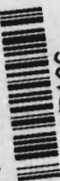


Mount Harriet National Park

Andaman & Nicobar Islands



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PR166

A report of

ECO-DEVELOPMENT PLAN

Submitted to

Department of Environment & Forests
Andaman & Nicobar Administration
Port Blair

Prepared by



Sálim Ali Centre for Ornithology
Natural History (SACON)
Coimbatore

2013

2166



Mount Harriet National Park

Andaman & Nicobar Islands

Eco -Development Plan

A report Submitted to Forest Department of A& N Islands

By

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Salim Ali Centre for Ornithology & Natural History,

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ACKNOWLEDGEMENTS

We are thankful to Department of Environment and forests. Andaman and Nicobar Administration for giving this responsibility to Salim Ali Centre for Ornithology and Natural History (SACON). We are also thankful to all the local people, particularly the Pradhans and members of the Panchayats around the Mount Harriet National Park for their support. Many officers who worked and working in the area from the Andman Forest Department has given many fruitful suggestions to complete this programme. We thankfully acknowledge that. The volunteers and workers who helped in collecting data from people are also thankfully acknowledged.

PREFACE

India is a Mega Biodiversity country and Andaman and Nicobar Islands is part of Global Biodiversity Hot spots. People around the Protected Areas are directly or indirectly depended on the natural resources and biodiversity of these areas. This understanding has lead the promotion of participatory conservation regime in our country. Eco developmental programmes have become very common and successful running activities in mainland India. However in Andaman Nicobar Islands, this took some time to receive the acceptance. As our local governance gets more and more strength, the local benefit out of the resources also assumes importance.

In this context, Department of Environment and Forests, Andaman and Nicobar Administration has entrusted Salim Ali Centre for Ornithology and Natural History (SACON), the responsibility of initiating the process through developing a preliminary micro planning suited to the ecodevelopment of the region around Mt. Harriet National Park. Idea here is to promote the involvement of local people in conservation, protection activities of the National Park as well as they also get benefited from it. Despite many limitations of administering the project in the specific context of Mt. Harriet National Park, we have taken sincere efforts to reach out to people and the suggestions are consolidated and presented briefly here in this report.

Authors

1. INTRODUCTION

National Forest Policy, 1988, states “ forests should not be looked upon as a source of revenue” but as a “ national asset to be protected and enhanced for the well being of the people and nation. The people will be actively involved in programmes of protection, conservation and management of the forest”.

Protected area Management in India started recognizing the importance of participation of local people in forest conservation and local development by 1990s. Ecodevelopment programmes were suggested as the way forward and to take up this new challenge, management tools were suggested to many protected areas in mainland India. In June 1990, the government of India passed a resolution providing specific guidelines regarding the foremation, functioning rights and responsibilities of communit forest management groups. . The government also launched centrally sponsored schemes called ‘Ecodevelopment around National Parks and Sanctuaries’ in the 8th five year plan. The Indian government launched the Indian Eco-development Project (IEDP) from 1996 in many PAs with external support. The objective of all these activities was to strike a balance between the management of parks and wildlife sanctuaries and the economic and social needs of the communities living in these areas or close to them.

After the bench mark Wildlife (Protection) Act of 1972, which defined the modes of implementation and management of natural parks and wildlife sanctuaries, number of protected areas grew suddenly. The development of protected areas was a sign of the sudden awareness of the need for conservation and the importance of the Indian biological heritage. The National Forest Policy (1988) later advocated the conservation and sustainable use of the forest and

demanded the protection of the rights of use of local communities. This resulted in the emergence of a participatory paradigm by 1990s. It officially recognised the dependence of local people in relation to their environment and the need to get them to participate in forest protection measures as well as in the financial profits derived from the exploitation or conservation of this environment.

Now the Forest Departments of each State got a new responsibility as the charge of preparing eco-development structures. The setting up of Eco-development Committees (EDC) was based on participatory rural appraisal techniques to assess the needs and activities of villages, and also on projects to restore ecosystems, train protected area employees and fight against forest fires and poaching. In practice, the objectives of the programme differed in the various parks and sanctuaries. The *modus operandi* changed according to the space, time and context. Because, the dependency and socio economic structure of the surrounding population varied very extensively around our protected areas.

2. MOUNT HARRIET NATIONAL PARK – A PROFILE

Eighty six percent of the land area of Andaman Nicobar Islands falls under forests. There are nine national parks identified and declared for the protection of nature and natural resources in the islands. Of these, Mount Harriet National Park (MHNP) in South Andaman is the nearest one from the state head quarters Port Blair.

Mount Harriet national park is an area of exceptional natural beauty and is one of Andaman's most accessible rainforests. It is located in South Andaman Island, just 40 km from Port Blair by road and much less when it access through the boat via bamboo flat. This area falling under Ferrargunj Tehsil of South Andaman District and controlled by the Wildlife Division I of the Department of Environment and Forests.. The hill ranges under the National Park falls in the eastern part of South Andaman Island and lies between following geo-coordinates of Latitude: 11° 42' 05'' and 11° 51' 45'' N Longitude: 92° 43' 41'' and 92° 48' 13'' E The hills are steeper on the east than on the west. Some of the principal peaks are Mt.Koyob (459m), Mt. Hext (425m), Mt. Harriet (422m), Mt. Goodridge (376m) and Mt. Carpenter (346m). The Mount Harriet range contains some of the highest peaks in the Andaman and Nicobar group of Islands and is covered with dense evergreen and semi- evergreen forest of outstanding natural beauty. These forests are in pristine conditions and have been largely untouched. They harbor a rich diversity of faunal and floral life.

The National Park is named following the name of one of the main peaks in the hill range, the Mt. Harriet which in turn is named after Mrs. Harriet. wife of Col. R.C.Tytler who was primarily responsible for clearance of Mont Harriet Ridge area for the construction of summerhouse of the British Chief Commissioner.

Though the area of the National Park is 46.62sq.km, the total forest area of South Andaman is 2672.94 sq.km, which includes 2656.75sq.km as reserved forest and 111.66 sq km as Protected area. There are recommendations, State Wildlife advisory board, Andaman & Nicobar Islands to increase the area of the park. The proposed extended area would not only include Mt. Harriet peak itself, which was left out, but would also include and integrate the terrestrial and the Marine ecosystem, on the southern and eastern side of the National Park. The total area of this park comprises only Reserve forest area and no forestry operations carried out in the past has kept it in pristine condition with a composition of dense evergreen and semi-evergreen forests. The working plans of South Andaman division cover the park area also. But since it contains some of the highest peaks in South Andamans it was kept as part of protection/conservation circle.

The boundary encompasses a very compact area ranging from 460m at Mt. Koyob to the sea level on the Eastern coast. The area is completely undulating having a number of perennial and seasonal streams. On the Western side, its boundary is completely demarcated by hill ranges starting from Mt. Carpenter to Mt Warden.

In addition to rich biodiversity value, the National Park provides ample opportunities which may have significant impact on the socio-economy of the people living in the vicinity of the National park.

- a) The existence of very dense forest, covering almost entire area of the National park, provides a variety of tangible and intangible benefits.
- b) The unique biodiversity is a source of attraction to tourist, scientist, researchers, environmentalist and trekkers.

- c) It has high potential for ecotourism which will be of immense significance for the economic upliftment of the communities living around.

Absence of alternative livelihoods and financial/social incentives for resource dependent communities around biodiversity-rich areas; have been identified as one of the major causes of threats to biodiversity. Importance of local people in the management of the park, their involvement in awareness creation and protection activities of the park cannot be over emphasised. Hence, in the approved Management plan of MHNP includes the following also as the objectives along with the biodiversity conservation protection measures.

1. Develop appropriate ecodevelopment plans to seek participation of local people
2. Promote ecotourism
3. Create awareness among masses

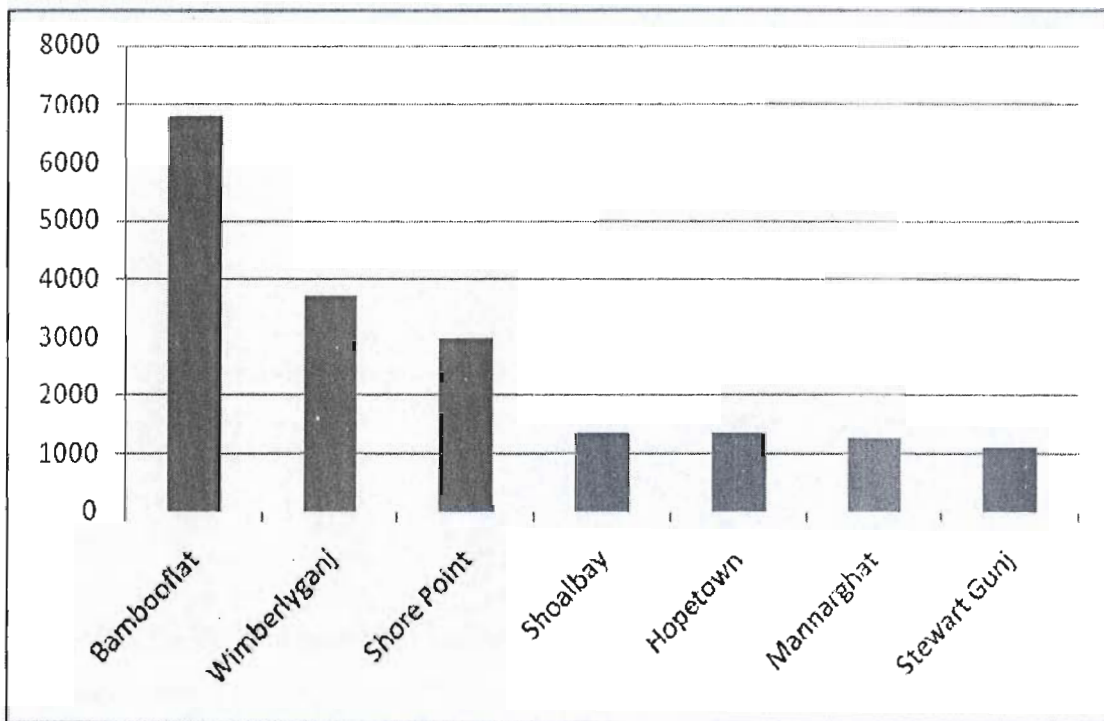
Andaman Administration has notified the EDC resolution in 2011. The Notification clearly states 'for the purpose of protection and development of wildlife Protected Areas Ecodevelopment Committee (EDC) shall be constituted to reduce the negative impacts of local people on biodiversity as well as negative impacts of Protected Area on the livelihood of the local people and to increase opportunities for local participation in Protected Area management.



3. PEOPLE AROUND MT. HARRIET NATIONAL PARK

3.1 Social and demographic structure of the society

Colonisation of the areas around Mount Harriet also started immediately after the initial settlement in Port Blair area. However population remained limited till recently. As Mount Harriet situated on the north side of the Phoenix Bay harbor very close it was very easy to access. Due to this proximity to Port Blair, presence of three jetties such as Bambooflat, Panighat and Hope town, people of bamboo flat always lived integrated with Port Blair and involved in service sector jobs in Port Blair. Hence their dependency to the forest around is not heavy.



Population of the panchayats around the National Park

Service sector dominate in the occupational structure of the people in the villages surrounding the National Park. As the regular employment within these villages is less, majority

goes to Port Blair for either regular service employment with Government or private sector or daily wage employments. Although MHNP is a known tourist destination, lack of logistic facilities and absence of proper packaging from tourism point of view much reduced tourist visits in the area. Hence, the tourism industry has not made a significant impact on these villages.

Following are the major socio-economic activities observed in the area on an importance gradient.

1. Service sector jobs in Government offices and private sector.
2. Horticulture and Agriculture: Activities related to horticultural plantations and paddy cultivation, as well as allied activities.
3. Fisheries: Activities related to capture and culture fisheries in marine and inland waters
4. Forestry: Activities related to extraction, harvesting and regeneration of Non Timber Forest Products.
5. Manufacturing: activities related to both formal and house hold manufacturing.
6. Construction: Activities related to the building of tenements for domestic, commercial or official purposes.
7. Transport and shipping: Activities related to the operation and maintenance of transport vehicles and infrastructure.
8. Tourism: Activities related to the operation and maintenance of tourist infrastructure and facilities.



3.2. Farming in the villages around the National Park

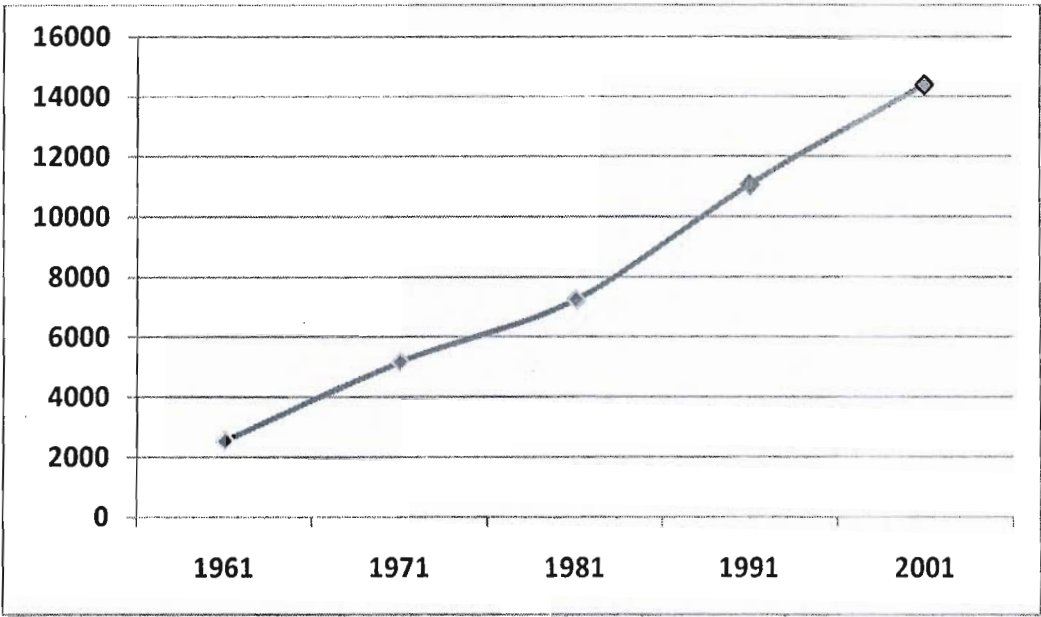
Agriculture and Horticultural activities are one of the major source of income for the settlers apart from the employment in government offices. Coconut and Areca nut plantations are most common horticultural crops. Though this agriculturists and their activities are not depended on the National Park, as mentioned earlier, their activities such as high usage of pesticides can affect the biodiversity of forests and mangroves around them on a long run. The approach to handle this issue shall be promotion of organic agriculture.

3.3. Stake holders of MHNP.

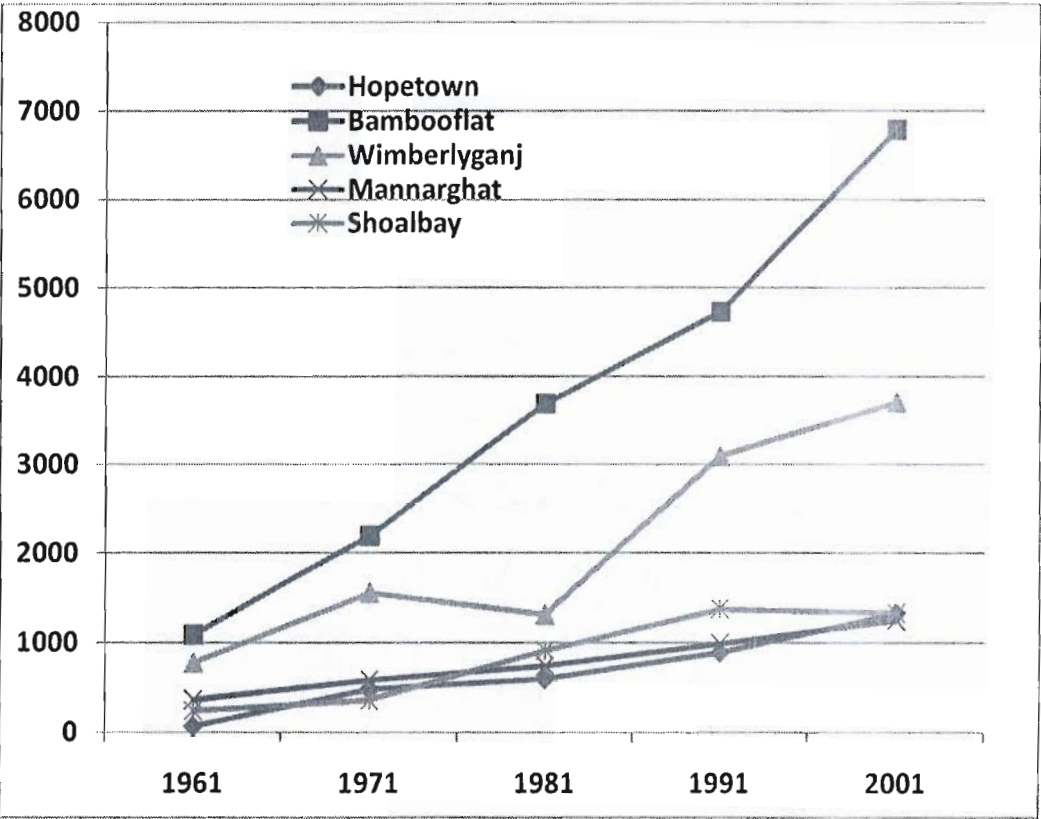
- Forest Department: The major stake lies with Department of Environment and Forests as it is the legal custodian of the Mt. Harriet Park area and are duty bound to conserve the biodiversity therein.
- Farmers : Farmers around the National Park is indirectly connected with the part for water and other ecosystem services.
- Shopowners of the nearby villages and townships
- NTFP collectors: In Shoal bay and Mannar Ghat panchayat some people are involved in the collection of NTFP for their livelihood.
- Jeep owners and drivers of Bamboo flat- Hopetown panchayats
- Fishermen: Regular fishermen settled in Hope Town area.

3.4. General observations.

1. At present all tourism related activities in Mt. Harriet are operated through Port Blair based tour operators entirely..
2. MHNP do not directly share the boundary with any of the revenue villages.
3. Due to the occupational structure of the village people and location of National Park, direct dependency of the people on Mount Harriet National Park is relatively less.
4. Tourist activities are not linked with conservation education as of now; if it is done it would be ideal for a place like MHNP as it will influence both the local people and tourists positively.
5. Local people feel that they are not much benefited and hence they are not much enthusiastic/ or proud regarding the existence of National Park in their area.
6. Local people are also not against the conservation/ protection hence doesn't keep any ill will against National Park.
7. Employment opportunities are generally low in this area and unemployment is on the raise.
8. Of the seven panchayats surrounding the National Park Bamboo flat, Wimberly Ganj and Shore Point have very high population and population growth primarily by immigration from other areas and the people at large are not directly interested in any issues with Mount Harriet National Park. Whereas panchayats such as Shoalbay, Mannar Ghat and Hopetown, people whose number and growth rate is relatively limited have expressed some concern about National Park



Population growth of five surrounding pachayats together in five decades



Population growth of five surrounding panchayats separately in five decades

4. METHODS ADOPTED

4.1. The Approach

The approach we have adopted in this exercise was that all the activities suggested should be within the frame work of the Wildlife Protection Act 1972 and National Wildlife Action Plan 2002-2016 and also the approved Management Plan of MHNP. Success of the participatory regime of conservation depends on the ability of planners to understand the complex issues involved in conservation and to integrate these in the overall planning process of the country.

In this case, MHNP do not share the boundary with any of the adjoining pachayats. Very few people go inside the nearby forest for any routine activities. Hence the National Park not directly affected by the people very much at the same time people also do not feel any special concerns with the National Park. In this kind of special setting, developing a participatory conservation programme and developing goodwill of the people and contribute to their well being is a challenge by itself.

The challenge is to identify the needy ones and meaningfully involve the local communities, in the planning and implementation of conservation and development programmes. In this context, tourism emerge as a good economic possibility but ofcourse it should be with limited activities in the allowed locations with the help of forest and other concerned departments.. Access should be restricted to permitted entry only and activities should be monitored and regulated. Because, the forest is the home of unique biodiversity and includes areas for bird nesting, feeding or resting, habitat for wild animals such as spotted deer, reptiles and amphibians.

After a series of individual and group discussion, stake holder meetings and also dependency analysis a set of feasible Eco Development Committees (EDC) are suggested with

the areas from where members can join. The EDCs have to be formed facilitated and supported by DoEF. EDC has to deliberate on all the microplans and decide the course of action. Considering the potentials available in the areas and also based on the initial discussion with the stakeholders and the feasibility of the options, a set of activities are suggested as microplan for the Ecodevelopment.

4.2 The Process

As mentioned earlier, the National Park do not share any boundary with the villages and very few local people go in the National Park in connection with regular activities. It does not feature anywhere in their developmental aspirations and takes MHNP away from their daily mindscape. As they were not much concerned, they were least interested even in the discussion about it. First task before us was to make people interested in it, sighting the potentials of ecotourism and possible livelihood options and economic returns. Even then it was only some panchayats such as Shoal Bay, Mannar Ghat and Hope Town, we could get some positive feed backs.

However we have conducted nearly seventy group discussions, three multi stakeholders meetings and interacted with hundreds of people belongs to different stake holder groups. Basic points of discussions and microplans were picked up in the personal meetings and later put in the PRA exercises and discussed. Following are the steps we followed.

1. Consultation meetings with the selected members of the stakeholders.
2. Neighbor-hood level consultation meetings
3. Sittings with the NGO members and Professional Organisations in the area
4. Dependency Analysis as discussion in the multistakeholder meetings

5. GUIDING PRINCIPLE

Proximity to the Port Blair and recent restrictions to tourist travel in ATR led to an increase in the tourist inflow to Mt. Harriet National Park Evergreen forests in the hilly mountainous terrain and the opportunity to have a birds eye view of the Andaman sea and other nearby islands including Ritchies Archipelago from the peaks makes this location with high potential for ecotourism This is the right place to accommodate and promote the high value tourism as suggested by Professor Shekhar Singh in his Commission Report on the Status of Forests and Other Allied Matters in Andaman and Nicobar Islands. Special interest tourist such as the one who look for unique and rich insular tropical biodiversity of rain forest of Andaman Islands can be particularly targeted.

Considering the lack of heavy dependency of the local people on National Park and considerable unemployment in the area, the economic development of the area and people is the key issue here. And the will be the mode that acceptable to them in whatever the activities demand their involvement. Given the potentials of the national park for attracting ecotourists, there is a good possibility to develop ecotourism with necessary caution facilitated through EDCs under the broad frame work of an Ecodevelopment Programme. Hence Eco tourism is the most practical key element which can make a significant change and hence that we have taken this as the major guiding principle to discuss and plan the micro plans for Ecodevelopment programme in the area.

Ecotourism is defined as the 'environmentally responsible travel and visitation to relatively undisturbed natural areas in order to enjoy and appreciate nature (and any

accompanying cultural features, both past and present) that promotes conservation, has low visitor impact and provides for beneficially active socio-economic involvement of local population'. Ecotourism is an activity that helps in understanding and appreciation of the importance of conservation, while simultaneously, involving the local communities and improving their economy, through promotion of tourism. It is an enlightening nature travel experience that contributes to the conservation of the ecosystem, while respecting the integrity of host communities. Conservation and tourist interests will work together in Ecotourism. It involves traveling to relatively undisturbed natural areas with specified objective of studying, admiring and enjoying the scenery and its wild plants and animals as well as any existing cultural aspects found in these areas. In the context of MHNP, ecotourism has the potential of bringing the local people more towards the National Park and its management.

Conservation of natural environment can effectively supported by rural people strengthening their livelihood options which are complementary to the conservation objectives. For the forest protection related works, as far as possible, service of the local people shall be used by the forest department through the duly constituted EDC. For tourism related works also local people shall be given priority through the duly constituted EDC as far as possible. Developing sustainable livelihood and conflict resolution is a long term process and the EDC should be empowered to do that.

6. SCOPE OF ECOTOURISM IN MHNP

With the exceptional natural beauty of MHNP and its unique rain forest vegetation and fauna, it provides an excellent opportunity for promotion of ecotourism and also will help in creation of awareness among local people to achieve the conservation objectives. This responsible tourism can also be the most potent alternative source of income for the people around the national park. Ecotourism, in fact, is the responsible travel to natural areas that conserves the environment and improves the well-being of local people. This mode of tourism is low impact, educational, and conserves the environment while directly benefiting the economic development of local communities. Ecotourism gives tourists and stakeholders an opportunity to gain firsthand experience with the natural environment. In ecotourism there is an expectation of gratification measured in appreciation and education, not in thrill seeking of physical achievement. So for MHNP the primary guiding principle for the development of an Ecodevelopment Plan should be in line of Ecotourism. Moreover, if properly communicated, it provides the best scope for the promotion of high value – low volume tourism which is the requirement of the natural places like this.

Analysis of tourist flow for a decade in Andaman, shows only seven percent of this were foreign tourists and 93 percent are domestic. Data from Mt. Harriet is also not different. In recent years the increased inflow of tourists particularly from the domestic sector have been observed. This has led to over use of space and resources and disturbance and serious management problems. As per the guideline of Ministry of Environment and Forests, in case of any conflict between tourism and conservation interests of Protected Area, the paradigm for decision must be that tourism exists for the parks and not parks for tourism, on that tourism demands must be subservient to and in consonance with the conservation interests of PA and all wildlife. While

revenue earned from tourism can help the management of the PA and add to the alternative livelihood of the local people, but maximization of income must never become the main goal of tourism, which should remain essentially to impart education and respect for nature. Conservation of the biodiversity and the natural resources of the MHNP area should be given the highest importance in the activities permitted and carried out in the region.

Eco - Tourism Potentials

Ever since the area has been declared as a National Park, only those activities have been undertaken which improve the habitat of wild plants and animals. Some wilderness trails have been opened so that this Park, which is easily accessible from Port Blair, can be developed into an eco-tourism zone to bring more awareness to the people visiting the park.

Nature Walks Several walking tracks are available and made in the National Park and surrounding forests which can take tourists through deep rainforest tracks and glades with exquisite view of the landscape and tropical biodiversity.

Bird watching: With over 100 species recorded, the entire National Park is great for bird watchers, but the trek to Kala pather and the suggested nature trails will be a treat for all those who love birds..

Nature Interpretation Centres :Nature education can be best provided with the real objects. Good nature education and interpretation facilities can only enrich the experience of the visitor but also win support for the park and nature conservation. Multiple opportunities for nature education and enjoyment, facilities like guided and un-guided nature trails, information centers and proper signage need to be developed. Use of local material and involvement of local people to the extent possible is desirable to boost economy of people residing near the park.

7. ECODEVELOPMENT OPTIONS

7.1.Ecodevelopment Committees

Eco-development is based on the organisation of a new institutional structure at the village level: the Eco-development Committee (EDC) is made up of inhabitants of the village, under the supervision of the Forest Department. A micro-plan with integrated development objectives is set up and validated by the Committee using participatory survey techniques. Activity projects or needs are therefore defined per EDCs suggested and receive funding for their implementation

7.2 Dependency and criteria adopted

At the bottom of the participatory conservation is the idea of a shared interest between the authorities and local communities for the protection of the forest and wildlife. This interest can be based only on the attachment of communities to their environment, an ideal that is not very much realistic in a context of MHNP at present. Based on the verifications of demographic data available, group discussions and discussions in the various stakeholder consultation meetings, level of the dependency of the people on MHNP is evaluated. As there is no obligatory dependency to the National Park, the approach taken here is to identify the most needy people and the people on a long run work for conservation of nature and wildlife. The unemployed youth of the villages are identified as the most important target group with respect to this criteria. The next task was the identification of the most significant areas where an EDC is relevant and which can be initiated and successfully run. For this the criteria used was the nearness from the National Park, Need for an alternative income, relative closeness with the natural resources and also the acceptability of idea when it is discussed. Potentials of Ecodevelopment activities possible in area also was one of the criteria for selection and discussion. Considering these

criteria, three panchayats were short listed and suggested here as the locations where EDCs can be initiated among the unemployed youths. The three panchayats short listed are

1. **Hopetown** : Hope town, the entry point to Mount Harriet National Park has immense potential for nature tourism and bird watching. The Rain forest Wilderness, Interpretation Centre, Watch Tower, and the serene atmosphere attract the visitors for all the time.
2. **Mannar Ghat** : Mannar Ghat panchayat includes villages such as Mannar Ghat, Malapuram, Wright Myo and Kalatang. Majority of the people are Malayalam speaking Mapilah communities.
3. **Shoal Bay** : Shoal Bay Panchayat involves villages from Shoal Bay 8 to 19 from south to North. Local population comprises of Tamil, Bengali settlers and Ranchi labourers who work in the forest department activities, engaged in the agriculture horticulture activities, and construction activities in the region. Settlers from East Bengal has come here as the first settlement in 1949. By 1961 population has grown from 85 to 222 and 1326 by 2001.

During the discussions in the villages it was well evident that villagers and even the elected panchayat members knew very little about EDCs. It is only through constant effort of the forest department in a long run the spirit of EDC can become real and it will become representative meaningful structure. As we have seen, relation between Forest Department employees and local communities were cordial. The success of eco-development depends undoubtedly on the ability of local communities to understand the potential of this idea and embrace it.

1. Mt. Warden
2. Mt. Hext
3. Mt. Keyod
4. Mt. Goodridge
5. Mt. Carpenter



Suggested EDC

● Moly Bay

Shoal Bay

1

2

3

Wright Myo



Mannarghat

4

● Madhuban (New)

5

Wimberly Gunj

● Madhuban (Old)

Proposed NP

Shore Point

● Mount Harriet

Bambooflat

● Range Office

Hope Town

3

N

5km

Existing NP

8. MICROPLANNING

Discussion about EDCs were taken up in these area and people took up with enthusiasm in the group meetings and multi stake holder meetings. The suggestions on the ecocodevelopment activities possible in these locations are discussed and consolidated as the preliminary microplan of these areas which need to be discussed in the duly constituted EDC in these panchayats and approved before implementation.

There are certain activities which can be taken up by all the three EDCs as follows.

- Forest protection works can be routed through EDCs which will give them a constant earning.
- The second activity is linked to tourism in the National Park. The economic impact of this activity now is rather limited and varied because of the low tourist visit of Mount Harriet. It is very limited compared to the nearby Mahatma Gandhi Marine National park. But however in the present context a little better planning and proper communication can bring very large number of tourists which will be beneficial to all EDCs and other local people.
- The EDC can also conduct tea stalls, cafeteria etc at strategic locations such as North Bay and Bambooflat, Wright Myo, Shoal Bay etc for tourists. The EDC can own boats and try to sail tourists through the creeks on the western side of the national park.
- EDC can build, own and run Eco lodges
- EDC members can build tree-huts to house tourists.

- Opening of small cottage industries (pickle making, handicrafts and artefacts with MHNP Branding)
- More advanced activities such as the financing of a poultry farm managed by about 15 people,
- Cooperative Driver groups for transporting people between the tourist locations
- Areas around the Mt. Harriet has the potential to offer a package of two to three days for the tourists with different experiences. For this the different EDCs should work together with Forest department. A variety of destinations, accommodation and activities can be planned to suit the taste of the visitors. Guided trips by boat, non-mechanized vehicle, on foot with interpretation of the local history, culture and biodiversity can also be planned.

However there are some site specific programmes and possibilities. The best would be different EDCs work together to make complementary programme and market it together and take synergistic advantage. Here are some site specific potentials and issues.

8.1 EDC 1 – Hope town

Hopetown has the potential to be the most sought after tourist destination in Andamans. As entry point of Mount Harriet, it has the natural capacity to attract nature based tourism activity. Many historical and archeological sites are close by and all these can be connected to a package to offer. . Apart from the natural environment, it has the Aqueduct which has archaeological significance, a sea beach at North Bay which is already attracting lot of visitors, historical locations such as the assassination of Lord Myo, Ruins of Chief Commissioner's Bungalow, Chunna Bhatta (Kitchen Midden) and so on

Rain Forest Interpretation Centre;

Mount Harriet is the right place to develop a rain Forest Interpretation Centre. The best available most accessible Insular Rain forest in the Andaman is in Mount Harriet. More than 100 species of Islands unique avifauna is visible there. An Interpretive display to learn about the national park's flora and fauna, with a large number of emergent tropical trees, flowering plants and birds will attract all the one who love nature. The typical functioning ecosystem of Tropical Rain forest can be explained there with trails, exhibits and a well designed Interpretation Centre. Development of such an Interpretation centre with the real forest outside will attract the high end tourists there.

There can be many associate possibilities along with the Interpretation centre such as

Canopy Walk Way : There is already a proposal and programme in place with Forest department for this facility. The tourists can take a stroll on the walk, which goes over the top of the rainforest canopy. It provides magnificent views over the rainforest and Andaman sea up to Ritchie's Archipelago on clear days.

Shop & information centre: The National Parks & Wildlife Service information centre with brochures, advice, books, DVDs, gifts and souvenirs could be put on sale.

Café: for breakfast, lunch, coffee and snacks for day time visitors.

Discovery Tours: National Parks & Wildlife Service run fun and educational walks, talks and tours during school holidays

Glimpses of history:

Mount Harriet region is quite rich in past history. Ruins of Chief Commissioner's Bungalow, Cannon Point and Old Wells used by British provide a glimpse into past history is the ones

which well associated with British in the Mount Harriet peak. Others down the hills such as the Aquaduct and the place of Lord Myo's assassination also attract tourists..

Aquaduct in the Panighat : Panighat, situated at about 4 Km from Bambooflat Jetty is a small settlement on the foothills of Mount Harriet . The place got its name *Panighat* owing to the Water Wisdom present in the form of *Aqueduct* installed by the British Govt during their ruling in the Andaman & Nicobar Islands. Aqueduct, used for transporting water from a small embankment at the foot of Mount Harriet to Panighat Jetty comprise of approx 150 m long, 60 cm wide and 45 cm deep channel (*Aqueduct*) raised from the surrounding by means of arched supporting structure made of red bricks and lime mortar; a trademark of the British construction in these islands. The height of the arched structure near the Panighat Jetty measures about 4 m above the ground. But now this historical structure is in ruins after it suffered severe damages in two earth quakes in history in 1941 and 2004. However, there is scope for developing this monument as the tourist attraction along with the Mount Harriet National park and has significant potential.

Lord Myo's Memorial: Very close to the Aquaduct in the Panighat area is the location where the then Viceroy of British India, Lord Mayo was assassinated by Sher Ali Khan on 8th February 1872. This point also is of historical importance.

Nature Walk/ Trekking: Though the Park has great potential for nature trekking due to hilly undulating terrain, great scenic beauty and rich flora and fauna, there are not well maintained and guided nature trails. There is one nature trail from Hope Town to Mount Harriet Ridge and another from Mount Harriet Ridge to Kala Pathar, which are frequently used by tourists. Tourists do not use other existing trails such as from Mount Harriet Ridge to Mudhuban Beach

The following nature trails will be developed (and maintained) for the purpose of eco tourism by the EDCs.

- 1) Hope Town to Mount Harriet Ridge (2km)
- 2) Mount Harriet to Madhuban Beach (14 km)
- 3) Mount Harriet Ridge, Kala Pathar, Nimbu Bagicha (2km)

A team of unemployed youth can be given training to identify trees, birds and butterflies with scientific knowledge. They can also be given training about the conservation issues of forests which they can convey to the tourists reaching the National Park. The training can be taken with the help of scientific research institutions such as SACON, CARI, BSI and ZSI. They can be certified and recognized as Nature Interpretation Guides of the MHNP every trekking permitted in the National Park should compulsorily be accompanied and interpreted by these certified guides

The entry point of Mt. Harriet should be kept free from visitors' vehicles in order to enhance the visitor experience of quiet enjoyment of the landscape, and avoid disturbance and also to minimise the 'carbon footprint'. This policy also provides local employment for those engaged in portage.

Visitors reach the National Park by vehicle can alight at Chunna Bhatta where accommodation can be made available in eco-lodges managed by EDC. Parking area should be developed and managed by EDC in Chunna butta

Those wishing to visit other parts of the National Park may travel between destinations by EDC vehicles.

A variety of accommodation can be developed, notably eco-lodges, local guest houses and home-stays, all of which can be run by members of EDCs. A centralised on-line booking system also can be developed.

Tea/curio shops, providing drinks, snacks, picture postcards and prints of the local natural/cultural heritage, maps, guide books and local handicrafts, can be developed in Mount Harriet, Chnnabutta, and many other places located strategically between destinations.

However there are hurdles to handle now for many developmental activities. One such problem is the connectivity from Port Blair. Since tourists are presently visiting Hope Town by boat (Vehicle ferry service from Chatham) via Bambooflat Jetty, it takes lot of time and effort to board the Vehicle ferry from Chatham to Bambooflat and then reach Hope Town by road. Further the local population of Hope Town and Panighat area does not get any benefit out of such visits by tourists. They come and go on vehicles hired from Port Blair.

It is suggested that direct passenger boat service from Phoenix Bay harbour to Hope Town/Panighat jetty should be provided for tourists. This will significantly reduce the journey time for the tourists and the tour operator need not ferry their vehicle.

Further the road after Panighat Chunna Bhatta area to North Bay is presently in bad shape. Due to this movement along this road is presently not possible. If this road is repaired and made motorable, visit to North Bay could also be clubbed with Mt Harriet. Even cycling or strolling along the sea shore road will be nice experience for the tourists.

8.2. EDC2- Mannar Ghat

Area under this panchayat has both hilly terrain and farm land people are involved in both paddy cultivation and horticultural crops. Presence of one of the most exquisite mangrove creek make the areas tourism potential very high. If properly planned, advertised and executed, this creek alone can attract large number of high end tourist to this location. At a later stage there is provision to start some house boat also in this area.

The Ecodevelopment activities specific to this place suggested are the following.

Short and long Creek tourism :

- From Wright Myo to Shoal Bay
- From Wright Myo upto Baratang

Nature walk/ Trekking

- 1) Trekking Wrightmyo, Mount Googridge, Mount, Koyob.
- 2) Madhuban Beach to Wrightmyo and Madhuban to mannarghat (8km)
- 3) Mangrove Walk

Mangrove Ecosystem Interpretation Centre

This is the right place to set up one good Mangrove Ecosystem Interpretation centre aimed at the International and domestic tourists. All the unique ecological properties and ecosystem services of Mangrove ecosystem can be exhibited through many interactive displays there. Extraordinary biodiversity of the Mangroves can also be explained, exhibited and interpreted there. This will be an added attraction for the people to reach this destination and will add to the livelihood of the people.

8.3 EDC3 - Shoal Bay

In Shoal bay panchayat, villages are juxtaposed to tropical rain forests and mangrove forests, they are very close to nature. People are involved in rice cultivation, horticultural plantation rearing of milch animals and fishing. Illegal sand mining, reduction in agricultural productivity and unemployment are their major problem. Microplan of ecodevelopment activities suggested in addition to the common ones suggested above in the region include the following.

Nature trek and Trekking:

- 1) Shoal Bay 15- to Shoal Bay 19
- 2) Shoal Bay to Mirchi Dera (6km)
- 3) Shoal Bay, Mount Warden, Mount Hext and Shoal Bay No.2.

Bird-watching: The Park is very important destination for bird-watchers. Out of 12 endemic species of endemic birds known from Andaman, 11 occur in the Park itself. Species like Andaman Crake. Andaman Treepie and Andaman Wood Pigeon, which are not common elsewhere, are frequently seen here.

Short distance Creek cruise : from Shoal Bay

Stay inside forest and tenting

Other livelihood options:

In the stakeholders meetings people expressed their interests in starting small cottage industry units to produce material such as Bio-plates out of Areca Nut leafs, Pickle making specially and

fish pickle with MHNP branding. Also many were interested in taking up Goat rearing and medicinal plant farming as other livelihood options.

Organic Farming: Due to the increasing prices of fertilizers and pesticides people expressed their willingness to go for organic farming but they expect financial and logistical support, from the authorities.

9. BENCHMARKS AND SUCCESS INDICATORS

Taking the present scenario as the basic and starting benchmark we need to set marks to identifiable goals as success indicators of the programmes to be initiated. These indicators should be social, economical and ecological in nature. Quantified information on the following may work as success indicators of this programme

- Improved employment opportunities to local people
- Improved management practices
- Community assets created
- Extent of participatory management in decisions achieved.
- Improved benefits sharing arrangement among PA stake holders
- Reduction in the negative impacts to PA.
- Empowering local communities.
- Creation and functioning of revolving fund by the EDCs
- Enhanced social standing
- Improved relation between park and villagers
- Rise in income hence the standard of living of the local people

10. EMPOWERMENT WITH AWARENESS, CAPACITY BUILDING

Awareness creation is central to the success of Ecodevelopment programme. For which we need to train all EDC members with the knowledge and skills required for the activities. Also need to develop a list of Dos and Don'ts with regard to area, educational film shows on threat to the environment, and descriptions of endangered species. Following capacity building programmes are suggested for skill development and empowerment of local communities.

- Cultivation of vegetables and/or fruit trees
- Bee keeping for honey production
- Poultry
- Nurseries for orchids, flowers, bamboo, medicinal plants, trees
- Handicrafts
- Revolving fund for self-help groups
- Training in administration and management skills (e.g. managing and minuting meetings, consensus building, maintaining accounts, preparing project proposals, managing projects)
- Sensitization in biodiversity conservation and PA management
- Preparation of People's Biodiversity Register
- Special training should be given for unemployed and educated youths as Nature Interpretation guides for explaining the details about the conservation of forest biodiversity, natural resources and natural themes and it can be done with the help of Scientific institutions. Certified guides can work as the interpreters for the tourists. The training programme may include atleast the following components.

- a) Identification of common and important species of flora and fauna

Eg: Birds, Snake, Mammals, Trees, Orchids, Medicinal Plants, Butterflies etc.

- b) Forest and Wildlife laws, rules and regulations
 - c) Salient features of flora and fauna of Andaman & Nicobar Islands
 - d) Fragile nature of Islands Ecosystem
 - e) Dos and don'ts for the visitors in the Park
 - f) First Aid
 - g) Personal hygiene
- Women Self help groups and Women education programmes: Development and strengthening of women self help groups and women education programmes through them shall be conducted
 - Nature clubs for children: Specific nature clubs can be developed for the local children associated with EDCs. Such nature clubs should conduct programmes to develop them to responsible and conservation oriented citizens.

11. CONCLUDING REMARKS

Ecodevelopment is not a onetime process. It works with site specific packages of measures which has to be adaptively modified according to the time and emerging opportunities in the respective location with people's participation. The suggestions given here as the preliminary microplans are to be presented to the duly constituted EDCs and the original micro plans should develop for the implementation. Eco development micro plan is not a rigid document; it is a functional plan of action which will get modified as and when required by the duly powered EDCs with the consensus of its promoter – the Department of Environment and Forests.

Annexure I. List of Local community members actively participated in individual and group discussions through out the period.

Sl No	Name of Participant	Address
1	Shiv Chander More	Pradhan Gram Panchayat Bambooflat
2	R Adinarayan	Pradhan, Gram Panchayat Shore Point
3	Smti Rasheeda Bibi	Pradhan, Gram Panchayat Hope Town
4	Chander Rao	Sarpanch, Gram Panchayat Hope Town
5	Nageshwar	Ward Member, Gram Panchayat Hope Town
6	Soma	Ward Member, Gram Panchayat Hope Town
7	Sukanto Ghosh	Gram Rozgar Sevak, Gram Panchayat Hope Town
8	Srinu	Panchayat, Gram Panchayat Hope Town
9	Aziz	Pradhan Gram Panchayat Stewart Gunj
10	Mohammed Ali	Panchayat Functionary, Gram Panchayat Stewart Gunj
11	A P Zabir	Pradhan, Gram Panchayat Mannar
12	Smti Jyoti Kindo	Pradhan, Gram Panchayat Wimbely Gunj
13	Deva	Zilla Parishad Member, Wimberly Gunj
14	Kutty	Up-Pradhan, Gram Panchayat Wimbely Gunj
15	Kumar	Pradhan, Gram Panchayat Shoal Bay
16	Smti S Padma	Samiti Member, Bambooflat Panchayat Samiti
17	Miss Maria Bibi	Zilla Parishad Member, Shore Point
18	Harish Narayan	Range Officer, Mannar Ghat Range
19	K Mohammed	Ranger, Mt Harriet Range
20	Ch Veera Swamy	Shore Point
21	S Sada Siva	Shore Point
22	Ch Ramprasad Rao	Shore Point
23	Somen Talukdar	Shore Point
24	S Duryodhana	Shore Point
25	Sambamurthi	Shore Point
26	Prakash Rao	Shore Point
27	Tulsi	Shore Point
28	T S Rao	Shore Point
29	Zubair Ahmed	Wimberly Gunj
30	Mohammed Yunus	Wimberly Gunj
31	Abdul Gafoor	Wimberly Gunj
32	Razak	Wimberly Gunj
33	Abhay Kumar	Wimberly Gunj
34	Debkumar Bhadra	
35	Dr T V R S Sharma	Scientist Emeritus
36	Samir Acharya	Port Blair
37	Sajan Gopalan	Port Blair
38	Bindu Sajan	Port Blair
39	Rishikesh Sinha	Port Blair

Annexure. II List of participants in the Stake holder's meeting conducted in Shoal Bay on 23.8.12

No	Name	Address	Job
1	M.Ebenezer	Shoal Bay	Social Worker
2	Anand Prakash	Shoal Bay	Pvt. Work
3	Jitan Haldar	Shoal Bay	
4	K.Semon	Shoal Bay	Surpanch
5	V.Devapraash	Shoal Bay	Pvt. Work
6	Johan Halko	Shoal Bay	Retired
7	Harain Biswas	Shoal Bay	P.R.I
8	Shanmugam	Shoal Bay	Pvt. Work
9	V.Arumugam	Shoal Bay	Pvt. Work
10	Virapputharan	Shoal Bay	C.P.V.T
11	Mertil Latha	Shoal Bay	C.P.V.T
12	Salamon	Shoal Bay	C.P.V.T
13	Damayanti	Shoal Bay	P.R.I member
14	Dharam Mashyhi	Shoal Bay	
15	Joseph Elda	Shoal Bay	
16	Samir Halder	Shoal Bay	
17	Madwari Ram	Shoal Bay	P.R.I member
18	James Tirkey	Shoal Bay	
19	Thanga Raj	Shoal Bay	
20	L Dev Raj	Shoal Bay	
21	Periyakaruppan	Shoal Bay	
22	Iesral	Shoal Bay	
23	Pramod Beck	Shoal Bay	P.S.M
24	Hissi Kamal Munda	Shoal Bay	P.R.Imember
25	Bhagyalaxmi	Shoal Bay	House Wife
26	Anjan	Shoal Bay	
27	A.R.Kumar	Shoal Bay	Pradhan
28	Harinarayan	Manarghat	Forest ranger
29	Jay Kumar	Wimberley gunj	Forest guard
30	Debkumar Bhadra	Shoal Bay	scientist



Mount Harriet entry point view



Nature Trekking of students – A view from trail to Kalapathar



Shoal Bay – Group discussions





Lord Myo's Memorial



Stake Holders Meeting at Wimber Gunj



Stake Holders Meeting at Bamboo Flat



Stake Holders Meeting at Shoal Bay



Wright Myo Mangrove Creek – A view from the entry point



Trek route in Shoal Bay

