

Session 05

Effects of the Bamboung Marine Protected Area (Saloum, Senegal) on fish communities: an approach based on the bio-ecological indicators analysis

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Abstract

Marine Protected Areas (MPAs), initially set up to protect critical habitats and improve biodiversity, are increasingly seen as a tool for the spatial management of fisheries. However, MPA managers rarely have a scientific assessment of the effectiveness MPAs from a fishery perspective. Thus this study analyzes the bio-ecological effects of Bamboung MPA by comparing two nearby tropical estuaries: Bolong de Bamboung (closed to fishing) and Bolong de Sangako (fished). For this purpose, usual ecological indicators have been estimated: abundance, biomass, specific richness and Shannon index. These indicators were calculated from experimental fishery data (2008-2016) in both bolongs using the same purse seine sampling protocol. The preliminary results showed the presence of 69 species in the MPA, compared to 61 species in the Sangako bolong. For Bamboung MPA, the mean abundance is 25 individuals for a biomass of 72 kg/ha, while for the Sangako bolong, the average abundance is 36 individuals for a biomass of 39 kg/ha. The Shannon index is equal to 1.8 in the AMP and 1.7 in the bolong of Sangako. These indices are close to their maximum values, indicating a more or less equal distribution of individuals between different species. However, the higher biomass in the MPA compared to the exploited site indicates the presence of large individuals in the Bamboung MPA.

Keywords: Bamboung; MPA Effect; Bioecological indicators; Sangako; Senegal.



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Extended book of Abstract

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