



New England Fishery Management Council

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DRAFT MEMORANDUM

DATE: March 31, 2015
TO: Monkfish Committee
FROM: Monkfish Plan Development Team (PDT)
SUBJECT: **Monkfish Framework Adjustment 9**

The PDT met in Mansfield, MA on February 6, 2015 and held a follow up conference call on March 23, 2015 to discuss analysis for Framework 9. PDT participants included Fiona Hogan (NEFMC), Doug Christel, Jerome Hermesen, Katherine Richardson (GARFO), Anne Richards (NEFSC), Tammy Murphy, Greg Ardini, Patricia Clay (NEFSC SSB), Jason Didden (MAFMC), Keri Stepanek (ME DMR), Matt Gates (CT), and Steve Correia (MA DMF).

Framework 9

At their August 26, 2014 Joint Monkfish Advisory Panel and Committee meeting, the Committee identified a number of Amendment 6 (A6) alternatives that could be completed via a framework action. The Committee intended to implement these alternatives as soon as possible, while also streamlining A6. The Council initiated Framework 9 (FW9) at the November 2014 Council meeting, which resulted in a change in Council priorities.

At their February meeting, the PDT planned out their analyses for FW9. However, while conducting the analyses, it became clear the PDT needed further guidance from the Committee prior to final action. The analysis and questions for the Committee are provided by alternative below.

1.1.1 Proposal to allow vessels to declare a Northeast Multispecies DAS at sea

Currently, there are four draft alternatives that would allow a groundfish DAS to be declared at sea: all monkfish permit category C, D, and H vessels, only monkfish category C, D, and H vessels participating in groundfish sectors, all monkfish category C, D, and H vessels fishing in the Northern Management Area (NFMA), or only monkfish category C, D, and H vessels participating in a groundfish sector in the NFMA.

The PDT requests that the Committee consider the following questions and bullets when providing guidance on this alternative.

1. Does this measure apply to all groundfish vessels or a subset?

- The original draft A6 measure, subsequently incorporated into this document at the August 2014 Committee meeting, did not identify which vessels would be eligible to use this measure.
 - Without that information, the PDT drafted the alternatives specific to restricting this measure to only category C, D, or H vessels.
 - Allowing all groundfish vessels, including those issued an incidental monkfish category E permit, would be more liberal, and could result in higher monkfish landings.
2. Does this measure apply to the NFMA, SFMA, or both areas?
 - The original A6 measure was not area-specific. Should the PDT assume that it would apply to all areas?
 - Current “monkfish option” only applies in the NFMA because NFMA vessels targeting groundfish were considered most likely to exceed incidental landing limits in FW4.
 3. Does this measure only apply to trips already under a monkfish DAS?
 - The original A6 measure was under the sub-section regarding interaction of NE multispecies and monkfish DAS measures.
 - Restricting this measure to only trips already on a monkfish DAS would not increase monkfish landings and would only allow vessels previously on a monkfish-only DAS trip to fish outside of exemption areas.

For this analysis, the PDT examined data from the Data Matching Imputation System (DMIS), the Northeast federal permit database, and the Allocation Management System (AMS) to estimate the need for or potential impacts of each alternative. When a vessel fishes without using a monkfish DAS, the applicable monkfish incidental landing limit varies based on several factors, including gear and area fished (see Table 1). The proposed alternatives would allow vessels, when needed, to declare a NE multispecies DAS while at sea and then be subject to the incidental monkfish trip limits under a NE multispecies DAS (Table 2).

The PDT estimated the number of trips that landed various amounts of monkfish (categorized as an amount of tail weight per DAS) in FY2013. The PDT noted that it is difficult to identify whether trips landed monkfish in excess of 5% of total weight of fish on board because the total catch varies by trip. Accordingly, 50 lb/DAS was generally used as a proxy for determining whether trips exceeded incidental amounts.

Table 1 – Current incidental monkfish landing limits when not on any DAS

DAS Program	Area	Gear	Landing Limit (per trip unless otherwise stated)
No DAS	Gulf of Maine or Georges Bank Regulated Mesh areas	Minimum mesh size or larger	Up to 5% of total weight of fish on board
	Southern New England RMA east of Mid-Atlantic exemption area		Up to 5% of total weight of fish on board, not to exceed 50 lb per day, up to 150 lb per trip
	SNE RMA west of the Mid-Atlantic Exemption area boundary or Mid-Atlantic RMA		Up to 5% of total weight of fish on board, not to exceed 450 lb
	NFMA or SFMA	Mesh smaller than minimum	50 lb per day, or partial day, not to exceed 150 lb per trip
		Rod and reel or handlines only	

No DAS and fishing under a skate bait letter of authorization	SNE RMA	Minimum mesh size or larger	Up to 5% of the total weight of fish on board, not to exceed 50 lb per day, up to 150 lb per trip
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Table 2 - Incidental monkfish trip limits while on a NE multispecies DAS

	NFMA			SFMA	
Permit Category	C	D	E, F, or H	E or H	C, D, or F
Gear	All gear			Non - trawl	Trawl
Landing Limit¹ (tail weight per DAS²)	600 lb (1,746 lb whole weight)	500 lb (1,455 lb whole weight)	Up to 25% (where all monkfish is converted to tail weight ²) of the total weight of fish on board, not to exceed 300 lb (873 lb whole weight/DAS)	50 lb (146 lb whole weight)	300 lb (873 lb whole weight)

Figure 1 provides estimates of the number of trips landing various amounts of monkfish tail weight per DAS. Figure 1 A indicates that the largest number of trips, with the relevant activity codes for permits C, D, and E land 10 pounds of tail weight per DAS. This does not indicate that these 10 lb trips are contributing the most to total landings, fewer trips with higher landings can land more overall. The preliminary analysis of the data suggests similar trends for all 4 options. The majority of non-DAS trips are landing low amounts of monkfish, however, there are a few trips exceeding the 50 lb/DAS proxy trip limit suggesting there may be a need for the flexibility to declare a NE multispecies DAS while at sea.

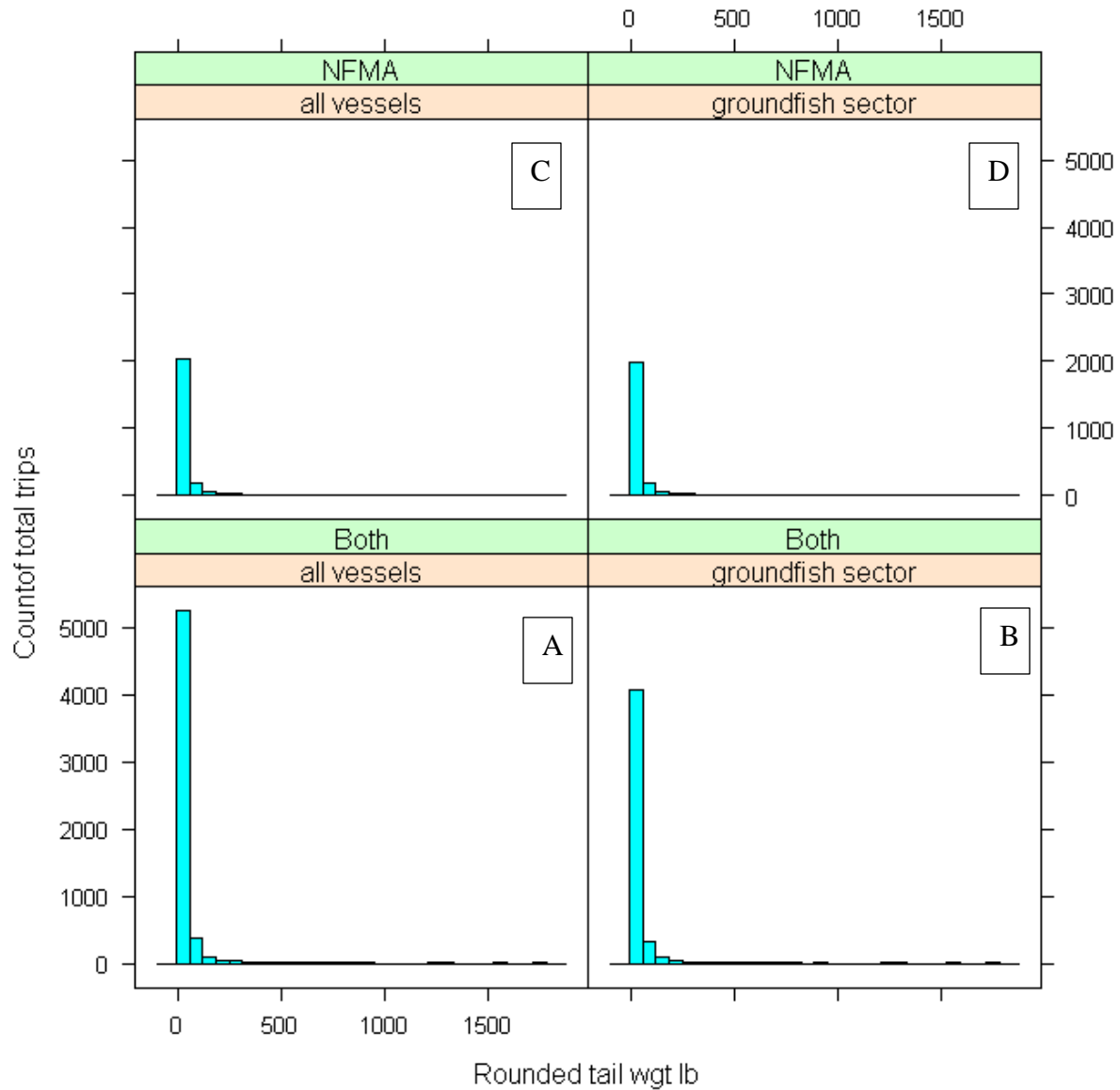


Figure 1 – Histograms estimating the number of permit category C, D, and E trips landing various amounts of monkfish tail weight per DAS for the four options for alternative 1.1.1 for FY2013. Y axis = count and x-axis = monkfish tail weight lb/DAS bins in all figures. A – all vessels in both management areas; B – only groundfish sector vessels in both management areas; C – all vessels only in the NFMA; D – only groundfish sector vessels in the NFMA.

1.1.2 Proposal to allow the declaration of a monkfish DAS in Southern Fishery Management Area

This alternative would allow vessels on a groundfish DAS in the Southern Fishery Management Area (SFMA) to declare a monkfish DAS at sea prior to returning to port in the event the vessel exceeds the monkfish incidental limit.

The PDT analyzed incidental landings in the SFMA to depict trends in FY 2013. This analysis is complicated by the previous alternative. Depending on the option selected, vessels in the SFMA could go from the incidental trip limit for vessels not under a DAS program (outlined in Table 1) to the GF DAS incidental limit (50 lb or 300 lb depending on gear and permit category outlined in Table 2) to the landing limits on a MF DAS (ranging from 500 lb to 1600 lb depending on permit category outlined in Table 3).

Table 3 - Possession limits while on a monkfish DAS in the NFMA and SFMA

Northern Fishery Management Area		
Permit Category	A & C	B & D
Landing Limit ¹ (tail weight per DAS ²)	1,250 lb (3,638 lb whole weight)	600 lb (1,746 lb whole weight)

Southern Fishery Management Area			
Permit Category	A, C, or G	B, D, or H	F
Landing Limit ¹ (tail weight per DAS ²)	610 lb (1,776 lb whole weight)	500 lb (1,455 lb whole weight)	1,600 lb (4,656 lb whole weight)

The PDT requests the Committee consider the following questions and bullets when providing guidance on this alternative.

1. How does this measure interact with the proposed measure to allow NE multispecies DAS to be declared at sea (see Section 1.1.1 above)?
 - Is the “monkfish option” cumulative with the declaration of a NE multispecies DAS at sea? In other words, in order to declare a monkfish DAS at sea (the “monkfish option”), would a vessel have to declare a NE multispecies DAS at the dock?
 - Could a vessel begin a sector non-DAS trip from the dock, declare a NE multispecies DAS at sea during the trip, and then declare a monkfish DAS at sea to maximize monkfish landings? If so, a NFMA Category C trawl vessel could increase its allowable monkfish landings from 5% of total weight of fish on board to 600 lb/DAS, and finally up to 1,250 lb/DAS under this interpretation.

This preliminary analysis examined only trips identified as incidental trips based on the declared Vessel Monitoring System (VMS) activity code. However, available data indicate that there are a number of trips that appeared to exceed the incidental limits and more closely followed directed trip limits (Figure 2). For example, Figure 2 shows a spike in the number of trips that landed 550 lb/DAS – the monkfish limit for Category C vessels fishing under a monkfish DAS during 2013. A caveat to this analysis is that we can only make assumptions as to why we are seeing this trend of trips identified as incidental trips exceeding the incidental limits. It could be that at least some of these trips were directed monkfish trips that were mis-declared as incidental trips. Many of these trips were initially declared as monkfish-option trips (i.e.,

a Northeast multispecies trip that anticipated the possibility of converting to a monkfish trip at sea), suggesting that vessel operators intended to convert to a directed monkfish trip if incidental limits were exceeded. However, since the current regulations do not allow the declaration of a monkfish DAS at sea in the SFMA (i.e., the monkfish “option” does not apply in the SFMA), operators did not have the ability to declare a monkfish DAS before landing. Examination of declared directed trips in the SFMA for FY2013 indicates that a large number directed trip limits were achieving the trip limits in place at that time (category A and C permits was 550 lb/DAS2006 and category B, D and H permits was 450 lb/DAS; Figure 3). As expected, the frequency distribution differs between incidental and directed trips. The small peak at 550 lb/DAS on the incidental trips does correspond to the peak for directed trips but as discussed above, the cause of this is unclear.

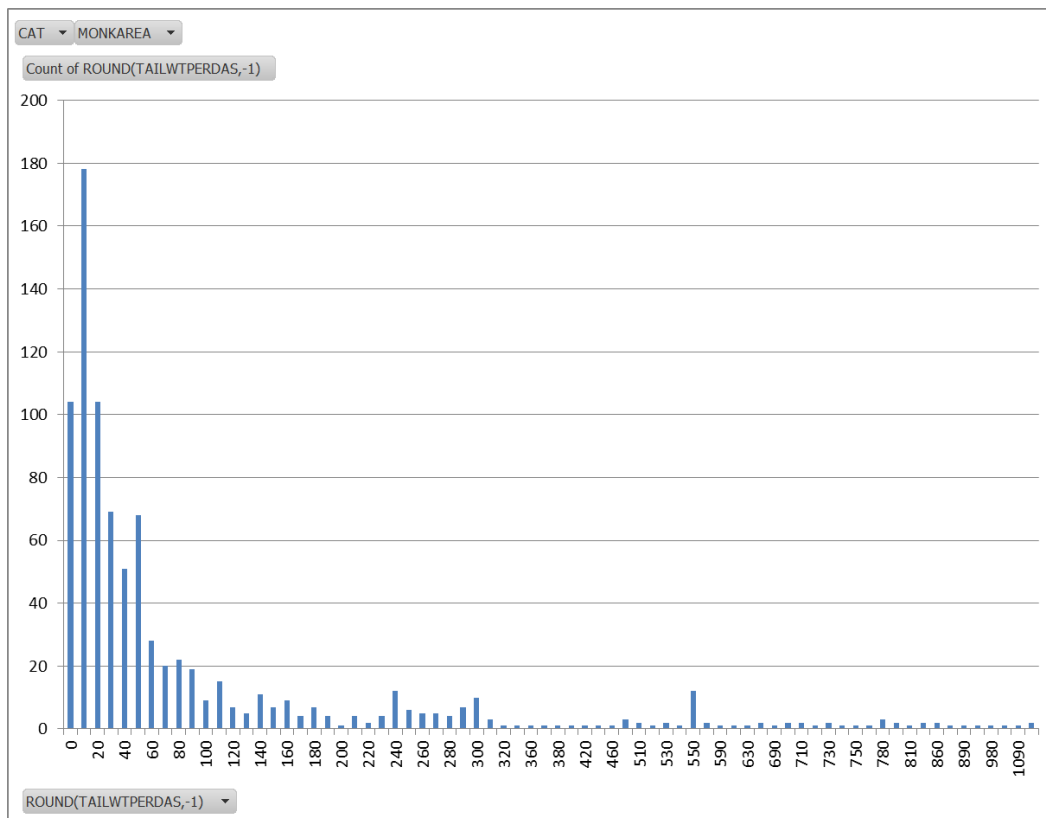


Figure 2 - Frequency of category C and D incidental trips grouped by trip limit in SFMA in FY2013

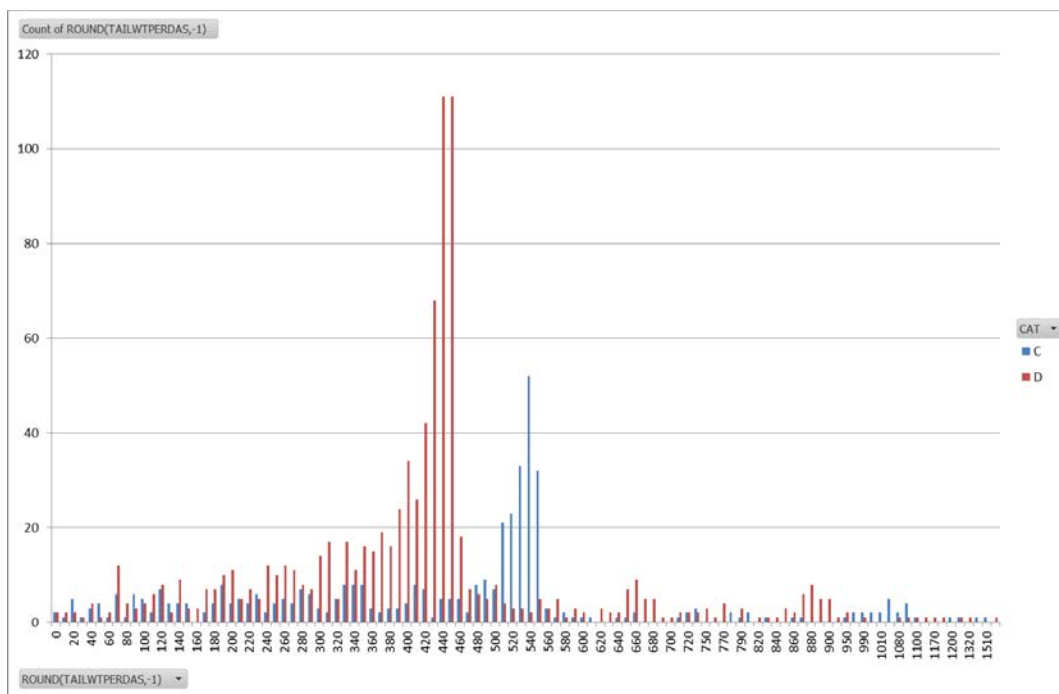


Figure 3 - Frequency of monkfish category C and D directed trips grouped by trip limit in SFMA in FY2013

1.1.3 Proposal to increase monkfish-only DAS based on higher groundfish common pool DAS counting

This alternative would increase the allocation of monkfish DAS to offset the impact of groundfish DAS differential counting for common pool vessels. The PDT approach to the analysis was to compare the NE multispecies and monkfish DAS charges. All the common pool trips analyzed were declared into the SFMA in FY2013. This could be due to the reduced need to declare a monkfish DAS in the NFMA due to the higher incidental landing limits allowed as part of the 2013 emergency action in the monkfish fishery, or that any declared NFMA trips did not sell monkfish.

Based on the analysis, only 13 permits operating in the common pool in FY2013 were charged both multispecies and monkfish DAS. Based on the differential DAS charge between monkfish and NE multispecies DAS by permit category, this does not suggest that the higher charge for NE multispecies DAS is affecting monkfish DAS usage (Table 4). This alternative was not proposed as an immediate need by industry and if it continues to have no effect on fishing activity, it could be removed from consideration in the framework.

Table 4 - Comparison of NE multispecies DAS and monkfish DAS usage by common pool vessels and permit category in FY2013

Permit category	Sum of NE multispecies DAS	Sum of monkfish DAS	Max Difference	Min Difference	Average Difference
C	85	67.41	0.96	-0.0007	0.25
D	104	87.79	0.9	-0.0007	0.17

1.1.4 **Modify DAS/trip limit and monkfish DAS allocation for Category F (offshore) vessels**

Under this alternative, the trip limit applicable to Category F vessels would be increased. The number of DAS that would accrue for the trip would be based on the Category F trip limit divided by the SFMA trip limit applicable to the vessel's primary permit category.

However, before further development of this alternative can be completed, the PDT needs further guidance from the Committee to better define this proposed measure.

1. Would monkfish DAS allocations or DAS accrual revised based on increased trip limits?

- While, the heading of the alternative references allocation, the description references accrual. The PDT would like the Committee to confirm which one it should be.
- The PDT did note that an alternative that allocated DAS would be more appropriate because charging DAS based on what a vessel landed would be too similar to an ITQ, and would likely necessitate an amendment and referendum. The Committee discussion to date has primarily focused on inclusion in FW9.
- Based on public comment, the Councils originally adopted a static possession limit for yearly consistency, with only adjustments to DAS allocation to increase access to available monkfish.
- The rationale for the current trip limit of 1,600 lb/DAS was not clear as written in A2. Further investigation is underway to find documentation for why 1,600 lb/DAS was initially selected for the Offshore Program and the formula to calculate the associated DAS allocation.

2. Is the objective of the offshore trip limit/DAS allocation measures to achieve a desired catch?

- The proposed text would result in substantial catch reduction from current measures because DAS allocations would be calculated differently than the current formula, resulting in fewer allocated DAS and lower potential overall catch, even with increased trip limits.
 - i. Proposed text maximum catch = 7,934 lb (2,200 lb/DAS x 3.6 DAS).
 - ii. Current measure maximum catch = 21,960 lb (1,600 lb/DAS x 13.725 DAS).
- Using the existing DAS allocation formula and simply adjusting trip limit would produce potential catch similar to existing measures.
 - i. Maximum catch with 2,200 lb/DAS trip limit = 21,956 lb.

1.1.5 **Proposal to eliminate Northern Area Monkfish Trip Limit on a Groundfish DAS**

The incidental limits while on a NE multispecies DAS are outlined in Table 2. The PDT examined monkfish landings per NE multispecies DAS for Category C, D, and E permits in the NFMA. Based on the analysis, the incidental limit does not appear to be limiting for the majority of vessels in the NFMA, as very few trips exceed the current incidental trip limit of 600 lb/DAS (Figure 4). Therefore, eliminating the incidental limit would likely not lead to any increase in monkfish landings on such trips within the NFMA. However, doing so would also eliminate any incentive/need to use a monkfish DAS in the NFMA. This could have unintended consequences, such as the potential that NFMA vessels would target monkfish under a groundfish DAS, reserving all of their allocated monkfish DAS to use in the SFMA. While this potential has existed in the monkfish fishery in the past, such as before monkfish possession limits were implemented in the NFMA in 2007, effort shifts do not appear to have occurred over time, as effort and landings have been relatively steady despite substantial reductions in available groundfish annual catch limits and associated fishing opportunities in recent years (Figure 5). Figure 6 suggests consistency in DAS usage in the NFMA in recent years.

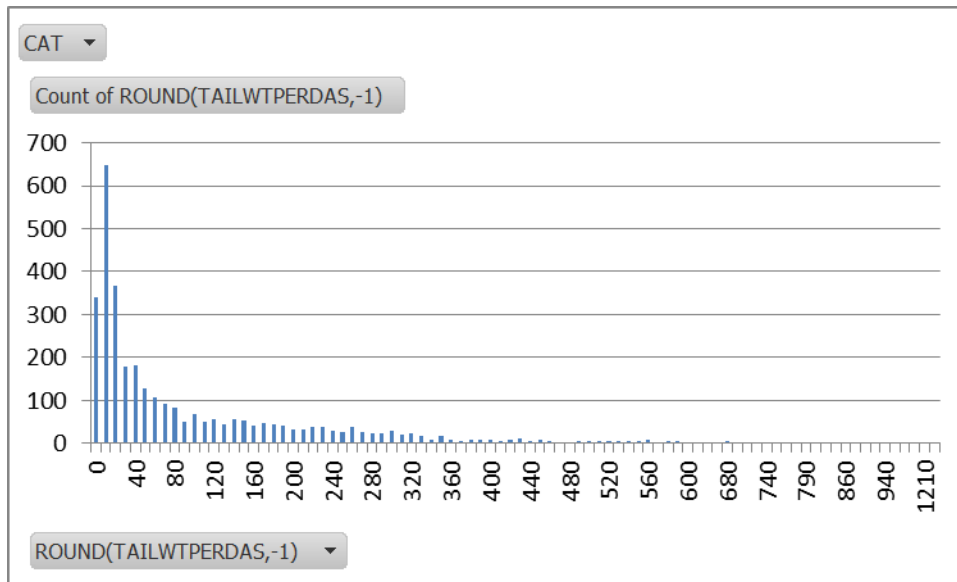


Figure 4 - Frequency of permit category C, D, and E trips grouped by trip limit in NFMA in FY2013

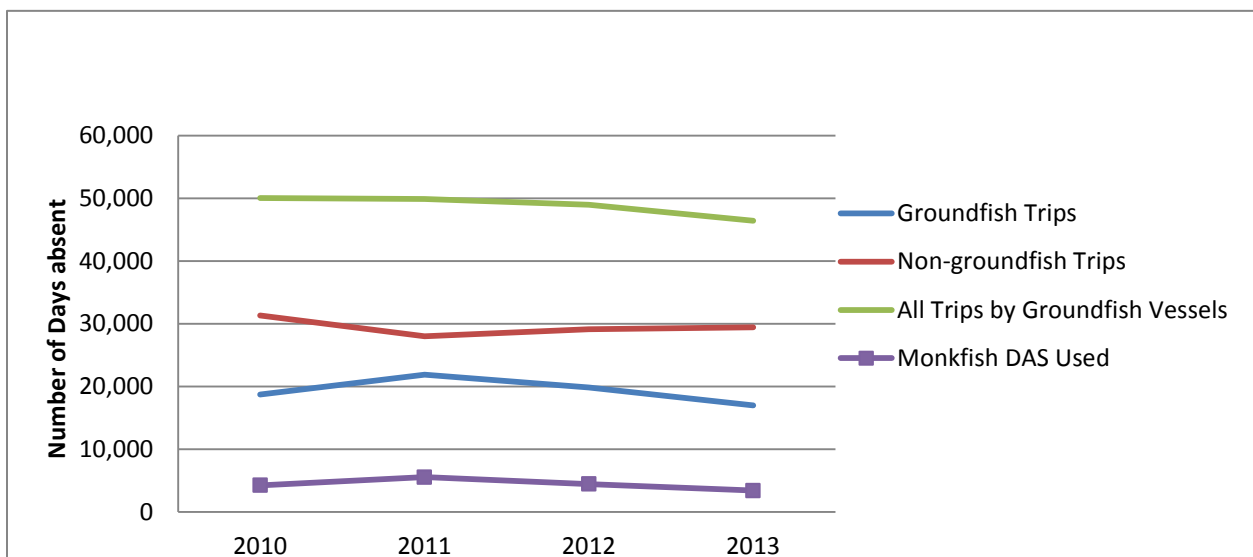


Figure 5 - Recent effort by active groundfish and monkfish vessels in the NFMA

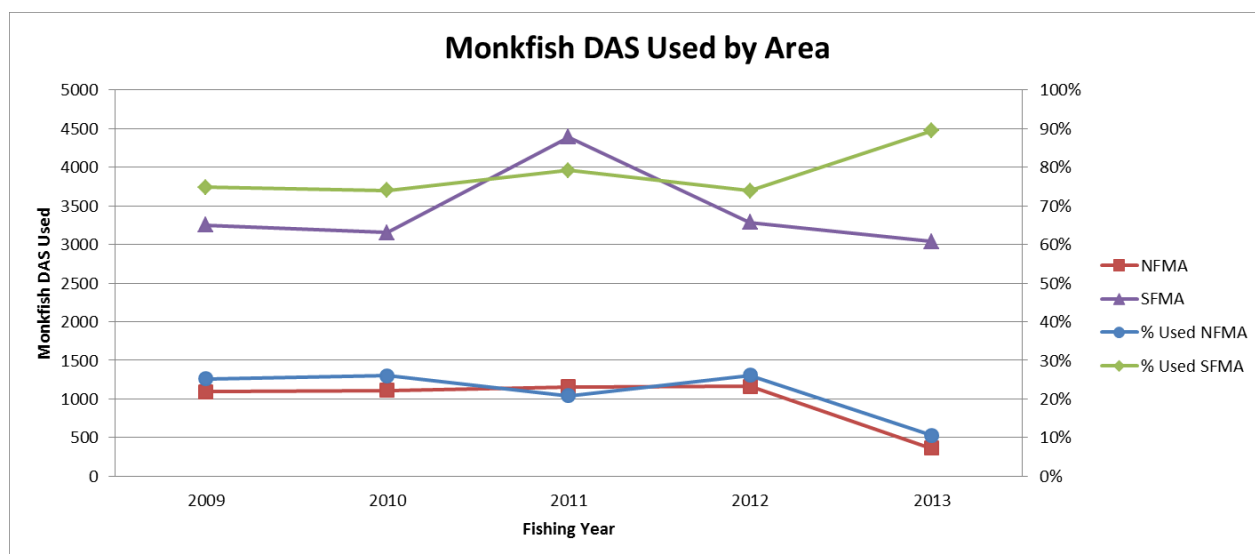


Figure 6 - Comparison of monkfish DAS usage by monkfish management area

Analysis of Additional Measures

The tasked the PDT with analyzing two additional measures that are not formally integrated into Framework 9 at this time:

1. Allowing the use of less than 10 inch mesh in a stand-up gillnet while on a monkfish DAS.
2. Allowing a vessel to re-declare from a monkfish DAS to a monkfish RSA DAS while at sea

Preliminary PDT analysis of the first measure is included below.

The PDT is requesting clarification from the Committee on the second measure. Specifically, is the intent of the second measure to charge monkfish RSA DAS for the entire trip, or only part of the trip? The PDT notes that it is much easier to implement and enforce this measure if the monkfish RSA DAS charge is applied to the entire trip. This is because when fishing under a monkfish RSA DAS, most vessels operate under an exempted fishing permit, which exempts RSA trips from the existing monkfish possession limits. Thus, it would be difficult to identify applicable possession limits and apply DAS business rules to trips using both a monkfish DAS and a monkfish RSA DAS on the same trip.

Allowing the use of <10 inch mesh stand-up gillnet on monkfish only DAS

This measure would increase profitability of a trip by allowing vessels to use large mesh (less than 8-inch mesh) stand-up gillnets to target dogfish on the same trip in which they use extra-large mesh (greater than 8-inch mesh) to target monkfish under a monkfish DAS (Figure 7).

The PDT was concerned that this measure could be difficult to implement considering goal 3 of the original FMP is to prevent increased fishing on immature fish. The PDT examined observer data to obtain the length frequency of monkfish catch on trips catching monkfish and using multiple gillnet mesh sizes on the same trip (Figure 8). The PDT defined large mesh (lg) as that less than 8 inches and extra-large mesh (xlg) as greater than 8 inches. The use of tie downs affected the size composition of the catch. Large mesh (less than 8" mesh) catches few undersized monkfish. The PDT has not included fishing location as part of this preliminary analysis, however, fishing for both species is likely occurring in the same statistical area to minimize fishing costs.

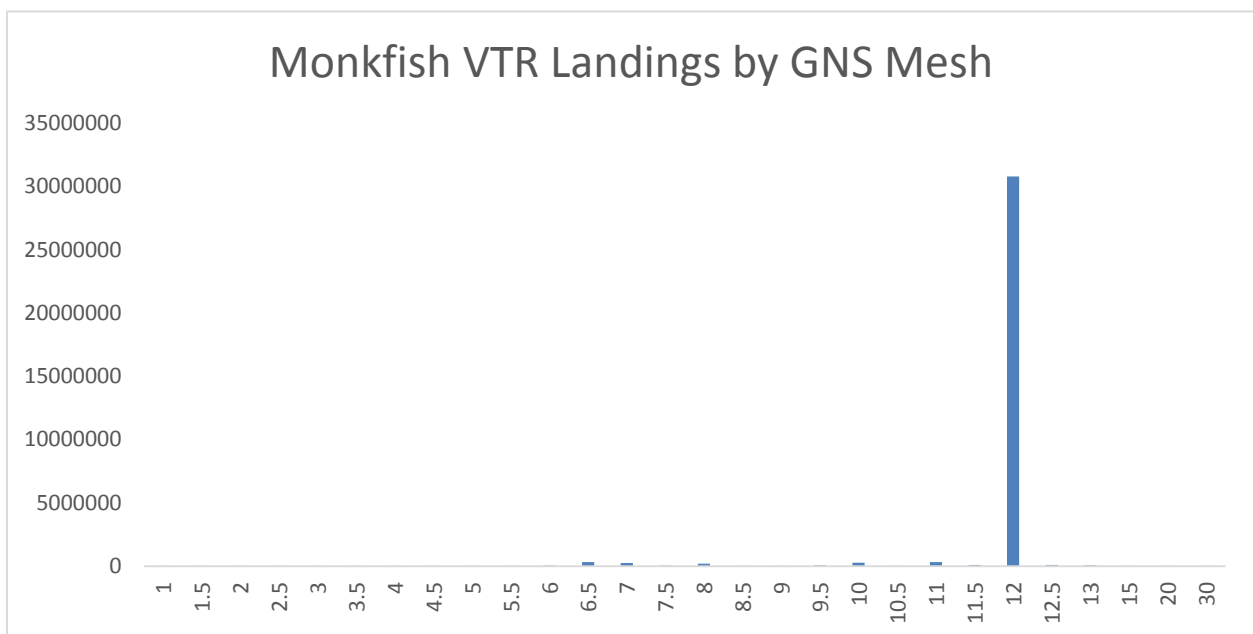
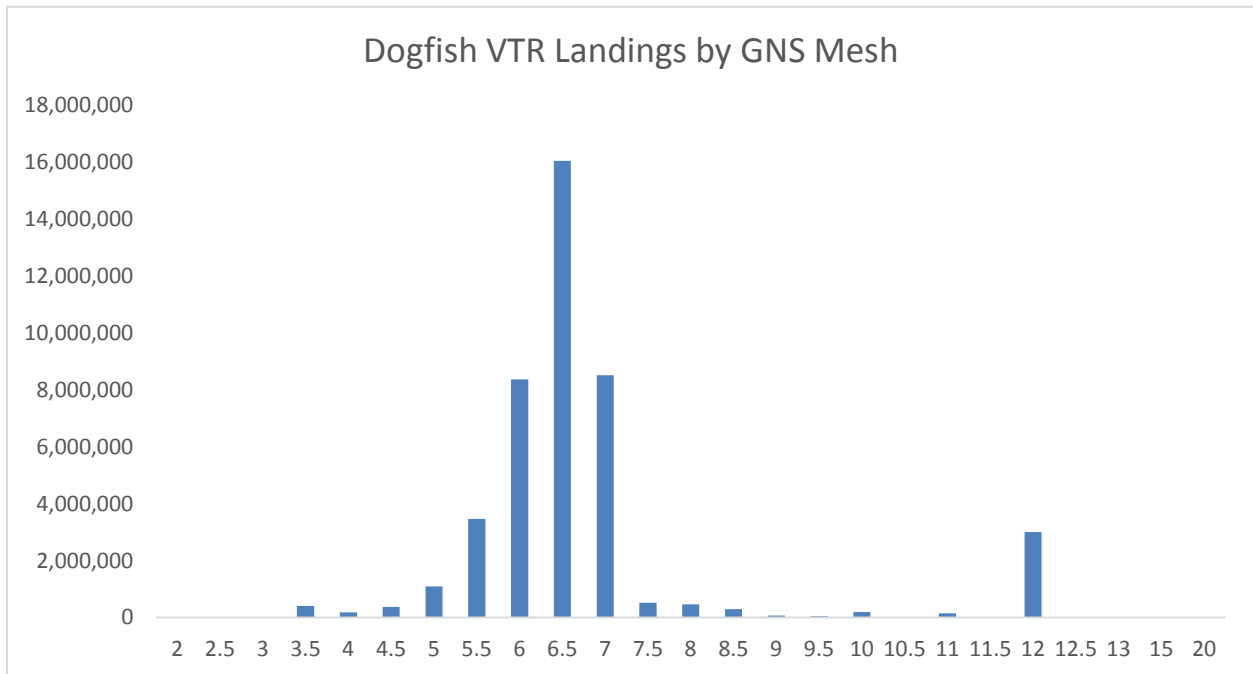


Figure 7 - Comparison of Dogfish and Monkfish landings by mesh size from VTR data

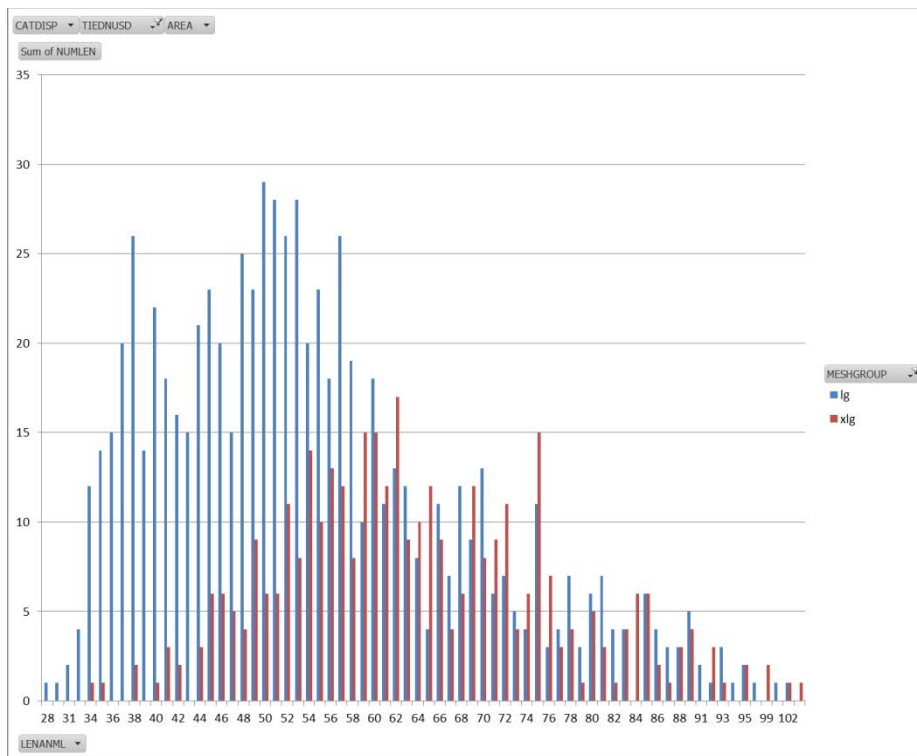


Figure 8 - Comparison of length frequencies of monkfish caught in large mesh (<8'') and extra-large mesh (>8'') with no tie downs on observed trips where both large and extra-large mesh were used on the same trip

Statistical analyses indicated there was a difference in monkfish length frequencies between the two mesh size categories. The boxplot shows the lg mesh without tiedowns catches smaller monkfish than xlg mesh without tiedowns (Figure 9). This is confirmed by the QQ plot, where you would expect the data to fall on the line if there was no difference between the two mesh sizes (Figure 10). The Tukey mean difference plot suggests a shift of approximately 15 cm between the two mesh sizes (Figure 11). The difference between the two mesh sizes is further emphasized by the length and density plot. The lg mesh catches more small fish (Figure 12).

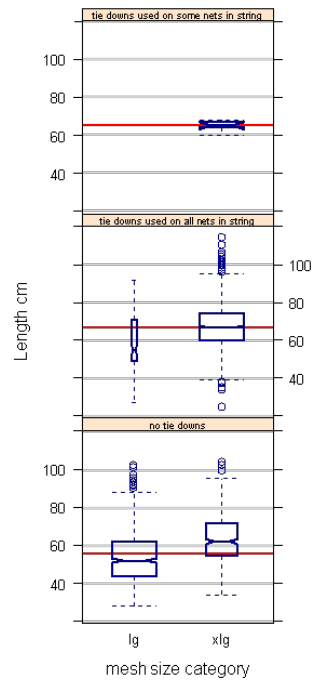


Figure 9 - Boxplot of different mesh size categories

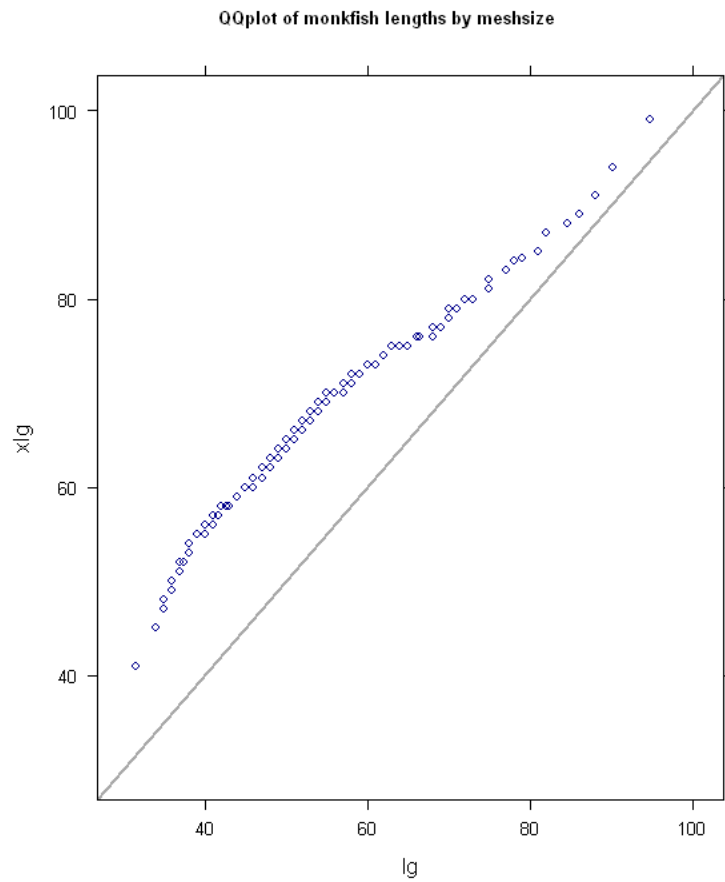


Figure 10 -QQ plot of monkfish length by mesh size

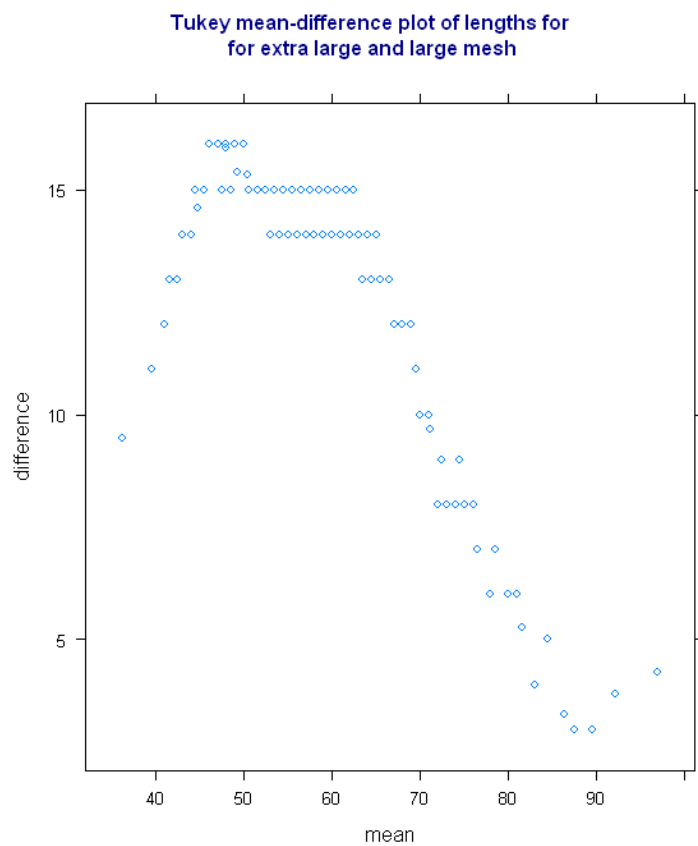


Figure 11 - Tukey mean test

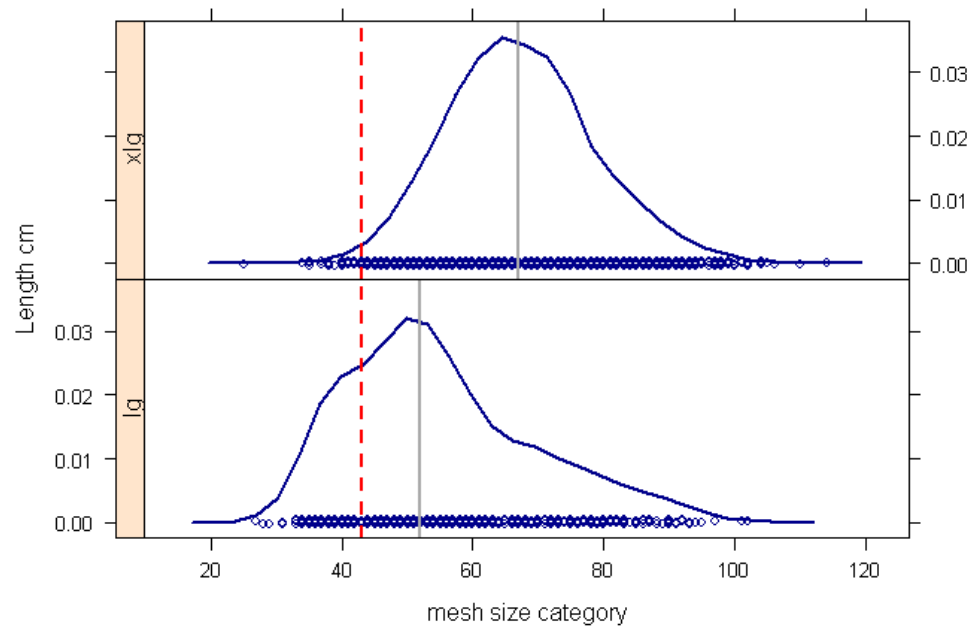


Figure 12 - Length and density plot. Red line represents minimum fish size of 43 cm. Grey line is the median length

The PDT examined observer and VTR data to determine the magnitude of this occurring. Based on VTR data between 2000 and 2013, less than 1% of monkfish caught in the SFMA was caught in sink gillnets with a mesh size less than 10 inches, which was consistent with data from similar observed trips over the same period. This number could increase if vessels were explicitly allowed to use less than 10 inch mesh, but might not increase substantially if tie downs are not allowed (91% of monkfish were caught in tied-down gear 2000-2013 in gillnet observer data) and if the mesh is restricted to the size relevant for dogfish (5"-7").

The PDT thus concluded that the use of less than 10 inch mesh on a monkfish DAS does not appear to be catching more than a minimal amount of undersized and, presumably, immature monkfish. However, this could largely be the result of existing regulations. The PDT also concluded that allowing the use of stand-up gear with mesh of 5-7 inches appears unlikely to undermine Objective 3 of the FMP ("To prevent increased fishing on immature fish"), especially since such gear has been being used for dogfish on some monkfish trips. However, if such a gear provision is codified in regulations, the PDT would periodically monitor observer and VTR data to ensure that such a change did not lead to an unexpected undermining of the objectives of the monkfish FMP through increased catch of immature monkfish.