



## Induced Commercial Growth and Deterioration of Little Andaman Island Environment – An Appraisal on Forest Policies

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### ABSTRACT

The Little Andaman Island of the Andaman archipelago is clothed in some of the finest virgin tropical evergreen forests and is a home to a large number of rare, endangered, even undocumented species of flora and fauna. Its unique climate, topography and coastal alignment have given birth to a canopy laden rainforest which is the homeland of bio-diversity. This dense rainforest is also the homeland to one of the most primitive tribe of the world – the Onge.

This resourceful island was sought after by the planners to make it economically more profitable. Of the total geographical area of 73,439 hectares nearly 95% of the area was notified as reserved forest which also included the tribal reserve area (50,323 hectares). Several attempts have been in process prior to independence and are continued till date. The British first set up the Forest Department here in 1883. The Andaman and Nicobar Forest Corporation has been set up during 1977. Loads of developmental policies in the name of timber harvesting, rehabilitation of mainlanders, plantation of exotic species, tourism, mining, and many more are undertaken ignoring the biotic equilibrium. Thus, the massive impact of these activities has been verified by the author through her field visits. Author through this paper have inferred upon a deterministic approach and have extended certain propositions such that this bio-diverse unit could be used as a laboratory for the future researchers.

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### 1. Introduction

Man in the era of scientific revolution has undermined through the propensities of the natural entities in and around him. He has trapped them in the name of 'resources'. Previously, this man who used to consider these natural entities as nature's blessing later on started utilising them in the name of natural resources.

The over demanding man sought after for making more profit in every such entities surrounding him. He locked the water, drilled the crust, blunted or sharpened the mounts whenever required and hoisted the flag of imperialism in every sphere. Amongst them the most maddening was the smashing of the forest for space as well as for the priceless forest products. After a prolonged period of extraction, a school of

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thought recognised that the long term effect would lead to a crisis and hence tagged it under the banner of sustainability. It was the effort of this cadre that established the acts and policies for conserving and managing these natural entities.

But in the several remotest parts of the world including India such management policies have been under taken to carry out the aforesaid activities. However, these policies cropped out with mismanagement or rather inapprehensive policy makings that are going to prove fatal in the long run. Similar such attempts have also been prescribed for a virgin tropical evergreen rainforest of the Little Andaman Island, located at the southern part of the Andaman District. Present author with a concise study within this island has portrayed the several fallacies undertaken in the name of forest development and management.

## 2. Objectives

Development strategies in the tag of globalisation are unknowingly portraying a label of despondency in the island's ecology. This paper is intended with crucial objectives.

Firstly, to outline the importance of the tropical evergreen rainforest of Little Andaman Island.

Secondly, to find out the effect of the implemented policies on the island's ecological balance.

Thirdly, to prognosticate the effect on the socio-cultural aspect on the indigenous community *Onges*, residing in this island in response to the induced forest policies.

Fourthly, to suggest some measures to preserve this serene island from the clutches of impractical economic policies.

## 3. Methodology

The present author after a precise survey on the present island, compiling the primary with the secondary data and relating with the past literatures have come through several disappointing observations.

## 4. Results and discussion

From this very paper the author is ardent enough to display the fallacies as been undertaken in the name of development and the imposed changes infused within a pristine culture.

### 4.1 Geographical account of Little Andaman Island

Little Andaman Island is the fifth largest island amongst the 348 islands that make up the Andaman and Nicobar archipelago and is the southernmost island of the Andaman District. Geographically, the

Little Andaman Island is situated between 10°30' to 10°54' North latitude and 92°21' to 92°37' East longitude. Hut Bay is the administrative centre of this island which is about 140 km from Port Blair, the capital town of the Union Territory and 150 km from Car Nicobar, the District Headquarters of Nicobar District. It is separated from the Great Andaman group

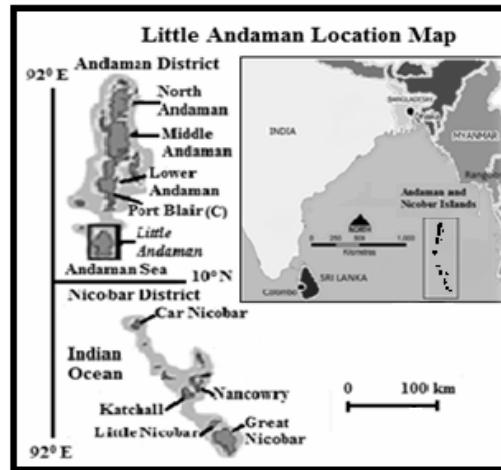


Fig. 1: Location of Little Andaman Island in respect to India and its neighbouring countries

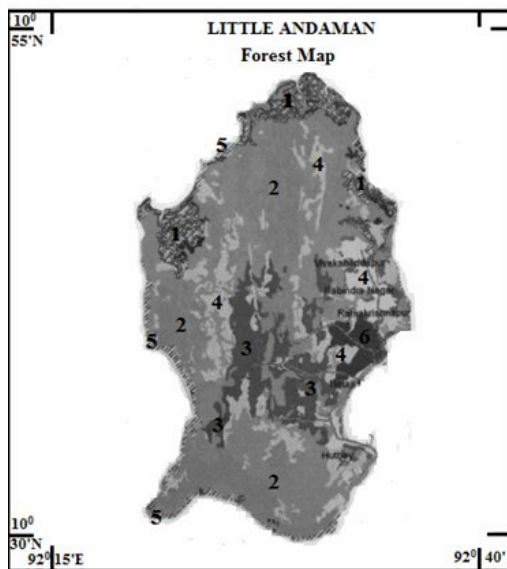
by the Duncan Passage and from the Nicobars by the 10° (Ten Degree) Channel. The Little Andaman Island covers an area of 732.8 square km. The Island is bound by the "Ten Degree Channel" in the South, South Brother Island in the north and the Bay of Bengal Sea in the east and west. Api Island is the nearest Island in the west coast of the Little Andaman Island. Other off-liners are South Sentinel and Brother Islands in the north-west and north-east respectively. The island has an elongated shape and spreads in north-south direction. Maximum length of the island is about 40 km and the maximum width is 25 km. The little Andaman Island was originally inhabited by the ethnic Onge community (a Palaeolithic Negroid tribe) from time immemorial (Portman, 1899).

Geologically, the Little Andaman Island is mainly of thick Eocene sediments deposited on pre-tertiary fine grey sandstone, shales and silt with intrusion of basic and ultra basic igneous rocks. The calcareous sand stones are interspersed with conglomerates and intercalated Serpentinities and Gabbre formations are found at higher elevations while the intertidal belts are characterized by recent coral reef formations. The soils are immature, loose in texture, poor in drainage and low in moisture retaining capacity. Sandy alluvial soil is found in creeks and sheltered coasts

while the richer grey, brown and red soils are found in the inland forests. The island possesses warm and humid, tropical climate with a temperature range of 20° to 32° Celsius and a mean relative humidity between 82 to 85% throughout the year. It receives rainfall twice a year, like the rest of Andamans, May to September from the South-west (Advancing) monsoon and October to December from the North-east (Retreating) monsoon. The average rainfall is 3000 to 3500 mm/year. Cyclones and thunderstorms are frequent during the prolonged wet season. Dry weather occurs from January to March.

#### 4.2 The canopied shelter

Many Scientists (Prain; Parkinson; Thothathri; Dagar and Bala Krishnan) have studied the Little Andaman,



**LEGEND:**  
 1. Mangrove  
 2. Andaman Evergreen  
 3. Giant Evergreen  
 4. Moist Deciduous  
 5. Littoral Forest  
 6. Red oil palm Plantation  
 — Roads

Fig. 2: Little Andaman Forest Type Map (Source: Working Plan for Little Andaman Forest Division (for the period from 2011-2021), Vol.-I and modified by the author).

but due to inaccessibility, many parts of the island remain unexplored.

The forest resource of the little Andaman Island possesses a very rich wealth of plant diversity and its flora is very akin to Myanmar and Malaysian islands.

The well-developed mangrove forests, littoral beach forests, dense moist evergreen rainforests and moist deciduous forests are the characteristics of its vegetation (Portman, 1899). The presence of well represented endemic elements, epiphytic orchids and ferns is also remarkable. Up to 1965, the forests of Little Andaman were almost in virgin condition and almost all the plant resources recorded by D. Prain in the earliest botanical expedition were available till then. In 1965 and afterwards, some areas in the eastern part of the island were used for several developmental activities. In 1975, the Little Andaman forests were taken up as a separate division with the establishment of Headquarters at Hut Bay. At present, the forest cover of this island is estimated to be about 706.49sq.km. As nearly 90% of the island is still under virgin expanse the typical rainforest character is still present (Working Plan for Little Andaman Forest Division, vol-I, prepared by C.V.C. Pandien).

#### 4.3 The chronology of fallacies

The Little Andaman Island is one of the administrative units of Andaman Districts within the revenue unit of South Andaman. Hut Bay is the only port town of Little Andaman. Due to the chronological decline in the population of the Onge tribal community, in the year 1957 Little Andaman Island was declared as a tribal reserve. The government team suggested that the development programme ignored the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR), which in 1957 accorded the status of a tribal reserve to the entire island of the Little Andaman Island (Working Plan for Little Andaman Forest Division, vol-I, prepared by C.V.C. Pandien).

#### 4.4 Rehabilitation programme: 1965

The entire Little Andaman Island was initially declared as "Tribal Reserve" in 1957 which was subsequently constituted into "Reserve Forest" during 1963. In fact, the forests of this island remained practically untouched and undisturbed till about 1964-65 when some suitable forest area were cleared under rehabilitation scheme for the settlement of refugees from East Pakistan (now Bangladesh) and repatriates from Ceylon (now Sri Lanka) and Burma (now Myanmar) and this continued till about the early years of 1970. Each refugee family was handed over with some 5 acres of land that were derived by clearing the tropical rainforest. Not only that, those lands were planted with coconut and betel nut trees which were alien amidst the rainforest lands. In the present day the refugees are gradually encroaching upon the forest lands and are increasing in number at a rapid

pace. The rehabilitation was carried on along a thin strip of the eastern coastal part of the island where they were allotted with 5 villages at Hut Bay, Netaji Nagar, Rabindranagar, Ramkrishnapuram, Vivekanandapur stretching for 28 kms from the southern tip of the island (Bose, 1994). All these rehabilitated settlements were developed at the expense of the forest areas, which were once the hunting grounds and gathering fields of the Onge.

With the recognition of the natural forestry and its potentialities in the year 1965 a Report was made by the Interdepartmental Team on Accelerated Development Programme for the Andaman and Nicobar Islands, Ministry of Rehabilitation, Government of India. This initiated the policy makers to seek into this island for extraction of economic gains.

#### **4.5 Introduction of Forest Management Division in Andaman: 1970**

Earlier three territorial forest divisions existed viz. North Andaman, Middle Andaman and South Andaman Forest Division; no separate plan was prepared for Little Andaman hence the forests of Little Andaman Island were covered under South Andaman Division with its headquarters at Hut Bay (working plan 1952-53 to 1967-68 prepared by Mr. Chengappa). Timber extraction began in this island in the year 1970. This was carried out in the name of Andaman Canopy Lifting Shelterwood System and was recognised of being a scientific system of forestry. In 1972 about 20,000 hectares (roughly 30 percent) of the island was denotified from its tribal reserve status in two stages. In the year 1974 assessment was done for the timber productivity of the forests of Little Andaman Island.

In the year 1975, Little Andaman Forest Division was created for the intensive management of its forests. At present it is one of the seven territorial divisions functioning under the Department of Environment and Forest, Government of India. Even the forest Division map of Little Andaman demarcates the Revenue area of the island in a peculiar rectangular shape that has been created due to the inaccessibility of the dense forest (Fig. 3).

On the establishment of the Andaman and Nicobar Islands Forests and Plantation Development Corporation Ltd. (ANIFPDCL) for the development of logging, marketing and raising of plantations in the year 1977, the harvestable forests were leased out to this Corporation. Since, 1977 the ANIFPDCL established an intensive field station in Little Andaman to expedite the forest exploitation programs by taking

over some 19,600 hectares of the forest in the name of timber harvesting. The Andaman administrators encouraged private traders to extract timber under ANIFPDCL supervision.

The most damning critique of forestry operations on the islands as a whole was contained in a 1983 report from the Department of Environment, Government of India. Environmental scientists S.C. Nair and Shanthi Nair had argued that the basic assumption of scientific forestry underlying the Andaman Canopy Lifting Shelterwood System was absolutely wrong. This forestry system they pointed out was leading to a preponderance of deciduous elements in the evergreen system that would eventually destroy the whole island ecosystem.

#### **4.6 Red Oil Palm Project under the ANIFPDCL: 1977**

The Andaman Forest Department, on the recommendations of a team of experts (from the Directorate of Oil Seeds Development, Ministry of Agriculture, Government of India, during their visit to the Islands in 1970) raised red oil palm (ROP) Plantation over an area of 160 hectares (ha) in the Little Andaman Island during 1975-76. The Government of India sanctioned (9.1.1979) a project for raising 2,400 ha of ROP Plantation in Little Andaman Island and entrusted the same to the ANIFPDCL for implementation. The project was to be extended to 5,000 ha in the second phase. Apart from palms raised in 1976 by the forest dept on 160 ha and subsequently taken over by the Corporation, new planting operations began in 1980-81. Under this programme the Corporation subsequently undertook raising plantation and till 1985-86 an area of 1,593 ha of ROP Plantation was raised mainly to produce Crude Palm Oil (Sekhsaria, 2003).

While, the Company was progressing with the implementation of the approved Project to achieve 2,400 ha of ROP Plantation, there was a sudden shift in the policy of the Government and a ban was imposed in January 1986 on further expansion of plantation of ROP in this Island. To examine this aspect a study was then entrusted to the Central Agricultural Research Institute (CARI), Port Blair in 1987. Even when the study was underway and the research recommendations had not yet been finalised, the matter was taken up by the Island Development Authority in its meeting held on 5<sup>th</sup> September 1993 and it was decided not to expand ROP Plantation in the Island any further.

The continuance of ban on clear-felling of forests imposed by Government of India (Govt. of India) in

1986 and confirmed by Island Development Authority in 1993 compelled that further plantation and expansion of the project to an area up to 5,000 ha could not be implemented. However, as per the approved corporate plan for the period from 1999-2000 to 2003-04, the Corporation has taken up the matter with Govt. of India for seeking permission to extend the plantation of ROP, so as to make it an economically viable project. The decision of the Govt. of India in this regard was awaited till March, 2003. In the later part of the decade the Corporation although was not permitted with the expansion but was asked

Now the Forest department after a failure have decided to cut off the planted area and return it back to the natural forest once again.

#### 4.7 Future prospects

Due to existing ban on clearing of natural forests for expanding areas under ROP and also suspension of extraction and sale of timber by the Corporation, there is very limited scope to expand the existing activities quantitatively. During the year 2011-12, the Corporation had to take an interest bearing loan of 11.00 crores from the Ministry of Environment and Forests to make up the shortfall in income to meet the urgent statutory and other obligatory payments to its employees.

The Corporation proposes to diversify its existing activities taking into consideration of the changing scenario where timber based activities may be adversely affected. The proposed new activities include tourism & allied activities, neo-forestry and allied activities, consultancy, research and training activities, and value addition and marketing of local products. At present, however, the message as to the future of the Corporation seems to be leading to natural death of the existing projects.

#### 4.8 Initiation of Little Andaman Forest Division: 2002

Again in 2002 a new Forest Division named "Little Andaman Forest Division" was created with headquarters at Hut Bay. The Little Andaman Forest Division comprised of 4 islands of the Andaman Islands in Table 1.

The reserved forest boundary on the eastern side has been demarcated with permanent concrete boundary pillars in two blocks i.e. Block –I pillar no. 0 to 387 covering periphery of Netaji nagar and Hut Bay villages and Block –II pillar no. 0 to 474 covering periphery of Rabindra Nagar, Ramakrishnapur and Vivekanandapur villages. The base concrete is yet to be provided to the boundary pillars. The forest area had been leased to the ANIFPDCL and handed over to them for management. The responsibility to maintain the forest boundary during the lease period lies with ANIFPDCL. Thereafter, the forest department the owner of the forestland will look after the management (Working Plan for Little Andaman Forest Division, vol-I, prepared by C.V.C. Pandien).

#### 4.10 Translocation of the primitive Onge community

Little Andaman is the homeland of the Onge community. Earlier, three distinct places were inhabited by this tribe and they were the Dugong

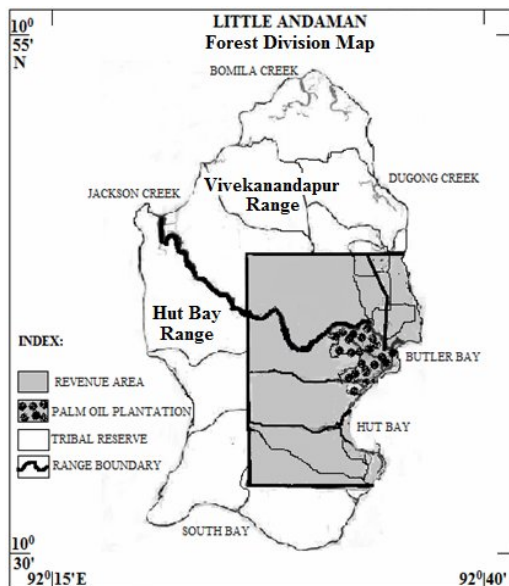


Fig. 3 : Little Andaman Forest Division Map (Source: Working Plan for Little Andaman Forest Division (for the period from 2011-2021), Vol.-I and modified by the author).

to merge with the forest division and carry out several activities to deal with the finance issues (35th Annual Report 2011-2012, ANIFPDCL).

This ROP was grown all over the forest area by cutting down the canopy and hence squeezing out the Onges of their hunting spots. In this plantation area the government hired labours from the mainland and out skirted the aboriginals allowing them to be at stake of the limited resources left out at mercy by the policy makers (Reddy and Sudersan). The optimum productive age of the ROP is thirty to thirty-five years after which yields are believed to decline i.e. by 2015, the productivity is assumed to be in its decline. Even the plantation at present are infected with diseases due to mismanagement and improper maintenance.

**Table 1:** The Little Andaman Forest Division

Name of Islands	Geographical area (in ha.)	Non-forest area (in ha.)	Reserved forest area (in ha.)	Tribal reserve area (in ha.)	Wildlife sanctuary (in ha.)
North Brother	75	-	75	-	75
South Brother	124	-	124	-	124
South Sentinel	161.2	-	161.2	-	161.2
Little Andaman	73439	3434	70005	50323	-
TOTAL	73799.2	3434	70365.2	50323*	360.2*

\* Included in the Reserved Forest Area

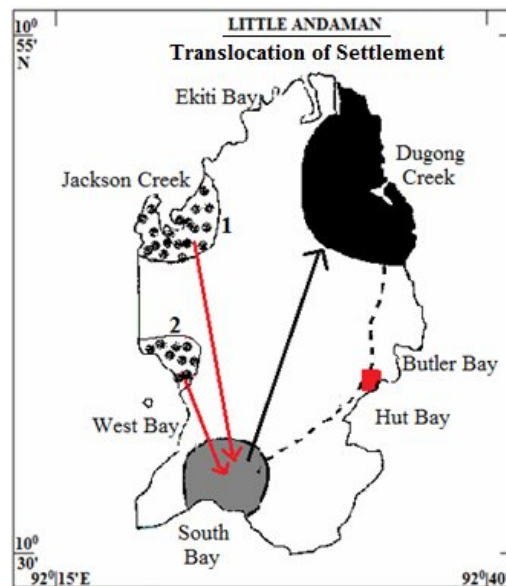
(Source: Working Plan for Little Andaman Forest Division (for the period from 2011-2021), Vol.-I).

Creek, Jackson Creek and South Bay within this particular island. Prompted partly by the changed situation in the aftermath of the colonisation of the Little Andaman Island and partly by the intension to do good to the Onge, the Government took the decision to settle the Onge at Dugong Creek in 1976-1977 and South Bay in 1980 (Mann, 1978).

Another treacherous impact on the habitat of the Onge was visualized after the tsunami hit this island on 26<sup>th</sup> December 2004. The tsunami affected the South Bay camp much more than the Dugong Creek due to its geographical location (Fig.4). Though they were successful enough in escaping the wrath of the nature with their rich oral tradition, the administration persuaded them to join the Onge of the Dugong Creek. However, the Onge of the South Bay had showed unwillingness to settle together with the Onge of the Dugong Creek (Haider and Kumar).

On the contrary, they wanted to be resettled near South Bay due to Topophilia – attachment to their traditional habitat where the spirits of their ancestors exist. Further the Onge of South Bay informed that for observing certain rites and rituals they require to go back to their traditional site where their ancestors are buried. They bear a higher degree of strong community life and greater organic relationship with nature where the individual is seen to be a part of the man-nature-spirit complex. This sense of place has emerged out of this attachment with the forest (Haider and Kumar). The Onges are attached to nature from attaining their very basic livelihood to the broad sense of spiritual feelings. But the administration paid no heed which gave a serious threat to the mentifacts that bear an important aspect within the Onge's folk spiritual culture.

The present Dugong Creek tribal area has been



After their island was "opened to settlement" by the Indian authorities in the 1950s the Onge were moved from their habitats.

**Spotted grey area:** Two Onge populations, including the one at Jackson Creek (1) and (2) were moved to the South Bay reservation (**medium grey area**) in the 1970s.

After the devastating tsunami of 26<sup>th</sup> December 2004 the survivors of South Bay reservation were moved to Dugong Creek reservation (**dark grey area**) which is now the only remaining Onge area.

**Dotted line:** main road.

**Square:** Administrative headquarters of the Indian administration.

Fig 4: Chronological translocation of the Onge tribal settlement

(Source: Anthropological Survey of India and modified by the author)

extended in order to allocate the translocated Onge and even to have a proper introduction of the developmental strategies. These all generally included the installation of helipad, community halls, generator & pump houses, ration units and the pseudo houses imitating the Onge's indigenous huts but at the cost of the lush greens.

#### **4.11 Eco-tourism project under Vvet, 2011: Already in pipeline**

The other islands of the Andaman district which earn a handsome amount from tourism are in the verge of losing its physical as well as the social integrity of the island dwellers. Hence the nature lovers are now ready to pay high to get into the uninhabited islands of this archipelago. The Corporation involved itself in Eco-tourism making a small beginning in 1999 under the nomenclature "Vvet" (Van vikas eco-tourism). Currently the activities are located at 2 parts - Little Andaman and Mayabunder catering to accommodation and nature tourism. Hence, going through the tourism potentiality, the Van vikas eco-tourism has spotted five locations along the eastern coastal strip of the island those are: *Butler Bay, White surf waterfall, Kalapaththar, Krishna Nala and Harminder Bay*. These are going to be done in the name of eco-tourism. To avail the huge influx of tourist hotels, inns and restaurants are in the project proposal which is going to be installed at the stake of the natural plots. These all proposed activities would be very much threatening for such an evergreen rainforest of Little Andaman.

#### **5. Conclusion**

It is an advantage for this rainforest to be remote and isolated from the mainland. The island is fortunate that yet 90% of the total forest is more or less intact. The aforesaid fallacies have cropped as the policies were undertaken with shallow environmental understanding. Rather it may be the other way round - the economical benefit extracting policies out swayed the intellectual apprehension. This was the reason why, each and every policies undertaken here were regarded undesirable in the mid way after its initiation. Author after vividly going through the impacts of the policies has come to a conclusion of rethinking and finally would like to propose for a deterministic approach. When the whole world is running after a possibilistic approach of quenching the demands by usurping the virgin forests, it is also necessary enough to leave a clump to retain its pristinity. After a chronological overview of the policies, the present author would like to draw out certain propositions.

Firstly, a strict fencing should be demarcated to prevent the further encroachment of the outsiders within the forest arena.

Secondly, the trial and error application of the various alienated projects must be put to a stop. As discussed earlier regarding the red oil palm plantation the government now thinks that it was inappropriate to grow exotic species in the virgin soil. Hence, thinking to evacuate them off and return it back to the Andaman evergreens. This decision is totally vague as a period of 30-35 years being invested for an exotic species has led to the destruction of the natural ecosystem of the island forest. Or rather before jumping into a newer approach there should be a scientific assessment of the impact that might procure in the long run.

Thirdly, before initiating the full fledged tourism, the impact assessment should be carried out, such that it might not get a conclusion of being vague at the last account. Even if tourism gets into this island, this should be a selective and restricted one where very selected and nature educated groups would be entertained under strict vigilance. Even the number of tourist spots in any ways should not be encroaching into the forest.

Fourthly, the aboriginals should get a concern and their Topophilia or sense of place should be dealt with utter priority. They should be returned back with their forest without any interference from the main stream. Lastly, in relation to the above point the latent science within the Onge's nature's perception could be drawn out and put to use in the policy making. This synergism might prove fruitful before leaping into some big mistakes.

In fine, the author's ardent request is to leave this remaining part of the island intact which could be used up as a laboratory for the researchers in the upcoming years.

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