

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON PACIFIC MACKEREL
MANAGEMENT FOR 2009-2010

The Scientific and Statistical Committee (SSC) received a presentation on the 2009 Pacific mackerel stock assessment by Dr. Paul Crone. Dr. Owen Hamel was present to answer questions about the review of this assessment by the Stock Assessment and Review (STAR) Panel, held in La Jolla, California, during May 4-8, 2009.

The last full assessment of Pacific mackerel occurred in 2007. The 2008 assessment was an update assessment. There are two primary changes in the 2009 assessment compared to the assessments conducted recently. First, the assessments of Pacific mackerel for the past years were conducted using the ASAP model. The 2009 assessment reflects a continued effort by the Stock Assessment Team (STAT) to change the modeling platform from ASAP to the more flexible Stock Synthesis (SS). Second, unlike the assessments for the past years which were based on three indices of abundance (California Cooperative Oceanic Fisheries Investigations [CalCOFI], commercial passenger fishing vessel [CPFV], and spotter), the 2009 assessment excluded the CalCOFI and spotter indices, and used only the CPFV index due to concerns associated with potential sampling biases for Pacific mackerel.

In addition to the SS baseline model (model AA), an alternative SS model (model AB) was developed by the STAT for the purpose of comparison and sensitivity analysis.

The harvest guideline (HG) for the 2009-10 fishing year was 55,408 mt based on the baseline model and 7,729 mt based on the alternative model AB. The results of alternative models AA and AB differ for the recent years because an additional selectivity time block 2000-2008 for both the commercial and recreational fisheries was added to model AB, and the single CPFV index in model AA was split into two indices in model AB, one for 1962-1999 and another for 2000-2008. The differences in the results of models AA and AB reflect a range of uncertainty for the model estimates. The SSC endorses the use of the baseline model (AA) for setting the acceptable biological catch, but recommends that the results of model AB be taken into account when setting the HG.

Despite unresolved problems, such as a lack of biological sampling data from Mexico, and a lack of fishery-independent index of relative abundance, the current assessment represents best available science, and can serve as the basis for Council management decisions.

The SSC agrees to the research and data needs identified by the STAT and STAR Panel to improve future assessments of Pacific mackerel. These include better collaboration with Mexico and Canada in data collection, enhanced monitoring of the CPFV fleet, and increased sampling for biological data.

A new assessment for Pacific mackerel would not be a high priority if catches remain at recent low levels. A substantial increase in catch levels could potentially trigger the need for a new assessment.