

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
PACIFIC SARDINE STOCK ASSESSMENT AND HARVEST GUIDELINE FOR 2006

Dr. Kevin Hill (Southwest Fisheries Science Center) presented the stock assessment of Pacific sardine to the Scientific and Statistical Committee (SSC). The assessment is based on the age-structured assessment program (ASAP) model and is an update to last year's assessment which was based on the same methodology. This model was reviewed by a Stock Assessment Review (STAR) Panel during June 2004. The new data included in the assessment are 2004-05 catches for the U.S. fisheries, revised catches for the Ensenada fishery for 2000-2005, a recalculated series of spotter plane indices, and a daily egg production method estimate of abundance for 2005.

The assessment presented by Dr. Hill represents the best available science regarding the status of the Pacific sardine resource. The SSC endorses the use of the harvest guideline (118,937 mt) estimated using the fishery management plan control rule and the biomass estimate of 1.1 million mt for management of the Pacific sardine fishery for 2006. This harvest guideline is 13% lower than the 2005 harvest guideline. The SSC notes that the U.S. catches have been below the Council-specified harvest guidelines. However, after accounting for catches by Canada and Mexico, the total catches for 2002 and 2004 are now estimated to have been greater than the retrospective estimates of the stockwide harvest guidelines calculated as part of this assessment.

The biomass time-series from the assessment is similar to that from last year's assessment for the years after 1998-1999 and somewhat higher for the years prior to this. Last year's assessment estimated the 2003-2004 recruitment to be the largest in the time-series, but that estimate was based on a very limited amount of data (primarily the number of age-0 fish caught during 2003-2004). The data on which the 2006 assessment are based have now confirmed that there was a strong recruitment during 2003-2004.

The SSC notes that the harvest guideline depends on population weight-at-age, which is poorly known. The SSC supports regular systematic sampling, such as the proposed coastwide survey planned for 2006, which can provide annual estimates of population weight-at-age and as well as of maturity-at-age.

The next STAR Panel to review the Pacific sardine assessment is scheduled for 2007. The SSC anticipates that it should be possible to include the results from the coastwide survey in the assessment to be reviewed by this STAR Panel. The SSC recommends that review of the Pacific sardine and mackerel assessments will be enhanced if the SSC Coastal Pelagic Species subcommittee can meet to discuss the draft assessments prior to the Council meetings at which these assessment are to be presented.

PFMC
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