

Majluf, P., E.A.Babcock, J.C.Riveros, M.A.Schreiber, and W.Alderete. 2002. Catch and bycatch of sea birds and marine mammals in the small-scale fishery of Punta San Juan, Peru. *Conservation Biology* 16(5):1333-1343. October 2002.

Abstract:

Between 1991 and the present, we have had observers stationed at the port of San Juan in southern Peru to interview fishers as they landed their catch. They observed the landings of 922 Humboldt Penguins (*Spheniscus humboldti*), 510 dusky dolphins (*Lagenorhynchus obscurus*), 214 Burmeister's porpoises (*Phocoena spinipinnis*), and 75 bottlenose dolphins (*Tursiops truncatus*) between November 1991 and June 1998, although the retention of penguins and small cetaceans is banned by Peruvian law. Most of these animals were captured in 1992-1994, when the fishers were mainly using surface-drift gillnets to target a pelagic schooling fish called cojinova (*Seriolella violacea*). Capture rates were much lower in 1995-1998, when fishers were mostly using fixed demersal gillnets and shellfish diving, due apparently to a lack of surface-schooling cojinova in the vicinity. We used generalized linear models to examine the effect of year, gear type, area, and target fish species on the probability of capturing either penguins or dolphins. We found that the probability of a fishing vessel capturing a penguin or a dolphin increased when drift gillnets were used instead of fixed gillnets. Fishing area, year, and the species of fish caught also significantly affected the probability of capture. A population model (Vortex) applied to Humboldt Penguins showed that the high levels of mortality seen in the early 1990s are not sustainable and could lead to local extinction in a few years. The mortality levels seen in the late 1990s are more likely to be sustainable, but a return to the use of drift gillnets would rapidly result in unsustainable levels of mortality.