 1938
13. *Iphigenella acanthopoda* G.O. Sars, 1896⁹
14. *Katamysis warpachowskyi* G.O. Sars, 1893¹⁰
15. *Labidocera brunescens* Czerniavsky, 1868
16. *Pachygrapsus marmoratus* Fabricius, 1787
17. *Pilumnus hirtellus* Linnaeus, 1761¹¹
18. *Pontella mediterranea* Claus, 1863
19. *Potamon tauricum* Czerniavsky, 1884¹² – valid name *Potamon ibericum* Bieberstein, 1808¹³

³ Rationale for listing? – asked D. Micu

⁴ UA proposal

⁵ UA proposal

⁶ UA proposal

⁷ According to WORMS (V. Abaza)

⁸ UA proposal

⁹ UA proposal

¹⁰ UA proposal

¹¹ D. Micu commented that both decapods *Pilumnus hirtellus* and *Xantho poressa* are very common and there's no need to be included in the Annex 2 of the Biodiversity Protocol; proposed by UA, as well

¹² UA proposal

20. *Upogebia pusilla* Petagna, 1792
21. *Xantho poressa* Olivi, 1792¹⁴

Mollusca

1. *Aporrhais pespelecani* Linnaeus, 1758
2. *Bela nebula* Montagu, 1803
3. *Cyclope pellucida* Risso, 1826¹⁵
4. *Donacilla cornea* Poli, 1791
5. *Ostrea edulis* Linnaeus, 1758
6. *Patella tarentina* – valid name *Patella ulyssiponensis* Gmelin, 1791¹⁶
7. *Solen marginatus* Pulteney, 1799¹⁷
8. *Pholas dactylus* Linnaeus 1758¹⁸
9. *Lepidochitona cinerea* (Linne 1767)
10. *Gibbula divaricata* (Linne 1758)
11. *Tricolia pullus pullus* (Linne 1758)
12. *Epitonium commune* (Lamarck 1822)
13. *Vitreolina incurva* (Bucquoy, Dautzenberg & Dollfus 1883)
14. *Melarhappe neritoides* (Linne 1758)
15. *Calyptrea chinensis* (Linne 1758)
16. *Trophonopsis breviatus* (Jeffreys 1882)
17. *Mangelia pontica* Milaschewitsch 1908)
18. *Ebala pointeli* (de Folin 1868)
19. *FAM. Pyramidellidae* Gray 1840
20. *Myosotella myosotis* (Draparnaud 1801)
21. *Striarca lactea* (Linne 1758)
22. *Chlamys glabra* (Linne 1758)
23. *Anomia ephippium* Linne 1758)
24. *Tellina donacina* Linne 1758)
25. *Tellina fabula* Gmelin 1791)
26. *Irus irus* (Linne 1758)
27. *Paphia aurea* (Gmelin 1791)
28. *Petricola lithophaga* (Philippson 1788)
29. *Teredo navalis* Linne 1758)

ECHINODERMATA

1. *Marthasterias glacialis* Linnaeus, 1758
2. *Moerisia maeotica*¹⁹ – valid name *Odessia maeotica* Ostroumoff, 1896²⁰

¹³ According to WORMS (V.Abaza)

¹⁴ Proposed by UA

¹⁵ Valid name for *Cyclope donovani*, according to WORMS (D. Micu corrected)

¹⁶ According to WORMS (V. Abaza)

¹⁷ All mollusk species after *Solen marginatus* have been added by Dragos Micu

¹⁸ Considered by both Bern and Barcelona Conventions (D. Micu comment)

¹⁹ UA proposal

²⁰ According to WORMS (V. Abaza)

Pisces

1. *Acipenser nudiventris* Lovetsky, 1828
2. *Acipenser stellatus* Pallas, 1771
3. *Acipenser sturio* Linnaeus, 1758
4. *Aidablennius sphyinx* Valenciennes, 1836
5. *Alosa immaculata*, Bennett, 1835
6. *Alosa maeotica*, Grimm, 1901
7. *Alosa tanaica*, Grimm, 1901
8. *Alosa agone*, Scipoli, 1786²¹
9. *Aphia minuta* Risso, 1810
10. *Balistes carolinensis* – valid name *Balistes caprisicus* Gmelin, 1789²²
11. *Brabus barbus borysthenicus*²³ – valid name *Barbus barbus* Dybowski, 1862²⁴
12. *Boops boops* Linnaeus, 1758
13. *Callionymus belenus* – valid name *Callionymus risso*, Lesueur, 1814
14. *Conger conger* Linnaeus, 1758
15. *Dicentrarchus labrax* Linnaeus, 1758
16. *Diplodus annularis* Linnaeus 1758
17. *Gymnocephalus schraetser* Linnaeus, 1758²⁵
18. *Hippocampus guttulatus microstephanus* Slastenko, 1937
19. *Huso huso* Linnaeus, 1758
20. *Knipowitschia longicaudata* Kesler, 1877
21. *Lipophrys pavo* – valid name *Salaria pavo* Risso, 1810
22. *Lophius piscatorius* Linnaeus, 1758
23. *Lucioperca marina*²⁶ – valid name *Sander marinus* Cuvier, 1828²⁷
24. *Nerophis ophidian* Linnaeus, 1758
25. *Platichthys flesus* Linnaeus, 1758
26. *Pomatoschistus caucasicus* – valid name *Knipowitschia caucasica* Berg, 1916²⁸
27. *Rutilus frisii* Nordmann, 1840
28. *Salmo labrax* Pallas, 1814²⁹
29. *Serranus cabrilla* Linnaeus, 1758

²¹ *Alosa* species have been proposed by Valentina Todorova; she mentioned that *Alosa agone* is referred as *Alosa falax* for management purposes in EU Natura 2000 ecological network. She brought the following arguments: All species belonging to genus *Alosa*, listed in the Annex II of the Habitats Directive are referred as species of community interest, whose conservation requires the designation of special areas of conservation. Therefore, both BG and RO are obliged to designate sites for their conservation and restoration. Additionally, *Alosa* is an evolutionally young genus undergoing a process of speciation and species have complicated life histories with different stages taking place in range of habitats – from marine pelagic to estuarine, therefore, their conservation is complicated and requires special attention.

²² According to WORMS (V. Abaza)

²³ Proposed by UA

²⁴ V. Abaza inserted

²⁵ Proposed by UA

²⁶ Proposed by UA

²⁷ According to WORMS (V. Abaza)

²⁸ According to WORMS (V. Abaza)

²⁹ Correction of species name – Dragos Micu

30. *Serranus scriba* Linnaeus, 1758
31. *Sphyraena sphyraena* Linnaeus, 1758
32. *Syngnathus tenuirostris* Rathke, 1837
33. *Thunnus thynnus* Linnaeus, 1758
34. *Trigla lucerna* – valid name *Chelidonichthys lucerna* Linnaeus, 1758³⁰
35. *Trigla lyra* Linnaeus, 1758
36. *Umbrina cirrosa* Linnaeus, 1758
37. *Vimba vimba* Linnaeus, 1758³¹
38. *Xiphias gladius* Linnaeus, 1758

Mammals

1. *Delphinus delphis* Linnaeus, 1758
2. *Phocoena phocoena* Linnaeus, 1758
3. *Tursiops truncatus* Montagu, 1821
4. *Monachus monachus* Hermann, 1779

Aves

1. *Asio flammeus* Pontoppidan, 1763
2. *Calonectris diomedea* Scopoli, 1769
3. *Ciconia nigra* Linnaeus, 1758
4. *Gelochelidon nilotica* Gmelin, 1789
5. *Haliaeetus albicilla* Linnaeus, 1758
6. *Himantopus himantopus* Linnaeus, 1758
7. *Numenius tenuirostris* Vieillot, 1817
8. *Pandion haliaetus* Linnaeus, 1758
9. *Panurus biarmicus* Linnaeus, 1758
10. *Pelecanus crispus* Bruch, 1832
11. *Pelecanus onocrotalus* Linnaeus, 1758
12. *Phalacrocorax aristotelis* Linnaeus, 1761
13. *Phalacrocorax pygmeus* Pallas, 1773
14. *Phenicopterus ruber* Linnaeus, 1758
15. *Platalea leucorodia* Linnaeus, 1758
16. *Plegadis falcinellus* Linnaeus, 1766
17. *Puffinus yelkouan* Acerbi, 1827
18. *Recurvirostra avosetta* Linnaeus, 1758
19. *Branta ruficollis* Pallas, 1769
20. *Somateria mollissima* Linnaeus, 1758
21. *Sturnus roseus* Linnaeus, 1758
22. *Tadorna ferruginea* Pallas, 1764

³⁰ According to WORMS (V. Abaza)

³¹ Proposed by UA

Annex 4. List of Species **Whose Exploitation Should be Regulated**

Criteria for selection of species whose exploitation should be regulated

1. Fish stocks are sufficient for commercial exploitation and are above biological safety limits
2. Local stocks are to be regulated nationally but reported regionally
3. Shared stocks and migratory stocks are regulated by Parties concerned but reported regionally
4. Highly migratory stocks are regulated by the special Black Sea body on fisheries
5. Species that fall under category extinct, critically endangered, critical, vulnerable or rare are automatically assigned zero quota by the Party of concern (Ref. CITES requirements)
6. Species that fall under category endangered, vulnerable and rare are allowed for exploitation on scientifically based information for the status of their populations and after fishing quota common for the Black Sea and the flowed rivers, has been negotiated and agreed by the Parties. In case if one of the Parties disagrees the common quota, the fishing is prohibited for all Parties of concern

PISCES

Acipenser guldenstaedti Brand (*Acipenser guldenstaedti colchicus*) Brandt & Ratzeburg, 1832

Acipenser nudiventris Lovetsky, 1828(Şip)³²

Acipenser ruthenus Linnaeus, 1758

Acipenser stellatus (Sivrişka)

Acipenser sturio Linnaeus, 1758

Alosa immaculata Benett, 1835

Alosa tanaica Grimm, 1901

Atherina pontica – valid name *Atherina boyeri* Risso, 1810³³

Belone belone euxini Guenther

Dasyatis pastinaca Linnaeus, 1758

Engraulis encrasicolus Linnaeus, 1758

Engraulis encrasicolus maeobiens Azov Sea race

Gobiidae (???? – all?)

Huso huso Linnaeus, 1758

Liza saliens Risso, 1810

Liza aurata Risso, 1810

Merlangius merlangus Linnaeus, 1758

Mugil cephalus Linnaeus, 1758

³² A. nudiventris, A. ruthenus and A. sturio were proposed by TR

³³ According to WORMS (V. Abaza)

Mugil soiyu Basilewsky, 1855
Mullus barbatus ponticus Essipov, 1927
Pomatomus saltatrix Linnaeus, 1758
Psetta (maxima) maeotica (Pallas)
Raja clavata
Sarda sarda Bloch, 1793
Scomber japonicus Houttuyn, 1782
Sprattus sprattus Linnaeus, 1758
Squalus acanthias Linnaeus, 1758
Trachurus mediterraneus ponticus Aleev 1956 – valid name *Trachurus mediterraneus* Steindachner, 1868³⁴

Mollusca³⁵

*Rapana venosa*³⁶
Mytilus galloprovincialis Lamarck, 1819
Chamelea gallina Linnaeus, 1758³⁷
Donax trunculus Linnaeus, 1758
Donacilla cornea Poli, 1791

Insects

Mosquitos larvae Chironomidae family³⁸

Crustaceans

Crawfish *Astacus leptodactylus* Eschscholtz, 1823
Shrimp *Palaemon adspersus* Rathke, 1837
Palaemon elegans Rathke, 1837
Amphipoda *Pontogammarus maeoticus* – valid name *Euxinia maeotica* Swinsky, 1894³⁹
Anostraca *Artemia salina* Linnaeus, 1758
Decapod *Crangon crangon* Linnaeus, 1758

Birds

Pochard *Aythya ferina* Linnaeus, 1758
Scaup *Aythya marila* Linnaeus, 1761

Species which abundance needs to be controlled/regulated

Birds (included in the Birds Directive)

³⁴ According to WORMS (V. Abaza)

³⁵ *Rapana* and *Mytilus* have been proposed by TR

³⁶ *Rapana venosa* doesn't fall into any criteria for the species included into Annex IV. First it should be regulated as an invasive alien by application of different principles than those applied to native species stocks (Valentina Todorova)

³⁷ Next three mollusk species have been added by V. Todorova. She explained that these species are harvested by environmentally damaging fishing methods: dredging and hydraulic dredging.

³⁸ Proposed by Borys Aleksandrov

³⁹ According to WORMS (V. Abaza)

Cormorant *Phalacrocorax carbo* Linnaeus, 1758

The countries Focal Points in the CBD and FOMLR AGs (November 2007) agreed with the proposal of UA (Mr. Alexandrov) on the additional species of commercial importance. The countries decided the Cormorant *Ph. carbo* not to be included into Annex 4. However, the Cormorant Conference in Ukraine (2008) recommended keeping the Cormorant in the list of regulated species.