

New eco-development initiatives involving local people in the conservation of Mahatma Gandhi Marine National Park, Wandoor (India)

A. Saxena¹ & M. Saxena²

¹ Women Scientist, Port Blair, A & ² Managing Director, Andaman & Nicobar Islands Forests & Plantation Development Corporation Limited, Van Vikas Bhawan, Haddo, Port Blair, Andaman & Nicobar Islands (India) Email: dr_aloksaxena@rediffmail.com
N Islands (India) Email: dr.manisaxena@gmail.com

Abstract. Mahatma Gandhi Marine National Park situated at Wandoor about 29 km from Port Blair is among the first three Marine National Parks in India. Established in 1983 with the objective of conserving the unique marine diversity and the coral reefs, it also comprises 15 uninhabited islands. There are 6 villages in the adjoining area with a population of about 4157. The main occupation is fishing. No fishing is allowed within the Marine National Park but routes are demarcated for providing safe passage to local fishermen. MGMNP is an important eco-tourist site because of its unique marine biodiversity. In order to involve the local people in the conservation efforts, the Park authorities initiated action at a small level in 2003-04. The tsunami of 2004 affected not only tourism but also the efforts of Park authorities in people's participation. Increased tourist inflow in the last two years led the park authorities to revive their eco-development initiatives. New initiatives are being taken for providing livelihood means to locals and involving them in the conservation efforts.

Key Words: Eco-development, tourism, fishing routes, livelihood options, Peoples' participation

Introduction

Mahatma Gandhi Marine National Park (MGMNP) was established in 1983 under the Wildlife (Protection) Act, 1972, with a view to protect and conserve the rich marine life found in this area. This was the first Protected Area notified in this Union Territory and also among the first three Marine Protected Areas of India. It is situated around 29 km from Port Blair, the Capital town of the Andaman & Nicobar Islands. The total area of MGMNP is 281.50 km² which includes 220.5 km² of territorial water and 61 km² of land area of 15 Islands located within the boundary of the National Park. All the Islands within MGMNP are uninhabited. Only two Islands namely Jollybuoy and Redskin are open for tourism, but no night halt is allowed. The Park is completely free from all rights. It is managed by the Department of Environment & Forests, Andaman & Nicobar Administration.

Biodiversity Status

The Park is known for its rich biodiversity-both plant and animals. There are 279 species of plants. Most of the islands have tropical evergreen forests and mangroves on the fringes. The tree species include *Dipterocarpus*, *Terminalia*, *Pterocarpus*, *Diospyrus marmorata*, *Artocarpus*

chaplasha etc. Littoral species are dominated by *Manilkara littoralis* and important mangrove species are *Rhizophora*, *Bruguiera*, *Avicennia officinalis*, *Ceriops tagal*.

The terrestrial fauna include Andaman wild pig, spotted deer, water monitor lizard and a variety of snakes including sea snakes. The birds include Andaman teal, white-bellied sea eagle, parakeets, sea herons among many others.

The Park is rich in marine biodiversity. More than 280 species of fish, 57 species of mollusc, 52 species of echinoderms, 122 species of corals belonging to 54 genera, salt water crocodiles, four species of sea turtle, dolphin, dugong, a variety of sea weeds and sea grasses are reported to occur (Kulkarni et al., 2000, 2004).

Socio-economic status of communities living around

There are no inhabitants within the boundary of MGMNP. However, six villages adjoin the boundary of the Marine National Park. Population figures of these villages as per 2001 census are given in Table 1. Occupational pattern of the villagers is depicted in Figure 1 (Kulkarni et al., 2004). The data shown in Figure 1 is pre-tsunami data (i.e., before 2004). There has been a significant

Table 1: Population of villages adjoining villages

Sl. No.	Name of village	Population
1.	Wandoor	1511
2	Hashmatabad	616
3	Guptawara	716
4	Manglutan	575
5	Manjeri	585
6	Rutland	154

change in the occupational pattern after the area was struck by a Tsunami in December 2004. A number of farmers lost their land due to submergence and have turned to other opportunities. A number of fishermen have taken up tourism related activities.

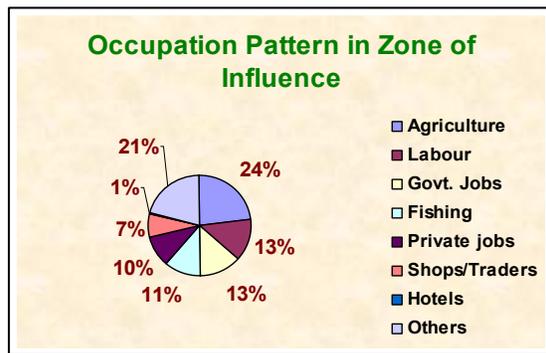


Figure 1: Occupational patterns of locals near MGMNP Source: Kulkarni et al., 2004

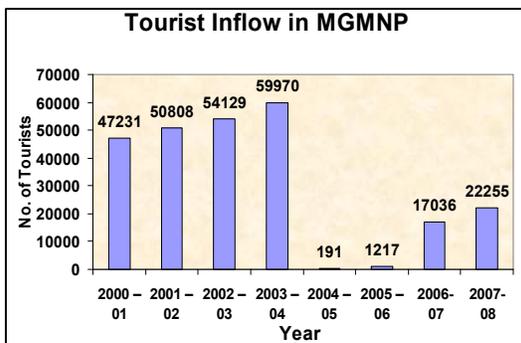


Fig. 2: Tourist inflow to MGMNP.

This Park is an important tourist destination. The inflow of tourists was adversely affected by the Tsunami but in subsequent years the inflow increased again (Figure 2). Though the number of tourists visiting the Marine National Park appears to be still less than 50% of visitors in 2003-04, but the number of tourists visiting Wandoor in 2007-08

was higher than in 2004-05. Two new tourist attractions (New Wandoor beach and Mahua Dera beach) were identified and developed by the local people. Even without proper record, increase in the number of tourists was confirmed by the local people and the Park authorities.

Objective

The objective of the present study was to evaluate measures taken by the Park authorities to address the expectations of the local communities residing in the vicinity of the Park and to involve them in the conservation efforts being taken up in the MGMNP, Wandoor.

Methodology

Four villages (Wandoor, Guptawara, Hashmatabad and Manglutan) fell in the zone of influence. In addition to collection of basic data on the socio-economic profile of these villages, a survey was conducted to understand the extent of

- Awareness about the MNP
- Its objective and impact on occupations
- Their perception about changes taking place
- Their expectations
- Relation with Park Authorities
- Initiatives by the Park Authorities

A questionnaire was developed and interviews were the main tool of data-collection. Stratified random sampling design was used. Sample size of each stratum was based on population as well as the relative importance. Strata-wise percent distribution of sample size is depicted in Figure 3.

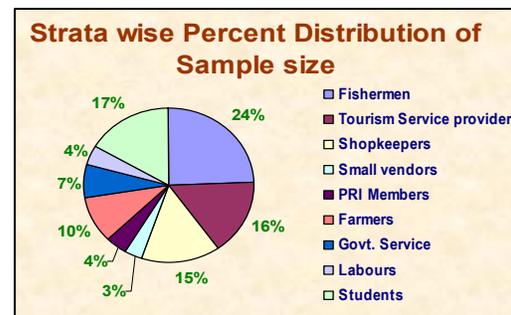


Figure 3: Occupations in the zone of influence of MGMNP.

Results and Discussion

It is revealed from Table 2 that there has been an increase in economic activities particularly in the post-tsunami period. The number of bus services from Port Blair to Wandoor has almost doubled. The number of private taxis visiting Wandoor per day is presently around 50. The numbers of lodges

and restaurants did not increase much, probably because tourists visit this area during day time for enjoying the beach, swimming, snorkeling and viewing marine life. Local tourist services have also increased from nil to 12. It is quite evident from this Table that local people have realized the potential of tourism as an important livelihood option and therefore not only have they identified new areas of tourist attractions but have also acquired loans from Bank mainly to purchase boats for tourism purpose.

Activity	Pre 2000	2000 -04	2004 -08
Restaurants & Lodges	3	5	6
Ration shops	1	2	3
Bus Service (No. of trips)	16	16	28
Schools	2	2	2
Tourist Services	Nil	Nil	21
Other commercial Establishments	7	8	12
Loans availed for boat	Nil	Nil	37
New tourist Areas identified by local people	Nil	Nil	2

Table 2: Pattern of emerging economic activities

Other important findings of the survey are as follows:

- About 93 % of the local people were aware of the objectives of the establishment of MGMNP in some form or the other. Of the total people interviewed, 66 % knew that the Park was constituted for protection of marine life, 22 % think that the purpose was for promoting tourism and 5% think it to be protection of Wildlife. (Figure 4).

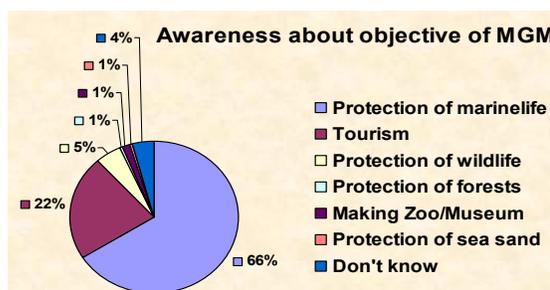


Figure 4: Awareness of the MGMNP.

- On effect of establishment of MGMNP on their occupation, 38 % responded that it

has adversely affected their occupations. Of this 91 % were fishermen as fishing is not permitted inside the Park and they have to go to far distances for fishing. Thirty six percent responded that the establishment of the Park has favorably affected their occupations. These include mainly tourist service providers, shopkeepers, small vendors etc. Four percent did not respond while remaining feels unaffected by the establishment of Park.

- About 99 % of the people interviewed were aware about the purpose of tourists visiting Wandoor. Of them, 65 % knew that tourists were coming for viewing marine life, 33 % think that they come for enjoying beaches and nature and 1 % think that wildlife is the major attraction for tourists.
- 95 % view the Park authorities' behaviour towards them to be good and supporting. They expressed that there is regular interaction between them and Park authorities. Five percent (mainly fishermen) complained about occasional harassment.

Following were the main reasons for discontent among the local communities:

- Ban on fishing inside the MNP
- No proper berthing place for fishing boats
- Occasional harassment by Forest/Police personnel within MNP
- Assurance of development made at the time of creation not fulfilled
- After Tsunami
 - Fish catch declined tremendously
 - Agricultural land also affected
 - No alternative means of livelihood except Tourism related jobs
- Recent restriction imposed on tourist boats plying to Mahua Dera beach, which is a new site with a beautiful beach and rich coral diversity attracting a large number of tourists. The site has been closed temporarily, which generated a lot of discontent since a number of fishermen turned tourist service providers had taken loans to buy motorized boats for tourism and faced difficulties in repaying loans due to the ban.

On interviewing people about their expectations from the Park authorities, they expressed following points:

- Permission within MNP
 - To carry tourists in small boats/country boats
 - For fishing
- Safe fishing routes through MNP to be demarcated
- Opening of Mahua Dera Beach for tourism through local tour operators
- Permission for country boats to carry eatables for sale to tourists within MNP
- Employment of local people as
 - Tourist Guides/Guards
 - Labourers
- Permission to open Shops and Restaurants near entrance of the Park

It was revealed during the interviews with Park authorities that they have, after a series of meetings with local village leaders, initiated following actions/measures:

- Safe passage routes for fishing boats through MNP has been demarcated
- Alternative berthing site for fishing boat has been identified outside MNP in consultation with stakeholders
- Fish landing facility is being developed by Fishery Department
- Additional Island (Alexendra) has been opened for tourism
- Formation of eco-development committee is in final stage
- Employment of local youth in seasonal works
- Agreed to

- provide space to small vendors to run their shops near the entrance of Park
- provide training and employing unemployed youth as tourist guides inside MNP
- open Mahua Dera for tourism
- permit boats of local tour operators inside MNP after clearance of certain legal requirements
- These initiatives will be within the legal framework of existing Acts and Rules

It is evident from the survey done that the potential of tourism is realized by local people. As a result they are identifying new areas for tourism and also making investments. However, they need support of the Administration, particularly the Forest Department. In response the Authorities have initiated people's involvement in conservation efforts through alternative livelihood options.

Acknowledgement

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