

a) Northern shrimp in Denmark Strait and off East Greenland

Advice September 2024 for 2025

Recommendation

Catches up to 1 000 t are projected to result in a very low probability (less than 10%) of the stock going below B_{lim} .

Management objectives

No explicit management plan or management objectives have been defined by the Government of Greenland. General principles from the *Convention on Cooperation in the Northwest Atlantic Fisheries* are applied.

<i>Objective</i>	<i>Status</i>	<i>Comment/consideration</i>
Maintain B above B_{lim}	●	$B > B_{lim}$
Eliminate overfishing	●	F_{lim} undefined, F level is of concern

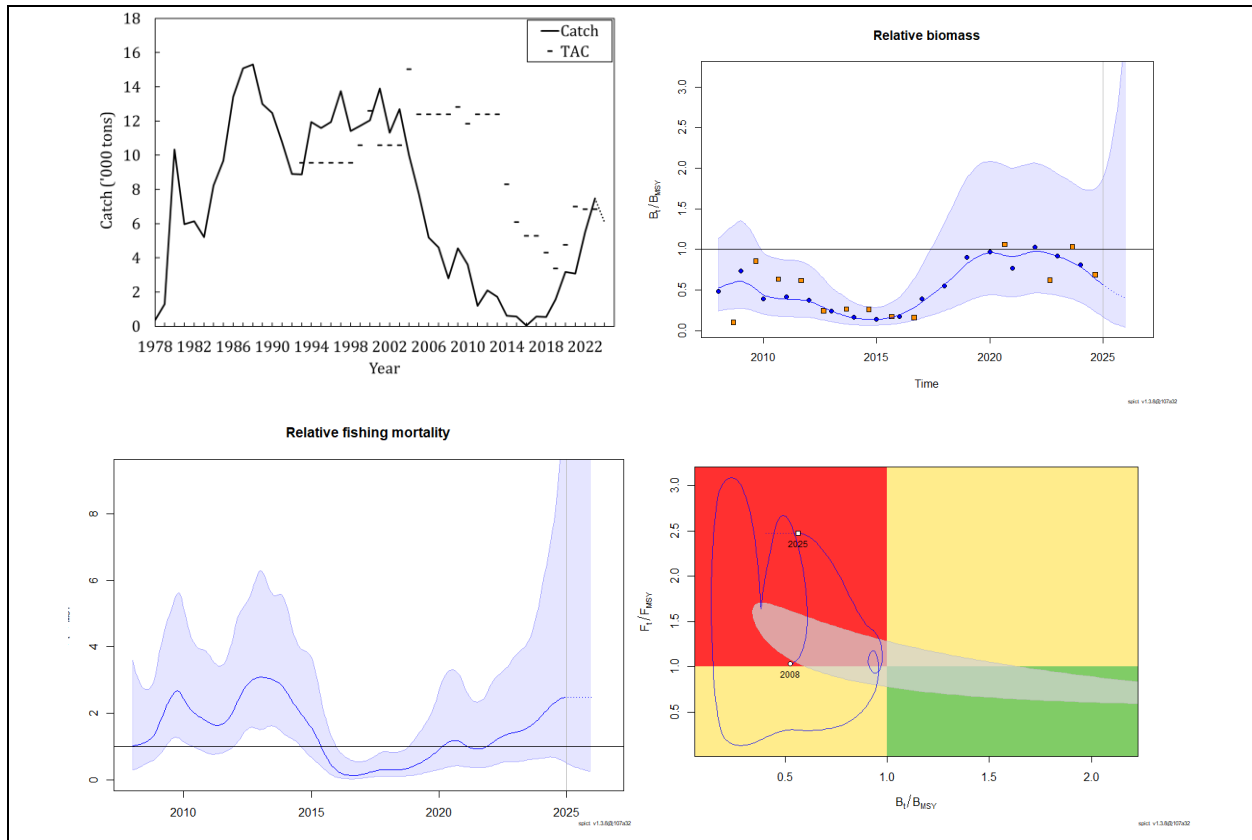
- OK
- Intermediate
- Not accomplished

Management unit

The shrimp stock is distributed off East Greenland in ICES Div. 14b and 5a and is assessed as a single stock.

Stock status

Median biomass is below B_{msy} ($B/B_{msy} = 0.58$) and the probability of being below B_{lim} is 15%. Fishing mortality is above F_{msy} ($F/F_{msy} = 2.47$). No estimates of recruitment are available.



Reference points

B_{lim} is defined as 30% of B_{msy} . The relative reference points B_{msy} and F_{msy} are estimated within the SPiCT model.

Projections

Relative reference points are estimated for six catch options for 2025.

Catch (t)	B/B_{msy}	F/F_{msy}	Prob $B < B_{msy}$	Prob $B < B_{lim}$	Prob $F > F_{msy}$	P($B_{2026} < B_{2025}$)
1 000	0.77	0.48	0.66	0.06	0.26	0.02
1 500	0.71	0.75	0.70	0.10	0.40	0.13
2 000	0.64	1.05	0.72	0.16	0.52	0.32
2 500	0.57	1.38	0.75	0.22	0.61	0.48
3 000	0.51	1.76	0.77	0.29	0.69	0.59
3 500	0.44	2.20	0.78	0.36	0.75	0.66

Catches above 3 000 t would result in a 30% or greater probability of B falling below B_{lim} and would likely result in continued decline of the stock.

Assessment

The Surplus Production in Continuous Time (SPiCT) model was used for the assessment of this stock.

The next assessment is scheduled for 2025.

Human impact

Mainly fishery related mortality has been documented. Other sources (*e.g.*, pollution, shipping, oil-industry) are considered un-documented.

Biological and Environmental Interactions

There is no integrated summary information available on the structure, status and trends of the marine ecosystem for the area inhabited by this stock. Atlantic cod is an important predator on shrimp, while the predation impact is unknown.

Ecosystem sustainability of catches

Shrimp is included in the benthivore guild. There are currently neither Ecosystem Production Units (EPUs) defined nor Total Catch Index (TCI) estimated for the distribution area of this stock.

Fishery

Shrimp is caught in a directed trawl fishery. The fishery is regulated by TAC and bycatch reduction measures include move-on rules and sorting grids.

Recent catches and TAC ('000 t) were as follows:

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Enacted TAC	6.1	5.3	5.3	4.3	3.4	4.8	7.0	6.9	6.9	7.9
SC advised TAC	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	2.0	2.5
STACFIS Catch	0.6	0.0	0.6	0.5	1.6	3.2	3.1	5.5	7.5	6.1 ¹

¹ To June 30

Effects of the fishery on the ecosystem

Measures to reduce effects of the fishery on the ecosystem include move-on rules to protect sponges and corals.

Source of Information

SCR Docs. 21/044, 24/056, 24/057, 24/058; FC Doc. 04-18