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Large marine ecosystem fisheries management with particular reference to Latin America and the Caribbean Sea

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ABSTRACT

Regional Fisheries Management Organizations (RFMOs) addressing the management of living marine resources have a long history, beginning in 1811 with the North Pacific Fur Seal Convention followed by the International Pacific Halibut Convention in 1924. Following the expansion of fisheries after WWII, RFMOs proliferated and after the general acceptance of a 200 mile extended jurisdiction in the mid- 1970s many more nations became involved. There are approximately 17 RFMOs (depending on the definition of "management") of the over 40 marine Regional Fisheries Bodies (RFBs) identified by the Food and Agriculture Organization (FAO) of the United Nations. The Large Marine Ecosystem (LME) approach has roots in the experience of the International Commission for the Conservation of Northwest Atlantic Fisheries (now defunct and replaced by the Northwest Atlantic Fisheries Organization (NAFO)) which pioneered ecosystem based fisheries management. The LME approach to the assessment of coastal ocean goods and services was included in the operational guidelines for project proposals by the International Waters Focal Area of the Global Environmental Facility (GEF) in 1995. LMEs have fisheries as one of five major components to be addressed under the modular assessment and management framework for LME project development. As LME Programs enter the stage where they need to move to develop their governance responsibilities, the relationship with existing RFMOs is critical. This paper examines possibilities for this interaction with special attention to Latin American and Caribbean LMEs particularly in relation to their three northeastern LMEs. Possible inferences from the experiences of the coastal states of the US are also addressed, considering the Gulf and Atlantic States Marine Fisheries Commissions as a pseudo RFMO with the states assuming a role similar to countries.

1. Introduction

Latin America and the Caribbean have moved to the forefront of Large Marine Ecosystem (LME) activity. There are 10 LMEs in the Caribbean and Latin America (Fig. 1), four of which are funded for the introduction and practice of ecosystem based management projects of countries bordering the LMEs by the Global Environmental Facility (GEF). These projects are in the Humboldt Current LME, the Gulf of Mexico LME and the Caribbean Sea and North Brazil Shelf LMEs. The latter two are entering a second phase devoted to implementing Strategic Action Plans (SAPs) developed during the first phase.

LMEs have been designated throughout the world as effective units for assessing, managing, recovering and sustaining the resources of the continental shelf and coastal ocean areas (Sherman and Alexander, 1986; Wang, 2004; Hennessey and Sutinen, 2005; McLeod et al., 2005; Duda, 2009; Lubchenco, 2013; Ishii, 2013; Watson-Wright, 2013; Sherman and Hamukuaya, 2016). They have become the "gold standard" for integrated ocean management, and have been adopted by the United Nations for their World Oceans

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VELOPMENT

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Fig. 1. Latin American and Caribbean Large Marine Ecosystems. Numbers represent LMEs as depicted on the LME world map (www.lme.noaa.gov).

Assessment (WOA) and by the Transboundary Waters Assessment Programme (TWAP) of the GEF on the status of the ocean as part of their mandate to meet General Assembly instructions (www.unesco.org/new/en/natural-sciences/ioc-oceans/high-level-objectives/ ecosystem-health/transboundary-waters-assessment-program/) (2014). The GEF adopted LMEs beginning in 1995 with the Gulf of Guinea (GOG LME pilot project) as the core of their coastal ocean international waters programs. They are supporting projects in 19 of the world's 66 currently designated LMEs (Hume and Duda, 2012). Unlike many development projects, the success of an LME Project cannot be judged by a final report on how well the project followed its implementation plan or even on the scientific results from a successful research cruise. This is because the ultimate goal of LME projects is to have, at the end of the day, a management structure capable of making LME policy decisions which has an ongoing stream of information from all of the five LME modules - Productivity, Fish and Fisheries, Pollution and Ecosystem Health, Socioeconomics, and Governance (http://lme.edc.uri.edu/) (2014) (Sherman and Duda, 1999).

One of the major driving forces in an LME is its fisheries. The LME approach emphasizes that fisheries be assessed and managed

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