

American Plaice in Divisions 3LNO

Advice June 2016 for 2017-2018

Recommendation for 2017- 2018

SSB remains below B_{lim} , therefore Scientific Council recommends that, in accordance with the rebuilding plan, there should be no directed fishing on American plaice in Div. 3LNO in 2017 and 2018. Bycatches of American plaice should be kept to the lowest possible level and restricted to unavoidable bycatch in fisheries directing for other species.

Management objectives

In 2011 FC adopted an "Interim 3LNO American Plaice Conservation Plan and Rebuilding Strategy" (FC Doc. 11/21). There is a Harvest Control Rule (HCR) in place for this stock.

Convention objectives	Status	Comment/consideration
Restore to or maintain at B_{msy}	●	$B < B_{lim}$
Eliminate overfishing	●	No directed fishery, current bycatches are delaying recovery
Apply Precautionary Approach	●	Reference points defined
Minimise harmful impacts on living marine resources and ecosystems	●	VME closures in effect, no specific measures.
Preserve marine biodiversity	○	Cannot be evaluated

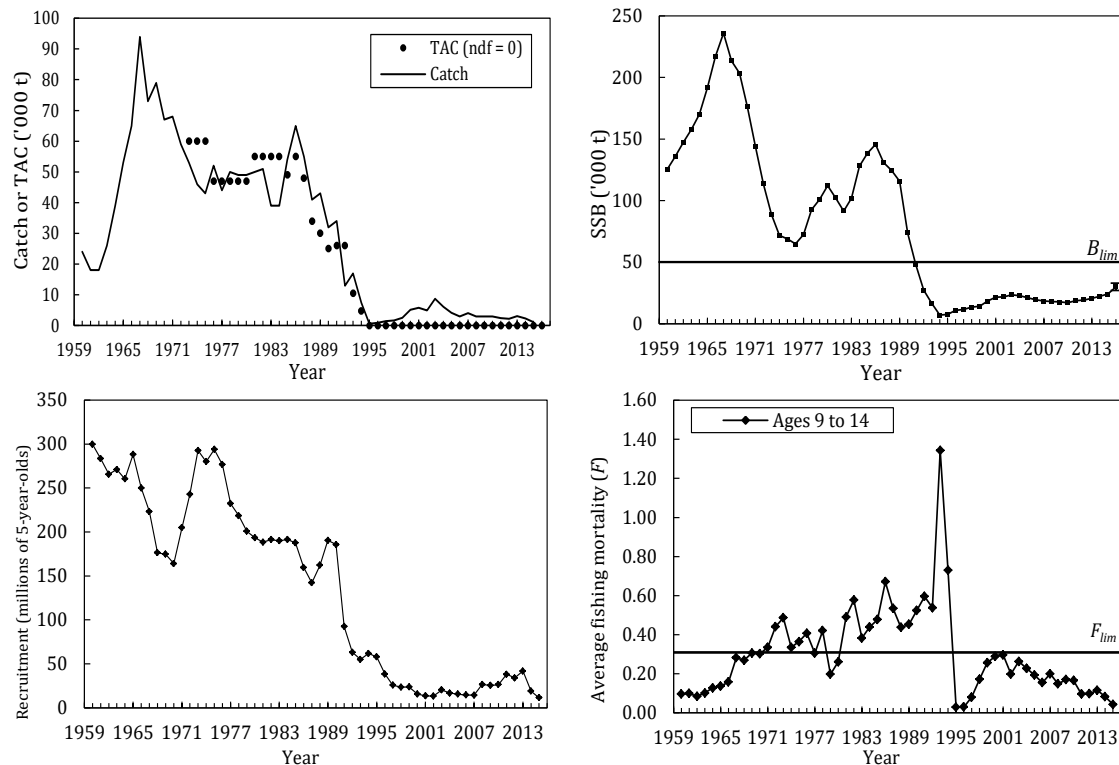
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 ● Intermediate
 ● Not accomplished
 ○ Unknown

Management unit

American plaice in Div. 3LNO is considered a separate stock.

Stock status

The stock remains low compared to historic levels and, although SSB is increasing, it is still estimated to be below B_{lim} . Recruitment has been low since the late 1980s, but has shown an increasing trend from 2007-2013. This has been followed by lower recruitments in 2014 and 2015.



Reference points

B_{lim} : 50 000 t of spawning biomass (Scientific Council Report, 2003)

B_{msy} : 242 000 t of spawning biomass (Scientific Council Report 2011)

F_{lim} : 0.31 (Scientific Council Report, 2011)

Projections

F = 0			
SSB ('000 t)			
	p10	p50	p90
2016	27	30	33
2017	32	35	39
2018	35	38	43
2019	37	41	46

F ₂₀₁₃₋₁₅ = 0.08						
SSB ('000 t)				Yield ('000 t)		
	p10	p50	p90	p10	p50	p90
2016	27	30	33	2.5	2.7	3.0
2017	29	32	36	2.6	2.8	3.1
2018	30	33	37	2.6	2.9	3.2
2019	30	33	37			

Fishing Mortality	Yield			P(SSB > B_{lim})			P(SSB ₂₀₁₉ > SSB ₂₀₁₆)
	2017	2018	2019	2017	2018	2019	
F = 0	-	-	-	<5%	<5%	<5%	>95%
F ₂₀₁₃₋₂₀₁₅ = 0.08	2744	2835	2906	<5%	<5%	<5%	>95%

SSB was projected to have a probability of >0.95 of being less than B_{lim} by the start of 2019 under both fishing mortality scenarios. However under each scenario there is a >0.95 probability that SSB in 2019 will be greater than in 2016.

Assessment

An analytical assessment using the ADAPTive framework tuned to the Canadian spring, Canadian autumn and the EU-Spain Div. 3NO survey was used. A virtual population analysis (VPA) was conducted based on the 2014 assessment formulation, with updated data.

The next full assessment is planned for 2018.

Human impact

Mainly fishery related mortality. Other sources (e.g. pollution, shipping, oil-industry) are undocumented.

Biological and environmental interactions

Capelin and sandlance as well as other fish and invertebrates are important prey items for American plaice. There has been a decrease in age at 50% maturity over time, possibly brought about by some interaction between fishing pressure and environmental/ecosystem changes during that period.

Fishery

The stock has been under moratorium since 1995. American plaice in recent years is caught as bycatch mainly in otter trawl fisheries of yellowtail flounder, skate, Greenland halibut and redfish. To estimate catch

for 2011-2014, for Div. 3N, information on effort from NAFO observers and logbook data was used where possible with the assumption that CPUE has not changed substantially from 2010. In 2015, STATLANT 21A data was used for Canadian fisheries and Daily Catch Records (DCR) for fisheries in the NRA.

Recent catch estimates and TACs are:

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TAC	ndf	ndf	ndf	ndf	ndf	ndf	ndf	ndf	ndf	ndf
STATLANT 21	1.5	1.9	1.8	1.5	1.2	1.3	2.2	1.4	1.1	
STACFIS	3.6	2.5	3.0	2.9	2.4 ¹	2.1 ¹	3.0 ¹	2.3 ¹	1.1 ²	

ndf No directed fishing.

¹ Catch was estimated using fishing effort ratio applied to 2010 STACFIS catch.

² Catch was estimated using STATLANT 21 data for Canadian fisheries and Daily Catch Records for fisheries in the NRA.

Effects of the fishery on the ecosystem

No specific information is available. General impacts of fishing gears on the ecosystem should be considered. An area of Divs. 3LNO has been closed to protect sponge, seapens and coral.

Sources of information

SCS Doc. 16/5, 6, 8, 9, 10, 15; SCR Doc. 16/10, 12; 30 GC Doc. 08/3