

implement these alternative funding mechanisms, as mentioned in previous responses.

*Comment 18:* One commenter stated that it is essential to assess bycatch for all protected species recovery plans and FMPs, and assess the impact of bycatch on marine food webs.

*Response:* NMFS agrees that the assessment of bycatch and its effect on the ecosystem should be an important element in FMPs and protected species recovery plans. Indeed, the ESA is founded upon the concept that listed species and their critical habitat must be conserved to recover endangered and threatened species. For this reason, ESA recovery plans contain detailed site-specific management actions necessary to address ongoing threats, such as bycatch in fisheries.

## 2. Incorporation of Bycatch Estimates into All Total Allowable Catch (TAC) Levels and Other Fishing Restrictions

*Comment 1:* One commenter indicated that adjustments to TACs based on bycatch information are already being made by NMFS analysts who do stock assessments on stocks for which the Gulf of Mexico RFMC and NMFS set TAC. The commenter stated that the levels of fish discarded alive are adjusted by the current estimates of post-release mortality, which are 10 percent to 20 percent for recreational fish that are discarded and 33 percent for commercially discarded fish. These portions of the discarded fish are considered as additional mortality (part of the TAC) in the assessments.

*Response:* NMFS works with RFMCs to factor bycatch into the setting of fishery TACs or harvest guidelines.

*Comment 2:* One commenter concurred that "reasonable" estimates of bycatch should be used when setting TACs and indicated that the Pacific RFMC/NMFS harvest mortality monitoring and control system distinguishes between bycatch and bycatch mortality and expressed the view that these estimates have been reasonable.

*Response:* NMFS agrees that reasonable estimates of bycatch mortality should be used when setting TACs.

*Comment 3:* Several commenters indicated that the NPFMC counts bycatch of groundfish and crab species (whether retained or not) against the applicable TACs for these species and stated that such bycatch is generally not considered a biological problem.

*Response:* NMFS believes it is appropriate to apply both retained and discarded bycatch in this fishery against TAC levels. NMFS MSA regulations at

50 CFR 600.310(f)(4)(iii) specify that "All fishing mortality must be counted against OY [optimum yield], including that resulting from bycatch, scientific research, and any other fishing activities."

*Comment 4:* One commenter indicated that the Mid-Atlantic RFMC incorporates bycatch estimates into all TAC levels for all species it manages and supports requiring bycatch estimates to be incorporated into TACs.

*Response:* NMFS agrees with the incorporation of estimates of bycatch into TACs.

*Comment 5:* One commenter suggested incorporating all sources of mortality, including bycatch, into stock assessments and when establishing TACs.

*Response:* NMFS incorporates bycatch data, when available, into stock assessments and into setting TACs as stipulated in various FMPs or FMP regulations, and NMFS operational guidelines.

*Comment 6:* One commenter opposed a mandatory requirement to incorporate estimates of bycatch into all TACs and other restrictions on fishing stating that sufficient data do not exist to do this for most fisheries. The commenter expressed opposition to such a requirement until such time as the bycatch monitoring mandates of the MSA are funded and are given time for a sufficient body of data to be developed upon which to base such estimates.

*Response:* NMFS supports the inclusion of bycatch estimates in TACs and their consideration in other fishery management measures to the extent that adequate scientific data exist for doing so.

## 3. Limits on Directed Catch and Bycatch in Each Fishery

*Comment 1:* One commenter objected to having NMFS set absolute limits on the amount of bycatch that can occur, and specifically opposed the petition's recommendation that a fishery be closed when a bycatch quota is met. The commenter stated the objections were based on the fact that bycatch is already considered when setting TAC for Gulf of Mexico RFMC-managed finfish stocks, and that the bulk of the bycatch in this area has already been reduced to the level practicable by gear technology.

*Response:* NMFS believes that the level of bycatch for managed species should be considered in the setting of TACs, whether the acceptable level of bycatch is considered prior to setting of TACs for target species as in the Gulf of Mexico RFMC instance referred to by this commenter, or whether a bycatch quota is included in the actual TAC as

in the NPFMC. However, reaching a specified bycatch limit may not necessarily require closure of the fishery, particularly when other mitigating measures are in place (e.g., reaching the bycatch limit may trigger an area closure or gear restriction). What is most important is that available information on bycatch should be used in formulating regulatory measures to manage fisheries, including fishery closures, where appropriate.

*Comment 2:* One commenter indicated that the South Atlantic RFMC would evaluate setting absolute limits on direct catch and bycatch for each fishery and closing the fishery when the limit is met, as additional data become available and if other approaches are not better suited.

*Response:* NMFS believes that RFMCs should consider all feasible approaches, such as direct catch and bycatch limits, when devising ways to mitigate bycatch.

*Comment 3:* One commenter stated that most Pacific RFMC fisheries are managed according to optimum yields and believes that total mortality should be the guiding criterion in fishery closure considerations if stock sustainability is the main concern. The commenter expressed the belief that decisions to limit bycatch for the purpose of minimizing waste, which are regulatory discards or economic discards that are not conservation problems, are best made on a case-by-case basis through the RFMC process.

*Response:* NMFS agrees with the comment.

*Comment 4:* One commenter disagrees that absolute bycatch limits should be used to close fisheries. The commenter stated that NMFS does not currently have the resources or capability to monitor bycatch, and believes it would be impossible to estimate bycatch on a timely basis and use such quotas as a trigger to close fisheries.

*Response:* To the extent that NMFS has the resources and capabilities to accurately monitor bycatch on a timely basis, such information could be used to trigger fishery closures if appropriate. For instance, Alaska Region managers are able to open and close groundfish fisheries in the Bering Sea and Aleutian Islands and in the Gulf of Alaska based on attainment of bycatch quotas. However, in some cases, especially with protected resources in which populations are extremely depleted, the interactions are rare and may vary greatly over time and area; thus, the level of observer coverage needed to identify a trigger and effectively respond may not be feasible at this time. In such instances, NMFS will seek to identify other means to monitor levels of take, as