

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
REVIEW CAPACITY GOAL AND RELATED ISSUES

Drs. Kevin Hill and Sam Herrick of the Coastal Pelagic Species Management Team (CPSMT) briefed the Scientific and Statistical Committee (SSC) on fleet profile, capacity goal and permit transferability options for the coastal pelagic species (CPS) finfish limited entry fishery. The window period for CPS permit transferability closed December 31, 2000. The current fleet consists of 65 vessels.

The CPSMT considered a number of alternative capacity goals (1) long-term, expected average allowable harvest of 108,306 mt, with physical capacity to harvest peak period landings of 273,507 mt, (2) average total finfish landings during 1981-2000 of 57,676 mt, (3) long-term expected average allowable harvest of 108,306 mt, and (4) fixed fleet of 65 vessels with no capacity goal.

In order to determine the number of vessels needed to achieve capacity goal options 1-3, it was necessary to estimate capacity per vessel. The CPSMT considered two alternative approaches to such estimation (1) an approach based on Data Envelopment Analysis (DEA) and (2) an approach based on observed historical behavior of the fleet. Using both these approaches, the CPSMT provided estimates of "physical" and "normal" capacity, with physical capacity being a measure of hold capacity and normal capacity being the amount of capacity used under average stock abundance and market conditions.

The DEA approach (Table 3, p. 11) involves estimation of a technically efficient production frontier and the assumption that all vessels in the fleet are capable of performing at the frontier. This approach assumes a homogeneous fleet; for instance, it does not consider variations in performance among vessels due to differences in skill among skippers and crews. Moreover, for most of the fleet, the frontier exceeds even their maximum historical harvest. For these reasons, the SSC considers this approach to greatly overestimate fleet capacity.

The second approach (Appendix Table 3, p. 22) is based on the assumption that each vessel is capable of consistently replicating its own peak performance in terms of the maximum landings per trip and the maximum number of trips per year during 1981-2000. Although this approach provides a more realistic estimate of each vessel's capacity than DEA, it likely overestimates the extent to which such capacity is likely to be utilized in the pursuit of CPS finfish.

The CPS finfish fishery possesses a number of unique characteristics that make it difficult to estimate capacity in a realistic way. CPS finfish landings typically fall well below allowable harvest levels, for reasons that are largely market driven. The fleet is highly diversified and typically targets low-priced CPS finfish only when higher-priced alternatives such as squid or tuna are not available. The few vessels that are CPS finfish specialists tend to make very modest landings. Moreover, it is customary for vessels to avoid filling their hold on CPS finfish trips, due not only to processor limits but also the desire to avoid compromising the marketability of their catch. Thus, while the fleet is certainly capable of CPS finfish landings that exceed its normal capacity, it is unlikely to harvest its physical capacity.

According to Appendix Table 3 (p. 22), the normal capacity estimates associated with option 1 (65 boats) and option 2-A (41 boats) are very similar to each other, as are the physical capacity estimates. These results are not surprising, given the lack of incentive for the fleet to maximize its CPS finfish harvests. Although the physical capacity estimates likely exceed the amount of capacity likely to be utilized even under optimal stock abundance and market conditions, they are sufficiently high to suggest that the number of vessels allowed under both options 1 and 2-A would be capable of harvesting the long term expected allowable harvest (capacity goal option 3 - 108,306 mt) and perhaps even peak amounts of CPS finfish that might be available on an occasional basis (capacity goal option 1 - 273,507 mt).

While fleet size options 1 and 2-A are not distinguishable on the basis of capacity, it is possible to distinguish between these options by considering how they interact with the vessel profile options. Of the 65 CPS finfish limited entry boats, 55 also hold squid permits. Vessel profile option 1, which is to maintain a diverse CPS finfish fleet that also relies on other fishing opportunities, reflects the manner in which this fleet has historically operated. Fleet size option 1 (65 boats) is consistent with vessel profile option 1. Fleet size option 2-A (41 boats) is also consistent with fleet profile option 1, at least for the 41 CPS finfish permit holders who maintain their diversity of opportunities by holding onto their CPS finfish permits. However, option 2-A may significantly reduce the diversity of opportunities for vessels that give up their CPS finfish permit and makes them economically vulnerable in years of low squid and tuna availability. Option 2-A is also potentially disruptive of a long-standing pattern of behavior by fishery participants.

The SSC agrees with the CPSMT's recommendation that permit transfers be allowed in the CPS finfish limited entry fishery so long as fleet capacity does not exceed recommended levels. The SSC also supports the CPSMT's recommendation that transferability provisions be re-evaluated should the fleet's gross registered tonnage change by 5%.

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