

ECOREGION **Widely Distributed and Migratory Stocks**
SUBJECT **NEAFC request on Northeast Atlantic elasmobranch species classification**

Advice summary

A table classifying elasmobranch species found within the NEAFC area is provided. Advice on basking shark, *Cetorhinus maximus*, and porbeagle, *Lamna nasus*, has remained unchanged for some years and new advice will be provided in 2012.

Request

*“A number of Northeast Atlantic elasmobranch species currently feature on the NEAFC list of deepwater species are managed under deepwater demersal fish regulations. Others are highly migratory pelagic species and fisheries for these species are regulated by ICCAT. However, NEAFC is aware of species with North Atlantic distributions that fall into neither of these categories. ICES is requested to list Northeast Atlantic elasmobranch species and classify them as 1) Highly migratory and widely distributed, 2) Deepwater species, and 3) Elasmobranch species that have distributions within the NEAFC area and are not Category 1) or 2). ICES is further requested to provide advice on basking shark (*Cetorhinus maximus*) and porbeagle (*Lamna nasus*) within the NEAFC CA, with an evaluation of the need for management actions.”*

ICES Advice

The advice for basking shark for 2011 and 2012 is the same as the advice given since 2006: “No targeted fishing for basking shark should be permitted and additional measures should be taken to prevent bycatch of basking shark in fisheries targeting other species. A TAC should cover all areas where basking sharks are caught in the northeast Atlantic. This TAC should be set at zero.”

The current ICES advice for porbeagle is the same as was provided for 2011. This was based on the precautionary advice that “given the state of the stock, no targeted fishing for porbeagle should be permitted and bycatch should be limited and landings of porbeagle should not be allowed.” In 2010, ICES also advised that there was no catch option that would be compatible with the ICES MSY framework.

New advice for porbeagle and basking shark shall be provided in 2012, for the years 2013 and 2014.

A table outlining the elasmobranch species found within the NEAFC area is provided below (Table 9.3.2.2.1).

Basis of advice

The list of species found in Table 9.3.2.2.1 is provided as the result of a literature review (see references below). References to frequency of occurrence stem from grey literature, including survey reports and expert group opinion.

Methods

Classification into the categories requested by NEAFC was carried out in the following way:

Highly migratory and widely distributed (Category 1)

ICES considers that this classification refers to pelagic shark species. Demersal elasmobranchs, such as the *Rajidae*, while they may be widely distributed, are not considered highly migratory, and so are not placed in this classification.

Very few members of this group are well identified at a species level in landings: the basking shark (*Cetorhinus maximus*, now in Appendix 2 of the Bern–Barcelona Convention and in CITES), blue shark (*Prionace glauca*), and the porbeagle (*Lamna nasus*). Other sharks as shortfin mako shark (*Isurus oxyrinchus*) and thresher shark (*Alopias vulpinus*) are caught regularly, but not recorded separately in the landings. This also occurs for species taken by the coastal fisheries, such as tope (*Galeorhinus galeus*).

Deep-water species (Category 2)

ICES considers that this category contains species that are normally found exclusively in deep water. Twelve or thirteen species of sharks are caught regularly in the deep-water fisheries of the Northeast Atlantic. Deep-water fisheries are here defined as those that take place in waters greater than 400 m in depth. This depth range can also be used to define deep-water sharks. The most commercially important species caught belong to the Squalidae family, e.g. the Portuguese dogfish (*Centroscymnus coelolepis*) and longnose velvet dogfish (*Centroscymnus crepidater*), Leafscale gulper shark (*Centrophorus squamosus*), gulper shark (*Centrophorus granulosus*), kitefin shark (*Dalatias licha*), birdbeak dogfish (*Deania calcea*), great lanternshark (*Etmopterus princeps*), and velvet belly (*Etmopterus spinax*). The blackmouth catshark (*Galeus melastomus* and probably *G. atlanticus*), which belongs to the family Scyliorhinidae, is also taken in catches by the deep-water trawlers.

Other species (Category 3)

ICES considers that this classification refers to elasmobranch species that live on the continental shelf in waters shallower than 400 m and, even if they may be widely distributed within the NEAFC Convention Area, don't migrate beyond this shelf area. It also includes species whose depth range includes both shallow and deep water.

Table 9.3.2.2.1 shows the taxonomic list with some specifications about the categories, depth range, and whether the species is rare, very rare, or common. This list was produced by referring to the Delass final report (Heesen, 2003) and integrating it with information from Fishbase (Froese and Pauly, 2000).

Sources

Heessen, H. J. L. Ed. 2003. Development of Elasmobranch Assessments. DELASS DG Fish Study Contract 99/055 Final Report. 603 pp.

Froese, R., and Pauly, D. 2000. FishBase 2000: concepts, design and data sources. ICLARM, Los Baños, Laguna, Philippines. 344 pp.

CMS. 2006. Convention on Migratory Species: Appendix I and II of CMS. At: http://www.cms.int/documents/appendix/cms_app1_2.htm#appendix_I. Accessed 10 October 2006.

The Convention on the Conservation of Migratory Species of Wild Animals (also known as CMS or the Bonn Convention) aims to conserve terrestrial, marine, and avian migratory species throughout their range. It is an intergovernmental treaty, concluded under the aegis of the United Nations Environment Programme, concerned with the conservation of wildlife and habitats on a global scale. Since the Convention's entry into force, its membership has grown steadily to include 115 (as of 1 March 2011) Parties from Africa, Central and South America, Asia, Europe, and Oceania.

Bern Convention. 1979. Bern Convention on the Conservation of European Wildlife and Natural Habitats (also known as the Bern Convention). CETS No.: 104.

Treaty open for signature by the member States, the non-member States which have participated in its elaboration, and by the European Union, and for accession by other non-member States. Signed in Bern 19 September 1979, came into force on 1 June 1982.

CITES. 1975. Convention on International Trade in Endangered Species of Wild Fauna and Flora. From http://en.wikisource.org/w/index.php?title=Convention_on_International_Trade_in_Endangered_Species_of_Wild_Fauna_and_Flora&oldid=2796367.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (also known as Washington Convention) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union). The text of the Convention was finally agreed at a meeting of representatives of 80 countries in Washington DC., United States of America, on 3 March 1973, and on 1 July 1975 CITES entered in force.

Barcelona Convention. 2006. Protecting the Mediterranean Sea. At: <http://europa.eu/scadplus/leg/en/lvb/l28084.htm>. Accessed 12 September 2006.

Convention for the Protection of the Mediterranean Sea Against Pollution. Signed 16 February 1976, in force 12 February 1978 (revised in Barcelona, Spain, on 10 June 1995 as the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean).

Table 1 Elasmobranchs of the Northeast Atlantic.

Order	Family	Species name	Category	Occurrence	Habitat	General depth range (m)
SHARKS						
HEXANCHIFORMES	Hexanchidae	1 <i>Heptranchias perlo</i> (Bonnaterre, 1788)	2	r	Demersal	150-1000
		2 <i>Hexanchus griseus</i> (Bonnaterre, 1788)	2	f	Demersal	150-2550
		3 <i>Hexanchus nakamurai</i> Teng, 1962 (formerly <i>H. vitulus</i> Springer & Waller, 1969)	2	r	Demersal	100-600
	Chlamydoselachidae	4 <i>Chlamydoselachus anguineus</i> Garman, 1884	2	r	Demersal	150-1280
ORECTOLOBIFORMES	Ginglymostomatidae	5 <i>Ginglymostoma cirratum</i> (Bonnaterre, 1788)	3	r	Demersal	0-130
LAMNIFORMES	Odontaspidae	6 <i>Odontaspis ferox</i> (Risso, 1810)	3	r	Demersal	10-200
	Mitsukurinidae	7 <i>Mitsukurina owstoni</i> Jordan, 1898 – or <i>M. nasuta</i> (Bragança, 1904)	2	vr	Demersal	270-960
	Lamnidae	8 <i>Carcharodon carcharias</i> (Linnaeus, 1758)	1	r	Pelagic	0-1280
		9 <i>Isurus oxyrinchus</i> Rafinesque, 1810	1	c	Pelagic	0-740
		9 bis <i>Isurus paucus</i> GuittardManday, 1966	1	r	Pelagic	0-200
		10 <i>Lamna nasus</i> (Bonnaterre, 1788)	1	f	Pelagic	0-715
	Cetorhinidae	11 <i>Cetorhinus maximus</i> (Gunnerus, 1765)	1	f	Pelagic	0-2000
	Alopiidae	12 <i>Alopias superciliosus</i> (Lowe, 1839)	1	r	Pelagic	0-500
		13 <i>Alopias vulpinus</i> (Bonnaterre, 1788)	1	f	Pelagic	0-550
CARCHARHINIFORMES	Scyliorhinidae	14 <i>Apristurus aphyodes</i> Nakaya & Stehmann, 1998 ?	2	u	Demersal	1000-1800
		15 <i>Apristurus laurussoni</i> (Saemundsson, 1922)	2	c	Demersal	560-1462
		16a <i>Apristurus maris</i> (Springer, 1979)	2	u	Demersal	600-1900
		16b <i>Apristurus melanoasper</i> Iglésias, Nakaya & Stehmann, 2004	2	u	Demersal	512-1520
		16 <i>Apristurus microps</i> (Gilchrist, 1922)	2	u	Demersal	1000-2200
		17a <i>Galeus atlanticus</i> Rafinesque, 1810	2	u	Demersal	200-1200
		17 <i>Galeus melastomus</i> Rafinesque, 1810	2	c	Demersal	55-1873
		18 <i>Galeus murinus</i> (Collett, 1904)	2	u	Demersal	475-1200
		19 <i>Scyliorhinus canicula</i> (Linnaeus, 1758)	3	c	Demersal	1-400
		20 <i>Scyliorhinus stellaris</i> (Linnaeus, 1758)	3	c	Demersal	1-200
	Pseudotriakidae	21 <i>Pseudotriakis microdon</i> Capello, 1868	2	f	Demersal	200-1500
	Triakidae	22 <i>Galeorhinus galeus</i> (Linnaeus, 1758)	1	c	Demersal	0-1100
		23 <i>Mustelus asterias</i> Cloquet, 1821	3	c	Demersal	0-350
		24 <i>Mustelus mustelus</i> (Linnaeus, 1758)	3	c	Demersal	0-350
		25 <i>Mustelus punctulatus</i> Risso, 1826	3	c	Demersal	0-350
	Carcharhinidae	26 <i>Carcharhinus brevipinna</i> (Müller & Henle, 1839)	1	r	Pelagic	0-70
		27 <i>Carcharhinus falciformis</i> (Müller & Henle, 1839)	1	r	Pelagic	0-400
		28 <i>Carcharhinus limbatus</i> (Müller & Henle, 1839)	3	r	Pelagic	0-30
		29 <i>Carcharhinus longimanus</i> (Poey, 1861)	1	r	Pelagic	0-230
		30 <i>Carcharhinus obscurus</i> (Lessaur, 1818)	1	r	Pelagic	0-400
		31 <i>Carcharhinus plumbeus</i> (Nardo, 1827)	1	f	Pelagic	0-1800
		32 <i>Galeocerdo cuvier</i> (Peron & Lessaur, 1822)	1	vr	Pelagic	0-370
		33 <i>Prionace glauca</i> (Linnaeus, 1758)	1	c	Pelagic	0-400
	Sphyrnidae	34 <i>Sphyrna lewini</i> (Griffith & Smith, 1834)	1	r	Pelagic	2-512
		35 <i>Sphyrna tudes</i> (Valenciennes, 1822)	1	vr	Pelagic	0-200
		36 <i>Sphyrna zygaena</i> (Linnaeus, 1758)	1	r	Pelagic	0-200
SQUALIFORMES	Dalatiidae					
	Etmopterinae	37 <i>Etmopterus princeps</i> Collett, 1904	2	c	Demersal	200-2213
		38 <i>Etmopterus pusillus</i> (Lowe, 1839)	2	c	Demersal	180-1070
		39 <i>Etmopterus spinax</i> (Linnaeus, 1758)	2	c	Demersal	200-2500
		40 <i>Centroscyllium fabricii</i> (Reinhardt, 1825)	2	c	Demersal	180-1600
	Somniosinae	41 <i>Somniosus microcephalus</i> (Bloch & Schneider, 1801)	3	f	Demersal	0-2200
		42 <i>Somniosus rostratus</i> (Risso, 1826)	2	r	Demersal	200-1000
		43 <i>Centroscyllium coelepis</i> Bocage & Capello, 1864	2	c	Demersal	150-3700
		44 <i>Centroselachus crepidater</i> (Bocage & Capello, 1864)	2	c	Demersal	230-1500
		45 <i>Symnodon ringens</i> Bocage & Capello, 1864	2	c	Demersal	200-1600
		45a <i>Zameus squamulosus</i> (Günther, 1877)	2	r	Demersal	400-2200
	Oxynotinae	46 <i>Oxynotus centrina</i> (Linnaeus, 1758)	2	u	Demersal	50-800
		47 <i>Oxynotus paradoxus</i> Frade, 1929	2	u	Demersal	265-720
	Dalatiinae	48 <i>Squaliolus laticaudus</i> Smith & Raddiffe, 1912	2	u	Demersal	200-1200
		49 <i>Dalatias licha</i> (Bonnaterre, 1788)	2	c	Demersal	50-1800
	Centrophoridae	50 <i>Centrophorus granulosus</i> (Bloch & Schneider, 1801)	2	c	Demersal	50-1440
		51 <i>Centrophorus lusitanicus</i> Bocage & Capello, 1864	2	u	Demersal	300-1400
		52 <i>Centrophorus squamosus</i> (Bonnaterre, 1788)	2	c	Demersal	145-2400
		53 <i>Centrophorus uyato</i> (Rafinesque, 1810)	2	u	Demersal	
		54 <i>Deania calceus</i> (Lowe, 1839)	2	c	Demersal	400-1000
		55 <i>Deania hystrix</i> (Garman, 1906)	2	u	Demersal	600-1000
		56 <i>Deania profundorum</i> (Smith & Raddiffe, 1912)	2	u	Demersal	275-1785
	Squalidae	57 <i>Squalus acanthias</i> Linnaeus, 1758	1	c	Demersal	0-1460
		58 <i>Squalus blainvilliei</i> (Risso, 1826)	3	c	Demersal	16-780
		58 bis <i>Squalus megalops</i> (Macleay, 1881)	3	vr	Demersal	30-750
	Echinorhinidae	59 <i>Echinorhinus brucus</i> (Bonnaterre, 1788)	2	r	Demersal	10-900
SQUATINIFORMES	Squatinaidae	60 <i>Squatina squatina</i> (Linnaeus, 1758)	3	r	Demersal	0-150

Order	Family	Species name	Category	Occurrence	Habitat	General depth range (m)
BATOIDS						
PRISTIFORMES	Pristidae	61 <i>Pristis pectinata</i> Latham, 1794	3	vr	Demersal	5-100
		62 <i>Pristis pristis</i> (Linnaeus, 1758)	3	vr	Demersal	5-100
TORPEDINIFORMES	Torpedinidae	63 <i>Torpedo (Tetronarce) nobiliana</i> Bonaparte, 1835	3	c	Demersal	10-350
		64 <i>Torpedo (Torpedo) marmorata</i> Risso, 1810	3	c	Demersal	1-100
		65 <i>Torpedo (Torpedo) torpedo</i> (Linnaeus, 1758)	3	c	Demersal	1-70
RAJIFORMES	Rhinobatidae	66 <i>Rhinobatos cemiculus</i> E. Geoffroy Saint-Hilaire, 1817	3	r	Demersal	1-100
		67 <i>Rhinobatos rhinobatos</i> (Linnaeus, 1758)	3	r	Demersal	1-100
	Rajidae	68 <i>Bathyraja pallida</i> (Forster, 1967)	2	vr	Demersal	2400-2960
		69 <i>Bathyraja richardsoni</i> (Garrick, 1961)	2	r	Demersal	1370-2500
		70 <i>Bathyraja spinicauda</i> (Jensen, 1914)	2	c	Demersal	140-1463
		71 <i>Amblyraja hyperborea</i> (Collette, 1879)	2	c	Demersal	140-2500
		72 <i>Amblyraja jenseni</i> (Bigelow & Schroeder, 1950) ?	2	r	Demersal	366-2295
		73 <i>Amblyraja radiata</i> (Donovan, 1808)	3	c	Demersal	20-1000
		74 <i>Dipturus batis</i> (Linnaeus, 1758)	3	f	Demersal	50-600
		75 <i>Dipturus nidarosiensis</i> (Collett, 1880)	2	f	Demersal	200-1000
		76 <i>Dipturus oxyrinchus</i> (Linnaeus, 1758)	2	f	Demersal	150-900
		77 <i>Dipturus</i> sp. (yet undescribed, Stehmann)	?	u	Demersal	
		78 <i>Leucoraja circularis</i> (Couch, 1838)	3	c	Demersal	70-676
		79 <i>Leucoraja fullonica</i> (Linnaeus, 1758)	3	c	Demersal	50-550
		80 <i>Leucoraja naevus</i> (Müller & Henle, 1841)	3	c	Demersal	20-500
		81 <i>Malacoraja krefftii</i> (Stehmann, 1978)	2	vr	Demersal	1200-1200
		82 <i>Malacoraja spinacidermis</i> (Barnard, 1923)	2	vr	Demersal	450-1568
		83 <i>Neoraja caerulea</i> (Stehmann, 1976)	2	u	Demersal	600-1262
		84 <i>Raja brachyura</i> Latont, 1873	3	c	Demersal	10-380
		85 <i>Raja clavata</i> Linnaeus, 1758	3	c	Demersal	10-577
		86 <i>Raja microcellata</i> Montagu, 1818	3	c	Demersal	0-100
		87 <i>Raja miraletus</i> Linnaeus, 1758	3	c	Demersal	17-462
		88 <i>Raja montagui</i> Fowler, 1910	3	c	Demersal	10-345
		89 <i>Raja undulata</i> Lacepede, 1802	3	c	Demersal	10-200
		90 <i>Rajella bathyphila</i> (Holt & Byrne, 1908)	2	r	Demersal	600-2172
		91 <i>Rajella bigelowi</i> (Stehmann, 1978)	2	c	Demersal	650-4156
		92 <i>Rajella dissimilis</i> (Hulley, 1970) ?	2	r	Demersal	719-1620
		93 <i>Rajella fyliae</i> (Lütken, 1888)	2	c	Demersal	170-1050
		94 <i>Rajella kukulevi</i> (Dolganov, 1985) ?	2	u	Demersal	750-800
		95 <i>Rostroraja alba</i> (Lacepede, 1803)	3	r	Demersal	10-600
		96 <i>Dipturus linteus</i> (Fries, 1838)	2	r	Demersal	150-1170
		97 <i>Breviraja</i> sp. (generic assignment and specific identity still to be clarified)	2			
	Dasyatidae	98 <i>Dasyatis centroura</i> (Mitchill, 1815)	3	c	Demersal	5-270
		99 <i>Dasyatis pastinaca</i> (Linnaeus, 1758)	3	c	Demersal	5-200
		100 <i>Pleuroplatytrygon violacea</i> (Bonaparte, 1832)	1	c	Pelagic	0-240
	Gymnuridae	101 <i>Gymnura altavela</i> (Linnaeus, 1758)	3	r	Demersal	5-100
	Myliobatidae					
	Myliobatinae	102 <i>Myliobatis aquila</i> (Linnaeus, 1758)	3	c	Demersal/Pelagic	1-300
		103 <i>Pteromylaeus bovinus</i> (E. Geoffroy Saint-Hilaire, 1817)	3	c	Demersal/Pelagic	10-150
	Rhinopterinae	104 <i>Rhinoptera marginata</i> (E. Geoffroy Saint-Hilaire, 1817)	3	r	Demersal/Pelagic	0-
	Mobulinae	105 <i>Mobula mobular</i> (Bonnaterre, 1788) ???	1	c	Pelagic	0-50

- 1) Highly migratory and widely distributed,
2) Deepwater species
3) Elasmobranch species that have distributions within the NEAFC area and are not Category 1) or 2).

c Common
f Frequently Found
r Rare
vr Very Rare
u Unknown Frequency

Reported, but not *Carcharhinus signatus*
confirmed present