Holothurian populations in the Caribbean have been significantly depleted in some areas, and others are still in danger to satisfy international markets. In Venezuela, this marine resource has been illegally exploited since the early 1990s. To contribute with their management and protection, this work analyzed the distribution, abundance and population structure of two commercial holothurians Isostichopus badionotus and Holothuria mexicana in Cubagua Island shores. A total of 52 stations were studied around the island during the year 2008. Surveys included visits to each station, for which a band transect of 50m² with four replicates were carried out. The results show that I. badionotus has a higher distribution on the East coast of the island, and is found over Thalassia testudinum beds or bivalve molluscs aggregations, with an average density of 0.011ind/m², C.I. 95%=0.005-0.017, n=122, and a general abundance estimated in 117ind/ha. H. mexicana has been practically depleted (0.001 ind/m² C.I. 95%= 0.0002-0.0013, 7.7 ind/ha, n=8). We recommend the maintenance of the total ban adopted in 1997 to assure the protection of these species, mainly because no previous data supported the start of the fishery, and also, because the current densities are still very low when compared to other areas in Venezuela and the Caribbean. These are animals easy to catch, susceptible to overfishing, and with a very low recovery rate; thus, more control is required from the local authorities.

Keywords
Isostichopus badionotus, Holoturia mexicana, sea cucumber, beche-de-mer.