

## White Hake in Divisions 3NO and Subdiv. 3Ps




## Advice June 2019 for 2020-2021

**Recommendation for 2020-2021**

Given the absence of strong recruitment, SC recommends catches of white hake in Divs. 3NO should not increase. Average annual catches over 2014 to 2018 were 406 tonnes.

**Management objectives**

No explicit management plan or management objectives have been defined by Commission. Convention General Principles are applied. Advice is based on survey indices and catch trends in relation to estimates of recruitment.

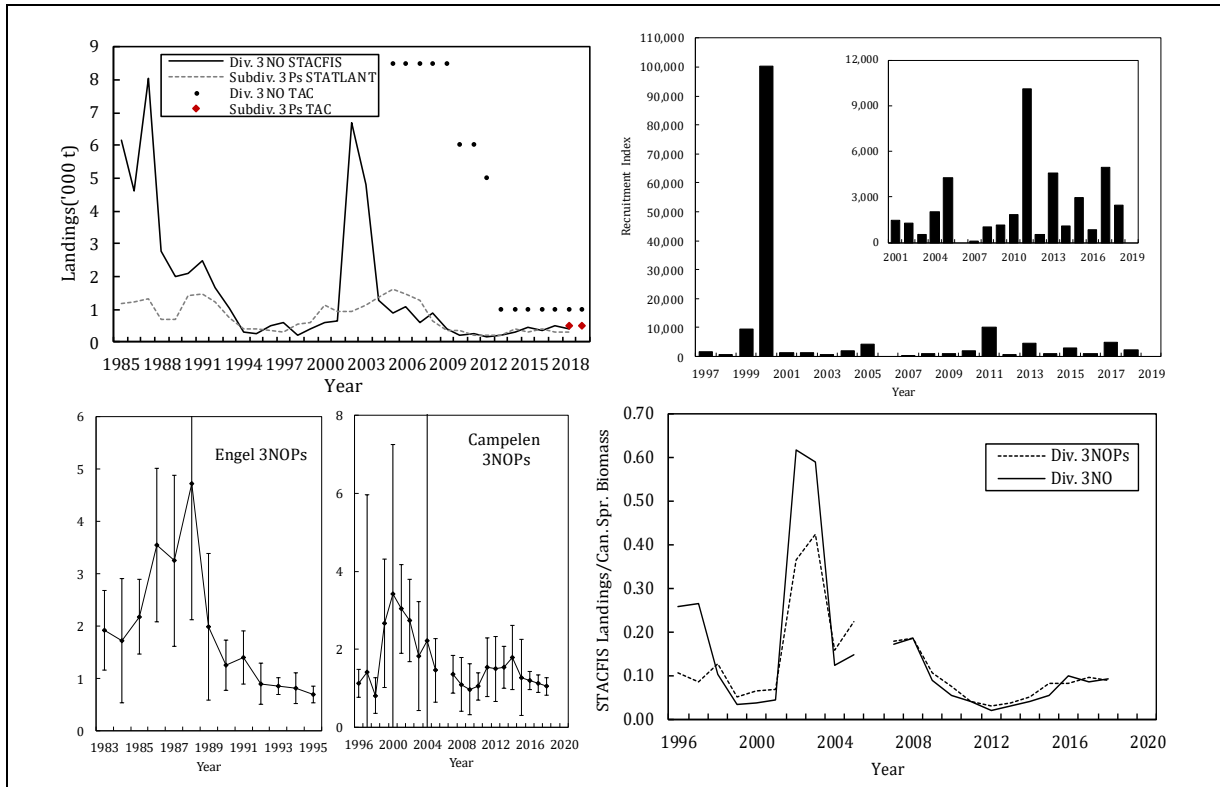
<i>Convention General Principles</i>	<i>Status</i>	<i>Comment/consideration</i>	
Restore to or maintain at $B_{msy}$	<input type="radio"/>	$B_{msy}$ unknown, stock at low level	 OK
Eliminate overfishing	<input type="radio"/>	$F_{msy}$ unknown, fishing mortality is low	 Intermediate
Apply Precautionary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

The next full assessment of this stock will be in 2021.

*Human impact*

Mainly fishery related mortality has been documented. Mortality from other human sources (e.g. pollution, shipping, oil-industry) is 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 is hypothesized to reduce potential losses of eggs and larvae due to entrainment in the Labrador Current and increase recruitment potential.

The Grand Bank (3LNO) EPU is currently experiencing low productivity conditions and biomass has declined across multiple trophic levels and stocks 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 is



regulated by NAFO and in subdivision 3Ps, by Canada (quota initially established in 2018). The fishery is opportunistic when favorable ecosystem conditions allow good recruitment.

Recent catch estimates and TACs ('000 tonnes) are:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Div. 3NO:</b>										
TAC	6	6	5	1	1	1	1	1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>
STATLANT 21	0.3	0.2	0.1	0.2	0.3	0.4	0.4	0.5	0.3	
STACFIS	0.2	0.2	0.1	0.2	0.3	0.5	0.4	0.5	0.4	
<b>Subdiv. 3Ps:</b>										
TAC									0.5	0.5
STATLANT 21	0.4	0.2	0.2	0.2	0.4	0.3	0.4	0.3	0.3	

<sup>1</sup>May change in-season. See NAFO Com. 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.

### Sources of Information

SCR Doc. 19/15,20,22; SCS Doc. 19/09,10,11.