

BROWN SHRIMP FISHERY IN THE GULF OF CALIFORNIA

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There is a well-developed brown shrimp (*Penaeus californiensis*) fishery in the Gulf of California, Mexico, between Bahía Kino, Sonora, and Bahía Agiabampo, Sinaloa. The fishery operates on a single stock over its entire geographic range.

During 22 fishing seasons (from 1976–77 to 1997–98) the catch per unit of effort (CPUE) has fluctuated. Notable are two periods, the first from 1976–77 to 1990–91, during which the CPUE declined, and the second from 1991–92 to 1997–98, during which the CPUE increased (fig. 1). The lowest CPUE occurred during the 1990–91 season ($0.04 \text{ t} \times 100$).

Effort, principally number of vessels, has varied from about 300 to 500 vessels per season. The fleet declined from a high in 1979–80, and stabilized in 1984–85, with fluctuations between 300 and 350 vessels. This decrease in effort is due to an overcapitalization of the fishery and is regulating access to the fishery.

The fishing season has varied from September to April or from September to May. The difference in the fish-

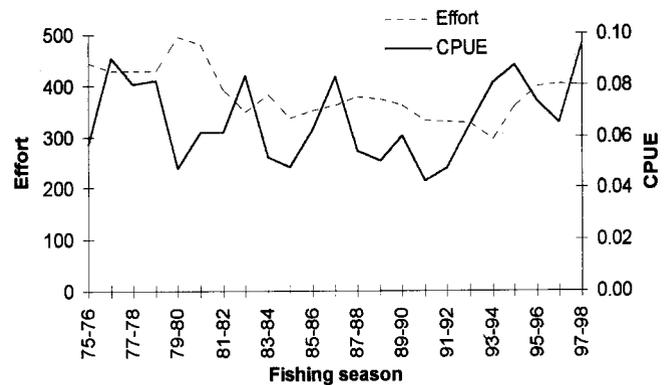


Figure 1. Effort and CPUE for brown shrimp in the Gulf of California, Mexico.

ing season corresponds to interannual variations in shrimp recruitment to the fishery, possibly related to strong year classes. These strong recruitments have been associated principally with anomalous temperatures such as those during El Niño events.