



Social and Economic Consequences of Conservation of Endangered Vaquita, *Phocoena sinus*, in Gulf of California, México

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Abstract

The conservation of ecosystems and marine species are a latent concern of the Mexican government. Since the creation of the Upper Gulf of California Biosphere Reserve in 1993, it has been a priority to protect endangered species and their habitats. The restricted habitat and strong catch by gill nets used in fishing activities has placed these species within the protected status and risk of extinction. After many years of biological and social studies, we can affirm that the intensive fishing activities using entangling nets during 8 months yearly have caused severe mortality on vulnerable species. Unfortunately, a considerable local market for fish and shrimp encourages fishing and there are no real economical alternatives for more than 4000 fishers. The Mexican people (government, fishers, and society) have to find a solution to the demise of endangered species, given the very limited possibilities of past actions of the authorities. Without a doubt, the effect of conservation schemes would be negative for society and its economy; the wrong decisions taken by the government and the impact of human activities could lead to the extinction of species.

Keywords: Conservation, endangered species, fisheries, socioeconomic analysis, Upper Gulf of California, Mexico.

Introduction

According to Jaramillo-Legorreta *et al.* (2007), 150 individuals of vaquita *Phocoena sinus* (Norris and McFarland, 1958) remain in the Upper Gulf of California. The authors raised a warning that

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