GROUNDFISH MANAGEMENT TEAM REPORT ON CONSIDERATION OF GEAR REGULATIONS FOR THE TRAWL CATCH SHARES

Overview

Under this agenda item, the National Marine Fisheries Service (NMFS) and Pacific Fishery Management Council (Council) staff integrated the input of Trawl Rationalization Regulatory Evaluation Committee (TRREC), Gear Workshop, the Groundfish Advisory Subpanel (GAP), and the Groundfish Management Team (GMT) (see references at end) to provide a strawman purpose and need, and range of alternatives pertaining to four potential trawl individual fishing quota (IFQ) regulatory changes. Following Council guidance, greater analysis will be conducted in this process with an implementation goal of 2017. The purpose of this GMT report is to provide guidance regarding additional benefits and issues not yet presented, and to highlight those currently presented that could be of potential greatest interest to the Council.

Purpose and Need

With individual accountability and 100 percent observer coverage, regulations used previously to manage the fishery under trip limits may no longer be necessary; potential reduction or elimination of rockfish conservation areas (RCAs) are discussed under Agenda Item H.8, Amendment to Modify Groundfish Essential Fish Habitat (EFH) and to Adjust Rockfish Conservation Areas later at this meeting, and the relaxation of trawl gear configurations are more specifically discussed within this Agenda Item.

Whether or not individual accountability is an effective method to replace or reduce historic trawl regulations, particularly those that were implemented from overfished rockfish species declarations, is the primary question the GMT recommends the analysis explore in detail and the Council consider. And if so, by which degree.

In the remainder of this report, the GMT provides comment and guidance pertaining to the range of alternatives for each of the four gear proposals provided by Council staff (Table 1).

Table 1. Range of alternatives for trawl gear regulatory changes provided by Council staff based on the input from Council, TRREC, the gear workshop, and advisory bodies.

	Alternative 1 (No Action)	Alternative 2 (TRREC/Gear Workshop)	Alternative 3 (maximum flexibility)
Trawl Gear Configuration			
Minimum mesh size for bottom trawl	4.5"	4"	
Selective flatfish trawl (SFFT) gear, a type of small footrope trawl	SFFT is a 2-seamed net with no more than 2 riblines, excluding codend. Breastline no longer than 3 ft in length. No floats along center third of headrope or attached to top panel except on riblines. Footrope less than 105 ft in length. Headrope must be not less than 30% longer than footrope.	Eliminate the SFFT requirement shoreward of the RCA and replace with small footrope (like south of 40°10'). Sub-option, retain SFFT but change the SFFT definition to allow 2-seam or 4-seam net	Eliminate SFFT requirement, and allow small or large footrope shoreward of the RCA.
Chafing Gear	Last 50 meshes, 50% circumference, attachment method, consistent with minimum mesh size, attached outside straps	Consider bottom trawl chafing gear restrictions mirroring recent midwater changes (see 660.130(b)(4)(i) – bottom of page 3 in Agenda Item H.2, Attachment 2).	Eliminate chafing gear restrictions for bottom trawl and midwater
Gear Use			
Multiple Gears Onboard	One type of trawl gear onboard per trip. Multiple fixed gear allowed onboard per trip. Can't have trawl and fixed gear onboard on the same trip. Can only use one gear per trip.	Allow multiple trawl gear types onboard and midwater on the same trip. Can't have trawl and fixed gear onboard on the same trip. Can only use one gear per trip.	Allow any legal IFQ groundfish gear onboard on the same trip. Allow use of multiple gears per trip.* Sub-option A – must separate catch by gear type Sub-option B – catch by gear type can be co-mingled

Note: Clarification in table – small and large footrope trawls can currently be used during same trip if seaward of the RCA.

Decrease the minimum mesh size from 4½ inches to 4 inches

The purpose of the proposal is to provide a buffer for fishermen who purchases nets with the minimum 4½ inch mesh size, but may end up with smaller meshes due to shrinkage as the net ages, or inconsistencies in net manufacturing. Either of these events could lead to enforcement violations, or the need to purchase new nets.

If the minimum mesh size was reduced to 4 inches and fishermen began purchasing 4 inch mesh nets, then the same issues could remain; however, industry has stated that most would continue fishing 4½ inch mesh because it would be costly to purchase smaller mesh nets, and would result in greater catches of smaller, non-marketable fish for which they are held accountable.

Although industry has indicated that there are no incentives to fish smaller mesh, doing so could have biological implications. Using smaller meshes would increase the selectivity of trawls for small fish (Figure 1), preventing escape of juvenile species, including protected species such as eulachon. Since groundfish quotas are based on weight, increased catches of small fish could result in greater quantities of fish taken with a given quota, thereby increasing fishing mortality rates. With IFQ though, the mortality would still be expected to stay within harvest limits. However, the implications to the stocks given greater mortality rates of small fish is a complicated issue, as there are also benefits to harvesting a greater proportion of small fish (e.g., they have higher natural mortality rates).

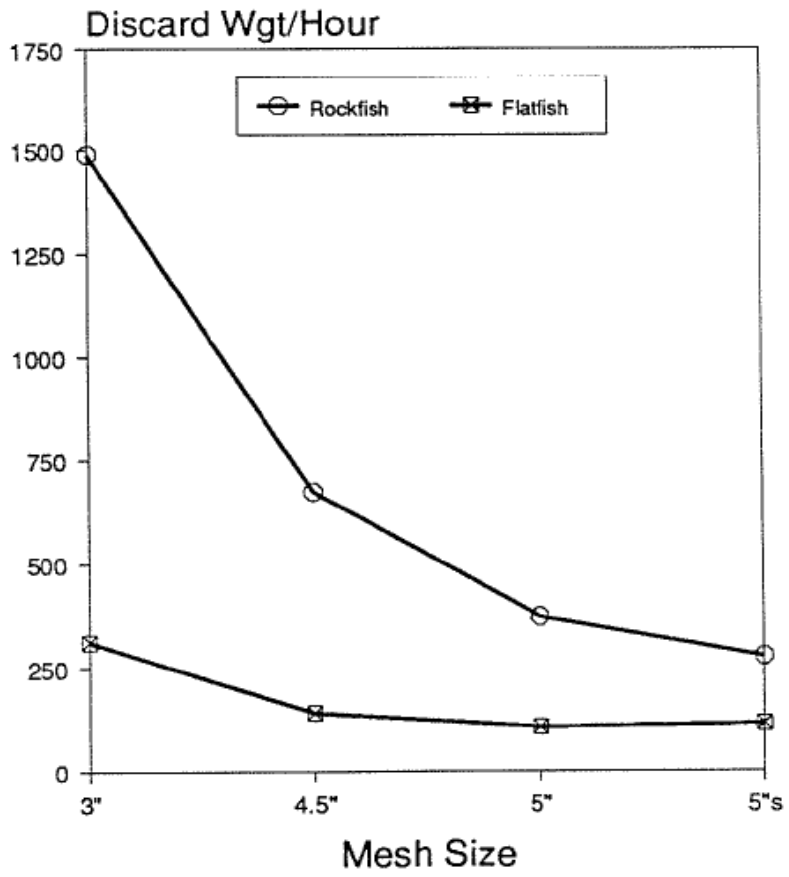

Figure 1. Discard rates of flatfish and rockfish for the various mesh sizes by bottom trawls from the Pikitch et al. (1990) study that was used to establish the current 4½ inch minimum mesh size. Since the proposed 4 inch minimum was not evaluated, potential increases in bycatch need to be interpolated (approximately 1,000 wgt/hour).

Increase allowances for chafing gear

The purpose of the proposal to increase chafing gear allowances is to provide better protection of expensive trawl nets from damage inflicted from the bottom and ramp. Chafing gear is a webbing applied to the exterior of trawl nets to absorb impacts and abrasions.

Similar to the proposal to reduce the minimum mesh for trawls, the primary GMT concern with expanding the allowance for chafing gear is increased selectivity for small fish. If the webbing of chafing gear intersects the trawl net meshes, then the effective mesh size of the trawl net can become much smaller than the current 4½ inch minimum.

In Alternative 3 (maximum flexibility), the proposal is to eliminate all chafing gear requirements based on recommendations from TRREC. Furthermore, there may be protected species impacts for protected species escapement, and excessive chafing gear allowance may also have certain EFH impacts that would need to be considered in the analysis.

Increase net configuration allowances for trawling shoreward of the RCA
Currently, trawlers fishing shoreward of the RCA north of 40°10' N. latitude (near Cape Mendocino, CA) are required to use selective flatfish trawls (SFFT), a two seam trawl with a low rising and cutback headrope designed to reduce encounters with canary rockfish (Hannah et. al., 2007). In particular, the SFFT regulation was implemented to reduce catches of schools of canary rockfish ("lighting strikes") when the stock was considered overfished. These large scale catches were problematic because they could exceed one's individual quota by amounts that could affect the entire sector. Now with the recent rebuilding of canary rockfish, the need for selective flatfish trawls may have been reduced. However, bycatch of other constraining rockfish species that commonly occur within 100 fathoms (shoreward RCA) could be remain problematic (e.g., yelloweye rockfish), but if the small footrope requirement stays in effect shoreward of 100 fathoms, yelloweye concerns may be minimal.

Although concerns with canary rockfish may be somewhat alleviated with the recent rebuilt status of the stock, bycatch of Pacific halibut remains a concern, especially for fisheries in Oregon and Washington. The allowance for four seam nets (in Alternative 2) was proposed because rigid excluders for Pacific halibut perform better in four seam nets than in SFFTs, and thus this option would be advantageous for the fleet. Additionally, an allowance for four seam nets may enable fishing vessels to develop other innovative rigid excluder designs that achieve better selectivity of target species while reducing catch of limiting species.

Least restrictive would be to allow use of any small footrope trawl shoreward of the RCA (also within Alternative 2). Note that the option to allow large footrope trawls shoreward of the RCA in Alternative 3 should be removed since the Council has already rejected this option during EFH discussions in April 2014. While Alternative 3 is even less restrictive since it also allows large footrope trawls, this removing this alternative since use of large footrope trawls shoreward of the RCA. Although allowing small footrope trawls (regardless of excluder use) would be the least restrictive and possibly have the greatest bycatch rates of rockfish (i.e., yelloweye), trawlers using small footropes have strong incentive to avoid rocky habitat because small footropes offer much less protection against damage to gear than larger footrope trawls (with protective roller gear). Furthermore, NMFS logbook analysis (Bellman et al, 2005), pre-and-post current gear restrictions, indicates that fishing vessels will navigate a vessel around hard substrate areas (current gear restrictions) instead of through them (previous gear restrictions), thereby potentially reducing impacts to EFH. These issues could be investigated further in the supporting analysis.

The GMT recommends that references to trawling shoreward of the RCA under the SFFT proposals should be adjusted to account for potential removals of RCAs during the ongoing EFH modification process. To accommodate for potential elimination of RCAs, proposals could be expanded to "shoreward of the RCA or shoreward of 100 fathoms, without RCAs". The GMT notes that this matter will be addressed in regulation during the 2017-2018 SPEX.

Multiple Gears Onboard and/or in Use
This alternative is intended to allow fishermen greater flexibility to use different gear types on the same trip, thereby increasing the potential to increase efficiency by allowing greater overall catch on the same trip. Industry has indicated this would primarily pertain to deploying groundfish pots and/or traps prior to trawling, which would be beneficial not only in volume but

also price (as species such as sablefish landed with fixed gear sustain less damage and thereby fetch a higher price than trawl caught fish). While it could also allow greater flexibility to fish multiple trawl gears (e.g., bottom and midwater), industry has indicated that this may be less likely to occur due to difficulties switching nets while at sea. Note that trawlers are currently allowed to use both large and small footrope trawls seaward of the RCA (see footnote in Table 1).

The primary issue from the GMT's perspective with allowing multiple gears is proper accounting of removals by gear type, and haul level data, especially for vessels that may be utilizing electronic monitoring (EM) monitoring solutions. Currently, fish ticket reporting systems in Washington and Oregon only allow a single gear type from which to assign landings. Even if landings were sorted by gear, fish ticket systems would have to be upgraded to account for this. Although it could also be possible to treat the separate gear landings on the same trip as split landings, with a separate ticket for each. Perhaps methods could be developed to insure that different sections of a fish hold are being utilized for each of the gears deployed on the same trip. Although, the GMT notes that further feedback by the NMFS West Coast Groundfish Observer Program (WCGOP) may help to inform this question. Also, the GMT is curious if a camera solution might be feasible for vessels utilizing EM, whereby an extra camera or two is placed into the fish hold region to help fishermen verify their compliance with different fish hold areas for different gear types on the same trip.

Proper accounting of removals by gear type is important for stock assessments due to differences in selectivity among gears (to better understand the sizes and ages of fish removed). Although landings of fish caught with multiple gear types with different selectivities are lumped together in other sectors (such as small shrimp flies and large bait hooks in recreational fisheries), the GMT recommends that whenever possible, landings should be separated by gear type to improve the accuracy of stock assessments. As such, the GMT supports the use of multiple gear types if catch is separated by gear type, can be accurately monitored, and be accounted for in reporting systems.

Summary of GMT recommendations:

(1) That the Council consider that individual accountability and 100 percent observer coverage were vital to exploring relaxation of regulations previously used to manage the trawl fishery under trip limits

(2) Examine the effects of increased selectivity of small fish to stock dynamics resulting from reduced mesh size requirements or increases in chafing gear allowances

(3) Consider potential of gear regulatory changes resulting in catches of constraining species that could exceed one's individual quota by a degree that could affect the whole sector.

(4) If multiple gears with different selectivities are allowed to be fished during the same trip, require sorting of catch by gear to properly determine removals by gear type.

(5) To accommodate for potential elimination of RCAs, proposals could be expanded to "shoreward of the RCA or shoreward of 100 fathoms without RCAs

References:

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Gear Workshop (August 29-30; PDX):
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Gear Workshop Report:
http://www.pcouncil.org/wp-content/uploads/I5a_ATT4_GEAR_WKSHP_NOV2012BB.pdf

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