

Appendix VIII

A Proposal for Harvest Cooperatives in the Sea Scallop Fishery
by
Dr. Steve Correia and Dr. Steve Edwards
Scallop PDT member

Harvest Cooperatives in the Atlantic Sea Scallop Fishery: Amendment 10 Management Alternative

Steve Correia (Massachusetts DMF) and Steve Edwards (NMFS)
Scallop Plan Development Team

May 29, 2001 (DRAFT)

Introduction

Amendment 10 alternatives thus far prepared by the Fishery Survival Fund (FSF) and the Council's Sea Scallop Plan Development Team (PDT) propose either rotational closures of dense seed beds or separate management of historical scallop beds. Both strategies promise to limit localized overfishing and increase economic benefits. However, they also require industry to comply with some control over its traditional freedom to choose fishing locations. For example, small New England vessels might not traditionally fish eastern Georges Bank due to weather or the Mid-Atlantic due to distance. Some scallopers from VA or NC might prefer the Mid-Atlantic because it is familiar. Scallopers who do not traditionally harvest sea scallops throughout their range could find it difficult to use all of their area-specific allocations of DAS, TACs, or combinations of trips and trip limits. Recognizing this drawback, the FSF's and PDT's rotational management proposals constrain the number and locations of closures and re-opened areas so as to spread impacts among ports. These constraints do not ensure that all scallopers have the means to completely use their area-specific allocations, however. Furthermore, the constraints could require premature openings that compromise potential benefits.

The Proposal

This harvest cooperative proposal is offered as an independent component to any of the Amendment 10 area management alternatives. In a sense it substitutes for the tradable or transferable mechanisms that reportedly are opposed by the Council and much of industry. Thus, it is a different way to make area management policy flexible for industry. Permission to form voluntary harvest cooperatives could allow industry to adapt to area management controls by **pooling** their effort or harvest allocations and, at the same time, reduce operating costs, including fuel expenses. If widespread, harvest cooperatives would make constraints on the location of closures unnecessary.

At the onset, annual harvest cooperatives formed by scallopers would be partnerships for collective decision-making about input use, including allocation of area-specific DAS/TAC/trips among member vessels. Cooperatives may form after the annual specifications of the fishing year are approved and before the fishing year begins. Permit owners who want to work together would negotiate a harvest contract and submit a fishing plan to NMFS. Among other things, the cooperative's contract will stipulate where specific vessels will fish and how it plans to divide shares of the total harvest among permit owners and, conceivably, captains and crew. Fishing plans will include descriptions of how the cooperative will comply with Amendment 10 objectives, the annual specifications, and any rules or controls that the Council establishes for cooperatives. Once approved, cooperatives receive the combined, or pooled, area-specific

allocations of its members. Permit owners not in a cooperative would be regulated by their individual annual allocations.

Special Considerations

There are several considerations that need to be highlighted given the concerns of the Council.

Membership constraints: If permit stacking among fleet owners remains forbidden in Amendment 10, then the Council would need to establish rules that control its occurrence in harvest cooperatives. The rules could include a lower bound on the number of full-time (and full-time-equivalent for part-time and occasional scallopers) permit owners (e.g., 5), a lower bound on the percentage of owners with only one full-time permit (e.g., 80%), and possibly an upper bound on the total number of full-time permits (e.g., 20). To use the *arbitrary* numbers in parentheses, a 12-member cooperative would include at least 10 members who own only 1 full-time permit and no more than 2 members who together own 8 permits. Actual rules could be derived from information on permit ownership once the Council defines its social/economic objectives for harvest cooperatives.

Recent experience with harvest cooperatives in Alaska is germane to the stacking issue. In each of the three cooperatives – i.e., the Pacific whiting and Bering Sea Pollock cooperatives (Sullivan 2000) and the weathervane scallop cooperative (Joe Terry, NMFS, personal communication) – owners of more than one vessel agreed to harvest quotas that were less than equal vessel shares.

Activation of latent effort: We should expect more complete use of effort or harvest allocations by cooperatives, including those allocated to confirmation history permits. This possibility can be accounted for, though, when deciding individual shares from a TAC or industry's aggregate DAS.

DAS accounting: Unlike landings quotas or shares, the DAS allocated in a pool to a cooperative could be distributed among vessels in a way that increases overall fishing power. If DAS is the medium for allocation, then the Council and NMFS needs a way to technically evaluate a cooperative's fishing plan to see if it would likely contribute more to fishing mortality than planned. One option is to calibrate DAS using the standardized vessel production functions that were previously developed by the PDT. Note, however, that calibration cannot control for the skills of captain and crew.

Bycatch: Cooperatives provide an opportunity to reduce groundfish bycatch. Each cooperative could be allocated its share of area-specific bycatch TACs. This would create strong incentives within the cooperative to reduce its bycatch so as not to risk being closed for the season. This mechanism worked well during the first year of the weathervane scallop cooperative in AK (2000) where crab bycatch had previously closed the scallop TAC fishery.

Hypothetical examples

Three purely hypothetical examples are provided to illustrate how harvest cooperatives might work in the Atlantic sea scallop fishery depending on the harvest controls that the Council chooses. In each case we adopt the FSF proposal of up to 5 closed areas inside 5 regions plus 1

open area throughout the shelf. As mentioned above, however, harvest cooperatives are compatible with all of the proposed area management policies.

Example 1 - DAS controls: A cooperative with 12 members and 20 full-time permits receives a total of 2400 DAS (20x120) which are allocated as follows to the general open area and to 5 “closed” areas: 1200 to the general open area, 200 to the re-opened area in the Gulf of Maine (GOM), 600 to the re-opened area on Georges Bank (GB), 0 to the South Channel (SCh) closed area, 400 to the re-opened area in Hudson Canyon (HC), and 0 to the Southern (So) closed area. The cooperative has 2 vessels from Maine and MA use the GOM days, 2 vessels from MA and one from NJ use the GB days, 2 vessels from NJ and VA use the HC days, and 5 additional vessels from MA, NJ, VA, and NC use the general open area DAS allocation. The initial DAS allocation might be adjusted depending on the fishing power of the selected vessels. Presumably the power-adjusted DAS will be less than the initial allocation assuming that the most technically productive vessels (and captains and crew) are selected. At least 8 vessels are not used this year (more, depending on the DAS adjustment) which saves on some fixed costs, but the vessel owners, captains, and crew of these vessels share in the net operating profit nonetheless as stipulated in the cooperative’s contract.

Example 2 - IQ controls: The same cooperative is allocated a pool of 4.8 million pounds of scallop meats from the general open area and the above re-opened areas. Area- and cooperative-specific bag tags are also issued. The 7-man crew limit is lifted, so vessels can economize on the number of trips and trip expenses required to land the area quotas. Given high biomass inside the re-opened areas, total effort by the cooperative is expected to be 1920 DAS (assuming an average CPUE of 2500 pounds by the selected vessels). Only about 9 out of the 20 vessels are used during the year.

Example 3 - Trip and trip limit controls: Although more complicated than the IQ control and even the DAS control, the number of area-specific trips and trip limits could be allocated to the harvest cooperative as well. If Frameworks 11, 13, and 14 are any indication, these measures and possibly an automatic DAS charge per trip would apply to the 3 re-opened areas in the GOM, GB, and HC in the example (not the general open area). As above, the cooperative would decide which vessels use each area’s trips.

A variation on this theme is to make the trips and trip limits fungible. For example, suppose the cooperative is allocated a pool of 600 DAS to the GB re-opened area, and that its initial trip controls are 60 trips and a 2000 pound trip limit. The cooperative might have 3 vessels with captains and crew that could average 2500 pounds-per-day in this area. It therefore decides to take 48 10-day trips with these vessels.

References

Sullivan, J.M. 2001. Harvesting cooperatives and U.S. anti-trust law: recent developments and implications. Proceedings of IIFET2000 (International Institute of Fisheries Economics and Trade), Corvallis, OR, July, 2000. In press.