



Pacific Fishery Management Council FACT SHEET

Forage Fish

The Pacific Fishery Management Council understands that forage fish are among the critical components that form the basis of a healthy ecosystem and the commercial, recreational, and tribal fisheries that rely on it. This fact sheet briefly describes some of the actions the Council has taken to protect forage fish and to implement ecosystem-based fisheries management.

Preventing Krill Fisheries

In 2006, we adopted a complete ban on commercial fishing for all species of krill in West Coast Federal waters and identified essential fish habitat for krill (*euphausiids*), which serve as a fundamental link of the marine food chain.

Preventing New Fisheries on Unmanaged Forage Species

In 2012 we prohibited the development of new directed fisheries on unmanaged forage species until there was an adequate opportunity to assess the science relating to the fishery and any potential impacts to existing fisheries and communities. In concert with this action, we designated several forage species as “shared ecosystem component” (EC) species through our Fishery Ecosystem Plan initiative, which amended all our fishery management plans. These protections were also afforded to the shared EC species. This action addressed the importance of these forage fish to dependent species, to the California Current Ecosystem as a whole, and to the Council-managed fisheries, which rely on healthy stocks of forage species.

Understanding Ecosystem Interactions

Annually, the Pacific Council receives a California Current Integrated Ecosystem Assessment [report](#) that provides updates on the status of most major forage species. The report synthesizes data to present key environmental indicators, as well as trends in physical, biological, and socioeconomic components of the ecosystem. This report provides the ‘big picture’ look at ecosystem and fisheries trends, thus allowing the Council to better incorporate ecosystem considerations into fisheries management decisions, including forage fish management and protection.

Considering the Importance of Forage Fish in Coastal Pelagic Species Management

Our Coastal Pelagic Species Fisheries Management Plan requires consideration of forage and ecosystem needs when setting annual catch limits and other management measures for CPS stocks. One of the 11 goals and objectives in the plan is to “provide adequate forage for dependent species.” To help accomplish this goal, both Pacific sardine and Pacific mackerel have “cutoff” values included in the harvest control rules. When the estimated biomass falls below certain thresholds, the primary directed fishery is closed down to allow the core spawning population to replenish itself. This rule closed the directed sardine fishery in 2015, four years before the stock reached its current overfished status.

Shaping future research

The Council’s Research and Data Needs document includes forage fish populations and distributions in its research priorities, including the need for spatial analysis of predator-prey interactions such as estimating forage needs and efficiencies for higher level carnivores and the prey density and location needed for them to acquire these food resources.