

White Hake in Divisions 3NO and Subdiv. 3Ps










Advice June 2021 for 2022-2023

Recommendation for 2022-2023

Given the absence of strong recruitment, catches of white hake in 3NO should not increase. Average annual total catches of the most recent five years were around 400 tonnes.

Management objectives

No explicit management plan or management objectives defined by Fisheries Commission. General Convention Principles (NAFO/GC Doc 08/3) are applied. Advice is based on survey indices and catch trends in relation to estimates of recruitment.

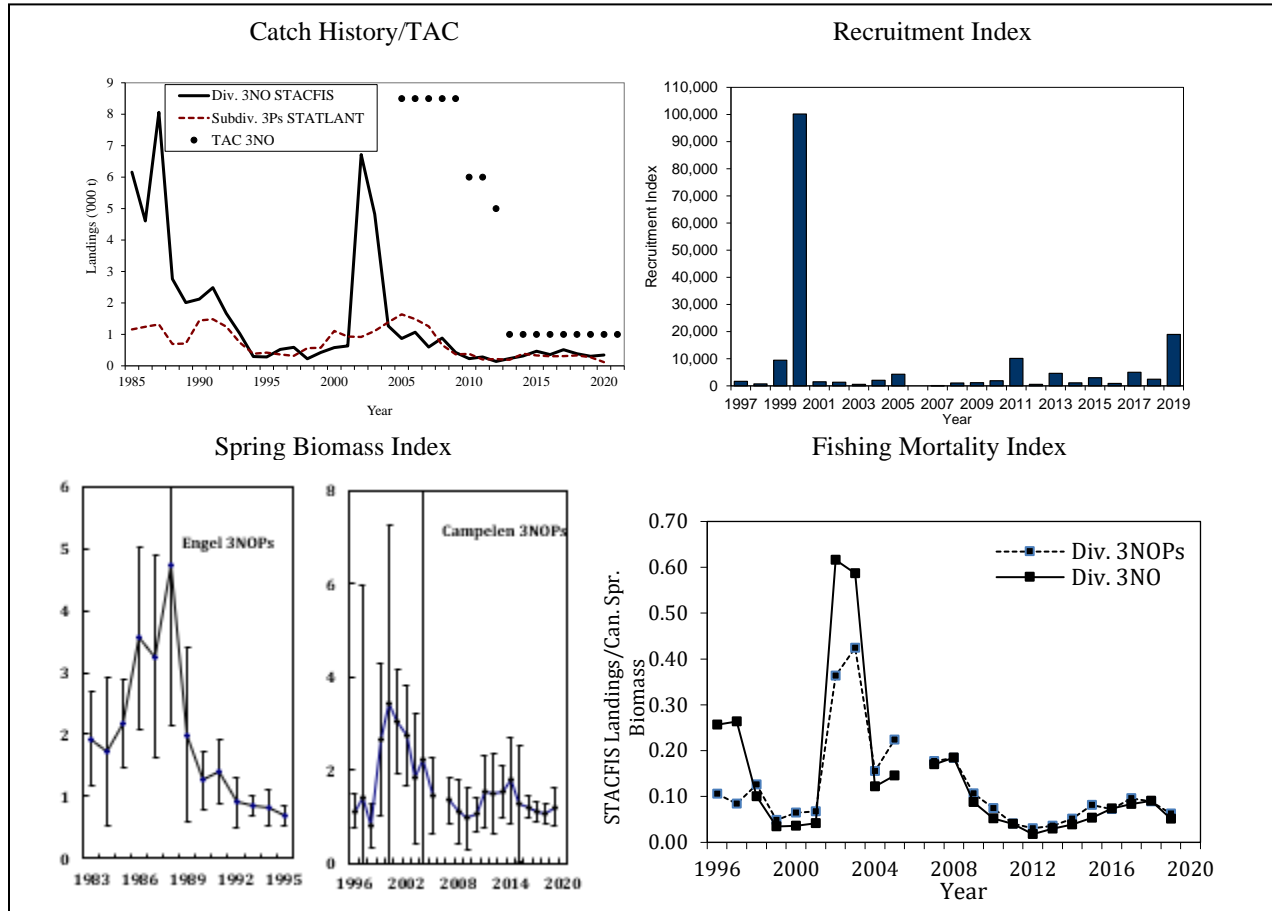
<i>Convention objectives</i>	<i>Status</i>	<i>Comment/consideration</i>	
Restore to or maintain at B_{msy}		B_{msy} unknown, stock at low level	 OK
Eliminate overfishing		F_{msy} unknown, fishing mortality is low	 Intermediate
Apply Precautionary Approach		Reference points not defined	 Not accomplished
Minimise harmful impacts on living marine resources and ecosystems		No specific measures, general VME closures in effect	 Unknown
Preserve marine biodiversity		Cannot be evaluated	

Management unit

The management unit is confined to NAFO Div. 3NO, which is a portion of the stock that is distributed in NAFO Div. 3NO and Subdivision 3Ps.

Stock status

The assessment is considered data limited and is associated with a relatively high uncertainty. Biomass of this stock increased in 1999 and 2000, generated by the large recruitment observed in those years. Subsequently, the biomass index decreased and has since remained variable but lower. No large recruitments have been observed since 2000, however the 2019 index is the highest in two decades. Fishing mortality is low.



Reference Points

Not defined

Assessment

Based upon a qualitative evaluation of stock biomass trends and recruitment indices. The assessment is considered data limited and as such associated with a relatively high uncertainty. Input data are research survey indices and fishery data (STACFIS 2021).

The next full assessment of this stock will be in 2023.



Human impact

Mainly fishery related mortality has been documented. Mortality from other human sources (e.g. pollution, shipping, oil-industry) are undocumented.

Biology and Environmental interactions

On the Grand Bank, white hake are near the northern limit of their range, concentrating along the southwest slope of the Grand Bank at temperatures above 5°C. The major spawning area is located on the shelf-edge on the Grand Bank. Weaker ocean currents on the continental slope during the spawning period are hypothesized to reduce potential losses of eggs and larvae due to entrainment in the Labrador Current and increase recruitment potential.

White hake feed mostly on crustaceans and fish. Larger individuals are reported to be cannibalistic and to feed upon eggs and juveniles. In nearshore areas, white hake are also thought to predate on smaller juvenile cod. Predators of white hake include Atlantic cod, other fish species, Atlantic puffins, Arctic terns, other seabirds and seals.

This stock straddles the 3Ps and 3LNO Ecosystem Production Units (EPU), which have been experiencing low productivity conditions in recent years, including biomass declines across multiple trophic levels and stocks in 3LNO since 2014.

Fishery

White hake is caught in directed gillnet, trawl and long-line fisheries. In directed white hake fisheries, Atlantic cod, black dogfish, monkfish and other species are landed as bycatch. In turn, white hake are also caught as bycatch in gillnet, trawl and long-line fisheries directing for other species. The fishery in NAFO division 3NO, and subdivision 3Ps, are regulated by quotas.

Recent catch estimates and TACs ('000 t) are:

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Div. 3NO:										
TAC	5	1	1	1	1	1	1	1	1	1 ¹
STATLANT 21	0.1	0.2	0.3	0.4	0.4	0.5	0.3	0.3	0.3	
STACFIS	0.1	0.2	0.3	0.5	0.4	0.5	0.4	0.3	0.3	
Subdiv. 3Ps:										
TAC							0.5	0.5	0.5	0.5
STATLANT 21	0.2	0.2	0.4	0.3	0.4	0.3	0.3	0.3	0.1	

¹May change in-season. See NAFO FC Doc. 19/01.

Effects of the fishery on the ecosystem

No specific information is available. General impacts of fishing gears on the ecosystem should be considered.

Special comments

No special comments.

Sources of Information

SCR Doc.20/010; 21/004, 022; SCS Doc. 21/05, 06, 08, 09