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Fisheries catch under-reporting in The Gambia, Liberia and Namibia and the three large marine ecosystems which they represent



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ARTICLE INFO

Article history:

Received 11 May 2015

Received in revised form

10 August 2015

Accepted 13 August 2015

Keywords:

Catch reconstruction

West Africa

Under-reporting

Foreign fisheries

ABSTRACT

Fisheries catches from the Exclusive Economic Zones of three West African countries, each representing a Large Marine Ecosystem (LME), were reconstructed to cover all fishing sectors over a 6-decade period. While there are strong differences in terms of target species and the ecosystems within which they are embedded, there are similarities in the manner that domestic catches in The Gambia, Liberia and Namibia are under-reported. For The Gambia, catches by all domestic sectors were assessed to be twice the data supplied by The Gambia to the Food and Agriculture Organization of the United Nations (FAO). This is similar to the trend observed for Liberia, representing the Guinea Current LME, and where there is a larger margin for improvement, as the Liberian small-scale sector on its own is twice the entirety of the catches reported to the FAO. In Namibia, representing the Benguela Current LME, reconstructed catches were only 9% higher than the data reported by the FAO on behalf of Namibia, implying that the drastic measures implemented by Namibia to prevent illegal fishing are bearing fruits. Important lessons can be drawn from the present study for other countries in West Africa, notably for combating illegal foreign fishing, still rampant in the CCLME and the GCLME, and in managing small-scale fisheries, which require, as a starting point a detailed knowledge of their catch. These latter points are illustrated, finally, by catch time series for these three LMEs, reconstructed by taking account of the other 20 West African countries.

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1. Introduction

The western coast of the African continent (Fig. 1) comprises some of the most productive fisheries ecosystems in the world, encompassed within three Large Marine Ecosystems (LME) (Sherman and Hempel, 2008), whose fisheries are sources of employment, revenue, and food (Fao, 2006). LMEs of West Africa comprise the entirety or part of the Exclusive Economic Zone (EEZ) of the countries which border them (Fig. 1).

The Canary Current LME (CCLME, Fig. 1) is known for its geographical diversity, high productivity and fisheries wealth (Aristegui et al., 2009). A seasonal upwelling, a wide continental shelf, and strong river discharge in the south of this LME

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Fig. 1. West African Large Marine Ecosystems and the Exclusive Economic Zones of the countries therein. The light blue line in the south represents the boundary of the Agulhas Current Large Marine Ecosystem.

play a major role in enriching the waters of the CCLME (Aristegui et al., 2009). These three factors are all represented in The Gambia, one of Africa's smallest coastal states. The Gambia lies almost entirely in the Savannah-Sahel belt of West Africa, and consists of a strip of land whose width varies from 25 to 50 km on either side of the Gambia River (Horemans et al., 1996). The particular shape of The Gambia implies that most Gambians live along the coast or the banks of the Gambia River, thus making fishing an integral part of their lives, particularly given that a third of them live below the international poverty line.

The Guinea Current Large Marine Ecosystem (GCLME), (Fig. 1) is located in the Eastern Equatorial Atlantic region and is characterized by a relatively wide continental shelf with low lying coastal topography and a large number of estuarine

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