

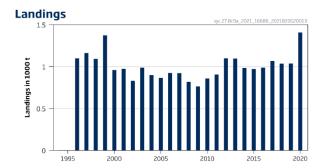
Lesser-spotted dogfish (*Scyliorhinus canicula*) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)

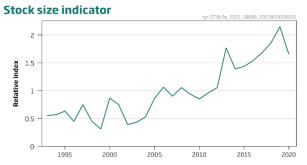
ICES advice on fishing opportunities

ICES has not been requested to provide advice on fishing opportunities for this stock.

Stock development over time

ICES cannot assess the stock and exploitation status relative to maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined.





Lesser-spotted dogfish in divisions 8.c and 9.a. Summary of the stock assessment. Left: recent ICES estimates of species-specific landings (landings data before 1996 are incomplete and not shown). Right: the stock-size indicator, is the mean normalized biomass index from the average of the two Spanish groundfish surveys in the Gulf of Cadiz: SP-GCGFS-WIBTS-Q1 (G7511) and SP-GCGFS-WIBTS-Q4 (G4309), the Portuguese survey PT-GFS-WIBTS-Q4 (G8899) and the Northern Spanish survey SP-NSGFS-WIBTS-Q4 (G2784).

Catch scenarios

ICES has not been requested to provide advice on fishing opportunities for this stock.

Basis of the advice

ICES has not been requested to provide advice on fishing opportunities for this stock.

Table 1 Lesser-spotted dogfish in divisions 8.c and 9.a. The basis of the advice.

| Advice basis | No advice requested |
|-----------------|---|
| Management plan | ICES is not aware of any agreed precautionary management plan for lesser spotted dogfish in this area |

Quality of the assessment

Fishery-independent trawl surveys provide the longest time-series of species-specific information, cover most of the stock area and depth distribution, and sample mature fish effectively.

The Portuguese survey PT-GFS-WIBTS-Q4 (G8899) was not conducted in 2019 (technical problems) and 2020 (COVID-19 pandemic). This survey series showed similar trends to the other surveys prior to this time and the absence of 2019–2020 data from this survey is not expected to change the perception of the stock (ICES, 2021b). Consequently, this survey series (1993–2018) was included in the stock-size indicator.

Issues relevant for the advice

Scyliorhinid species are productive in comparison to other demersal elasmobranchs (McCully Phillips et al., 2015).

Discarding is variable between fishing fleets and has not been fully quantified. Discard survival is ~70% in otter trawls (Rodríguez-Cabello *et al.*, 2005) but has not been estimated for other métiers.

Reference points

No reference points are defined for this stock.

Basis of the assessment

 Table 2
 Lesser-spotted dogfish in divisions 8.c and 9.a. Basis of the assessment and advice.

| ICES stock data category | 3 (ICES, 2021a) | | | |
|--------------------------|--|--|--|--|
| Assessment type | Survey trends-based assessment (ICES, 2021b) | | | |
| Input data | Surveys: Portuguese PT-GFS-WIBTS-Q4 (G8899) and Spanish: SP-GCGFS-WIBTS-Q1, (G7511), SP-GCGFS-WIBTS-Q4 (G4309),SP-NSGFS-WIBTS-Q4 (G2784) | | | |
| Discards and bycatch | Unknown | | | |
| Indicators | None | | | |
| Other information | None | | | |
| Working group | Working Group on Elasmobranch Fishes (WGEF) | | | |

History of the advice, catch, and management

Table 3 Lesser-spotted dogfish in divisions 8.c and 9.a. History ofICES advice, the agreed TAC and ICES species-specific estimated landings. All weights are in tonnes.

| Year | ICES advice | Landings corresp. to advice | Agreed TAC | ICES species-specific estimates of landings |
|------|---|-----------------------------|------------|---|
| 2005 | No advice | | No TAC | 866 |
| 2006 | No advice | | No TAC | 925 |
| 2007 | No advice | | No TAC | 923 |
| 2008 | No advice | | No TAC | 819 |
| 2009 | Maintain catch at recent level | | No TAC | 765 |
| 2010 | Maintain catch at recent level | | No TAC | 858 |
| 2011 | Maintain catch at recent level | | No TAC | 915 |
| 2012 | No new advice, same as for 2011 | | No TAC | 1099 |
| 2013 | Decrease catch by 9% + no species-specific TAC | | No TAC | 1097 |
| 2014 | No new advice, same as for 2013 | | No TAC | 985 |
| 2015 | No new advice, same as for 2014 | | No TAC | 971 |
| 2016 | Increase by no more than 20% compared to the average catches in 2012–2014 | | No TAC | 987 |
| 2017 | Same catch value as advised for 2016 | | No TAC | 1067 |
| 2018 | Precautionary approach | ≤ 1178 | No TAC | 1014 |
| 2019 | Precautionary approach (Same advice as for 2018) | ≤ 1178 | No TAC | 1037 |
| 2020 | No catch advice requested | • | No TAC | 1408 |
| 2021 | No catch advice requested | ı | No TAC | |
| 2022 | No catch advice requested | - | | |
| 2023 | No catch advice requested | - | | |

ICES Advice 2021 2

History of the catch and landings

The distribution of this stock does not extend into the NEAFC Regulatory area. $\label{eq:continuous} % \begin{subarray}{ll} \end{subarray} % \b$

 Table 4
 Lesser-spotted dogfish in divisions 8.c and 9.a. Catch distribution by fleet in 2020 as estimated by ICES.

| Catch (2020) | Landings | | | | Discards |
|--------------|---------------------|---------------|----------------|-------------------|----------|
| Unknown | Bottom trawl 75% | Others 17% | Gillnet 8 % | Longline < 1 % | Unknown |
| | 1408 tonnes | | | | |

Table 5Lesser-spotted dogfish in divisions 8.c and 9.a. ICES estimates of landings by country (in tonnes). 0 = value below 0.5.

| Year | France | Spain | Portugal | Total |
|------|--------|-------|----------|-------|
| 1996 | 0 | 431 | 667 | 1098 |
| 1997 | 0 | 472 | 691 | 1163 |
| 1998 | 1 | 403 | 689 | 1093 |
| 1999 | 1 | 491 | 882 | 1374 |
| 2000 | 1 | 202 | 757 | 960 |
| 2001 | 4 | 236 | 734 | 974 |
| 2002 | 3 | 155 | 673 | 831 |
| 2003 | 4 | 248 | 735 | 987 |
| 2004 | 5 | 237 | 657 | 900 |
| 2005 | 1 | 297 | 568 | 866 |
| 2006 | 1 | 333 | 591 | 925 |
| 2007 | 1 | 327 | 595 | 923 |
| 2008 | 1 | 272 | 546 | 819 |
| 2009 | 0 | 229 | 535 | 765 |
| 2010 | 0 | 336 | 522 | 858 |
| 2011 | 0 | 364 | 551 | 915 |
| 2012 | 0 | 555 | 544 | 1099 |
| 2013 | 0 | 577 | 520 | 1097 |
| 2014 | 0 | 464 | 521 | 985 |
| 2015 | 0 | 417 | 554 | 971 |
| 2016 | 0 | 398 | 589 | 987 |
| 2017 | 0 | 448 | 619 | 1067 |
| 2018 | 0 | 484 | 530 | 1014 |
| 2019 | 0 | 449 | 588 | 1037 |
| 2020 | 0 | 853 | 555 | 1408 |

ICES Advice 2021 3

Summary of the assessment

Table 6 Lesser-spotted dogfish in divisions 8.c and 9.a. Assessment summary. Biomass indices were derived from four bottom trawl surveys (SP-GCGFS-WIBTS-Q1 and Q4, SP-NSGFS-WIBTS-Q4, and PT-GFS-Q4). The indices for SP-GCGFS-WIBTS-Q1 and SP-GCGFS-WIBTS-Q4 were averaged and normalized. The stock-size indicator is the annual mean of the normalized survey indices.

| normalized survey indices. | | | | | |
|----------------------------|------------------------|-------------------|------------|---------------------|--|
| Year | Spain | | Portugal | Combined stock-size | |
| rear | SP-GCGFS-WIBTS-Q1 & Q4 | SP-NSGFS-WIBTS-Q4 | PT-PGFS-Q4 | indicator | |
| 1993 | 0.187 | 0.51 | 0.97 | 0.55 | |
| 1994 | 0.45 | 0.5 | 0.76 | 0.57 | |
| 1995 | 0.48 | 0.33 | 1.1 | 0.63 | |
| 1996 | 0.43 | 0.47 | - | 0.45 | |
| 1997 | 0.65 | 0.47 | 1.13 | 0.75 | |
| 1998 | 0.161 | 0.41 | 0.78 | 0.45 | |
| 1999 | 0.27 | 0.35 | | 0.31 | |
| 2000 | 0.32 | 0.56 | 1.73 | 0.87 | |
| 2001 | 0.41 | 0.79 | 1.06 | 0.75 | |
| 2002 | 0.23 | 0.5 | 0.45 | 0.39 | |
| 2003 | 0.29 | 0.58 | - | 0.43 | |
| 2004 | 0.54 | 0.53 | - | 0.53 | |
| 2005 | 0.97 | 0.75 | 0.87 | 0.86 | |
| 2006 | 1.51 | 0.87 | 0.81 | 1.06 | |
| 2007 | 0.96 | 1.03 | 0.72 | 0.9 | |
| 2008 | 1.37 | 0.75 | 1.05 | 1.06 | |
| 2009 | 0.86 | 0.89 | 1.06 | 0.94 | |
| 2010 | 1.1 | 0.81 | 0.64 | 0.85 | |
| 2011 | 1.14 | 0.77 | 0.98 | 0.96 | |
| 2012 | 1.06 | 1.05 | | 1.05 | |
| 2013 | 1.7 | 2.6 | 0.99 | 1.77 | |
| 2014 | 1.48 | 1.93 | 0.76 | 1.39 | |
| 2015 | 1.64 | 1.63 | 1.03 | 1.44 | |
| 2016 | 1.94 | 1.76 | 0.91 | 1.54 | |
| 2017 | 2.2 | 1.44 | 1.37 | 1.68 | |
| 2018 | 1.87 | 1.86 | 1.84 | 1.86 | |
| 2019 | 2.4 | 1.94 | - | 2.1 | |
| 2020 | 1.39 | 1.92 | - | 1.65 | |

Sources and references

ICES. 2021a. Advice on fishing opportunities. *In* Report of the ICES Advisory Committee, 2021. ICES Advice 2021, section 1.1.1. https://doi.org/10.17895/ices.advice.7720.

ICES. 2021b. Working Group on Elasmobranch Fishes (WGEF). ICES Scientific Reports, 3:59. http://doi.org/10.17895/ices.pub.8199.

McCully Phillips, S. R., Scott, F. and Ellis, J. R. 2015. Having confidence in Productivity Susceptibility Analyses: A method for underpinning scientific advice on skate stocks? FisheriesResearch, 171: 87–100. https://doi.org/10.1016/j.fishres.2015.01.005.

Rodríguez-Cabello, Fernández, A., Olaso, I., and Sánchez, F. 2005. Survival of small-spotted catshark (*Scyliorhinuscanicula*) discarded by trawlers in the Cantabrian Sea. Journal of the Marine Biological Association of the UK, 85(05): 1145–1150. https://doi.org/10.1017/S002531540501221X.

Download the stock assessment data and figures.

Recommended citation: ICES. 2021. Lesser-spotted dogfish (*Scyliorhinuscanicula*) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters). *In* Report of the ICES Advisory Committee, 2021. ICES Advice 2021, syc.27.8c9a. https://doi.org/10.17895/ices.advice.7874.

ICES Advice 2021 4