Marine Policy 41 (2013) 110–117

Contents lists available at SciVerse ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

# Chumbe Island Coral Park—governance analysis

Lina M. Nordlund [a,b,*], Ulrike Kloiber [b], Eleanor Carter [c], Sibylle Riedmiller [b]

[a] WIO CARE, PO Box 4199, Zanzibar, Tanzania
[b] Chumbe Island Coral Park, PO Box 3203, Zanzibar, Tanzania
[c] RARE Conservation, 1310N. Courthouse Road, Suite 110, VA 22201, USA

ARTICLE INFO

Available online 23 January 2013

*Keywords:*
Private management
No take area
Marine protected area
Zanzibar
Tanzania
Ecotourism

ABSTRACT

Chumbe Island Coral Park Ltd (CHICOP), established in 1991 as the first managed marine park in Tanzania, has become an international test case for sustainable private marine conservation funded by ecotourism. The experiences, problems and achievements of CHICOP are described, in particular drivers and incentives for committed on-site MPA management in the legal and institutional environment of Zanzibar. The employment of local fishers as park rangers proved cost-effective and facilitated partnership with local fishing communities, as did Environmental Education (EE) programs for local schools and communities. Risks for private investors remain high though due to limited long-term security of tenure of leases and contracts.

© 2012 Elsevier Ltd. All rights reserved.

## 1. Introduction

The East African coastal and marine environments suffer from natural and anthropogenic disturbances mainly caused by rapid population growth and widespread poverty. Especially for Tanzania, which has a population of around 43 million (2011 estimate) and a growth rate of 2.9% (2011 estimate). Tanzania is recognized as a Heavily Indebted Poor Country (HIPC) [1] with one of the world's poorest economies [2].

More effective management of the coastal and marine ecosystems is required to improve people's livelihoods, sustain national economies and to maintain the diversity and productivity of these valuable natural resources [3]. In Tanzania, MPAs and their management effectiveness are recent concepts. The MPAs gazetted from the mid 1990s have insufficient staffing and budget, and only few have more recently developed management plans. Therefore, the nation is still far from meeting its commitment of protecting 10% of the marine ecological regions by 2012 [4].

From 1991 to 1994, Chumbe Island Coral Park Limited (CHICOP) successfully negotiated with the semi-autonomous government of Zanzibar that the western coral reef and all forest cover of Chumbe Island should be gazetted as a MPA. This MPA would be managed by CHICOP, a limited company established for that purpose, becoming the first managed marine park in Tanzania and what is considered to be the first private MPA in the world. Ecotourism operations started in 1998. The intention was to develop a financially sustainable model of MPA management through revenue generated from ecotourism, and the site was chosen for the high biodiversity of the shallow fringing coral reef (ideal for environmental education).

The company objectives are not-for-profit, while operations follow commercial principles and the revenue generated funds all aspects of MPA management, conservation activities and environmental education programs. The Chumbe MPA includes a 33 ha Reef Sanctuary with diverse habitats such as sandy shores, seagrass meadows and a fringing coral reef, and is located on and around the small and formerly uninhabited Chumbe Island that is situated about 6 km west of the larger island of Zanzibar and about 30 km off the coast of Tanzania in East Africa. In addition, the island has a 22 ha Forest Reserve covered with mangrove and tropical dry forest that is also managed by CHICOP.

## 2. MPA establishment and objectives

Chumbe Island Coral Park (CHICOP) is a privately established and managed island nature reserve recognized by the Zanzibar Government since 1994. The Legal Gazettement order of the Government of Zanzibar (24.12.1994) defines the Reef Sanctuary as a No-Take-Area (NTA) where "No fishing or any extractive use shall be permitted in the area so declared". Such restrictions also apply to research activities. Chumbe is thus classified as a Category II protected area under IUCN's WDPA listings [5]. Permitted uses of the Chumbe MPA include recreation (swimming, snorkeling, underwater photography), education and non-extractive research activities. In the Articles and Memorandum of Association of CHICOP Ltd the aim for which the company is incorporated is: *"To*

* Corresponding author at: WIO CARE, PO Box 4199, Zanzibar, Tanzania. Tel.: +46 739232000.
*E-mail addresses:* linanordlund@gmail.com (L.M. Nordlund), ukloiber@gmail.com (U. Kloiber), carter.ed.consulting@googlemail.com (E. Carter), sibylle@chumbeisland.com (S. Riedmiller).

0308-597X/$ - see front matter © 2012 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.marpol.2012.12.018

**Table 1**
The current objectives and management actions as established in the revised Management Plan 2006–2016.

| *Category* | Objectives of the Chumbe Island MPA (2006–2016) |
|---|---|
| ***Conservation*** | (1) To protect and manage the marine and forest ecosystems in the MPA |
| | (2) To promote research in the MPA in support of management |
| | (3) To develop and implement the biodiversity monitoring systems for both the marine and forest habitats in the MPA |
| | (4) To promote the conservation of rare and endemic species |
| ***Education*** | (5) To promote environmental education issues regionally |
| | (6) To provide environmental education through the Chumbe Education Programme |
| | (7) To educate national and international visitors to the MPA |
| ***Ecotourism*** | (8) To manage the Chumbe eco-lodge as a model for sustainable tourism development at the same time as providing a high quality service to visitors |
| | (9) To operate the eco-lodge with not-for-profit intentions, whereby revenue generated supports the MPA management and associated activities |
| | (10) To promote the eco-lodge nationally and internationally to encourage visitors |
| ***Socioeconomic*** | (11) To encourage benefit streaming from MPA activities to local communities |
| | (12) To promote the employment of Zanzibari's from local communities, and to provide on-going training and capacity building for local people. |
| | (13) To maintain the sites of historical and cultural importance in the MPA in collaboration with the relevant associated organizations |
| ***Management / Governance*** | (14) To operate in a sustainable, transparent manner, involving all stakeholders |
| | (15) To encourage close cooperation between all agencies and to promote good public relations |
| | (16) To monitor management performance against planned activities and effectively evaluate the project over time |
| | (17) To fulfil all legal and contractual obligations |

*manage, for conservation purposes, the Chumbe Island Reef Sanctuary and the Chumbe Island Closed Forest Habitat. This includes educational and commercial activities related to the non-consumptive use of the above mentioned natural resources and the doing of all such other things as are incidental or conducive to the attainment of the above object.*" A Management Plan 1995–2005 [6] was developed with wide stakeholder participation, and further revised and updated for 2006–2016 [7] with detailed goals and objectives as summarized in Table 1.

### 2.1. Supporting international commitments

CHICOP's objectives also aim for supporting international commitments to which the United Republic of Tanzania is a signatory, such as the Convention on Biological Diversity (CBD) and the Nairobi Convention of 1985. Tanzania has committed itself to increase protection of its seas to 10% by 2012 and 20% by 2025 [8] and recommended the expansion of MPA systems and networks, along with promoting a supportive legislative environment for MPA establishment and management [9].

### 2.2. The legal framework

In 1993, the Government of Zanzibar (GoZ) Commission for Land and Environment (COLE) leased a land area of 2.44 ha on the island to CHICOP for a period of 33 years. No specific policies and legislative acts were yet available regarding MPAs in Zanzibar. Therefore, the Chumbe Reef Sanctuary was gazetted based on the laws available when the reef area was declared closed to fishing under the Department of Fisheries and Marine Resources of Zanzibar in 1994. The management of the MPA was entrusted by Management Agreement to CHICOP for a renewable 10 year period for the Reef Sanctuary. In 2004 this agreement was reviewed and extended until 2014.

## 3. Drivers/conflicts

The policies, legislation and management capacity of the GoZ are insufficient to meet the challenges of rapid environmental deterioration, while investment continues to be directed into unsustainable development. The main threats to biodiversity conservation are overexploitation of marine and terrestrial resources, population increase, tourism, poverty and a lack of environmental awareness.

### 3.1. Overexploitation of natural resources

Tanzania and Zanzibar suffer from overexploitation of marine resources [10,11]. In particular the coral reefs are subject to destruction by unsustainable fishing methods such as dynamite fishing and beach seining [10,12,13]. Other threats are coral mining, pollution from coastal development and intensive agriculture, and the effects of climate change including coral bleaching and acidification of seawater [14]. Marine organisms such as turtles, sea cucumbers, seahorses, shells and shark fins that were formerly unexploited or non targeted, are now being harvested, mainly for export purpose [10,15,16].

### 3.2. Population increase, tourism and coastal development

The coastal population is growing rapidly along the East African coast [17,18]. From the 90s, the liberalization of the Tanzanian economy has opened coasts and beaches for tourism investments [19], contributing to environmental degradation of coral reefs and coastal forests, including that caused by sewage.

Uncontrolled garbage disposal from an increasing population contributes significantly to the pollution of the coastal waters via surface water run-off and leaching. Onsite waste treatment facilities are often not in place and many hotels discharge untreated wastes into the sea [20]. Moreover, drifting garbage such as plastic bags can accidentally be mistaken for jelly fish and eaten by turtles, resulting in increased turtle and seabird mortality.

### 3.3. Poverty

Livelihoods of the coastal communities are highly dependent on natural resources and a healthy marine ecosystem. Poverty affects conservation as it sometimes forces people to use destructive fishing practices or break regulations. Therefore, a significant factor for MPA success is integrating conservation with promotion of livelihood opportunities [21,22].

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات