

Community involvement in marine protected areas: The case of Puerto Morelos reef, México

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Abstract

The case of Puerto Morelos reef marine protected area (MPA) provides an example of a community-based marine conservation initiative to protect a coral reef ecosystem. The establishment and maintenance of this MPA had five stages: (a) identification of community leaders who would participate in the project; (b) generation of consensus on the need to protect the reef through discussions among local stakeholders, NGOs and reef scientists; (c) involvement of government agencies in establishing the status of a MPA; (d) take-over of decision-making by centralized governmental agencies; and (e) continuous problem-solving process between the government and stakeholders. Over a 9-year period, the control of the MPA was taken over by government and stakeholders' participation downgraded from a decision-making to an advice-giving role. Government shortcomings to manage this MPA could be circumvented via collaborative co-management. Given the small population size of the community and strong sense of ownership, there was a high level of participation in the decision-making processes and scientific advisors are present in the area.

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1. Introduction

Experience has demonstrated that the success of marine protected areas (MPAs) as a management tool improves when the local stakeholders participate in planning and decision-making activities together with the government (Harvey et al., 2001; Hildebrand, 1997; Jameson et al., 2002; Pollnac et al., 2001). Consequently, government agencies must promote and facilitate community participation by providing the necessary finances, monitoring, law enforcement and technical expertise to ensure that the MPAs meet their management objectives (Foucat, 2002; Jameson et al., 2002). Also, communities need to uphold the rules, procedures and values which predispose them to work collectively for mutual benefit (Rudd, 2000). Despite this knowledge, neither community-based nor co-management conservation initiatives are frequently practiced in Mexico, or in many other developing countries (where a

mere 35% of Caribbean and 10–15% of Indo-Pacific MPAs meet their stated management objectives (i.e. most are “paper parks”)) (Jameson et al., 2002). In Mexico, some of the reasons for the low participation of local communities in management of natural resources are that (1) they are poorly organized and unmotivated; (2) they do not understand fully the importance of the resources or the negative impacts of particular anthropogenic activities; (3) they are unaware of the mechanisms that exist for resource protection in terms of legal action, funding applications and for reporting crimes; and (4) they are fearful of creating problems with the government if they become organized and adopt a more critical and demanding role.

The Puerto Morelos reef MPA is located on the northeastern Yucatan Peninsula, in the state of Quintana Roo, Mexico. This MPA was declared in 1998 and is among the first in Mexico to have been created through a community-based approach (Murray, 2005), with local stakeholders assuming the responsibility for elaborating the management program (published in 2000). Funding for

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the management of the MPA began in 2002, with a fee charged to tourists for its use. The former high level of stakeholder participation has declined significantly since 2002, because (1) the MPA user fees collected by the government were not efficiently returned to fulfil the management program; (2) stakeholder opinions, recommendations and complaints were not always considered, and agreements made during Advisory Council meetings were not always honored; and (3) management decisions were based often on centralized, regional, or generalist guidelines, rather than on the particular characteristics and needs of the MPA.

In this paper, I share my experiences in the Puerto Morelos reef MPA as a promoter for its creation (1995–1998) and as president of the Advisory Council (2001–2006). Based on this experience I present my perception of the multiple problems faced by the Puerto Morelos MPA and discuss possible alternatives for reaching efficient collaborative co-management of natural resources in this and other MPAs.

1.1. Definitions and concepts

Co-management can be defined as the decentralization of power and authority to various stakeholder groups who collaborate in the management of natural resources, primarily in or around a protected area (Leikam et al., 2004). Pomeroy et al. (2004), describe three degrees of co-management: (1) *consultative*, when the government interacts often with stakeholders but makes all the decisions; (2) *collaborative*, when government and stakeholders work closely and share decisions; and (3) *delegated*, when the government lets formally organized users/stakeholders make decisions. Delegated co-management includes, but is not limited to, community-based management, wherein the people who live and work in coastal areas, and depend on these resources, are enabled to take an active and responsible role and increasingly share planning and decision-making responsibilities with the government (Hildebrand, 1997). The concept of *stakeholder* refers to those who have influence on, or can be affected by, the management process (Geoghegan and Renard, 2002).

2. Background

2.1. History of protection of natural resources in Mexico

Mexico's first effort to protect natural resources started in 1876, when the Desierto de los Leones forest reserve was created in order to protect water springs that supplied Mexico City. In 1917, this reserve became the first national protected area declared by a presidential decree. The first decree for the protection of a coastal area was published in 1937 and included the estuarine area of Lagunas de Chacahua on the Pacific coast of Oaxaca (Bezaury-Creel, 2005). The first coral reef protected area was created in

1973 off Cancun. By the end of 2006, the nation recognized the decrees of 158 federal protected areas that in total occupied almost 19 million ha (9.6% of the country); 77% were terrestrial and 23% were marine ecosystems. Ten areas included the coral reef ecosystem: seven in the Caribbean, one in the Campeche Bank, one in the Gulf of Mexico and one in the Pacific Ocean. Seven of them have management programs, that were published between 1997 and 2004.

México's interest in protecting natural resources is reflected in the fact that over the last 90 years more than 500 protected areas have been created, covering more than 50% of the nation's territory. Unfortunately, the majority of them were "paper parks" and now do not exist (Gómez-Pompa and Kaus, 1999). Initial motivation to create protected areas was mainly historical, economical, or political, rather than biological or ecological, and environmental policy did not consider evicting local people from lands to create protected areas; it only restricted legal use of the land—a precedent that has persisted until the present (Gómez-Pompa and Dirzo, 1995). The lack of success of several protected areas in Mexico has been attributed to (1) the weaknesses of the initial objectives, design and enforcement; (2) the minimal resources that have been assigned for their management (Gómez-Pompa and Dirzo, 1995); (3) a highly fragmented coastal and marine legal framework; (4) a dispersed and overlapping body of governmental institutions with jurisdiction over coastal and marine issues; and (5) the lack of experience in the creation and consolidation of intergovernmental and multi-stakeholder participatory spaces (Bezaury-Creel, 2005).

In the year 2000, a National Commission of Protected Areas (Comisión Nacional de Areas Naturales Protegidas, CONANP) was created with the purpose of governing protected areas with a nationwide plan. This Commission has a higher administrative rank and is the largest structure that exists in Mexico to take care of natural protected areas. Its objective for the period 2001–2006 was to consolidate the protected areas system that already existed. Progress has been made and principles that guide the system on a national level have been created. CONANP's report for the period 2000–2006, indicates that the number of natural protected areas increased from 127 to 158, the protected surface area from 17 to almost 19 million ha and the budget to manage them from 147 to 617 million pesos (<http://www.conanp.gob.mx/dcei/12005/>). The document also mentions that there are still many things needed to guarantee the conservation of ecosystems and their biodiversity, including reforms to (1) the Constitution, so lands can be purchased to create protected areas; (2) environmental law regarding natural protected areas; and (3) fiscal regulations, so benefits for those investing in conservation are created. Several NGOs, both national and international, are advocating efforts to make this and many other environmental legislation reforms possible.

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