

Deepwater Flatfish Partial Assessment

(Full assessment scheduled for 2019)

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Executive Summary

- Projection model for Dover sole using output from age-structured model
- Used age 3 recruits
- 2018 catch estimated as 2018 current catch up to Oct 6 + 5-yr average Oct 6-Dec 31 catch
- 2019-2020 catch estimated as 2013-2017 average catch for Dover sole
- AKFIN reports catches at the complex level
- Proportion of each species found in the observer data in each year are used to estimate catch by species

Species	Quantity	As estimated or specified last year for:		As estimated or recommended this year for:	
		2018	2019	2019*	2020*
Dover sole	<i>M</i> (natural mortality rate)	0.085	0.085	0.085	0.085
	Tier	3a	3a	3a	3a
	Projected total (3+) biomass (t)	144,654	145,899	145,926	147,001
	Projected Female spawning biomass (t)	49,366	49,373	49,385	49,418
	<i>B</i> _{100%}	57,871	57,871	57,871	57,871
	<i>B</i> _{40%}	23,148	23,148	23,148	23,148
	<i>B</i> _{35%}	20,255	20,255	20,255	20,255
	<i>F</i> _{OFL}	0.12	0.12	0.12	0.12
	<i>maxF</i> _{ABC}	0.1	0.1	0.1	0.1
	<i>F</i> _{ABC}	0.1	0.1	0.1	0.1
	OFL (t)	11,050	11,187	11,190	11,337
maxABC (t)	9,202	9,316	9,318	9,441	
ABC (t)	9,202	9,316	9,318	9,441	
Greenland turbot	Tier	6	6	6	6
	OFL (t)	238	238	238	238
	maxABC (t)	179	179	179	179
	ABC (t)	179	179	179	179
Deepsea sole	Tier	6	6	6	6
	OFL (t)	6	6	6	6
	maxABC (t)	4	4	4	4
	ABC (t)	4	4	4	4
Deepwater Flatfish Complex	OFL (t)	11,294	11,431	11,434	11,581
	maxABC (t)	9,385	9,499	9,501	9,624
	ABC (t)	9,385	9,499	9,501	9,624
	Status	As determined last year for:		As determined this year for:	
		2016	2017	2017	2018
	Overfishing	no	n/a	no	n/a
	Overfished	n/a	no	n/a	no
Approaching overfished	n/a	no	n/a	no	

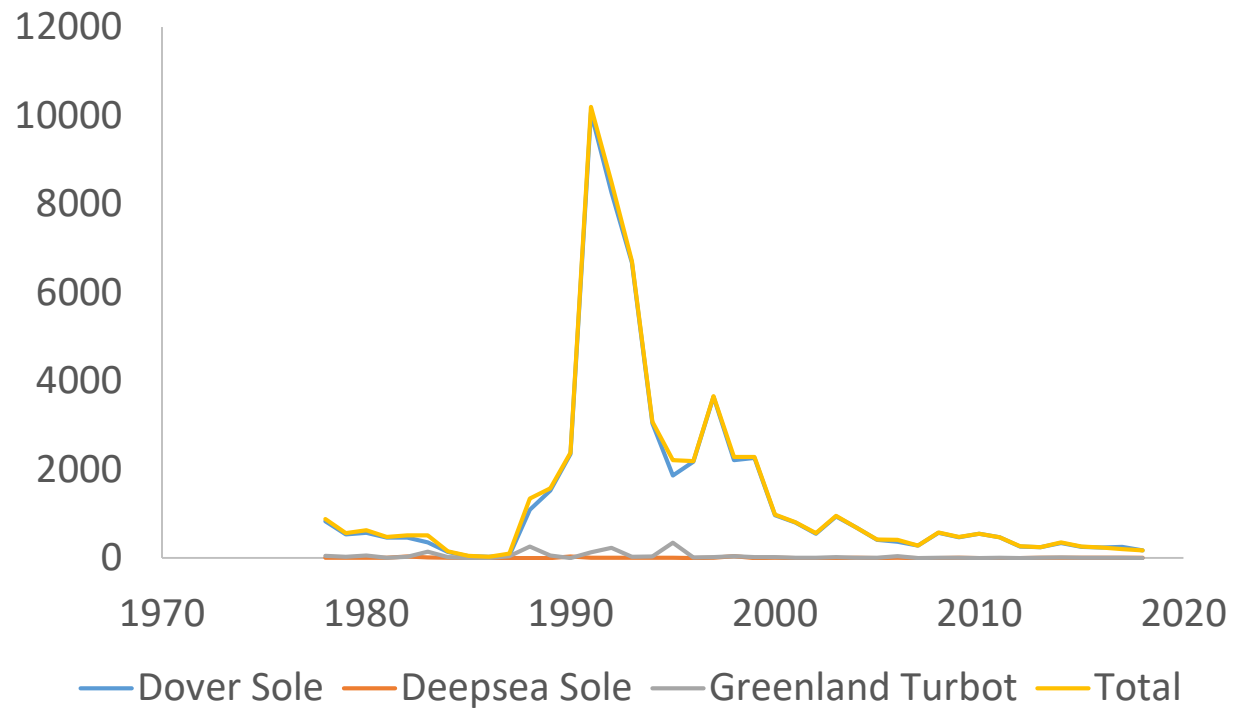
Area Apportionment (PT chose method in 2016)

- Dover sole proportions come from area- and depth-specific random effects models to smooth survey biomass and fill in depth/area gaps
- Greenland turbot and deepsea sole proportions based on average survey biomass for each species since 2001
- ABCs are applied at the complex level

Species	Year	West				Total
		Western	Central	Yakutat	Southeast	
		2.5%	36.9%	35.2%	25.3%	100.0%
Dover Sole	2019	237	3,440	3,279	2,362	9,318
	2020	241	3,485	3,322	2,393	9,441
		100.0%	0.0%	0.0%	0.0%	100.0%
Greenland Turbot	2019	179	0	0	0	179
	2020	179	0	0	0	179
		0.7%	72.9%	15.3%	11.0%	100.0%
Deepsea Sole	2019	0	3	1	0	4
	2020	0	3	1	0	4
Deepwater Flatfish	2019	416	3,443	3,280	2,362	9,501
	2020	420	3,488	3,323	2,393	9,624

- Survey biomass in 2017 was 58,307 t, up by ~ 10% from 2015

Total Catch of Deepwater Flatfish by Species and in Total



Catch/Spawning Biomass

