

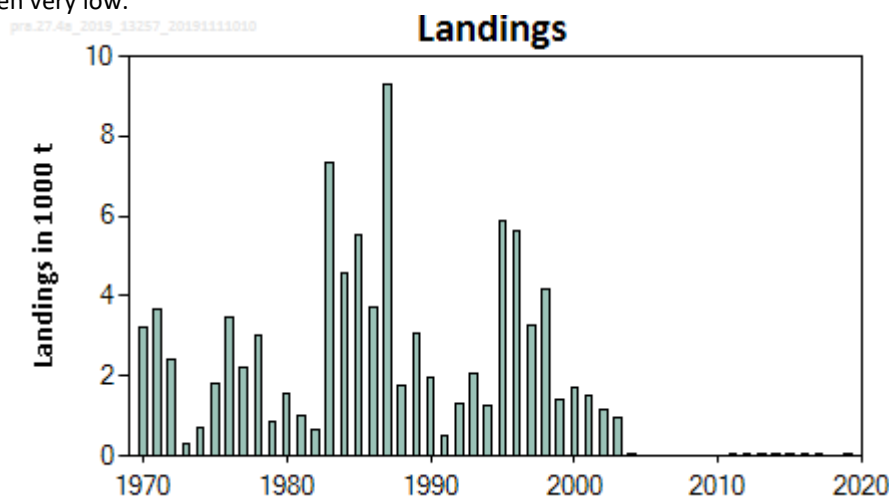
## Northern shrimp (*Pandalus borealis*) in Division 4.a West (Northern North Sea, Fladen Ground)

### ICES advice on fishing opportunities

ICES advises that when the precautionary approach is applied, there should be no targeted fisheries on this stock for the year 2020 and 2021. ICES cannot provide catch advice on the status of this stock, because of a lack of sufficient survey and catch data.

### Stock development over time

The available information is inadequate to evaluate stock trends. The state of the stock is therefore unknown. Landings since 2003 have been very low.



**Figure 1** Northern shrimp in Division 4.a West. Total official landings.

### Stock and exploitation status

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

**Table 1** Northern shrimp in Division 4.a West. State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size				
		2016	2017	2018		2016	2017	2018		
Maximum sustainable yield	$F_{MSY}$	?	?	?	Unknown	$MSY B_{trigger}$	?	?	?	Unknown
Precautionary approach	$F_{pa}, F_{lim}$	?	?	?	Unknown	$B_{pa}, B_{lim}$	?	?	?	Unknown
Management plan	$F_{MGT}$	—	—	—	Not applicable	$B_{MGT}$	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	?	?	?	Unknown

### Catch scenarios

ICES framework for category 6 stocks was applied (ICES, 2012). For stocks without information on abundance or exploitation, ICES considers that a precautionary approach should be applied. In this case there should be no directed fishing until sufficient information is available to demonstrate that an expansion of the fishery can be considered sustainable.

## Basis of the advice

**Table 2** Northern shrimp in Division 4.a West. The basis of the advice.

Advice basis	Precautionary approach.
Management plan	ICES is not aware of any agreed precautionary management plan for northern shrimp in this area.

## Quality of the assessment

There is no information to evaluate stock trends.

## Issues relevant for the advice

There have been minor Danish and Norwegian landings of northern shrimp from this stock since 2011, mainly taken as bycatch in the Norway pout fishery.

## Reference points

No reference points are defined for this stock.

## Basis of the assessment

**Table 3** Northern shrimp in Division 4.a West. The basis of the assessment.

ICES stock data category	6 (ICES, 2018).
Assessment type	No assessment.
Input data	Official landings.
Discards and bycatch	Unknown.
Indicators	None.
Other information	None.
Working group	Joint NAFO/ICES <i>Pandalus</i> Assessment Working Group ( <a href="#">NIPAG</a> ).

## Information from stakeholders

Norwegian shrimp fishers are interested in participating in an exploratory fishery in 2020.

## History of the advice, catch, and management

**Table 4** Northern shrimp in Division 4.a West. History of ICES advice, the agreed TAC, and official landings. Weights in tonnes.

Year	ICES advice	Landings corresp. to advice	TAC EU waters of 2.a and 4	Official landings
2006	Average landings (2001–2003)	< 1300	4980	0
2007	No increase in effort to levels above the average for the years where fishing activity took place. Mandatory data collection programme for catch and effort data on both target and bycatch fish.	-	3984	0
2008	Same advice as last year	-	3984	0
2009	Same advice as last year	-	4980	0
2010	Same advice as last year	-	4233	0
2011	Average landings (1999–2003), mandatory data collection programme	< 1400	3598	0
2012	No increase in catch	-	3058	1
2013	No increase in catch unless there is evidence that this will be sustainable	0	3058	0
2014	No new advice, same as for 2013	0	2446	1
2015	No new advice, same as for 2014	0	2446	20.1
2016	No increase in catch unless there is evidence that this will be sustainable	0	2446	10
2017	No increase in catch unless there is evidence that this will be sustainable	0	2446	10.7
2018	No increase in catch unless there is evidence that this will be sustainable	0	1957	0.5
2019	No targeted fisheries on this stock	-	1566	1.4*
2020	No targeted fisheries on this stock			
2021	No targeted fisheries on this stock			

\* Preliminary 2019 landings are until October.

## History of the catch and landings

**Table 5** Northern shrimp in Division 4.a West. Catch distribution by fleet in 2018 as estimated by ICES.

Total catch	Landings	Discards
Unknown	100% trawl	Unknown
	0.5 tonnes	

**Table 6** Northern shrimp in Division 4.a West. History of official landings are presented for each country participating in the fishery (in tonnes).

Year	Denmark	Norway	Sweden	UK–Scotland	Total
1970	3115			104	3219
1971	3216			436	3652
1972	2204			187	2391
1973	157			163	320
1974	282			434	716
1975	1308			525	1833
1976	1552			1937	3489
1977	425	112		1692	2229
1978	890	81		2027	2998
1979	565	44		268	877
1980	1122	76		377	1575
1981	685	1		347	1033
1982	283			352	635
1983	5492	8		1827	7327
1984	4553	13		25	4591
1985	4188			1341	5529
1986	3416			301	3717
1987	8620			686	9306
1988	1662	2		84	1748
1989	2495	25		547	3067
1990	1616	3	4	365	1988
1991	421	31		53	505
1992	1212			116	1328
1993	1516	38		509	2063
1994	1202	0		35	1237
1995	4552	15		1298	5965
1996	3689	32		1893	5614
1997	2886	9		365	3260
1998	2801	3		1365	4169
1999	934	9		456	1399
2000	1358			378	1736
2001	1117	18		397	1532
2002	1061	9		70	1140
2003	935	8	1		944
2004	21	0	0	0	21
2005	10	0	0	0	10
2006	0	0	0	0	0
2007	0	0	0	0	0
2008	0	0	0	0	0
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	1	0	0	1
2013	0	0	0	0	0
2014	1	0	0	0	1
2015	19	0	0	1.1	20.1
2016	0	10	0	0	10
2017	1	6	0	3.7	10.7
2018	0	0.5	0	0	0.5
2019*	0	1.4	0	0	1.4

\* Preliminary 2019 landings are until October.

### Summary of the assessment

There is no assessment for this stock.

## Sources and references

ICES. 2012. ICES Implementation of Advice for Data-limited Stocks in 2012 in its 2012 Advice. ICES CM 2012/ACOM:68. 42 pp. <https://doi.org/10.17895/ices.pub.5322>.

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ICES. 2019. Report of the Joint NAFO/ICES *Pandalus* Assessment Working Group (NIPAG), 8–13 November 2019, Tromsø, Norway. ICES CM 2019/FRSG:84. In prep.

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