

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
PACIFIC SARDINE 2005 STOCK ASSESSMENT AND HARVEST GUIDELINE

Dr. Ray Conser (Southwest Fisheries Science Center) presented the 2005 stock assessment of Pacific sardine to the SSC. Previous assessments of Pacific sardine were conducted using the catch-at-age analysis for sardine – two area model (CAMSAR-TAM). The 2005 assessment is the first based on the age-structured assessment program (ASAP) model. The use of this model for assessments of Pacific sardine and Pacific mackerel was reviewed by a stock assessment review (STAR) Panel in June 2004. The SSC recommended this model be used for the 2005 assessment at its September 2004 meeting.

The biomass time-series from the new assessment for the years prior to 2004 is higher from the 2005 assessment than that from the 2004 assessment, while biomass estimates for the most recent year are approximately the same. There are, however, major differences in the data used in the 2004 and 2005 assessments, as well as changes to the structure of the model. Unlike the 2004 assessment, the 2005 assessment suggests the biomass may have now stabilized.

The assessment presented by Dr. Conser represents the best available science regarding the status of the Pacific sardine resource. The SSC endorses the use of the harvest guideline (136,179 mt) estimated using the fishery management plan control rule and the biomass estimate of 1.2 million mt for management of the Pacific sardine fishery for 2005. This harvest guideline is 11% larger than the 2004 harvest guideline. The SSC notes that the 2004 recruitment is the largest in the time-series. However, this estimate is based on only a very limited amount of data (primarily the number of age-0 fish caught during 2004) and is hence highly uncertain. The SSC recommends the next assessment allow for differences among areas in weight-at-age in the fisheries and examine further the possibility of changes over time in the weight-at-age used when calculating spawning stock biomass.

The 2005 stock assessment was a “full” stock assessment and involved a review of the assessment methodology and data by a STAR Panel. The SSC recommends the harvest guideline for 2006 be based on the use of the ASAP model. The 2006 assessment will largely be an update to the 2005 assessment, so the SSC currently sees no need for a STAR Panel to review the assessment methodology during 2005. Rather, as has been the case in past, the SSC will review the 2006 assessment during its November meeting.

PFMC
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