

## Accounting for Research Catch

Northeast Regional Office, Sustainable Fisheries Division

Per National Standard 1 (NS1) guidelines at 50 CFR 600.310(e)(3)(v)(C), all catch must be counted against optimum yield (OY), including that resulting from scientific research activities. There are two categories of trips under which research catch occurs: (1) During experimental fishing trips by federally permitted fishing vessels; and (2) aboard scientific research vessels conducting a scientific research activity, as defined at § 600.10, or by vessels authorized to conduct exempted educational activities, as established at § 600.745(d). The first category will be referred to as experimental fishing catch, and the second category will be referred to as scientific research catch (SRC). Catch resulting from exempted educational activities is included as SRC because such catch may only be used for educational purposes and may not be sold for commercial purposes.

Experimental fishing catch is research-related catch that occurs in conjunction with fishing trips and is attributed to the fishery in which the vessel is operating and the applicable quota. Vessels operating under an exempted fishing permit (EFP) are considered to be on a fishing trip, and all associated catch is treated as such, and is accounted for. Experimental fishing catch is primarily accounted for through standard fishing trip reporting requirements such as vessel trip reports and dealer reports, although Interactive Voice Response system reports and research reports may also pertain.

Regarding SRC, the Magnuson-Stevens Fishery Conservation and Management Act (MSA) expressly excludes scientific research vessels conducting scientific research activities from the definition of “fishing.” Therefore, because such vessels are not fishing, SRC cannot occur in conjunction with a fishing trip, as defined by MSA. Even if a vessel has a Federal fishing permit, it is considered to be a scientific research vessel, and not a commercial fishing vessel, while operating as the research platform. Therefore, any catch and resultant mortality should not be attributed against a specific fishery quota while the vessel is conducting research. However, per NS1 guidelines, SRC needs to count against OY. OY is based on maximum sustainable yield (MSY), as reduced by social, economic, and ecological factors, and is a requirement for all fishery management plans (FMPs).

Currently, none of the 13 FMPs in the Northeast Region explicitly recognize SRC and count it against OY. Therefore, it is recommended that the Councils should explicitly consider how SRC is accounted for and, as appropriate and necessary, FMPs should be amended such that SRC is considered and accounted for as follows: (1) The FMP should recognize SRC as a source of mortality and describe how it is considered in setting the OY; and (2) there should be a means identified which SRC will be evaluated on an ongoing basis. There is considerable variability among FMPs on how OY is established, so it is difficult to recommend one method for all FMPs regarding how SRC is accounted for.

### OPTIONS FOR ACCOUNTING FOR SRC

There are at least four general approaches that could be used to account for SRC during the quota setting process.

1. SRC could be evaluated solely as a source of mortality when assessing stock status through a stock assessment and not considered separately when establishing the overfishing limit (OFL) for that stock;
2. SRC could be considered as a source of scientific uncertainty when establishing acceptable biological catch (ABC), without an associated Accountability Measure (AM);
3. SRC could be accounted for by reducing the ABC by an amount sufficient to cover the expected SRC, prior to setting the annual catch limit (ACL) and/or annual catch target (ACT), without an associated AM.
4. SRC could be accounted for through an ACL or sub-ACL, and have an associated AM.

**Option 1:** SRC is evaluated solely as a source of mortality when assessing stock status through a stock assessment and is considered separately when establishing the OFL for that stock.

**Strengths:** This is the simplest approach. SRC data could be provided to the Northeast Fisheries Science Center (NEFSC) in a scheduled, comprehensive, and consistent manner for this purpose. Currently, SFD requests that letter of acknowledgment (LOA) recipients provide a copy of the catch data from field research activities. Because OFL is derived from stock assessment results, if SRC mortality is accounted for in the assessment, it should be reflected in the OFL determination.

**Weaknesses:** Although LOA recipients are requested to report SRC, investigators are not required to obtain an LOA to conduct scientific research, and investigators that do obtain an LOA are not required to submit catch data. Further, SRC data typically are not available until after the field research has been completed.

This approach could underestimate the removals from the stock. If the under-estimate is of sufficient magnitude, it could contribute to retrospective patterns in stock assessments. In addition, there is frequently a relatively high degree of uncertainty on the removals from a stock as proscribed by a stock assessment. Simply including SRC in a stock assessment may reduce the ability for the Councils to understand the magnitude of SRC.

**Option 2:** SRC could be considered as a source of scientific uncertainty when establishing ABC, without an associated AM.

**Strengths:** Under this scenario, SRC would be explicitly taken into account in setting OY. This approach would provide flexibility as to how SRC is considered within each FMP. This flexibility is important, given the variable relevance of this issue to any given FMP, and the different ways in which FMPs are structured and administered. Accounting for SRC at this level would not require an AM for SRC, which would be difficult to do, since there is no authority to restrict catches by researchers in the future.

**Weaknesses:** There is relatively high variability between FMPs regarding how quotas are established, which makes it difficult to establish policy on specifically where or how SRC would be considered with respect to scientific and management uncertainty in a given FMP.

**Option 3:** SRC could be accounted for by reducing the ABC by an amount sufficient to cover the expected SRC, prior to setting the ACL and/or ACT, without an associated AM.

Strengths: Similar to Option 2, under this scenario SRC would be explicitly taken into account in setting OY. This approach would increase the level of oversight by estimating SRC and reducing an ACL accordingly. This approach would provide flexibility within each FMP as to how SRC is considered. This flexibility is important, given the variable relevance of this issue to any given FMP, and the different ways in which FMPs are structured and administered. Accounting for SRC at this level would not require an AM for SRC, which would be difficult to do.

Weaknesses: There may be substantial uncertainty regarding SRC, and SRC data may not be available in a timely manner. This may make it difficult to integrate SRC with Council quota setting processes.

**Option 4:** SRC is accounted for through an ACL or sub-ACL, and have an associated AM.

Strengths: This approach would ensure the highest level of accountability and oversight for SRC.

Weaknesses: The National Marine Fisheries Service (NMFS) and the Councils cannot constrain SRC, because scientific research vessels conducting scientific research activities are not subject to MSA. Therefore, it is not possible to hold entities conducting scientific research from scientific research vessels accountable via an AM. It is only possible to constrain catch that the Council has discretion over, such as a commercial fishery.

## DISCUSSION

Options 2 and 3 offer the most flexibility, while satisfying NS1 guidelines, and afford flexibility by which SRC may be considered, as dictated by the magnitude and relevance of SRC to any given FMP. For example, under option 3, the magnitude of SRC may be sufficiently high that it is a relevant factor in setting an ACL, and the Council may want to explicitly estimate SRC and reduce the catch that is within their discretion by a comparable amount. In contrast, under option 2, if SRC has minimal implications for an FMP, the Council could establish this within the FMP, and not adjust catch levels that are within their discretion, because of the de minimus nature of SRC. In both cases, the Council would have considered SRC and established a means to account for it. Due to the lack of NMFS and Council authority to regulate scientific research conducted by scientific research vessels, or mortality associated with that activity, option 4 could only establish an AM that would affect an ACL where such discretion exists, which would essentially hold “accountable” those who were not responsible for the ACL overages due to research activities.

As noted, there are still challenges associated with options 2 and 3. Each FMP, or suite of FMPs, would need to establish the appropriate mechanism to consider SRC, and there would need to be a compatible data collection program to implement and administer such a mechanism. There are additional challenges associated with SRC data. The Regional Office and NEFSC would coordinate data collection on SRC, and provide SRC data to the Councils as proscribed by the FMP.