

Economic gains from invasive species in the Gökova Bay: A small scale fishing experiment

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Abstract

Global warming, increasing heat content and rising temperatures is being resulted in irreversible changes in the marine ecosystems. One of the important changes is the introduction and increased distribution of invasive species into the seas like Mediterranean. These climate-induced change not only affected the food web within the ecosystem but also impacted the livelihood of small scale fishermen by positive and negative returns from new species fisheries. This study was conducted to present economic gains of a small scale fisherman from invasive species in Gökova Bay (southwest coast of Turkey). Further, value per unit effort and benefit cost of fishermen through the survey period will be presented with the attribution of the results for the same type of small scale fishing in the bay. The data was collected through 19 gillnet and 10 longline fishing operations in between 5 and 37 m depth from June 2014 to June 2015. Invasive species have also been valued in the market similar to unit prices of native species as well as invasive species have high market demand as the native species. 98% of invasive species caught by gillnet fishing and 100% of invasive species caught by longline fishing have commercial value in the region. The most of lessepsian species have crucial economic impact for the revenue of small scale fisheries in the Gökova Bay.

Keywords: Lessepsian migration, climate change, economics, small scale fishery, Gökova Bay

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