

EC request on *Dipturus batis*

SUBJECT **Provide advice on *Dipturus batis* in Celtic Seas and Biscay-Iberia Ecoregions**

Advice Summary

There is no basis in the current or previous ICES advice for the listing of the common skate (*Dipturus batis*) as a prohibited species. Therefore it should not appear on the prohibited species list in either the Celtic Seas or the Biscay/Iberia eco-region fisheries legislation. In the Celtic Seas eco-region, ICES considers that stocks of the common skate complex is depleted, and that protective management measures are required. There should be no target fishing on the common skate, and there should be a TAC set at 0. In the Biscay/Iberia eco-region ICES has no information on stock status. In view of the vulnerability of these species to fishing ICES advises, on the basis of the precautionary approach, that there be no directed fishing unless studies are available on sustainable harvest rates.

Request

The Commission requests ICES, when providing its advice on elasmobranch species in 2010, to examine and assess the following elements regarding management considerations:

*To what extent current scientific information regarding the state of ...[*Dipturus batis*]... in the Celtic Seas and in the Bay of Biscay/Iberian waters supports the continuation of the measures provided for in the EU fishing opportunities regulation referred to above.*

Where appropriate, ICES is invited to recommend any alternative measures it would consider as potentially more effective than those in force, taking into account the various fisheries taking place in each area and their impact on the stocks (e.g. by métiers).

ICES Advice

In Celtic Seas Eco-region the advice for common skate in 2009 and 2010 has been that “target fisheries for this species should not be permitted and measures should be taken to minimize bycatch”.

In Biscay/Iberia ICES has not provided advice for common skate.

In neither eco-region has ICES advised that this species be added to a protected species list nor that all specimens being brought on board and should be promptly released unharmed.

The management measures in place are as follows:

The following provision applies: “Catches of ‘[common skate]’ may not be retained on board and shall be promptly released unharmed to the extent practicable. Fishers shall be encouraged to develop and use techniques and equipment to facilitate the rapid and safe release of the species.”

This applies to the following management areas:

- EC waters of VI, VIIa-c; VIIe-k.
- EC waters of VIId (considered by ICES to be part of North Sea demersal elasmobranchs complex).
- EC waters of VIII and IX

ICES notes that there is no basis in the current or past ICES advice for *Dipturus batis* being listed as a prohibited species, that must not be retained on board. Therefore common skate, the *Dipturus batis* complex should not appear on the prohibited species list in either the Celtic Seas or the Biscay/Iberia eco-region fisheries legislation.

For the Celtic Seas ecoregion ICES considers the common skate stock to be depleted or extirpated from most of its former inshore range, although they still occur in the deeper parts of their range. Given this decline, ICES advises that *Dipturus batis* be subject to conservative management. Given the uncertainty in the current status of remaining stocks, and that discard mortality in many fisheries that may take ‘common skate’ is unknown, ICES recommends that there should be a zero TAC for common skate.

For the Biscay/Iberia eco region ICES has no information on stock status. ICES advises, on the basis of the precautionary approach, that there be no directed fisheries for common skate in this sub-region, unless there is information available on the sustainable harvest rate in such fisheries.

ICES notes the recent revision of the taxonomy of *Dipturus batis*. This is now considered a complex of two species: *D. flossada* (blue skate) and *D. intermedia* (flapper skate). Further information is required on the distribution, stock structure, life history and abundance trends on each of these two species in each of the eco-regions. The current advice provided by ICES may have to be revised if more information on these individual species becomes available.

ICES has provided advice within the Celtic Seas eco-region and North Sea. No advice was provided for this species complex in the Biscay and Iberia ecoregions as the status of common skate is unknown in these areas.

In the Celtic Seas eco-region and North Sea, ICES advised that “Target fisheries for this species should not be permitted and measures should be taken to minimize bycatch”.

This advice was not as strong as the subsequent EC TAC regulation which placed *Dipturus batis* on the Prohibited species list, and requires that any specimens caught must, where possible be returned unharmed

Basis of advice

The advice is based on survey and market data. In particular survey trends from the following surveys were examined:-

- Southern and Western International Bottom Trawl Survey in Q4 (SWIBTS), including surveys from the UK (England & Wales), the UK (Scotland), the UK (Northern Ireland) and Ireland, France and Spain.
- UK (Scotland) Q1 trawl survey.

Preliminary analyses of data from the Spanish Porcupine Bank Survey indicate low and declining catch rates of ‘*D. batis*’. A preliminary examination of Scottish data indicates some increase in the proportion of hauls in which they were observed, although it should be recognised that catch rates are low and with high confidence intervals.

The status of the common skate complex in other areas (e.g. Icelandic and Faroese waters) is unclear.

The status of *Dipturus batis* is the following:

West of Scotland (VIa)

Local populations still exist, and both species within this complex (blue skate *Dipturus cf. flossada*) and flapper skate *D. cf. intermedia*) occur in this Division.

Irish Sea (VIIa)

Although this has been described as extirpated (Brander, 1981), occasional individuals have been reported from the north-western Irish Sea (e.g. discard sampling in the North Channel and from recreational angling in deep waters outside Belfast Lough), and WGEF consider this species to be ‘near-extirpated’ in VIIa.

Bristol Channel (VIIf)

Unknown, but numbers are likely to be low.

Western English Channel, Celtic Sea and west of Ireland (VIIf,c,e,g-k)

Regularly encountered in further offshore areas, but survey data are limited.

North Sea, Skaggerak, Kattegat and Eastern English Channel

Depleted. It was formerly widely distributed over much of the North Sea but is now found only rarely, and only in the northern North Sea. The distribution extends into the west of Scotland and the Norwegian Sea.

Methods

Recent trends in the distribution and relative abundance of common skate in fishery-independent surveys are difficult to interpret because of the low number of *D. batis* caught. The perspective of the contraction in geographical range of the

species is inferred from comparisons of the recent distribution to that described in fish and fishery accounts from the later 1800s and earlier 1900s (e.g. Rogers & Ellis, 2000).

The list of Prohibited species on the TACs and quotas regulations is an appropriate measure for trying to protect the marine fishes of highest conservation importance, particularly those species that are also listed on CITES and various other conservation conventions. Additionally, there should be sufficient concern over the population status and/or impacts of exploitation that warrants such a **long-term** conservation strategy over the **whole** management area.

It should also be recognised that some species that are considered depleted in parts of their range may remain locally abundant in certain areas, and such species might be able to support low levels of localised exploitation. Additionally, some fisheries may have low incidence of bycatch, where discard mortality is high. From a fisheries management viewpoint, advice for a zero or near zero TAC, or for no target fisheries, is very different than a requirement for 'Prohibited species' status, especially as a period of conservative management may benefit the species and facilitate a return to commercial exploitation in the short term.

Additionally, there is a strong rationale that the list of Prohibited species should not be changing regularly, as this could lead to confusion for both the fishing and enforcement communities.

Special note regarding the *Dipturus* complex

Two recent papers (Iglesias *et al*, 2010; Griffiths *et al*, 2010), showed that *Dipturus batis*, frequently referred to as common skate, is in fact a complex of two species, mis-labelled since the 1920s. *D. batis* is a misidentification of *D. flossada* (blue skate) and *D. intermedia* (flapper skate). The distribution and relative proportions of these skates in the North-East Atlantic are unknown, but it is expected that in some areas at least, the two species will overlap. While here we refer to *Dipturus batis*, in reality we are referring to the Dipturus complex.

Sources and References:

- Brander, K. 1981. Disappearance of common skate *Raia batis* from the Irish Sea. *Nature*, 290: 48–49.
- Griffiths, A.M., Sims, D.W., Cotterell, S.P., El Nagar, A., Ellis, J.R., Lynghammar, A., McHugh, M., Neat, F.C., Pade, N.G., Queiroz, N., Serra-Pereira, B., Rapp, T., Wearmouth, V.J. and Genner, M.J. 2010. Molecular markers reveal spatially segregated cryptic species in a critically endangered fish, the common skate (*Dipturus batis*). *Proceedings of the Royal Society B*, 277: 1497–1503.
- ICES 2008 Report of the Working Group on Elasmobranch Fishes (WGEF), 3–6 March 2008, Copenhagen, Denmark. ICES CM 2008/ACOM:16. 332 pp.
- ICES 2010. Report of the Working Group on Elasmobranch Fishes (WGEF). 22–29 June 2010. Horta, Portugal
- Iglesias, S.P., Toulhaut, L. & Sellos, D.Y., 2010. Taxonomic confusion and market mislabelling of threatened skates: important consequences for their conservation status. *Aquatic Conserv: Mar. Freshw. Ecosyst.* 15pp DOI: 10.1002/aqc.1083
- Rogers, S.I. & Ellis, J.R. 2000. Changes in the demersal fish assemblages of British coastal waters during the 20th century. *ICES Journal of Marine Science*, 57: 866–881.

Table 9.3.2.4.1 Demersal elasmobranchs in the Celtic Seas. Taxonomic list of skates taken in the Irish IBTS in VIa, VIIa-c,g,j,k, giving the numbers of each species caught by year, the total number of males and females, the overall sex ratio and length range. *Identification of *R. alba* is considered to be potentially misidentified.

Species	2003	2004	2005	2006	2007	2008	2009	Males	Females	Unsexed	Sex ratio (M:F)	L min (cm)	L max (cm)
<i>Amblyraja radiata</i>		2						1	1		1:1	65	74
' <i>Dipturus batis</i> '	20	42	30	16	42	52	110	148	158	6	1:1.1	26	210
<i>Dipturus oxyrinchus</i>	2	8						6	6		1:1	33	73
<i>Leucoraja fullonica</i>	1		1	1	1	1	6	3	7	1	1:2.3	50	74
<i>Leucoraja naevus</i>	67	212.5	148.8	117	197	121	213	639.7	552.6		1:0.9	12	73
<i>Raja brachyura</i>	34	46	13	12	29	32	11	109	118		1:1.1	32	99
<i>Raja clavata</i>	173	291	81	215	207	220	273	714	904		1:1.3	12	95
<i>Raja microocellata</i>	1	6		10	44	23	1	45	40		1:0.9	35	86
<i>Raja montagui</i>	188	415	276.4	304	376	248	480	1231.4	1418		1:1.2	10	73
<i>Raja undulata</i>	3	2						4	1		1:0.3	17	71
* <i>Rostroraja alba</i>			6	2				4	4		1:1	49	54

Table 9.3.2.4.2 Demersal elasmobranchs in the Celtic Seas. Summary of maturity information collected from UK (England & Wales) surveys (including both coordinated surveys, and dedicated surveys of various skates) around the British Isles. Data provided include the sample size (N), length range of fish observed, length at first maturity, length of largest immature fish and 50% maturity.

Species	Region	Females					Males				
		N	Length range	First maturity	Largest immature	50%	N	Length range	First maturity	Largest immature	50%
Amblyraja radiata	North Sea	448	8–49	32	46	38.2	428	8–49	30	44	36.2
	Combined	986	10–69	50	65	59.4	988	11–72	48	64	56.3
Leucoraja naevus	Celtic Seas	827	10–69	51	65	-	841	11–72	49	64	-
	North Sea	129	15–62	50	58	-	109	17–63	48	57	-
Raja brachyura	Combined	395	11–108	60	93	85.6	360	13–100	55	91	78.2
	Combined	3330	10–98	47	90	75.1	6002	10–94	47	88	66.5
Raja clavata	Celtic Seas	2394	10–98	47	90	-	2448	10–89	56	76	-
	North Sea	885	12–94	67	82	-	3503	11–94	47	88	-
Raja microcellata	Combined	739	12–85	73	83	77.1	709	13–80	66	74	69
Raja undulata	Combined	45	17–95	79	83	-	85	22–97	80	88	83
Raja montagui	Combined	1811	10–76	49	70	64	1947	10–67	40	66	50.3
	Celtic Seas	1677	10–74	49	69	-	1761	10–67	40	66	-
	North Sea	121	17–76	53	70	-	178	14–67	47	60	-

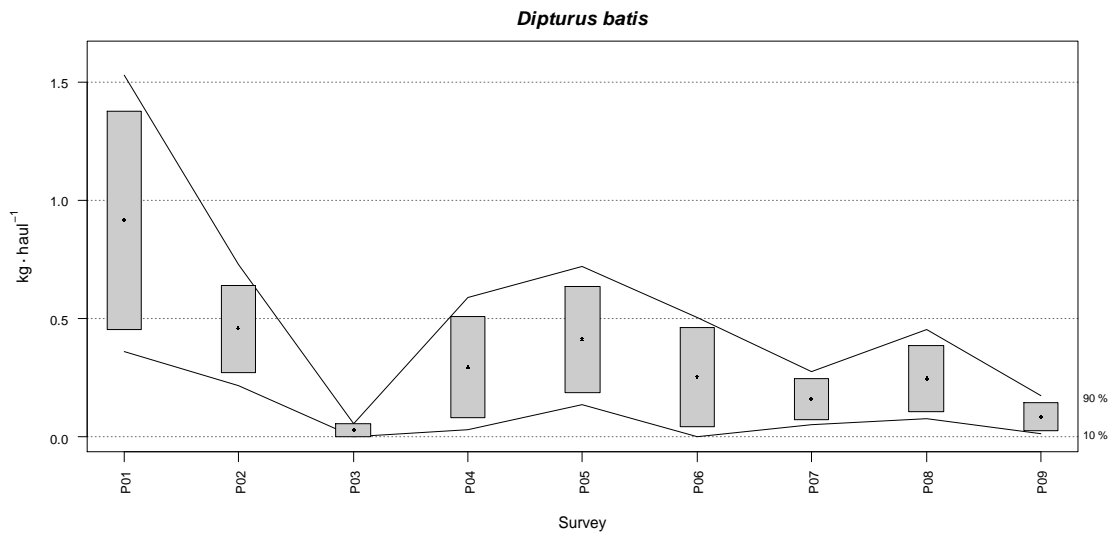


Figure 9.3.2.4.1 Demersal elasmobranchs in the Celtic Seas. Changes in common skate complex (*Dipturus batis*) biomass index (kg.haul⁻¹) during Porcupine Survey time series (2001–2009). Boxes mark parametric standard error of the stratified index. Lines mark bootstrap confidence intervals ($\alpha = 0.80$, bootstrap iterations = 1000)

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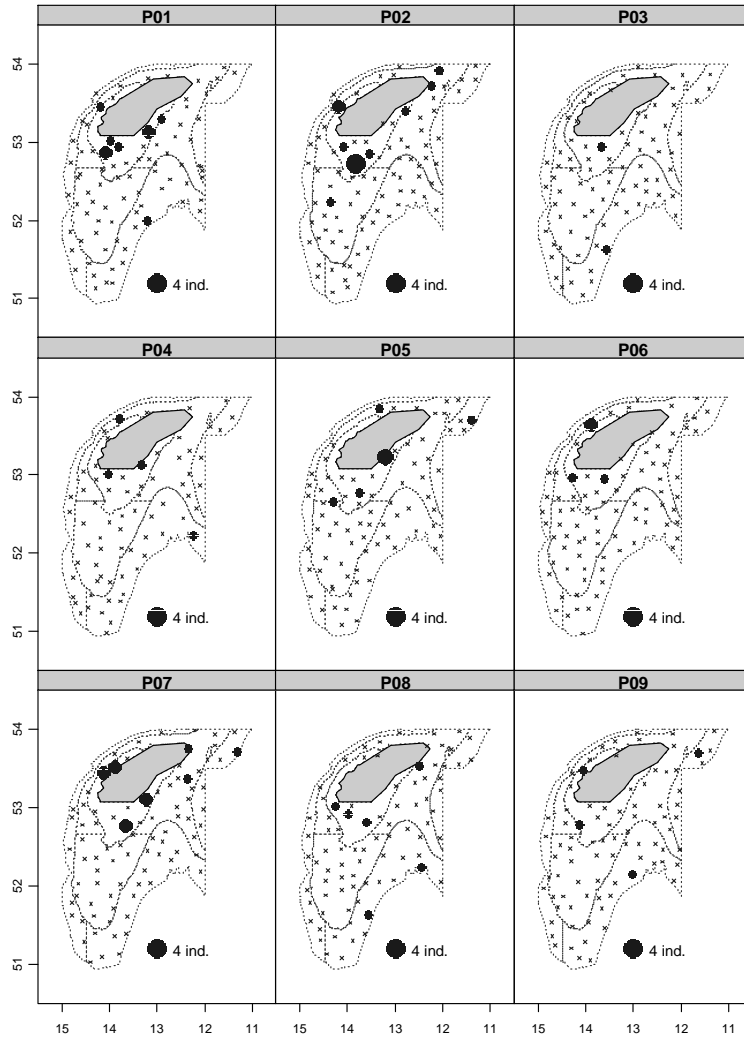


Figure 9.3.2.4.2 Demersal elasmobranchs in the Celtic Seas. Geographic distribution of the common skate complex (*D. batis*) catches (ind. · haul⁻¹) in Porcupine surveys (2001–2009)

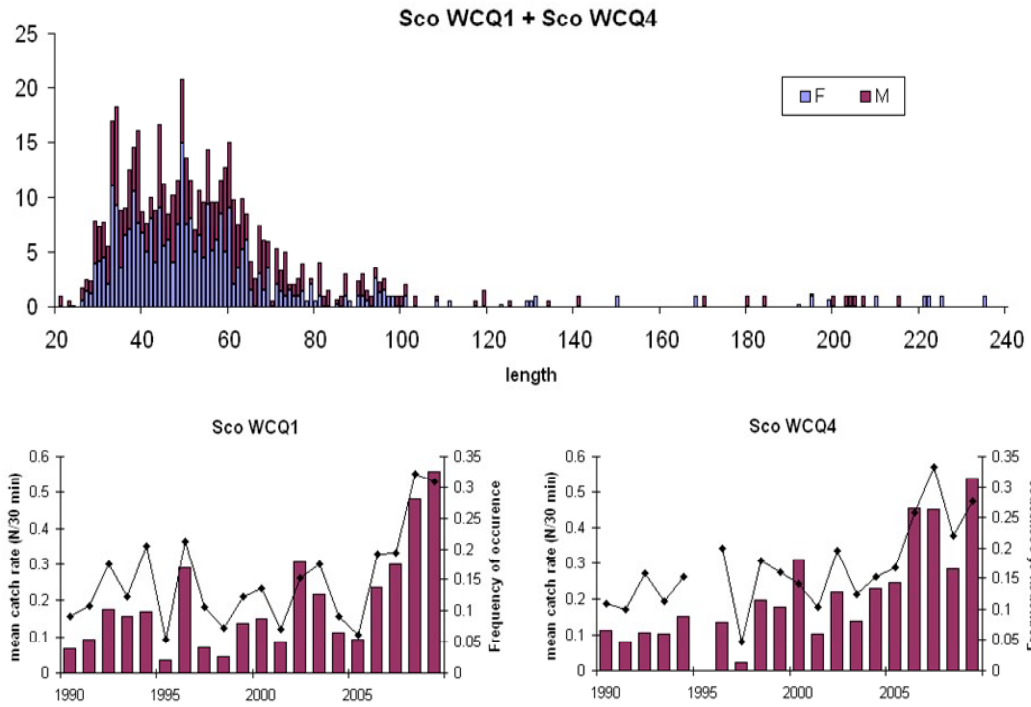


Figure 9.3.2.4.3 Demersal elasmobranchs in the Celtic Seas. Combined length frequency distributions of '*D. batis*' from the Scottish west coast surveys in Q1 and Q4 (upper plot). Lower plots show frequency of occurrence (line) and average catch rate in number 30 min⁻¹