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U.S. Atlantic Spiny Dogfish and Winter Skate, Scope Extension for Little Skate

Public Comment Draft Report
June 30, 2020

Conformity Assessment Body (CAB)	MRAG Americas, Inc.
Assessment team	Amanda Stern-Pirlot (team leader), Joseph Powers and Erin Wilson
Fishery client	Sustainable Fisheries Association
Assessment Type	Scope Extension

Document Control Record

Document Draft	Submitted By	Date	Reviewed By	Date
ACDR	JP, EW	3 March 2020	ASP	4 March 2020
CDR/PRDR	JP, EW, ASP	15 May 2020	ASP	21 May 2020
PCDR	JP, EW, ASP	17 June 2020	ASP	23 June 2020

1 Contents

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2 Executive summary

To be drafted at Announcement Comment Draft Report stage
To be completed at Public Certification Report stage

This Public Comment Draft Report sets out the results of the Marine Stewardship Council (MSC) assessment of the U.S. Atlantic little skate *(Leucoraja erinacea)* fisheries against the MSC Fisheries Standard. This evaluation has been undertaken by way of a "scope extension" to the currently certified U.S. Atlantic spiny dogfish and winter skate fishery. As such, only those components not held in common with the spiny dogfish and winter skate fishery (as determined through a gap analysis available on the MSC website) have been evaluated, and the commensurate background sections revised. See the MRAG 2019 and SCS 2018 for the complete report on the components of the fishery that were not re-evaluated during the scope extension process. These reports are incorporated herein by reference.

SCS Global Services was contracted in 2017 by Sustainable Fisheries Association, Inc. to undertake an MSC reassessment of the U.S. Atlantic Spiny Dogfish Fishery, which was subsequently recertified in May 2018. A scope extension was then conducted in 2019 by MRAG Americas to include winter skate to the certified spiny dogfish fishery.

The following Units of Certification were assessed:

Species:	Atlantic Spiny Dogfish (*Squalus acanthias)*
Stock:	Atlantic
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Longline
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch spiny dogfish
Other Eligible Fishers:	N/A

Species:	Atlantic Spiny Dogfish (*Squalus acanthias)*
Stock:	Atlantic
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Gillnet (Anchor/Drift and sink float gillnets included)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch spiny dogfish
Other Eligible Fishers:	N/A

Species:	Atlantic Spiny Dogfish (*Squalus acanthias)*
Stock:	Atlantic
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Bottom trawl (all mesh sizes)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch spiny dogfish
Other Eligible Fishers:	N/A

Units assessed in the previous MRAG Scope Extension:

Species:	Winter skate (*Leucoraja ocellata)*
Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Longline
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Winter skate
Other Eligible Fishers:	N/A

Species:	Winter skate (*Leucoraja ocellata)*

Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Gillnet (Anchor/Drift and sink float gillnets included)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Winter skate
Other Eligible Fishers:	N/A

Species:	Winter skate (*Leucoraja ocellata)*
Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Bottom trawl (all mesh sizes)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Winter skate.
Other Eligible Fishers:	N/A

The reassessment was undertaken in accordance with the MSC Certification Requirements (v. 1.3, January 10th, 2012) and using the MSC Guidance to MSC Certification Requirements (v. 1.0, August 15, 2011) which sets out the assessment and certification process. In 2018, Sustainable Fisheries Association, Inc. requested that SCS transfer the US Atlantic spiny dogfish certificate to MRAG Americas, in order that MRAG Americas could undertake a scope extension for the fishery to include winter skate as a target (Principle 1) species. That scope extension assessment for winter skate was undertaken in accordance with the process as laid out in the MSC Fisheries Certification Requirements version 2.0 Annex PE but using the default assessment tree contained within Version 1.3 of the MSC Certification Requirements, section C, as that was the tree used in the original dogfish assessment, but was subsequently updated using the Fisheries Standard v2.0 The scope extension of little skate will use v2.01 of the Fisheries Standard, which is substantively the same as v 2.0.

The **current** scope extension process adds three additional Units of Assessment to the fishery as follows:

Species:	Little skate *(Leucoraja erinacea)*
Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Longline
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Little skate
Other Eligible Fishers:	N/A

Species:	Little skate *(Leucoraja erinacea)*
Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Gillnet (Anchor/Drift and sink float gillnets included)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Little skate
Other Eligible Fishers:	N/A

Species:	Little skate *(Leucoraja erinacea)*
Stock:	Atlantic stock
Geographical area:	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method:	Bottom trawl (all mesh sizes)
Client Group:	Sustainable Fisheries Association, Inc.
Fishers in the UoC for the chosen stock	Vessels with state or federal permits to catch Little skate.
Other Eligible Fishers:	N/A

The following steps have been undertaken as part of the scope extension process:

- A Gap Analysis per FCR 7.22.4 to confirm which assessment components are the same and different to the certified U.S. Atlantic spiny dogfish fishery (https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessments/).
- Announcement of the assessment, including scope extension assessment team, use of the default assessment tree (v1.3), and notification of the site visit.
- Undertaking of the site visit (remote)
- Production of the client draft scope extension report that describes the background to the fisheries, the fishery management operations and the evaluation procedure and results. The client and subsequent draft and final reports include only the information required for the scope extension evaluation according to FCR PE 3.1.2. The original SCS Global Services U.S. Atlantic Spiny Dogfish Public Certification Report (SCS 2018) and MRAG 2019 contains the remaining evaluation of those components held in common between the different fisheries.
- The stakeholder consultation on proposed peer reviewers
- Peer Review Confirmation
- Production of the Peer Review Report
- Response to Peer Review comments, and report revisions where necessary
- Production of the Public Comment Draft Report
- ~~Response to stakeholder comments on the Public Comment Draft Report~~

The scope extension was conducted remotely on April 10th, 2020.

The assessment of the U.S. Atlantic little skate fishery was undertaken by Amanda Stern-Pirlot, Joseph Powers, and Erin Wilson. Amanda Stern-Pirlot is the Assessment Team Leader. According to the gap analysis, the differences between the U.S. Atlantic little skate fishery and the certified U.S. Atlantic spiny dogfish and winter skate fishery were found only in Principle 1.

Principle 1 Strengths:
The strengths related to Principle 1 are that the status of Little skate have been determined to not be overfished and not undergoing overfishing. Additionally, a harvest strategy and control rule have been implemented which establishes overall harvest goals and discard rules. Management procedures adjust for changes in biomass and catches relative to biomass threshold and targets when establishing Total Allowable Landings.

The status determinations are based on upon a survey biomass index. The threshold and target biomass for the stock have been established by the historical dynamics over several decades taking into account the catch history. Since 1980 the index has been above the target 8 years out of 18 and it has been above the target 5 of the most recent 8 years. It currently (2019) is below the target. However, the current index shows an increase (13.4%) relative to the previous year. Therefore, clearly the biomass is fluctuating around the target.

The HCR is a well-defined management procedure in which ABC, ACL and ACT are defined through formalized formulae established in the FMP in which catches are derived from the median catch/biomass exploitation ratio for time series and the three year average stratified mean biomass for skates, using the fall survey data for Winter skate and other skate species. As the biomass index declines and approaches or exceeds the threshold, the catch levels are reduced, and catches are reduced more precipitously by the rule if thresholds are exceeded.

Therefore, through pragmatic implementations of management the HS and HCR are working to maintain the stock above the conservation threshold and fluctuating around the management target.

Principle 1 Weaknesses:

Previous scientific reviews established the current procedure in which status determinations are based upon the survey index and the HCR used the survey to adjust catches. At the time of the review it was determined that biological (growth, mortality, maturity, size frequency) information was insufficient to conduct more analytical, statistical stock assessments. Also, that the appropriate management HCR would determine catch limits for the skate complex as a whole, rather than individual stocks. These are weaknesses for Principle 1.

While non-analytical assessments are acceptable within the MSC framework, there are inherent uncertainties in the thresholds and targets so established and how they relate to potential stock productivity (MSY). The question of their appropriateness has not been scientifically revisited for about a decade.

Also, the aggregate stock management procedure (TAL's for the skate complex rather than individual stocks) can allow individual stocks to suffer disproportionally. This has not appeared to have occurred for the MSC skate stocks (Winter skate and Little skate), because proportions in the catch have been variable but without much trend, but it is less clear that this could not occur in the future.

Therefore, these uncertainties are weaknesses in the Principle 1 assessment.

3 Report details

3.1 Authorship and peer review details

To be drafted at Announcement Comment Draft Report stage
Peer reviewer information to be completed at Public Comment Draft Report stage

A discussion between team members regarding conflict of interest and biases was held and none were identified.

The team members are Ms. Amanda Stern-Pirlot (team leader), Dr. Joseph Powers and Ms. Erin Wilson. The teams' bios are as follows:

Ms. Amanda Stern-Pirlot will serve as team leader for the assessment. Amanda is an M.Sc graduate of the University of Bremen, Center for Marine Tropical Ecology (ZMT) in marine ecology and fisheries biology. Ms. Stern-Pirlot joined MRAG Americas in mid-June 2014 as MSC Certification Manager (now Director of the Fishery Certification Division) and is currently serving on several different assessment teams as team leader and team member. She has worked together with other scientists, conservationists, fisheries managers and producer groups on international fisheries sustainability issues for over 15 years. With the Institute for Marine Research (IFM-GEOMAR) in Kiel, Germany, she led a work package on simple indicators for sustainable within the EU-funded international cooperation project INCOFISH, followed by five years within the Standards Department at the Marine Stewardship Council (MSC) in London, developing standards, policies and assessment methods informed by best practices in fisheries management around the globe. Most recently she has worked with the Alaska pollock industry as a resources analyst, within the North Pacific Fisheries Management Council process, focusing on bycatch and ecosystem-based management issues, and managing the day-to-day operations of the offshore pollock cooperative. She has co-authored a dozen publications on fisheries sustainability in the developing world and the functioning of the MSC as an instrument for transforming fisheries to a sustainable basis.

Ms. Erin Wilson joined MRAG Americas, Inc. in February 2015, where she currently works as a Senior Fisheries Consultant. She has collaborated as a team member on several MSC assessments, including North and South Pacific albacore tuna fishery, US West Coast Groundfish fishery, and is team leader for all the Alaska Groundfish fisheries. She provides routine audit services for the International Seafood Sustainability Foundation (ISSF) and is the MRAG Project Manager for the ISSF ProActive Vessel Registry (PVR). Prior to joining MRAG Americas, she spent 2 years working at the Oregon Department of Fish and Wildlife (ODFW) as a Natural Resource Specialist and Biological Technician for the Oregon Marine Reserves. She has collaborated on a multitude of projects that focus on marine science and conservation in both a biological and social science aspect. She received a M.Sc. in Marine Resource Management from Oregon State University and a B.S. in Zoology from Colorado State University, along with a Spanish minor.

Dr. Joseph E. Powers has been involved in fisheries issues for more than 40 years, conducting stock assessments, coordinating international stock assessment research, communicating scientific advice to fishery management councils and commissions and also serving as the senior marine fisheries manager in the southeast US. His background includes: professor of marine resource assessment at Louisiana State University; Senior Stock Assessment Scientist of the US's National Marine Fisheries Service (NMFS) southeast region, Laboratory Director of a NMFS facility; lead US scientist for Atlantic tuna, swordfish and billfish species for the International Commission for the conservation of Atlantic Tunas (ICCAT); Chair of the Scientific Committee of ICCAT; Chair of the Stock Assessment Committee for Southern Bluefin Tuna; Chair of the Scientific Committee of the Gulf of Mexico Fisheries Management Council and he has worked on numerous Marine Stewardship Council assessments of tunas, swordfish, hake and other fisheries resources in the Atlantic, Pacific and Indian Oceans.

There was one peer reviewer selected by the Peer Reviewer College to review this report. In the interest of anonymity, s/he is not named here. However, a list from which the reviewer was selected can be found here: https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish-and-winter-skate/@@assessment-documentsets?documentset_name=Proposed+peer+reviewers&assessment_id=FA-02328&phase_name=Peer+review&start_date=2020-03-10&title=Scope+Extension+v2.1

3.2 Version details

Table 1 Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	**Version 2.1**
MSC Fisheries Standard	**Version 2.01**
MSC General Certification Requirements	**Version 2.4.1**
MSC Reporting Template	**Version 1.1**

4 Unit(s) of Assessment and Certification and results overview

4.1 Unit(s) of Assessment and Unit(s) of Certification

4.1.1 Unit(s) of Assessment

MRAG Americas has confirmed that this fishery is within scope for MSC fisheries certification through the following determinations (FCP v2.1:7.4):

7.4.2.1 The following taxa are not target species under Principle 1:
a. Amphibians
b. Reptiles
c. Birds.
d. Mammals

7.4.2.2 The fishery does not use poisons or explosives.

7.4.3 The fishery is not conducted under a controversial unilateral exemption to an international agreement.

7.4.4 No member of the client group has been successfully prosecuted for a forced or child labour violation in the last 2 years.

Table 2 Unit(s) of Assessment (UoA)

UoA 1	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Bottom trawl (all mesh sizes)
Client group	Sustainable Fisheries Association, Inc.

Other eligible fishers	N/A
UoA 2	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Longline
Client group	Sustainable Fisheries Association, Inc.
Other eligible fishers	N/A
UoA 3	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Gillnet (Anchor/Drift and sink float gillnets included)
Client group	Sustainable Fisheries Association, Inc.
Other eligible fishers	N/A

4.1.2 Unit(s) of Certification

Table 3. Units of Certification (UoC)

UoC 1	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Bottom trawl (all mesh sizes)
Client group	Sustainable Fisheries Association, Inc.
Other eligible fishers	N/A

UoC 2	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Longline
Client group	Sustainable Fisheries Association, Inc.
Other eligible fishers	N/A
UoC 3	Description
Species	Little skate *(Leucoraja erinacea)*
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Gillnet (Anchor/Drift and sink float gillnets included)
Client group	Sustainable Fisheries Association, Inc.
Other eligible fishers	N/A

4.2 Assessment results overview

4.2.1 Determination, formal conclusion and agreement

To be drafted at Final Draft Report
To be completed at Public Certification Report

The report shall include a formal statement as to the certification determination recommendation reached by the assessment team on whether the fishery should be certified.

The report shall include a formal statement as to the certification action taken by the CAB's official decision-makers in response to the Determination recommendation.

Reference(s): FCP v2.1 Section 7.21

4.2.2 Principle level scores

To be drafted at Client and Peer Review Draft Report

Table 4 Principle level scores

Principle	UoA 1	UoA 2	UoA 3	UoA 4
Principle 1 – Target species	87.50	87.50	87.40	87.50

Principle 2 – Ecosystem impacts	N/A	N/A	N/A	N/A
Principle 3 – Management system	N/A	N/A	N/A	N/A

4.2.3 Summary of conditions

To be drafted at Client and Peer Review Draft Report

Table 5 Summary of Conditions

Condition number	Condition	Performance Indicator (PI)	Related to previous condition?
Condition 1	Evidence shall be presented to show that there is an adequate assessment of the stock status that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.	1.2.4	**NA**

4.2.4 Recommendations

No Recommendations.

5 Traceability and eligibility

5.1 Eligibility date

The eligibility date shall be when the Public Comment Draft Report is published. This date was selected because it is the earliest possible eligibility date according to MSC requirements and there is no concern regarding the implementation of traceability and segregation systems (they are already established).

5.2 Traceability within the fishery

To be drafted at Announcement Comment Draft Report stage
To be completed at Public Certification Report stage

Table 6 Traceability within the fishery

Factor	Description
Will the fishery use gears that are not part of the Unit of Certification (UoC)? If Yes, please describe: - If this may occur on the same trip, on the same vessels, or during the same season; - How any risks are mitigated.	*No. The main gear types evaluated in this fishery (gillnet, trawl and bottom longline) account for >95% of commercial landings. Existing regulatory or fishery management controls: All federally permitted vessels are required to complete their VTR which includes information on gear type used. The dealer reports usually also includes information on gear type, which would allow the client group to identify if the product is not from the UoC.*
Will vessels in the UoC also fish outside the UoC geographic area? If Yes, please describe: - If this may occur on the same trip; - How any risks are mitigated.	*The UoC encompasses the entire range of the fishery including both US state and federal waters. The only potential for vessels from the UoC to fish outside the UoC would be for the vessels to fish outside of the US waters, for example in Canada. This is considered an extremely highly unlikely scenario. The mitigation measure in place are national regulations prohibiting US vessels from fishing in Canadian waters.*

Do the fishery client members ever handle certified and non-certified products during any of the activities covered by the fishery certificate? This refers to both at-sea activities and on-land activities. - Transport - Storage - Processing - Landing - Auction If Yes, please describe how any risks are mitigated.	*There is a negligible risk that product caught by handline gear is mixed with certified product. Existing regulatory or fishery management controls: as noted previously the VTR requirements provide information on gear type and fishing areas, which provide the information that allows to trace product back to the UoC.*
Does transhipment occur within the fishery? If Yes, please describe: - If transhipment takes place at-sea, in port, or both; - If the transhipment vessel may handle product from outside the UoC; - How any risks are mitigated.	*In the past, occasionally little skate would be trans-shipped at-sea if the vessel was above its landing quota; however, if this would occur it would be between vessels within the UoC*
Are there any other risks of mixing or substitution between certified and non-certified fish? If Yes, please describe how any risks are mitigated.	*The risk of substitution between fish from the UoA and fish from outside this unit before Chain of Custody is minimal because the UoA comprises the entire commercial landings of little skate. There is a negligible risk that product caught by handline gear is mixed with certified product. Existing regulatory or fishery management controls: as noted previously the VTR requirements provide information on gear type and fishing areas, which provide the information that allows to trace product back to the UoC.*

5.3 Eligibility to enter further chains of custody

To be drafted at Announcement Comment Draft Report stage
To be completed at Public Certification Report stage

The team has concluded and determined that the product originating from the UoC is eligible to enter further certified chains of custody and be sold as MSC certified or carry the MSC ecolabel. The point of intended change of ownership of product is the first sale from a vessel, or an independent federally permitted dealer, to one of the processing plants that is part of the client group.

Processing plants that are part of the client group also hold federal dealer permits, allowing them to buy product directly from a vessel, either at a client group facility or at a remote offloading site. In these cases, the change of ownership takes place when the product is offloaded from the vessel and Chain of Custody commences at that point. When processing plants that are part of the client group, purchase product from an external federally licensed dealer, the fishery certificate will cover such dealer activities. In this case CoC will begin at the point of change of ownership from the dealer to a member of the client group. A current list of federally permitted dealers can be found here https://www.greateratlantic.fisheries.noaa.gov/aps/permits/data/index.html. Dealer activities here refer to the receipt of product for commercial purposes involving the material handling of fish to add value to the product, including transportation and preservation (i.e. freezing). Secondary processing is not covered in the fishery certificate.

The team considers that the dealer operations described above don't require CoC because the transfer of product to a dealer presents an extremely low to negligible risk that volume of non-UoA product is landed. The current UoA includes all commercial gears across both state and federal waters. There are in place mitigations measures to address this traceability risks and which can be used by the client group to demonstrate provenance back to the UoC. The two main measures are: (1) federally permitted vessels may only sell their catch of federally managed species to federally permitted dealers and (2) federally permitted dealers are required report trip-level reports for all species purchases on a weekly basis to NOAA Fisheries Service which includes the Vessel Trip Report (VTR) serial number. The client group members are able to demonstrate provenance to the UoC(s) with the use of the VTR.

Parties/categories of parties whose product will be eligible to use the fishery certificate and sell product as MSC certified with the blue eco-label include companies listed under the Sustainable Fisheries Association, Inc.:

- Cape Ann Seafood Exchange, Inc.
- Marder Trawling, Inc.
- Seatrade International

Only product sourced from vessels with state or federal permits to catch little skate employing the following gear types: may enter Chain of Custody:

- Longline
- Gill net (Anchor/Drift and Sink/Float Gillnets included)
- Bottom trawl (All mesh sizes)

The client group members are required to demonstrate provenance back to the UoC by providing documentation that the product was sourced from vessels employing the permitted gear types described above. This information may be provided from the dealer report.

5.4 Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to enter further chains of custody

To be drafted at Announcement Comment Draft Report stage
To be completed at Public Certification Report stage

No IPI stocks were identified.

6 Scoring

6.1 Summary of Performance Indicator level scores

To be drafted from Announcement Comment Draft Report

Table 7 Fishery Assessment Scoring Worksheet for Principle 1

Fishery Assessment Scoring Worksheet Scope Extension for Little skate

Principle	Component	Weight	Performance Indicator (PI)		Weight	Score
One	Outcome	0.333	1.1.1	Stock status	1.000	100
	Management	0.667	1.2.1	Harvest strategy	0.250	85
			1.2.2	Harvest control rules & tools	0.250	85
			1.2.3	Information & monitoring	0.250	80
			1.2.4	Assessment of stock status	0.250	75

7 Principle 1

7.1 Principle 1 background

7.1.1 Description of Fishery Resource

The seven species in the Northeast US coast (Maine to Virginia) skate complex are distributed along the coast of the northeast United States from near the tide line to depths exceeding 700 m (383 fathoms). The species are little skate (*Leucoraja erinacea*), winter skate (*L. ocellata*), barndoor skate (*Dipturus laevis)*, thorny skate (*Amblyraja radiata*), smooth skate (*Malacoraja senta*), clearnose skate (*Raja eglanteria*), and rosette skate (*L. garmani*). In this Northeast region, the center of distribution for the little and winter skates is Georges Bank and Southern New England. The barndoor skate is most common in the Gulf of Maine, on Georges Bank, and in Southern New England. The thorny and smooth skates are commonly found in the Gulf of Maine. The clearnose and rosette skates have a more southern distribution and are found primarily in Southern New England and the Chesapeake Bight. Skates are not known to undertake large-scale migrations, but they do move seasonally in response to changes in water temperature, moving offshore in summer and early autumn and returning inshore during winter and spring. Members of the skate family lay eggs that are enclosed in a hard, leathery case commonly called a mermaid's purse. Incubation time is 6 to 12 months, with the young having the adult form at the time of hatching (NEFSC 2006, NEFMC 2003, 2017).

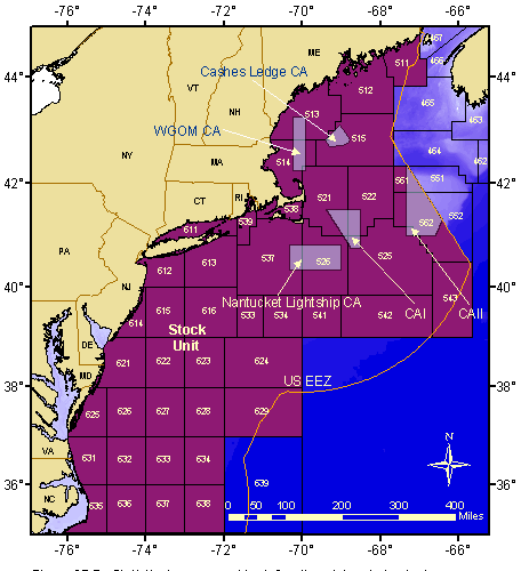

Figure 1 Statistical areas used to define little skate stock. NEFSC 2006

Maturity information was available in some form for all species to split the survey length information into mature and immature animals. The series chosen for each species was the same as chosen for reference points (see below). There is a protracted spawning as females likely lay develop eggs year-round so there is no need to pick a season based on spawning time. (NEFSC 2006).

7.1.2 Stock Assessment and Status

The first stock assessment for the skate complex was conducted in 1999 at Northeast Fisheries Science Center. At that time there was no Fishery Management Plan (FMP) in place. The National Marine Fisheries Service had been petitioned to list barndoor skate as endangered and was also asked to assess the other species in the complex. That assessment found no cause to list barndoor as endangered but recommended that the species remain on the candidate species list as well as to put thorny skate on the candidate species list. Biomass reference points were developed for all seven species and four were listed as overfished (not Winter skate or Little skate). Fishing mortality reference points were developed for winter and little skate and at that time it was determined that overfishing was occurring for winter skate.

Subsequently, the stock assessment approach for winter and little skate was based on Data Poor Stocks Workshop. A number of alternative methods were examined at that workshop. These included SPR-based reference points for three skate species, barndoor, winter, and thorny, were derived from life-history parameters and fitted Beverton-Holt stock recruit relationships. However, this was not able to have been done for winter skate. Basic growth, mortality

and maturity information for winter skate used was K=0.1, M=0.15 and age of maturity of 9.5-12.5. In comparison estimates for little skate were approximately K=0.16 and age of maturity from 7.5 to 9.5 years.

In general, the alternative models were found to be unsatisfactory. Therefore, biological reference points for Winter and Little skate were based upon indices of biomass taken from resource surveys, as per the suggestions of the Data Poor Workshop. From that, the status determination for each of the species in the skate complex was based on an appropriate index of biomass abundance and then threshold and target levels were defined based upon the history of the index, the history of catches and other external information. That process has carried over to the present time. The following figure gives the most current trajectories of the survey biomass indices which are used for status determination (NEFSC 2019 and Figure 2).

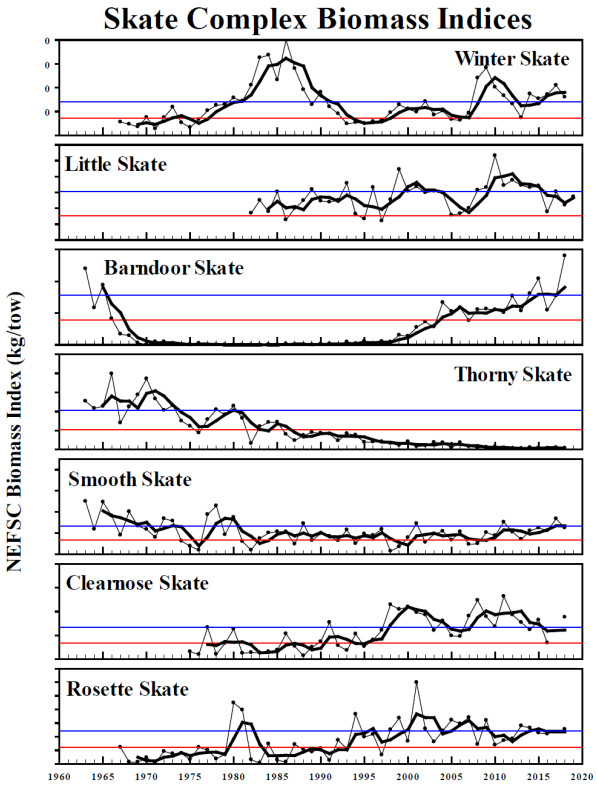

Figure 2 NEFSC survey biomass indices (kg/tow). Thin lines with symbols are annual indices, thick lines are 3-year moving averages, and the thin horizontal lines are the biomass thresholds and targets

The 3-year moving average of the Little skate biomass index has been above the threshold for the entire time series and has fluctuated around the target for approximately the last two decades.

Under the current definition, a stock of skates is designated as overfished when the three-year moving average of the NEFSC survey index is less than $B_{THRESHOLD}$, the survey index estimates of the recommended biomass-based reference points (NEFSC 2019).

Fishing mortality reference points are based on changes in survey biomass indices. If the three- year moving average of the survey biomass index for a skate species declines by more than the average CV of the survey time series, then fishing mortality is assumed to be grater that FMSY and overfishing is occurring.

For Little skate, the 2017-2019 NEFSC spring average biomass index of 5.32 kg/tow is above the biomass threshold reference point (3/07 kg/tow). but below the BMSY proxy (6.15 kg/tow). The 2017-19 average index is above the previous average (2016-2018) by 13.4%, thus this stock is not overfished, and overfishing is not occurring (NEFSC 2019).

7.1.3 History of Fishing and Management

Skate landings have two components, one focused on larger skates to cut wings, and the other focused on small skates for bait in other fisheries. Based upon NMFS port sampling data, over 98 percent of skate wing fishery landings are composed of Winter skate. Similarly, approximately 90 percent of skate bait landings are composed of Little skate, with the remainder being largely comprised of juvenile Winter skates. (NEFMC 2017, NEFSC 2017)

The history of exploitation of the two dominant species within the complex (i.e. Winter and Little skate) shows Landings of skates have been apportioned by species with Little and Winter skate being the largest share. Additionally, discards have been estimated. The following figures show a general increasing trend from the 1970s to the early 2000s. But there has been a declining trend over the last decade in the total (largely in Winter skate). Discards have fluctuated at a low level over the last 20 years. Both landings and discards of Little skate have fluctuated over the last two decades without noticeable trends. Also, importantly the proportion of the total that is comprised by Little skate landings and discards during that period has fluctuated without trend, as well.

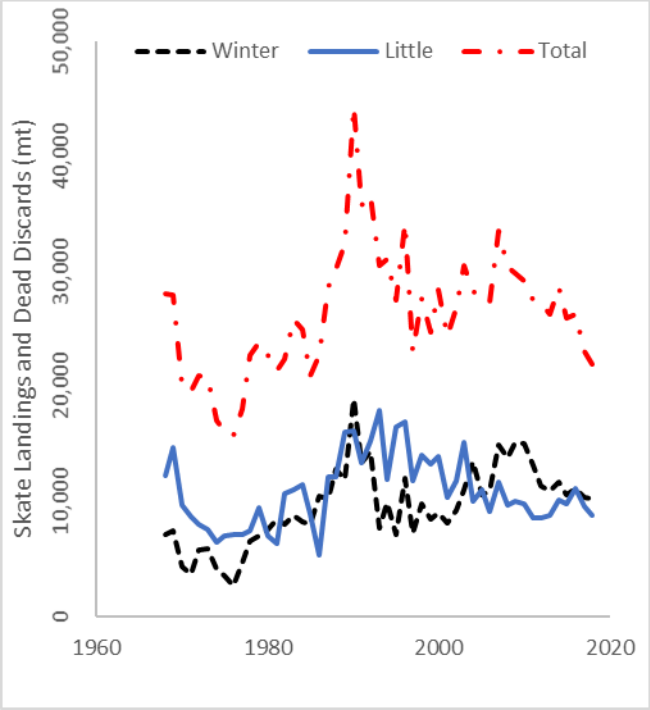

Figure 3 Winter, Little skate and All skates combined landings and discards 1968-2018

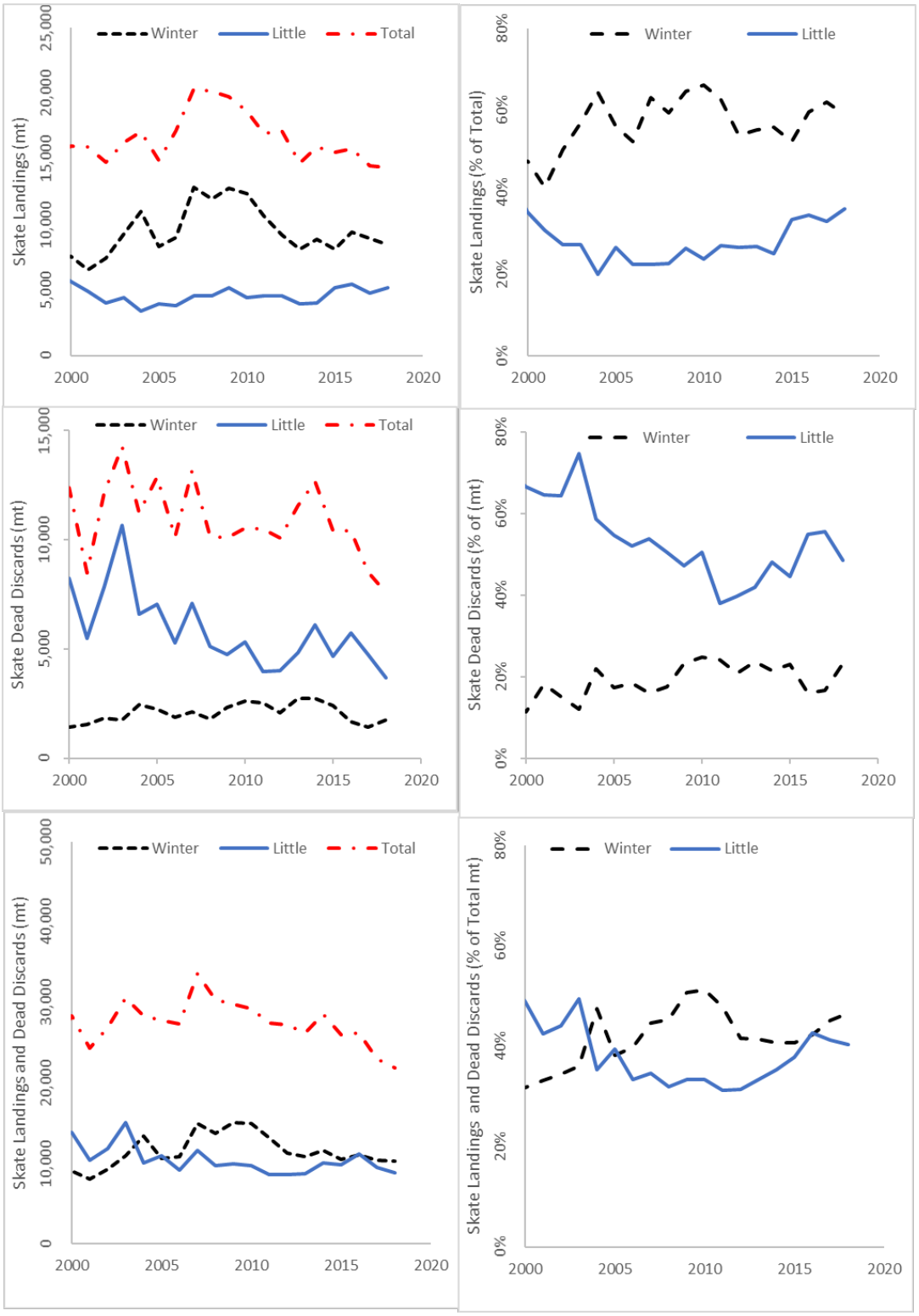

Figure 4 Winter, Little skate and all skates landings and discards 2000-2018 and percentages of each.

Winter and Little skates are managed as part of a skate complex with six other species under the New England Fishery Management Council's Skate Fishery Management Plan. The proposed overfishing definitions included in the northeast skate FMP proposes establish fishing mortality thresholds for all seven skate species based on a percentage decline in the NEFSC trawl survey. The status of skate overfishing is determined based on a rate of change in the three- year moving average from NEFSC Groundfish Survey biomass (NEFSC 2018).

The skate complex ABC and ACL specifications derived from the median catch/biomass exploitation ratio for time series and the three-year average stratified mean biomass for skates, using the fall survey data for Winter skate and other managed skate species. For skates, the Council set the ACL to be equal to the ABC. TALs are set

according to procedures that assume that future discards would be equivalent to the average rate from the most recent three years; state landings would approximate to 3.45% of the total landings (NEFSC 2019).

The ACL is adjusted by a 25% buffer to get ACT. Then Total Allowable Landings is set at the ACT reduced by the discards and State landings. Finally, the TAL is apportioned to a Wing TAL and a Bait TAL with a 66.6/33.3 split. (NMFS 2019). The most recent management specification for 2020-21 for the complex is in Figure 5.

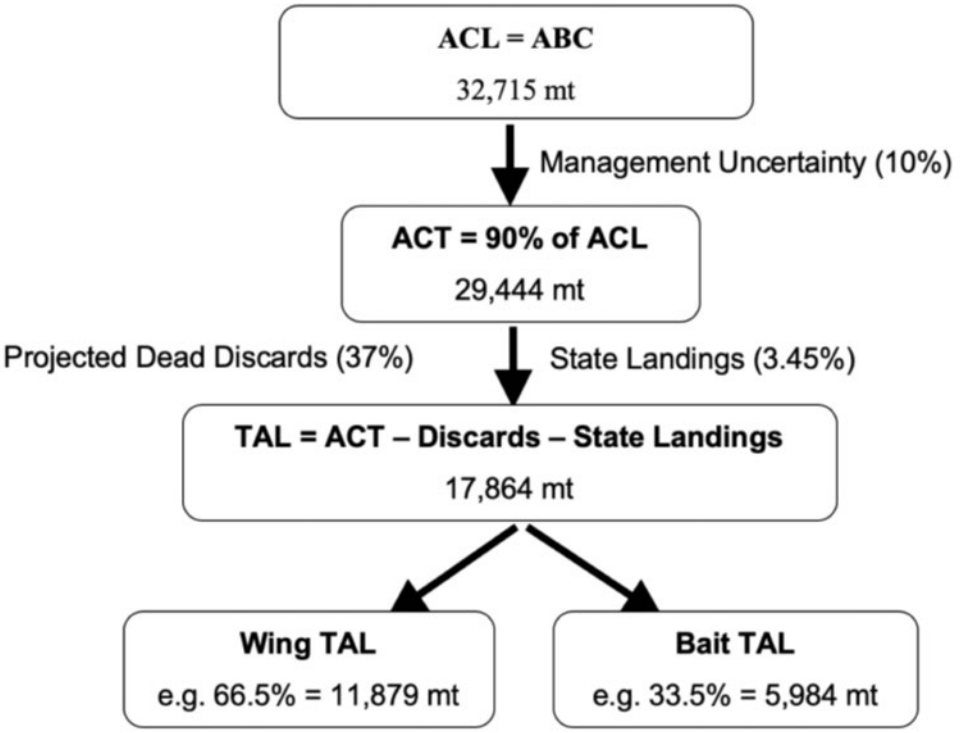

Figure 5 Determination of ABC, ACT and TAL for the Skate Complex for 2020-2021.

Note that since the management plan was developed for the skate complex, it does not afford direct protection for each species within that complex. Also, since status criteria are based on historical indices of biomass, a stock may well be sustainable, but still not achieving MSY. Despite that, there are a number of safeguards and indirect measures that support the current management of Little skate. Even though there is not a direct estimate of BMSY, Little skate status is monitored through the survey index. That index has shown several decades of fluctuating stability. Additionally, the proportion of the skate complex catch comprised of the dominant species (Little and Winter) has been relatively stable for about 20 years. This supports the notion that management is working to maintain sustainability of these two species. Also, the status criteria as they are defined provides a trigger to adjust catches when faced with declining indices and/or indices below a threshold. Nevertheless, the life history nature of Little skate (relatively old age at maturity) suggest caution in management and a need to revisit the basic assessment approaches periodically.

7.1.4 Lower Trophic Level Species

Little skate are not Lower Trophic Level species.

7.1.5 Catch profiles

Please see Figure 3 and Figure 4 above.

7.1.6 Total Allowable Catch (TAC) and catch data

Table 8 Total Allowable Catch (TAC) and catch data

TAC = Skate Complex Annual Catch Target	Year	**2020**	Amount	**17,864 mt**
UoA share of Total Allowable Landings (TAL)*	Year	**2019**	Amount	**15.788mt**
UoA share of total TAL	Year	**2018**	Amount	**13,157mt**
Total green weight catch by UoC	Year (most recent)	**YYYY**	Amount	**n, unit**
Total green weight catch by UoC	Year (second most recent)	**YYYY**	Amount	**n, unit**

* Framework 6 became effective 2/15/19 wherein the scientific uncertainty buffer was reduced from 25 to 10%, thus increasing the federal TAL to 15,788 mt during Fishing Year 2018, allowing the fishery to remain open for the entire year.

7.1.7 Principle 1 Performance Indicator scores and rationales

PI 1.1.1 – Stock status

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guide post	It is **likely** that the stock is above the point where recruitment would be impaired (PRI).	It is **highly likely** that the stock is above the PRI.	There is a **high degree of certainty** that the stock is above the PRI.
	Met?	**Yes**	**Yes**	**Yes**

Rationale

The team considered proxies indicating that the stock is at highly productive level as outlined in SA 2.2.3.1 of MSC Fisheries Standard (Annexes S) and associated Guidance GSA 2.2.3.1:

'Proxy indicators and reference points or measuring stock status may also be used where the exact relationship with the PRI, BMSY and FMSY levels are not known. In these cases, the team must provide justification that these proxies are reasonable for the context in which they are used.'

At SG60: If no decline has been observed in one proxy of biomass for at least one generation time of the species and the proxy indicates that the stock is likely above the PRI.

At SG80: If no decline has been observed in two proxies of biomass for one generation time and at least one proxy indicates that the stock is at a highly productive level.

At SG 100: If no decline has been observed in three proxies of biomass for one generation time and at least two proxies indicate that the stock is at a highly productive level.

The biomass index for Little skate forms the proxy basis of determining status. A threshold (overfished definition) is defined as when the 3-year moving average of the spring survey mean weight per tow is less than one-half of the 75th percentile of the mean weight per tow observed in the spring trawl survey from the selected reference time series. The threshold has never been exceeded in the 50-year time series of the 3-year moving average (**Figure 2**). The last time the threshold was approached was about 20 years ago (more than a generation time ago). In the ensuing time period, the index has fluctuated around the target. Therefore, the stock has demonstrated to be sustainable at these levels and it is highly likely that it is above the PRI (meets SG 60, 80)

It is less clear that the index threshold as defined is the appropriate PRI. The established PRI might not be the best estimate. Nevertheless, there is a high degree of certainty that the stock is above the PRI as defined. The index coupled with the recent catches being less than the target are evidence that the stock may be defined is at a highly productive level. This marginally meets SG100).

Therefore, taking into consideration the available evidences from the index, it is possible to conclude that there is no evidence of a decline in the proxy and the SG60, 80 and 100 requirements for this SI set out in GSA2.2.3.1 are thus met.

b	Stock status in relation to achievement of Maximum Sustainable Yield (MSY)

	Guide post		The stock is at or fluctuating around a level consistent with MSY.	There is **a high degree of certainty** that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		**Yes**	**Yes**

Rationale

The biomass index for Little skate is the basis of determining status. A target (BMSY proxy) is defined by the 3-year moving average of the spring survey mean weight per tow relative to the average during the selected reference time series. Since 1980 the index has been above the target 8 years out of 18 and it has been above the target 5 of the most recent 8 years (**Figure 2),** albeit the three most recent years are below the target including the current (2019) level. However, the current index shows an increase (13.4%) relative to the previous year. Therefore, is a high degree of certainty that the biomass is fluctuating around the target (SG 80 met).

As noted in 1.1.1. It is less clear that the index target as defined is an appropriate indicator of BMSY. The true value may differ from the defined amount. Nevertheless, there is a high degree of certainty that the stock is fluctuating around the target as defined. And the sustainability of the stock at a level appropriate for acceptably high productivity has been demonstrated by the index and catch history. This meets SG 80 and marginally meets SG100.

References

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019) https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf

Stock status relative to reference points

	Type of reference point	Value of reference point	Current stock status relative to reference point
Reference point used in scoring stock relative to PRI (SIa)	*Biomass Survey Index (BSI) Threshold*	*3.07 kg/tow*	*BSI(2017-2019)/BSIThreshold =1.73*
Reference point used in scoring stock relative to MSY (SIb)	*Biomass Survey Index (BSI) Target.*	*6.15 kg/tow*	*BSI(2017-2019)/BSITarget =0.87; BSI(2017-2019)/ BSI(2016-2018)/Target =1.13*

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	**≥80**
Information gap indicator	**Information sufficient to score PI**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**100**
Condition number (if relevant)	**N/A**

PI 1.1.2 – Stock rebuilding

PI 1.1.2		Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe		
Scoring Issue		SG 60	SG 80	SG 100
a	Rebuilding timeframes			
	Guide post	A rebuilding timeframe is specified for the stock that is the **shorter of 20 years or 2 times its generation time**. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed **one generation time** for the stock.
	Met?	**N/A**		**N/A**
Rationale				

Not Applicable. Stock is not overfished

b	Rebuilding evaluation			
	Guide post	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is **evidence** that the rebuilding strategies are rebuilding stocks, **or it is likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the **specified timeframe**.	There is **strong evidence** that the rebuilding strategies are rebuilding stocks, **or it is highly likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the **specified timeframe**.
	Met?	**N/A**	**N/A**	**N/A**
Rationale				

Not Applicable. Stock is not overfished

References

List any references here, including hyperlinks to publicly-available documents.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	Not Applicable. Stock is not overfished
Information gap indicator	**More information sought / Information sufficient to score PI**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**N/A**
Condition number (if relevant)	**N/A**

PI 1.2.1 – Harvest strategy

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guide post	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	**Yes**	**Yes**	**No**
Rationale				

The Little skate harvest strategy is defined through the Skate FMP with the major objectives of maintaining stocks at levels that can support MSY, maintaining fishing rates at levels less than Fmsy and to stop overfishing “immediately” should it occur. The harvest strategy is achieved through management allocation of catches of the combined Skate Complex at levels that can maintain Bmsy with appropriate buffers. Additionally, the strategy takes into account the interaction of the fishery with other target species (dogfish, Winter skate and other skates). Annual Catch Limits, Annual Catch Targets and overfishing limits are determined based on the target and limit reference points (see section 7.1.3). For the Skate Complex, the scientifically derived ABC set by management as the Annual Catch Limit. Then the ACL is reduced by a rather large 25% buffer to get the Annual Catch Target. Finally, the ACT is adjusted downward by discard rates and state catches to get the Total Allowable Landings.

As the stocks change, the catch advice is adjusted with the rule in which catch is adjusted up or down using the trend percentage of the smoothed three-year running average of the biomass indices (section 7.1.3). Therefore, the harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points (SG 60 and SG 80 met).

However, there are limitations imposed by the management regime being implemented for the complex, rather than individual stocks. While the monitoring and assessment using an index is appropriate, the harvest strategy is designed to increase or decrease catch of the whole complex, rather than individual stocks. This harvest strategy can and has worked as long as the catch of Little Skate as a percentage of the complex remains fairly consistent. Should, for example, Little Skate catch increase due to availability, but the stock status decline, then this relationship between LittleSkate and complex catch will deteriorate. Overall it is accounted for, but caution is suggested. Given these caveats, it is expected that the strategy is responsive to the state of the stock and it is designed to achieve management objectives. Also, the history of its use suggests that it is “working”, but the combined species issue leads to the conclusion that SG 100 is not met.

b	Harvest strategy evaluation			
	Guide post	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	**Yes**	**Yes**	**No**
Rationale				

The harvest strategy has not have been fully tested but evidence exists that it is achieving its objectives. The harvest strategy as implemented through the FMP has been demonstrated to “work” in that the catch levels and indices appear to be keeping biomass above threshold and target levels (Section 7.1.3). This is demonstrated by the relative stability of the catch over the last two decades and that the biomass index has been fluctuating around the target, so the SG60 and SG80 are met.

But there has been no full evaluation of the strategy through simulation and/or stock assessments and Management Strategy Evaluation, therefore the SG100 is not met.

c	Harvest strategy monitoring			
	Guide post	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	**Yes**		
Rationale				

Catches, indices, surveys and size frequencies are monitored annually (section 7.1.3). These are reported and implemented into the FMP TAL setting process (section 7.1.3). Realized catches and indices are compared to the ACLs and TALs to determine whether the harvest strategy is working. SG 60 met.

d	Harvest strategy review			
	Guide post			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			**Yes**
Rationale				

The harvest strategy is reviewed annually to determine if objectives are being achieved. Through the New England Fishery Management Council, the FMP is reviewed at least annually to determine if improvements are needed. Framework Actions through the Council allow annual adjustments to TALs. Improvements can and have been implemented through the FMP amendment process (section 7.1.3); SG 100 met.

e	Shark finning			
	Guide post	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	**NA**	**NA**	**NA**
Rationale				

While Little skate are periodically targets of the dogfish fishery, the primary driver of the fishery is usually the dogfish target. Finning of these sharks is not allowed and there is a high degree of certainty that it is not taking place (Not applicable).

f	Review of alternative measures

	Guide post	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biennial** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	**Yes**	**Yes**	**No**

Rationale

There are discards of Little skate within the UoA and in the fishery as a whole. These discards are documented annually. The harvest strategy has been designed to account for these discards by deducting them from the overall catch such that the TAC is lower given the amount of discarding.

The FMP has, as one of the standards or goals, a requirement to reduce bycatch to the extent practical. This has been revisited periodically through review of the FMP and as revisions of the FMP have occurred. It has been determined through those reviews that the most practical approach at this time is to account for the discards in the determination of the TAC and that has been implemented as appropriate. Thus, the potential effectiveness has been addressed; SG60 and SG80 are met.

However, there have not been biennial reviews to specifically address potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock. SG 100 is not met.

References

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	**≥80**
Information gap indicator	**Information sufficient to score PI**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**85**
Condition number (if relevant)	**N/A**

PI 1.2.2 – Harvest control rules and tools

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guide post	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	**Yes**	**Yes**	**Yes**
Rationale				

The Harvest Control Rule (HCR) for Little skate is a well-defined management procedure in which ABC, ACL and ACT are defined through formalized formulae established in the FMP in which catches are derived from the median catch/biomass exploitation ratio for time series and the three year average stratified mean biomass for skates, using the fall survey data for Winter skate and other skate species (Section 7.1.3). Clearly, as the biomass index declines and approaches or exceeds the threshold, the catch levels are reduced, and catches are reduced more precipitously by the rule if thresholds are exceeded. So, well-defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. SG 60 and SG80 are met.

The limitation of the HCR is that it is formulated for the skate complex rather than individual stocks. However, the rule is designed to be responsive to the target biomass index (Section 7.2.1) and that has been achieved (**Figure 2**). While it is less clear that the target level represents BMSY, the target does represent an appropriate level associated with skate biology and ecology and the interaction of discarding behavior might have with the efficacy of the HCR (see justification below for 1.2.2.b). The SG100 is met.

b	HCRs robustness to uncertainty			
	Guide post		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		**Yes**	**No**
Rationale				

The main uncertainty addressed in the Little skate HCR is the definition of the threshold based on the 75th percentile of the index and a 25% buffer for the skate complex definition of ACL relative to ABC. These act in concert to be precautionary in the face of uncertainty. While the buffer and 75th percentile are precautionary, it still not account for a wider set of uncertainties that likely affect Little skate, such as uncertainty in basic productivity estimates. In particular the removals of Little Skate due to discarding are a substantial portion of the total (Figure 4).
The observed discard ratios were derived from the Sea Sampling Observer and the At Sea Monitoring programs and included both sector and non-sector vessels, but were not stratified on that basis. The projected discard rate is calculated using a three-year average of the discards of skates/landings of all species. If changes in discarding behavior were to occur,this could reduce the efficay of the harvest control rule. To some extent this is addressed

through the monitoring of discards and their annual review. Should variations in discards occur, then the ABC/ACL is adusted accordingly (Figure 5). Nevertheless, this is a weakness in the HCR. Therefore, it is concluded that the selection of the harvest control rules considers the main uncertainties and it is likely that the HCR is robust to them, therefore SG80 is met. There is not sufficient evidence that the HCR is, indeed, robust to these uncertainties. Hence, SG100 is not met.

	HCRs evaluation			
c	Guide post	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	**Yes**	**Yes**	**No**

Rationale

Evidence indicates that it is achieving its objectives in that the biomass thresholds have not been exceeded and the biomass index is fluctuating around the target (section 7.1.3) and catch levels are well within the HCR established limits. So, the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules. SG60 and SG80 are met.
It should be noted that the exploitation (overfishing) is measured by the index, with short-term increases or declines being attributed to fishing. As such changes in availability Little Skate to the survey are potentially seen as changes in exploitation, which might be erroneous. Because of the weaker linkage between the rule for the skate complex and the implementation for the Little skate stock, in particular, it cannot be said that the evidence shows that the tools in use are effective in achieving the exploitation levels required under the HCRs. SG 100 is not met.

References

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

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Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	**≥80**
Information gap indicator	**Information sufficient to score PI**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**85**
Condition number (if relevant)	**N/A**

PI 1.2.3 – Information and monitoring

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Range of information			
	Guide post	**Some** relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	**Sufficient** relevant information related to stock structure, stock productivity, fleet composition and other data are available to support the harvest strategy.	A **comprehensive range** of information (on stock structure, stock productivity, fleet composition, stock abundance, UoA removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	**Yes**	**Yes**	**No**
Rationale				

The range of information available for assessments and harvest strategy support for Little skate is limited primarily to survey indices of abundance and limited size data. For those reasons the skate complex status was address by the Data Poor Working Group more than a decade ago. Their conclusions were that status determination would have to depend on Bmsy proxies from surveys. That situation has not changed. The use of those survey indices as the basis for decision rules has largely been successful. Thus, some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy (SG 60 met). Also, given the relative success of the strategy (Section 7.1.3), the current information base is de facto sufficient to support the harvest strategy, thus SG80 is met. There is little information on potential stock productivity that can be directly related the amount of catch that might be allowed. While the catch decision rules appear to have been effective, they are not directly related to the simple assessment through index monitoring and therefore SG100 is not met.

b	Monitoring			
	Guide post	Stock abundance and UoA removals are monitored and **at least one indicator** is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and UoA removals are **regularly monitored at a level of accuracy and coverage consistent with the harvest control rule**, and **one or more indicators** are available and monitored with sufficient frequency to support the harvest control rule.	**All information** required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent **uncertainties** in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	**Yes**	**Yes**	**No**
Rationale				

Abundance surveys are conducted twice annually, all landings are monitored, and discards are estimated. These surveys have been integrated into assessment advice and catch decision rules. Therefore, stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. SG60 and SG80 are met. Not all information required by the harvest control rule is monitored with high frequency and a high degree of certainty. The discards are estimated using at-sea observers but the estimates are not well stratified. Additionally, the discards used in the HCR are a 3-year average. Also, as with all surveys, the consistency of the the “catchability” is always questioned. In the case of Little Skate there has been changes in gear during the period which were addressed through calibration, but still might affect the estimate of the target level for the indexFor these reasons, the SG100 is not met.

	Comprehensiveness of information			
c	Guide post		There is good information on all other fishery removals from the stock.	
	Met?		**Yes**	

Rationale

Removals including landings, discards, state catches are all monitored. There is good information on all fishery removals from the stock (Section 7.1.3). SG 80 is met. However, it should be noted the removals of Little Skate due to discarding are a substantial portion of the total (Figure 4). The observed discard ratios were derived from the Sea Sampling Observer and the At Sea Monitoring programs and included both sector and non-sector vessels, but were not stratified on that basis. The projected discard rate is calculated using a three-year average of the discards of skates/landings of all species. If changes in discarding behavior were to occur, this could reduce the efficacy of the harvest control rule.

References

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019) https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf
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Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	**≥80**
Information gap indicator	**Information sufficient to score PI**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**80**
Condition number (if relevant)	**N/A**

PI 1.2.4 – Assessment of stock status

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Appropriateness of assessment to stock under consideration			
	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment takes into account the major features relevant to the biology of the species and the nature of the UoA.
	Met?		**Yes**	**No**
Rationale				

Little skate "assessment" is index based as would be expected for a data poor stock. The index is appropriate for the current stock and the HCR. However, there are a large number of features relevant to these skate's biology and fisheries including growth rates, mortality and spawning productivity that are not being addressed. Additionally, there is an inherent weakness in the linkage between the stock-specific biomass index and the HCR for the skate complex. Thus SG100 is not met.

b	Assessment approach			
	Guide post	The assessment estimates stock status relative to generic reference points appropriate to the species category.	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.	
	Met?	**Yes**	**Yes**	
Rationale				

The Little skate assessment estimates stock status relative to reference points (section 7.1.3) through a survey biomass index. These are estimated and monitored, annually. Overfishing and overfished definitions are based on the historical time series of the biomass survey index. Thus, the status determination is appropriate for the stock as demonstrated by the history of the biomass and catches. SG 60 and SG 80 met.

c	Uncertainty in the assessment			
	Guide post	The assessment **identifies major sources** of uncertainty.	The assessment **takes uncertainty into account**.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a **probabilistic** way.
	Met?	**Yes**	**No**	**No**
Rationale				

Major sources of uncertainty have been noted (Section 7.1.3), thus SG 60 is met. However, the assessment does not take into account many of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately; however, they have not been clearly related to stock productivity. The uncertainties in biological productivity, distribution, reproduction and mortality have not been explored since the Data Poor Workshop (2008). Discard rates and their monitoring are an important component of the HCR, Additionally, there was a change on survey vessel in the period for which the target index was established. There was a callibration done, yet undcertainties remaon. Alternative assessment analysis methods might be explored to reduce this uncertainty which can then be related to the index monitoring methods or suggest other approaches. But currently, the assessment does not take into account the uncertainties. Characterizing uncertainty in the assessment should be related to the harvest

strategy and control rule. The index, itself, has been reviewed and modified, but the basic relationship of the uncertainties in the linkage of productivity to the assessment has not. Currently, SG80 is not met.

d	Evaluation of assessment			
	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			**No**
Rationale				

The Little skate assessment has not been tested to show if it is robust (section 7.1.3). Alternative hypotheses and assessment approaches were suggested in 2008, but not since then and not rigorously. SG100 is not met.

e	Peer review of assessment			
	Guide post		The assessment of stock status is subject to peer review.	The assessment has been **internally and externally** peer reviewed.
	Met?		**Yes**	**No**
Rationale				

Review of Little skate assessments are subject to peer review through annual reviews of assessment advice conducted by the Scientific and Statistical Committee of the New England Fishery Management Council. These are part of the FMP process. Additionally, the assessment approach was reviewed by internal and external peers in the Data Poor Workshop (2008). However, this type of review has not been revisited since then. Therefore, it is determined that the assessment is not now being reviewed at the SG 100 level. SG 80 is met, but not SG100.

References

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019) https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	**60-79**
Information gap indicator	**More information sought**

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	**75**
Condition number (if relevant)	**Condition 1**

7.2 Principle 2

7.2.1 Principle 2 background

This scope extension only addresses Principle 1 for little skate. MRAG Americas looked at the scoring implications for P2 primary species of moving Little skate to P1, and there were none. Hence. please see the SCS 2018 and the MRAG 2019 reports for further details on Principle 2.

8 References

NEFMC. 2003. Northeast Skate Complex Fishery Management Plan. New England Fishery Management Council in Coordination with the National Marine Fisheries Service (NMFS). http://s3.amazonaws.com/nefmc.org/FINAL.Skate-FMP.EIS.FINAL.VOL.I.pdf

NEFMC. 2017. Northeast Skate Complex FMP. http://www.nefmc.org/management-plans/skates

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf

NEFSC. 2006. Status of Fishery Resources off the North Eastern US: Skate. https://www.nefsc.noaa.gov/sos/spsyn/op/skate/

NEFSC. 2019. 2018 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019) https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_August_2019.pdf

9 Appendices

9.1 Evaluation processes and techniques

The scope extension was conducted primarily as a desk review of information on April 10, 2020 and opening and closing meetings with the client representative. This was an assessment of Principle 1 only as that is the only difference from the previous winter skate scope extension. All necessary information needed to do the scope extension is publicly available online, so additional meetings and phone calls were not necessary, and availability to speak with government staff was also limited by the coronavirus pandemic anyway. The attendees included Amanda Stern-Pirlot (team leader), Dr. Joseph Powers (team member and Principle 1), and the client group representative, John Whiteside.

Information supplied by the clients and publicly available information from management agencies was reviewed by the assessment team ahead of the meetings, and discussions with the client centred on the content within the provided documentation. In cases where relevant documentation was not provided in advance of the meeting, it was requested by the assessment team and subsequently supplied during, or shortly after the meeting.

Thirty days prior to the audit, all stakeholders from the full reassessment for spiny dogfish, and the scope extension for Winter skate, were informed of the opportunity to provide information to the auditors in advance of, or during, the period of this scope extension assessment. We received no requests from outside stakeholders to take part in meetings or provide information remotely.

9.1.1 Stakeholder participation

Thirty days prior to the audit, all stakeholders from the full reassessment for spiny dogfish, and the scope extension for Winter skate, were informed of the opportunity to provide information to the auditors in advance of, or during, the period of this scope extension assessment. We received no requests from outside stakeholders to take part in meetings or provide information remotely.

9.1.2 Evaluation techniques

The scope extension of little skate will use v2.01 of the Fisheries Standard, which is substantively the same as v 2.0. To carry out the scope extension process, MSC FCR version 2.0 Annex PE was used. MRAG published an announcement of the scope extension on our website and sent a direct email to all stakeholders on our stakeholder list. MSC posted the announcement on its US Atlantic Spiny Dogfish track-a-fishery page, as well as sent it by email in their Fishery Announcements newsletter to all registered recipients. At this time, MRAG Americas also announced the assessment site visit dates and that the scope extension would be conducted remotely, as well as the assessment team. This was done according to the process requirements as laid out in MSC's Fisheries Certification Process v2.1. Together, these media presented the announcement to a wide audience representing industry, agencies, and other stakeholders.

In the Fisheries Standard (v2.01) default assessment tree used for this assessment, the MSC has 28 'performance indicators'. Only Principle 1 was evaluated for this scope extension. Principle 1 has two components. Each performance indicator consists of one or more 'scoring issues;' a scoring issue is a specific topic for evaluation. 'Scoring Guideposts' define the requirements for meeting each scoring issue at the 60 (conditional pass), 80 (full pass), and 100 (state of the art) levels.

Note that some scoring issue may not have a scoring guidepost at each of the 60, 80, and 100 levels; in the case of the example above, scoring issue (b) does not have a scoring issue at the SG60 level. The scoring issues and scoring guideposts are cumulative; this means that a performance indicator is scored first at the SG60 levels. If not all of the SG scoring issues meet the 60 requirements, the fishery fails and no further scoring occurs. If all of the SG60 scoring issues are met, the fishery meets the 60 level, and the scoring moves to SG80 scoring issues. If no scoring issues meet the requirements at the SG80 level, the fishery receives a score of 60. As the fishery meets increasing numbers of SG80 scoring issues, the score increases above 60 in proportion to the number of scoring issues met; performance indicator scoring occurs at 5-point intervals. If the fishery meets half the scoring issues at the 80 level, the performance indicator would score 70; if it meets a quarter, then it would score 65; and it would score 75 by meeting three-quarters of the scoring issues. If the fishery meets all of the SG80 scoring issues, the scoring moves to the SG100 level. Scoring at the SG100 level follows the same pattern as for SG80.

Principle scores result from averaging the scores within each component, and then from averaging the component scores within each Principle. If a Principle averages less than 80, the fishery fails.

For this scope extension assessment, only those Performance Indicators found to be not in common with those scored during the full assessment of US Atlantic Spiny Dogfish and the Winter skate scope extension were included. The preliminary gap analysis for this determination is published here:
https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish-and-winter-skate/@@assessments;
file:///C:/Users/erinw/Downloads/Little%20Skate_MSC%20fishery-announcement.pdf.

The original spiny dogfish reassessment report (SCS 2018) can be found here:
https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessment-documentsets?documentset_name=Public+certification+report&phase_name=Public+certification+report+and+certificate+issue&start_date=2017-04-01&title=Re-Assessment

Scoring for this fishery followed a consensus process in which the assessment team discussed the information available for evaluating performance indicators to develop a broad opinion of performance of the fishery against each performance indicator. Review of section 6 by all team members assured that the assessment team was aware of the issues for each performance indicator. Subsequently, the assessment team member responsible for Principle 1, filled in the scoring table and provided a provisional score. The assessment team members reviewed the rationales and scores, and recommended modifications as necessary, including possible changes in scores.

Performance Indicator scores were entered into MSC's Fishery Assessment Scoring Worksheet (see Table 7) to arrive at Principle-level scores.

Table 9 Scoring elements (note only new scoring elements applicable to the scope extension are listed here. For a full list of scoring elements please see SCS 2018 and MRAG 2019)

Component	Scoring elements	Main/Not main	Data-deficient or not
Principle 1	US Atlantic Winter skate	Target	Not

The RBF was not used in this scope extension assessment.

9.2 Peer Review reports

To be drafted at Public Comment Draft Report

As this was a single Principle scope extension, only one peer reviewer was assigned. The table below contains the comments from the single peer reviewer, together with the assessment team responses.

PI	PI Information	PI Scoring	PI Condition	Peer Reviewer Justification (as given at initial Peer Review stage)	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)	CAB Response Code
Perfo r-manc e Indica -tor (PI)	Has all available relevant information been used to score this PI?	Does the informati on and/or rationale used to score this PI support the given score?	Will the condition(s) raised improve the fishery's performan ce to the SG80 level?	PRs should provide support for their answers in the left three columns by referring to specific scoring issues and/or scoring elements, and any relevant documentation as appropriate. Additional rows should be inserted for any PIs where two or more discrete comments are raised e.g. for different scoring issues, allowing CABs to give a different answer in each case. Paragraph breaks may also be made within cells using the Alt-return key combination. Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).	CABs should summarise their response to the Peer Reviewer comments in the CAB Response Code column and provide justification for their response in this column. Where multiple comments are raised by Peer Reviewers with more than one row for a single PI, the CAB response should relate to each of the specific issues raised in each row. CAB responses should include details of where different changes have been made in the report (which section #, table etc).	See codes page for response options
1.1.1	Yes	Yes	NA	SIa: Agreed. Though the stock is below the target BMSY proxy it is likely above PRI.	Caveat mentioned by the Peer Reviewer are now included in the Report	Accepted (no score change)

1.1.1	Yes	Yes	NA	SIb: Agreed. Though the index values for the past 4 years have been themselves below the index target.	Caveat mentioned by the Peer Reviewer are now included in the Report	Accepted (no score change)
1.1.2	Yes	Yes	NA	NA: Rebuilding not required.	NA	
1.2.1	Yes	Yes	NA	SIa: Agreed with misgivings. While the monitoring and assessment using an index is appropriate, the HS is designed to increase or decrease catch of the whole complex, rather than individual stocks. This HS can and has worked as long as the catch of LS as a percentage of the complex remains fairly consistent. Should, for example, LS catch increases due to availability, but the stock status decline, then this relationship between LS and complex catch will deteriorate. Overall it is accounted for in the scoring as proposed, but caution is suggested.	The Peer Reviewer's comments emphasize the need for the Condition in 1.2.4. Additional text was added to this justification noting the weaknesses mentioned by the Peer Reviewer	Accepted (no score change)
1.2.1	Yes	Yes	NA	SIb: Agreed LS appears to be doing well under this HS.	No comment needed	Accepted (no score change)
1.2.1	Yes	Yes	NA	SIc: Agreed. Through the index, stock status is monitored, landings through the VTRs with the aid of VMS, and discards through at-sea observers.	No comment needed	Accepted (no score change)
1.2.1	Yes	Yes	NA	SId: Agreed. The HS is reviewed at least annually with the ability to do it more frequently as the situation warrants.	No comment needed	Accepted (no score change)

1.2.1	Yes	Yes	NA	SIe: NA	NA	
1.2.1	Yes	Yes	NA	SIf: Agreed. While there are reviews on strategies to minimize bycatch, they are generally not biennial. The Skate specifications are set every third year (I believe) where issues with discards and resulting action could take place.	No comment needed	Accepted (no score change)
1.2.2	Yes	Yes	NA	SIa: Agreed with reservations. Chief concerns are; a) that exploitation is reduced as the stock approaches limits given the question in SIb, and b) the use of a complex-wide HCR. If the issue in SIb is addressed then it is scored correctly; and this comment is more cautionary.	The justification or Sib was extended to emphasize the precautionary comments noted by the Peer Reviewer	Accepted (no score change)
1.2.2	Yes	Yes	NA	SIb: Agreed with misgivings and a suggestion to maybe add more to the text. While the buffer and 75th percentile are precautionary, I note that approximately 40% of the removals are the result of discarding, presumably from vessels not targeting skates, such as scallop gear and groundfish otter trawl (NESC, 2019). Wouldn't a decrease in the ABC or ACL simply result in higher discards rather than lower landings; resulting in less than expected declines in mortality? If not, then some explanation of how the HCR works in the face of discarding by non-UoC vessels might be helpful.	Text was added to address the importance of discards in the functioning of the HCR	Accepted (no score change)
1.2.2	Yes	Yes	NA	SIc: Agreed. It could be noted that the exploitation (overfishing) is measured by the index, with short-term increases or declines being attributed to fishing. As such changes in availability LS to the survey are potentially seen as changes in exploitation, which may be erroneous.	The limitations of the survey index are now noted in the text	Accepted (no score change)
1.2.3	Yes	Yes	NA	SIa: Agreed. The HS is working, but there is more information to be gathered to improve the assessment and the HS/HCR.	No comment needed	Accepted (no score change)

1.2.3	Yes	Yes	NA	SIb: Agreed. Further justification here might be helpful. Specifically, what data elements collected do not meet SG 100?	Further text added	Accepted (no score change)
1.2.3	Yes	Yes	NA	SIc: Agreed. But discarding, presumably by vessels not part of the UoC, are the bulk of the discards. An overview or at least reference to how discard data are collected would be useful.	Further text added to address discards	Accepted (no score change)
1.2.4	Yes	Yes	NA	SIa: Agreed. The assessment doesn't take in to account many aspects of LS biology or population dynamics.	No comment needed	Accepted (no score change)
1.2.4	Yes	Yes	NA	SIb: Agreed. Stock status is measured relative to reference points, though as pointed out the relevance of those reference points to stock productivity is questionable.	No comment needed	Accepted (no score change)
1.2.4	Yes	Yes	Yes	SIc: Agreed. But an important uncertainty not commented on is the survey vessel change in 2009. While a calibration coefficient is used and has a modest standard error of 0.32, that vessel change happened right after the reference time series basis for LS (1982-2008). So while uncertainty is scored appropriately, it might be wise to mention these in the text and the scoring.	Further discussion of the uncertainties were added to the text	Accepted (no score change)
1.2.4	Yes	Yes	NA	SId: Agreed.	No comment needed	Accepted (no score change)

1.2.4	Yes	Yes	NA	SIe: Agreed but with reservations. The SSC can and do function as external peer reviews and can provide reviews of Tier 2 assessments under the current NEFMC (new) process. The SSC does set the ABC during the process, and thus reviews the asseesment. Many members of the SSC are not employed by NOAA and are from academic institutions. Members of SSC can participate in processes such as SEDAR, and often chair the review panel. As SSC review could be agrued as an external review, a suggestion to revisit is requested; though the current scoring is precautionary. See https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=6b0acea089174af8594db02314f26914&mc=true&r=SECTION&n=se50.12.600_1315	The SSC function can be considered an external peer review process and clearly the SSC review of ABCs falls within that function. However, in the case pf Little Skate there hase been no extensive review for over a decade. For these reasons the "external peer review" was scored lower than otherwise.	Accepted (no score change)

9.3 Stakeholder input

There has been no stakeholder input received as of the publication of the PCDR.

9.4 Conditions

Table 10 Condition Table

Performance Indicator	1.2.4.
Score	*75*
Justification	1.2.4.c. Major sources of uncertainty have been noted (Section 7.2.1), thus SG 60 is met. However, the assessment does not take into account many of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately; however, they have not been clearly related to stock productivity. The uncertainties in biological productivity, distribution, reproduction and mortality have not been explored since the Data Poor Workshop (2008). Alternative assessment analysis methods might be explored to reduce this uncertainty which can then be related to the index monitoring methods or suggest other approaches. But currently, the assessment does not take into account the uncertainties. Characterizing uncertainty in the assessment should be related to the harvest strategy and control rule. The index, itself, has been reviewed and modified, but the basic relationship of the uncertainties in the linkage of productivity to the assessment has not. Currently SG 80 is not met.
Condition	Evidence shall be presented to show that here is an adequate assessment of the stock status that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.
Milestones	1st surveillance milestone: evidence of an approach or plan being developed to address condition; 2ndt surveillance milestone: evidence of the plan being implemented; 3rd surveillance milestone: evidence the assessment being reviewed and/or modified; 4th surveillance milestone: evidence of 1.2.4 achieving a score of 80.
Consultation on condition	Include details of any verification required to meet requirements in FCP v2.1 7.19.8

9.5 Client Action Plan

By the 2021 surveillance audit: The SFA will continue, through its participation in the NEFMC, to promote efforts to improve the information related to stock structure, stock productivity, fleet composition and other data for little skate that is available to support the harvest strategy in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.

By the 2022 surveillance audit: The SFA will continue to work with the NEFMC and will report on the status of ongoing efforts to promote improvements to the information related to stock structure, stock productivity, fleet composition and other data for little skate that is available to support the harvest strategy such that this information is sufficient to meet the 80 scoring guidepost for this Performance Indicator by the fourth surveillance audit (of the combined dogfish, winter and little skate fishery) in 2022.

9.6 Surveillance

To be drafted from Client and Peer Review Draft Report

Table 11 Fishery surveillance program

Surveillance level	Year 1	Year 2	Year 3	Year 4
e.g. Level 5	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit & re-certification site visit
Level 4	**Offsite**	**Onsite**	**Onsite**	**Onsite**

Table 12 Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1 (Winter only)	**May 2020**	**October 2020**	**To enable Little skate report to be finalized before the first Winter skate audit and to allow for the delay caused by the coronavirus pandemic**
2	**November 2021**	**July or August 2021**	**Near anniversary of combined fishery and enabling combined site visit with other fisheries in the region.**
3	**November 2022**	**July or August 2022**	**Near anniversary of combined fishery and enabling combined site visit with other fisheries in the region.**

Table 13 Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
Winter 1	Remote audit	3 off site	The Dogfish recently completed its 1st surveillance audit and Winter skate UoCs are due for their first surveillance imminently, however the Little skate UoAs are not yet certified. It is therefore recommended that there be a remote audit to cover the first Winter skate surveillance (all information is available remotely) and to then get the two joined up for the 2nd surveillance with an onsite audit
2	On-site audit	3 on site	Default level audit for dogfish, Winter skate and Little skate combined
3	On-site audit	3 on site	Default level-may be revisited following 2nd audit depending on conditions progress and ability to verify remotely
4	On-site audit and ressassement	3 on site	Default level and in combination with reassessment

9.7 Harmonised fishery assessments

Harmonization as relevant for this fishery is fully reported on in SCS 2018. There is no new harmonization needed as a result of adding Little skate as a new target stock to this assessment.

9.8 Objection Procedure – delete if not applicable

To be added at Public Certification Report stage

The report shall include all written decisions arising from a 'Notice of Objection', if received and accepted by the Independent Adjudicator.

Reference(s): FCP v2.1 Annex PD