



The spatial distribution of coastal fish assemblage in Côte d'Ivoire's Exclusive Economic Zone (EEZ), West Africa.

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Original submitted in on 7th October 2016. Published online at www.m.elewa.org on 31st December 2016

<http://dx.doi.org/10.4314/jab.v108i1.5>

ABSTRACT

Objectives: The interest of this study is double. Firstly, these results allow for the characterisation of species assemblages, to identify their spatial distribution boundaries. Secondly, these findings are relevant to define spatial or ecosystem units in order to provide background for fisheries management.

Methodology and Results: Samples were collected and studied at a grid of three zones during the cruise of investigation on board the Oceanographic Vessel ITAF DEME in March 2012. Forty- seven taxa belonging to four orders (Cephalopoda, Malacostraca, Chondrichthyes and Osteichthyes) were selected for analysis. Spatial differences in fish structure were analysed through different multivariate routines from PRIMER including between-matrix analysis of similarities (ANOSIM), species contributions to similarity/dissimilarity (SIMPER), non-metric multidimensional scaling (MDS) and group average cluster analysis. Typical or abundant species from those zones included fishes from the families Sparidae, Haemulidae, Carangidae. The most abundant species were *Ariomma bondi* (Ariommidae), *Selene dorsalis* (Carangidae), *Brachydeuterus auritus* and *Pomadasys incisus* (Haemulidae), *Pagellus bellottii* (Sparidae). The species *Sardinella maderensis*, *Brachydeuterus auritus*, *Trachurus trecae* and *Selene dorsalis* had the highest frequencies of occurrence.

Conclusion and application: The distribution of the species halieutics is not uniform along the coast of Côte d'Ivoire. This study pointed to the fish resources of Côte d'Ivoire's Exclusive Economic Zone. These results will be used by the fishermen and for the development of adequate measures to prevent the loss of aquatic biodiversity.

Key words: Biodiversity, Indices of diversity, Coastal zone, Côte d'Ivoire.