

SCIENTIFIC AND STATISTICAL COMMITTEE COMMENTS ON  
STATUS OF PLAN AMENDMENT (SQUID MAXIMUM SUSTAINABLE YIELD AND BYCATCH)

The Scientific and Statistical Committee (SSC) reviewed Attachment D.3.b. "Recommendations of the Coastal Pelagic Species Management Team (CPSMT) on market squid maximum sustainable yield (MSY), market squid acceptable biological catches (ABC), and bycatch provisions for the coastal pelagic species (CPS) fishery management plan (FMP)." This document was prepared in response to NMFS' disapproval of two provisions of *Amendment 8 to the Northern Anchovy Fishery Management Plan* pertaining to optimum yield (OY) specification for squid and bycatch evaluation for all species in the plan.

The document outlines options to address three distinct areas:

1. Squid MSY
2. Squid ABC
3. Bycatch in CPS fisheries.

**1. Determination and Designation of Market Squid MSY**

The CPSMT report indicates the data are inadequate to estimate MSY, requiring the specification of a proxy for MSY based on landings data. Five options are given.

The SSC observes that setting an MSY for market squid is impractical for a number of reasons. Fishery and biological data are scarce. International markets are important and variable influences on fishing effort, meaning that landings data are not a reliable indicator of stock abundance. The short life of the species combined with its vulnerability to oceanographic variation limits the usefulness of a sustainable yield concept.

However, the Sustainable Fisheries Act requires that OY be set on the basis of an MSY or MSY proxy. The guidance provided by Restrepo et al. in cases of data-poor situations is to calculate an MSY proxy on the basis of average landings during a period in which there is no evidence of declining abundance. This would suggest the adoption of Option 4, which specifies an MSY proxy of 75, 570 mt. The MSY proxy could be larger if there are unfished spawning areas that serve as refugia. The SSC recommends the relative magnitude of these areas be identified, and the MSY figure be expanded accordingly. However, the recommendation to expand MSY is contingent on the identified refugia remaining unfished. It is also important to recognize MSY will need to vary with environmental conditions, and more data will be needed to refine and update the estimate.

**2. ABC Definition for Market Squid**

As a temporary measure until more squid research is conducted, the SSC supports the CPSMT's recommendation to set ABC equal to MSY. The basis for this recommendation is the presumption that refugia spawning areas exist, and the recognition that further protection is provided by management controls in the fishery.

**3. Bycatch Provisions for all CPS**

The Sustainable Fisheries Act requires that bycatch be documented and minimized to the extent practicable. The SSC notes the need to document the extent of bycatch in CPS fisheries. For the six options identified by the CPSMT, the SSC supports both Options 3 and 6.

With regard to Option 3, the SSC notes that, because of the way the fishery operates, there is little or no opportunity to sort and discard catch at sea. Therefore, bycatch in the CPS fishery can be documented and monitored through enhancement of existing port sampling programs. Port sampling procedures should also be documented.

With regard to Option 6, the SSC concludes that requiring logbooks and observer coverage is a

particularly good idea, given the potential for salmon interception in CPS fisheries that may develop north of 39° N latitude.

PFMC  
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