## DECOUPLING ALLOWANCES AND FORAGE AND ECOSYSTEM SPECIES

1) The Issue

In designing a future RSA program there is a fundamental design decision of whether to require the recipients of RSA quota to also conduct the scientific research, or to "decouple" that decision and allow some fishermen to catch the RSA quota, and allow different fishermen to help conduct the scientific research.

What are the implications of having RSA quota directly tied to the research conducted? This could help in enforcement of the quota, as the fishermen/scientists have an incentive to make sure catch accounting is accurate for their own research. This is how the current scallop RSA program in New England works. However, this would also have an impact on the auction process by changing the types and number of vessels that are likely to bid for the quota, and thereby restricting the types of research that is likely to be conducted.

Moreover, the species under management by the MAFMC are not all high value commercial or recreational species. Thus, there is a need to carefully consider the implications of using landings value for RSA Research prioritization choices. High-valued fisheries may get their projects elevated in priority above lower valued fisheries and forage species fisheries, important for their ecosystem services, would rarely get priority for their research needs because they cannot raise a critical mass of funding. This could also potentially lead to biases in stewardship that create social inequity and environmental injustice for some fishing constituencies and fishing communities. Sustainable fisheries management requires an understanding of the role of forage species in the ecosystem and some of these lower valued species can have large impacts on the sustainability of local fishing communities, regardless of their direct revenue contribution to the total industry.

2) Past RSA Experience with the Issue

The former RSA program decoupled the harvest of the RSA quota from the research and relied on the auctions implemented by the National Fisheries Institute (NFI) to generate revenue. Most of the revenue came from a handful of high value species (e.g., summer flounder, black sea bass, scup). Only up to 25% of the revenue from a given species quota could be used to fund research for a different species.

3) Pros and Cons of Options the Council Could Consider

Decoupling the research data collection from the harvest of the RSA quota has important benefits:

(i) It allows for allocation of the RSA quota through a market mechanism (e.g., an auction), which in turn allows for price discovery (how much is the quota worth?) and maximization of revenues (i.e., competition pushes the prices up).[1] In contrast, requiring that the same boats are engaged in the data collection as in the scallop program (i.e., where research and harvesting of the RSA quota are tied) would not maximize program revenues. The principal investigators (PIs) search for interested parties and the ensuing bargaining process are likely to be inefficient.

[1] See, for example, "Auction Theory" by V. Krishna or "Auctions: Theory and Practice" by P. Klemperer.

(ii) Allocation through a market mechanism, assuming the information is available to the Council, would provide data on willingness to pay for quota from the recreational and commercial sectors. In turn, this information could later be used for decisions on intersectoral quota reallocation.

(iii) The auction data would also provide information on the economic value harvesters attached to the regulatory waivers associated to the RSA quota. This information would give the MAFMC a sense of the cost for the industry of the restrictions imposed to regular vessels.

(iv) Leasing of the RSA quota allocated through the auction facilitates full use of the RSA quota. Indeed, harvesters that realize later in the season that they will not be able to harvest all their RSA quota can easily transfer it to other vessels.

(v) Auctioning off quota for forage species (i.e., low value commercial species) is unlikely to generate enough revenue to fund the research associated with those species. While this issue was not addressed in the former RSA program, there are alternative auction designs that could help generate funds for forage species. This could be done, for example, by bundling the quota of forage species with the quota for high value species. The bundle would then be auctioned off as a single unit.

(vi) Additionally, a properly designed market would allocate the quota efficiently, which means that the RSA quota would end up in the hands of the harvesters that can make the most profit from it. This would not be achieved by an RSA program modeled after the New England scallop RSA.

Decoupling the research data collection from the use of the RSA quota could also have (serious) drawbacks:

(i) All the benefits associated with a competitive market (i.e., auction) rely critically on a transparent process for allocating that quota. Without participants' trust in the process (e.g., due to collusion, unclear rules for awarding winners, etc.) the auctions will not be competitive and will lose their appeal in terms of revenue generation. Likewise, all the information associated with the bidding for the quota that could be used for management is only valuable if it is accurate and readily available to the MAFMC. The market for RSA quota should be run by a third party following clear guidelines specified by the MAFMC.

(ii) Decoupling the data collection from the harvesting of the RSA quota makes enforcement of quota reporting requirements significantly harder. This is so because (a) the number of vessels landing RSA quota is likely to increase (with the concomitant increase in the number of landing ports), and (b) leasing makes keeping track of that quota throughout the season challenging.

(iii) Decoupling the data collection from the harvesting of the RSA quota may prevent researchers from developing long-term relationships with industry counterparts. This is the case because the quota is unlikely to be allocated to same vessels every year. In turn, this may undermine the goal of fostering collaboration between the scientific community and the fishing community.