



New England Fishery Management Council

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MEMORANDUM

Date: 11/1/2006
To: Pelagics Committee
From: Chad Demarest, Whiting PDT Chair

SUBJECT: Biological reference points and trends for small mesh multispecies

A SAFE Report has not been produced for this fishery since 2003. This memo will briefly update you on the status of the five stocks included in the Small Mesh Multispecies fishery.

Overfishing definitions

Overfishing definitions for silver hake, red hake and offshore hake were specified in Amendment 12 to the NEMS FMP (2000). They were amended by the Whiting Monitoring Committee (WMC) in 2001, and the new definitions were adopted for SAW 42 (March 2006), which was the most recent assessment for silver hake. The most recent biological data for the northern and southern stocks of red hake and offshore hake are from the 2003 WMC SAFE Report.

The following overfishing definitions are extracted from the 2003 WMF SAFE Report.

Table 1 Current Overfishing Definition Reference Points for Silver Hake

STOCK	THRESHOLDS	TARGETS
Northern Silver Hake	$F_{0.1} = (0.41)$ $B = \frac{1}{2} B_{MSY}$ proxy = 3.31 kg/tow	F below $F_{0.1}$ $B = 1973-1982$ weight per tow = 6.63 kg/tow
Southern Silver Hake	$F_{0.1} = (0.39)$ $B = \frac{1}{2} B_{MSY}$ proxy = 0.89 kg/tow (See footnote)	F below $F_{0.1}$ $B = 1973-1982$ weight per tow = 1.78 kg/tow (See footnote)

Table 6 Overfishing Definition Reference Points for the Northern Stock of Red Hake

	THRESHOLD	TARGET
Maximum Sustainable Yield	2,000 MT	Not applicable
Exploitation Index (catch/survey biomass)	0.65	0.39
Stock Biomass (kg/tow)	1.6	3.1

Table 9 Overfishing Definition Reference Points for the Southern Stock of Red Hake

	THRESHOLD	TARGET
Maximum Sustainable Yield	Not estimable	
Fishing Mortality (F)	Not specified	Not specified
Stock Biomass (B)	Average weight less than 0.12 kg AND survey abundance for immature fish less than 4.72 per tow	Not specified

Table 12 Overfishing Definition Reference Points for Offshore Hake

	THRESHOLD	TARGET
Maximum Sustainable Yield	Not estimable	
Fishing Mortality (F)	Not specified	Not specified
Stock Biomass (B)	Average weight less than 0.24 kg AND survey abundance for immature fish (<30 cm) less than 0.33 per tow	Not specified

Current overfishing status

Tables 1 and 2 were constructed using data from the most recent silver hake assessment and the 2003 WMC SAFE Report for the remaining three small mesh multispecies (SMM) stocks. Figures 1 – 4 are derived from data found in the most recent silver hake assessment (SAW 42). Biomass and exploitation indices for the two red hake stocks and offshore hake have not been updated since the 2003 WMC SAFE Report and those tables are not reproduced here.

Table 1 – Biomass reference points for the five SMM stocks

	Whiting-North	Whiting-South	Red Hake-North	Red Hake-South	Offshore Hake	
OVERFISHED	Biomass Target Type	BMSY proxy: Delta Mean KG/Tow 1973-82	BMSY proxy: Delta mean KG/Tow 1973-82	BMSY proxy: Mean KG/Tow 1978-96	Not defined	Not defined
	Biomass Target Value	6.63	1.78	3.1	Not defined	Not defined
	Biomass Threshold Type	1/2 BMSY proxy (SAW 32)	1/2 BMSY proxy (SAW 32)	1/2 BMSY proxy (Am. 12)	Avg. fish weight in fall survey > 25th %ile from 1963-97 AND fall survey #/tow for immature (< 25 cm) fish < median from 1963-1997	Avg. fish weight in fall survey > 25th %ile from 1963-97 AND fall survey #/tow for immature (< 30 cm) fish < median from 1963-1997
	Biomass Threshold Value	3.31	0.89	1.6	0.12 kg/fish and 4.72 fish/tow	0.24 kg/fish and 0.33 fish/tow
	Evaluation Criteria Type	3-year Avg. Delta Fall Survey	3-year Avg. Delta Fall Survey	3-year Avg. Delta Fall Survey	3-year Avg. Fall Survey Values	3-year Avg. Fall Survey Values
	Evaluation Criteria Value	6.72	1.37	6	0.1 KG/Fish and 5.2 Fish/Tow	0.2 KG/Fish and 0.8 Fish/Tow
	Overfished?	NO	NO	NO	NO	NO
	Latest year of assessment	2006	2006	2003	2003	2003

Table 2 – Fishing mortality reference points for the five SMM stocks

	Whiting-North	Whiting-South	Red Hake-North	Red Hake-South	Offshore Hake	
OVERFISHING	Exploitation Target Type	FMSY proxy	60% FMSY proxy	60% FMSY proxy	Not defined	Not defined
	Exploitation Target Value	2.57	20.63	0.39	Not defined	Not defined
	Exploitation Threshold Type	FMSY proxy: landings/3-year average fall survey	FMSY proxy: landings/3-year average fall survey	FMSY proxy: landings/3-year average fall survey	Avg. fish weight in fall survey > 25th %ile from 1963-97 AND fall survey #/tow for immature (< 25 cm) fish < median from 1963-1997	Avg. fish weight in fall survey > 25th %ile from 1963-97 AND fall survey #/tow for immature (< 30 cm) fish < median from 1963-1997
	Exploitation Threshold Value	2.57	34.39	0.65	0.12 kg/fish and 4.72 fish/tow	0.24 kg/fish and 0.33 fish/tow
	Evaluation Criteria Type	landings/3-year average fall survey	landings/3-year average fall survey	landings/3-year average fall survey	landings/3-year average fall survey	landings/3-year average fall survey
	Evaluation Criteria Value	0.24	4.85	0.1	0.1 KG/Fish and 5.2 Fish/Tow	0.2 KG/Fish and 0.8 Fish/Tow
	Overfishing occurring?	NO	NO	NO	NO	NO
	Latest year of assessment	2004	2004	2002	2002	2002

Figure 1 – Northern Silver Hake trends in biomass indices

3-year average (delta mean kg/tow)

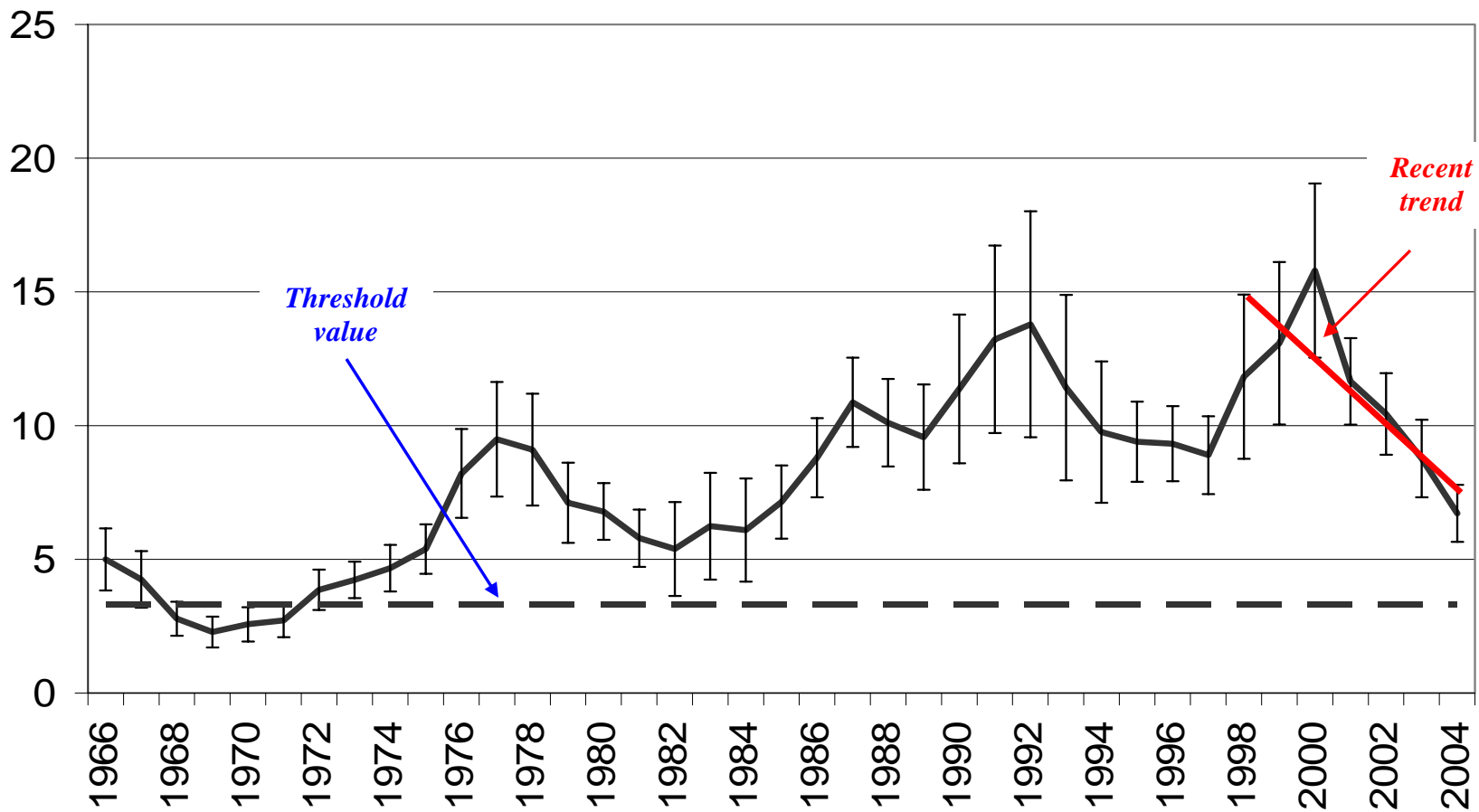


Figure 2 – Southern Silver Hake trends in biomass indices

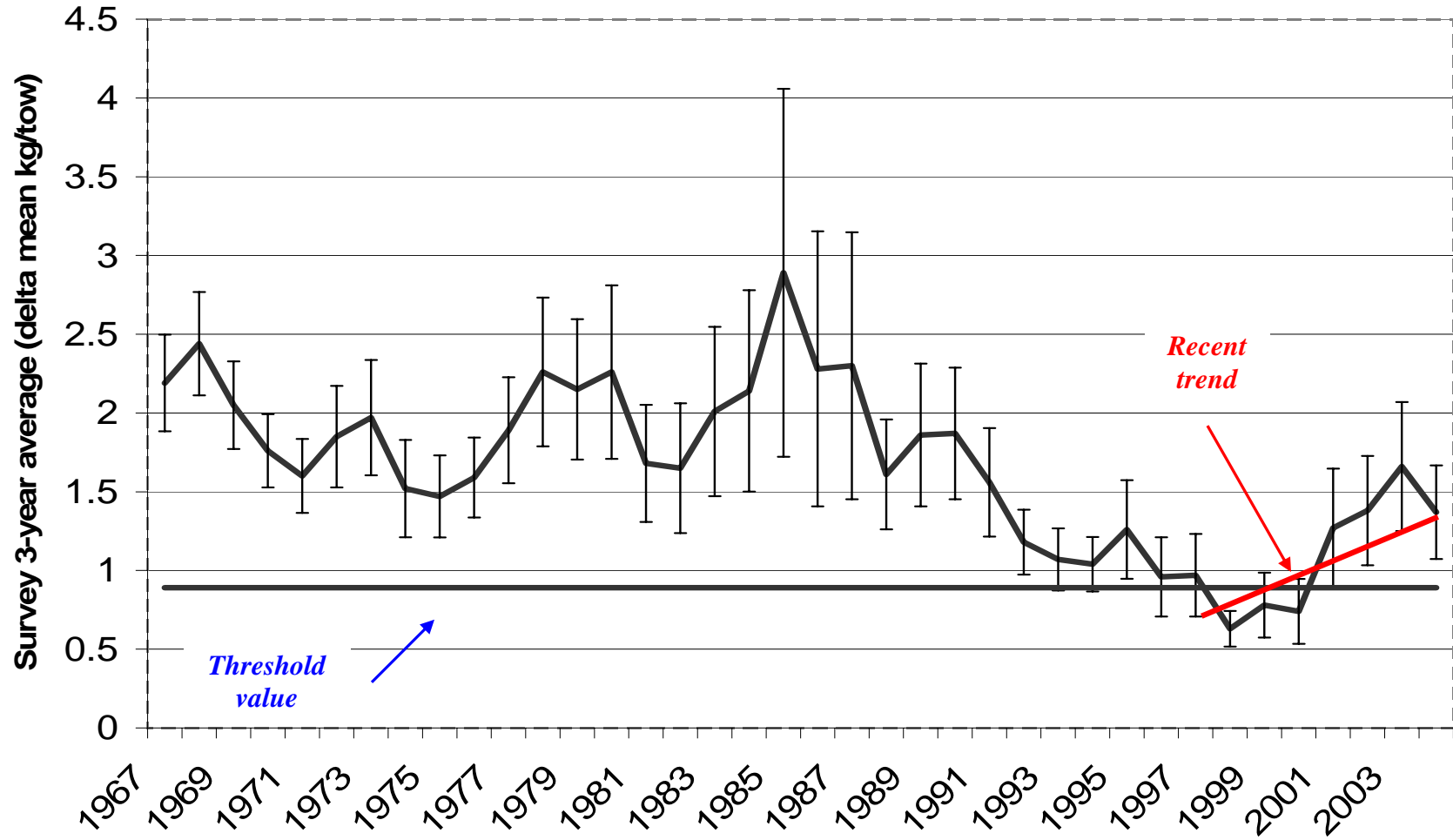


Figure 3 – Northern Silver Hake trends in exploitation indices

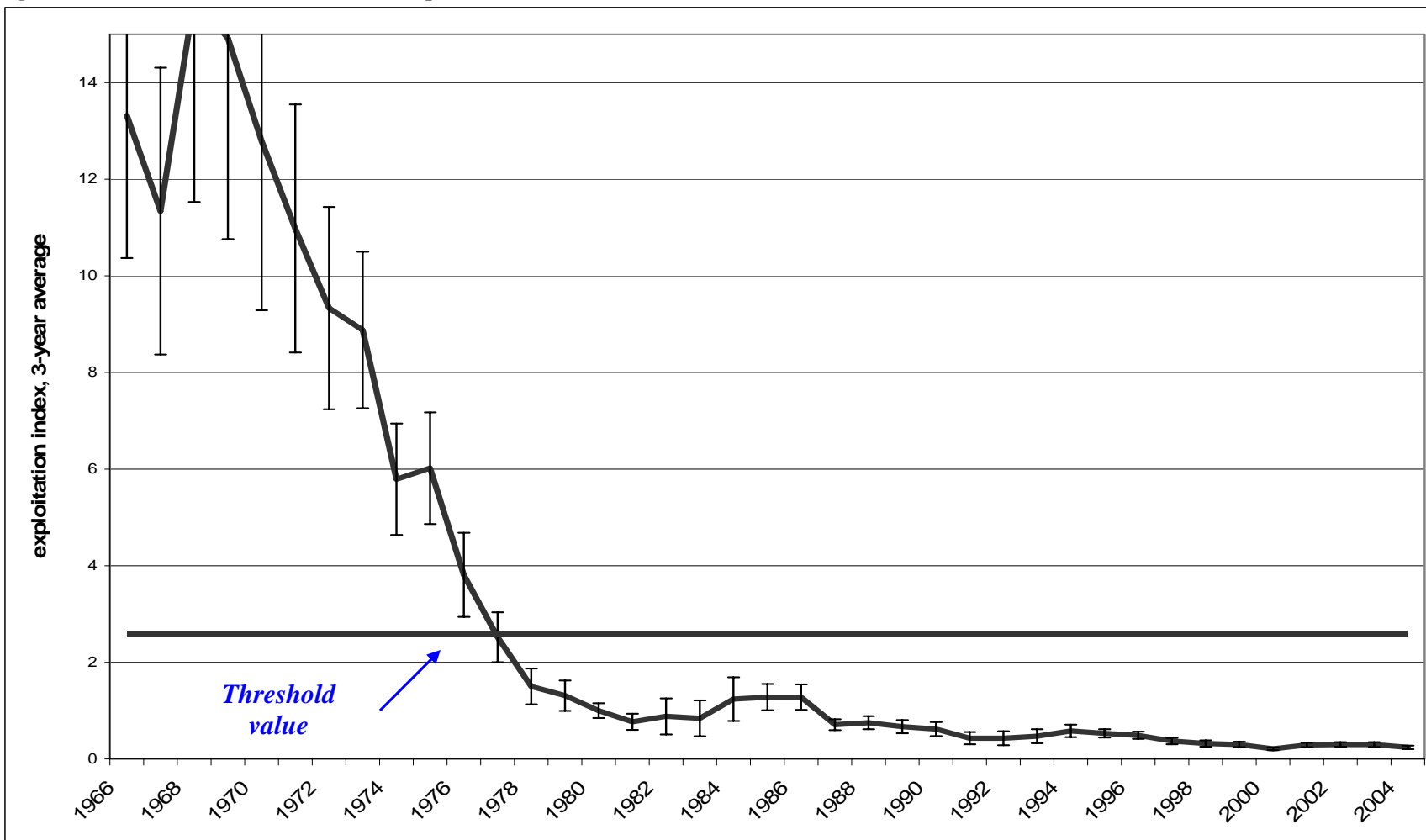


Figure 4 - Southern Silver Hake trends in exploitation indices

