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Panama revisited: evolution of coastal management policy

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Abstract

A window of opportunity for integrated coastal management may exist in Panama at the beginning of the new century. The country emerged from a period of political instability in the 1990s and began the new century with full political control over its most important resource—the Panama Canal. A major institutional reorganization in the late 1990s merged a number of agencies with authority in the coastal and marine areas into the Panama Maritime Authority and expanded the responsibilities of the marine resource directorate to include marine and coastal resources. This reorganization occurred with the adoption of new legislation that clearly recognizes the importance of integrated coastal management (ICM). Concurrent with the formation of the Maritime Authority, the Legislature passed the General Environmental Law and created the National Environment Authority. Despite these positive developments, institutional change has been slow. Sectoral management of coastal resources continues. Interagency coordination remains deficient, and no formal coastal coordination mechanism exists. Legislation is contradictory and confusing, and the new laws only add to the confusion. As coastal environmental quality continues to degrade and conflicts between sectors increase, the marine and coastal directorate must strengthen its institutional role and take the initiative in the development of a meaningful ICM effort in Panama. This manuscript analyzes the evolution of Panamanian institutions and legal frameworks related to coastal areas and highlights themes that are ripe for future action. © 2002 Elsevier Science Ltd. All rights reserved.

1. Introduction

In 1993, Sorensen analyzed the international proliferation of coastal management efforts and calculated 142 national attempts at coastal management, many of them

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regional or local. He cited programs in four Central American countries (Belize, Costa Rica, El Salvador, and Honduras, but not Panama) [1]. Several years later, Cicin-Sain and Knecht conducted another global survey and suggested that 63 nations were engaged in coastal management efforts [2]. They reported programs in the same Central American countries as Sorensen.

Although no formal coastal management program may exist, a nation nevertheless develops some strategies for dealing with coastal issues. Suman analyzed the institutional and legal framework of Panamanian coastal management over a decade ago and concluded that “Panama lack[ed] effective coordination among the various institutions with jurisdiction in the coastal zone. No agency [had] overall responsibility for managing the coastal zone and integrating sectoral interests. [N]o legal mandate for coastal management [existed in that country]” [3,4].

Panama possesses important and highly productive living marine and coastal resources along its 1287 km of Caribbean and 1700 km of Pacific shoreline [5]. With just over 75,000 km² of area, Panama has the highest ratio of coastline to national territory of any continental American country [6]. The Caribbean coast has a low level of urban development, a narrow continental shelf, and numerous habitats, such as fringing mangroves, estuaries, coral reefs, seagrass beds, and sandy beaches, as well as over 50 keys in Bocas del Toro in the west and over 300 coralline islands in San Blas in the east. Both these areas are important sites for the approximately 250 km of coral reefs along the Caribbean coast. (See maps in Appendices A and B.)

The Pacific coastal environment is quite different from the Caribbean. The continental shelf is broad and extends to 150 km. The Gulf of Panama is an important upwelling zone that sustains highly productive marine ecosystems. Most of Panama’s 170,000 ha of mangroves grow along the numerous Pacific estuaries and are important nursery areas for shrimp and other marine living resources. In fact, over 2.2% of Panama’s territory is mangrove forest, the second highest of any country in the Western Hemisphere [7]. Eighty percent of the nation’s population and most of its agricultural development occur on the Pacific coastal plains and watersheds.

Panama landed an average of 165,621 metric tons of living marine resources between 1995 and 1997 which translates into the highest per capita consumption of fish in Central America and Panama (14.6 kg/person/yr) [8]. However, these statistics hide the fact that most fish landings are exported or reduced. The vast majority of landings occur on the Pacific side of the Isthmus with its wide continental shelf and extensive coastal mangrove/estuary systems. Shrimp account for the majority of fish exports and are the second largest export earner, generating approximately \$137 million in recent years [9]. Over 220 shrimp trawling vessels landed over 8000 metric tons of several shrimp species in 1996, the most important of which is white shrimp. Some fishery managers suggest that white shrimp are overexploited by the improved technologies of the large number of vessels. Small pelagic species (anchovies and Atlantic herring) account for over 95% of the industrial landings from 28 seine net vessels but reach only 10% of the value, as most are reduced to fish oil [10]. Landings by artisanal fishers (approximately 10,000 individuals) account for <10% of fish

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