

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

#5

Richard B. Robins, Jr.
Chairman

Lee G. Anderson
Vice-Chairman

800 North State Street, Suite 201
Dover, Delaware 19901-3910
Tel: 302-674-2331

Toll Free: 877-446-2362
FAX: 302-674-5399
www.mafmc.org

Christopher M. Moore, Ph.D.
Executive Director

M E M O R A N D U M

DATE: 27 September 2011
TO: JLA Joint Spiny Dogfish Committee
FROM: JLA Jim Armstrong, Chair, Spiny Dogfish Monitoring Committee
SUBJECT: Summary of Spiny Dogfish Monitoring Committee Management Measure Recommendations for 2012

The Spiny Dogfish Monitoring Committee (MC) met in Baltimore, MD on September 22, 2011 in conjunction with the ASMFC Spiny Dogfish Technical Committee (TC) to develop management measure recommendations for the 2012 fishing year. Monitoring Committee members in attendance included Jim Armstrong (MAFMC staff), Paul Rago, (NEFSC), Tobey Curtis, (NERO), Eric Schneider (RI-DEM), Dan McKiernan (MADMF), Jack Musick (VIMS) and Angel Willey (MD DNR). Members of the TC (but not the MC) that were in attendance included Chris Vonderweidt (ASMFC staff), Matt Gates (CT DEP), Russ Babb (NJ DEP), and Matt Cieri (ME DNR). MC member Eric Brazer (CCCHFA) and TC member Wilson Laney (USFWS) attended via teleconference. Members of the public in attendance included Louis Julliard (AML International), Brian Marder (Marder Trawling), Steve Barndollar (Seatrade), and John Whiteside (Sustainable Fisheries Association).

Overfishing Limit / Allowable Biological Catch (OFL / ABC)

The MC received an update on the SSC's OFL and ABC recommendations. The Fmsy proxy (0.2439) was used as the basis for the overfishing limit (OFL) by the SSC. OFL, therefore was defined as the median (not mean as suggested in the staff memo) estimate of total catch at $F = 0.2439$, which is 25,131 mt (55.404 M lbs). For ABC, the SSC recommended a reduction from OFL based on a probability of overfishing (P^*) of 40%. This probability is in keeping with the SSC's risk policy for a level-3 assessment on a "typical" stock, with typical meaning that species life history and/or current population conditions are well characterized by the assessment. The ABC that corresponds to $P^*=40\%$ in 2012 is 20,352 mt (44.868 M lbs).

Calculation of the Federal TAL and commercial quota

The federal spiny dogfish TAL is calculated using the process outlined in the Council's Omnibus ACL/AM Amendment (see Figure 1 in the staff memo). The values corresponding to the steps in the process are given in Table 1. In general, the TAL is the remaining catch available as landings after accounting for management uncertainty and all other types of removals considered by the assessment. The other types of removals include Canadian commercial landings and U.S. discards (commercial and recreational). The commercial quota is the remaining landings after a further reduction to account for U.S. recreational landings.

Canadian Landings and Calculation of the Domestic ACL

Because of a major shift in Canadian landings beginning in 2009, the MC chose to reduce ABC by average realized Canadian landings in 2009 – 2010. Canadian spiny dogfish landings dropped 93% in 2009 compared to 2008 (3.466 M lb; 1,572 mt see Table 1 in the stock status report). In 2010, commercial landings dropped to 6 mt (0.131 M lb). This was considered by the MC to be a new stanza in Canadian landings and subsequent year reductions will likely be a long term average of Canadian landings beginning in 2009. Accordingly,

$$\text{Domestic ACL} = \text{ACL} - \text{Canadian landings}_{2009-2010\text{ave}} = 20,352 \text{ mt} - 59.5 \text{ mt} = 20,293 \text{ mt} (44.737 \text{ M lb}).$$

Management Uncertainty and Calculation of the ACT

Management uncertainty was addressed by the MC based on its expectation of the likelihood that landings would exceed the specified management measures. During the discussion, it was observed, that the timeliness of landings monitoring has generally improved during the management history of spiny dogfish and is probably at its best within the most recent couple of years. Additionally, it was pointed out that realized F has been lower than target levels in all management years for the stock. During 2009-2010, after regional and state-specific accountability measures were put in place by the ASMFC, realized landings have been at or below target (see Table 1 in the staff memo). Lags in reported landings in 2011 do appear to have resulted in landings above periodic and regional limits when closure went into effect, and going forward, a more conservative closure trigger may be needed. It was generally accepted that management uncertainty is non-zero, however, a means of arriving at an appropriate non-zero buffer has not been established. It was pointed out that 1) the net impacts of management have been to achieve management goals (rebuild the stock to Bmsy) and 2) fishing year landings have been below specified harvest limits in 2009-2010 and 3) the F target has never been exceeded. It was, therefore, determined that no (zero) reduction would be made to account for management uncertainty. Accordingly,

$$\text{ACT} = \text{Domestic ACL} - \text{Mgmt. Uncert. Buffer} = 20,293 \text{ mt} - 0 = 20,293 \text{ mt} (44.737 \text{ M lb}).$$

U.S. Commercial Discards and Calculation of the TAL

The projection time series reviewed by the MC included estimated discards for each year based on an averaging of proportional spiny dogfish landings and discards. Spiny dogfish discards, however, occur mostly from fishing activity outside of the directed dogfish fishery, especially trawl vessels, and are thus a function of overall fishing effort. Last year, when the MC met, widespread effort reduction associated with rebuilding groundfish stocks in the northeast (Amendment 16) was expected for 2010 forward. According to the Northeast Fishery Science Center's Groundfish Report (CRD 11-12) published in August 2011, the total number of commercial trips in 2010 was about 52% of 2009 trips (see Table 9 in CRD 11-12). Dead discards in 2010 estimated in the spiny dogfish assessment update were reduced by approximately 31% of the 2009 level (see Table 3 in the stock status report). The MC did recognize that discards could increase if dogfish abundance increases; however, the offsetting reduction in effort is expected to dampen this effect. The MC suggested that gear-specific discard mortality, to which discard estimates are very sensitive, should receive further research attention. The MC considered 2010 to represent the first year in a new stanza of discard levels for spiny dogfish and expects averaging of subsequent specification year discards will be anchored in 2010. Accordingly, the MC based its expectation of 2012 discards on the 2010 estimate (4,081 mt; 8.997 M lb):

$$\text{TAL} = \text{ACT} - \text{Discards}_{2010} = 20,293 \text{ mt} - 4,081 \text{ mt} = 16,212 \text{ mt} (35.740 \text{ M lb})$$

Recreational Landings and Calculation of the Commercial Quota

A further reduction to account for recreational harvest is made to calculate the spiny dogfish commercial quota. Generally, recreational harvest is <1% of total removals. Because the MC did not have any basis to expect 2012 recreational landings to deviate from 2010 levels, the MC reduced the TAL by the 2010 rec landings estimate (21 mt; 46,297 lbs) to arrive at an upper limit on the commercial quota for 2012:

$$\text{Commercial Quota} = \text{TAL} - \text{Rec Landings}_{2010} = 16,212 \text{ mt} - 21 \text{ mt} = 16,191 \text{ mt} (35.694 \text{ M lb})$$

Trip Limits

The MC did not make a recommendation on trip limits for 2012. There was discussion of the potential benefit of a lower trip limit which may extend the season and reduce discard incidence related to fishery closures. In 2011, landings under a 3,000 lb trip limit were sufficient to close Period 1 by September 1. An increase in the quota (expected) is likely to extend the season under status quo trip limits. There was a suggestion that a lower trip limit would reduce the rate of landings which may improve quota monitoring accuracy, however, very low trip limits were expected to affect discarding. The MC could find no

biological basis for recommending a specific trip limit.

Other Comments

A lower quota in 2012 would leave more mature female dogfish in the water and would likely result in more consistent subsequent year (2013+) quotas than if the entire calculated 2012 commercial quota is landed. Long-term projections at OFL provided the basis for the reduction to ABC and subsequently to the commercial quota. Although multi-year specifications were not considered by the MC, multi-year ABCs presented in the staff memo and based on OFL decline sharply within five years. The identified commercial quota is, therefore, identified as an upper limit based on OFL/ABC and expectations about other sources of removals in 2012.

Table 1. Spiny dogfish management measures for 2012 as recommended by the Mid-Atlantic Council’s Spiny Dogfish Monitoring Committee.

2012 Measures	Basis	M lb	Mt
OFL	$F_{MSY} (0.2439)$	55,404	25,131
ABC	P^* for Level 3, typical (40% p(overfishing))	44,868	20,352
ACL	= ABC	44,868	20,352
Domestic ACL	= ACL - Canadian Landings (ave 2009-2010 [59.5 mt])	44,737	20,293
Mgmt Uncertainty Buffer	Mgmt Uncert Offset by Hx Underages	0.000	0
ACT	= Domestic ACL - management uncertainty	44,737	20,293
U.S. Discards	2010 Estimate	8,997	4,081
TAL	ACT - Discards	35,740	16,212
U.S. Rec Landings	2010 Estimate	0.046	21
Comm Quota	TAL - Rec Landings	35,693,943	16,191

Sources (These will be made available in the October Council Meeting Briefing Book)

Rago PJ and KA Sosebee. 2011. Update on the status of spiny dogfish in 2010 and initial evaluation of alternative harvest strategies. Report to MAFMC SSC September 12, 2011. 32 p.

MAFMC staff memorandum from Jim Armstrong to Chris Moore: “Spiny dogfish ABC and Management Measures for 2012,” dated September 15, 2011. 12 p.

SSC Report from September 2011. 6 p.

Kitts A, Bing-Sawyer E, McPherson M, Olson J, Walden J. 2011. Report for Fishing Year 2010 on the Performance of the Northeast Multispecies (Groundfish) Fishery (May 2010 – April 2011). US Dept. Commerce, Northeast Fish Sci Cent Ref Doc. 11-12; 44 p. Available online at <http://www.nefsc.noaa.gov/nefsc/publications/>