

SEDAR 81 Updated Projections

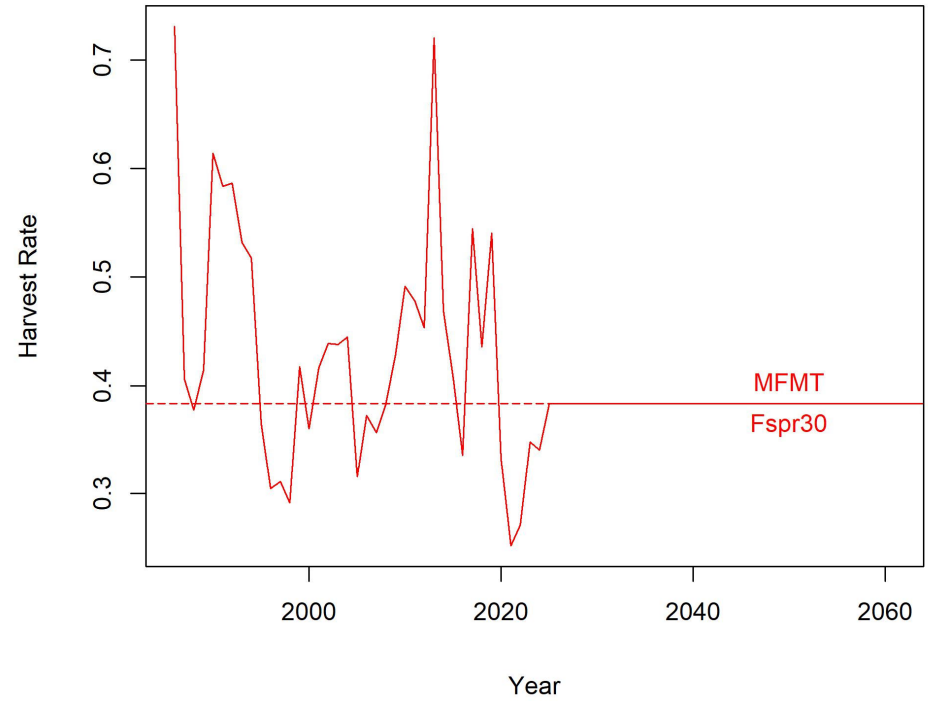
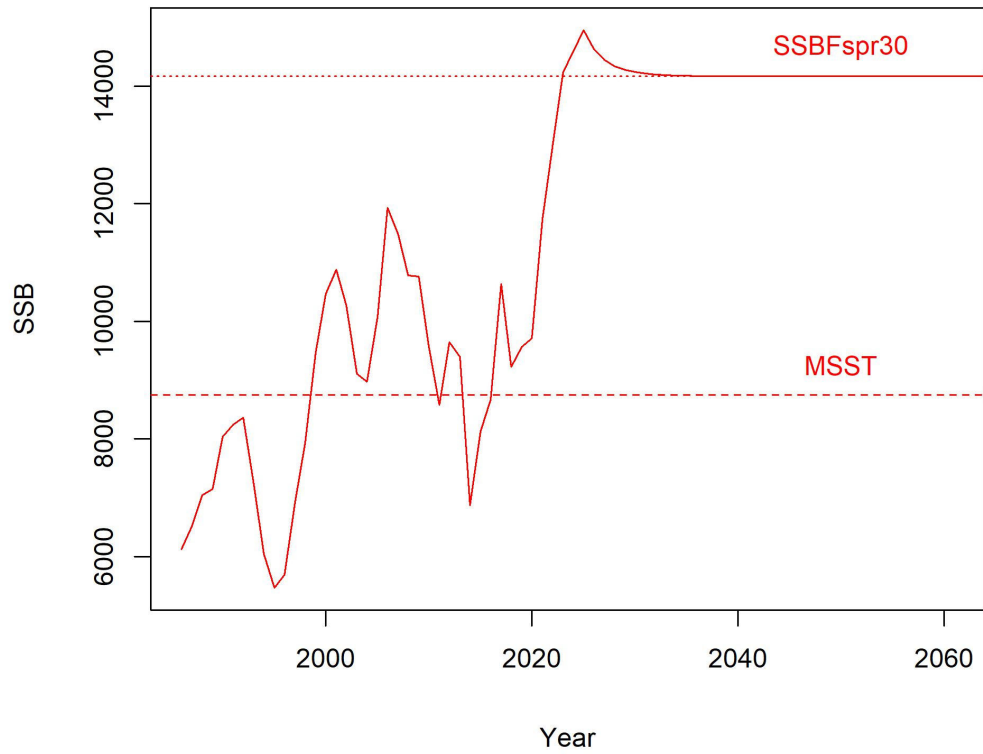


Projections Settings

Parameter	Value	Comment
Relative F	Average from 2019 - 2021	Average relative fishing mortality over terminal three years
Selectivity	Average from 2019 - 2021	Fleet specific selectivity estimated in terminal year
Retention	Average from 2019 - 2021	Fleet specific retention estimated in terminal year
Recruitment	Beverton-Holt	Derived from the Beverton-Holt stock-recruitment relationship
Interim Landings (2022-2024)	148.51/ 367.29/367.29 mt (Comm. GN) 14.12/ 37.25/37.25 mt (Comm. HL) 175.77/ 265.55/265.55 thousands of fish (HB/CB) 1245.29/ 1111.48/1111.48 thousands of fish (PR) 3025.09/ 5116.73/5116.73 thousands of fish (SH)	Final landings estimates provided for 2022; For 2023-2024, used 3-year average of landings (2017-2019)
Shrimp bycatch F	0.06	Average F over 2015-2019
Allocation Ratio	None	

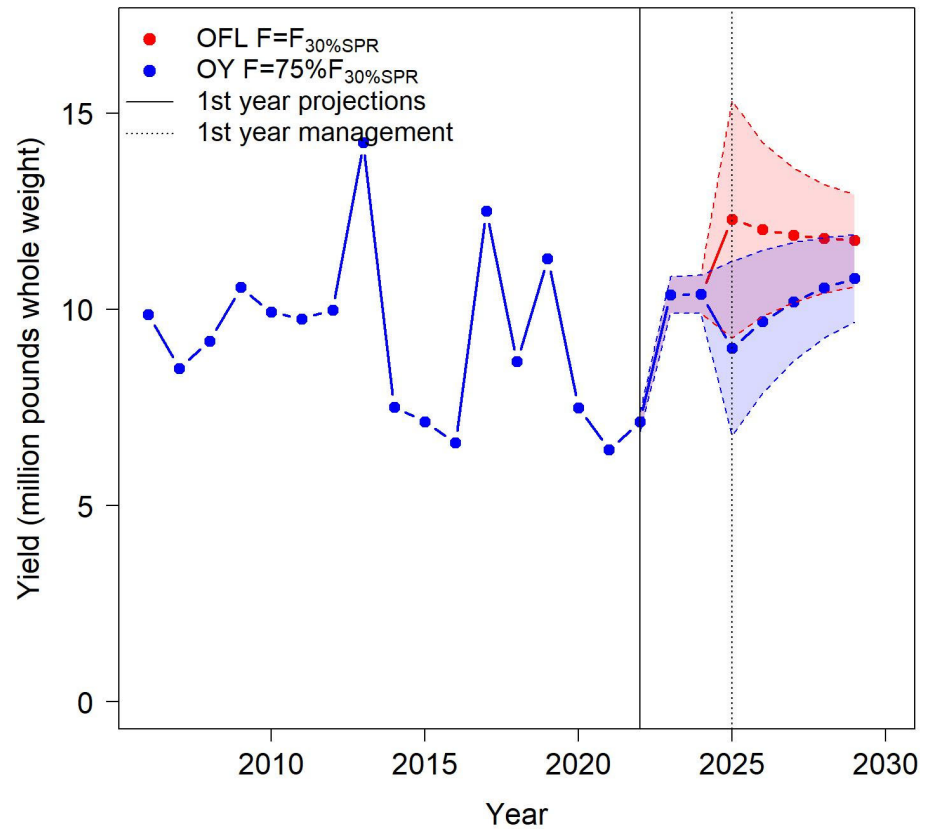
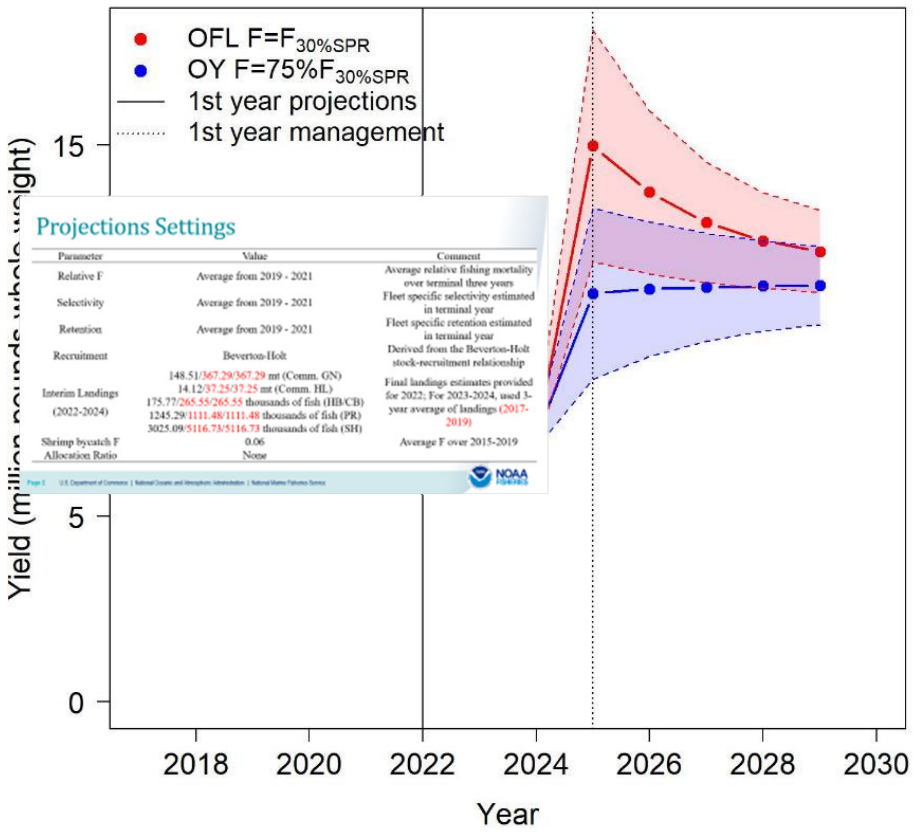
MSRA benchmarks and reference points

Criteria	Definition	Value
Base M	Target M for fully selected ages in the Lorenzen (2005) scaling	0.38
Steepness	Steepness of the Beverton-Holt stock-recruit relationship (fixed)	0.80
R0	Virgin Recruitment (1000s)	104,409
Generation Time	Fecundity-weighted mean age	5
SSB0	Virgin spawning stock biomass (mt)	55,928
Mortality Rate Criteria		
$F_{MSYproxy}$	$F_{30\%SPR}$	0.38
MFMT	$F_{MSYproxy}$	0.38
$F_{current}$	Geometric mean of the last 3 years of the assessment ($F_{2019-2021}$), including shrimp bycatch fleet	0.36
$F_{current}/MFMT$	Current stock status based on MFMT	0.93
Biomass Criteria		
$SSB_{MSYproxy}$	Equilibrium SSB at $F_{30\%SPR}$	14,168
MSST	$(1-M) * SSB_{MSYproxy}$	8,754
$SSB_{current}$	SSB_{2021}	11,734
$SSB_{current}/SSB_{FMSY}$	Current stock status based on $SSB_{F30\%SPR}$	0.83
$SSB_{current}/MSST$	Current stock status based on MSST	1.34
$SSB_{current}/SSB0$	SSB ratio in 2021	0.21



OLD

NEW



OFL Projections : $F=F_{30\%SPR}$

Year	R (1000s)	F	F/FMSY	SSB (mt)	SSB/ SSBFMSY	SSB/ MSST	SSB/SSB0	OFL (mp ww)
2022	86,494	0.271	0.71	12,964	0.91	1.48	0.23	7.13
2023	88,258	0.348	0.91	14,238	1.00	1.62	0.25	10.37
2024	88,696	0.341	0.89	14,585	1.03	1.66	0.26	10.38
2025	89,146	0.384	1.00	14,956	1.06	1.70	0.27	12.29
2026	88,758	0.384	1.00	14,635	1.03	1.67	0.26	12.04
2027	88,528	0.384	1.00	14,450	1.02	1.64	0.26	11.89
2028	88,394	0.384	1.00	14,344	1.01	1.63	0.26	11.81
2029	88,311	0.384	1.00	14,280	1.01	1.63	0.26	11.75

Constant catch

- three-year (2025-2027) : 12.074 mp ww
- five-year (2025-2029): 11.956 mp ww



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ABC Projections : $F=75\%F_{30\%SPR}$

Year	R (1000s)	F	F/FMSY	SSB (mt)	SSB/ SSBFMSY	SSB/ MSST	SSB/SSB0	OY (mp ww)
2022	86494	0.271	0.71	12964	0.915	1.481	0.232	7.131
2023	88257.7	0.348	0.91	14238	1.005	1.627	0.255	10.371
2024	88696.1	0.341	0.89	14585	1.029	1.666	0.261	10.385
2025	89146	0.288	0.75	14956	1.056	1.709	0.267	9.007
2026	88758	0.288	0.75	16066	1.134	1.835	0.287	9.686
2027	88528	0.288	0.75	16920	1.194	1.933	0.303	10.196
2028	88394	0.288	0.75	17512	1.236	2.001	0.313	10.549
2029	88311.2	0.288	0.75	17912	1.264	2.046	0.32	10.789

Constant catch

- three-year (2025-2027) : 9.63 mp ww
- five-year (2025-2029): 10.05 mp ww

