

NMFS Southwest Fisheries Science Center Activities

Forage in the CCLME. Several recent studies have focused on the importance of forage in maintaining healthy ecosystems. A brief review will be presented to make interested parties aware of existing and planned SWFSC and other NMFS monitoring activities that focus on three aspects of the forage question: 1. Monitoring the state of the forage base of the California Current Large Marine Ecosystem (CCLME); 2. Monitoring abundance trends and foraging needs of higher trophic level species such as the highly migratory fishes (HMS), marine mammal species and seabirds and 3. Examining the role of sentinel species in determining the forage capacity of the CCLME. Survey programs to be discussed will include:

Forage Monitoring

- SWFSC Fisheries Resources Division: CalCOFI Monitoring Program
- SWFSC Fisheries Resources Division: Acoustic/Trawl Coastal Pelagic Species (CPS) Ecosystem surveys.
- SWFSC Fisheries Ecology Division: Juvenile Rockfish Survey

Fish Predator Monitoring

- SWFSC Fisheries Ecology Division: Salmon Ocean Ecology Monitoring
- SWFSC Fisheries Resources Division: HMS Surveys
- SWR/SWFSC Fisheries Resources Division: Drift Gillnet Observer Program

Marine Mammal Monitoring

- AFSC, National Marine Mammal Laboratory (NMML) California Current Ecosystems Program
- SWFSC Protected Resources Division: Cetacean Ship Surveys of CCLME
- SWFSC Protected Resources Division: Pinniped Aerial Surveys
- SWFSC Protected Resources Division: Harbor Porpoise Aerial Surveys

Assessment and Research Schedule for CPS. At the November 2011 PFMC meeting in Costa Mesa, CA, the SWFSC introduced the idea of revisiting the CPS assessment schedule. At this meeting SWFSC will give a brief presentation (November supplementary briefing material) that asks the Council to consider tasking SSC and CPSMT to develop a more adaptive comprehensive and ecosystem based approach to the CPS assessment schedule. Given the present schedule, species such as Pacific mackerel receive a large amount of staff time even when fishing pressure is light while market squid which is fished to the harvest guideline receives less attention. A more inclusive and adaptive approach is suggested as a first step in developing a conversation among industry, NGO's, Council staff and NMFS to provide a more adaptive allocation of scientific resources.

Update on Results from Spring 2012 Sardine DEPM/Acoustic Trawl Survey.

SWFSC planned and carried out a two ship survey of spawning activity and biomass

of Pacific sardine populations and related CPS stocks. The survey was carried out aboard the FSV Shimada and the charter vessel Ocean Starr (formerly the NOAA vessel David Starr Jordan). The original plan was a coastwide survey but a combination of ship problems, harbor access and weather related delays resulted in a more typical survey of the core spawning region from the Mexican border to near the California-Oregon border. The active spawning region used in the DEPM estimate was fully sampled with acoustics, surface trawls and net tows for eggs and larvae and will form the basis of the 2012 Sardine Assessment update.

Report on CIE-SSC Review of Canadian Swept Area Trawl Survey. A review of the Canadian Swept Area Trawl Survey was held May 29-31, 2012 at the Torrey Pines Facility of the SWFSC. Jake Schweigert and Linnea Flostrand were the presenters from DFO, Andre Punt and Ray Conser represented the SSC. John Simmonds and Olav Rund Godø were the CIE reviewers. The two key topics were the survey design and the potential for inclusion in the Sardine Assessment.

Update on Planned Summer Coastwide Tri-National Sardine Survey and combined Sardine/Hake survey off PNW and Canada. SWFSC will update the Council on plans to conduct two cruises to support a coastwide survey of the distribution and abundance of Sardine and other CPS. The first is a joint SWFSC-NWFSC-industry sardine/hake survey aboard the FSV Shimada and an industry provided hake trawler the Forum Star. This survey will begin June 24 and will cover the region from south of Monterey Bay to the northern tip of Vancouver Island. The goal will be to measure the summer distributions of the northern Sardine stock at the time of maximum northward migration into Canada and during the period that the industry aerial survey is conducted off Oregon and Washington. The second cruise will be aboard the contract research vessel Ocean Starr and will survey from the Mexican border to San Francisco. This survey will measure the extent that the Central stock migrates from Mexico into Southern California.