

*Forests and Allied Matters
in the
Andaman & Nicobar Islands:
Report for the Supreme Court
II*



Little Andamans

Shekhar Singh

REPORT OF THE COMMISSION SET UP UNDER ORDERS OF THE SUPREME COURT ON THE STATUS OF FORESTS AND OTHER ALLIED MATTERS IN THE ANDAMAN AND NICOBAR ISLANDS

VOL II

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Shekhar Singh

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**Memorandum on behalf of the
Andaman & Nicobar Administration**

**submitted to Professor Shekhar Singh,
Commissioner**

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Memorandum on behalf of the Andaman & Nicobar Administration

submitted to Professor Shekhar Singh, Commissioner appointed by the Ministry of Environment and Forests, Government of India, as per the order of the Hon'ble Supreme Court of India dated 23.11.2001 in the Interlocutory Application No. 502 in Writ Petition (Civil) 202 of 1995 (T.N. Godavarman Thirumalpad vs. UOI and others), to report on the state of forests and other allied matters in the Andaman & Nicobar Islands

I. INTRODUCTION:

A writ petition (Civil) of 202/1995 (T.N. Godavarman Vs UOI & Ors.) is before the Hon'ble Supreme Court of India since 1995 pertaining to forests and related aspects in the country. Series of interlocutory applications have also been filed by various groups in this case and have been heard and various orders passed from time to time.

In 1999, the Society for Andaman and Nicobar Ecology (SANE), Bombay Natural History Society and Kalpavriksh filed Writ Petition No. 76 of 1999 (Kalpavriksh and Ors. Vs. Union Territory of A & N Islands and Ors.) before the Hon'ble High Court at Calcutta Circuit Bench at Port Blair requesting that the cutting of trees and mining activities be stopped in Little Andaman. On submission by the Andaman Administration before the Hon'ble High Court on 31.08.1999 that the main issue is pending before the Hon'ble Supreme Court of India, the Hon'ble High Court of Calcutta directed the petitioners to seek necessary directions from the Hon'ble Supreme Court. Accordingly the petitioners filed an interlocutory

application No: 502/1999 in W.P. (C) 202 of 1995 before the Apex Court with the following prayers:

- a) Allow the applicants to be impleaded in the present petition.
- b) Direct the Respondents to forthwith stop the cutting of trees in the Little Andaman.
- c) Direct the Respondents to remove from the tribal reserve all encroachments/camps/bases.
- d) Direct the Respondents to immediately stop all mining/quarrying or any other non-forest activity in the Little Andaman.
- e) Quash and set aside the lease dated 20.11.1987.
- f) Restrain the Respondents from carrying out any road construction either within the tribal reserve or within 500 meters around the tribal reserve.

The I.A. 502/1999 came up for hearing and the Hon'ble Supreme Court on 10.10.2001 directed as under:

"Issue Notice returnable after two weeks. Dasti service in addition is permitted. In the meantime, the cutting of naturally grown trees in any going projects or otherwise, except plantation wood, is prohibited from being cut".

While complying with the directions, the Andaman Administration filed an affidavit before the Hon'ble Supreme Court on 30.10.200. Simultaneously the petitioners filed an affidavit in rejoinder, making various submissions as under:-

- a) That the forestry operation in Andaman and Nicobar is putting adverse impact on the ecology of the Islands.

- b) That the logging activities of Andaman and Nicobar Forest Development and Plantation Corporation and Forest Department is changing the very nature of forests and therefore these activities are clear violation of the National Forest Policy, 1988.
- c) That there is no forest available for logging in the Andamans any more if the forest area falling under Tribal Reserve, CRZ, Steep Slopes and areas already harvested is taken out from the total forest area.
- d) That there is a decline in forest cover in Andaman and Nicobar Islands.
- e) That there are large quantity of timber already cut and yet to be disposed of and this quantity of timber can meet the present requirement of local people and therefore there is no justification for continued extraction of timber in the Andamans.
- f) That the logging operation is having adverse impact on the rare and endemic animals and there is violation of the Onge Tribal Reserve in Little Andaman.

Further, the petitioners urged the Hon'ble Supreme Court to pass the following specific orders:

- (a) That the ban on tree felling from the naturally grown forests in Andaman & Nicobar Islands imposed vide Supreme Court Order dated 10.10.2001 should be continued.
- (b) That specific order be passed banning export of any timber from the Islands to mainland in any form whatsoever, either in round log, sawn timber or

plywood by any agencies either governmental, non-governmental or private establishment.

The case was heard on 23.10.2001 when Amicus Curiae filed an application seeking specific directions against the illegal encroachments on forest land and accordingly the Hon'ble Supreme Court issued orders for taking up the issue of illegal encroachments in various States/UTs on board and directed the Ministry of Environment & Forests to appoint Prof. Shekhar Singh as a Commissioner to give report on the state of the forests and other allied matters in respect of Andaman & Nicobar Islands.

Till further orders, the Administrator, A & N Islands was directed to ensure compliance of the Apex Court's Order dated 10.10.2001 banning cutting of naturally grown trees by anyone and restraining utilization of naturally grown trees by Sawmill, Veneer of Plywood factories without further orders from Apex Court.

The Hon'ble Supreme Court's directives have been complied with in letter and spirit by suspending felling of naturally grown trees in the entire island including those under the various development/ defence projects cleared by the Ministry of E & F. Besides, all the wood based industries have suspended their operations of conversion of naturally grown trees.

Pursuant to the Hon'ble Court's Order dated 23.11.2001, the Administration has filed an affidavit furnishing the inventory of material lying in the Government Sawmills as well as the list of Sawmills in A & N Islands on 12.12.2001. On the same day the Administration also filed an Interim application seeking exemption for felling and cutting of minor forest produce such as Bamboos,

Ballies (Small poles) and Cane on the ground that the local people particularly the cultivators in rural areas would face insurmountable difficulties as the minor forest produce are used by them for fencing their land as well as for construction of huts and further, on the ground that the Hon'ble Court in its order dated 4.3.1997 in Writ Petition (Civil) No. 202 of 1995 with Writ Petition (Civil) No. 171 of 1996 and Writ Petition (Civil) No. 897 of 1996 had clarified that the direction contained in the Order dated 12.12.1996 and order dated 4.3.1997 would not apply to minor forest produce including Bamboos etc.

The Administration has again moved an application before the Hon'ble Supreme Court of India to lift the ban on the felling of naturally grown trees in respect of certain important time bound development projects requiring urgent implementation for which forest and environmental clearances have already been obtained from the Ministry of Environment and Forests, Government of India.

2. SUBMISSION BEFORE THE COMMISSION ON THE STATE OF FORESTS AND ALLIED MATTERS

While the A & N Administration appreciates the concerned expressed by the Petitioners in regard to preservation of forests, bio-diversity and overall ecology of the islands and shares with them their environmental concerns, it does not agree with the views/suggestions made by the Petitioners to ban tree felling operations in the islands. It also does not share the view that forestry operations by the Forest Department and the Forest Development Corporation are damaging the ecology of the islands. The Administration is certain that the views of the Petitioners are based on inappropriate understanding of the forestry situations obtaining in the islands.

Tree felling operations in the islands are carried out (i) under normal forestry operations by the Department of Environment & Forests and in the leased forest areas by ANIFPDC as per sanctioned Working Plans approved by the Government of India, (ii) tree felling in the various developmental projects for which prior forestry and environmental clearance are obtained from Ministry of Environment & Forests and (iii) tree felling in private holdings and unauthorized tree felling are due to encroachments in the forest areas.

While the ban imposed by the Supreme Court in private holdings, where tree felling are carried out unauthorisedly and without any scientific or detailed environmental impact assessment, seems to be in order, ban on tree felling operations which are authorized, based on prior detailed scientific scrutiny and studies and on accepted forestry and environmental standards and norms, would not stand close scrutiny. The Andaman & Nicobar Administration would like to submit the following factual details on Forests, Forest Cover, Ecology, extent of cutting of trees and other related matters:

A. Past History of Forest Management

Scientific management of forests of these islands dates back to 1906 when the first Working Plan was prepared by Todd for North Andamans. Bonnington in 1914 prepared the second Working Plan which aimed at improvement of forests by removing over-mature trees for supply of Padauk timber for export and local demand. This Working Plan prescribed plantations of Teak and indigenous species. Clear felling was resorted to in 1921 for raising plantations of Teak and Padauk, but was abandoned after three years.

H.S.Deans in 1935 initiated the third Working Plan and completed it in 1936. Deans emphasized on scientific management of forests by tackling regeneration and exploitation simultaneously. Thereafter B.S.Chengappa standardized a silvicultural system for regenerating the heterogeneous tropical forests and prepared Working Schemes for different forest areas. By 1941 nearly 4,451.54 ha of forests were successfully regenerated under Chengappa's system.

In 1948, preparation of Working Plans was taken up in the right earnest for North Andaman, Middle Andaman and South Andaman. Demarcation of Blocks on the ground and Territorial Divisions was the significant achievement. These Working Plans suffered a set back due to post independence colonization programme wherein large tracts of virgin forests were cleared for settlement of refugees. In later period, forests were strictly worked in accordance with the approved Working Plans. Further regular revision of Working plans were also undertaken on the expiry of each Working plan period.

Currently, there are approved Working Plans for Diglipur division (1998-2008), Mayabunder division (1997-2007), Middle Andaman division (1993-2003), Baratang division (1999-2009) and Little Andaman (1999-2009). The Working Plan for South Andaman (2000-2010) has been submitted to the Government of India and approval is awaited.

B. The Present Status of Forests

The notified forests in the islands are reckoned at 7171 sq. km. (86.93%) of the geographic area of 8249 sq.km., of which 1078

sq.km. (13.67%) is under Revenue Administration. The Revenue area also supports forests over 462 sq.km. The 'State of Forest Report' 1999, of Forest Survey of India has reported forest cover over 7606 sq.km., which is 92.21% of the geographic area. Mangroves occupy 966 sq.km., which is about 11.71% of the geographic area. Dense forests with mangroves account for 7181 sq.km. in the islands which is about 87% of the geographic area (Annexure-I).

The area under production forestry with the Forest Department and Forest Corporation accounts for 26.43% of the geographic area of the islands and 30.41% of the forest area. The balance area is totally protected under Tribal Reserve and Protected Area Network. Mangroves are fully protected in the islands consequent upon total ban on felling of Mangroves imposed by the Administration in 1988 (Annexure-II).

C. Regeneration of Forests and the present status of regeneration

Though the Andaman Forests are very dense, the proportion of commercially valued tree species is very small. The condition of the crop is that the valuable species, with a few exceptions, are mostly deciduous or semi-deciduous and occupy the top most storey. The crop is over-mature with a large percentage of hollow and unsound trees. Younger age classes are very poorly represented. Ground vegetation is invariably evergreen forming an impenetrable thick mass, with no commercial importance. Top canopy prevents the regeneration of the species, which are valuable, and needs to be opened up for ensuring adequate regeneration.

Only in the wet evergreen forests, the vegetation from the ground level is completely evergreen and the younger age classes are also present. The main crop here is *Dipterocarpus* species. The patches of *Dipterocarpus kerrii* have all age gradations and are excellent examples of perfect uneven aged forests.

After several attempts to regenerate these forests by a system of selection and clear felling failed, the present system of regeneration called the Andaman Canopy Lifting System, which is a variation of the Irregular Shelterwood System, was evolved. At present, about 26% of the geographic area and 30% of the forest area have been taken up for production forestry employing the standardized system of regeneration with the objective of converting these forests into uniform forests with representation of all age groups and increasing proportion of commercially valued species.

Under this system, the under-growth is cleared and canopy is raised gradually to a height of 18-24 metres. Adequate penetration of sunlight is ensured by removing a few trees of first and second storeys. In deciduous forests, some control burning was practiced which has been stopped now. Cultural operations are carried out in the subsequent years. Felling of trees generally coincides with seeding of the trees of desired species in the top canopy. Intensity of light is ensured by culling and girdling of a few trees. In deciduous areas broadcasting of seeds is also carried out. Enrichment plantation and dibbling of seeds is carried out in the semi evergreen areas in gaps. Weeding and climber cutting are continued in the subsequent years. The final girdling of top canopy trees used to be carried out in the fifth year, has been totally abandoned since 1990 for conservation of overall biodiversity and minimizing the damage to the eco-system.

As per the regeneration survey carried out by the Forest Survey of India during 1993-1995, the established stocking of seedling is 2333 per hectare, which is considered adequate. The proportion of commercial species is only 15%. A note on the status of natural regeneration is enclosed as Annexure -III.

D. Forest Utilization and Wood based industries

In the absence of any wood industries in the islands except M/s. WIMCO the timber that was extracted used to be exported abroad till 1958. Thereafter, timber was used mainly for local consumption and to meet the requirements of Government departments in mainland through the Director General of Supplies and Disposals. The supply to DGS &D was also discontinued from 1989. Two Government timber depots were opened in late fifties at Chennai and Kolkata to popularize Andaman Timber and to dispose the surplus timber not required locally. The export of logs by the department to these depots as well as export by private individuals was banned from 1993 in order to promote the local entrepreneurship and ensure value addition to timber.

Among the local industries, a matchwood factory, namely, M/s WIMCO was the first to be established as early as 1929. After independence, three major plywood industries were set up viz, Andaman Timber Industries (ATI) in 1960 at Bambooflat, Jayshree Timber Products (JTP) at Bakultala in 1965 and Albion Plywood at Long Island in 1963, which was later acquired by M/s Asian Woods and Polymers, in 1979 by M/s Kitply Industries in 1992. Apart from Plywood Industries the forests of the Islands support 6 nos. of Pencil Slate Units, 3 nos. of Cottage Match Units, 2 nos. of Composite

Units, 22 private saw mills and two Government Saw Mills at Chatham and Betapur. In the initial years lumbering was the main activity in the Islands which provided employment to a large number of labour force on felling, logging, transportation, shipping etc. Regeneration operations, carried out after felling, also provided employment opportunities to a large labour force in ground clearance, canopy manipulation and cultural operations. Chatham and Betapur Saw Mills alone engaged more than 1000 workers.

Island Development Authority in its meetings of 1986 and 1989, chaired by the Hon'ble Prime Minister of India desired that large scale industries consuming bulk timber in the Islands should be completely phased out, since 75 percent of the timber extracted in the Islands is used only by plywood and match factories, and not for construction purposes for creating durable assets for the Islands. The major industries were asked to augment their timber needs through imports. Promotion of other alternate activities was suggested for conservation of Forest wealth of the Islands. Thus, timber extraction had already been considerably reduced.

Recently, due to financial problems and difficulties in marketing their products in mainland in competition with the much cheaper imported plywood and with small scale industries operating at lower production cost, the major industries failed to lift in time, the timber allotted to them and also resorted to heavy rejection of timber. Two of the Plywood Industries, namely, Andaman Timber Industries and Jayshree Timber Products have already closed down. This has led to accumulation of timber at various depots and also resulted in certain amount of deterioration. Efforts are on to dispose of this accumulated stock of timber and to facilitate this, the ban on export of timber has been lifted by the Administration. The system

of allotment of timber through quotas introduced in 1986-1987 has also been dispensed with and the industries have been asked to pay and lift the quantity timber required subject to availability. A note on the utilization of forest produce in the Andaman and Nicobar islands is enclosed (Annexure- IV)

E. Biodiversity and Wildlife Conservation through Protected Area Network

There are 9 National Parks, 96 Wildlife sanctuaries and 1 Biosphere Reserve over an area of 1968.93 sq.km. reckoned at 27.46% of the forest area, protected as a safe habitat for terrestrial wildlife, marine life and corals. Further, Tribal Reserves constitute 38.19% of the Geographic Area (Annexure V). Entire Nicobar group of Islands is declared as Tribal Reserve where no timber operations are carried out. Management Plans have been prepared for three Protected Areas, namely, Mt. Harriet National Park, Mahatma Gandhi Marine National Park, Wandoor and Interview Island Wildlife Sanctuary. For preparation of Management Plans of other Protected Areas, action has already been initiated. Strengthening the protection machinery with sophisticated modern equipments, patrolling vessels, survey, inventory and documentation of coral reefs with periodic monitoring mechanism are necessary for effective management of Protected Area Net Work. Addition of potential areas for threatened flora and fauna is equally important for providing adequate protection to Wildlife and genetic diversity. Wildlife and Biodiversity Conservation is receiving the highest priority through development of infrastructure for protection, habitat improvement, promotion of ecotourism and creation of awareness amongst public and students. A Biological Park at Chidiyatapu is being created for ex-situ conservation with the assistance of Central Zoo Authority.

F. Forest Protection

Due to low population pressure, forest protection had never been a priority till early 50's. Later, due to the colonization operations and subsequent influx from other parts of the country, the biotic pressure over the forests has increased and the pressure is continuously increasing. In addition there are also incidents of poaching by foreigners mainly for the marine produce.

For the protection of the forests and wildlife, the Department of Environment and Forests implements the Indian Forest Act, 1927, Public Premises (Eviction of Unauthorized Occupants) Act, 1971 and the Wildlife (Protection) Act, 1972. The Andaman and Nicobar Administration has framed the following rules, under the above said Acts:

1. Andaman and Nicobar Islands Protected Forests Rules, 1986
2. Andaman and Nicobar Islands Forest Produce Transit Rules, 1966
3. Andaman and Nicobar Islands Wildlife Protection Rules, 1974

All the Divisional Forest Officers have been declared as Estate Officers under the Public Premises (Eviction of Unauthorized Occupants) Act, 1971 to issue eviction orders in all forest encroachment cases. Though, eviction orders have been issued in many cases by the Estate Officers, the orders are unable to be implemented mainly due to stay orders obtained by the encroachers from the appellate court.

The recent amendments to the Schedule to Wildlife (Protection) Act, 1972 by the Ministry of Environment and Forests, including certain shells, sharks and corals has extended the area of operations of the department to marine ecosystem also.

The coastline of these islands extending to 1962 km. is accorded protection through the implementation of the Coastal Regulation Zone Notification of 1991, under the Environment (Protection) Act.

Though all efforts are being taken to control illegal activities, due to deficiencies in infrastructure, viz., vehicles, vessels, arms & ammunition, communication equipment, etc., the protection provided is not at desirable levels. The Administration has formulated a scheme exclusively for Forest Protection in the X Plan (2002-2007). A note on the legal and institutional constraints in forest protection is enclosed (Annexure-VI)

G. Conservation and Research efforts

Harvesting of timber in the islands has been gradually reduced bringing down the level of timber extraction from 1,65,726 cum during the year of 1980-81 to 40,000 cum in 2000-01. Clear felling of forests and burning are not practised in these forests, but only 10-15 mature and over-mature trees per ha out of about 400 trees are harvested taking all safeguards against soil erosion and large canopy openings. Judicious Canopy manipulation is made for penetration of optimum sunlight for inducing regeneration. Removal of inferior trees has been totally stopped since 1990 as a step towards Biodiversity conservation and maintenance of heterogenous character of tropical forests. Monoculture of economic tree species has been stopped from 1990-1991 onwards. The coverage of dense forests over 87% of geographical area even after more than 120 years of forestry practices itself, amply goes to show that forests in the islands have been worked on the most conservative lines.

The National Forestry Research Plan has also identified Biodiversity Conservation, Assessment, Monitoring and Utilization as the priority area of research in these islands. Taking into consideration the priority areas of research, 17 Research Projects have been formulated and prioritized for the Union Territory, of which Assessment of regeneration status of logged areas, trials of solid bamboos, genetic improvement of Padauk and Casuarina and seed biology and phenology studies are under way. Other projects are planned in the X Five Year Plan. In addition, collaborative projects have been started with Department of Space, National Botanical Research Institute and the Indian Council of Forestry Research and Education, viz., Biodiversity characterization at landscape level, Bio-prospecting for medicinal plants, Revision of forest flora and Planting Stock Improvement Programme.

In the field of wildlife management various studies on (i) Survey and monitoring of Coral reefs (ii) Management Action Plan for Marine National Park (iii) Management Plan for Conservation of Coral Reefs (iv) Management Action Plan for Great Nicobar Biosphere Reserve and (v) Conservation of Mangroves through Survey and eco-restoration have been taken up, under Centrally Sponsored Schemes.

H. Threat to forest ecology and environment

(a) Population: Increasing population is the main threat to the island ecology and forest resources. The decadal growth of population from 1901 to 2001 shows that population is rising rapidly. In the absence of any means of livelihood the people heavily depend on forest resources to which they have easy access. The census figures

indicate an increasing trend in the growth of population. Present provisional population is 3,56,265. The details of population growth over the years are enclosed (Annexure - VII). There is an urgent need to put a check on uncontrolled immigration to these islands and fix a limit on population matched to the carrying capacity of these islands.

(b) **Encroachment** : The encroachment cases are on the increase in the Islands due to increasing population and unchecked immigration. The Government of India had approved regularization of 1367, Pre-1978 encroachment cases covering 2458.953 Ha. These pre-78 encroachers are proposed to be settled over 1367 Ha. of land distributed over 19 pockets in these islands. The process of settlement of the encroachers has not yet been completed. The post-78 encroachment cases are also increasing and as on date, there are 2325 cases identified over 2633.654 Ha. The Estate Officers are taking action for eviction of these encroachments and so far 146 cases have been evicted over an area of 144.983 Ha. In many cases the encroachers have reoccupied the encroached area and in other cases managed to bring a stay order from the Courts. In order to oversee the execution of the eviction orders issued by the Estate Officer, the Administration has been considering delegation of Executive Magistrate's power to the Asst. Conservators of Forests. The Island Development Authority has also been apprised of the problems and has been requested for arranging promulgation of ordinance to empower forest officers for carrying out summary eviction of encroachers. The encroachments also have significant impact on forests resulting in deterioration of forests and pose threat to ecology and bio-diversity. A note on the present status of encroachment is enclosed (Annexure- VIII). There is a need to

restrain the lower Courts, which entertain petitions from evictee from illegal pockets of encroachments.

(c) Development activities: The Union Territory has many ongoing developmental activities and most of the proposed developmental activities are land based requiring forest land and forest resources. Use of a large quantity of sand and metal is inevitable for construction of structures. Their limited availability restricts civil construction works. Being located in seismic zone, Housing structures need to be eco-friendly using available timber resources reducing use of sand and metals as minimum as possible. While all the developmental projects are subject to environmental scrutiny and required clearances have been obtained before hand, there is need to promote only these projects which are appropriate to these islands.

(d) Wood working Units: Of late, nearly 176 wood working units are existing in the islands. People having no other means of livelihood have switched over to wood working business. The furniture making and carpentry shops and woodcarving units have multiplied in the recent years. These units are SSI units licensed by the Industries Department. Unless their growth is checked the forest resources in the islands cannot be protected effectively. The furniture units alone consume about 1529 cum of Padauk per year.

(e) Illicit Cutting: Of late, a number of wood working units have come up in the islands which consume the ornamental timber Padauk. Illicitly removed Padauk is reportedly used by such units. In order to minimize and check the increase in illicit cutting stringent action, such as, provisions for vehicle confiscation as enforced in Karnataka may be necessary in the Islands.

3. DISCUSSION ON THE CONTENTIONS OF THE PETITIONERS

The main contentions of the petitioners in their application before the Hon'ble Supreme Court of India are

- (a) That the forestry operation in Andaman and Nicobar is putting adverse impact on the ecology of the Islands.
- (b) That the logging activities of Andaman and Nicobar Forest Development and Plantation Corporation and Forest Department are changing the very nature of forests and therefore these activities are a clear violation of the National Forest Policy, 1988.
- (c) That there is no forest available for logging in the Andamans any more if the forest area falling under Tribal Reserve, CRZ, Steep Slopes and areas already harvested is taken out from the total forest area.
- (d) That there is a decline in forest cover in Andaman and Nicobar Islands.
- (e) That there are large quantity of timber already cut and yet to be disposed and this quantity of timber can meet the present requirement of local people and therefore there is no justification for continued extraction of timber in the Andamans.
- (f) That the logging operation is having adverse impact on the rare and endemic animals and there is violation of the Onge Tribal Reserve in Little Andaman.

Dealing with the above contentions, seriatim, the observations of the Andaman and Nicobar Administration are as follows:

- (a) Even after 120 years of forestry operations, 87% of the land area is under dense forests, including mangroves. Any adverse effect observed on the ecology of these islands is due to uncontrolled influx of people and the consequent encroachment of forest land and not due to the forestry operations as alleged.
- (b) Logging activity has not brought about any change in the composition of the forests. A recent report by the Forest Survey of India has shown that the proportion of evergreen, semi-evergreen and moist deciduous forests in both the worked and unworked forest areas are comparable, which indicates that there is no change in the forest type due to forestry operations. The working of forests has also been mostly in the moist deciduous and semi-evergreen forests, which have a higher proportion of commercially valuable species and were also easily accessible and this may also give an impression of the forest type having arisen due to forestry operations. The purported change in Forest Type cannot be attributed to forest working unless it is clearly established with periodic monitoring with site-specific studies. The details of the forest types from the study made by Forest Survey of India are enclosed (Annexure-IX). As such, the forestry activity in no way violates provisions of National Forest Policy, 1988 in any manner. Besides the logging operations are being done in accordance with the Working Plans approved by Government of India.

- (c) Production forestry is confined to 2180.79 sq.km (26.43% of geographic area and 30.41% of forest area) of which till now 1110.52 sqkm (15.49% of the forest area) has been worked under the Andaman Canopy Lifting System, thus leaving a balance of 1070.27 sq.km. yet to be worked. These forests are worked not for extraction per se but for the purpose of conversion to uneven-aged forests with a predominance of commercially important species thus upgrading the status of such forests.
- (d) Any decline in forest cover noticed is due to encroachments and clearance of hilly lands in the revenue area and not due to forestry operations, as may be seen in the State of Forest Report, 1999. In fact, change of open forest into dense forest has been noticed presumably due to successful regeneration after logging under the Shelterwood system.
- (e) Accumulation of logs lying undisposed is a recent phenomenon attributable to the sickness of the major industries, which resorted to heavy rejection of logs and also failed to lift the logs in time. Action is being taken for their disposal by auctions as well as utilization in the government saw mills. The existing stock of timber may meet the immediate need of the Island, but is not sufficient, hence proposed ban on extraction does not seem to be based on sound logic. The recent ban on conversion of timber by the Hon'ble Supreme Court of India has led to a situation where the utilization of the accumulated logs is not possible, and this is leading to further deterioration.
- (f) Logging is restricted only to 30% of the forest area and 70% area has been set aside exclusively for the conservation of flora and fauna. After biodiversity characterization is carried out if areas rich in biodiversity

are noticed falling in the area set aside for production forestry, they may be transferred to the Protected Area Network. In the absence of any information on the biodiversity at landscape level, it would be difficult to infer that logging is adversely affecting the endangered fauna, which may be well represented in the 70% area set aside for protection.

4. STAND OF THE ANDAMAN AND NICOBAR ADMINISTRATION IN FORESTRY AND ALLIED MATTERS:

The Andaman and Nicobar Administration is of the firm view that the present system of forest management is based on sound silvicultural principles and is ecologically sustainable. The system of forest management has undergone sufficient changes to adjust itself to the shift in the National Forest Policy of 1988 and has become more conservation oriented than commercial. The activities of the Department of Environment and Forests are also gradually transforming and expanding into areas, which are far from the traditional forestry, with greater emphasis on environmental protection, biodiversity and wildlife conservation and research. Therefore, the Administration submits before the Commission:

- (a) That the Administration is in principle committed to the phasing out of wood based industries and restrict the level of timber extraction to meet the essential and growing local constructional needs through Government Saw Mills and Private Saw Mills.
- (b) That in case there is market failure due to which the timber is not lifted in time by the industries and local purchasers, the Administration should have the liberty to export the surplus

timber to mainland in order to utilize the scarce resource and realize the value thereof.

- (c) That for better control over the wood based industries they should be relocated to an industrial estate away from the forests
- (d) That Protection Machinery for land, coastal and marine front needs to be strengthened for effective mobility to combat poachers.
- (e) That value added secondary processing of sawn timber should be encouraged for increasing longevity of sawn timber so as to minimize use of sand and metal, and wood based handicraft and joinery can be in the private sector.
- (f) That large-scale plantations of Bamboo, Rattans and medicinal plants are required to be raised to minimize the pressure on the forests and also to improve the economic level of rural poor.
- (g) That adequate powers are required to be delegated to forest officers for dealing with forest encroachments and forest offence cases and lower Courts be restrained in taking up cases which are not in conformity with Supreme Court directions.
- (h) That Panchayati Raj Institutions are to be involved in social forestry for promoting plantations of fuelwood, fodder and fruit trees by farmers and also to protect the forests adjacent to the villages using Joint Forest Management concepts/ approaches.

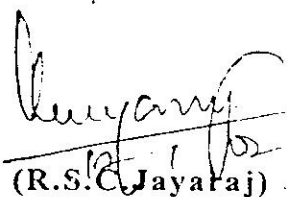
- (i) That the hilly lands in the revenue area should be put to productive use by bringing them under permanent tree cover either under horticulture or forestry, in order to check the environmental degradation due to soil erosion from the hilly lands.
- (j) That the agriculture and forestry based economy should be transformed by promoting fisheries, tourism (mainly ecotourism) and agroforestry/ farm forestry in an eco-friendly manner.
- (k) That the Administration in principle stands committed to implementation of the provisions of the National Forest Policy, 1988 and other central enactments in regard to Forest, Wildlife Biodiversity Conservation and Protection of Environment and to promote sustainable Forest Management which harmonizes the conservation and development need of the islands and promotes forestry to meet the basic need of people including income/ livelihood while caring for protection of forests/ environment.

CONCLUSION:

In view of the aforesaid, the Andaman & Nicobar Islands Administration submits to the Commission to obtain the following dispensations from the Court, by removing the ban on

- (i) felling of trees in respect of important, time bound development projects requiring urgent implementation for which forest and environment clearances have already been obtained;

- (ii) felling and cutting of minor forest produces such as Bamboos, Ballies and Canes on the ground that they are being used by poor cultivators for fencing their lands and construction of their huts.
- (iii) felling of trees in the forests is carried out as per Working Plans approved by Government of India, with a view to utilize mature/ over-mature trees to maintain health and hygiene and regeneration of forests and to meet the local timber need of the people and developmental programmes.



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Deputy Secretary
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sq.km to scrub and 15 sq.km to non forest. Conversion of 22 sq.km of dense forest, 10 sq. km of scrub and 22 sq.km of non forest to open forest is also associated with this increase.

The increase of 2 sq.km of mangrove is an account of regeneration of 7 sq.km of non-forest on one hand and degradation of 5 sq.km to non forest on the other.

The total number of districts in the state is 24 but boundaries of only 18 districts, excluding newly created ones, are incorporated in the SOI map. The extent of dense and

open forests and scrub in respect of these districts, along with the changes compared to 1997 assessment is given in Table 3.27 f

The increase in the forest cover is recorded in the districts of Bankura, Jalpaiguri, Maldah, Midnapur and Murshidabad. The increase in forest cover is mainly due to the plantations and the protection offered to areas under JFM.

Decrease in forest cover has been recorded in the district of Uttar Dinajpur in scattered patches near Bangladesh border.

Table 3.27.f : District-wise forest cover

District (1-180, T-Total)	Geographic area	1999 Assessment			Total	Change compared to 1997	Scrub
		Dense forest	Open forest	Mangrove			
Bankura	6,852	233	615	0	869	+2	13
Bardhaman	7,024	49	157	0	206	0	2
Barabani	4,545	10	47	0	57	0	11
Coochbehar	105	0	0	0	0	0	0
Dooars	3,387	12	20	0	32	0	0
Dumkai	3,149	1,055	359	0	1,455	0	0
Hooghly	1,467	0	0	0	0	0	0
Howrah	3,149	0	0	0	0	0	0
Jalpaiguri	6,227	1,445	137	0	1,582	+2	0
Maldah	3,744	2	6	0	8	+1	0
Midnapur	19,081	529	655	3	1,387	+6	29
Murshidabad	5,324	0	8	0	8	+3	0
Nadia	3,927	10	0	0	10	0	0
Purba	6,259	174	433	0	607	0	0
24 Pargana North	4,094	0	1	29	30	0	0
24 Pargana South	10,042	0	0	2,093	2,093	0	0
Uttar Dinajpur	3,149	0	0	0	0	-1	0
Debraj Dinajpur	2,218	5	5	0	10	0	0
Total	88,752	3,565	2,672	2,125	8,362	+13	98

3.22 ANDAMAN AND NICOBAR ISLANDS

3.22.1 Introduction

The total geographic area of the Union Territory of Andaman and Nicobar Islands is 0.82 million ha. The territory is a chain of more than 572 islands and islets situated in the south-eastern part of Bay of Bengal. It lies between lat. 6° 45' and 13° 45' N and long. 92° 00' and 94° 18' E. The islands form two broad groups, viz. the Andamans and the Nicobars of which Andamans account for 0.64 million ha and Nicobar 0.18 million ha. Coral reefs surround most of the islands of the Nicobar group. Land use pattern of the territory is given in Table 3.28.a

The climate is humid tropical. The average annual rainfall varies from 1,400 mm to 3,000 mm and average annual temperature varies from 24° C to 28° C.

The total population is 0.28 million (1991 census) of which 86% inhabit Andaman Islands and rest Nicobar Islands. Scheduled Tribes constitutes 9.54% of the total population. Four aboriginal tribes i.e. Andamanese, Jarwas, Onges and Sentanalese inhabit the Andaman group, Nicobaris and Shompens are in the Nicobar group. The total livestock population of the islands is 0.15 million (1992 livestock census).

Table 3.28.a : Land use

Land use	Area in '000 ha	Percentage
Total Geographical area	825	
Reporting Area for land utilisation	793	100.00
Forests	695	87.47
Not available for cultivation	24	3.16
Permanent Pasture & Grazing land	4	0.63
Land under misc. tree crops & groves	16	1.77
Culturable waste land	12	1.65
Fallow land & other than current fallows	3	0.38
Current fallows	1	0.13
Net area Sown	38	4.81

Source: Land use statistics, W & C since 1946-97, Ministry of Agriculture, GOI 2000

3.28.2 Forest Resources

The total recorded forest area of the islands is 0.72 million ha, which constitutes 86.93% of the land area. The Reserved and Protected Forests constitute about 40% and 60%, respectively.

There are four forest types, viz. Tropical Wet Evergreen, Tropical Semi-evergreen, Tropical Moist Deciduous and Littoral & Swamp forests.

3.28.3 Protected Areas

There are 9 National Parks and 94 Wildlife Sanctuaries covering an area of 0.15 million ha, which is 18.53% of the land area. Major part of the Great Nicobar Island has been declared as a Biosphere Reserve.

3.28.4 Forests in Villages

There are 504 villages, of which 153 have forest as a land use. The forest area in these villages is 0.04 million ha. The total population of these villages is 0.12 million. The villages having less than 100 ha, between 100-500 ha and more than 500 ha forest in each village constitute 46%, 43% and 11% of the total villages, respectively. Table 3.28.b provides details of villages by forest area and population.

Table 3.28.b: Forests as land use in villages

Forest area	No. of villages	Total Forest area (ha)	Population
Less than 100 ha	71	2,780	61,485
100 - 500 ha	65	15,073	44,387
More than 500 ha	17	17,632	13,087
Total	153	35,485	118,961

Note: Information relates to Andaman only.

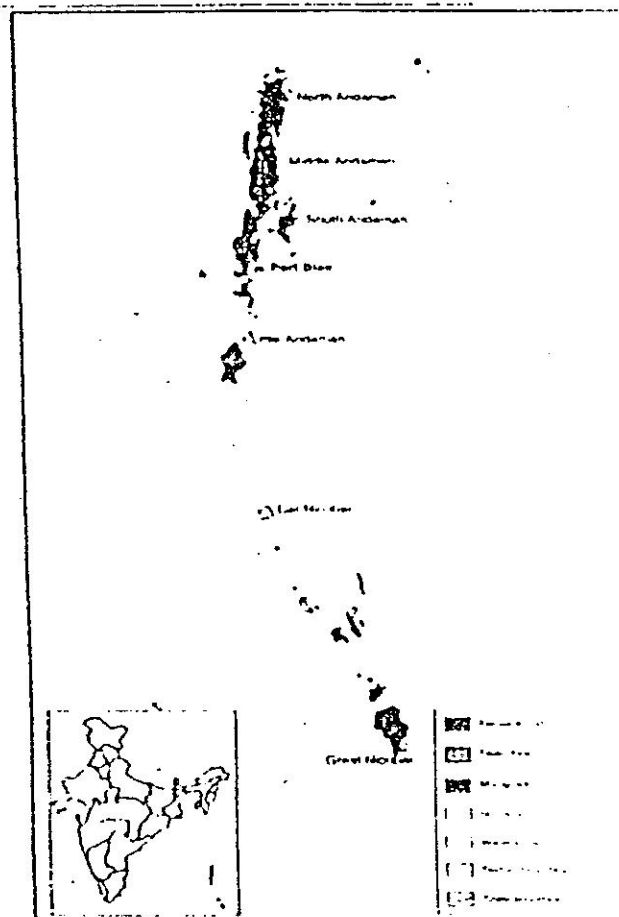


Fig. 3.27 Forest cover of Andaman & Nicobar

3.28.5 Forest Plantations

Since the islands have very rich forest resource, forest plantations have remained a low key activity. Only limited plantations of famous timber spp., viz. Padauk (*Pterocarpus dalbergioides*), a native species and teak (*Tectona grandis*)

Forest Resources in States and Union Territories

has done in pre-independence period.

Regular plantation of teak was started in 1954 after clear felling patches of Moist Deciduous forests. In addition to Fadlak, other native species such as Koko (*Albizia lebbek*), Pinnia (*Lagerstroemia hypoleuca*), Badam (*Terminalia procera*) and matchwood species (*Bombax insignis*, *Sterculia pumpanulata*) have been planted in a limited scale.

The pace of planting was drastically reduced since mid seventies because of giving up the practice of clear-felling and planting and resorting only to assisted natural regeneration in all areas. Planting activity has remained confined to roadside and in other vacant lands. Besides forest plantations, about 1,600 ha of red oil palm and 600 ha of rubber plantations have been established by Forest Development Corporation. These plantations are not being extended since 1981. The details of plan-wise and species-wise plantations are furnished in Table(s) 3.28.c and 3.28.d, respectively.

Table 3.28.c: Forest plantations by all agencies

Period	Area in '000 ha
1951-80	11.84
1980-85	17.01
1985-90	26.58
1990-91	3.32
1991-92	3.10
1992-97	19.34
1997-98	3.53
1998-99	3.39
Total	88.14

Source: NACB, Vol I, 1999

Table 3.28.d: Species-wise plantations by Forest Department upto 1998

Species	Area in '000 ha	Percentage
<i>Terminalia procera</i>	9.70	38.4
Others	15.40	61.6
Total	25.00	100.0

Source: Andaman & Nicobar Forest Department

3.28.6 Forest Cover

The forest cover based on satellite data of March 1997, and January-March, 1998, is 7,606 sq. km, which is 92.21% of the geographic area. Dense forest, open forest and mangroves account for 6,515 sq. km, 125 sq. km and 966 sq. km, respectively. Forest cover of the islands is shown in Fig. 3.27. There has been a net decrease of 7 sq. km in the present assessment as compared to the previous assessment. The difference between the data periods of the two assessment is about 4 years.

The change matrix, given in the Table 3.28.e, reveals that there has been an overall decrease of 5 sq. km of dense forest. This is the result of degradation of 7 sq. km of dense forest to non forest and improvement of 2 sq. km of open forest to dense forest.

The decrease of 2 sq. km of open forest is on account of its improvement to dense forest. There has been no change in the area of mangrove.

The total number of districts in the state is 2. The extent of dense forest, open forest and mangrove, in both these districts, along with the change compared to 1997 assessment, is provided in Table 3.28.f.

The decrease of forest cover in the Little Andamans, Dighpur and Havelock is because of encroachment by the settlers in the revenue land.

Table 3.28.e: Forest cover change matrix

1997 Assessment (Data Dec. 94)	1999 Assessment (Data Mar. 97 & Jan.-Mar. 98)					Total 1997
	Dense forest	Open forest	Mangrove	Scrub	Non-forest	
Dense forest	6,513	0	0	0	7	6,520
Open forest	2	125	0	0	0	127
Mangrove	0	0	966	0	0	966
Scrub	0	0	0	0	0	0
Non-forest	0	0	0	0	636	636
Total 1999	6,515	125	966	0	643	8,249
Net Change	-5	-2	0	0	+7	

Table 3.28.f : District-wise forest cover

District T. Total	Geographic area	1999 Assessment			Total	Change compared to 1997	Scrub
		Dense forest	Open forest	Mangrove			
Andamans T	6,264	4,864	90	929	5,883	-7	0
Nicobars T	1,981	1,651	35	37	1,723	-	0
Total	8,249	6,515	125	966	7,606	-7	0

3.29 CHANDIGARH

3.29.1 Introduction

The Union Territory of Chandigarh has a geographic area of 11,400 ha. It lies between lat. 75° 42' and 30° 39' N and long. 76° 51' and 30° 49' E. The land use of UT is shown in Table 3.29.a

The average annual rainfall ranges between 400 to 600 mm. The average annual temperature varies between 22.5°C to 25°C.

The population of Chandigarh is 642,015 (1991 census). It is overwhelmingly urban as 90% of the population is based in Chandigarh city. The state supports a small livestock population of 31,000 (1992 census).

3.29.2 Forest Resources

The recorded forest area is 3,102 ha, which is 27.19% of the geographic area. Reserved Forest constitutes 98.48% of the forest area, the rest being Unclassed Forest. Forests are Tropical Dry Deciduous type.

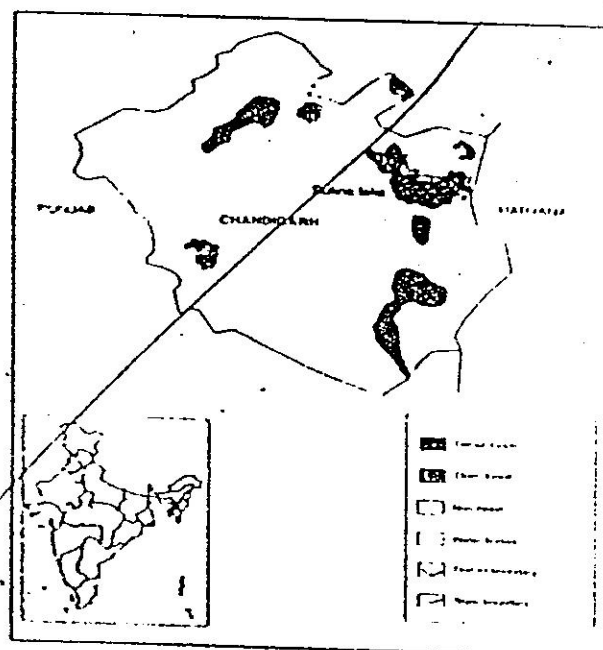


Fig. 3.28 Forest cover of Chandigarh

Table 3.29.a : Land use

Land use	Area in '000 ha	Percentage
Total geographical area	11	
Reporting area for land utilisation	7	100
Forests	2	0
Not available for cultivation	4	57.14
Permanent pasture and other grazing lands	0	0
Land under misc. tree crops & groves	2	0
Culturable wasteland	2	0
Fallow land other than current fallows	1	14.29
Current fallows	2	28.57
Net area sown	2	
< Below 500 ha		

Source : Land use statistics At a Glance 1999-07, Ministry of Agriculture, GOI 2000

ANNEXURE-II

Total Geographical Area of A&N Islands	8249 Sq.Km.
1. Reserved Forest	2928.76 Sq.Km.
2. Protected Forest	4241.93 Sq.Km.
3. Total Forest area	7170.69 Sq.Km.

Forest Cover

Dense Forest	6515	
Open Forest	125	
Mangrove	966	7606 Sq.Km.

Percentage of forest cover to geographical area	92.2%
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**NOTE ON FOREST COMPOSITION AND NATURAL
REGENERATION IN TROPICAL FORESTS.**

Globally in tropical zone, the major forest types found are Wet Evergreen, Moist Deciduous and Dry Deciduous. The composition of the forests occurring at a specific location, depends on various climatic and edaphic factors. In a global assessment made during 1974, in the tropical zone, it was found that about 38% forests were Wet Evergreen type, about 21% were Moist Deciduous and about 40% were Dry Deciduous (Persson, 1974). In Andaman and Nicobar Islands also, somewhat similar trends in forest cover have been observed. The major forest types occurring in Andaman are Tropical Evergreen forests, Semi-evergreen forests and Moist Deciduous forests. As per a report published by Andaman and Nicobar Forest Department in late sixties, the forest cover under Andaman Moist Deciduous forests was reported to be almost half the total area of the forests of the islands. The evergreen forests are generally found growing on the low alluvial damp stripes of land in the valleys or on the moist loamy fertile hill tops and slopes. While the Moist Deciduous forests are usually found growing on undulating land of somewhat poor looking and comparatively dry soil. The extent of coverage of Moist Deciduous forest and their occurrences in the lower undulating land, is directly related to the worked over forest cover in the islands, as most of the forestry operations have been carried out in such areas. Hence the contention of the petitioners that because of logging operations the forest composition of Andaman and Nicobar Islands have

changed from evergreen to deciduous, is incorrect. It is also not correct to say that our forests are 'Rain Forests', as we don't have any such forests occurring in these islands. Even the composition of tree crops in the natural / high forests and preponderance of deciduous species such as Padauk, Pyinma, Chuglam, Didu etc., also points out towards moist deciduous nature of the naturally occurring forests of these islands, covering almost half of the total geographical area.

Although no specific studies have been conducted on the regeneration pattern in a forest, after logging operations have been carried out, studies conducted elsewhere do indicate that even in evergreen and moist deciduous forests of tropical zone, the primary colonizers are mostly deciduous species. The regeneration strategy of the evergreen species, which are mostly shade tolerant, is to grow under the canopy of primary colonizers i.e. deciduous species. A recent study conducted by the Department of Environmental Biology, University of Delhi, in Great Nicobar Islands also indicates that the successional stages in a tropical forest eco-system start through a major component of deciduous species. As per this report, within the clear forest area, canopy gaps provide openings for the solar radiation to enhance regeneration cycle, and are thus concurrent to the maintenance of biodiversity. Gap dynamics therefore, provides an insight on the forest succession, which is essential for sustenance of species richness (Babu et. al, 2001). As per this study, during the initial stages of plant succession, light tolerant species grow in fresh blanks. While in the later phases the tree crop is mostly composed of young trees of the middle and top canopy species. The pioneer species like *Macaranga* spp., *Sterculia villosa* etc. have large size leaves to help in enhancing photosynthetic rate. The secondary and climatic species which are either evergreen or semi-evergreen, remain in their seedlings and saplings stage

below the shade of pioneer species. These species are so acclimatised that they can prosper only under the defused light provided by the foliage of pioneer species (Denslow, 1987).

The report concludes that the successional trend depend upon the size and type of forest gaps. The understanding of such relationship is central for evolving an appropriate strategy for extraction of timber in a tropical forest. Incidences of disturbance regime were central to the maintenance of the rich floral, faunal and microbial diversity. The micro environmental factors within the canopy gaps promoted the complex trophic relationships, which is the major motor in species evolution.

This information clearly indicates that the system of tree felling and the regeneration as followed in the Andaman and Nicobar Islands by Forest Department is based on the scientific lines. The creation of gaps by selective removal of middle and top canopy tree species and the resultant regeneration in the logged areas through such opening is essentially being the same as is occurring in a natural gap created in a tropical forest eco-system. The fear that forest composition is being converted into moist deciduous is wrong because in reality, half of our forest coverage occurring in these islands is naturally of moist deciduous nature and even in evergreen forest areas, the initial successional stages as documented by the study conducted in the Great Nicobar Islands also indicates that the primary succession is dominated by deciduous species, which are the primary colonizers. And as the crop matures, the composition gradually changes from predominantly moist-

deciduous/semi-evergreen species to evergreen species. This can be seen in old NRAs of TLD in South Andaman and in Prolobjig of Middle Andaman.

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STATUS OF NATURAL REGENERATION IN TROPICAL FORESTS OF THE ANDAMAN ISLANDS

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Introduction

Regeneration of forests is an important facet of forest developmental process, indicating its composition, structure and stand distribution and is suggestive of the future crop and possible economic returns. Adequacy of regeneration of commercially important tree species signifies the extent of response the standing crop has given to the silvicultural system being practised. In the Andamans, the forest management primarily aims at improving the existing heterogeneous stand of low value by providing better opportunity of growth to valuable tree species under a modified version of Shelterwood system popularly known as "Andaman Canopy lifting Shelterwood System" evolved by Chengappa (1952). Although tropical forests of the Andamans are being scientifically worked for nearly five decades, there is meagre information on its regeneration, hence, during the course of forest inventory carried out from October 1993 to March 1995, an attempt was made to assess the status of regeneration of important tree species. This paper presents findings of regeneration survey undertaken for the assessment of stocking index, stocking per cent by important forest types and Forest Divisions according to utility classes in the operable forest area.

Forests of the Andamans are spread over varying topographical, edaphic and ecological zones and have been broadly categorised into three types for the purpose of stratification i.e. Evergreen, Semi-evergreen and Moist Deciduous.

Evergreen Forests: Giant Evergreen Forests (IA/C1 - Champion and Seth, 1962) are the most luxuriant and have attained climatic climax where the top canopy formed by giant trees is almost entirely evergreen. These forests are found in small areas, near the banks of larger streams, where soils are deep alluvium. Andaman Tropical Evergreen Forests (IA/C2) are not as luxuriant, with top storey rather irregular and incomplete and there is a fair presence of deciduous species. This type is found throughout the Andamans typically as caps to the hills with moist deciduous forests on the slopes. An inferior type of wet evergreen forests i.e. Southern Hilltop Tropical Evergreen Forests (IA/C3) is found on upper slopes and hill tops which are exposed to winds and have more than 3500 mm precipitation. The dominant species in Evergreen Forests are *Dipterocarpus* spp., *Artocarpus chaplasha*, *A. gomeziana*, *Sideroxylon longipetiolatum*, *Planchonia andamanica* etc. At many places *Dipterocarpus* forms pure stands. Canes

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(*Calamus* spp) and climbing bamboo (*Dinochloa andamanica*) are found in many areas.

Semi-Evergreen Forests (2A/C1): These are the dense forests in Andamans, which include both evergreen and deciduous species, often intimately mixed but frequently in groups. These are found on immature alluvial soil sufficiently old and raised above flood level, to be able to progress to climatic climax, but with a good subsoil water supply and well drained soils. Principal species are *Dipterocarpus* spp., *Pterygota alata*, *Pterocymbium tinctorium*, *Terminalia bialata*, *T. procera*, *Albizia chinensis*, *A. procera*, *Artocarpus* spp., *Pterocarpus dalbergioides*, *Lagerstroemia hypoleuca* etc. Usually bamboos are not found.

Moist Deciduous Forests : (3A/C1) These forests occur throughout the Andamans and have typically irregular top storey of predominantly deciduous species, many having very large girths with heavy buttresses, reaching heights of about 40 m. A definitive second storey has more of deciduous species but some evergreen species are also found. The shrubby under growth is evergreen in character. Bamboos and Canes also occur. The underlying rock is sandstone with bands of shale and conglomerate and the soil is often shallow. This type of forest is generally not found above 100 m and is considered to be a stable preclimax to the tropical evergreen forests, determined by the soil. Main species are *Canarium euphyllum*, *Pterocymbium tinctorium*, *Salmalia insignis*, *Tetrameles nudiflora*, *Terminalia bialata*, *T. procera*, *Lagerstroemia hypoleuca*, *Artocarpus chaplasha*, *A. lakoocha*, *Planchonia andamanica* and most importantly *Pterocarpus dalbergioides*. Bamboos -

Oxytenanthera nigrociliata and *Bamboosa schizostachyoides* are also found.

Utility-wise classification of some commercially important species frequently occurring in the Andamans is as below :

Hardwood Plywood : *Dipterocarpus* spp., *Terminalia procera*, *Terminalia bialata*, *Amoora wallichii* and *Perishia insignis*.

Hardwood Ornamental Species : *Pterocarpus dalbergioides* and *Sageraea elliptica*.

Hardwood Constructional : *Albizia lebbek*, *Lagerstroemia hypoleuca*, *Artocarpus chaplasha*, *Terminalia manii*, *Lourea coromandelica*, *Milinsia* spp., *Planchonia andamanica*, *Callophyllum inophyllum* etc.

Softwood Commercial : *Canarium euphyllum*, *Endospermum chinense*, *Pterocymbium tinctorium*, *Planchonella longipetiolatum*, *Salmalia insignis* etc.

Materials and Methods

In order to obtain proper representation of the forest crop, the Survey of India toposheets of 1 : 50,000 scale were divided into grids of 1 1/4' x 1 1/4'. Sampling units were marked by referring to table of random numbers by drawing co-ordinates along the latitudes as per the existing Forest Survey of India methodology. At the intersection of co-ordinates the sample plots were marked in each grid. This ensured representative coverage under different topographic and forest composition. The lay out of sample plots in the field involved referencing with convenient topographical features by use of compass and other traversing equipments. The size of sample plot was 0.2 ha (square in shape, with 44.72 m sides). The sample

plots laid in the field were common for forest inventory as well as regeneration survey. The selection of sample plot size of 0.2 ha was finalized on the basis of the results of pilot survey undertaken over 40 locations, each location having plots of 0.1, 0.2 and 0.3 ha. A standard error of 4.519% was obtained for 0.2 ha plot and it was adjudged most suitable.

In the case of forest inventory, enumeration data were collected from the entire 0.2 ha sample plots, while for regeneration survey, only the North-West quadrant was considered. All the recruits, unestablished and established seedlings were counted and were grouped under commercial and miscellaneous categories. For the present regeneration survey, the guidelines prescribed by Chacko (1965) for "Sample Survey of Natural Regeneration" was followed with slight modification. A sampling unit of 0.05 ha was considered in the present survey instead of 2 m x 2 m plot size prescribed. Further, a sampling intensity of 25% was obtained against a minimum of 20% intensity in the plot size 0.2 to 0.5 ha recommended by Chacko. The enumerated seedlings were classified as Plywood, Constructional wood, Ornamental wood, Softwood and Miscellaneous as per the classification of tree species adopted by Andaman Forest Department. The Establishment Index (EI), Stocking Index (SI) and Established Stocking Percent (ESP) of regeneration were worked out on the basis of formula given by Chacko. The data were analysed by important forest types viz : Evergreen, Semi-evergreen and Moist Deciduous, as well as for Forest Divisions separately.

Data on following lines were collected from the sample plots :

- (i) Established seedlings - Poles and Saplings having a height of 3 m and above but below 10 cm dia.
- (ii) Unestablished seedlings - Saplings of less than 3 m height and below 10 cm dia.
- (iii) Recruitment - Seedlings with one season's growth.
- (iv) Height measurements of 10 unestablished seedlings were recorded according to preponderance of species and the average height of unestablished seedlings was worked out.
- (v) Four unestablished seedlings were considered equal to one established seedling. Thus, if Established (E) seedlings are 1000 and Unestablished (UE) seedlings are 2600, per ha, the Stocking Index (SI) would be :

$$SI = \frac{1000 + 2600/4}{2500} = \frac{1650}{2500} = 0.66$$

Following categories of regeneration are obtained depending on SI:

- (a) Profuse - SI = 1 and above = 2500 seedlings (E + UE/4) and above per ha;
- (b) Adequate - SI = 0.5 to 1 = 1250 to 2500 seedlings (E + UE/4) per ha;
- (c) Inadequate - SI = less than 0.5 = Less than 1250 seedlings (E + UE/4) per ha.
- (vi) Established Stocking Per cent (ESP) is obtained by multiplying Stocking Index (SI) by Establishment Index (EI) and 100. Establishment Index is obtained

by dividing weighted average height by establishment height i.e. 3 m. Procedure for arriving at the weighted average height is given subsequently.

- (vii) The recruitment is not considered important in assessment but recording the number provides the factual position.

In Chacko's formula for assessment of natural regeneration, following notations are used. (The plotwise and utility-wise seedlings were totaled and converted to seedlings per ha).

n = The number of sampling units

e_l = Total number of established plants per ha

u_l = Total number of unestablished plants per ha

h_l = Average height of unestablished plants in the i th sampling unit i.e. the sum of recorded heights in the i th sampling unit divided by the number of plants measured.

H = Establishment height i.e. 3 metres.

$$\text{Weighted av. ht. } \bar{h} = H \frac{\sum e_l + \sum h_l u_l}{\sum e_l + \sum u_l}$$

$$\begin{aligned} \text{(i) Establishment Index (EI)} &= \frac{\text{Weighted av. ht.}}{\text{Establishment ht.}} \\ &= \frac{\bar{h}}{H} \end{aligned}$$

$$\text{(ii) Stocking Index 12 (SI)} = \frac{1}{2500} \sum u_l + \frac{1}{1} \sum e_l$$

$$\text{(iii) Established Stocking Per cent (ESP)} = 100 \frac{EI}{12}$$

In all 419 sample plots, each of 0.05 ha in a grid of 1 1/4' x 1 1/4' were surveyed amounting to an intensity of 0.01%. Relative geographical locations of various Forest Divisions is given in Fig. 1. The distribution of sample plots in different forest divisions by strata has been adequately covered as given in Table 1.

Results and Discussion

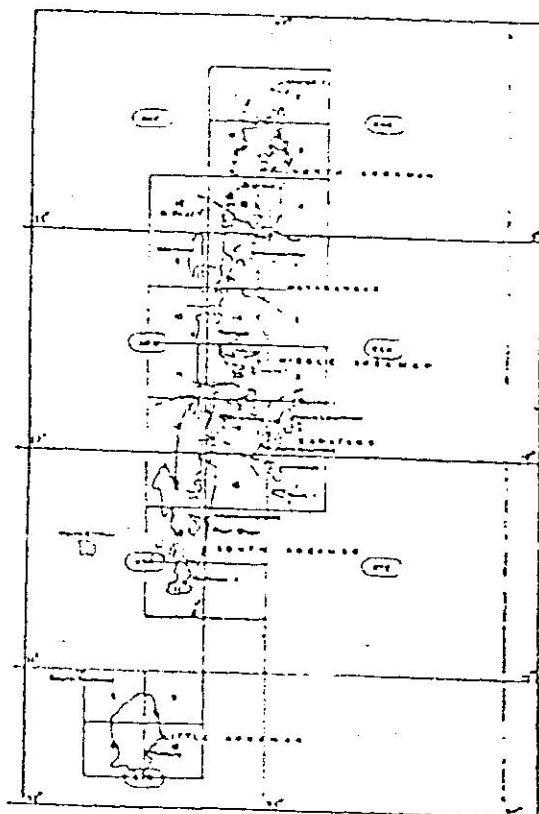
The position of established stocking in respect of commercial category by various utility classes by strata and Divisions has been given in Table 2 and Fig. 2.

It is seen from the table that if one considers only the total number of seedlings per ha, the regeneration in all the forest types and divisions is adequate, in fact, hovering around the profuse category, in most cases. However, for the forest manager, its composition is more important. It is interesting to note that within the commercial category as such, the evergreen stratum contributes maximum of 50% of ply species while share of constructional wood is 35%, ornamental timber species share 6% and soft wood is 9%. In the Semi-evergreen stratum constructional wood is on higher side at 34%, plywood and ornamental species are 21% each but softwood has a fairly good proportion of 24%. The Moist Deciduous type, where Andaman Padauk is a major species, contributes seedlings of ornamental species by 60%, constructional wood by 24%

Table 1
Sample Plots in different Forest Divisions

Division	Stratum			Total
	Evergreen	Semi-Evergreen	Moist Deciduous	
Little Andaman	8	28	-	36
South Andaman	34	27	10	71
Baratang	13	26	15	54
Middle Andaman	12	37	34	83
Mayabandar	12	38	27	77
Diglipur	10	44	44	98
	89	200	130	419

Fig. 1



Location of various Forest Divisions
of Andaman Islands

and softwood 10% whereas plywood is poorly represented by 6%. Bulk of the species in all the three strata are of Miscellaneous category. The Division-wise position reveals maximum of 45% of ply species in South Andaman, and lowest of 12% in Mayabandar. In constructional category Middle Andaman shows 44% and Diglipur contributes lowest of 14%. The ornamental species are highest at 55% in Diglipur Division and least at 2% in Little Andaman where Padauk is practically absent. The distribution of Softwood species in Little Andaman is better than in other Divisions with a share of 37% while Middle Andaman contributes only 4%. It is noteworthy that Miscellaneous species in both strata and Divisions are more than 80% while commercial species are below 20% of the stockings, Middle Andaman showing the least i.e. 9% commercial seedlings, though its stocking is highest at 2991 seedlings per ha.

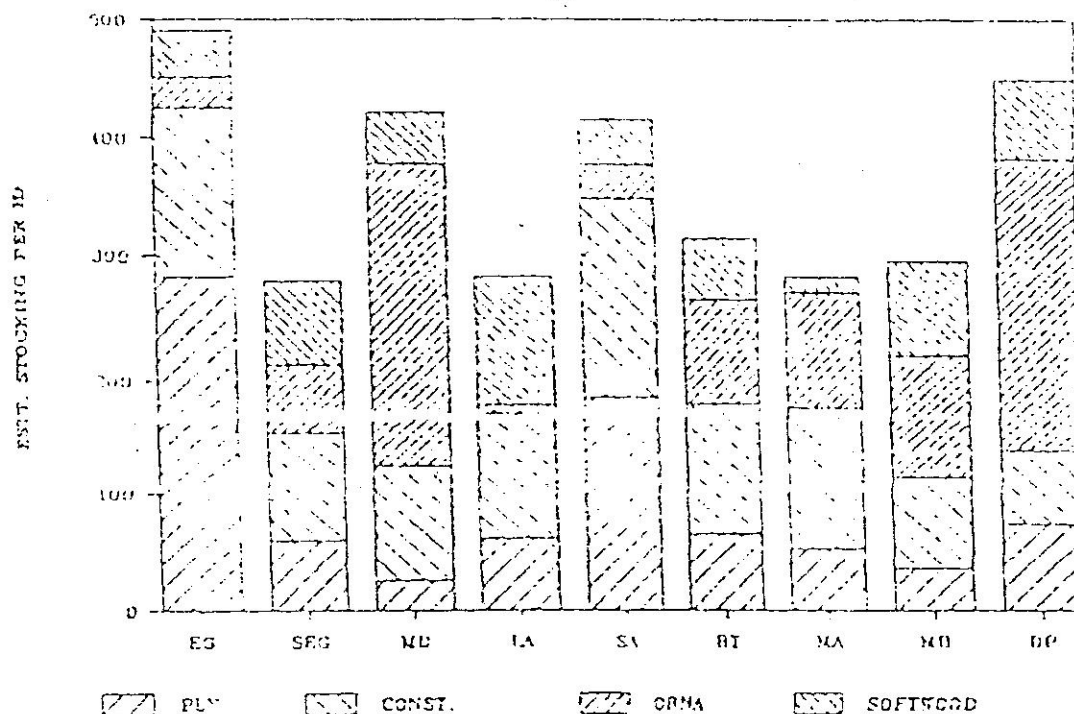
Although the recruits are not of much significance in determining any of the indices, the distribution of recruits has been depicted in Table 3 and Fig. 3 to show the general trend. Within commercial category as a whole, Evergreen stratum has maximum recruitment of 47% of ply species

Table 2
Seedlings per ha according to utility for estt. stocking.

	Andaman	EG	SEG	MD	LA	SA	BT	MA	MB	DP
No. of sample plots	419	89	200	130	36	71	54	83	77	98
Plywood	79	283	59	25	61	185	64	52	35	74
Const.	106	142	95	99	110	164	115	124	79	64
Orna.	113	26	59	255	7	29	87	96	107	245
Softwood	54	39	67	42	106	37	50	12	75	66
Total	352	410	280	421	284	415	316	284	296	449
Misc	1981	2084	1929	1989	1977	1891	1581	2707	1418	2130
G.Total	2333	2494	2209	2410	2161	2306	1897	2991	1714	2579
SE%	3.41	8.69	4.92	5.16	10.49	10.04	9.10	6.98	6.34	6.18

Note (i) Estt. stocking per ha = Established seedlings per ha + Unestt. seedling per ha/4
(ii) EG = Evergreen, SEG = Semievergreen, MD = Moist deciduous.
LA = Little Andaman, SA = South Andaman, BT = Baratang,
MA = Middle Andaman, MB = Mayabander, DP = Dighpur.
(iii) SE% = Standard Error%

Fig. 2



Regeneration status of Comm. Seedlings.
(No. of Estt. Stock seedlings per ha)

Table 3
Recruits per ha in commercial category according to utility

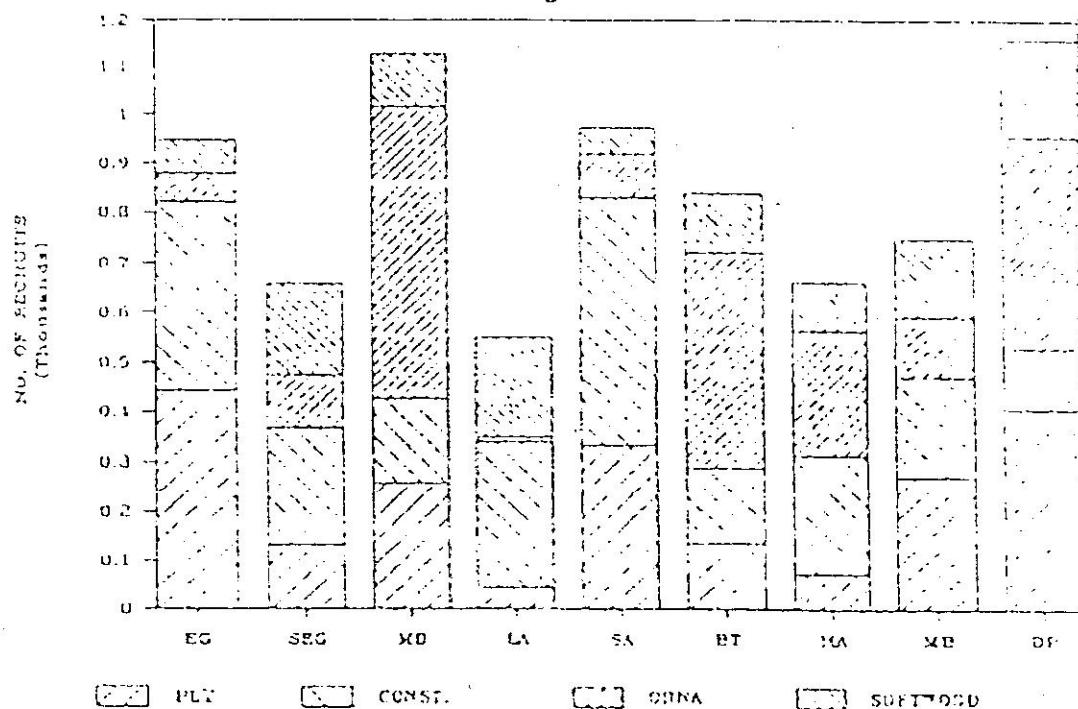
	Andaman	EG	SEG	MD	LA	SA	BT	MA	MB	DP
Plywood	239	443	135	259	44	333	137	73	272	408
Const.	244	379	234	167	297	499	152	240	200	124
Orna.	246	57	106	591	8	89	435	253	123	427
Softwood	138	68	187	111	203	56	116	100	156	202
Total	867	947	662	1128	552	977	840	666	751	1161
Misc.	4235	4551	4062	4286	2355	4236	3065	4997	3498	5439
G. Total	5102	5498	4724	5404	2907	5213	3925	6663	4249	6600

Note (i) EG = Evergreen, SEG = Semievergreen, MD = Moist deciduous

LA = Little Andaman, SA = South Andaman, BT = Bara Tang

MA = Middle Andaman, MB = Mayabander, DP = Diglipur.

Fig. 3



Regeneration status of Comm. Seedlings.
(No. of recruits per ha)

and simultaneously constructional species are also on higher side at 40%. Ornamental species are highest at 52% in Moist

Deciduous type. Softwood distribution is satisfactory in Semi-evergreen type showing 28%. Amongst Forest Divisions, ply species

are maximum in Mayabandar Division at 36%, followed by 35% in Diglipur and 34% in South Andaman while Little Andaman shows a poor picture - just 8%. However, in the constructional category the recruitment is better in Little Andaman representing 54% and South Andaman contributing 51%. In the case of ornamental species, Baratang contributes 52%, Middle Andaman 38%, Diglipur 37% and Little Andaman sharing a meagre 1%. Softwood category in Little Andaman, represents 37% while South Andaman presents a poor picture of 6%. Like established seedlings the recruits also reveal more than 80% in Miscellaneous category.

The S.E.% is rather high at 10.49% in Little Andaman followed by South Andaman at 10.64%, Baratang 9.10%, Middle Andaman 6.98%, Mayabandar 6.34% and Diglipur 6.18%. However, the S.E. for overall analysis is in the region of 3.41% which is well within the reasonable limits.

In case of Forest types the count of established regeneration reveals an S.E. of 8.69% in Evergreen while in Semi-evergreen, S.E. is 4.92% and Moist Deciduous stratum presenting an S.E. of 5.16%.

The regeneration status in all the Forest Divisions has been given for commercial and miscellaneous species by deriving Stocking Index (SI) and Establishment Stocking per cent (ESP) (Table 4, Fig. 4). In respect of commercial species, Diglipur Division shows an SI being highest at 0.180, South Andaman 0.166, Baratang 0.126, Mayabandar 0.119 while Little Andaman and Middle Andaman showing 0.114 each. The Miscellaneous category exhibits profuse regeneration in Middle Andaman at 1.083 while in other Divisions regeneration is adequate. The ESP in commercial category is 12.78% in

Diglipur Division, 11.63% in South Andaman, 8.57% in Mayabandar, 8.32% in Middle Andaman, 8.09% in Little Andaman and 7.81% in Baratang. The Miscellaneous spp. show ESP of 73.63% being maximum in Middle Andaman followed by 57.92% in Diglipur, 57% in Little Andaman, 52.94% in South Andaman, 39.85% in Baratang and 38.56% in Mayabandar. The overall SI and ESP indicate adequate regeneration.

The forest type-wise scenario (Table 5, Fig. 4) in commercial category reveals 0.164 SI in Evergreen type, 0.112 in Semi-evergreen, 0.169 in Moist Deciduous type while for entire Andaman it is 0.140. The ESP is highest at 11.60% in Evergreen stratum, 11.49% in Moist Deciduous and 7.84% in Semi-evergreen. For Andaman the ESP is 9.66% in commercial category. Irrespective of utilities, ESP is highest in Evergreen forests i.e. 68.90%, in Semi-evergreen 60.11%, in Moist Deciduous 62.66% and for the entire Islands it is 62.51%.

The data collected from sample plots falling coincidentally in worked and unworked area are shown in Table 6 and 7, and Fig. 8 for all Divisions and forest types according to various utilities. A comparative position of established, un-established and recruit seedlings for worked and unworked area within the commercial category as a unit is detailed below.

Regeneration status of Plywood species

In Little Andaman, the working of forest has improved the stocking of established seedlings. Against 21% of ply spp. in unworked area the worked forest has 33%. Similarly in South Andaman, unworked area has 40% ply spp. while worked area has 50%. There is slight improvement in Baratang and Mayabandar

Table 4

Regeneration status in the Andmans across the Forest Divisions

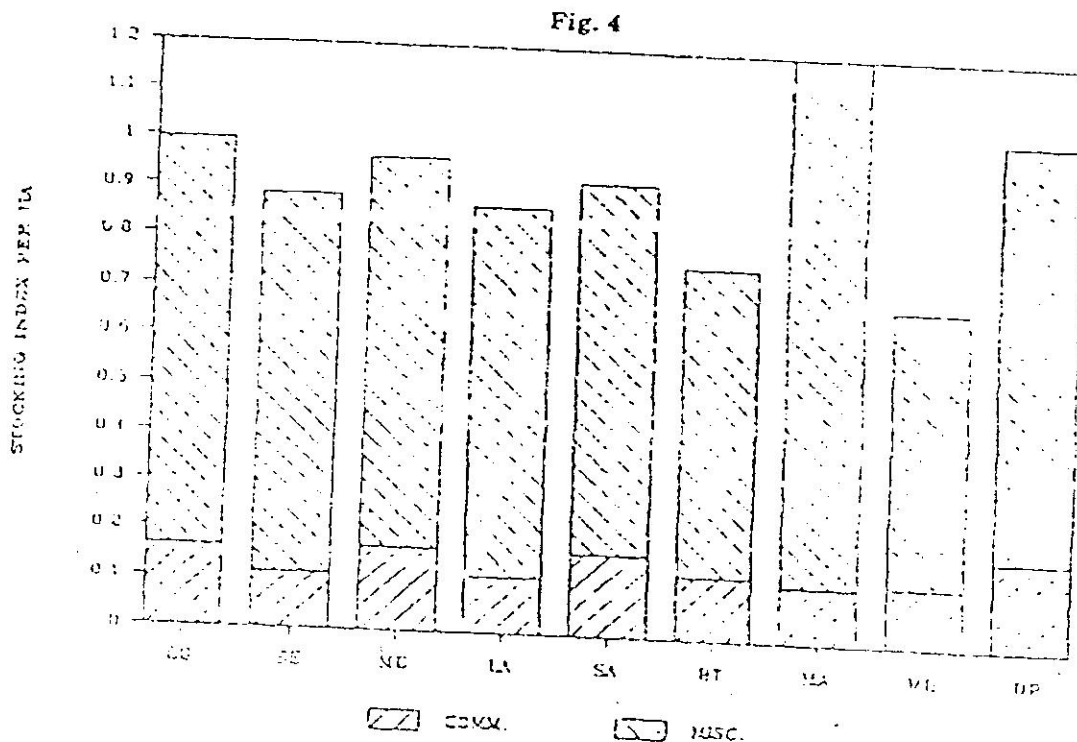
Division	Av.Ht. of Unestt. Seedling (m)	Commercial				Miscellaneous				Total			
		Wt. Av. height of seedling (m)	EI	SI	ESP (%)	Wt. Av. height of seedling (m)	EI	SI	ESP (%)	Wt. Av. ht. of seedling (m)	EI	SI	ESP (%)
L. Andman (36)	1.50	2.14	0.71	0.114	8.09	2.29	0.76	0.751	57.00	2.27	0.76	0.86	65.69
S. Andman (71)	1.30	2.09	0.70	0.166	11.63	2.10	0.70	0.756	52.94	2.10	0.70	0.922	64.57
Baratang (54)	1.30	1.87	0.62	0.126	7.81	1.89	0.63	0.632	39.85	1.88	0.63	0.759	47.82
M. Andman (83)	1.80	2.18	0.73	0.114	8.32	2.03	0.68	1.083	73.63	7.04	0.68	1.196	81.35
Mayabander (77)	1.60	2.15	0.72	0.119	8.57	2.05	0.68	0.567	38.56	2.07	0.69	0.686	47.00
Diglipur (98)	1.70	2.12	0.71	0.180	12.78	2.03	0.68	0.852	57.92	2.04	0.68	1.032	70.14
Total (419)													

Table 5

Abstract of regeneration status per ha for the entire Andman Island for different forest types

Division	Av.Ht. of Unestt. Seedling (m)	Commercial				Miscellaneous				Total			
		Wt. Av. height of seedling (m)	EI	SI	ESP (%)	Wt. Av. height of seedling (m)	EI	SI	ESP (%)	Wt. Av. ht. of seedling (m)	EI	SI	ESP (%)
Evergreen (89)	1.72	2.12	0.71	0.164	11.60	2.06	0.69	0.833	57.48	2.07	0.69	1.0	68.90
Semi-evergreen (200)	1.63	2.09	0.70	0.112	7.84	2.02	0.67	0.772	51.72	2.03	0.68	0.884	60.11
Moist Deciduous (130)	1.56	2.04	0.68	0.169	11.49	1.93	0.64	0.796	50.94	1.95	0.65	0.964	62.66
Total For Andamans (419)	1.63	2.08	0.69	0.140	9.66	1.98	0.66	0.792	52.27	2.01	0.67	0.933	62.51

N.B. (i) No. of sample plots are given in the parentheses. (ii) EI = Estt. Index, SI = Stocking Index and ESP = Estt. Stocking Percentage
 (iii) Fully stocked area is assumed to have 2500 seedling/ha and is represented as SI=1



Division, in ply species, while in Middle Andaman the picture is not clear.

In the unestablished category for worked areas there is definite improvement in Little Andaman from 19% to 21%, in South Andaman from 30% to 41% and Mayabandar Division from 18% to 35% whereas, in Baratang the position is not satisfactory, as the percentage has gone down from 37% to 18% and in Middle Andaman it is static at 13%.

In recruits category the position in Little Andaman, South Andamans and Baratang has improved from 7% to 15%, 26% to 40% and 6% to 27% respectively but the situation in Middle Andaman and Mayabandar shows fall in regeneration from

14% to 6% and 38% to 24%, respectively.

Regeneration status of Constructional wood species

The established regeneration has improved in worked areas favourably responding to silvicultural treatment in Little Andaman i.e. 47% in worked area against 30% in unworked and in Baratang 47% against 34% in unworked area. In South, Middle and Mayabandar Divisions there is a decline in worked areas as compared to unworked areas i.e. 33% from 41%, 38% from 48% and 22% from 31%, respectively.

In the unestablished category, Little Andaman shows better picture of 75%

representation in worked forests compared to 50% in unworked as also in Baratang Division at 47% against 34%, whereas there is slight fall in South Andaman, Middle Andaman as well as in Mayabandar Divisions, at 46% from 56%, 45% from 49% and 13% from 19%.

In recruits category there is fall of regeneration in South Andaman and Baratang from 62% to 43% and from 24% to 12% respectively while in Little Andaman, Middle Andaman and Mayabandar Divisions the situation has improved i.e. from 50% to 81%, from 34% to 40% and from 25% to 36%, respectively.

Regeneration status of Ornamental species

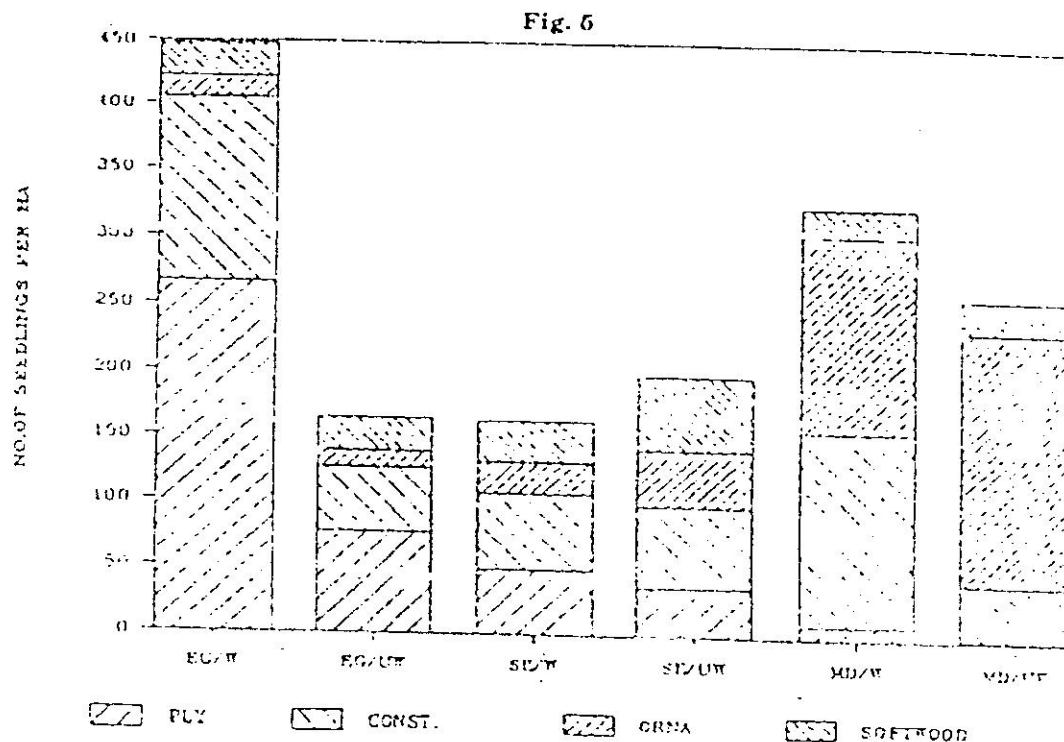
In all the three categories of regeneration the contribution of Little Andaman is poor owing to the fact that Little Andaman has very poor representation of ornamental species in the overwood. In South Andaman, Middle Andaman and Mayabandar Divisions the established regeneration category shows improvement in worked area than in unworked i.e. 7% to 3%, 40% to 26% and 56% to 34% but in Baratang position is not satisfactory as there is decline from 39% to 16%. In the unestablished category, South Andaman, Baratang and Middle Andaman show slight improvement in worked areas at 10% to 8%, 37% to 33% and 44% to 23% while in Mayabandar there is slight fall from 34% to 28%. As for recruits there is marginal improvement in South Andaman and Baratang, while in Mayabandar Division, there is decline in the population from 18% to 7%. However, in Middle Andaman the ornamental spp. have increased from 28% per ha to 53% per ha in worked forests. Diglipur Division, where most of the forests are unworked shows a

maximum of 58% established regeneration in ornamental category, 47% in unestablished category and 37% in recruits.

Regeneration status of Softwood species

In Little Andaman the established regeneration has abruptly fallen from 46% to 20% in the worked area. Similarly there is decline in South Andaman, Middle Andaman and Mayabandar Divisions from 15% to 10%, 2% to 1% and 27% to 10% while there is slight increase in Baratang Division from 51% to 52%. The regeneration of unestablished category also shows sudden fall from 31% to 4% in worked area in Little Andaman. Similarly in South Andaman and Mayabandar there is drop in the regeneration. In Baratang there is a little improvement. However, the position in Middle Andaman is critical as in the worked areas unestablished regeneration of softwood species is practically absent whereas in unworked areas it is 16%. The recruits in Little Andaman have drastically fallen from 41% of unworked to 4% in worked forests. Whereas in South Andaman and Mayabandar there is some improvement in stocking at 8% to 3% and 33% to 19%, in Baratang there is considerable decline from 19% to 9%. The trend in Middle Andaman is the same as in unestablished category by conspicuous absence of recruits. As seen, the position of regeneration of softwood species is not satisfactory. Possible reason may be inadequacy of seeding trees in worked areas.

In Miscellaneous category it is seen that in the worked area the proportion of miscellaneous species in all the three categories of regeneration has generally decreased except a few categories in some Divisions.



Regeneration status of Estt. Comm. Seedlings in worked and unworked areas by F. types

Regeneration status in different Forest types

The Forest type-wise scenario (Table 7, Figs. 5 to 7) of ply species in Evergreen reveals improvement in established category from 47% to 60% in worked areas, while in unestablished category there is an increase from 33% to 47% in worked forests but recruits show slight fall from 48% to 45%. In the constructional category there is slight improvement in established, unestablished, as well as in recruits. It is pertinent to observe that ornamental as also softwood categories reveal fall in overall regeneration by around 4% to 10% in worked areas, though the percentage occurrence itself is only from 7% to 15% in unworked areas.

In semi-evergreen type, regeneration of ply and constructional categories show improvement in worked areas vis-a-vis unworked areas. Established seedlings in ply category have increased from 19% to 30%, unestablished from 16% to 29% and recruits from 19% to 25%. In constructional category, established, unestablished and recruits seedlings have increased from 31% to 36%, 36% to 39% and 35% to 38% i.e. the rise is marginal. In ornamental and softwood categories, there is declining trend. In ornamental category, in the worked area, established seedlings have declined as against unworked from 22% to 15%, unestablished from 25% to 16% and recruits from 16% to 15%. In softwood category also established seedlings have declined from 29% to 20%, unestablished from 21% to 15%

and recruits from 30% to 22%.

In Moist Deciduous type of forest in ply category, established seedlings have increased from 1% to 3% in worked areas, but declined in unestablished and recruits category from 20% to 2% and 27% to 8%. In constructional category, there is overall improvement from 15% to 45% in established seedlings, from 13% to 33% in unestablished category and from 13% to 21% in recruits category in worked areas. In ornamental category, whereas established seedlings show a decline from 74% to 45%, unestablished seedlings show rise from 52% to 61% and recruits also show rise from 47% to 70%.

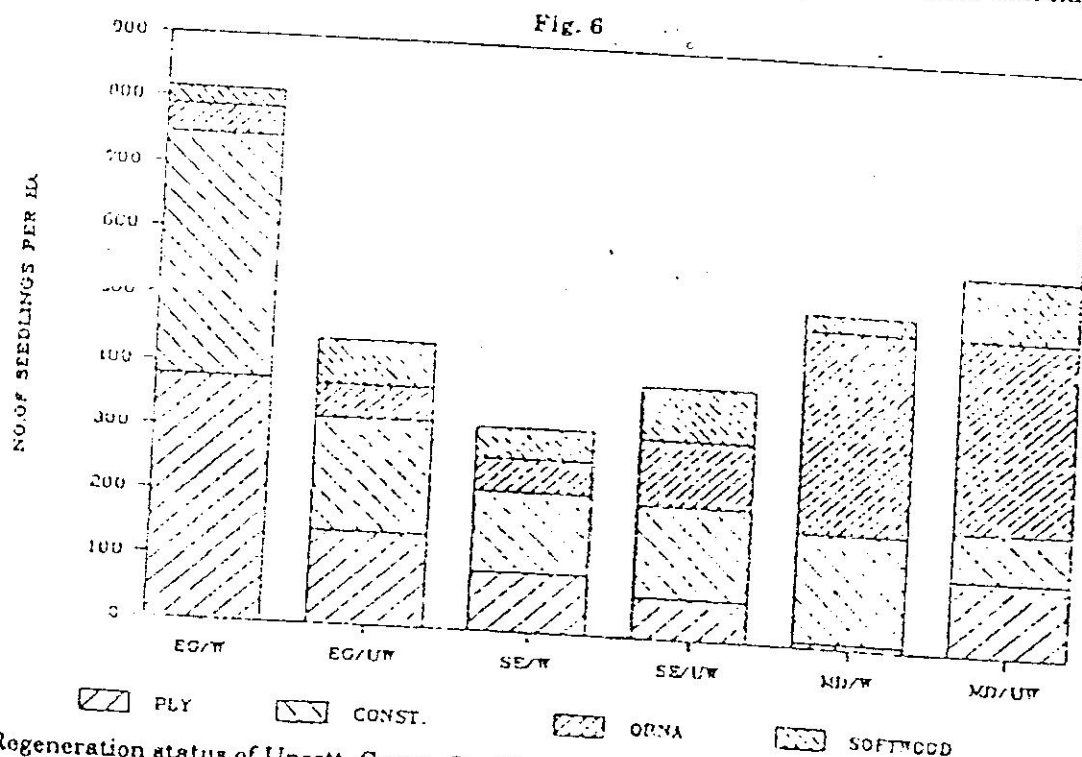
The representation of softwood category itself is less in this stratum.

However, the decline in worked area as against unworked area is noteworthy. In case of established seedlings, the decline is from 10% to 6%, in unestablished seedlings it is from 16% to 5% and in recruits it is from 12% to 1%.

It is seen that constructional category has benefitted because of working whereas ornamental and softwood species have declined possibly because of inadequate number of seed bearers.

Discussion

The Tropical forests of Andamans are primarily of mixed tree species. There are about 200 tree species found in the Bay Islands of which only 40 are commercially harvested. The worked forests still have a



Regeneration status of Unestt. Comm. Seedlings in worked and unworked areas by F. types

Table

No. of seedling (Established) (E), Unestablished (UE) and Recruits (R)

	Plywood			Construction			Ornamental		
	E	UE	R	E	UE	R	E	UE	R
L. Andaman									
Worked (5)	60	100	68	84	360	380	0	0	0
Unworked (31)	43	57	40	61	154	284	8	2	8
S. Andaman									
Worked (44)	183	243	362	122	275	366	24	60	85
Unworked (27)	59	123	288	61	233	676	5	33	95
Baratang									
Worked (28)	46	119	217	125	199	99	42	239	424
Unworked (26)	10	168	52	28	91	209	32	151	445
M. Andaman									
Worked (38)	54	47	37	102	151	229	106	156	303
Unworked (45)	28	54	103	57	209	251	31	96	210
Mayabandar									
Worked (18)	17	107	108	33	40	164	82	88	23
Unworked (59)	18	59	322	74	65	210	79	113	151
Diglipur									
Unworked (98)	43	124	408	40	98	124	172	292	427

N.B.(i) No. of sample plots considered for the study are given in the parenthesis.

large number of miscellaneous species in the top canopy as their removal was not silviculturally desired in the initial stage, which otherwise would have created large openings in the canopy. besides this, their removal was also not economical in the past. The contribution of these miscellaneous species towards regeneration thus had a pronounced effect. However, the marginal improvement in the regeneration of ply species in Evergreen and Semi-evergreen strata is obviously due to preponderance of *Dipterocarpus* and few

other ply species amongst dominants. While judicious manipulation of canopy and spatial distribution of seed bearers of economic species marginally increased the regeneration at places, the excess and selective removal of commercial trees left behind broken canopy, resulting in the preponderance of miscellaneous species.

The regeneration survey revealed a satisfactory position as the Stocking Index for the entire Andamans is 0.933, EG

6

per ha for worked and unworked areas for forest divisions of Andmans

Softwood			Total			Miscellaneous			Grand Total		
E	UE	R	E	UE	R	E	UE	R	E	UE	R
36	20	20	180	480	468	620	596	424	800	1076	892
94	94	232	206	306	565	1607	1793	2667	1813	2100	3232
36	20	72	365	598	905	1348	3017	3838	1713	3615	4744
23	27	30	148	416	1088	1112	1739	4861	1260	2155	5949
53	87	69	266	644	808	891	2180	2592	1157	2824	3401
12	44	107	87	151	273	353	3153	3616	1023	3608	4489
4	1	1	265	354	570	1447	5001	5946	1712	5355	6516
3	66	183	118	425	747	1223	5973	4196	1341	6398	4944
14	76	151	147	310	456	737	2237	3288	883	2547	3743
63	98	158	235	336	842	987	1877	3563	1221	2212	4404
40	104	202	295	619	1161	1218	3645	4539	1513	4264	6600

stratum showing 1, SEG showing 0.884 and MD stratum showing SI as 0.964 (Table 5). In the worked areas, particularly Evergreen and Semi-evergreen strata, there is definite improvement of plywood species but marginal rise in constructional category. However, the declining trend in ornamental as well as in softwood category is quite conspicuous. While the Moist Deciduous stratum shows no significant improvement of ply species, there is drastic decline in ornamental and softwood category. Whereas constructional category shows remarkable

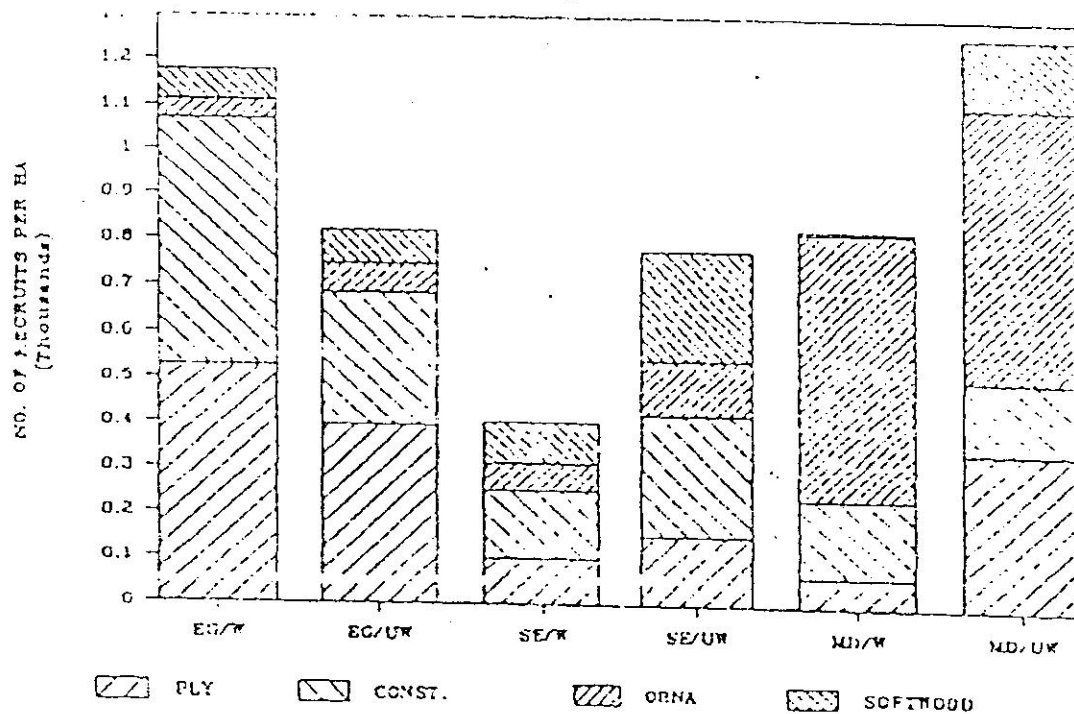
improvement. The results of regeneration survey indicate a proportion of about 20% to 80% between commercial and miscellaneous species, hence a thorough review of the silvicultural practices with periodic monitoring of regeneration is called for to enhance the regeneration of utility species though keeping pace with present harvesting schedule. A conservative working may be necessary in harvesting ornamental and softwood species with simultaneous suitable regeneration practices.

Table
No. of seedlings per ha in worked

	Plywoods			Construction			Ornamental		
	E	UE	R	E	UE	R	E	UE	R
Andaman									
W (133)	90	137	193	104	195	251	58	127	208
UW (286)	34	97	260	53	126	240	84	155	264
EG									
W(32)	26.8	379	530	138	366	538	15	43	44
UW(57)	77	145	395	49	176	290	13	52	64
SE									
W (62)	49	93	100	58	125	153	24	51	59
UW (138)	37	64	151	62	141	270	43	103	126
MD									
W (39)	10	9	65	147	168	173	148	314	580
UW (91)	2	115	343	41	74	165	193	300	595

N.B: (i) EG (Evergreen), SE (Semi-evergreen), MD (Moist Deciduous)

Fig. 7



Regeneration status of Recruits in worked and unworked area by F. types

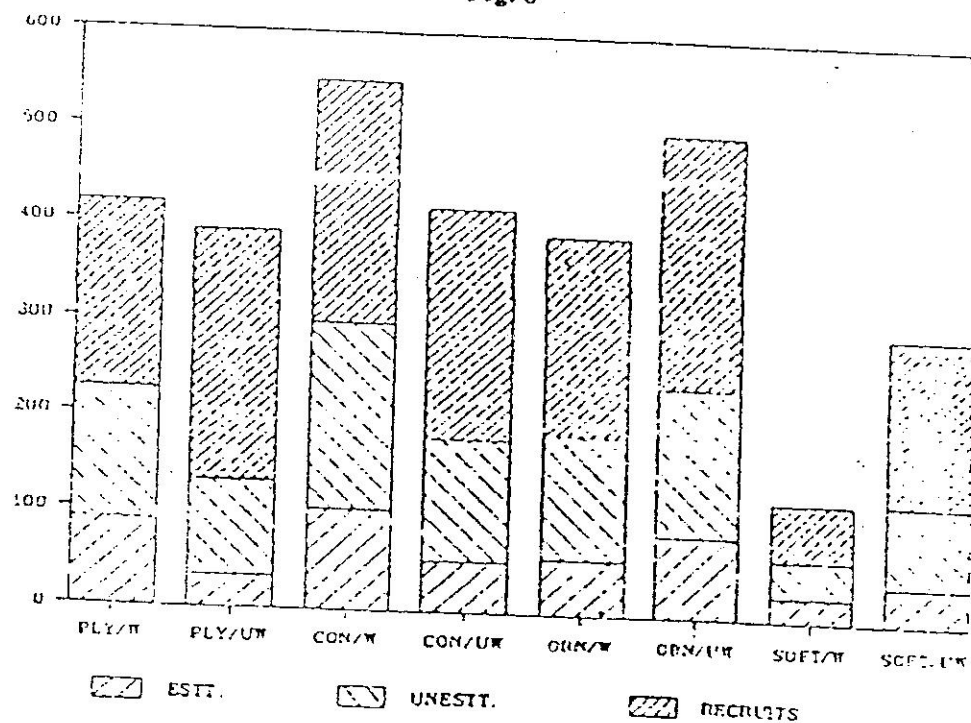
7

and unworked areas by forest types

Softwood			Total			Miscellaneous			Grand Total		
E	UE	R	E	UE	R	E	UE	R	E	UE	R
27	36	59	279	495	711	1170	3211	3976	1449	3706	4687
40	83	175	211	461	939	1180	3222	4356	1391	3683	5295
26	26	65	447	814	1177	1094	3334	3805	1541	4148	4982
26	69	70	165	442	819	1295	3506	4970	1460	3948	5789
32	48	89	163	317	401	1091	2818	3898	1254	3135	4299
57	84	231	199	392	778	1197	3169	4136	1396	3561	4914
21	24	7	326	515	825	1359	3735	4237	1685	4250	5062
25	91	255	261	580	1258	1078	3122	4306	1339	3702	5564

(ii) No. of sample plot considered for the study as given in the parenthesis

Fig. 8



Regeneration status of Estt., Unestt. and Recruits in worked and unworked areas in A&N Islands

Acknowledgements

Authors deeply appreciate the work carried out by the field staff of Central Zone of Forest Survey of India, Nagpur who have collected the data assiduously under adverse field conditions.

SUMMARY

The Tropical Evergreen Forests are highly sensitive to disturbance in the original crop composition under natural environment. Proper manipulation of canopy and judicious application of silvicultural systems may maintain the balanced composition. The regeneration survey revealed that though the regeneration status as such is satisfactory in the tropical forests of Andamans, change in stocking under the present management practices indicate decline of ornamental and softwood species in some Forest Divisions and fall in ply species in some localities. A conservative approach in exploitation schedule and improving future crop by adequate regeneration of desired species compatible to ecosystem needs should be adopted in such areas. Overall position of total seedlings per ha shows marginal improvement in worked areas than in unworked areas, most of which are from miscellaneous category. Although the silvicultural system practised in Andaman forests primarily aims at conversion to uniform crop by few identified economic tree species it is more than four decades old and hence the system needs immediate critical review in the context of ground reality obtained thereon.

अंडमान द्वीपों के उष्णदेशीय वनों में प्राकृतिक पुनर्जनन की स्थिति

सतीश एलकुंचवार, पी०पी० सावंत व एस०एन० राय

सारांश

उष्णदेशीय सदा - हरित वन प्राकृतिक पर्यावरण की मूल सत्य संरचना में विघ्न पड़ने के प्रति अत्यधिक प्रभावशील होते हैं। विज्ञान का समुचित प्रयत्न और वनसंवर्धन प्रणालियों का समझभूत से उपयोग में लाकर इस संतुलित संरचना को बचावत धनाए रखा जा सकता है। इनका पुनर्जनन संरक्षण करने पर पता चला कि यद्यपि उष्णदेशीय वनों की पुनर्जनन स्थिति में तो संतोषजनक है किन्तु वर्तमान प्रयत्न प्रक्रियाओं के अधीन वनों में परिवर्तन होने से कुछ वन मण्डलों में सजावटी और मृदुकाष्ठ जातियों में कमी आती जा रही है और कुछ स्थानों में परतकाष्ठ जातियों में गिरावट आई है। ऐसे क्षेत्रों में समुपयोजन तालिका में रुद्धिगत दृष्टि अपनाकर और भविष्य के वनों में परिवर्तन करने के लिए प्रतिस्थापन नीतियों की जरूरतों सुलभत बांझित जातियों का पर्याप्त पुनर्जनन करना अपनाया जाना चाहिए। प्रति हेक्टेयर पर कुल पौधों की समग्र स्थिति से भी काम न कराए गए क्षेत्रों की तुलना में काम कराए गए क्षेत्रों में थोड़ा सा ही सुधार दिखाई पड़ता है जिनमें से अधिकांश क्षेत्र फूटकर श्रेणी के अन्तर्गत हैं। हालांकि अंडमान द्वीपों में व्यवहार की जा रही वनसंवर्धन प्रणालियों का मुख्यतः कुछ आर्थिक महत्व पड़वानी हुई प्रकाष्ठ जातियों को समरूप प्रणाली पर लाने का उद्देश्य है, ये चार दशकों से भी ज्यादा पुरानी हो गई हैं इसलिए वहां ही वर्तमान भूमि वास्तविकताओं के संदर्भ में इन प्रणालियों की तत्काल समालोचनापूर्ण समीक्षा कराने की आवश्यकता है।

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NOTE ON UTILISATION OF FOREST RESOURCES IN A. & N. ISLANDS – PAST LEVELS & PRESENT TRENDS

Timber, the main resource from the forest is essential for meeting the local needs. In the early sixties when the local demand was growing due to settlement process and development work, to make the logging operation cost – effective, export of timber to mainland market was essential. Following were the exploitation level of timber resources in the early sixties.

Table –1 : Yield of timber in early 60s in A.& N. Islands

Year	Annual yield in (Cbm.)
1962-63	90,754
1963-64	83,154
1964-65	74,383

The bulk of the timber was consumed by the two Govt. Saw Mill at Chatham and Betapur as the plywood factories were just being established during this time. Following table gives the break up of round logs utilisation in the Island:-

Table-2 : Timber use in early 60s

Year	Chatham Saw Mill (in cbm.)		Betapur Saw Mill		Ply wood/Matchwood Industries			
	Intake	Out turn	Intake	Out turn	WIMCO Port Blair	ATI B/Flat	AWP Long Island	JIT B/tal.
1962-63	28,678	15,356	2,774	1,359	5,622	5,723	-	-
1963-64	29,447	16,184	2,932	1,111	4,117	7,594	3,434	-
1964-65	35,583	17,753	2,672	1,273	1,134	3,763	2,336	1,541

As there was shortage of timber in India, even in those days, Andaman Islands played an important role in catering to the requirement of sawn timber, plywood factories and Govt. organisations like Railways; Ordnance Factories etc. The figures regarding availability of forest in the islands vis a vis Indian mainland and the world in 1961, reflects the importance of forest resources specially timber and their sustainable use, in the islands.

Table-3 : Comparison of Forest Resources in 1971

Region	Forest as % of land area	Forest area per capita (ha)
Andamans	73 (Recorded)	9.38
India	24 (Recorded)	0.22
World	33	1.60

Due to increasing population, upgradation of capacity of the major plywood factories and establishment of small scale industries for utilisation of forest resources, such as timber, cane and bamboo, the level of exploitation of forest resources increased during 1970's and 1980's, when the total exploitation level reached up to 1,40,000 cbm. To increase the efficiency of the Govt. working in the sector, Forest Corporation was also established in the island in 1977.

However, with increasing awareness about the conservation of natural resources and protection to bio-diversity, the utilisation pattern of our timber resources has taken a distinct shift in the late 80s and 90s. The export of logs to the Indian Railways, the major user of Andaman timber was totally stopped in 1989 and all private logging operation were stopped in 1988 and the private coupe system was gradually abolished by 1990. As the logging operation remained selective; using elephants, man power and light machineries, the cost of Andaman timber became more as compared to international market, where, in most cases clear felling and use of heavy logging machineries were being used. However, no compromises were made on this front in Andaman and the practice of minimum disturbance to the forest ecosystem and optimum use of available timber was and is still being followed. The following table clearly shows that even after continuous forestry operation for more than 120 years, the recorded forest cover has increased to 86% and the actual forest cover at present is 92 %, as per FSI State of Report 1999. The major shift/loss however, is in the form of per capita availability of forest which has come down to 2.14 ha./capita from 9.38 ha./capita in last 40 years, due to six times increase in human population in these Islands from 1961 to 2001.

Table-4 : Comparison of Forest Resources in 1999

Region	Recorded Forest as % of land area	Actual Forest cover	Per capita forests (ha.)
Andaman	86.93%	92.21%	2.14
India	23.28%	15.7%	0.06
World	-	26.6%	0.69

Source - FSI (1999)

Following table shows the level of exploitation of timber resources in the islands during last five years, which indicates the decreasing level of use of timber by the local wood based industries.

Table-5 : Consumption level of round logs between 1996- 2000.

Page Number 1996-2000.

Category	No. of Units	Licensed (in cbm.)	Actual Capacity (cbm.)	CONSUMPTION (in cbm.)					Employment (No)
				1996-97	1997-98	1998-99	1999-2000	2000-2001	
MEDIUM SCALE INDUSTRIES									
Plywood Industries	3	91,110	66,148	60,886	53,015	35,601	13,752	11,509	1899
SMALL SCALE INDUSTRIES									
Pencil Slat	6	11,400	3,871	2,480	1,234	706	439	1,192	223
Cottage-match	3	14,800	11,806	1,459	1,833	1,078	2,830	1,019	198
SAW MILLS									
Private Saw Mill	22	35,564	8,308	15,488	7,594	5,713	11,582	11,314	226
Govt. Saw Mill	2	29,000	18,000	17,657	11,684	1,4464	12,173	14,495	975

A total ban on export of logs to mainland was affected in 1995 as the local industries demanded that first there needs be met. But as the above figures show that the local industries, specially the medium scale, failed to utilise there capacity and their intake of logs came down from 60,886 cbm. in 1996-97 to 11,509 cbm. in 2000-2001. As there was a ban on export of logs, the department also reduced its felling operation

which came down from a high of 1,35,523 cbm. in 1994-95 to 77,097 cbm. in 1997-98 and further to 40,068 cbm in 2000-2001

Due to increasing cost of local timber and cheaper cost of imported timber, the local plywood factories even went to buy cheaper imported timber. However due to various market factors, WIMCO the oldest private mill, was closed down in early 90's. In recent times ATI and JTP has also closed down. Following table indicates the trends in use of timber in the islands

Table- 6 : Trend in timber use between 1993-2001

Year	Forest Dptt by Departmental Agency	Private parties on payment of Royalty	Free and concessional Royalty	Forest Plantation Development Corpn	Total
1993-94	65,148	15,378	1,022	48,588	1,30,136
1994-995	64,393	21,490	1,348	48,292	1,35,523
1995-96	65,300	11,551	727	49,001	1,26,579
1996-97	59,760	3,728	698	43,583	1,07,769
1997-98	49,439	-	157	27,501	77,097
1998-99	35071	3	42	27,507	62,623
1999-2000	25603	-	22	22,009	47,634
2000-2001	18002	-	6	22,060	40,068

Table-7 : Timber Imported in A. & N. Islands

Year	Quantity (No. of Logs)	Quantity (Cbm)	Category	Country
1997-98	5061	17414.080	Plylogs	Malaysia
1998-99	12721	22,200.884	Plylogs & Hardwood (8.6%)	Malaysia & Singapore
1999-2000	7630	18086.380	Plylogs & Hardwood (22%)	Malaysia & Myanmar
2000-2001	1427	4823.162	Hardwood (100%)	Malaysia & Myanmar

Even then the industries failed in lifting the logs and a large quantity of them is still lying unutilised at various depots and their quality has deteriorated over the years. To avoid any further loss to the timber and due to limited local market, for logs and sawn timber the administration recently lifted the ban on export of logs in Sept. 2001.

Apart from plywood, the other major wood product in the islands is sawn timber. At present there are two Govt. Saw Mills and 25 operational Saw Mills in the islands. Following are the production level of sawn timber and their disposal -

Table-8: SAWN TIMBER PRODUCTION IN THE TWO GOVT.SAW MILLS (in cbm.)

Year	Production (in cbm)	Local sale				Export		
		Govt. Dept.	Private	Forest Dept.	Total	Kolkata	Chennai	Total
1996-97	9000	1,014	3,750	1,911	6,675	246	601	847
1997-98	6952	1,141	4,654	719	6,514	252	298	550
1998-99	6507	1,264	4,185	459	5,908	-	127	127
1999-2000	5515	1,224	4,626	369	6,219	-	103	103
2000-2001	6199				5,360			545

Table -9: PRODUCTION OF SAWN TIMBER BY PRIVATE SAW MILLS

Year	Production (Cbm)	Local sale (Cbm)	Export (Cbm)
1998-99	5736	4554	884
1999-2000	4878	4814	515
2000-2001	5153	5029	532

Thus it is clear, that over the year the exploitation level of timber resources have come down drastically in the islands. The major factor in this reduction is increasing cost of Andaman Timber, due to use of less damaging logging techniques, selective felling of trees and additional investment in the form of three years of Natural Regeneration operation in each felled area, so that the forest cover is brought back through aided natural regeneration under Andaman Canopy -lifting system.

It is also clear that there is inherent demand for sawn timber for local consumption of about 11,000 cbm, which will increase at an annual rate of about 2%. keeping in view the past trend in demography and developmental activities. However, inspite of this limited local demand and the highly selective nature of felling, even then to meet the local requirement, the Forest Department and the Forest Corporation will have to fell a minimum number of trees, per hectare to keep the logging operation at effective cost / economic level. Also certain species such as Gurjan and soft wood, which do not have much local demand, will have to be exported to the mainland markets. However, we need some time to analyse this surplus. In the mean time to meet the local demand of timber and to utilise the available felled timber at various forest depots, the ban on use of these logs needs to be lifted at the earliest, failing which precious resource will further deteriorate and losses will increase.

Consumption pattern of Sawn Timber:

1. Wooden Furniture Units : There are 176 number registered wooden furniture making units in these islands, with a total capacity of 1624 cbm. As per an estimate of the Industries deptt., these units are giving direct employment to about 848 persons. Most of the local furniture is made of Padauk timber which is sold only through the two Govt. saw mills at Chatham and Betapur. The average annual sale of Padauk sawn timber during last three years from these saw mills is 1529 cbm., which is also corresponding to the total capacity of the registered furniture making units. On an average a small quantity of about 74 cbm. of Padauk sawn timber has been exported to the mainland annually during the last three years.
2. Constructional Purpose: About 9500 cbm. hardwood sawn timber is currently being used locally mostly for building construction and other purpose and about 850 cbm. hardwood sawn timber has been exported to mainland, annually during last three years.

Consumption of non timber forest produce (NTFPs)

Apart from sawn timber, other major forest resources being used for local consumption are small timber such as poles, ballies, bamboo, cane and fuel wood. The current level of use of kerosene (860 kilolitre per month) is covering about 80% human population (about 72,000 families). This has been arrived on the assumption that all the 81,357 family units having Ration Cards in the islands are having on an average 4 family members. As per the IOC norms, 12 lit. of kerosene is to be supplied monthly, to a family having more than four members.

While there are total 29,623 LPG connections in the islands, which is covering about 34% human population. Here again the assumption is that each family is having on an average 4 family members. This means that most of the human population in the island is having the facility of kerosene and gas as well. However, still on an average about 30,000 cbm. of fuel wood is being utilised annually in the islands. Following table indicates level of use of different categories of NTFPs in the Island.

Table-10 : Use of NTFPs in A. & N. Islands

Year	Bamboo (Nos.)	Cane (Rmt)	Thatch (Nos.)	Posts (Nos)	Ballies (Nos.)	Fuel wood (Cbm)
1996-97	12,82,601	7,84,182.	79,57,285	56,800	2,37,748	40,789
1997-98	13,61,577	6,17,132	42,55,613	53,656	2,03,108	30,443
1998-99	12,00,275	58,64.10	43,49,423	9,906	2,11,244	30,671
1999-2000	12,43,139	38,22.54	47,91,656	13,980	2,02,857	25,692
2000-2001	16,81,982	64,35.68	59,72,341	19,445	2,70,628	32,816

Ref:

(i) State of Forest Report 1999, FSI, Dehradun - 2000.

ISLAND WISE AREA DECLARED AS TRIBAL RESERVE
IN A & N ISLANDS

SL No	NAME OF ISLAND	NAME OF TRIBES	TOTAL GEOGRAPHICAL AREA (in Sq. Kms)	TRIBAL RESERVE AREA (in Sq. Kms)
1.	Battimalv	Nicobarese	2.07	2.07
2.	Bampoka	Nicobarese	13.46	13.46
3.	Blutt	Jarawas	1.14	1.14
4.	Car Nicobar	Nicobarese	126.91	126.91
5.	Chowra	Nicobarese	8.28	8.28
6.	Great Nicobar	Shompenes Nicobarese	1044.54	853.19
7.	Katchal	Nicobarese	174.30	174.30
8.	*Kondul	Nicobarese	4.66	4.66
9.	Kabea	Nicobarese	0.51	0.51
10.	Camorta	Nicobarese	188.03	188.03
11.	Little Nicobar	Nicobarese	159.02	159.02
12.	Little Andaman	Onge	731.57	403.37
13.	Middle Andaman (Main Island)	Jarawas	1535.80	338.69
14.	Meroe	Nicobarese	0.51	0.51
15.	Menchal	Nicobarese	1.29	1.29
16.	North Sentinal	Sentinalese	59.67	59.67
17.	Nancowry	Nicobarese	66.82	66.82
18.	Pillos Millo	Nicobarese	1.29	1.29
19.	Strait Island	Andamanese	6.01	6.01
20.	Spike	Jarawas	11.70	11.70
21.	South Andaman (Main Island)	Jarawas	1347.97	560.66
22.	Teressa	Nicobarese	101.26	101.26
23.	Tilangchong	Nicobarese	16.83	16.83
24.	Trinket	Nicobarese	36.26	36.26
25.	Trak	Nicobarese	0.25	0.25
26.	Treis	Nicobarese	0.25	0.25
27.	South Sentinal	Nicobarese	1.60	1.60
28.	Brother	Nicobarese	1.99	1.99
29.	Sister	Nicobarese	0.36	0.36
30.	Passage	Nicobarese	0.62	0.62
31.	Cinque	Nicobarese	9.53	9.53
TOTAL			5645.20	3150.65

SOURCE. 1. ASSISTANT COMMISSIONER (FOREST SETTLEMENT)
2. OFFICE OF THE DEPUTY DIRECTOR (CENSUS OPERATION)
3. ANDAMAN ADIM JANJATHI VIKAS SAMITY

NOTE. * Includes unreserved area of an field of Car Nicobar and
Port area of Car Nicobar and Kamorta

**NOTE ON LEGAL AND INSTITUTIONAL
CONSTRAINTS**

i) *Right of ownership of Naturally growing trees outside notified forests :-*

The right of ownership over natural trees standing on allotted land of an occupancy right holder has been the focus of controversy from time to time. It arises because of the dual provision in the A&N Islands LR & LRR, 1966. Section 156 (4) of the said regulation states that:-

"All commercial trees standing in the holding of an occupancy tenant shall belong to the Govt. and it shall be the duty of the govt. to remove or cause to be removed such trees from the holding within a period of five years from the commencement of this Regulation or the acquisition of the occupancy right by the tenant, whichever is later.

Provided, that where the Chief Commissioner is of opinion that it is not practicable to remove such trees within the said period of five years, he may, by notification, extend the said period of five years generally or in relation to any specified holding or class of holding by such further period as he thinks fit; as however that the total period as extended shall not in any case exceed one year. If any such trees are not removed within the aforesaid period or the period as extended, such trees shall, on the expiry of that period, belong to the occupancy tenant."

Although by above provision, the right to all commercial trees standing in the holding of occupancy tenant is vested in the Government but there is a provision that Govt. shall remove such standing trees from the holding of occupancy tenant within a maximum period of 6 years. The spirit behind this stipulation has been that on one hand the govt. wanted to give the right to the occupancy tenant only in respect of the land and not the commercial trees. It was perhaps, not the intention to permit the occupancy tenant to trade in commercial trees as the basic objective was giving him land for cultivation. May be the maximum period of 6 years, at the time of formulation of the regulation, was considered adequate for removal of

trees. The experience during the last 30 years, has however, shown that it was not so. It has not been possible for the Forest Department to remove such trees because of various difficulties like dispersed nature of such holdings, their inaccessibility and preoccupation of the Forest Department.

It is pertinent to state here that A&N LR& LRR was promulgated in 1966 when the socio political scenario in these Islands was different from what is prevailing now. At that time under the colonization scheme, refugees from erstwhile East Pakistan were being settled in these Islands. Speedy settlement was definitely one of the top most priorities of the Administration. Provision of Sec.156 (4) of A&N LR & LLR, 1966 has safeguarded the priority. Keeping in view the spirit of the provision in section 156(4) and at the same time to speed up clearance for cultivation by the farmer, an executive order was issued which states that:-

"The farmer to whom the hilly land has been allotted more than 6 years back should be declared the absolute owner of all wood therein except the commercial timber. He may remove the commercial timber, if he so wishes to grow his commercial plantations. In case he needs to retain the commercial timber so extracted, he should pay the royalty to the Forest Department. In case he does not wish to retain the commercial timber so extracted, the Forest Department may take over that timber within one year after paying the extraction charges to the farmer concerned".

By this order the ownership of the trees more specifically the commercial trees standing on the allotted hilly land belonging to the allottee has been continued to be vested in Government. Unfortunately this executive order has so far not been incorporated in the Regulation itself and as a result amended provision has not been able to pass the test of law. In the case of Shri. P.A. Ramakrishna Vs Lt. Governor and others (CO No.124 (W) of 1994, the Revenue Secretary upheld the contention of the petitioner that the ownership of the trees standing on his allotted land lies with him.

Considering the importance of the protection trees standing on privately owned land many states have promulgated tree preservation Act but there is no such Act in this territory.

ii) *Protection of Trees Growing outside the Notified Forest:*

Having realized the national significance of forest, a provision was incorporated in Sec. 57 of the Constitution (42nd Amendment Act, 1976) by which the Administration of forest law was made a concurrent subject by inserting entry 17(a) in the third list of the Seventh Schedule of the Constitution. Accordingly a central Act, the Forest (Conservation) Act, 1980 has come into existence. This Act was enacted with a view to check further deforestation which ultimately results in ecological imbalance; and therefore, the provisions made therein by making it mandatory to obtain prior approval of the central Government whenever any forest land is diverted for non forestry purpose. The forest land includes reserve forest, protected forest, or any area recorded as forest in government records including lands notified under section 4 of Indian Forest Act. More significant is the interpretation of the Forest (Conservation) Act, by the Apex Court in the Writ Petition(s) No.171 of 1996 in the case of T.N. Godavarman Tirumal Pad-vs- Govt. of India and others. The provisions made in the Act has been made applicable to all forest lands irrespective of the nature of ownership or classification thereof. The word "forests" is to be understood according to its dictionary meaning. This description covers all statutorily recognized forests, whether designated as reserved, protected or otherwise for the purpose of section 2 (i) of the forest Conservation Act. The terms "forest land", occurring in Section 2 will not only include "forests" as understood in the dictionary sense, but also any area recorded as forest in the govt. record irrespective of the ownership. This is how it has to be understood for the purpose of Section 2 of the Act. Although the Forest (Conservation) Act, 1980 prohibits the union territory administration in permitting use of forest land for non-forestry purpose and clearance of naturally grown trees without obtaining prior approval of central government but for protection of and use by private individuals of such forest land and for felling of naturally grown trees, the department is handicapped because provisions of Indian Forest Act is not available for taking cognizance of the offence. The case in point is the removal of naturally grown trees in the allotted hilly land. Considering the importance of protection of such trees standing on privately owned land, many states in the country have promulgated Tree Preservation Acts. Had there been such an Act in this territory, it was possible to control felling or use for non-forestry purpose the land which are outside the

purview of Indian Forest Act. It is , therefore, necessary that in order to incorporate the spirit of Forest (Conservation) Act, 1980 and Supreme Court's judgment following amendment/enactment be made to protect and regulate felling of naturally growing trees outside the notified forest:-

- a) The provisions of Section 156(4) of Andaman and Nicobar Land Revenue and land Records Regulation 1966 be amended to vest the ownership of all naturally growing trees on the allotted land with Government.
- b) Necessary enactment on the lines of tree preservation Act of some of the states be made for protection and to regulate felling of all naturally growing trees outside the notified forest.

iii) Protection of sea beaches falling under CRZ-II & IV:-

As per the provision in the Costal Regulation Zone enacted under Environment Protection Act, 1986 and the classification of coastal zone made there under in respect of this union territory all areas falling under national park, sanctuary, reserved forests, protected forests, mangroves etc have been placed under CRZ-I and for regulation of developmental activities in this zone, Department of Environment and Forests has been designated as the authority. However for regulation of developmental and constructional activities in respect of areas falling within the municipal limits has been placed under CRZ-II and coastal stretches under rural areas/revenue areas has been placed under CRZ-IV and the Municipal authorities and Deputy Commissioner respectively has been designated as the authority for this purpose. Sand mining which is one of the activities prohibited under CRZ notification has been carried out after obtaining approval/amendment in the notification from MOEF. As sand mining is carried out in CRZ-I,II and IV, the Department of Forests has been entrusted with the responsibility to regulate sand mining irrespective of the zonal classification by local authority. This arrangement has its difficulties in regulating sand mining in CRZ-II and CRZ-IV because on one hand the Divisional forest officers has been regulating sand collection by issuing permits and on the other hand he is not the competent authority to take action against those who violates the law , However in respect of CRZ-I areas

the divisional forest officers have powers to take action under CRZ (Environment Protection Act) as well as under Indian Forest Act. Hence either the responsibility for regulating sand mining be entrusted to the authorities designated under the regulation or the Divisional Forest officers be designated as the competent authority for CRZ-II and CRZ-IV.

iv) Eviction of Encroachment:-

For eviction for the forest encroachments, the Divisional Forest Officers of A&N Forest Department have been appointed as Estate Officer under the Public Premises (Eviction of unauthorized occupants) Act, 1971 . The Estate Officers are empowered to order eviction of unauthorized occupation under section 5 of the above Act. There are as many as 2325 cases of post-1978 encroachments involving 2633.654 ha. of forest land pending for eviction as on date in various forest divisions. Only 146 cases covering 144.983 ha. have been evicted since 1978 and 2179 cases covering 2488.671 ha. are pending for eviction. The process of eviction has been very slow and not effective firstly because there is no provision for summary eviction and the process under PP Act takes time and secondly because even after ordering the eviction of encroachers by the Estate Officer, the encroachers obtain stay orders from Appellate Court/High Court. Besides, there are instances where in even after effecting eviction the encroachers re-occupy the same land. In many cases, there has been criminal counter cases filed against the personnel executing eviction. Such counter cases has dampening effect on staff. It is therefore necessary that for preventing and for effective and speedy eviction of encroachments in the forest land the Forest officers are vested with power for summary eviction as has been empowered to Tehsildars under LR&LRR. Such a provision has been made by the Government of Madhya Pradesh by amendment to the Indian Forest Act inserting Section 80-A after Section 80 of the principal Act. The details of Section 80-A are as follows :

“80-A. Penalty for unauthorizedly taking possession of land constituted as reserved or protected forest.- (1) Any person who unauthorizedly takes or remains in possession of any land in

areas constituted as reserved or protected forest under Sec.20 or Sec.29, as the case may be, without prejudice to any other action that may be taken against him under any other provisions of this Act, be summarily ejected by order of a Forest Officer not below the rank of Divisional Forest Officer and any crop which may be standing on such land or any building or other work which he may have constructed thereon, if not removed by him within such time as such Forest Officer may fix shall be liable to forfeiture:

Provided that no order of ejectment under this sub-section shall be passed unless the person proposed to be ejected is given a reasonable opportunity of showing cause why such an order should not be passed.

(2) Any property so forfeited shall be disposed of in such manner as the Forest Officer may direct and the cost of removal of any crop, building or other work and of all work necessary to restore the land to its original condition shall be recoverable from such person in the manner provided in Sec.82.

(3) Any person aggrieved by an order of the Forest Officer under sub-section (1) may, within such period and in such manner as may be prescribed, appeal against such order to the State Government or to such officer as may be authorized by the State Government in this behalf and the order of the Forest Officer shall, subject to the decision in such appeal, be final.

(4) The provisions of this section apply to such areas and on such dates as the State Government may, by notification, specify different dates for the different areas."

It was also proposed to delegate the powers of Executive Magistrates/ Special Executive Magistrates to the senior-most Asst. Conservators of Forests in each forest division under Section 20/ 21 of Cr.PC. in order to enable smooth execution of eviction orders passed. However the proposal is yet to come through.

v). Revenue Settlement in Nicobar group of Islands:

In Nicobar group of Islands were declared as tribal reserve area along with some other Islands in Andaman group vide Notification No: ANPATR/3(1)/I dated 02.04.1957 under Andaman and Nicobar Islands (*Protection of Aboriginal Tribes*) Regulation 1956. Thereafter, vide Notification No: 37/67/F.No. G/635 Vol-3 dated 11.03.67 as the Nicobar group of Islands were declared as protected forests Under Section 29 of Indian Forest Act. The declaration so made provides there the existing rights of any individuals or communities in the said protected forests shall not be abridged or affected. Thereafter, it was decided to bring these Islands under Reserve Forests and accordingly the Administration issued proclamation declaring its intention to constitute these Islands as Reserved Forests under Section 4 of Indian Forest Act vide Notification No: G/635/2 dated 15.03.1971 and Additional Dy. Commissioner, car Nicobar was appointed as Forest Settlement Officer to inquire into and determine the existence, nature and extent of any right alleged to exists in favour of any person. The area comprised within the proposed reserved forests was to exclude the tribal villages, the names of which villages were mentioned in the declaration itself. However, the survey and demarcation to constitute these Tribal villages in to Revenue villages as required under Section 31 of LR & LRR 1966 by delineating their boundary has been done till date in entire Nicobar Group of Islands except seven Villages of Great Nicobar Islands because of this, there is ambiguity as regards the status of the land and the disputes crop up every now and then. It is therefore necessary that urgent steps be taken to appoint forest settlement officer who should inquire into the rights of the Tribal villages over the land comprised in the Notification of 15.03.1971 and bring into revenue ambit these villages so that the boundary between the village and forests could be delineated. This is essential for effective protection and management of the forests of Nicobar group.

vi) Forest Offence cases

Forest offences have increased manifold and the reasons for same is not very far to trace. One of the main reason is inadequacy of forest department in matters of legal powers, staff strengthened infrastructure. The forest offences in general are bailable and noncognizable. The over all implication is that forest offenders are

likely to be released on bail soon after arrest and then escape punishment by prevailing innocence considering inheritance inadequacy in forest act various state governments have elected state forest acts . But in case of union territory the Indian Forest Act of 1927 which is a central act continues to be applied the inadequacy of Indian Forest Act in dealing with forest offence mainly arises for the following

- a. The power of confiscation of forest produce, tools, boards, vehicles etc. used in committing any forest offence is not available to the forest office such confiscation can be done only on successful conclusion of a trial by the Trial Court .
- b. The forest offence cases in general are non cognizable and bailable.
- c. Forest offence cases are complaint cases as against offences under Indian Penal Code which are CR cases. The forest offence report is required to be submitted before a trying magistrate and the honours of prove or anything states in the report lies with the forest officer who files this report. The forest officer who files office report is required to be in attendance every time the hearing takes place.
- d. Most of the offence under Indian Forest Act carries punishment of imprisonment for six months and fine a maximum of Rs. 500/- therefore the penalty is so inadequate that it has hardly any deterrent effect .

As such there is an urgent need to enact state forest act or to make necessary amendment in Indian Forest Act to remove the constraints/inadequacy pointed out above.

Annexure-VII

Population of Andaman and Nicobar Islands since 1901

Year	Total population	Variation status	% Decadal variation
1901	25649		
1911	26459	+ 810	3.16
1921	27086	+ 627	2.37
1931	29463	+ 2377	8.78
1941	33768	+ 4305	14.61
1951	30971	- 2797	8.28
1961	63548	+ 32577	105.19
1971	115313	+ 51765	81.46
1981	188741	+ 73428	63.68
1991	279111	+ 90370	47.88
2001	356265	+ 77154	27.64

ENCROACHMENT ON FOREST LAND IN ANDAMAN AND NICOBAR ISLANDS

Encroachment inside the forest areas started sooner after the completion of colonisation /settlement schemes in the late sixties. Prior to 1969, the cases of encroachment were very few confined to small pockets. The number of encroachments increased after 1969 due to influx of illegal entrants such as Bangladeshi refugees, Tamilian expatriates from Burma and others who came here from mainland for their livelihood but stayed back. It is evident from the census figures that the population of these islands increased many fold by 105% between 1951 to 1961; by 81% between 1961 to 1971 by 64% between 1971 to 1981 and by 47% between 1981 to 1991. This increase in population which is the highest in the country is primarily due to influx of people from outside and this has led to large tracts of forest land as well as the revenue land being encroached upon by them.

On the direction of Ministry of Agriculture, Govt of India a High Power Committee comprising of Chief Conservator of Forests, Inspector General of Police and Deputy Commissioner was set up in 1982 to make assessment of encroachment in forest as well as in revenue land. This Committee prepared a complete list of all persons who have encroached upon the forest and revenue land at each location after complete and comprehensive survey by a joint survey team drawn from Revenue, Forest and Police officials. However the Island Development Authority (IDA) in its first meeting on 27.12.86 held under the Chairmanship of the Prime Minister decided to regularise only the encroachments that took place prior to 31.12.1978. A stipulation in this decision was that encroachment up to 1 (one) hectare per family will be regularised by ensuring that such regularisation does not result in honey combing of the forests.. The relevant abstracts from proceedings of the meeting of IDA communicated by MOEF vide No.11-15/87-FC dated 20.3.87 is reproduced below:

"22.4 - All encroachments in forest areas upto 31.12.1978 would be regularised upto one hectare per family, and ensuring that these encroachments are not in the middle of the forest areas. No encroachment should be allowed to be regularised that would result in honey combing of the forests; in such cases the party concerned should be shifted to the peripheries to avoid honey combing of the forests. Diversion of forest land will be permitted only on the basis that equal area of revenue land will be allocated for forests."

In pursuance of the above decision, Review Committee was constituted to scrutinize the applications received from the members of the public claiming to be in occupation of Govt. land prior to 31-12-78 and to screen the list prepared in 1982 by the High Power Committee to prepare list of eligible persons for regularisation of encroachment. Accordingly a list of eligible encroachers was drawn up.

It was found that there were a total of 1367 encroachers who were identified as pre-1978 encroachers and thus entitled for getting land @ 1 ha. Per family. However, as per the decision of the IDA honey combing of the forest was to be avoided and the encroachments deep inside the forests were to be shifted and made into blocks adjoining the revenue areas. Where the area actually encroached exceeded one hectare, the excess area was to be allotted to the families who were to be shifted from other blocks to this block. After earmarking the actual land to be given to existing encroachers who were to be settled in situ, another block was set aside @ 1 ha. per family minus the area which was available for allotment to the families to be shifted.(as referred to earlier) so that this block could be utilised for settlement of families who are to be shifted from other encroachment areas. After undertaking the exercise as above, the position was as under:

Division	No. Of cases for in situ settlement	No. Of cases for shifting	Total
S/Andaman	79	50	129
Baratang	5	6	11
M/Andaman	-	17	17
Mayabunder	142	241	383
Diglipur	454	373	827
Total	680	687	1367

In all 19 blocks have been identified for the settlement of encroachers. Briefly the position is as under:

Name of Division	No. Of pockets	Area involved in ha.
South Andaman	3	129
Baratang	3	11
Middle Andaman	1	17
Mayabunder	8	383
Diglipur	4	827
Total	19	1367 ha.

Necessary proposal for dereservation of 1367 ha of forest land for regularisation of above encroachment was sent as per the provisions of Forest Conservation Act, 1980 and was approved by the Ministry of Environment & Forests vide their letter No.8-274/87-FC dated 19th August, 1988. As a prerequisite, an area of 1434 hectares in Survey No.1 - Jagannath Dera has been released by the Revenue department for compensatory afforestation. Accordingly 1367 ha. of forest area spread over 19 blocks was denotified and in

pursuance of decision taken in the meeting held at Raj Niwas on 27.7.88, complete list of pre-78 encroachers (1367 in number) alongwith the map of each resettlement block (dereserved for the purpose) with detailed boundary description of each resettlement block was sent to Deputy Commissioner (Andaman District) vide letter No.CF/G/25-A/418 dated 12.8.88 for taking further action. These blocks were also demarcated on the ground with wooden posts because demarcation with RCC pillars was not considered necessary till these blocks were constituted in to revenue villages. It was categorically decided in a meeting held on 14.6.89 convened by Lt.Governor that the responsibility for removal of post-78 encroachments from denotified resettlement blocks and encroachments in revenue area was that of revenue department and post-78 encroachments elsewhere in the forest area was that of forest department. As a follow up the revenue department initiated proceeding for survey for constitution of revenue village and issue of pattas/licences etc.. It seems that as far as resettlement of encroachers in revenue land is concerned the process was completed during the period from 1989 to 1991. The matter was taken up with Revenue Department from time to time but, no progress was made in the regularisation of pre-78 encroachers of forest land although the Deputy Commissioner (Andamans) did issue notification to carryout survey operation and preparation of village map and other records vide his Order No.270 dated 9.9.1988 but the process is yet to be completed. As process involved surrender of excess land (over and above one ha) by those who were in occupation at dereserved block to enable other eligible encroachers to shift to this block, the matter dragged on. As the time passed the process became more difficult as the existing encroachers had further consolidated the area by planting up. An attempt was made in the year 1998 to restart the process and to start with, a resurvey of two blocks in South Andaman was taken up by a joint team of forest and revenue officials and make assessment of the ground position and to redemarcate the boundary of deserved blocks. When the cadastral survey was attempted to fix the boundary and to demarcate the boundary, there was severe

resistance and the whole exercise was discontinued to avoid law and order situation on the advice of higher ups.

Subsequent to the listing of pre-78 encroachments by the High Powered Committee, there were claims from certain people that their names have been left out from the list. The Administration therefore constituted another Committee under the chairmanship of Counsellor(Forest) and this committee found the cases of 89 such people out of 2866 claimants to be genuine. Accordingly another proposal for deservation of 89 ha of forest land was submitted to Govt of India but this proposal has not been cleared because Govt of India wanted the earlier proposal to be fully implemented first.

As far as eviction of post -78 encroachments are concerned, Divisional forest officers who have been designated as Estate officer under Public Premises (Eviction of Unauthorised occupants) Act have been taking action under section 5 of the above Act. There are as many as 2325 cases of post-1978 encroachments involving 2633.654 ha. of forest land pending for eviction as on date in various forest divisions. Only 146 cases covering 144.983 ha. have been evicted since 1978 and 2179 cases covering 2488.671 ha. is pending for eviction. The process of eviction has been very slow and not effective firstly because there is no provision for summary eviction and the process under PP Act is time taking. The other reason being that almost each and every encroachers against whom eviction order has been passed by Estate officer go in for appeal and get stay orders from Appellate Court/High Court. Besides, there are instances where in even after effecting eviction, the encroachers re-occupy the same land. In many cases, there has been criminal counter cases filed against the personnel executing eviction. Such counter cases has dampening effect on staff. It is therefore necessary that for preventing and for effective and speedy eviction of encroachments in the forest land, the Forest officers are vested with power for summary eviction as has been empowered to Tehsildars under Andaman and Nicobar Land Revenue and Land Records

Regulation(LR& LRR). Similar provision exists in the State amendment to Indian Forest Act, 1927 in Madhya Pradesh, by insertion of Section 80A. It is also proposed that the powers of Executive magistrate/ Special Executive Magistrate be delegated to the senior-most Asst. Conservators of Forests in each forest division under Section 20/ 21 of Cr.PC. in order to enable smooth execution of eviction orders passed.

The Commission is requested to appraise the Hon'ble Apex Court for issuing suitable directions to deal with the encroachment cases firmly. It is also suggested that as long as the matter regarding encroachment is before the Apex Court as per Order dated 23.11.2001, the Lower Courts should not have the appellate jurisdiction with regard to forest encroachment.

ANNEXURE-IX

BREAKUP OF FOREST AREA IN ANDAMANS

(Source: Forest Survey of India, 1992)

STRATUM	FOREST DIVISION (AREA IN SQ KM)							Percent
	Little Andaman	South Andaman	Baratang	Middle Andaman	Mayabunder	Dighipur	Total	
WORKED								
Evergreen	5.41	139.67	57.34	26.69	19.43	-	248.54	24.96
Semi-evergreen	27.06	139.67	139.24	74.74	136.02	-	516.73	49.82
Moist Deciduous	-	44.44	31.91	106.77	38.86	-	221.98	26.22
Total	32.47	323.78	228.49	208.20	194.31	-	1037.25	
UNWORKED								
Evergreen	48.71	95.23	65.53	42.71	106.87	64.54	423.59	20.16
Semi-evergreen	140.71	76.19	81.91	133.46	262.33	303.34	997.94	17.53
Moist Deciduous	-	25.4	49.15	85.41	233.18	296.89	690.03	32.68
Total	189.42	196.82	196.59	261.58	602.38	664.77	2111.56	

Memorandum on behalf of Environment & Forest Department of Andaman & Nicobar submitted to Professor Shekhar Singh, Commissioner appointed by Hon'ble Supreme Court as per order dated 23-11-2001 in the Interlocutory Application No. 502, on forests and other allied matters of Andaman & Nicobar Islands.

In compliance of the Supreme Court order dated 10-10-2001, tree felling has been suspended in the islands as a result of which:

- a) all felling operations of naturally grown trees in the Forest Divisions and in Forest Corporation areas, as per approved Working plans, have been suspended;
- b) No tree fellings are allowed in various developmental projects i.e. power, Defence and irrigation projects for which forest and environmental clearances from MEF have been obtained;
- c) collection of bamboo, cane and minor forest produce from the forest area has also been suspended.

Further, in compliance of the Supreme Court order dated 23-11-2001

- a) processing of wood in the Govt and privately owned saw mills and privately owned plywood mill has been stopped.
- b) A list of wood based industries functioning in the A & N Islands has been prepared and the inventory of stock of timber with Govt. saw mills has been prepared and furnished to the Hon'ble Supreme Court vide Affidavit dated 11th December, 2001. Further, another affidavit has also, been filed on 11th December, 2001 before the Hon'ble Supreme Court praying for permission for the collection of bamboo, cane and minor forest produce which has been affected due to the ban order imposed by the Hon'ble Supreme Court.

In this connection, the following views of the Administration deserve consideration:

The forests are an important and major resource of the A& N Islands and constitute a dominant feature of the island's ecology/environment in as much as 92% of geographical area is covered with forests. The forests are rich in timber resources. Realising the value and importance of this resource, the Forest Deptt. was established in these islands in 1883. **Efforts have been made since then continually to manage these timber rich forests on scientific lines. The objectives of forest management have been conservation, development and sustainable utilisation of forest resources with a view to contributing to the socio-economic development of these islands ensuring at the same time protection and conservation of islands' eco-system/ecology. Over the years, harvesting of matured and overmatured trees have been carried**

out to utilise the rich timber resources of the islands to meet the local needs of the people and develop as well as promote a market for such resources elsewhere i.e. in mainland, simultaneously, ensuring regeneration of forests. Sustainable harvest of timber on sustained yield principle in conjunction with regeneration of forests of desirable species has been the basis of scientific management of forests. With a view to ensure sustainable utilisation of timber resources, the Govt. Saw Mill was established in the islands in 1912 and a privately owned match factory, WIMCO was established in 1929. Forest regeneration methodology, timber harvesting technology and silvicultural systems were standardized and the canopy lifting and shelterhood system was evolved. In the post independence period three more plywood factories and a number of privately owned saw mills were established in the islands which facilitated utilisation of increased yield of timber from the forests. A Forest Development Corporation was also established which supplemented the effort of the Forest Deptt. in the harvesting of the forests. Over the years, forest sector development efforts have significantly contributed to the socio-economic and industrial development of these islands. With a view to promote wood based industries, A. & N Administration has ensured availability of timber to the various wood based industries by allocation of quota and a frame work of incentives is in place in these islands. Today as many as 3 Plywood industries 6 match industries 22 saw mills and 176 carpentry units are in place which are a source of livelihood and employment to a large number of families(16000)

The impact of the Supreme Court's order has virtually paralyzed the functioning of all wood based industries in the islands besides idling of work force and manpower engaged in the wood based industries as well as related Govt. departments and Andaman and Nicobar islands Forest & Plantation Development Corporation. The plywood industry M/s Kitply has suspended morning shift from 10-12-2001 where 580 employees are affected. Similarly, M/s Asia Timber Products Pvt. Ltd, Hutbay, Little Andaman has also issued notices for laying off 80 employees vide notice dated 5th Dec 2001. Other saw mills and wood based units including two Govt. saw mills have stopped conversion of timber. The details of affected employees are as follows:

	<u>Directly affected</u>	<u>Indirectly affected</u>
1. M/s Kitply Industries	380	100
2. Saw Mills	483	120
3. Wooden furniture shops	1000	250
4. Pencil wood factories	120	30

Two Govt. sawmills have also closed operations of sawing and nearly 975 No. of persons are now idle.

The Impact of the Apex Court order has also affected various ongoing developmental projects cleared by Ministry of Environment and Forests under Forest(Conservation) Act, 1980. The local housing need in respect of Bamboo and other minor forest produce has also been adversely affected.

Under the circumstances, it is submitted that the Hon'ble Supreme Court may kindly be apprised of the situation prevailing in the island and be requested to allow relief to the islanders on the following at the earliest.

a) Permitting Collection of Minor Forest Produce including Bamboos from Forests:

A large section of rural people depend upon Bamboo, canes, thatch leaves, ballies and posts for house construction activity agriculture and for livelihood. Immediate relief is sought for lifting the ban on cutting of Bamboo and other minor forest produce.

b) Permitting tree felling in on going Govt. Projects approved by MOEF where Forest/Environmental clearances were accorded.

There are 7 numbers of projects which have been cleared by the Govt. of India and the works have been under execution. In these projects some clearance of trees is inevitable. Unless the ban is lifted, the time bound projects will get delayed causing extra burden on the Union Territory Government. The details of affected projects are as follows :

1. 33 K.V. Transmission line from Bambooflat to Minnie Bay – Forest area involved 4.2125 ha. 27 Nos. trees to be felled. Govt. order No. 11(25)/2000-FCE dated 28.6.2001(This is a time bound project involving power evacuation. Delay in execution will result in payment of compensation to the extent of several crores to the executing agency as per the . Power Purchase Agreement signed by Admn with the Executing Agency. Further delay will affect power distribution and availability in the islands.
2. Clearing of funnel area at Car Nicobar Airport – Forest area involved- 37.12 ha. 1850 Nos. of trees are required to be felled. Govt. order No. 8-80/2001-FC-3538-F dated 3.10.2001 (This is a high priority defence project involving National Security Concerns)
3. Rural Road construction from Adajig to Flat Bay Village- 17 trees are required to be felled. Govt. order No. 11(26)/1/2001-FCE dated 13.7.2001.

c) Re- Opening of Sawmills and other woodbased industries.

Permission of the Apex Court is sought for allowing the functioning of woodbased industries in the islands who have suspended conversion of the round logs(legally procured) obtained from forests to meet the urgent need of timber for Govt. and public and private utilities and on going development projects.

- 4) At present 5382.210 cum. of timber is lying in log form obtained from forest areas. This has to be converted to avoid further deterioration. Relief is sought for **allowing conversion of the existing stock of timber legally purchased by the private Saw Mills from Govt sources as well as conversion of timber as per inventory of the Govt. Saw Mills to prevent further deterioration of logs including softwood logs which are subject to quick value loss.**

Delay in providing relief by lifting the ban on tree felling and conversion of existing stock of round timber will affect a large section of work force and their dependants in the islands(estimated 70-80000 about 20-25% of the island population). Their rehabilitation/settlement will be quite difficult which may lead to socio-economic problems in the islands where there are limited means of employment in other sectors.

The completion of the runway at Car Nicobar is also going to be affected adversely since the required number of trees to be felled, agreed to earlier, upon payment of compensation were far from complete. Inability to complete the runway could have considerable impact upon the security scenario, especially in view of the Tri-service Andaman Command established just over two months ago.

The Department of Environment & Forests and Andaman Admn. will submit a further detailed memorandum later indicating long term views on important issues like status of forests, forestry, regeneration of forests, woodbased industries, on going conservation efforts, trends in consumption/demand and public need of forest resources, listed issues raised by the petitioner in the petition and rejoinder filed before the humble Court and possible approach to harmonise the conservation/developmental needs and establishing an appropriate frame work of forest sector development in these islands.



(S.S. Patnalk) 20.XII

Principal Chief Conservator of Forests &
Secretary(Envt. & Forests)
Andaman & Nicobar Islands.

**ANDAMAN & NICOBAR ISLANDS
FOREST AND PLANTATION DEV. CORPORATION LTD.
(A Government of India Undertaking)
PORT BLAIR.**

Memorandum presented

to

**Prof. Shekhar Singh, Commissioner,
appointed by Hon'ble Supreme Court of India
in IA No.502 of 1999**

During his visit

to

Andaman & Nicobar Islands

from 16.12.2001 to 21.12.2001

MEMORANDUM SUBMITTED TO THE COMMISSIONER (PROF. SEKCHAR SINGH OF INDIAN INSTITUTE OF PUBLIC ADMINISTRATION, DELHI) APPOINTED BY THE HON'BLE SUPREME COURT OF INDIA IN THEIR ORDER DATED 23.11.2001 IN I.A. NO. 502 IN WRIT PETITION (CIVIL) NO. 202 OF 1995 – T.N. GODAVARMAN TIRUMULPAD –Vs- UNION OF INDIA & OTHERS – ON BEHALF OF ANDAMAN AND NICOBAR ISLANDS FOREST AND PLANTATION DEVELOPMENT CORPORATION LIMITED, PORT BLAIR.

This Memorandum, is submitted to Prof. Sekhar Singh of Indian Institute of Public Administration who has been appointed as a Commissioner by the Hon'ble Supreme Court of India in their order dated 23.11.2001 in I.A No. 502 of 1999 of Writ Petition 205 of 1995 (TN Godavarman Tirumulpad –vs- Union of India and Others) on behalf of Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited, Port Blair.

In the said order, Hon'ble Supreme Court of India has directed Prof. Sekhar Singh to give a report to the court with regard to the state of forests and to what extent cutting of trees, if any, can be protected and what is required to be done to improve the ecology and the forest cover of the area. Prof. Sekhar Singh has been asked to submit the report preferably within a period of six weeks.

In pursuance of the order of the Hon'ble Supreme Court, the Ministry of Environment and Forests vide their order No. 13-19/2001/SU dated 6.12.2001 have conveyed the order appointing Prof. Sekhar Singh as Commissioner.

Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited, which has been leased 30788 hectares of forest areas in Little Andaman and North Andaman Islands for forest and oil palm projects, and employs about 2000 executives/workmen, has decided to submit this Memorandum, for favour of information and favourable consideration.

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Andaman & Nicobar Islands
Forest & Plantation Development Corporation Ltd
(A Government of India Undertaking)
Port Blair.

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Introduction

The National Commission on Agriculture in its interim report on Production Forestry in 1972 recommended establishment of Forest Development Corporations all over the country through fuller utilization of forest resources for meeting timber and pulpwood needs of industry, railways and defence and for this purpose tap institutional finance for development of forest infrastructure and plantations of commercial utility. Following the acceptance of the recommendations by the Government of India, a number of Forest Development Corporations were set up in most of the states of the country in the 70's. Accordingly, GOI sanctioned setting up of Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited (ANIFPDCL), as a Government of India enterprise, vide Ministry of Agriculture and Irrigation, GOI's Resolution No. 2-88/73-F.II dated 6th January 1977 with the objective of scientific management and development of forest resources in the islands based on a project report approved by the Govt. of India vide order No. F.4-1/77-F.II dated 17.1.1977. The Corporation was registered as a govt. company under the Companies Act 1956 on 21st January 1977 with its headquarters at Port Blair. The company is fully owned and controlled by the Central Government. Initially under the administrative control of Ministry of Agriculture, the company was brought under the administrative control of Ministry of Environment and Forests after the formation of this new ministry. The company has an authorised capital of Rs. 600 lakhs, of which the paid up capital is Rs. 359 lakhs. All the shares are held by the President of India through the Secretary to Ministry of Environment and Forests, Director General of Forests, Govt. of India and Lt. Governor, Andaman and Nicobar Islands. Against the authorized strength of 15, the Company has at present 5 Government Directors. Since all the directors of the Company are government officials, the Central Government has all pervasive control over the programmes, policies and operations of the Company.

Objectives

The main objectives of the Corporation are as follows:-

1. Scientific harvesting, natural regeneration and development forest resources on the principle of sustained yield.
2. To plant, grow, cultivate, produce and raise plantations of various agricultural/horticultural crops, forest species of proven utility, aromatic plants, etc.
3. To establish, administer, own and run industries for manufacturing forest products, horticultural products etc,
4. To carry on the business of planters, cultivators, producers, sellers and dealers in timber and such other products and to manufacture, dispose of product of natural forests, agricultural plantations, horticultural crops, aromatic plants etc.
5. To protect and maintain wildlife and other natural resources.

Activities:

The above objectives are sought to be achieved through:-

1. Forestry Project
2. Red Oil Palm project
3. Rubber Plantation Project, Katchal.

Forestry Project:

The Corporation has been leased 19600 hectares of forest area in Little Andaman and 11,188 ha. of forests in North Andaman Islands. The lease extends over a period of 30 years commencing from 1.4.1977. The project entails scientific harvesting and regeneration of forests on the principle of sustained annual yield.

In accordance with the policy laid down by A & N Administration, the Corporation has to dispose of the entire quantity of timber harvested from the leased area to the local wood based industries at prices fixed by the Administration. The quotas for individual industries are fixed by A & N Administration on a year to year basis depending upon the utilization by individual industries during the previous year. The administered prices are fixed on the basis of recommendation of the Pricing Committee. A small quantity of timber, which did not have local demand, was permitted to be sold in the mainland markets until in February 1995 the Administration imposed a ban on export of round logs to the mainland with a view to promoting value addition and creation of additional employment. Based on the review of this decision, however, the A & N Administration has recently removed the ban on export of round logs to mainland and has

also done away with the system of timber quotas to the wood based industries and introduced "cash and carry" system.

Red Oil Palm Project.

As a corollary to the drive for producing more edible oil in the country, the Government of India sanctioned a Project Report for raising 2400 ha of Red Oil Palm plantation in Little Andaman Island vide Ministry of Agriculture's letter No:13-1/78-F.II dated 9.1.1979 and entrusted the same to Corporation for implementation. Under this programme, an area of 1593 ha has also been brought under Red Oil Palm plantation.

The Forest Corporation commenced implementation of the plantation project in 1979. It was envisaged that after the first phase of plantations involving 2400 ha. the plantation area would be extended to 5000 ha. to make the project viable. However, in 1985-86, there was a sudden shift in the policy and the Govt. of India in January 1986 imposed a ban on further extension of red oil palm plantation in these Islands in view of the adverse ecological impact perceived due to monoculture cultivation of red oil palm. In order to study the environment impact of red oil palm plantations a study was commissioned through Central Agriculture Research Institute (CARI), Port Blair in 1987. Even when the study was under way and the research findings/recommendations had not yet been finalised, the matter was taken up by the Island Development Authority in its meeting held at New Delhi on 5.9.1993 and a decision taken that no further expansion of Red Oil Palm Plantations needs to be undertaken in these islands. In the meantime the CARI has completed its study on the impact of Red Oil Palm plantations on the local ecology and submitted its report in Feb. 1996. The study has not found any significant adverse impact on the ecology, climate and rainfall in Little Andaman as a result of Red Oil Palm plantations. On the contrary, the report has commended that Red Oil Palm is a crop which is agro-climatically suitable for Little Andaman.

A fruit processing mill with a capacity of 1.5 MT Fresh Fruit Bunches (FFB) per hour was established in the year 1985. This capacity was enhanced by 4 MT FFB/hour in May, 1992. The existing capacity of the mill is sufficient for the fresh fruit bunches produced in the Plantations.

Rubber Project.

This project was started in 1967 by the Rehabilitation Ministry for the rehabilitation of the Srilankan repatriates in pursuance of Indo-Srilankan

agreement. The Rubber Board, which was looking after this project could raise only about 600 ha. of rubber plantation as against the original target of 2,400 ha. As this project was besieged with many internal problems and as the Rubber Board was unable to run this as a commercial venture, the Government of India entrusted its management to the Corporation from 1st April, 1983. This project has 614 ha of area under rubber plantation. During 1997-98, the Corporation undertook replantation of old rubber plantation also. Since cultivation of rubber is categorised as a 'non-forestry activity', enlargement of the area under rubber plantation attracts Forest(Conservation) Act 1980. National Forest Policy 1988 also discourages plantation of monoculture by replacing naturally grown forests.

Little Andaman

The geographical area of Little Andaman is 73,439 ha.. The entire forests of Little Andaman were notified as reserve forests vide notification No.59/G/635 of 1992 dated 17.4.1963. During the sixties, the Govt. of India also started colonization scheme in A & N Islands and settled refugees from erstwhile East Pakistan all over A & N Islands including Little Andaman. A portion of reserved forest measuring about 3434 hect. stands allotted for settlements which were notified into six revenue villages. The population of Little Andaman, as per 2001 census, is about 15000. Out of the balance forest area, 19600 hectares is on lease with the ANIFPDCL and about 50000 hectares as tribal reserve notified under ANPATR 1956. The entire activities of logging, regeneration and oil palm plantations of ANIFPDCL are confined within the leased area which is outside the tribal reserve.

Forest Resource Assessment and Harvesting

The Pre-Investment Survey of Forest Resources- now called Forest Survey of India (FSI), a Govt. of India organization, carried out survey and inventorisation of the volume and distribution of growing stock available in the forests of Little Andaman during 1976-77, with a view to harvesting the resources on a sustainable basis. Separately, the Working Plan Division of A & N Forest Department also conducted survey of inventories and prepared a resource assessment report in respect of Little Andaman island. Based on this, the A&N Forest Department, prepared a Project report in the year 1976 which was sanctioned by the Govt of India in the year 1977. The Project report was, thereafter, revised from time to time. Even though the maximum annual cut projected was of the order of 60,000 Cum from an area of 800 ha., Corporation never achieved this level of extraction in Little Andaman.

The average level of timber extraction so far has been of the order of 23,500 cum. Under North Andaman project, this works out to 7500 cum.

In order to phase out industrial coupes being worked by the industries, the Ministry of Environment & Forests in 1987, desired that, ANIFPDCL and the Forest Deptt. should to play an increasing role of supplying timber for meeting the requirement of wood based industries as well as local requirements. Both the department and the Corporation were, therefore, asked to work a programme to phase out private coupes and to completely nationalize the forest working by 1990. Out of 90,000 Cum of timber handled by the industries at that time, the Corporation was asked to extract atleast 50%. Based on the above decision, the Corporation submitted a project report for harvesting additional quantity of timber which was sanctioned by the Ministry of Environment & Forests in 1989-90. The timber extraction in Little Andaman thus has been in accordance with the Project report approved by the Govt. of India and various administrative ceilings on level of timber harvesting fixed from time to time. From 1999, however, the ceilings have been regulated by the working plan approved by the Central Govt.

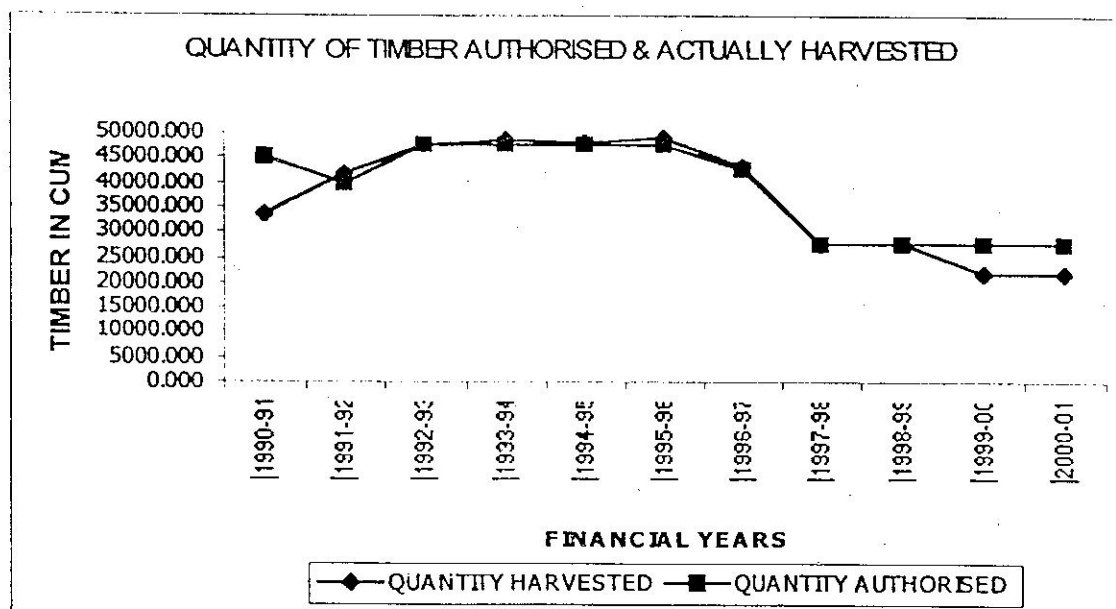


Figure-1

The level of timber harvesting has been declining during the last five years as may be seen from Figure-I. In particular, the level of timber extraction during the last 2 years has been less than even that prescribed under working plan in view of poor demand from local industries and lack of

alternative market within the islands due to the ban on export of round logs imposed by the Administration in 1995. In fact, two plywood industries suffered closure during the last 2 years. Consequently, the Corporation scaled down timber extraction even below the level prescribed in the working plan. At present, the Corporation has the following quantities of timber available at its depots:

Little Andaman	1100 cum
North Andaman	1239 cum
Total	2339 cum

Unless the timber is disposed of immediately, not only will it deteriorate in quality but will also cause substantial loss to the Corporation.

Lease of Forests to ANIFPDCL

The Forestry operations in Little Andaman started in the year 1977 and those in North Andaman in the year 1979. No lease agreement, however, was made until 1987 when a formal lease agreement was signed whereby 19,600 ha. of area in Little Andaman and 11,188 ha. of area in North Andaman Island were assigned to the Corporation for a period of 30 years commencing 1977. The agreement was signed by the CCF on behalf of A & N Administration and Managing Director on behalf of ANIFPDCL. The lease agreement is in conformity with the Forest (Conservation) Act 1980, as there is no prohibition in the Act to grant lease to a Govt. Company. Besides, the purpose for which lease has been granted is scientific harvesting and regeneration of forests and not for any "non-forestry" purpose.

Regeneration of harvested areas.

Under the system of forest management followed in A & N Islands, the areas harvested during a particular year are taken up for regeneration operations during the subsequent year. In Little Andaman during the initial years prior to 1985-86, most of the areas were clear-felled for raising oil palm plantations under a project sanctioned by Govt. of India in 1979 and therefore, regeneration operations with the forest tree species were confined to a very small area. However, after 1985-86, when the Govt. of India imposed a ban on further expansion of oil palm cultivation, all the harvested areas have been regenerated with indigenous species, under silvicultural system of management called 'Andaman canopy lifting shelterwood system'. Under North Andaman project, however, right from the inception of the project, the harvested areas have been regenerated with indigenous species under the natural regeneration technique followed in Andaman

islands. The areas harvested and regenerated since inception are shown in Annexure -I

System of Forest Management.

The forests in Little Andaman are predominantly evergreen, semi evergreen and moist deciduous in floristic composition. The silvicultural system adopted for management of these forests, called the 'Andaman canopy lifting shelterwood system' is a time-tested system for management of irregular tree crop and species composition present in the forest types of Little Andaman. Under the system only over mature, dead and dying trees, not exceeding 15 per hectare, which are above exploitable girth can be removed, the exploitable girth being 180 cm for hard woods and 150 cm for soft wood. In addition, there is a stipulation by the Govt of India that only 50% of the available yield is to be harvested. In actual practice, on an average only about 10 trees per ha. are being removed from the areas taken up for timber harvesting and regeneration. All the trees below the exploitable girth are retained as a part of the future crop. Also, there are certain species which are classified as 'miscellaneous' species. They are also left standing in forest as a measure of conservation and maintenance of bio-diversity. In this manner, against a stand density of 450 trees per hectare in Little Andaman, the number of trees removed per ha. on an average is only 10. This works out to about 2% of the trees being removed through the process of logging. A statement of trees extracted and mother trees retained in the coupes operated by the Corporation during the last two years is placed at Annexure-II.

The Forest Survey of India in a detailed study of the status of natural regeneration in different forest divisions of Andaman & Nicobar Islands has observed that the working of forest in general and in Little Andaman in particular has resulted in adequate regeneration of commercial and non-commercial tree species. The timber harvest in Little Andaman is, therefore, within the sustainable limit which ensures regeneration of indigenous species.

The above silvicultural systems is being followed in all forest areas being worked by the Corporation, except those brought under Oil Palm cultivation. The system has been evolved through long periods of experiments carried out in 30s and 40s by one of the illustrious foresters, namely, Chengappa. It is internationally recognized as a technically sound system for the management of tropical evergreen, semi evergreen and moist deciduous forests. In the absence of a better alternative, the system seeks to

simulate pre-existing vegetation by causing minimum disturbance through removal of only over-mature and mature trees and thereby promote regeneration of vegetation in the under-storey.

Tribal-Forest interface.

Little Andaman island is the home of Onges – a primitive Negro tribe. Out of 73439 hectares of the geographical area about 50000 hectares is set aside for their exclusive use though they are free to roam about even in the forest area on lease to the ANIFPDCL for the purpose of hunting and food gathering. Their number declined from 672 in 1901 to 150 in 1951 and to 107 in 1971. For the last thirty years their population has more or less stabilised around 100. On an average the forest area available for each Onge for hunting and gathering works out to about 500 hectares. The activities of the Corporation are confined to the leased area and do not impact on the welfare of Onges. On the contrary Corporation has been occasionally patrolling the tribal reserve with a view to controlling poaching of forest and wild life products despite legal infirmities in the notification conferring powers on the Corporation officials under the Forest and Wildlife Acts.

Wood based Industries.

The island economy is primarily forest based. Consequently, almost all the timber harvested by the Corporation is committed to the wood based industries within the islands as a part of its mandate to promote industrialization. About 40% of the total quota of the industries is supplied by the Corporation, with Forest Department contributing the balance 60%. The Corporation also promoted industries in Little and North Andaman Islands with a view to encourage utilization of local timber within the Islands and thereby promote value addition and create employment. It is only during last two years that some forest based industries have been facing difficulties due to various factors, most of which are attributable to general economic policies of the Govt. and the market conditions. However, once the market picks up in future as a normal economic cycle, the local wood based industries would once again be in a position to utilize the timber available from forests of Andamans.

Employment.

The Corporation employs about 475 executives/ staff and about 1452 workmen.. Assuming five members in each family, about 10,000 people are dependent on the Corporation for their survival. In addition, harvesting

activities by the Corporation also result in employment in the industries to which raw material is supplied and in ancillary sectors like transportation, shipping, stevedoring etc.

Significant highlights.

1. The Corporation is an entity fully owned by the President of India who holds all the shares in the company. As opposed to a private company, the President through the Ministry of Environment & Forests exercises administrative and technical control not only on the policies, but also the day to day working of the Corporation. Three out of its five Directors are Ministry officials.
2. The Forest Corporation has been given forest areas on lease. Such a lease is of only peripheral significance. What is important is that Corporation is as much a commercial organization as the Forest Department and an entity under the control of the Central Govt like the UT Administration. That the Corporation is called a lessee, is a matter semantics. As opposed to private coupe holders/ contractors whom the Corporation replaced, the Corporation has been responsible for regeneration of all the harvested areas besides the royalty paid to the government.
3. During the last 24 years of its existence, the Corporation has made significant contributions to the national exchequer by way of payment of dividend, income tax and royalty. So far, the Corporation has contributed Rs.74.62 crores of revenues to the Govt. against a paid up capital of only Rs.3.59 crores.(Annexure-III) All these achievements have been possible without adversely affecting the health of the forests. In addition, there are indirect contributions to the national exchequer in the form of corporate tax, excise duty by the wood based industries in the islands. On account of its consistently good performance despite several constraints, the Company was declared as a "Mini Ratna" by GOI in 1997.
4. Little Andaman island has six revenue villages, namely, Ramakrishnapur, Vivekanandapur, Rabindranagar, Netajinagar, Hutbay and Harminderbay. In the absence of the Forest Department, all the regulatory, social and development functions related to forestry in the island are being performed by the corporation. All the requirement of non-timber forest produce like cane, bamboo, ballies, firewood and grazing is met from the forests assigned to the corporation. Besides, the demand for constructional timber of the local population and the Nicobaree tribes as per the scales laid down by the Govt is also met by the Corporation. The corporation,

therefore, contributes significantly to the livelihood of the forest dependant communities. The forest Corporation staff have also been working closely with the local villages and panchayati raj institutions in the implementation of watershed development programmes on village commons.

5. The Corporation has been responsible for creation of infrastructure in its project areas namely, Little Andaman, North Andaman and Katchal Islands. The infrastructure of roads greatly helps in controlling poaching, encroachments, and illegal removal of timber and other forest produces.
6. The monthly salary/wage bill of the Corporation is about Rs.100 lakhs. Assuming a saving rate of 30%, about Rs.70 lakhs per month can be assumed to be spent by its employee and workforce in remote places like Katchal, Little Andaman and North Andaman Islands. This makes a significant contribution to the local economy of these remote islands by providing a ready market to vegetable growers, fishermen, fruit sellers, poultry farmers and the growers of other agricultural produce besides other trade.
7. Though a commercial organization, the Corporation has the responsibility for the management of a purely welfare project at Katchal. The rubber project was started for rehabilitation of Srilankan repatriates. There are about 200 families at present. They were brought in the late sixties under Indo-Srilankan agreement. Despite losses almost throughout its existence, the corporation has been running this project from surpluses generated in other projects.
8. The Corporation has developed expertise in the cultivation and processing of oil palm. If only cultivation could be extended to a viable area, of say 5000 ha., the economy of the islands particularly, Little Andaman, could get a significant boost, thereby reducing dependence on forests by local inhabitants/settlers. This would also go a long way in saving forest and thereby protecting environment.

Constraints.

Even though the project report of the Corporation was based on the assessment of forest resource carried out by Forest Survey of India, due to various restrictions imposed on its working from time to time, with regard to the level of extraction, marketing and sale of produce or fixation of prices of timber, Corporation could never realize its full potential in its contribution to the national exchequer and to the local economy. In particular, the following have been the main constraints:-

1. Restriction on the area available for scientific forestry operations in Little Andaman. As against 60,000 ha. of productive forests areas provided in the project report, the area leased to the Corporation was only 19,600 ha..
2. The red oil palm project was sanctioned for 2,400 ha. and was to be expanded to 5000 ha. to make it into a viable unit. However, the project was curtailed to 1593 ha. making it unviable. Consequently all the palm oil produced is sold in crude form in the mainland whereas refined oil for local demand is imported into the islands incurring huge costs on containers and shipping freight etc.
3. A totally unviable rehabilitation project of Rubber Plantation at Katchal was transferred to the Corporation in 1983. The project has been incurring losses right from its inception. The accumulated losses amount to Rs.4.50 crores. However, these losses were cross-subsidized by the Forestry project which was making profits. Being a welfare project, it should have been funded by the Govt. under its normal plan/non-plan funds.
4. Even though a central PSU, operational controls on its working have been imposed at local level by A & N Administration. In particular, quotas have been allocated to different wood based industries at prices which most of the time were below the market prices. Also, even when the local industries were unable to utilize timber made available by the Corporation, the Corporation was not permitted to sell its timber in the mainland in view of the ban imposed in 1995 on export of round logs. This, on the one hand severely impaired the financial health of the Company, on the other hand, large quantity of timber was allowed to rot in depots in the absence of alternative markets within the Islands.

Recommendations of parliamentary Committees:

The working of the Corporation has been reviewed by the parliamentary committees from time to time. In 1997, the Parliamentary Consultative Committee attached to the Ministry of Environment and Forests observed that in A&N islands timber extraction, being primarily a commercial activity, is carried out both by the Forest Department and the Corporation and, therefore, recommended that this be carried out by the Corporation leaving the forest department to perform the regulatory functions of forest protection, wildlife and environmental conservation. In September 2001, the Committee on Public Undertaking (COPU) also recommended that timber extraction work should be carried out by the Corporation for which such corporations were created in the country. The committee also recommended that Oil palm cultivation be expanded to

2400 hectares and thereafter to 5000 hectares to make it in to a viable project.

Impact of the Judgement dated 10-10-2001 of Supreme Court of India:

1. Against a turnover of Rs. 14.28 crores during 2000-01 the forestry project accounted for Rs. 11.20 crores. The forestry project, therefore, contributes about 75-80% of the turnover of the company. The ban on fellingings if continued will result in closure of the project. Even the other projects, namely the Oil Palm and Rubber projects will have to be closed as both these projects are being cross subsidized by the profits from the forestry project.
2. The monthly salary/wage bill at present is Rs 100 lakhs. After paying out the present liability, the corporation would have no funds for essential requirements like salary, wages and statutory dues like provident fund/gratuity. The Govt of India has also not pledged any funds so far.
3. Closure of the forestry project will amount to closure of the Corporation. The result would be retrenchment of 2000 employees/workmen. Assuming five members per family, livelihood of about 10000 people directly depends on the Corporation. Besides, it would impact employment in ancillary sectors of transportation, stevedoring and wood based industries.
4. Closure of the corporation would impact on the local economy of not only the project areas at Little Andaman, North Andaman and Katchal but also other areas in view of the backward and forward linkages.
5. Non availability of timber, ballies, firewood, canes and bamboo's due to ban on tree cutting will increase theft/poaching from forests which will be difficult to control and in the long run will cause more damage to the forests and local ecology which is sought to be achieved by the ban.

Suggestions.

1. Corporation is of the view that it should be allowed to continue with the present level of timber harvesting (27,300 cum) as the same is based on a scientific assessment of resource availability on a sustainable basis. Any stoppage or reduction is likely to make the forestry project, unviable because of low level of mechanization, high dependence on manual and livestock based extraction and long transportation leads involved in harvesting from the interior forest areas.
2. All the timber harvesting in Andaman and Nicobar islands, done presently both by the Forest department and the Corporation should be entrusted to the Corporation. This being primarily a commercial function,

Forest Corporation is the appropriate agency for this work. In fact the corporation were set for this very purpose. The Corporation has the technical manpower for this, which can be redeployed in the areas presently worked by the department. The man power presently engaged in timber harvesting work in the department can be suitably re-deployed in regeneration, protection and regulatory functions.

3. The Articles of Association and Memorandum of Association of the Corporation, *inter alia* provide for setting up and promotion of wood based industries as one of the objectives of the Corporation. Though the Corporation has promoted two wood based industries in Little Andaman and one at Mayabunder, no such industry was set up by the Corporation on its own. Possibilities for setting up such industries by the Corporation can be looked at as a serious business opportunity with attendant positive fall out for the forest and environment.
4. The Corporation has, on a pilot basis, started eco-tourism in Little Andaman. With the growth of infrastructure of shipping, the scope of the project is proposed to be enlarged, both in terms of area and the range of activities.
5. The only way oil palm project can be made in to a viable size is to enlarge the area to 5000 hectares and setting up of a refinery so that bulk of the oil produced is consumed locally. This will substantially reduce import of edible oil into the islands. In the absence of this, the oil palm project will be a constant drain on the Corporation.
6. The Corporation has proposals for cultivation of medicinal and aromatic plants. After a pilot trial, feasibility for further expansion needs to be pursued..

The above activities, if pursued, have the potential of retrieving the Corporation from the present morass and making it a vibrant organization with prospects for growth in future thereby contributing not only to the local economy but also the national exchequer.

Details of Area Extracted and Regenerated by AMIFPDC LTD

Year	Area Extracted		Total	Area Regenerated		Total
	Little Andaman	North Andaman		Little Andaman	North Andaman	
1977-78	324.00	-	324.00	-	-	-
1978-79	356.00	-	356.00	39.00	-	39.00
1979-80	479.00	74.34	553.34	18.56	28.00	46.56
1980-81	379.60	91.48	471.08	22.48	17.00	39.48
1981-82	358.00	119.44	477.44	38.50	68.00	106.50
1982-83	325.00	103.80	428.80	39.30	17.60	56.90
1983-84	340.70	86.28	426.98	12.55	67.50	80.05
1984-85	321.72	146.50	468.22	58.60	-	58.60
1985-86	273.80	187.26	461.06	3.00	109.21	112.21
1986-87	279.11	235.07	514.18	72.00	196.60	268.60
1987-88	354.00	305.70	659.70	7.30	94.50	101.80
1988-89	391.27	265.94	657.21	400.00	120.00	520.00
1989-90	402.93	283.40	686.33	82.50	340.20	422.70
1990-91	463.67	375.81	839.48	97.33	110.64	207.97
1991-92	633.02	429.33	1062.35	370.00	455.11	825.11
1992-93	708.13	440.73	1148.86	343.00	544.99	887.99
1993-94	728.39	606.19	1334.58	893.00	369.89	1262.89
1994-95	862.99	474.19	1340.18	726.55	514.40	1240.95
1995-96	703.38	525.34	1228.72	820.72	451.73	1272.45
1996-97	989.96	364.55	1354.51	834.84	620.14	1454.98
1997-98	400.22	370.51	770.73	843.30	618.90	1462.20
1998-99	448.35	408.40	818.35	722.60	474.26	1199.60
1999-00	648.50	341.22	957.60	646.10	595.59	1241.69
2000-01	600.00	430.99	1000.26	837.47	308.55	1246.02
Total	11772.74	6666.47	18339.96	8128.70	6122.81	14254.25

L/Andama

North Andaman
(In Ha.)

1. Total Area Extracted	[A]	11772.74		6666.47	
[B]					
2. Total Area Regenerated		8128.00		6122.81	
3. Area under ROP Plantation/Spices		1470.00		24.70	
4. Area under Revenue		1218.85			
5. Area under Minor Irrigation		159.39			
6. Area under regeneration 2001-2002		660.00		518.96	
Total [2 to 6]	[B]	11636.94			
Backlog [A - B]		135.80		NH	

ENUMERATION DETAILS FOR THE YEAR 1999 - 2000 & 2000 - 2001

LITTLE ANDAMAN

KRISHNA NALLAH

Year	Coup	Area and quantity as per enumeration				
		Area	Exploitable Tree		Mother Tree	
			No.of trees	Quantity	No.of trees	Quantity
1999-00	Coup C	91.50	515	4523.000	919	4944.000
	Coup Q	117.50	840	8159.000	2291	12004.000
	Coup H	52.50	292	2793.000	788	5145.000
	Coup D	139.50	501	4431.000	1283	7200.000
	V.K.Pur	98.50	501	4666.000	1336	7504.000
	Total	499.50	2649	24872.000	6627	36767.000
2000-01	K/Nallah	118.00	473	4024.442	1366	7459.443
	Natali Nagar	82.00	826	6701.750	1168	6190.183
	V.K. Pur	400.00	1229	11080.537	5430	27338.977
	Total	600.00	2528	21806.729	7964	40988.603

NORTH ANDAMAN

AUSTIN FELLING SERIES

1999-00	Ganadhala					
	Coupe D	97.50	624	2068.000	972	2039.000
	Coupe C	92.50	625	2766.000	833	2057.000
	Total	190.00	1249	4834.000	1805	4096.000

KALIGHAT FELLING SERIES

1999-00	Kalara					
	Coupe D	145.38	710	2453.000	1460	2693.000
	Coupe E	79.84	509	1640.000	791	1260.000
	Total	225.22	1219	4093.000	2251	3953.000

AUSTIN FELLING SERIES

2000-01	Coupe F	190.00	547	2351.320	1041	3252.410
	Coupe E	132.64	651	2853.170	1398	3045.460

KALIGHAT FELLING SERIES

2000-01	Kalighat					
	Coupe F	80.64	371	1417.880	629	1153.890
	Total	403.28	1589	6622.370	3088	7451.760

Note: Harvesting restricted as per Working Plan

Andaman and Nicobar Islands
Forest and Plantation Development Corporation Limited
(A GOVERNMENT OF INDIA UNDERTAKING)

YEAR WISE DETAILS OF CONTRIBUTION TO EX-CHEQUER

(Rs. in lakhs)

YEAR	DIVIDEND	INCOME TAX	ROYALTY & LEASE RENT	TOTAL
1977-78	-	4.44	1.78	6.22
1978-79	7.65	3.77	2.03	13.45
1979-80	10.50	3.80	2.94	17.24
1980-81	19.62	36.00	13.37	68.99
1981-82	15.35	68.00	13.96	97.31
1982-83	20.34	120.00	13.43	153.77
1983-84	25.86	92.50	17.02	135.38
1984-85	26.07	113.00	71.20	210.27
1985-86	-	-	179.64	179.64
1986-87	17.92	104.05	97.82	219.79
1987-88	19.55	102.60	145.84	267.99
1988-89	13.03	45.50	120.79	179.32
1989-90	17.92	102.40	161.25	281.57
1990-91	21.18	91.60	205.08	317.86
1991-92	22.81	212.99	281.29	517.08
1992-93	26.07	264.49	277.75	568.31
1993-94	27.80	310.20	354.31	692.31
1994-95	32.33	260.10	352.06	644.49
1995-96	71.84	273.00	373.98	718.82
1996-97	59.26	232.20	395.80	687.26
1997-98	14.37	124.00	266.68	405.05
1998-99	-	52.00	347.92	399.92
1999-2000	3.59	76.00	302.46	382.05
2000-2001	-	-	298.41	298.41
	473.04	2692.64	4296.81	7462.50

VANVIKAS EMPLOYEES ASSOCIATION

(The only representing Body of the Employees of A & N Islands F.P.D.C. Ltd.)

Little Andaman.

No.....

Date: 17.01.2002

PRESENTATION OF THE VANVIKAS EMPLOYEES ASSOCIATION, LITTLE ANDAMAN BEFORE PROFESSOR SHEKHAR SINGH OF THE INDIAN INSTITUTE OF PUBLIC ADMINISTRATION, NEW DELHI, COMMISSIONER, APPOINTED TO ASSESS THE STATUS OF FORESTS IN A & N ISLANDS WITH REGARD TO LIFTING OF BAN IMPOSED BY THE HON'BLE SUPREME COURT OF INDIA ON FELLING OF NATURALLY GROWN TREES IN LITTLE ANDAMAN AND MAYABUNDER WITHIN THE AREA ALLOTTED TO THE ANDAMAN AND NICOBAR ISLANDS FOREST AND PLANTATION DEVELOPMENT CORPORATION LTD., FOR THE PURPOSE OF MARKETING.

Sir,

I, representing the Association would present before you the following in relation to the subject matter with the request to pursue the case on merits in order to enable you to submit your report to the authorities concerned: -

1. That Sir, the Andaman & Nicobar Islands Forest & Plantation Development Corporation Ltd., was formulated as a Government of India Undertaking during the year 1977 under the Company's Act, 1956 with the main objective of intensifying scientific forestry management and Plantation activities in the A & N Islands. Out of the 73439 Ha. Of geographical area of Little Andaman Island, 19600 ha. Of forest land was handed over to the Corporation on lease initially for a period of 30 years by the Government of India acting through the Chief Conservator of Forests, A & N Islands. The task of converting suitable existing irregular forest crop into uniform crop with a view to obtain increasing sustained yield of standard timber without damaging the ecology of such forest land was entrusted to the Corporation. The Corporation has been doing the extraction as well as the marketing of the excess stock of matured trees available in the forest as per this objective. All the forest area from where the timber were extracted by the

Corporation since the year 1977, except those areas earmarked and identified for non forestry operations, have been brought under the natural regeneration as per the unique and famous "Andaman Canopy lifting Shelter wood system". Apart from undertaking extraction of timber as well as Natural regeneration as per the Working Plan prescribed for Little Andaman, the Corporation have also been entrusted with the duties of protection of forest within the leased out area. With the limited powers delegated under the Indian Forest Act, 1927 as well as the Wildlife Protection Act, 1972, the Corporation has been doing everything possible for the protection of the forest and wildlife strictly in accordance with the norms and policy of Government of India.

2. That Sir, more than 70% of the total annual revenue of the corporation are met from the marketing of the round logs extracted. Therefore, the unexpected ban on cutting of any naturally grown trees in any part of the A & N Islands by the Hon'ble Supreme Court of India has jeopardised the activities of the Corporation and adversely affected the economic position very much.
3. That Sir, if the ban is not lifted immediately, no other course will be left for the Corporation than to disband the organization in the very near future as the Corporation shall not be able to disburse the salary to the employees and to meet with the huge expenses that normally falls upon the corporation for its survival.
4. That Sir, the Corporation has invested about RS. 100.00 Crores for the purpose of purchase of various types of machineries and for construction of family accommodation for the employees on its pay-roll and for construction of Office buildings as well as assets and other essential requirement at various places.
5. That Sir, over 80% of the population of Andaman and Nicobar Islands are very poor people who have settled here after India became free in the year 1947 and they are not financially capable for construction of RCC type buildings and by and large

accommodated in houses made out of timber and other minor forest produces.

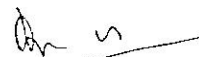
6. That Sir, the A & N islands is categorized as seismic zone No. 5 and habitats of wooden structure are suitable for the inhabitants to overcome such natural calamities.
7. That Sir, the system adopted by the A & N Islands Forest and Plantation Development Corporation Ltd. for extraction of timber is purely based on scientific process/method as directed in the Working Plan designed by the Government of India and therefore there cannot be any reason to support the argument that this Islands may be converted into a desert if the present practice of extraction of timber is allowed to continue.
8. That Sir, the extraction of dead, diseased, dying and over-matured trees in no way would cause any danger to the ecology if extracted as otherwise they would be dying a natural death having over-lived their span of life if not extracted and marketed.
9. That Sir, if the mature trees in the thick forest growth prevailing in the A & N Islands are not extracted and the materials used for construction purposes, it can be said that we are not making use of the natural obligation provided by the nature.
10. That Sir, the cargo ships transporting goods of varied nature for these islanders from mainland can be profitably used for transporting of timber products from this end to mainland as there is no much of any other merchandise to be exported from A & N Islands.
11. That Sir, this Corporation being a commercial organization, its survival and growth largely depend upon export of round logs to mainland at rates prevalent in the mainland on competitive commercial terms.
12. That Sir, the quantity of logs suggested for export to mainland in para 11 above would depend upon the quantum of timber that

may be available for the purpose after fulfillment of the demand of the local wood based industries.

13. That Sir, the Forest Corporation should be provided with the full authority for harvesting and marketing of timber available from all over the A & N Islands for extraction under the scientific management and under the direction, guidance and supervision of the Forest Department, and no area is left without regeneration immediately after the timber is extracted.
14. That Sir, it is further suggested that a special Forest Protection Force may be formed providing them with the suitable powers as well as weapons for self defence to check timber smuggling activities, encroachments in forest lands and illegal clearing of the forest growth by intruders and irresponsible general public in the A & N Islands.

In case the subject ban order is not completely lifted immediately, the entire Corporation project would die out untimely and to overcome this catastrophe, it is suggested with all humility that the entire employees of the A & N Islands Forests and Plantation Development Corporation Ltd. may be merged with the Forest Department under the A & N Administration and thus save thousands of starving souls.

Yours faithfully,
for VANVIKAS EMPLOYEES ASSOCIATION


(A Surendranathan)
President

BISHNU PADA RAY
Member of Parliament
(Lok Sabha)



Member :

- Standing Committee on Transport & Tourism
- Consultative Committee of Ministry of Home Affairs

Ref: No. 14/MP/ANI/2002/99

130, North Avenue, New Delhi-110001
Phone : 3793807(R) Fax : 3793807

P.O. Port Blair, Andamans - 744 101
Phone: (03192) 36835, 42916(O)
Fax : (03192) 42916
(03192) 33375, 39395(R)

E-mai : bpray@sansad.nic.in
bishnupadaray@rediffmail.com

16th January, 2002.

Prof. Shekhar Singh
Commissioner appointed by
Hon'ble Supreme Court in IA No. 502
Camp. Port Blair.

Respected Sir,

I beg to submit the following for the Hon'ble Commission's consideration.

On behalf of my constituents, the people of Andaman & Nicobar Islands, I urge the Commission to kindly ban export of all logs and low value high volume timber products from the Islands. Let the timber available through sustainable harvest only be used to meet the local needs.

Our District Planning Committee charged with the responsibility for developmental planning has recommended that buildings in the Islands except the kitchen and the toilets be constructed with local timber duly treated for longer life and fire retardance. I urge the Hon'ble Commission to kindly cause this recommendation to be implemented immediately.

The DPC has also asked for recognition of the rights of the local people over their local resources and implementation of Joint Forest Management (among others) in the forest adjacent to villages. I urge the Hon'ble Commission to kindly grant this.

The two offices and Log Depot/Timber Yards of the Forest Department at Calcutta and Chennai cost the taxpayers a crore a month ^{year} to maintain. There are about 50 to 60 people employed there almost without any work. We urge the Hon'ble Commission to order closure of these two units to plug the rat holes through which public money disappears. The track record of these two establishments are dubious. They sold padauk sections @ Rs. 5,000/- per cu.mtr when they charged the Islander Rs. 9,310/- per Cu.mtr. In other words, if we deduct the cost of transportation of timber from Port Blair to Calcutta from the Rs. 5,000/-,

BISHNU PADA RAY
Member of Parliament
(Lok Sabha)



Member :

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the actual, price received by FD would be Rs. 2,000/- only, just 22% of what an Islander is made to pay ! The sooner the Depots are closed, the better for our Forests and our people.

The lops and tops are currently allowed to rot in the forest floor. I urge the Commission to kindly order collection and utilization of the lops and tops to increase availability of timber without increasing extraction.

I urge the Commission to kindly issue strict instructions to the authorities to ensure supply of timber to the small industries and the furniture manufacturers. In fact, the smaller the unit, the more priority it should get. The tiny furniture manufacturers provide the largest employment per unit of timber used. They must, therefore, be encouraged by making available the raw material (timber) needed by them locally.

To meet the above end, I urge the Commission to kindly permit conversion of Padauk in all Saw Mills.

I urge the Commission to order setting up of treatment plants in every inhabited Island, preferably, attached to every Saw Mill to ensure availability of durable timber for construction to all, particularly, the rural people.

I had made similar requests to the former Lt. Governor and the Chief Secretary repeatedly. My colleagues in the Panchayat Raj Institutions also are in agreement with my views. They had met you and made their representations before you during your last visit to the Islands.

I urge you to kindly pass such orders as you deem fit for protection of the Islanders and Island Forests, for our forest give us water security and food security. Without the forests, our Islanders would be lost.

Thanking you,

Yours faithfully,


(BISHNU PADA RAY)

January 18, 2002

Submissions by Kalpavriksh to the Shekhar Singh Commission

- 1) **Export of timber in any form (as round logs, sawn timber and plywood and veneer) from the islands to the mainland India or any other part of world should be permanently banned**

Rationale: Use of timber cut in the islands should be allowed for use by the islanders in the islands only. Cutting the pristine forests of the islands to meet the demands of mainland India cannot be justified and this has caused great environmental damage in the islands. It has also proven to be economically unviable. This ban should thus be imposed on both, ecological and economical grounds.

Additionally, the large scale corruption that has been noticed in the islands, and for which there is a lot of prima facie proof as well (also discussed later in point No. 3) is clearly linked to the export that is permitted from the islands. A lot of smuggling of timber from the islands has taken place under the cover of legal transportation. This can only be effectively dealt with if all export of timber in the forms mentioned above is banned immediately.

The Honourable Supreme Court may please be requested to issue orders to this effect.

- 2) **Permit the local people use of timber and other forest produce.**

Rationale: The residents of the islands are critically dependant of produce from the forests like timber, bamboo, cane, thatch etc. for their daily needs. Restriction on their utilisation for bonafide use will certainly place large scale hardships on the islanders which is not at all desirable. It could also alienate the local population from efforts being now made towards conservation and forest protection. If regulated and controlled, extraction of the above mentioned resources for local use is unlikely to cause serious damage to the forests. In any case it is the commercial exploitation of the forests, and the legal and illegal transportation of timber from the islands that are to be primarily blamed for the degradation of the local forests.

- 3) **Request for an inquiry into all reports of illegal forestry related activities in the islands**

Rationale: It is a well known fact in the Andaman and Nicobar islands that the timber operations have over the years seen a huge amount of illegal operations. It has also been alleged that the officials and administrators in the highest levels of office have made crores of rupees. Apart from large scale misappropriation of funds, this has resulted in large scale damage to the priceless forests of this fragile island ecosystem. Those who are guilty should be brought to book, so that this also serves a deterrent for this kind of activity in the future in the islands.

There is prima facie evidence that we have for a number of such illegal and malafide operations in the islands. Some details are given below

- a) **Lease agreement between the Andaman and Nicobar Forest Department (FD) and the Andaman and Nicobar Forest Plantation and Development Corporation (ANFPDC) for 19,600 hectares of land in Little Andaman.**

Though the ANFPDC had started extraction of timber from the forests of Little Andaman in 1977, a lease agreement between the FD and the Corporation was signed only in 1987 with retrospective effect. This was not only a violation of the Forest Conservation Act (FCA) 1980, but also a clear attempt on part of the concerned authorities to cover up for one decade of illegal operations in the island. In

the Working Plan submitted in 1999 too, the FD reiterates in at least 14 places that the lease was signed in 1977, when in fact the date for the same was 1987.

b) Illegal export of timber from the islands:

Attached with this submission are the photocopies of 2 transit passes (TPs) for timber transportation from Diglipur in North Andaman to Chennai. It will be seen that these TPs dated February 19, 2000 are unnumbered. This is clear proof of the scale and audacity of the those involved in the illegal operations, particularly so, because this transport of timber was carried out even as the matter related to the forests of the islands was before the Hon'ble Supreme Court. At a conservative estimate the total value of the timber exported in that consignment exceeds Rs. 30 lakhs and this could well be the tip of the iceberg.

c) Comptroller and Auditor General's (CAG) Report 1996

Attached with this submission also is a copy of the 1997 report of the CAG (for the year ending March 3, 1996). This report too points out large scale irregularities in the forestry operations in the islands. The details of the report and the figures in this report speak for themselves. Urgent action is needed on this. Details of this report of the CAG is also available of the internet and can be accessed at the following web address: www.cagindia.org/reports/civil/1996_book2/index.htm

4) Shutting down of the Andaman Trunk Road

Rationale: The Andaman Trunk Road (ATR) that runs from Port Blair to Diglipur in North Andaman, cuts through some of the finest evergreen forests in the islands that have been home to the Jarawa tribal community for thousands of years. The road has been responsible for the large scale direct destruction of the forests and also allowed for the faster and larger exploitation of the forests. Additionally, and perhaps more important have been the direct negative impacts that the road has had on the Jarawa community. Over the last couple decades the road has become the main vector that has carried exploitative and destructive forces to the heart of Jarawa land and has caused them untold hardships.

If the forests of the South and Middle Andaman islands are to be protected and the Jarawas are to given a chance for survival, it is imperative that the ATR should be shut down as the earliest possible.

It has already been proven that the huge amount of financial expense that is incurred by the state is not justified by the number of passengers that daily use the ATR. The road has been and continues to be a huge financial burden on the exchequer of the highly subsidised economy of the islands.

At the same time, it has also been proven that the sea route to connect Port Blair with Middle and North Andaman islands will be faster and cheaper. This should be suggested as an alternative to the existing road and special allocations for the procurement of boats and development of facilities should be urgently made.

5) Declaration of the Andaman and Nicobar islands as an Environmentally Sensitive Area (ESA) under the Environment Protection Act (EPA) - 1986

Rationale: That the A&N islands are a rich and unique ecosystem is a fact that has now been acknowledged around the globe. The only thing that the Government of India (GOI) has done in acknowledging this is the declaration of 100 protected areas (wildlife sanctuaries and national parks). A holistic approach to the conservation of the islands has still to be evolved. The EPA

could in fact provide this kind of a framework, under which plans and policies for the islands can be developed. It will also be clear that all the criteria needed for the declaration of an area as an ESA under the EPA are easily met by the Andaman and Nicobar islands.

6) Additional protection to the tribal reserves under the Wildlife Protection Act (WLPA) - 1972

Rationale: Though the tribal reserves in the islands have been created under the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR) 1956, it is clear that they have been regularly violated over the years (Also please see Point 7 below). There is a need to bring the forests of the tribal reserves under additional legal protection. Declaration of the tribal reserves as Wildlife Sanctuaries (not National Parks) will allow for this kind of protection. The reason for not suggesting their declaration as a National Park is the fact that under the WLPA all the rights of the tribals will also have to be extinguished. The WLPA allows for the continuation of the rights of the tribals inside a Wildlife Sanctuary and at the same time provides protection against some of the forces that may be able to violate the ANPATR. It must in any case be made very clear that there will be no obstacles whatsoever to the local tribal communities (which includes the Great Andamanese, Onge, Jarawa, Sentinelese, Shompen and Nicobarese) in their movement in or utilisation of the resources of the forests within the tribal reserves and the wildlife sanctuaries and any other forests in the islands.

7) Need to strengthen the provisions of the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR) - 1956

Rationale: The primary aim of the ANPATR was the protection of the indigenous tribal communities that have inhabited these islands for thousands of years and also for the protection of the forests on which these communities depend critically for their survival. A large number of tribal reserves were created under the ANPATR. However, as can be clearly seen, the ANPATR was not strong enough to prevent the denotification of the tribal reserve from time to time. Encroachments have regularly been allowed to flourish inside these reserves, illegal entry and poaching in the forests of the reserves continues unabated, and in Little Andaman even timber was being extracted from within the boundary of the tribal reserve.

It is thus very important to strengthen the provisions of the ANPATR and some urgent steps should be taken in this direction. Legal experts with an understanding of forests and tribal issues should be immediately requested to look into the matter and suggest changes.

8) Inclusion of the Andaman and Nicobar islands in Schedule V or Schedule VI of the Indian Constitution:

Rationale: It is one of the biggest ironies of independent India, that the aboriginal tribal communities of the Andaman and Nicobar islands, who are also among the most vulnerable human communities, do not get the kind of constitutional safeguards that are accorded to other communities and regions of the country.

Protection to the forests of the islands and the communities by inclusion either under Schedule V or Schedule VI of the Indian Constitution is extremely desirable and could be one of the biggest protective covers that we can provide for the forests of the islands and these tribal communities.

Except for those areas where settlements of immigrants from mainland India have already been established, the rest of the islands should be brought under the preview of either of these Schedules of the Indian Constitution. Special efforts should be made towards this end.

9) Conversion of areas under plantations with exotics to forests for reforestation and regeneration activities with indigenous tree species

Rationale: There are large areas of forest land in the islands that have over the years been converted to plantations of various exotic tree species like red oil palm (in Little Andaman), teak (in various parts of the islands and rubber (in Katchal). These plantations are proven across the world to have severe negative effects of the ecology of tropical forest systems like in the A&N islands. It has also been reported from the A&N that the growth in the plantations has been far from satisfactory. On the other hand there are a number of reports that in areas where indigenous trees have been planted the growth has been exceptionally good.

In light of this it might be suggested that areas with exotic plantations on lands that belong to the Government and / or the Forest Department be handed over for planting with indigenous species of trees over a reasonable period of time. Private plantations like those of areca, coconut, banana can be excluded from the operation of this particular suggestion.

10) Banning the collection of sand from the beaches in the islands

Rationale: Sand mining in the islands has today become a huge operation with devastating impacts all along the coastal belt. This mining has completely destroyed a number of beaches along the length of the islands that were very important breeding grounds of the endangered sea turtles like the Olive Ridley Turtle, the Green Sea Turtle and the Giant Leatherback.

The removal of sand has also taken away the buffer zone between the sea and the land, the adverse impacts, of which too can be seen in many places. It has been reported that the destruction of the beaches by sand mining, has destroyed farmlands, plantation crops like areca and coconut and also the littoral forests. In many places now huge investments are being made to construct sea retaining walls. This is for a function that was being provided for free by nature's elements like the sand beach, mangroves and coral reefs, all of which are being destroyed thoughtlessly. The biggest irony is that the sea retaining walls are themselves made using sand that has been collected from some other beach in the island. A vicious circle has been initiated and this can only be stopped if sand collection is stopped.

As far as the construction needs of the islanders are concerned, there is a need to go back to timber and bamboo based constructions, that are also ideal for the hot, humid and earthquake prone tropical zone of these islands.

11) Stop the in migration of people to the islands from mainland India

Rationale: Carrying Capacities of island systems like the A&N are limited. There is evidence that the human population on the islands has far exceeded this carrying capacity here. However in migration continues from mainland India and this needs to be stopped. There is an urgent need to devise a mechanism by which this can be achieved.

Pankaj Sekhsaria
(Kalpavriksh)

To
Sri Shekhar Singh
Commissioner Appointed by the Hon. Supreme Court of India
Indian Institute of Public Administration
IP Estate,
New Delhi – 110002

January 18, 2002

Sub: Submissions for the Report to be submitted to the Supreme Court

Dear Sri Singh,

This is with respect to your letter dated Dec. 26, 2001 regarding submissions for your report to the Hon. Supreme Court in the matter of the Intervention Application (IA) 502 related to the Andaman and Nicobar islands in the Writ Petition (Civil 202) of 1995 in the TN Godavarman Thirumulpad Vs. Union of India and Ors.

On behalf of the petitioner organisation, Kalpavriksh, I request you to consider the points in the attached submission for inclusion in your report and recommendations to the court.

Thanking you
Sincerely

Pankaj Sekhsaria
(for Kalpavriksh)

SUBMISSIONS OF SOCIETY FOR Andaman & Nicobar ECOLOGY BEFORE PROF. SHEKHAR SINGH COMMISSIONER APPOINTED BY HON'BLE SUPREME COURT

These submissions pertain to long term issues. We request that these be addressed by the final report that Prof. Singh proposes to submit to the Supreme Court. Issue that need to be addressed immediately in the proposed interim report of Prof. Singh are submitted separately.

1. Migration to the A&N islands and the issue of encroachments:

The biggest threat to the Island ecosystem comes from encroachments permitted by a permissive Administration. Of late, awareness of this problem had been growing and now there is a political will to combat this menace among the people and PRI functionaries across the party line. Several measures to curb the influx are in the pipeline.

We suggest that the people at a large and the PRIs in particular need to be encouraged and motivated to resist encroachments, particularly in the forest area. A very large number of encroachers have already honeycombed our dense forests. Without the support of the people and the PRIs, there does not appear to be any chance of evicting/relocating them. The Commission, could, perhaps help in establishing a mechanism to solve this very serious problem. The commission may like to consider the following proposal in this regard:

Action points:

- a. An inner line regime should be implemented with immediate effect in the entire A&N territory.
- b. Following this, all residents in the islands should be issued identity cards. For modalities about the issue of Identity Cards, kindly refer Annexure _____. This operation should be carried out in the shortest possible time so that fresh infiltration subsequent to the implementation of the inner line regime is minimum.
- c. Following the issue of identity cards to all residents on the A&N islands, all encroachers who have been enumerated in the pre 1978 list should be given a fixed time period, say 30 days, to revert to the areas that have been demarcated for them. All post 1978 encroachers should be given homesteads, preferably in the same area where the pre 1978 encroachers are to be resettled. This is suggested in order to prevent honey-combing. We also have to ensure that means of livelihood are available to the relocated families.

2. Designation of new protected areas:

It is widely believed by the scientific community that the PA network in the A&N islands focuses on small islands that have high endemic value but are low in richness (reference). In order to correct this, the following is proposed:

Action points:

- a. After the issue of encroachments has been settled, competent agencies (FSI, NRSA etc) may be asked to prepare digitalized maps of the A&N islands that would show areas that are free of human habitation and can potentially be notified as protected areas.

- b. Meetings should then be organised with various stakeholders (villagers, PRI members, forest department, local NGOS, research institutions etc) in order to discuss the areas that could be designated as Pas. The new PAs must, as far as possible, reflect a consensus between various stakeholders.

3. Illegal extraction of timber and the issue of export of timber:

Illegal extraction by locals:

Illegal extraction of timber by locals takes place under the following situations:

- Illegal extraction by locals is primarily for Padauk wood. This is because of the fact that Padauk is allowed to be sawn only in government saw mills at Chatham and Betapur. No private saw mill is allowed to convert Padauk. If a farmer in Diglipur wishes to order a Table or Almira legally, he would have to undertake a five day trip to Chatham or Betapur (one day each for travel up and down and three days to get the timber) if he is lucky. Since this is too inconvenient, even law-abiding citizens are obliged to buy, illegal timber and/or bribe their way through.

There is no logic in not permitting cutting of Padauk logs in Diglipur or Mayabunder where these are harvested. The system only undermines peoples' faith in the law of the land and perpetuates corruption.

Action points:

- a. It needs to be ensured that saw mills are in operation in all major population centers/towns. It must of course be stipulated that all such saw mills are located in industrial estates.
- b. Such saw mills should be permitted to process Padauk as well.
- c. It must be made mandatory that all sawn timber (with the exception of Padauk) wood must be treated before being sold. Ancillary treatment plants must be set up parallel to each saw mill.

The ANI District Planning Committee has also made this recommendation.

This option is preferable over the Forest Department setting up depots in major population centers/towns as transporting wood from Chatham and Betapur to some of the distant villages will be financially unviable. Moreover, the experience with the working of the Forest Department apparatus has been far from satisfactory with repeated complaints of inefficiency, corruption etc. It can of course be argued that private saw mills are just as liable to indulge in illegal practices, as has been borne out by experiences in the North East. The provision of saw mills being allowed to operate only in designated industrial estates is likely to address this issue to a certain extent. It is also proposed that in addition to the Forest Department policing these saw mills, PRI's should also be involved in this process. This will reduce the probability of the mills indulging in malpractices.

Illegal extraction by foreigners

There have been a number of instances of poachers from Burma and other neighboring countries stealing wood from various uninhabited islands. In addition to timber, it has also been reported that such poachers target crocodiles, turtles, crabs and swiftlets nests.

Action points:

- a. The Forest Department needs to be strengthened to be able to protect the coastline and creeks etc. more effectively. They need to be provided fast boats, additional staff (the issue of forest department staff is dealt with separately as well), and additional equipment, including weapons. The PCCF may be asked to submit a list of such additional equipment that the Forest Department requires to beef up patrolling.
- b. The commission may consider taking up this issue with the Coast Guard authorities. Their contribution is critical in order to effectively police the 12 km zone from the coastline.
- c. The commission may also consider enlisting the support of the Indian Navy. The Navy has a critical role to play in controlling mother ships from which smaller vessels commit various ecological crimes in the ANI.

4. The issue of NTFP, free royalty and role of PRIs:

Currently each settler family in the ANI receives a stipulated quantity of NTFP and timber for his/her bonafide use. The concerned Range Officer issues a permit to the villager for extracting the stipulated quantity of NTFP, timber/bamboo for bonafide use. This system is being misused by contractors who extract NTFP, bamboo/timber in place of the villager by obtaining his/her consent. This primarily happens because the stipulated quantity of forest produce is perhaps too large for the villagers' needs.

Action points:

- a. The quantity of forest produce to be extracted by villagers need to be rationalized.
- b. The 73rd and 74th Amendments to our Constitution provides for devolution of powers to the local self government institutions. In accordance with these amendments the President of India has framed the relevant Regulation of the A & N Islands and the Administrator has framed the Rules as required under the Regulation. The subjects proposed for such devolution of power to PRIs include collection of NTFP and Social Forestry. In particular it is proposed that the PRIs should have the power to issue permits for the extraction of NTFP. This is likely to improve the current regime. Further it is proposed that the Forest Department and the PRIs draw up a common monitoring regime for the purpose. This was recommended in the findings of BCPP Peoples' Strategy Project also.
- c. Cane, bamboo and leaves for thatching should also be treated in tiny units locally to extend their service-life. This will reduce the demand of these forest resources substantially in two to three years time.

5. The Andaman Trunk Road:

Action points:

- a. The stretches of Andaman Trunk Road (50 kms approx.) between Jirkatang Check Post and Middle Strait Check Post in South Andaman and the stretch adjoining Jarawa Reserve at Porlobjig in Middle Andamans be closed to all vehicular traffic.

- b. That fast boats of the type and speed of MV Rangat or still faster ones be operated between Port Blair, Oraikatcha, Kadamtala, Rangat, Mayabunder and Diglipur. The frequency of service be determined on the basis of volume of traffic.
- c. That the remaining portion of ATR be used for intra-Island traffic rather than the inter-Island one.

6. Fire wood:

Even now a lot of the rural poor are dependant on firewood from the forests. Kerosene oil is also not always available in the villages.

Action points:

- a. It is suggested that the availability of kerosene be ensured in adequate quantity in every village to reduce the dependence of the villagers on jungle fuel.
- b. Cooking Gas works out to be somewhat cheaper but the initial investment is high. We humbly suggest that a one time subsidy be provided for the purchase of the stoves and cylinders. This will greatly aid the biodiversity conservation efforts.

7. Transparency in the functioning of the forest Department:

There have been frequent reports of irregularities in the functioning of the Forest Department, inefficient functioning, improper management plans, double marking of logs, use of the same TP more than once to take material out etc. etc. An instance of an improperly made working plan is given below. These pertain to the working plan for the Little Andaman forest division.

At Para 1, it is stated, "in the year 1977, the harvestable forests were leased out to the Corporation". It accepts that forests outside the area leased out are not harvestable.

Although required in Para 18, the Corporation has not maintained the forest boundary. The work of fixing permanent boundary pillars remains incomplete.

At Para 4, wild pig is described as an injurious animal though it is an endemic. At Para 45, Pegions, Parrots and Parakeets are described likewise, allegedly causing "great destruction" to "Paddock" (among others). Paduak does not occur in Little Andaman at all and parrots do not occur in the whole of Indian Union.

Para 52 states illicit falling is not a big problem but encroachment is! Encroachments in the Islands are for the purpose of agriculture requiring clear felling of the area. During the last three years between 1000 and 1500 new encroachments took place in LA.

Para 65 states "There are 250 wood based industry... with an installed capacity of 1.50 Lakhs cu.mtrs per annum" And yet, last year even the 40,000 cu.mtrs felled could not be sold.

Para 90 states that the cost of extraction of timber was Rs. 923.69 and the overhead cost was Rs. 2274.21 bringing the total cost to Rs. 3197.90. Para 141 gives the main objectives of setting up of the FPDC. The corporation to date could meet none of the objectives.

Para 145 (iii) puts the length of the forest roads at 114.5 kms, Even if only 10 mtrs are cleared for the road and the shoulders, 114.5 Hacts are covered by the roads and should be deducted from the available forest area.

Para 190 categorically states that " the forests of LA Division have not been divided into blocks and boundaries" but Para 194 says, "The felling series is divided into two blocks".

Para 192 says " the balance area of 6000hact. irregular forest crops is required to be converted into normal crop". Can the Working Plan Officer decide whether a natural forest is "irregular" and whether it should be converted to what he perceives to be "normal"? Para 209 lists "to convert existing irregular forest crop to normal crop with a view to increase productivity of commercial timber per unit area" as a special objective of management.

Para 237 shows" a backlog of 2029 ha. harvested area yet to be re-generated" up to 1998 while Para 148(Table 1.5.3) puts it at 2029 in 1998-99 and 2351 in 1997-98. Para 237 required the FPDC to cover at least 500 Ha. of back log every year (in addition to the current felling). This has not been done.

The direction of marking for thinning by a trained Deputy Divisional Manager and atleast 25% checking by DM and 10% by GM are not being followed.

Para 267 required that "some of the drag path and feeder roads which cover the whole of the regenerated area shall be cleared of all debries and maintained as jeepable inspection road" . Since such an area is substantial, it should be deducted from the area claimed to have been regenerated as no forest is allowed to exist on the roads.

Para 286 admits that "due to excessive and unsystematic collection of cane in the past, they are becoming scarce." Para 297 says "cane areas regenerate themselves naturally if proper protection is given." In fact, under the FPDC's management, excessive and unsystematic collection of cane was the norm and proper protection for regeneration was lacking.

Para 319 reveals tha profound ignorance of the Working Plan author. The CF was declared as CWLW, the DFOs and DMs as Wildlife Wardens. Only non-officials are declared as Hony Wildlife Wardens.

Para 360 claims that the boundaries of Reserve Forests were demarcated with erection of RCC pillars in 1971. Why should it then be "difficult to give the correct length of boundary" even 30 years later?

Para 371 prescribes maintenance of Plantation and Regeneration Journals in "the loose leaf file system" ! Will this not facilitate intentional tampering with records and evidence?

Para 381 states, "we may expect to sell the entire quantity of 17370 m³ of annual saleable yield in the local market." A fond hope not bolstered by past performance. In the past the Corporation had repeatedly exported logs on the plea that the local Industry was not picking up the stocks.

Action points:

- a. The Working Plans and such other documents should be made public and available to the common citizens on payment of reasonable charges. Any permits issued by FD should be made public by putting a copy on the Notice Board and internet/media and forwarding a copy to the local PRI office.
- b. The Working Plan is a ten year prescription for forest management and major errors in such a prescription is unacceptable. We suggest that formulation of Working Plans be done collaboratively between the Forest Department and experts from Research Institutions like FRI. Also draft plans should be made available to NGOs, interested persons, PRIs to eliminate such pit falls in future.
- c. There should be complete cessation of harvesting from the Little Andaman Island. Most of the harvestable area in little Andaman has already been extracted. In addition, extraction of timber has a deleterious impact on Onges.

8. An estimate of Land area available for extraction of Timber in the A & N Islands:

AN ESTIMATE OF FOREST LAND AREA AVAILABLE FOR EXTRACTION OF TIMBER IN THE A & N ISLANDS

	Area in sq.km.	Source	Balance
A&N Islands	8249		
Forest Area	7171	Forest Statistics 97-98pl	7171
Tribal Reserve PA- (combined)	3150	Forest statistics 97-98pl Forest statistics, 97-98 p43-45	3661
CRZ Area	320	Estimated pro rata for areas other than TR&PA	3341
Area above 45% slope,	438	Estimated pro rata as per forest statistics	2903

waterways, catchment s etc			
Area already harvested	2578	Forest statistics p15	325
Area available for logging	325		

According to the forest statistics, in the last 8 years (1990-91 to 1997-98) 27504 ha was harvested for timber. Therefore at an average, the annual area subjected to extraction comes to 3438 ha. Actual figure will be much more as forestry operations were definitely more extensive and intense in its quantum of extraction per unit area. Since the rotation period is at 75 years, although the department has worked for more than 100 years, the minimum area worked in the last 75 years works out to $3448 \times 75 = 257850$ ha, assuming that the department has religiously followed the principles of rotation as prescribed in its silvicultural system and had not gone back to a worked area within 75 years.

A&N Islands have a total area of 8249 sq.kms. The forest area is stated to be 7171 sq.kms. The total area of tribal reserves is 3150.65 sq.kms. While the tribal reserves mostly have a good forest cover, these are protected under the A&N Aboriginal Tribes Protection Regulation. These are under the administrative control of the two Dy. Commissioners of Andaman & Nicobar districts. Therefore, the forest area under the control of the Forest Deptt. Is only 4021 sq.kms. Collection of any resource from the tribal areas is prohibited under the ANAPTR except by primitive tribes.

Some of the areas are covered under two or more of the above classification that is there may be an overlap. However, once it is worked out and deducted from the available area outside the ambit of forestry, there appears to be only 32,500Ha left for forestry operations in the islands. If extraction from about 800 ha. Is permitted to meet local needs, and no more, this should last us for about 40 years. In the meantime, the 75 year cycle would have been completed in some areas.

The entire north and middle Andaman islands was leased out to M/s P.C.Ray and Company Limited in early fifties and they had worked the forests in these area till mid sixties. The exact data of their working is not available and as such these could not be incorporated in the above conclusion. The Department has already submitted an affidavit with regard to the working of the Company in the Hon' High Court of Calcutta. Details can be called for at the Commissions discretion for the areas leased out to timber industries like ATI, Wimco, ATP and Kitply etc., as Timber Harvesting coupes in the eighties. The areas covered by Andaman Trunk Road, forest camps all over the islands, the camps and other establishments of the Forest Corporation have not been incorporated in the above calculation.

Separately enclosed are statements of available data on the huge quantity of logs lying in the forests, forests depots, log depots, log ponds etc. There is also a huge stockpile of sound timber of unwanted sizes at the Govt. Saw Mills which can be resawn to meet local demands. In fact this is a crying need as much of the stock has already got spoiled/pilfered and so on due to prolonged storage. We urge the Commission to ascertain the actual quantities on ground.

The Forest Department and the FPDC maintain the data of extraction and export in form no.7. The form no. 7 would indicate how much timber remained in stock(extraction minus export) over successive years. The department as well as the Corporation had been extremely wasteful in the past. There were many mentions in local papers and many complaints of valuable logs rotting in the forest for years together. The Supreme Court could facilitate productive use of this wasted resource. The Commission might like to call for the form 7s and to get a summary prepared.

9. Forest Corporation:

There are numerous complaints of illegal export of timber from the FPDC's area. Standard operating procedure is marking two trees with the same number and using the same Transit Pass/Gate Pass twice by greasing the palm of Check Post Personnel.

In Feb, 2000, on the basis of a complaint, the IB investigated and found 4 Transit Passes issued by Ranger officer, Diglipur, all dated 19th February, 2000, two of which were numbered and two unnumbered. The Forest Deptt. apparently did not know of any export permit granted to FPDC. On enquiry, it was revealed that the MD, FPDC, had personally carried a file and obtained the signature of PCCF and the LG to legalize the export. It was quite extraordinary, to say the least. Our MP had sent a complaint to the Chief Vigilance Commissioner. A copy of his letter together with photocopies of the TPs are enclosed.

We suggest that the Forest Department and particularly, the Forest Corporation have been felling more trees than are permitted under the Working Plans and more than the market demand and had been losing huge quantities of timber through mishandling, pilferage and deterioration of stocks.

We urge the Hon'ble Commission to examine the Form "7" of every extraction camp and also to call for the Felling Control Registers wherever the Commission feels it is necessary.

Hershad Mehta's modus operandi was to persuade a friendly Senior Banker to accept a cheque in absence of sufficient funds in the account and to hold on to the cheque till enough balance was available in the Bank Account. We suspect that the Forest Corporation had been engaging in this dubious practice. They had issued a cheque no. 314492 for Rs. 50,00,000/- on 5th September, 2001, to the Forest Department towards outstanding lease rent and royalty dues which, according to our information, was credited to the Forest Department only on 1st October, 2001. Similarly, on 29th October, 2001, they had issued a cheque No 684960 for Rs. 1,00,00,000/- (when their balance was only Rs. 44,05,206/-) which along with another cheque No. 124876 of 29th October, 2001. We

suspect that similar situation existed in respect of Cheque no. 625960 of 5th October, 2001 issued to the Forest Department.

We have reasons to believe that the Corporation used to accept cheques from mainland-based timber merchants and allowed them to lift stocks, sell in the market and deposit the proceeds in their accounts, before producing the cheques received from the merchants for payment. This practice we believe, prevailed particularly during the tenure of Mr. Vakkom Purushothaman as LG.

We further suggest that the Forest Corporation had been collecting royalty for minor forest produce issued by them in Little Andamans, which were never deposited in Govt. Account (Forest Department). The Corporation, thereby, has been guilty of breach of trust and has illegally usurped taxpayers' money.

Action points:

- a. The Forest Corporation may be wound up and the staff thus rendered jobless may be absorbed by the Forest Department and used for enhanced patrolling, regeneration, soil and water conservation works.

10. Forest Department organisation and staff:

At present we have a PCCF, a CCF, six CFs, sixteen DFO level officers, a total of 24 IFS officers. In 1982-83, there were only 16 IFS Officers. In 1982-83, 1,50,000 cu.mtrs of logs were extracted, and 12,000 labourers were working. In 2000, only 40,000 cu. mtrs of logs were extracted and 2400 labourers worked. The regeneration figures of 82-83 are also much higher than those of 2000-01. It seems that less and less is getting done by more and more people. Prof Parkinson studied the British Admiralty and British Colonial Office and demonstrated that the growth of bureaucracy is totally unrelated to the volume of work. The Admiralty employed more babus in 1960s than in 1944 when the Royal Navy had three times more ships, officers and sailors. There were a lesser number of people in the British Colonial Office when "the sun never set in the British Empire" than when the entire consisted of two crown Colonies of Hong Kong and Singapore only. Our Forest Department is a classical model demonstrating Parkinson's Law.

There is a proposal of inducting an Addl. PCCF and another CCF in the Department. The total forest area in the Islands is 7171 sq. Kms, out of which 3150 Sq. kms. Is declared as Tribal Reserve, controlled by the DCs of Andaman & Nicobar. So, only 4021 Sq.kms of forest is being managed by 24 IFS Officers @ 168 Sq. mtrs per person. When we compare this with 349 in MP and 488 in Nagaland, 382 in Orissa, 480 in Arunachal, Goa, Mizoram and all Uts, ANI appear to be over endowed with IFS Officers.

Action points:

- a. At the cost of inducting an additional PCCF and a CCF, it is possible to have 30 Foresters. Considering the thin spread of Foresters and Forest Guards who guard the forest against illegal

felling and poaching we need more field staff than Managers. We have a hundred odd PAs in these Islands but the CWLW is extremely poorly equipped to handle these.

- b. We humbly urge the Commissioner to kindly recommend restructuring by reducing the number of Senior Officers to 1982 level and putting a ban on creation/filling up of any more senior posts in the next five years.

11. Joint Forest Management:

In view of the prevailing level of educated unemployment and illegal activities, the present regime of forest protection through policing alone is unviable. Joint Forest Management is the only answer to the question of protection. An additional benefit from JFM would be income generation for rural poor through collection of non-timber forest produce. Rural poor should be permitted and even encouraged to grow medicinal plants on the forest floor, fatten and later culture mud crabs in mangrove area and such other activities in the long-term interest of conservation. This will reduce and hopefully even eliminate the pressure of illegal felling and poaching that afflicts the Island forests today.

12. Existing stock of timber:

The recent Supreme Court Order banning felling of all naturally-grown trees and the subsequent order banning conversion of all naturally-grown logs has created much apprehension. A large number of factory/workshop workers are currently out of employment as are the Small-Scale Industry owners.

The already harvested logs are likely to deteriorate and rot, benefiting no one.

Action points:

- a. We humbly suggest that conversion of existing stock of already felled logs may kindly be allowed. It will save the livelihood of a large number of people who were adversely affected through no fault of theirs. We estimate that there is enough timber to last 9 to 12 months even if there is no fresh felling. Once this interim relief is granted, the Commission will have ample time to minutely examine and decide the issue of further felling of trees. Even if the Commission takes six months or more, there would be no immediate danger to the livelihood of poor people.

13. Forest personnel rendered idle due to SC order

The personnel of Forest Department and Forest Corporation who are currently idle due to the ban on tree-felling could be profitably deployed to reduce the huge backlog in regeneration. In case surplus manpower is still available, they could be deployed for water shed management, demarcation of forest boundaries and eco-development work, if the Commission agrees.

14. Ownership of saw mills:

Forest Officers do not necessarily have the expertise to run such non-forestry establishments as sawmills. Further, the conversion rate from logs to sawn timber of the Chatham saw mill is approximately 42 %, while that of the private saw mills is up to 90 %.

It is observed that Medium Scale Industries generated only 800 to 900 jobs for every 15,000 to 20,000 cu.mtrs of logs used. The small scale sawmills and other units generate 2400 jobs and consume 7500 to 9000 cu.mtrs. The tiny sector of small furniture manufacturers generate an equal number of jobs but consume less than 3000 cu.mtrs. of timber. Moreover, the medium Industries take away a sum equal to this wage bills by way of transport and other subsidies, which the tiny ones do not.

Action points:

- a. We urge the Commission to consider transferring the Govt. Saw Mills at Chatham and Betapur to a commercial organisation, whether private or public, as long as the units are manned by professionals and are run at a profit. The wastage rates of the Govt. Saw Mills are too high to be acceptable.
- b. We, also suggest a package of benefits to encourage the existing SSI and tiny industries and even set up more tiny ones to provide employment to more unemployed at least cost.

15. Sand:

Collection of sea sand, although prohibited under CRZ continues unabated causing massive erosion and potential loss of tourist revenue by obtaining exemptions from the MoEF year after year, even after successful operation of Stone Pulverisers producing rock-dust and sand substitute. There are many allegations of misuse and mismanagement including use of a single TP for transportation of more than one consignment.

Action points:

- a. We urge the Commission to encourage setting up of the required number of stone pulverisers to meet construction needs and to transfer the work of allotment, monitoring and issue of TP for collection of sand to the PRIs.
- b. The collection of sea sand be totally banned, say at the expiry of 12 months, and the Administration be directed to set up/cause to be set up such units within a rigidly prescribed time frame.
- c. At least one stone pulveriser should be set up in each Island so that enough sand substitute is available locally at cheap cost to take care of the construction needs of the local people as well as for development projects. Unemployed engineers could perhaps be gainfully employed in such units.

16. Future felling regime:

The forestry operations in Andamans must be made sustainable in the long run. We advocate extreme caution in avoiding waste and a highly selective felling with in a rigidly fixed limit. According to the conservative calculations submitted by us to the Hon'ble Supreme Court, we still have 32500 Hectares of forest left that could be harvested. In a few years time, the 75 year cycle would be over in old harvested area.

The approximate requirements of timber for the local needs as calculated by the Director of Industries (36,789 cu.m) is enclosed for the Commission's consideration.

Action points:

- a. Further tree-felling should be permitted only after the existing inventoried stocks, including salvaged and salvageable stocks are exhausted.
- b. A mechanism may be instituted for continued and sustainable harvesting.

16. Introduction of swimming in schools:

The over dependence of the ANI on roads for transport is symptomatic of the mainland mindset. Island dwellers are apprehensive of undertaking sea voyages on account of a psychological fear of the sea. Further, despite tremendous potential for fisheries, we are currently exploiting a very small proportion of our potential.

Action points:

- a. Swimming lessons should be made compulsory in every school in the Islands by evolving suitable infrastructure wherever necessary. Nicobarees are excellent swimmers. With a little training as lifeguard/lifesaver, they will be able to fulfill the need of lifeguards in these schools. It should be borne in mind that the object of such lessons is not to prepare sportspersons but to encourage the students to go out into the sea for resource gathering when they come of age and to develop in them an affinity for the sea.
- b. The state as well as the PRIs should encourage setting up of swimming clubs, sailing clubs, etc for the local people in order to remove the fear of the sea from peoples' mind and to facilitate resource-gathering from sea in view of the limitations of land-based activities.

(SAMIR ACHARYA)
Secretary

Bombay Natural History Society

Founded 1883

PATRON
SHRI K. R. NARAYANAN
PRESIDENT OF INDIA

PRESIDENT
B. G. DESHMUKH
I. A. S. (Retd.)

Ref:37/2002

Mr Shekhar Singh
The Indian Institute of Public Administration
Indraprastha Estate
Ring Road
New Delhi - 110 002.

January 4, 2002

Dear Shekar,

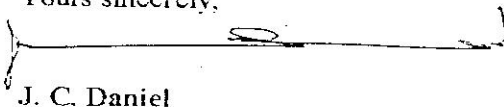
We are indeed grateful to you for having taken the trouble to interact with several scientists and Committee Members of the BNHS on December 24, 2001, in Mumbai.

As requested by you, we are enclosing herewith a note on all the issues that were discussed with you. This note is in the form of an *aide-memoire*.

If any further clarifications are required, please do let us know at the earliest so that we can send the requisite information to you.

With kind regards,

Yours sincerely,



J. C. Daniel
Hon. Secretary

Encl: a.

Written Submissions for Mr Shekhar Singh, Commissioner appointed by the Hon'ble Supreme Court of India, to examine various issues relating to the Andamans & Nicobar Islands.

1. The BNHS is of the view that the A&N Islands are environmentally and ecologically sensitive areas, containing a vast number of endemic species of wildlife, and a number of tribal populations that are on the verge of extinction, and they are in urgent need of protection.
2. The BNHS is grateful that the Hon'ble Supreme Court has been pleased to appoint a Commissioner to examine all the forestry and allied issues relating to the A&N Islands.
3. As regards the forests and trees within the A&N islands, the BNHS is of the view that all commercial exploitation of these forests to meet the requirements of the mainland of India should continue to remain stopped, since this is having a very adverse impact on the ecology and environment of the islands.
4. The A&N Forest Development Corporation should be closed down and merged with the Forest Department.
5. Areas "leased" to the A&N Forest Development Corporation should be immediately taken over by the Forest Department. These areas, including the palm oil plantation, should be reafforested with indigenous tree species.
6. The forests should be exploited solely to meet the requirement of the local population of the A&N islands, and the Working Plan prepared by the FD should be revised accordingly.
7. The private saw mills, which are of very small capacities, and are dispersed over the islands, should be allowed to operate so that the requirements of the local population can be met. They should only be allowed to use the stocks of wood that are physically in their possession. The FD should be asked to refund the amounts paid by these saw mills for stocks that have still not been lifted by them. The saw mills operated by the FD, which are very large capacity mills, and centrally located, should remain closed.

8. All subsidies that were being paid by the Central Government/Island Administration for the transport of timber/plywood/wood products to the mainland should be diverted to the FD to pay for protection and reafforestation.
9. The allocation of timber, Minor Forest Produce, etc. to the local population, needs to be reviewed, and brought down to realistic levels. The allocation of 6 cubic metres of timber for house repairs should be curtailed. The use of modern materials, such as laminated and treated bamboos developed by organizations funded by the MoEF such as IPIRTI should be explored. Structures made of such materials would be environmentally friendly, and suitable for the climatic and geological conditions of these islands.
10. The distribution of timber and Minor Forest Produce to the local population should be handed over to the local Panchayat Samitis. This should be done on a Joint Forestry Management basis, whereby the Panchayat Samiti is also entrusted with the responsibility of protecting the forests from illegal felling, poaching and encroachments.
11. A high powered inquiry should be conducted by the CBI on the working of the Forest Department and the A&N Forest Development Corporation. The CBI should be asked to look into the large-scale felling carried out without a proper Working Plan as well as excessive felling. The lease of forest land to the A&N Forest Development Corporation needs to be investigated also.
12. Projects that involve the use of forest lands for transmission lines etc. should be reviewed, and the possibility of putting underground ducts/cables instead of transmission towers should be seriously examined.
13. The construction of the runway being built by the Ministry of Defence should be allowed to resume, if it involves the felling of only coconut trees. This may be independently verified.
14. The issue of encroachers from the mainland and from Bangla Desh and Sri Lanka is very serious and needs to be resolved on top priority. The following measures are suggested –
 - a. All encroachments before 31/3/1978 may be regularized after fully complying with the provisions of the Forest Conservation Act, 1980.

Such encroachments must be shifted to the sites identified for rehabilitation in a strict time bound manner.

- b. The rehabilitation must be completed within a strict time frame, and families who refuse to move within the stipulated time frame would lose their entitlement.
 - c. Encroachers after 31/3/1978 should not be rehabilitated in forest areas or CRZ areas. These encroachers may be rehabilitated in small house plots admeasuring about 200 square metres, subject to adequate employment activities being available locally.
 - d. Strict controls on the entry of newcomers should be put into place. These could be in the form of entry permits/visas that can be issued at the time of embarkation either at the airports or in the docks.
 - e. Any person found on the islands who does not have an entry permit or is not a permanent authorized resident should be deported to the mainland or to the country of origin.
 - f. The Inner Line Permit system that is already in force should be strengthened and strictly enforced.
15. All projects that are proposed to be set up in the A&N islands should be subjected to proper public scrutiny, unlike the present system followed by the MoEF, which is grossly inadequate.
16. The concepts of "Sustainability", "Carrying Capacity" and "Precautionary Principle" should be brought in whilst examining such project proposals.
17. No projects that seek to bring in exotic flora or fauna should be permitted.
18. The Forest Department should be speedily equipped with arms and speed boats so that anti-poaching patrols can be effectively carried out. The FD must also be legally empowered to use their arms, as and when required, without subjecting them to harassment.
19. The FD in the A&N islands must be strengthened with more field staff rather than senior IFS officers. Secondly, the senior officers must be deployed

geographically so that they are in a position to look after all the islands, rather than be concentrated in Port Blair.

20. The Andamans Trunk Road should be closed in a phased manner. In Phase I, the areas occupied by the Jarawas, should be closed to motor traffic, within a period of three months. The Island Administration should be asked to make additional provision for fast ferry boats as an alternative to road transport.
21. All subsidies for foreigners should be removed.
22. The mining of sand in the A&N islands, which has so far been permitted by the MoEF as an exceptional case, should be banned forthwith. The MoEF should be directed to encourage the use of non-cement structures. All subsidies on the transport of cement should be removed. However, if RCC structures are at all required to be constructed, these could be allowed subject to the condition that the prefabricated cement blocks/bricks are imported from the mainland, and their transport is also not subsidized. The MoEF may direct its autonomous institutes, such as the IPIRTI, to implement a project for constructing environmentally friendly houses made of treated bamboos and cane. This would reduce the demand on both timber and sand.
23. The growing population of spotted deer (chital), which is a species that was introduced to the islands, is growing rapidly. The rapid proliferation of chital has also led to a situation where their uncontrolled grazing is preventing the natural regeneration of the forests. It is therefore suggested that a project should be immediately initiated to identify the best solution for dealing with this problem. Possible solutions could include sterilization, tranquilization and trans-location, etc.
24. The A&N islands also harbours elephants, which were also introduced to these islands to help work the forests. There is a population of domesticated elephants that could be used for patrolling, eco-tourism, and other similar activities. However, there is a small population of about 30-40 elephants that have gone wild and whose depredations on Interview Island have created serious ecological problems. We would suggest that the feral elephants on Interview Island should be captured, domesticated and trans-located to the mainland if they cannot be used on the islands.

25. For the long term protection of the ecological fragility of the A&N islands, it is suggested that the non-urban areas, and the non-tribal areas, should be notified as National Parks or Sanctuaries under the Wildlife Protection Act, 1972.
26. The provisions of the Environment Protection Act should be used to enforce environmental safeguards in the non-forest areas.

ANDAMAN & NICOBAR PLANTS IN IUCN RED LIST

CLASSIFIED CHART OF THREATENED SPECIES

	TOTAL	ANDAMAN	NICOBAR	A& N BOTH
Threatened	116	69	39	8
Ex/E	1	-	1	-
E	7	5	1	1
V	10	5	3	2
R	23	16	5	3
I	75	43	29	2

NOTE: There are 8 species of plants which are on Schedule II of CITES List.

Total number of species of vascular plants in Red Data List = 116

EX/E – Plants that are suspected of recently becoming extinct – 1

E – Endangered Taxa in danger of extinction ---- 7

V – Vulnerable or Taxa that are likely to move in endangered category ---- 10

R – Rare - Taxa with small world population, presently not in “E” or “V”, but are at risk ---- 23

I – Indeterminate – Taxa that are surely known to be “E”, “V”, or “R” but data deficient to assign the proper category --- 75

**DATA SUPPLIED BY
ANI ADMINISTRATION**

Documents/Information Needed from the Forest Department

1. Please give us the most recent Working Plan of the South Andaman Forest Division
2. Please give us the most recent Management Plans that may have been formulated for the national parks and sanctuaries in the A&N Islands
3. Please give details of encroachment as under:
 - 3.1. Forest encroachments before 1978.
 - 3.1.1. Kindly plot the location of encroachments on a map
 - 3.1.2. Give a list of the localities where these encroachments are located eg. Gandhisagar, Shantisagar, Shivsagar etc. and cross refer to the map
 - 3.1.3. Give the area encroached in each location
 - 3.1.4. Give the number of families involved in each location
 - 3.2. Forest encroachments after 1978.
 - 3.2.1. Kindly plot the location of encroachments on a map
 - 3.2.2. Give a list of the localities where these encroachments are located eg. Gandhisagar, Shantisagar, Shivsagar etc. and cross refer to the map
 - 3.2.3. Give the area encroached in each location
 - 3.2.4. Give the number of families involved in each location
 - 3.3. Proposed relocation sites for the encroachers that have encroached forests before 1978.
 - 3.3.1. Kindly plot the location of the relocation sites on a map
 - 3.3.2. Give a list of the localities that are proposed for relocation of encroachers and cross refer to the map
 - 3.3.3. Give the forest area as well as revenue area that is proposed to be used for the purpose of relocation
 - 3.3.4. Give the number of families that are proposed to be relocated in each site
4. Please give details of the export (separately) of logs/ sawn timber from the A&N Islands for the last ten years specifying:
 - 4.1. The type of wood eg. Hardwood/ softwood
 - 4.2. The species of wood eg. Girjan, Padauk etc.
 - 4.3. The quantity, in cubic metres, of the wood exported
5. Please give details of the poaching of timber and other terrestrial and marine wild products for the last five years, specifying:
 - 5.1. The location on a map
 - 5.2. The quantities that are estimated to be illegally extracted of each category of wild products like timber, animal products, nests etc.
 - 5.3. The seizures that have taken place of illegal consignments by either the Forest Department, Police, Coast Guard or Navy and details like

- 5.3.1. Type of wild product eg. timber, animal products, nests etc. and their quantities
- 5.3.2. The nationality of the people arrested along with the consignments
6. Please give an year wise break up of the extraction of timber from A&N starting from 1989-90 with the following details:
 - 6.1. Category of the timber extracted according to type
 - 6.2. The species that was extracted
 - 6.3. The quantity that was extracted
 - 6.4. The location, marked on a map, from where extraction of timber was done each year
 - 6.5. The area of the forest from which the timber was extracted
7. Please give details of the regeneration as under:
 - 7.1. The location, marked on a map, where regeneration activities have been taken up
 - 7.2. The area that has been taken up for regeneration in each location
 - 7.3. The agency that was/is involved in regeneration works
 - 7.4. The type of regeneration works eg. plantation, enrichment, etc. that have been done in each location
 - 7.5. Where available, please enclose reports or assessments of such regeneration efforts, pinpointing location and area and cross refer to the map
 - 7.6. In case of plantations, please specify which of these have involved the planting of exotics like teak.
8. Please provide us with assessments or reports, if any, comparing the regenerated forest areas with natural forests in terms of their ecological profile
9. Please give details of revenue areas in each forest division of A&N as under:
 - 9.1. Location of the revenue areas in each island, marked on a map
 - 9.2. Name of each location marked in the map, along with the area that it occupies
10. Please send us District Census Handbooks (Village and Town Directory and the Primary Census Abstract) of all the districts in A&N for the 1991 Population Census
11. Please give information for the tribal reserves in A&N as under:
 - 11.1. The location of all the tribal reserves in A&N, marked on a map
 - 11.2. Name of each location and the area that it occupies
12. Give a map of the forest areas in A&N with the following details:
 - 12.1. The boundaries of RF's, PF's, National Parks, Sanctuaries, Biosphere Reserves and any other category of forest areas in A&N
 - 12.2. The names of each of the above and the area that they occupy
13. Please provide us with a copy each of all the relevant rules and laws that govern the administration of the forest/land areas of A&N

14. Please provide us with a copy each of all the relevant rules and laws that deal with encroachment, its control and prevention, and other related matters in A&N
15. Please provide us with a copy each of all the relevant rules and laws that deal with poaching and its control in A&N
16. A copy of the affidavit that was filed by the Forest Department, A&N, in the Hon'ble Supreme Court of India, in response to the judgement of 23 November, 2001.
17. Please give details of the forest land that has been converted in the last ten years to non forest land in A&N as under:
 - 17.1. Mark the location of all such areas on a map
 - 17.2. Name each location given in the map and give its area
18. Please provide us with a list of all forest based rights and concessions including free royalties, specifying:
 - 18.1. The right or concession given
 - 18.2. The quantum of the right or concession
 - 18.3. The location, if applicable, of where the right or concession is allowed to operate
 - 18.4. The category of people to whom it is available and the numbers in each category
19. Please provide us with details of:
 - 19.1. Quotas, if any, that are reserved for forest based industries
 - 19.2. Subsidies, if any, (including transport subsidies or subsidies given by other agencies) that are provided to the forest based industries
20. Please provide use with details of the number of people employed at present in the wood based industries (separate for each industry) in A&N as under
 - 20.1. The number of people directly employed
 - 20.2. The number of people employed in support industries, if any, of the wood based industries, including transport
21. Please provide us with the details and status of the Voluntary Retirement Scheme(s) that have been offered by the large and medium scale wood based industries to their workers
22. Please give us details of sawmills in A&N as under:
 - 22.1. The location of the sawmills marked on a map
 - 22.2. The names of these sawmills
 - 22.3. Their installed and operating capacities
23. Please let us know the following:
 - 23.1. What is the estimated amount of sawdust that is generated by the operations of sawmills in A&N
 - 23.2. Of the above, how much is currently being utilised.
 - 23.3. How is the unutilised sawdust, if any, being disposed of
24. Please give us the following details of fuelwood consumption in A&N:
 - 24.1. The estimated quantity of fuelwood consumed in A&N

- 24.2. The species that are preferred for fuelwood in A&N
25. Please send to us a note on the technical feasibility of treating wood or bamboo extracted in A&N for domestic application and uses in A&N itself
26. Please give the following details of wood treatment plants in A&N:
 - 26.1. Please mark the location where these plants are located in a map
 - 26.2. Please give us the installed as well as operating capacity of these plants for treatment of various types of wood
27. Currently, what is the quantum of unused but extracted timber that is available in the A&N Islands. Please give details of the extraction (specifying types of woods), sale/use (specifying the user), balance left, and current status of the balance wood, for the last ten years.

Documents/Information Needed from the A&N Administration

1. Please give us details of the goods imported into A&N from the mainland including:
 - 1.1. Types of goods imported
 - 1.2. Value of the import of such goods
 - 1.3. Quantum of the import of such goods
2. Please give us details of the subsidies, including those given on transportation, for import of goods in the A&N Islands
3. Please give us details of the subsidies, including those given on transportation, for export of wood and other products from the A&N Islands
4. Please give details of the A&N fisheries as under:
 - 4.1. The existing catch in each category
 - 4.2. The existing potential in each of the categories
5. Please give details of the employment generated in A&N through:
 - 5.1. Forestry and allied activities like sawmills, furniture making, wood based industry etc
 - 5.2. Agriculture
 - 5.3. Horticulture (including spices)
 - 5.4. Sand quarrying
 - 5.5. Other quarrying (please specify)
 - 5.6. Fisheries
 - 5.7. Transportation (Please give the percentage engaged in freight transport and passenger transport. Please also give a breakup, industry wise of the freight transport)
 - 5.8. Building and construction
 - 5.9. Furniture and carpentry
 - 5.10. Other economic activities (please specify)
6. Please give details regarding sand extraction from the A&N Islands as under:

- 6.1. Mark the locations from where sand is being extracted on a map
- 6.2. Give names of the locations marked on the map
- 6.3. Give the area that is affected by such extraction
- 6.4. Give the quantum of sand that is extracted from these locations
7. Please give details regarding stone quarrying in A&N Islands as under:
 - 7.1. Mark the locations from where stone is being extracted on a map
 - 7.2. Give names of the locations marked on the map
 - 7.3. Give the area that is affected by such extraction
 - 7.4. Give the quantum of stone that is extracted from these locations
8. Please give details regarding stone crushing units in A&N Islands:
 - 8.1. Please mark the location where these units are located in a map
 - 8.2. Please give us the installed as well as operating capacity of these units
9. Please give us the following details, year wise, regarding construction in A&N Islands for the last five years:
 - 9.1. What is the percentage of houses as well as other buildings in A&N that are made of wood, bamboo, cane and other natural materials
 - 9.2. What is the percentage of houses as well as other buildings in A&N that are constructed using RCC technology
10. Please give details regarding land allotted to defence establishments in A&N in the last five years as under:
 - 10.1. Mark the location of defence establishments in A&N on a map
 - 10.2. Give names of these locations
 - 10.3. Give the area occupied by defence establishments in these areas
 - 10.4. Specify whether these areas are forest or non-forest
11. Please send details of the last three years plan and non-plan budgets as also the actual expenditure, separately for each head.

Documents/Information Needed from the A & N Administration

1. Details of the goods imported in A&N from the mainland:

This information is being collected.

2. Details of the subsidies, including those given on transportation, for export of goods in the A&N Islands: -

- No Transport subsidy is given on goods imported from foreign countries. Subsidy is available for bringing Raw Materials from Mainland India.
- No Transport subsidy has been given on timber for its import from mainland India.
- Transport subsidy paid to industries for import of goods (Raw Materials) from mainland India for the last 5 years

(Amount Rs. In lakh)

Year	Medium Scale Wood based Industry		SSI Wood Based		Other Industries		Total	
	No of Unit	Amount	No of Unit	Amount	No of Unit	Amount	No of Unit	Amount
1996-97	0	0.00	0	0.00	2	0.38	2	0.38
1997-98	3	63.52	0	0.00	1	0.64	4	64.16
1998-99	3	62.56	0	0.00	2	1.09	5	63.65
1999-2000	3	100.60	0	0.00	0	0.00	3	100.60
2000-01	3	73.26	0	0.00	3	11.46	6	84.72
Total								313.51

3. Details of the subsidies, including those given on transportation, for export of wood and other products from the A&N Islands: -

- No Transport Subsidy is given on goods (finished goods produced by the unit) exported to foreign countries. Transport Subsidy is available for export of finished goods to Mainland India
- Transport Subsidy paid to industries for export of finished goods to mainland India for the last 5 years.

(Amount Rs. In lakh)

Year	Medium Scale Wood based Industry		SSI Wood Based		Other Industries		Total	
	No of Unit	Amount	No of Unit	Amount	No of Unit	Amount	No of Unit	Amount
1996-97	0	0.00	6	89.13	0	0.00	6	89.13
1997-98	3	254.08	6	48.19	0	0.00	9	302.27
1998-99	3	250.24	8	57.97	1	6.00	12	314.21
1999-2000	3	402.49	0	0.00	0	0.00	3	402.49
2000-01	3	293.05	4	33.45	0	0.00	7	326.51
Total								1434.51

4. Details of the A&N Fisheries:

4.1 Details of existing catch in each category:

The information is enclosed as Annexure- I

4.2 The Details of existing potential in each of the categories is as under: -

Demersal (Species wise)

S.No	Fish Group	Potential (in tonnes)	Present Harvest (in tonnes)	Remarks
1.	Perches & Others	22,500	6,500	Under exploited
a.	Perches	-	2,000	Under exploited
b.	Mullets	-	1,000	Under exploited
c.	Pomfrcts	-	500	Under exploited
d.	Polynemids	-	200	Under exploited
e.	Scianids	-	500	Under exploited
f.	Silver bellies	-	1,400	Under exploited
g.	Cat fishes	-	500	Under exploited
h.	Prawns	-	300	Under exploited
i.	Crabs	-	100	Under exploited

It may be seen that all the demersal stocks are under exploited having vast scope for exploitation.

5. Details of the employment generated in A&N through:

5.1 Forestry and allied activities like sawmills, furniture making, wood based industry etc.

	Direct Employment **	In-direct Employment *
Forest Department	7000 Persons	
ANIFPDC	2650 Persons	
Medium Scale Industry (Plywood Industry)	1994 Persons ***	500 Persons
Furniture making	831 Persons	450 Persons
Wood based Industries	594 Persons	200 Persons
Total	13069 Persons	1150 Persons

*** Three major ply wood industries whose direct employment is 1994 person is presently closed

5.2 Agriculture

1.	Raising of Live Stock	165
2.	Agricultural services & Hunting	808
	Total	973

Note: -The above information is based on Economic Census Result 1998

5.3 Horticulture (including spices) Not available

5.4 Sand quarrying

5.5 Other quarrying (please specify)

1.	Mining & Quarrying	362 Persons
	Total	362 Persons

5.6 Fisheries

Licensed fisherman as on date	2524 Nos.
Traders	50 Nos.
Processing	78 Nos.
Fish Sellers	300 Nos.

Departmental Staff	265 Nos
Total	3217 Nos

Note

All the Mechanized and non mechanized Fishing crafts are made up of wood, thereby material required for the construction of these crafts depends on Forest.

- 5.7 Transportation (Percentage engaged in freight transport and passenger transport with breakup, industry wise of the freight transport)

- 5.8 Building and construction

1.	Construction	980 Persons
	Total	980 Persons

- 5.9 Furniture and carpentry

	Direct Employment **	In- direct Employment *
Furniture and Carpentry	831 Persons	450 Persons

- 5.10 Other economic activities (please specify)

	Direct Employment **	In-direct Employment *
Other Industries	5255 Persons	1500 Persons

** Basis of arriving the direct employment is from the figures available in the Registration records of the units.

** The direct employment figures pertain only in respect of the Registered Industries with DGT & D, Industries Department.

* The in-direct employment figures relates to contract and casual labours engaged by the unit.

* In-direct employment about 25-30,000 persons in allied sectors such as transportation of timber, stevedoring etc. particularly the three Medium scale industries.

S.No	Major activity Group	Persons Employed
1.	Manufacturing	17481
2.	Electricity, Gas & Water	1004
3.	Wholesale Trade	277
4.	Retail Trade	9089
5.	Restaurant & Hotels	2359
6.	Transport	3708
7.	Storage & warehousing	614
8.	Communications	478
9.	Financial, instance, real estate & Business services	834
10.	Community, Social & Personal Services	24784
11.	Other (unspecified) activities	0
	Total	60628

6. Details regarding sand extraction from the A&N Islands: -

- 6.1 Locations from where sand is being extracted on a map enclosed as Annexure -II

- 6.2 Names of the locations marked on the map enclosed as Annexure III

- 6.3 The area that is affected by such extraction
Nil
- 6.4 Quantum of sand that is extracted from these locations.
The details are enclosed as Annexure IV

7. Details regarding stone quarrying in A&N Islands: -

The information is being collected.

8. Details regarding stone crushing units in A&N Islands:-

8.1 The information is being collected.

9. Details, year wise, regarding construction in A&N Islands for the last five years: -

9.1 The percentage of houses as well as other buildings in A&N that are made of wood, bamboo, cane and other natural materials: -

In the rural areas around 50% of households use grass, leaves, reeds, thatch, wood, mud, unburnt bricks or bamboo as the main material for roofs of the houses. For wall, grass, leaves, reeds or bamboo is the most widely used material followed by wood. As regards flooring in more than 50% of the houses, mud is most commonly used material followed by cement.

9.2 The percentage of houses as well as other buildings in A&N that are constructed using RCC technology: -

Port Blair Municipal Board is the only urban area more than 20% of the urban houses use corrugated iron/zinc or other metal sheets as predominant materials of roof while wood is widely used for walls. Cement is predominantly used by more than 80% of houses for floors in Port Blair town.

Total Census Houses in 1991

Rural	56,044
Urban	20,077
Total	76,121

Note: - The requisite information against 9.1 & 9.2 are not available. The information furnished is based on the 1991 Census Report.

10. Details regarding land allotted to defence establishments in A&N in the last five years:-

The information is being collected.

11. Details of the last three years plan and non-plan budgets as also the actual expenditure, separately for each head:-

The information separately for plan and non-plan are enclosed as Annexure V

ANNEXURE - I

ANNUAL TOTAL FISH PRODUCTION AND SPECIES WISE COMPOSITION (qty.in tonnes)

No	Name of the species	1996		1997		1998		1999		2000	
		Qty.	% composition	Qty.	% composition	Qty.	% composition	Qty.	% composition	Qty.	% composition
1.	Elasmobranches	985	3.71	886	3.55	1157	3.99	941	3.53	1523	5.02
2.	Sardines	3214	12.11	3194	12.79	3926	13.55	5237	19.63	3823	12.60
3.	Thissocles	1201	4.52	1118	4.48	2581	8.91	312	1.17	738	2.43
4.	Anchovies	1408	5.30	1395	5.59	1073	3.70	1361	5.10	1216	4.00
5.	Silver Bellies	1420	5.35	1405	5.63	1090	3.76	1098	4.12	1557	5.13
6.	Mackeral	1589	5.99	1430	5.73	1087	3.75	1213	4.55	1939	6.39
7.	Carangids	1456	5.48	1350	5.41	1139	3.93	2249	8.43	1007	3.32
8.	Seer Fish	799	3.01	729	2.92	882	3.05	1172	4.40	1210	3.99
9.	Tuna	981	3.69	970	3.88	3823	13.19	1362	5.11	467	1.54
10.	Sail & Sword Fish	348	1.31	328	1.31	342	1.18	241	0.90	1307	4.31
11.	Baracuda	942	3.55	842	3.37	1022	3.53	1021	3.83	617	2.04
12.	Pomfrets	393	1.48	345	1.38	472	1.63	499	1.87	1856	6.12
13.	Mullets	904	3.41	805	3.22	1262	4.36	1153	4.32	1417	4.67
14.	Hilsa	1680	6.33	1580	6.33	729	2.52	478	1.79	416	1.37
15.	Perches	1951	7.35	1926	7.71	1482	5.11	3356	12.58	5636	18.58
16.	Belonidae	358	1.35	390	1.56	113	0.39	133	0.50	364	1.20
17.	Chirocentridae	359	1.35	340	1.36	331	1.14	83	0.32	237	0.78
18.	Cat Fish	560	2.11	540	2.16	431	1.49	388	1.45	510	1.68
19.	Polynemids	218	0.82	209	0.84	201	0.69	430	1.61	62	0.20
20.	Scienids	253	0.95	249	1.00	276	0.95	82	0.31	86	0.28
21.	Prawns	250	0.94	405	1.62	601	2.07	785	2.94	351	1.16
22.	Crabs	140	0.53	145	0.58	578	1.99	556	2.08	738	2.43
23.	Ribbon Fish	481	1.81	395	1.58	597	2.05	527	1.98	424	1.40
24.	Miscellaneous	4661	17.55	3998	16.00	3788	13.07	1996	7.48	2838	9.36
	TOTAL	26551		24974		28983		26673		30339	

I. 2 - A LIST OF SAND EXTRACTION BEACHES MARKED ON THE MAP

SL NO:	DIVISION/SOURCE
	DIGLIPUR DIVN.
1	SAGAR DWEEP
2	RAMNAGAR
3	SHYAM NAGAR
4	PASCHIM SAGAR
	MAYABUNDER DIVN
5	SOUND ISLAND
6	KARMATANG
	MIDDLE ANDAMAN DIVN
7	LALAJI BAY
8	RAMA BANGICHA
9	DANNI NALLAH
10	AMKUNJ
11	BEHAIND G.I.T.I.
	BARATANG DIVN.
12	BALUDERA(BT)
13	PIPAL DERA(HL)
14	MEETAH NALLAH(H/L)
15	KHARA NALLAH(HL)
16	LAXMANPUR(NI)
17	RAGTACHANG(BT)
18	ROGLACHANG(BT)
19	SUKKAKHARI(B/T)
	SOUTH ANDAMAN DIVN.
20	SHOEL BAY-17
21	SHOEL BAY-18
22	SHOEL BAY-19
23	BARSA BAHAD(RUT LAND)
24	BAKRA BLAU(R/L)
25	KOMYO(R/L)
26	PORT MEADOW-1
27	PORT MEADOW-II
28	DHANI NALLAH(R/L)
	LITTLE ANDAMAN DIVN
29	6 TO 6.5 KM PT
30	6.8 TO 7.3 KM PT

31	7.5 TO 7.9 KM PT
32	HARMINDAR BAY
33	BREAK WATER
34	DUGONG CREEK
35	POCKET NO: I (6 TO 6.5KM)
36	POCKET NO: II (6.8 TO 7.3 KM)
37	POCKET NO: III(7.5 TO 7.9 KM)
38	POCKET NO: IV
39	SOUTH BAY
	NICOBAR DIVISION
40	KAKANA BEACH(C/N)
41	ARONG (C/N)
42	JANSIN(KATCHAL
43	ATKONA(KATCHAL)
44	KATCHAL JETTY
45	SAFED BALU(TRINKET)
46	ALHEAT(TRINKET)
47	BENGALI CHUKMACHI
48	LUXI CHUKMACHI
49	LUXI-ALURANG
50	BADA BALU(KATCHALO
51	AUGCHUNG -ARONG(C/N)
52	SAWAI BEACH(C/N)
53	SAFEED BALU(NANCOWRY-10
54	TRINKET AREA
	GREAT NICOBAR DIVN
55	NAVY DERA
56	7-11 KM PT
57	13-14 KM PT
58	16-18 KM PT
59	18-23 KM PT
60	27-30 KM PT
61	32-35 KM PT
62	TRINKET AREA
63	PATTAR NALLAH
64	MANGRASWAN TO JHAN
65	LAXMAN BEACH
66	B QUARRY AREA
67	FISH COL TO BALUDERA
68	KOPEAN HEAT
69	10-12 KM PT
70	22-24 KM PT
71	30-35 KM PT
72	LAXMAN BEACH AREA

QUANTUM OF SAND EXTRACTION FROM VARIOUS BEACHES FROM 1998-99 TO 2000-2001

SL NO:	DIVISION/SOURCE	1988-1999 (IN CBM)	1999-2000 (IN CBM)	2000-2001 (IN CBM)	TOTAL
	DIGLIPUR DIVN.				
1	SAGAR DWEEP	4885	2172	0	7057
2	RAMNAGAR	5589	2599	5318	13506
3	SHYAM NAGAR	1093	1839	1000	3932
4	PASCHIM SAGAR	0	370	485	855
	MAYABUNDER DIVN				
1	SOUND ISLAND	4061	3431	3242	10734
2	KARMATANG	4922	2543	3021	10486
	MIDDLE ANDAMAN DIVN				
1	LALAJI BAY	6145	3190	2897	12232
2	RAMA BANGICHA	425	120	290	835
3	DANNI NALLAH	2125	2689	1495	6309
4	AMKUNJ	2145	0	0	2145
5	BEHAI ND G.I.T.I.	52	0	0	52
	BARATANG DIVN.				
1	BALUDERA(BT)	3815	5168	2096	11079
2	PIPAL DERA(HL)	0	500	500	1000
3	MEETAH NALLAH(H/L)	764	580	914	2258
4	KHARA NALLAH(H/L)	603	600	0	1203
5	LAXMANPUR(NI)	147	350	1285	1782
6	RAGTACHANG(BT)	0	0	0	0
7	ROGLACHANG(BT)	0	0	0	0
8	SUKKAKHARI(B/T)	0	0	0	0
	SOUTH ANDAMAN DIVN.				
1	SHOEL BAY-17	2421	1228	0	3649
2	SHOEL BAY-18	16133	2145	0	18278
3	SHOEL BAY-19	0	765	50	815
4	BARSA BAHAD(RUT LAND)	4900	910	1365	7175
5	BAKRA BLAU(R/L)	18885	13090	3480	35455
6	KOMYO(R/L)	3000	0	2720	5720
7	PORT MEADOW-1	0	2985	2415	5400
8	PORT MEADOW-II	0	3535	950	4485
9	DHANI NALLAH(R/L)	0	1142	9480	10622
	LITTLE ANDAMAN DIVN				
1	6 TO 6.5 KM PT	1525	1104	0	2629
2	6.8 TO 7.3 KM PT	2139	1578	0	3717
3	7.5 TO 7.9 KM PT	803	3310	0	4113
4	HARMINDAR BAY	2812	0	0	2812
5	BREAK WATER	0	305	2834	3139
6	DUGONG CREEK	0	0	0	0
7	POCKET NO: I (6 TO 6.5KM)	0	0	1041	1041
8	POCKET NO: II (6.8 TO 7.3 KM)	0	0	1035	1035
9	POCKET NO: III (7.5 TO 7.9 KM)	0	0	511	511
10	POCKET NO: IV	0	0	0	0
11	SOUTH BAY	0	0	0	0
	NICOBAR DIVISION				
1	KAKANA BEACH(C/N)	0	0	1250	1250
2	ARONG (C/N)	0	0	0	0
3	JANSIN(KATCHAL)	0	0	800	800
4	ATKONA(KATCHAL)	100	300	600	1000
5	KATCHAL JETTY	50	0	0	50
6	SAFED BALU(TRINKET)	0	0	0	0
7	ALHEAT(TRINKET)	0	0	0	0
8	BENGALI CHUKMACHI	0	0	0	0
9	LUXI CHUKMACHI	0	0	0	0
10	LUXI-ALURANG	0	0	0	0
11	BADA BALU(KATCHALO)	0	0	800	800
12	AUGCHUNG -ARONG(C/N)	0	0	0	0
13	SAWAI BEACH(C/N)	0	0	0	0
14	SAFEED BALU(NANCOWRY-10)	0	0	0	0
15	TRINKET AREA	0	0	0	0

	GREAT NICOBAR DIVN				
1	NAVY DERA	0	0	250	250
2	7-11 KM PT	2940	110	0	3050
3	13-14 KM PT	1587	581	1075	3243
4	16-18 KM PT	705	1925	2563	5193
5	18-23 KM PT	0	0	561	561
6	27-30 KM PT	1182	6103	0	7285
7	32-35 KM PT	678	1380	0	2058
8	TRINKET AREA	0	0	0	0
9	PATTAR NALLAH	0	0	0	0
10	MANGRASWAN TO JHAN	0	170	0	170
11	LAXMAN BEACH	0	0	0	0
12	B QUARRY AREA	0	0	550	550
13	FISH COL TO BALUDERA	0	0	0	0
14	KOPEAN HEAT	0	0	0	0
15	10-12 KM PT	0	0	83	83
16	22-24 KM PT	0	0	1363	1363
17	30-35 KM PT	0	0	170	170
18	LAXMAN BEACH AREA	0	0	0	0

(In Lakhs Rupees..)

Major Head	1998-99				1999-2000				2000-2001			
	FINAL GRANT		ACTUALS		FINAL GRANT		ACTUALS		FINAL GRANT		ACTUALS	
	PLAN	NON-PLAN	PLAN	NON-PLAN	PLAN	NON-PLAN	PLAN	NON-PLAN	PLAN	NON-PLAN	PLAN	NON-PLAN
2052	0.00	369.51	0.00	349.54	0.00	630.00	0.00	672.43	0.00	684.37	0.00	675.63
3451	74.99	0.00	76.36	0.00	87.00	0.00	82.98	0.00	102.00	0.00	100.22	0.00
2012	0.00	73.27	0.00	73.33	0.00	152.32	0.00	149.71	0.00	59.76	0.00	57.95
2014	20.00	70.17	18.76	57.37	25.25	83.00	22.30	72.27	43.00	85.83	38.69	67.59
2030	0.00	1.00	0.00	1.15	0.00	2.00	0.00	1.86	0.00	6.00	0.00	5.64
2053	0.00	260.19	0.00	247.92	0.00	260.33	0.00	249.08	0.00	277.90	0.00	266.37
2054	23.00	85.25	22.80	84.46	25.90	85.20	25.70	84.77	29.50	88.20	27.87	86.41
2055	117.00	1901.70	114.55	1878.74	104.00	1964.49	103.94	2031.72	115.77	2448.94	114.04	2444.64
2056	49.00	69.25	46.12	69.10	58.00	68.11	55.11	73.47	53.04	98.83	58.66	97.77
2070	341.41	287.63	338.42	298.86	247.00	310.97	241.56	307.61	259.80	414.23	257.92	393.54
2075	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2225	33.82	23.00	30.55	21.49	44.32	34.97	43.48	33.89	39.40	28.34	37.01	26.78
2235	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.36
2245	0.00	1.90	0.00	0.39	0.00	0.60	0.00	0.09	0.00	2.00	0.00	0.25
2250	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
3454	14.00	15.00	13.23	14.95	12.95	11.13	12.35	11.17	13.51	13.31	13.11	12.61
6245	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
2401	76.50	496.08	73.26	473.67	85.77	508.18	80.87	500.20	102.00	506.76	95.88	488.51
2402	63.00	151.00	55.95	137.88	77.30	138.82	78.23	135.87	74.00	140.00	72.95	137.84
2403	216.43	391.30	216.98	388.09	258.15	359.53	254.91	358.22	204.00	398.00	203.40	396.32
2404	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2405	146.00	91.00	147.75	94.38	155.46	92.67	145.30	91.48	162.52	95.47	156.71	92.61
2425	28.10	97.49	25.62	91.83	34.38	93.02	33.46	90.97	31.00	92.16	29.97	90.04
2435	53.69	38.00	46.15	30.89	51.16	36.00	49.53	35.00	47.00	36.05	46.70	34.40
4401	0.00	77.00	0.00	107.94	0.00	111.00	0.00	107.00	0.00	127.00	0.00	94.23
4405	20.00	0.00	0.00	0.00	10.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00

4425	9.00	0.00	5.90	0.00	17.76	0.00	11.74	0.00	5.00	0.00	5.00	0.00
6402	3.00	0.00	0.71	0.00	2.70	0.00	2.38	0.00	1.00	0.00	0.66	0.00
6425	29.00	0.00	28.88	0.00	32.30	0.00	45.28	0.00	72.00	0.00	72.00	0.00
2029	0.00	149.00	0.00	139.78	0.00	145.38	0.00	149.07	0.00	157.00	0.00	150.20
2506	45.90	0.00	43.22	0.00	46.10	0.00	44.21	0.00	46.00	0.00	41.18	0.00
2215	160.00	310.00	160.00	333.61	198.00	360.00	198.00	359.98	40.00	450.00	40.00	456.43
2515	653.46	75.00	615.33	72.98	661.64	71.00	662.68	70.55	657.55	74.53	640.42	71.00
4215	1174.00	0.00	1173.59	0.00	1220.00	0.00	1214.51	0.00	1343.00	0.00	1347.01	0.00
2801	0.00	4454.23	0.00	5045.07	0.00	5891.00	0.00	5881.68	0.00	6705.00	0.00	6595.63
4801	1446.00	372.00	1418.32	369.83	1750.00	372.00	1728.76	373.11	1729.00	372.00	1651.72	370.08
2501	13.80	0.00	13.98	0.00	17.31	0.00	17.07	0.00	20.00	0.00	19.88	0.00
2810	171.42	0.00	170.58	0.00	141.56	0.00	138.06	0.00	110.00	0.00	106.00	0.00
2406	744.50	3314.21	747.50	3452.53	865.10	3360.91	839.47	3350.27	867.00	3544.71	856.56	3497.52
4406	199.00	50.00	208.45	14.13	282.00	32.30	284.46	15.15	280.00	32.00	280.10	21.67
2408	0.00	3496.00	0.00	3413.17	0.00	3555.99	0.00	3525.15	0.00	3587.00	0.00	3551.98
2425	2.00	0.00	2.00	0.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
3456	94.80	156.00	80.72	153.51	99.00	148.90	88.08	143.81	100.00	161.00	95.19	163.71
3475	5.00	8.00	5.28	3.33	8.00	3.68	7.87	3.28	8.00	5.00	7.43	4.84
2210	855.00	1741.00	850.36	1790.94	1077.00	1891.00	1074.90	1903.57	1088.44	1975.00	1094.29	1975.89
2211	400.00	0.00	400.00	0.00	223.00	0.00	223.00	0.00	223.00	0.00	223.00	0.00
2202	1760.20	4942.04	1756.24	5052.67	1747.62	5115.41	1731.40	5084.56	1728.00	5421.03	1694.43	5272.73
2203	209.31	77.26	205.35	76.32	161.66	78.00	144.25	73.40	179.93	78.37	177.37	77.42
2204	67.45	67.94	57.78	59.68	68.10	68.65	59.79	63.80	56.00	65.10	50.39	60.54
2205	62.00	28.00	56.63	26.25	70.02	30.00	56.88	24.86	62.00	30.00	57.14	26.84
2235	10.00	20.15	9.88	18.21	10.50	29.04	9.71	30.07	15.55	24.04	13.96	24.60
2236	55.00	8.00	47.61	6.42	50.00	8.00	51.91	7.74	99.00	8.00	95.63	7.89
2851	195.30	134.58	173.93	134.67	188.00	137.55	165.42	136.07	165.84	147.36	149.93	143.06
2885	980.00	0.00	959.65	0.00	873.00	0.00	871.89	0.00	524.00	0.00	523.57	0.00
4202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
4851	50.00	0.00	50.00	0.00	50.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00
6851	26.00	0.00	26.09	0.00	26.00	0.00	25.19	0.00	4.00	0.00	2.97	0.00
2220	86.00	57.00	96.43	56.39	63.50	58.28	63.50	54.43	61.00	61.80	60.95	60.93
2230	30.80	80.06	31.39	75.76	48.81	81.44	44.93	83.07	42.34	82.46	36.69	81.69
3425	7.00	0.00	7.29	0.00	8.68	0.00	10.34	0.00	7.92	0.00	6.34	0.00
3435	2.00	0.00	2.24	0.00	3.90	0.00	1.50	0.00	1.80	0.00	1.78	0.00

2070	53.33	301.00	49.95	309.09	53.06	313.50	52.47	322.73	49.00	329.90	47.28	326.89
3051	160.98	2739.76	167.11	2788.69	160.00	3300.93	159.70	3273.86	209.00	3751.56	204.37	3657.42
3052	0.00	4625.00	0.00	5293.58	780.00	5930.00	648.44	5929.68	1578.00	7119.00	1577.17	7119.00
3054	550.00	680.00	550.00	714.51	550.00	880.00	545.00	883.92	100.00	930.00	100.00	937.27
3055	138.25	570.00	138.15	668.37	95.62	770.00	95.26	773.21	161.00	731.98	160.65	728.40
3056	0.00	128.00	0.00	128.20	0.00	137.00	0.00	134.39	0.00	158.00	0.00	151.07
5051	892.00	0.00	883.45	0.00	1240.00	0.00	1239.12	0.00	891.00	0.00	887.64	0.00
5052	6135.00	0.00	6147.41	0.00	10110.00	0.00	10110.65	0.00	10295.00	0.00	10231.28	0.00
5054	3100.00	0.00	3114.46	0.00	3980.00	0.00	3989.28	0.00	4642.00	0.00	4648.09	0.00
2851	7.00	6.64	3.37	6.31	3.00	3.95	2.61	3.69	3.16	4.06	1.81	3.36
6851	5.00	0.00	1.76	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3053	1.00	0.44	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5053	725.00	0.00	725.52	0.00	2334.00	0.00	2332.94	0.00	3000.00	0.00	3000.02	0.00
3452	372.00	48.05	358.51	56.02	333.68	48.00	335.41	48.02	334.00	50.00	323.08	50.89
2053	0.00	9.00	0.00	9.00	0.00	9.00	0.00	9.00	0.00	9.00	0.00	9.00
2058	24.00	119.38	25.41	115.87	25.00	118.66	28.56	119.27	41.56	128.00	41.52	124.32
2059	48.50	4498.92	47.32	5371.60	86.20	5705.34	67.27	5609.20	111.75	6323.05	116.21	6324.43
2202	0.00	3.00	0.00	2.75	0.00	43.00	0.00	43.39	0.00	50.00	0.00	48.55
2215	201.00	310.00	201.00	310.32	105.00	350.00	105.00	350.23	60.00	370.00	60.00	369.71
2216	120.00	350.00	120.00	379.19	100.00	410.00	100.00	409.44	154.00	458.00	154.00	453.21
2217	691.00	21.60	689.00	21.01	335.00	23.00	335.00	20.92	300.00	27.00	300.00	27.64
2402	6.00	0.00	6.01	0.00	5.00	0.00	0.73	0.00	3.00	0.00	2.67	0.00
4055	295.00	0.00	300.84	0.00	300.00	0.00	302.51	0.00	314.00	0.00	314.04	0.00
4059	822.00	72.00	818.36	73.58	1063.00	81.70	1069.55	78.73	796.00	94.00	799.19	91.56
4070	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	50.04	0.00
4202	1872.77	0.00	1878.20	0.00	1885.00	0.00	1903.67	0.00	1744.00	0.00	1750.15	0.00
4210	791.00	0.00	788.93	0.00	710.00	0.00	710.83	0.00	650.00	0.00	651.27	0.00
4215	153.00	0.00	152.96	0.00	225.00	0.00	224.74	0.00	256.00	0.00	253.70	0.00
4216	678.00	19.00	673.53	17.08	1160.00	27.00	1161.07	26.27	1265.00	20.00	1263.93	20.00
4217	176.00	0.00	175.00	0.00	180.00	0.00	179.35	0.00	170.00	0.00	169.96	0.00
4220	7.00	0.00	6.93	0.00	5.00	0.00	4.45	0.00	3.00	0.00	3.02	0.00
4225	7.57	0.00	7.57	0.00	30.00	0.00	30.00	0.00	26.00	0.00	26.00	0.00
4235	60.00	0.00	59.34	0.00	60.00	0.00	59.03	0.00	28.00	0.00	27.93	0.00
4250	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	40.00	0.00

[illegible]

TABLE SHOWING THE TOTAL GRANT AND EX
ANDAMAN AND NICOBAR ISLANDS FOR THE YEAR

Major Head

2052 Secretariat General Services.	
3451 Secretariat Economic Services	
2012 Administrator of Union Territory	
2014 Administration of Justice	
2030 Stamps and Registration	
2053 District Administration	
2054 Treasury & Accounts Administration	
2055 Police	
2056 Jails	
2070 Other Administrative Services	
2075 Miscellaneous General Services	
2225 Welfare of SC, ST and OBC	
2245 Relief on Natural Calamities	
2250 Other Social Services	
3454 Census Surveys and Statistics	
6245 Loan for Relief on Natural Calamities	
2401 Crop Husbandry	
2402 Soil and Water Conservation	
2403 Animal Husbandry	
2404 Dairy Development	
2405 Fisheries	
2425 Cooperation	
2435 Other Agricultural Programme	
4401 Capital Outlay on Crop Husbandry	
4405 Capital Outlay on Fisheries	
4425 Capital Outlay on Co-operation	
6402 Loans for soil and Water Conserv.	
6425 Loans for Cooperation	
2029 Land Revenue	
2506 Land Reforms	
2215 Water Supply and Sanitation	
2515 Other Rural Development	
4215 Capital Outlay on Water Supp & Sani	1
2801 Power	
4801 Capital Outlay on Power Project	1
2501 Special Programme for Rural Dev.	
2810 Non Conventional Sources of Energy	
2406 Forestry and Wild Life	
4406 Capital Outlay on Forestry & Wild Life	
2408 Food Storage and Warehousing	
2425 Co-operation	
3456 Civil Supplies	
3475 Other General Economic Services	
2210 Medical and Public Health	
2211 Family Welfare	

2202 General Education
 2203 Technical Education
 2204 Sports and Youth Services
 2205 Art and Culture
 2235 Village and Small Industries
 2236 Nutrition
 2851 Village and Small Industries
 2885 Other Outlay on Industries & Mineral.
 4851 Capital Outlay on Village & Small Ind.
 6851 Loans for Village & Small Industries.
 2220 Information and Publicity.
 2230 Labour and Employment
 3425 Other Scientific Research
 3435 Ecology and Environment
 2070 Other Administrative Services
 3051 Ports and Light Houses
 3052 Shipping
 3054 Roads and Bridges
 3055 Road Transport
 3056 Inland Water Transport
 5051 Capital Outlay on Ports & Light Hou.
 5052 Capital Outlay on Shipping
 5054 Capital Outlay on Roads & Bridges
 2851 Village and Small Industries
 6851 Loans for Village & Small Industries.
 3053 Civil Aviation
 5053 Capital Outlay on Civil Aviations.
 3452 Tourism
 2053 District Administration
 2058 Stationery and Printing
 2059 Public Works
 2202 General Education
 2215 Water Supply and Sanitations
 2216 Housing
 2217 Urban Development
 2402 Soil and Water Conservation
 4055 Capital Outlay on Police
 4059 Capital Outlay on Public Works
 4202 Capital Outlay on Edn, Sports, Art & Cul
 4210 Cap. Outlay on Med. & Pub. Health
 4215 Capital Outlay on Water Supp & Sani
 4216 Capital Outlay on Housing
 4217 Capital Outlay on Urban Development
 4220 Capital Outlay on Infor. & Publicity
 4225 Cap. Outlay on Welf. of SC, ST & OBC
 4235 Cap. Outlay on Social Security & Wel
 4401 Cap. Outlay on Crop Husbandry
 4403 Cap. Outlay on Animal Husbandry
 4405 Capital Outlay on Fishries
 4408 Cap. Outlay on Food Stor & Warehou
 4515 Cap. Outlay on Rural Dev. Prog.
 4801 Cap. Outlay on Power Proj.

4851 Cap. Outlay on Village & Small Indust
5052 Cap. Outlay on Shipping
5054 Cap. Outlay on Roads & Bridges
5055 Cap. Outlay on Road Transport
5425 Cap. Outlay on othr Scienfic& Env. Res
5452 Cap. Outlay on Tourism
2702 Minor Irigation
2711 Flood Control and Drainage
4711 Cap. Outlay on Flood Cont. & Drainag
2235 Social Security & Welfare
2236 Nutrition

Total

3

Documents/Information Needed from the Forest Department

1. **The current Working Plan of the South Andaman Forest Division:**

This has already been despatched.

2. **The Management Plans formulated for National Parks and Sanctuaries in the A & N Islands:**

The Management Plan of Mahatma Gandhi Marine National Park has already been despatched. The management plans for Mt. Harriet National Park and Interview Island sanctuary are enclosed.

3. **Details of encroachments:**

The maps are under preparation and the information shall be sent separately.

4. **Details of the export (separately) of logs/sawn timber from the A & N Islands for the last ten years:**

4.1 The type of wood :-

- 1) Ornamental Wood.
- 2) Superior Hardwood.
- 3) Standard Hardwood.
- 4) Soft wood

4.2 The species of wood: -

- 1) Padauk
- 2) Gurjan
- 3) Badam
- 4) White Chuglam
- 5) Mohwa
- 6) Nabbe
- 7) White Dhup
- 8) Red Dhup
- 9) Thitpok etc.

- 4.3 The quantity, in cubic metres, of the wood exported

A) Log timber

YEAR	FOREST DEPT.	FPDC	Total (in cum)
1991-92	3498	9477	12975
92-93	2540	7206	9746
93-94	3654	11694	15348
94-95	803	9963	10766
95-96	-	1184	1184
96-97	-	-	-
97-98	-	-	-
98-99	-	-	-
99-2000	-	3347	3347
2000-01	-	1866	1866

2001-02 (Upto 11/02)		4438	4438
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**B) Sawn Timber exported to Govt. depots at Chennai & Calcutta.
(In cum)**

Year	Total Quantity
91-92	868.1
92-93	492.7
93-94	140.0
94-95	792.1
95-96	385.2
96-97	841.100
97-98	649.50
98-99	130.77
99-2000	132.510
2000-01	676.627
01-02 (upto Nov)	278.1

C. Sawn timber exported by Private saw mills:-

Year	Total Quantity	(In cum)
98-99	923	
99-2000	570	
2000-01	614	

D. Sawn Timber exported by Private Individuals

Year	Total Quantity	(in cum)
98-99	127.647	
99-2000	98.794	
2000-01	46.392	

5. The details of the poaching of timber and other terrestrial and marine wild products for the last five years:
The information is being collected.
6. The year wise break up of the extraction of timber from A & N starting from 1989-90:
 - 6.1. Category of the timber extracted according to type (given below)
 - 6.2. The species that was extracted (*Enclosed*)
 - 6.3. The quantity that was extracted (given below)

LIST OF COMMERCIAL & NON COMMERCIAL TIMBER SPECIES OF A & N ISLANDS

I COMMERCIAL

I (A) ORNAMENTAL WOODS

Vernacular Name	Scientific Name
1. Chooli	<i>Sagerea elliptica</i>
2. Marble wood	<i>Diospyros marmorata</i>
3. Padauk	<i>Pterocarpus dalbergioides</i>
4. Satin wood	<i>Murraya exotica</i>
5. Silvergrey	<i>Terminalia bialata</i>

I (B) HARD WOODS

1. Badam	<i>Terminalia procera</i>
2. Black chuglam	<i>Terminalia manii</i>
3. Chakrisia	<i>Chakrasia tabularis</i>
4. Gangaw	<i>Mesua ferrea</i>
5. Gurjan	<i>Depterocarpus species</i>
6. Hill mohwa	<i>Madhuca butyracea</i>
7. Jhingam	<i>Pajanalina rhedii</i>
8. Jungli sam	<i>Mangifera andamanica</i>
9. Koko	<i>Albizia lebek</i>
10. Lakuch	<i>Artocarpus gomeziana</i>
11. Lalchini	<i>Amoora wallichii</i>
12. Lal bombwe	<i>Planchonia andamanica</i>
13. Mau	<i>Duabanga sonneratioides</i>
14. Nabbe	<i>Lannea grandis</i>
15. Poon	<i>Calophyllum tonophyllum</i>
16. Pyrna	<i>Lagerstroemia hypoluca</i>
17. Red thingan	<i>Prunus martabanica</i>
18. Red dhup	<i>Parishia insignis</i>
19. Sea mohwa	<i>Manilkara littoralis</i>
20. Tounpinne	<i>Artocarpus chaplasha</i>
22. Thienkle	<i>Nauclea gageana</i>
23. White thingan	<i>Hopea odorata</i>
24. White chuglam	<i>Terminalia bialata</i>
25. Ywegi	<i>Adenanthera pavonina</i>

I (C) SOFT WOODS

Vernacular Name	Scientific Name
1. Ailanthus	<i>Allanthus kurzii</i>
2. Bakota	<i>Endospermum chinense</i>
3. Bombeza	<i>Albizia stipulata</i>
4. Didu	<i>Bombax insignis</i>
5. Evodia	<i>Evodia glabra</i>
6. Letkok	<i>Sterculia alata</i>
7. Lambapatti	<i>Sideroxylon longepetiolatum</i>
8. Myanim	<i>Zanthoxylum badrunga</i>
9. Papita	<i>Pterocymbium tinctorium</i>
10. Thitpok	<i>Tetrameles nudiflora</i>
11. White dhup	<i>Canarium euphyllum</i>

II NON COMMERCIAL WOODS

1. Ambara	<i>Spondias mangifera</i>
2. Chinyok	<i>Bracantomalum mangifera</i>
3. Gular	<i>Ficus Species</i>
4. Jaiphal	<i>Myristica species</i>
5. Jamun	<i>Schizigium species</i>
6. Jangli lakuch	<i>Antiaris toxicaria</i>
7. Jungli neem	<i>Ganophyllum falcatum</i>
8. Kattaphal	<i>Baccaria sapida</i>
9. Karanj	<i>Pongamia pinnata</i>
10. Lai chilka	<i>Sterculia villosa</i>
11. Letauk	<i>Aglaia andamanica</i>
12. Lepbew	<i>Xanthophyllum andamanica</i>
13. Sambium	<i>Dillenia Species</i>
14. Siris	<i>Enterolobium samara</i>
15. Thitkandu	<i>Pometia pinnata</i>

6.3 Quality Of Timber Extracted

Sl.No	Category	Forest Deptt & Private parties on Payment of royalty & free of royalty.	ANIFPDC	Total
TOTAL (1991-92)				
		63509	41810	105319
TOTAL (1992-93)				
		78025	47645	125670
1993-94				
1.	Ornamental wood	5657	957	6614
2.	Superior Hardwood	12703	6223	18926
3.	Standard Hardwood	51614	24707	76321
4.	Softwood	11574	16701	28275
	TOTAL	81548	48588	130136
1994-95				
1.	Ornamental wood	3845	1020	4865
2.	Superior Hardwood	23056	6485	29541
3.	Standard Hardwood	43681	22566	66247
4.	Softwood	16649	18221	34870
	TOTAL	87231	48292	135523
1995-96				
1.	Ornamental wood	4258	479	4737
2.	Superior Hardwood	7364	5269	12633
3.	Standard Hardwood	53622	26287	79909
4.	Softwood	12334	16966	29300
	TOTAL	77578	49001	126579
1996-97				
1.	Ornamental wood	4568	651	5219
2.	Superior Hardwood	6525	5464	11989
3.	Standard Hardwood	44139	30791	74930
4.	Softwood	8954	6351	15305
	TOTAL	64186	43257	107443
1997-98				
1.	Ornamental wood	3728	613	4341
2.	Superior Hardwood	25315	12621	37936
3.	Standard Hardwood	11462	5043	16505
4.	Softwood	9091	9224	18315
	TOTAL	49596	27501	77097
1998-99				
1.	Ornamental wood	3066.707	610.834	3677.541
2.	Superior Hardwood	20463.874	15850.320	36314.194
3.	Standard Hardwood	8161.060	4179.235	12340.295
4.	Softwood	3424.214	6866.824	10291.038
	TOTAL	35115.851	27507.213	62623.064
1999-2000				
1.	Ornamental wood	3517.604	759.549	4277.153
2.	Superior Hardwood	13791.340	13561.610	27352.950
3.	Standard Hardwood	6284.916	3877.637	10162.553
4.	Softwood	1917.519	3290.510	5208.029

5.	Misc. Hardwood	113.225	503.109	616.334
	TOTAL	25624.604	21992.415	47617.019
2000-2001				
1.	Ornamental wood	1200.279	771.658	1971.937
2.	Superior Hardwood	11462.394	12906.132	24368.526
3.	Standard Hardwood	4452.816	3116.038	7568.854
4.	Softwood	777.527	4410.784	5188.311
5.	Misc. Hardwood	87.332	438.875	526.207
6.	Misc. Softwood	27.233	402.094	429.327
	TOTAL	18007.581	22045.581	40053.162

6.4. The location, marked on a map, from where extraction of timber was done each year.

The map is enclosed as Annexure I.

6.5. The area of the forest from which the timber was extracted

YEAR	By Forest Deptt	By ANIFPDC	Total (In Hectare)
1990-91	2251	764	3015
1991-92	2815	947	3762
1992-93	2673	1014	3687
1993-94	2052	1241	3292
1994-95	3007	1249	4256
1995-96	3365	1145	4510
1996-97	1963	739	2702
1997-98	1547	733	2280
1998-99	1494	818	2312
1999-2000	1233	958	2191

7. The details of regeneration:

7.1. The location, marked on a map, where regeneration activities have been taken up

The map is enclosed as Annexure II

7.2. The area that has been taken up for regeneration in each location

Year	Natural Regeneration	Artificial Regeneration (In Hectare)		Total Regeneration (NRA+TFP+NTFP)
		Timber Plantation	Non-Timber Plantation	
91-92	2070	120	189	2379
92-93	2039	185	187	2411
93-94	2100	265	192	2557
94-95	2085	260	195	2540
95-96	2020	305	216	2541
1996-97	2036	179	235	2450

1997-98	1630	150	290	2070
1998-99	1650	177	231	2058
1999-2000	1675	210	278	2163
2000-2001	1492	185	302	1979

7.3. The agency that was/is involved in regeneration works

Department of Environment and Forests and the ANIFPDC Ltd.

7.4. The type of regeneration works eg. plantation, enrichment. etc. that have been done in each location

Weeding, climber cutting and canopy lifting. Enrichment planting after the third year in case of insufficient regeneration

7.5. Where available, please enclose reports or assessments of such regeneration efforts, pinpointing location and area and cross refer to the map

This report is being collected.

7.6. In case of plantations, please specify which of these have involved the planting of exotics like teak

Planting of exotics has been stopped

8. The assessments reports comparing the regenerated forest areas with natural forests in terms of their ecological profile:

The report is being collected.

9. The details of revenue areas in each forest division of A & N:

The revenue areas are shown in all the maps enclosed.

9.1. Location of the revenue areas in each island, marked on a map

9.2. Name of each location marked in the map, along with the area that it occupies

10. District Census Handbooks (Village and Town Directory and the Primary Census Abstract) of all the districts in A&N for the 1991

The District Census Handbook is enclosed.

11. Information for the tribal reserves in A&N :

11.1 The location of all the tribal reserves in A&N, marked on a map

11.2 Name of each location and the area that it occupies

The information is enclosed as Annexure III.

12. Map of the forest areas in A&N with the following details:

The map is under preparation.

13. The relevant rules and laws that govern the administration of the forest/land areas of A&N

Indian Forest Act, 1927 (enclosed)

Andaman and Nicobar Islands Protected Forests Rules, 1986 (enclosed)

Andaman and Nicobar Islands Forest Produce Transit Rules, 1966 (enclosed)

14. The relevant rules and laws that deal with encroachments, its control and prevention, and other related matters in A&N

Public Premises (Eviction of Unauthorized Occupants) Act, 1971 (enclosed)

15. The relevant rules and laws that deal with poaching and its control in A&N

Wildlife (Protection) Act, 1972 (enclosed)

Andaman and Nicobar Islands Wildlife Protection Rules, 1973 (enclosed)

16. The copy of affidavit filed by the Forest Department, A&N, in the Hon'ble Supreme Court of India, in response to the judgement of 23 November, 2001:

This has already been delivered by the Deputy Resident Commissioner, New Delhi.

17. Details of the forest land that has been converted in the last ten years to non forest land in A&N:

The details are enclosed as Annexure IV.

18. Forest based rights and concessions including free royalties:

18.1 The right or concession given

The following Concessions are available

- A) As per the provisions of A & N Islands protected Forest Rules 1987(Copy enclosed), the bonafide inhabitants of Villages in the vicinity of forest and the persons residing in Port Blair Municipal area who are in occupation of agricultural land allotted to them by appropriate authorities of the A & N Administration are entitled for timber on Payment of Royalty for their bonafide domestic use.
- B) The occupiers of agricultural land including settlers settled under the colonization scheme who reside in villages outside the Port Blair Municipal area and also the religious, Cultural, recreational and educational institutions and village Panchayats can collect timber on free of royalty for their bonafide domestic use.
- C) The bonafide agriculturists in possession of agricultural land residing outside Port Blair Municipal area are eligible to extract MFP on free royalty.
- D) The Schedule Tribes of A & N Islands shall collect their actual requirement of forest produce from the forest for the bonofide domestic use without any restriction

18.2 The quantum of the right or concession

The following are the limits upto which timber can be removed on payment of royalty and free of royalty: -

- A) 15 cum of timber in round form for construction of a new house only once.
- B) 6 cum timber in round form for repair to a house once in five years and
- C) 1cum timber in round form for construction of Dinghi and manufacturing of agricultural implements once in five years for domestic purpose and not for trade.

For collection of MFP the following limits per family is prescribed: -

Limits of MFP free of royalty: -

a) Fire wood	2 cords, per year
b) Bamboos	500 Nos, per year
c) Ballies	100 Nos, per year
d) Posts	20 Nos, per year
e) Thatching leaves	2000 Nos, per year
f) Canes	200 Nos, per year

- 18.3 The location, if applicable, of where the right or concession is allowed to operate: -

The Concession is allowed from the Protected Forest. As per the decision of Hon'ble Supreme Court of India in T.N.Godavarman Vs GOI and others (W.P.(c) No. 202 of 1995) in its order dated 12.12.1996 the felling of trees in all forests is to remain suspended except in accordance with working plans in any particular state such as Arunachal Pradesh where the permit system exists, felling under the permit can be done only by the Forest Deptt or the Forest Corporation.

Since separate provision for grant of timber on free of royalty has not been made in the Working Plans of the respective forest division the grant of permit for felling of timber under A & N Island Protected Forest Rules 1987 is suspended for time being.

18.4 The category of people to whom it is available and the numbers in each category: -

These facilities are available to bonafied agriculturists, settlers settled under various colonization schemes, Religious, Cultural, Recreational, Educational Institutions and village Panchayats, and Tribals of A & N Islands. However the exact numbers in each category are not readily available in this office.

19. Details of quotas and subsidies:

19.1 Quotas, if any, that are reserved for forest based industries

There are no quotas allotted to the industries from the year 2001-02.

19.2 Subsidies, if any, (including transport subsidies or subsidies given by other agencies) that are provided to the forest based industries

These details are furnished in Part-II Para 2 and 3

20. Details of the number of people employed at present in the wood based industries (separate for each industry) in A&N

Details are furnished in Part II Para 5

21. Details and status of the Voluntary Retirement Scheme(s) that have been offered by the large and medium scale wood based industries to their workers

The information is being collected

22. Details of sawmills in A&N:

22.1 The location of the sawmills marked on a map:-

A Map showing location of sawmills is enclosed as Annexure V.

22.2 The names of these sawmills (given below)

22.3 Their installed and operating capacities (given below)

<u>SLNo</u>	<u>Name of Saw Mills</u>	<u>Installed capacity (cbm)</u>	<u>Operating Capacity (Cbm)</u>
1)	M/s Silver Jubilee Multipurpose saw mill, Kadachang,(SA)	1800	169
2)	M/s Dori Lall Saw Mill, Prothrapur,(SA)	1323	632
3)	M/s Dori Lall Saw Mill, Junglighat,(SA)	1071	116
4)	M/s Mukesh Lall saw mill, Dhanikhari,(SA)	1800	782
5)	M/s Mayabunder Saw Mill, lucknow village, Mayabunder	3000	670
6)	M/s Samarias Trading company, Diglipur,N/A	1800	600
7)	M/s Bepari Wooden Industries, Diglipur,N/A	1800	30
8)	M/s Durga Saw mill, Diglipur, N/A	1800	200
9)	M/s Kamakshi Furniture Saw Mill, Teylerabad, (SA)	1800	416
10)	M/s Andaman Wood products, Junglighat,(S/A)	3500	814
11)	M/s Teja Engineering products, SA	600	379
12)	M/s Vinaya Lall Saw Mill (S/A)	NA	NA
13)	M/s Raj Kumari Saw Mill, Junglighat,(S/A)	1800	646
14)	M/s Kanuse Saw Mill, Car Nicobar	NA	NA
15)	M/s Chuk chuki, Saw mill Car Nicobar	NA	NA
16)	M/s Raj Shipping Timber Industries, (S/A)	1800	150
17)	M/s Rehabilitation, Multipurpose Co-operative society ltd. Rangat,(MA)	750	500
18)	M/s Green Islands Timber Industries, Rangat, M/A	1800	299
19)	M/s M.STimber Industry, Sipphighat, (S/A)	2400	984
20)	M/s Ram Saran Saw Mill, C/bay, Great Nicobar	300	300
21)	M/s Island Industries, Hutbay, (L/A)	3000	930
22)	Island wood products, Havclock	900	NA
23)	M/s Sea Island Saw Mill,Ograbranj, Port Mout, SA	1800	757
24)	M/s Elephant saw mill, C/bay	420	420

(160)

25) Govt. Saw Mill, Chatham	24000	150000
26) Govt. Saw Mill, Betapur	5000	3000

23. Details of saw dust: -

23.1 Amount of sawdust that is generated by the operations of sawmills in A&N: -

The actual data on sawdust generated by the all the sawmills in this Territory are not collected and maintained at present. However the saw dust generated by the milling operations of Govt. saw mill Chatham and Govt. sawmill Betapur are as follows (2000-01): -

1. Govt. Saw Mill, Chatham, South Andaman- 500 Cbm
2. Govt. Saw Mill, Betapur, Middle Andaman- 30 Cbm(approx)

23.2 Of the above, how much is currently being utilized:-

1. Govt. Saw Mill, Chatham - 100%
2. Govt. Saw Mill, Betapur - 2%

23.3 How is the unutilized sawdust, if any, being disposed of: -

The sawdust from Govt saw mill Chatham is fully utilized by sale to public and Govt departments and a small quantity from Betapur Saw Mill is sold to Public and poultry units etc. The unutilized saw dust has been dumped over waste land at Betapur.

24. Details of fuelwood consumption in A&N: -

24.1 The estimated quantity of fuelwood consumed in A&N Islands (Sale): -

(In Cbm)					
Area	96-97	97-98	98-99	99-2000	2000-01
South Andaman	4536	2590	1741	1201	1618
Baratang	3075	2513	3072	3546	2828
Middle Andaman	11091	4828	5240	5902	4314
Mayabunder	2562	2397	7291	1980	1700
Diglipur	13555	10437	10094	9769	19153
Nicobar (Div)	3486	4036	1229	266	695
Little Andaman	4688	3659	2004	3028	2508
Total	42749	30508	30671	25692	32816

24.2 The species that are preferred for fuel wood in A&N Islands: -

Sl.No	Local Name	Botanical Name	Category
1.	Gurjan	Dipterocarpus Species	Hardwood
2.	Badam	Terminalia procera	Hardwood
3.	Mohwa	Madhuca butyracea	Hardwood
4.	Thingham	Hopea odorata	Hardwood
5.	Red Bombay	Planchonia andamanica	Hardwood

6.	Yeugicv	Adenanthera pavonina	Hardwood
7.	Thikala	Nauclea gageana	Hardwood
8.	Pyma	Lagerstroemia hypoleuca	Hardwood
9.	Poon	Calophyllum inophyllum	Hardwood
10.	Jungli Am	Mangifera andamanica	Hardwood
11.	Sea Mohwa	Manilkara littoralis	Hardwood
12.	Jaiphal	Myristica species	Hardwood (N/C)
13.	Thitkandu	Pometia pinnata	Hardwood (N/C)
14.	Kattaphal	Baccaria sapida	Hardwood (N/C)
15.	Ambra	Spondias mangifera	Hardwood (N/C)

Note : - The sawn fuel produced in the milling operation of two Govt Saw Mills are sold to the public, Govt dept. as fire wood as well as for other activities. Govt saw mill Chatham sold 5300 cbm and Govt saw mill Betapur sold 1071 cbm of sawn fuel during the year 2000-01.

25. Note on the technical feasibility of treating wood or bamboo extracted in A&N for domestic application and uses in A&N itself: -

The note is being sent separately.

26. Details of wood treatment plants in A&N:

- 26.1 A Map showing the location of timber treatment plant in A & N Islands is enclosed.

The only treatment plant is located at Chatham saw Mill, Port Blair.

- 26.2 The Details of installed as well as operating capacity of these plants for treatment of various types of wood is given below: -

Timber Treatment facility is available in Govt Saw Mill Chatham, South Andaman and the following treatment facilities exist.

- a) Pressure Treatment
- b) Seasoning
- c) Oil Preservative

Type of Treatment	Installed Capacity	Operating Capacity (Average)
Pressure Treatment	900 cbm per Annum (in one Shift)	284 cbm
Seasoning	1000cbm per annum (non - shift)	164 cbm
Oil Preservative	Trial Basis	-

A proposal has already been sent for installation of additional pressure treatment plant in Govt. Saw Mill, Chatham and also to install similar timber treatment plant in Govt. Saw Mill Betapur (Middle Andaman).

27. Currently, what is the quantum of unused but extracted timber that is available in the A&N Islands. Please give details of the extraction (specifying types of woods), sale/use (specifying the user), balance left, and current status of the balance wood, for the last ten years: -

**YEARWISE DISPOSALS OF LOGS IN
ANDAMAN AND NICOBAR ISLANDS**

(In Cbm.)

Year	Sold to Industries (Major Industries)	Sold to Pencil Slate Industries	Sold to Match Industries	Issued to Govt Mills	Sold to other saw mills/ Govt. Dept.	Shipment To mainland	Total
1991-92	59897	1537	1136	18771	2217	12975	96533
1992-93	71240	1294	1074	13261	2220	9746	98835
1993-94	77629	1448	805	12600	4770	15348	112600
1994-95	74503	1779	1147	11002	5126	10766	104323
1995-96	77615	1676	1633	16244	5506	1184	103858
1996-97	61640	2480	1459	17657	15488	-	98724
1997-98	55099	1234	1833	11684	7694	-	77544
1998-99	36713	706	1078	14464	5713	-	58674
1999-2000	14674	439	2830	12173	11582	3347	45045
2000-2001	10401	1192	1019	14495	11314	1866	40287

B. Current Status of Balance Wood (as on 30.11.2001): -(Logs)

Sl.No	Location	Total Quantity	Of which Unsound logs (approx.)
1	South Andaman	4975.531	1010.000
2	Baratang	2362.893	300.000
3	Middle Andaman	7688.725	5453.720
4	Mayabunder	6463.120	1712.678
5	Diglipur	17848.310	6686.909
6	F.P.D.C	5164.00	2600.000
7	Chatham Saw Mill	2331.093	-
8	Betapur Saw Mill	851.658	-
9	Private Saw Mills	885.245	-
	Total	48570.575	17763.307

Annexure - III
(with maps)

**ISLAND WISE AREA DECLARED AS TRIBAL RESERVE
IN A & N ISLANDS**

SL No	NAME OF ISLAND	NAME OF TRIBES	TOTAL GEOGRAPHICAL AREA (in Sq.Kms)	TRIBAL RESERVE AREA (in Sq. Kms)
1.	Battimaly	Nicobarese	2.07	2.07
2.	Bampoka	Nicobarese	13.46	13.46
3.	Bluff	Jarawa	1.14	1.14
4.	Car Nicobar	Nicobarese	126.91	126.91
5.	Chowra	Nicobarese	8.28	8.28
6.	Great Nicobar	Shompenese Nicobarese	1044.54	853.19
7.	Katchal	Nicobarese	174.30	174.30
8.	Kondul	Nicobarese	4.66	4.66
9.	Kabra	Nicobarese	0.51	0.51
10.	*Camorta	Nicobarese	188.03	188.03
11.	Little Nicobar	Nicobarese	159.02	159.02
12.	Little Andaman	Onge	731.57	403.37
13.	Middle Andaman (Main island)	Jarawa	1535.50	338.69
14.	Meroe	Nicobarese	0.51	0.51
15.	Menchal	Nicobarese	1.29	1.29
16.	North Sentinal	Sentinalese	59.67	59.67
17.	Nancowry	Nicobarese	66.82	66.82
18.	Pille-Millo		1.29	1.29
19.	Strait Island	Andamanese	6.01	6.01
20.	Spike	Jarawa	11.70	11.70
21.	South Andaman (Main Islands)	Jarawa	1347.97	560.66
22.	Teressa	Nicobarese	101.26	101.26
23.	Tilangchong	Nicobarese	16.83	16.83
24.	Trinket	Nicobarese	36.26	36.26
25.	Trak	Nicobarese	0.25	0.25
26.	Tries	Nicobarese	0.25	0.25
27.	South Sentinal	Nicobarese	1.06	1.60
28.	Brother	Nicobarese	1.99	1.99
29.	Sister	Nicobarese	0.36	0.36
30.	Passage	Nicobarese	0.62	0.62
31.	Cinque	Nicobarese	9.53	9.53
		TOTAL	5645.20	3150.65

INDEX

Part - 17 ANNEXURE

DIVERSION OF FOREST LAND FOR NON-FORESTRY PURPOSE UNDER FCA-1980 FOR LAST TEN YEARS (1991-92 TO 2000-2001(DECEMBER 2001)

				(IN HA.)
1	Henry Lawrance for construction of PLO			0.9
2	Peel Island for construction of PLO			0.9
3	Lighted beacon at North Brother Island			0.04
4	Lighted beacon at Wilson Island			0.04
5	Lighted beacon at Interview Island			0.1
6	Stone quarry at Chidiyatapu			0.9
7	Construction of Rural Road at Katchal Island			0.9375
8	Lighted beacon at South Sentinel Island			0.04
9	Stone quarry at Kalapad in Mayabunder			0.5
10	Stone quarry at Great Nicobar Island			0.99
11	Modern Zoological Park at Chidiya Tappu			40
12	RCC Bridge at Austin strait in Middle Andaman			0.324
13	Construction of Rural Road from Bajota to Chainpur			1.76
14	Lighted beacon at Kabra Island			0.01
15	Lighted beacon at Tillanchang Island			0.04
16	Construction of a dam a Cross of Indira Nallah			24.94
17	Transmission line from Dolphin Yatri Niwas to Kalapathar in Havelock			0.81
18	Water pipe line from Bamboo Nallah water sources to Kalapathar(-do)			0.39
19	Lighted beacon at Rosen Point in Great Nicobar island			0.16
20	Construction of a road from Camp No: 5 to Kalapathan in Havelock			3
21	Construction of Check Dam/CC weir at Kesria Dera at Middle Andaman			3
22	Construction of Road from Jirkatang -2 to Jirkatang -4			0.2265
23	Construction of Jarawa protection post at Jinga Nallah			0.5
24	Construction of Jarawa protection post at Jirkatang No: 2			0.5
25	Construction of surface water tank at Jirkatang No: 2			0.0071
26	Repeater station at Bathew Point at Middle Andaman			0.006
27	Construction of Jarwa protection post at Tirur			0.5
28	Repeater station at Mount Harriet			0.005
29	Transmission line from Long Island Power house to Sickman Dera			0.6
30	Over head transmission line for evacuation of power - bamboo flat			4.2125
31	Stone quarry at Little Andaman			0.74
32	Laying of water supply pipe line and construction of additional CC weir at Rangal			0.482
33	Construction of road from Adajig to Flat Bay in Baratang			0.7993
34	Construction of Jarawa Protection post at Sona Pahar in South Andaman			0.5
35	Lighted beacon at Manchal Island			0.0225
36	Construction of Swaroop Nallah Minor Irrigation scheme in Great Nicobar			43.4
37	Construction of Korang Nallah minor irrigation Scheme in Middle Andaman			32.5
38	Fresh water lake at flat Bay in South Andaman			45
39	Forest land at Mark Bay in North passage Island for eco friendly tourist village			22.2
TOTAL				231.9824

PHONE: 91(O) 3192 33233

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BY SPEED POST

No.F.22 (E)/156/204

ANDAMAN & NICOBAR ADMINISTRATION
(DEPARTMENT OF ENVIRONMENT & FORESTS)

Port Blair, dated the 26 December 2001

To

Prof. Shekhar Singh,
Indian Institute of Public Administration,
I.P.Estate, Ring Road,
New Delhi

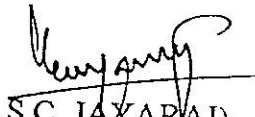
Sir,

As desired by you during your recent visit to these Islands, I am forwarding herewith the following documents: -

1. Copy of draft working plan for South Andaman Forest Division. (For the period from 2000 to 2010)
2. Copy of Management Plan For Mahatma Gandhi Marine National Park. (01.04.1997 to 31.03.2002)

The Working Plans of other divisions and maps have been handed over to Sh. Raman Mehta.

Yours faithfully,


(R.S.C. JAYARAJ)
Deputy Secretary
(Environment & Forests)

26/12/01

SPEED POST

**F. NO.DA/PT/14(Misc)/2001-2002//06
ANDAMAN & NICOBAR ADMINISTRATION
DIRECTORATE OF AGRICULTURE**

Port Blair, dated the 07th Jan., 2002

**FAX MESSAGE
NO. 011 6178048**

To

**Prof. Sekhar Singh,
Director,
Indian Institute of Public Administration,
Indraprastha Estate,
New Delhi – 110002.**

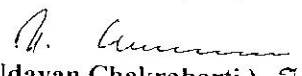
**Sub :- Proposed additional employment generation by Agriculture Department of
Andaman and Nicobar Islands – reg.**

Sir,

Enclosed please find herewith a detail of additional employment generation through Soil Conservation, Minor Irrigation & Horticultural Development in hilly areas of Andaman and Nicobar Islands in a sustainable way by the Agriculture Department during the Xth Five Year Plan.

This is for your kind information as was discussed during your last visit in these islands.

Yours faithfully,


(Udayan Chakrabarti) 7/1/02
Director of Agriculture

Proposed Employment Generation in the Soil Conservation, Minor Irrigation & Horticultural Sectors of Agriculture Department during Xth Five Year Plan


The Department of Agriculture in Andaman and Nicobar Administration will implement various developmental schemes during the Xth Five Year Plan(2002-07) and the following mandays are expected to be generated during the period for Andaman and Nicobar Group of Islands.

- | | |
|--|---------------------|
| 1. Soil Conservation Scheme, Hilly land Development in a sustainable way | - 4,25,000 mandays |
| 2. Saline Reclamation, Stream Bank Erosion Control, Gravel Deposits and Drainage Schemes | - 11,84,000 mandays |
| 3. Horticulture and Spices crops in Hilly Land including land development | - 16,800 mandays |
| 4. Minor Irrigation
(excavation of ponds) | - 3,98,400 mandays |

Centrally Sponsored Scheme and Special Central Assistance Scheme

- | | |
|--|----------------------------|
| 5. Implementation of National Watershed Development Project for Rainfed area | - 1,50,000 mandays |
| 6. Development, rejuvenation and maintenance of Plantation of aboriginal tribes of the UT of Andaman and Nicobar islands under Special Central Assistance Scheme | - 10,000 mandays |
| 7. Catchment Area Treatment for Kalpong Hydro-Electric Project, North Andaman | |
| Only for the year 2002 to 2003 | - 26,500 mandays |
| Grand Total | - 22,10,700 mandays |

Therefore, during the course of the entire Xth Five Year Plan Period, approximately 22,10,700 mandays employment are expected to be generated.


Director of Agriculture



BY SPEED POST

**Andaman & Nicobar Administration
Department of Environment & Forests**

Van Sadan, Haddo

Port Blair - 744 102

Andaman and Nicobar Islands

PABX : ++91 (0)3192 33233

FAX : ++91 (0)3192 30113

R.S.C. Jayaraj, IFS

Dy. Conservator of Forests (HQ) &

Deputy Secretary (E&F)

D.O. No. I. 22(2)/156/205

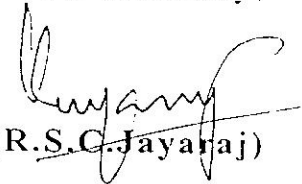
Dated the 27th Dec., 2001

Dear Sir,

This has reference to the telephonic conversation you had with Shri S.S. Patnaik, Principal Chief Conservator of Forests, Andaman & Nicobar Islands. The details of Minor Forest Produce (MFP) collected during the last 3 years (1998-99 to 2000-01) is sent herewith.

With regards,

Yours sincerely,


(R.S.C. Jayaraj)

Prof. Shekhar Singh,
Indian Institute of Public Administration,
Indraprastha Estate, Ring Road,
New Delhi-110002
Fax-011-3319954

COLLECTION OF MINOR FOREST PRODUCE (MFP) BY FOREST DEPTT & A&NFPDC IN A & N ISLANDS							
YEAR	BAMBOO	CANE	THACHING LEAVES	POST	BALLIES	PAHARIES	FUELWOOD
	(NOS.)	(RMT.)	(NOS.)	(NOS.)	(NOS.)	(NOS.)	(CBM)
1998-99							
On Payment of Royalty	671475	469243	1958803	7242	80739	13699	19438
On Free of Royalty	528800	117167	2390820	2754	130505	14855	11235
TOTAL	1200275	586410	4349423	9996	211244	28554	30671
1999-2000							
On Payment of Royalty	699069	268385	2376850	10480	105423	12617	17418
On Free of Royalty	544070	113869	2414806	3500	97434	14578	8274
TOTAL	1243139	382254	4791656	13980	202857	27195	25692
2000-2001							
On Payment of Royalty	842107	460968	3130241	10736	137273	20667	21684
On Free of Royalty	739875	182600	2842100	8709	133355	19021	11132
TOTAL	1681982	643568	5972341	19445	270628	39688	32816

NOTE: BALLIES : Less than 8" girth, POLES : 8" to 18" girth, PAHARIES : 18" to 24" girth

PHONE : 91(O) 3192 33233

FAX : 91(O) 3192 30113

MOST IMMEDIATE
SUPREME COURT MATTER
BY SPEED POST

No. F.22 (E)/156/ 231

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN & NICOBAR ISLANDS
VAN SADAN - HADDO

Port Blair, dated the January 11, 2002

✓ To
Prof. Shekhar Singh,
IIPA, Indraprastha Estate,
Ring Road, New Delhi - 2

Sub: - IA 502 in W.P.NO 202/95 (T.N.Godhavarman Thirumalpad Vs. UOI & Ors.)
- Furnishing of information to the Commission - reg.

Sir,

In continuation to our letter No. F.22 (E)/156/ dated 7th January 2001 on the subject cited above following information are sent herewith

3. Details of encroachments

3.1. Forest encroachments before 1978:

- 3.1.1. The location of encroachments on map is enclosed as Annexure I.
- 3.1.2. The list of the localities enclosed.
- 3.1.3. The area encroached in each location enclosed.
- 3.1.4. The details of families involved is enclosed.

3.2. Forest encroachments after 1978.

- 3.2.1. The locations of encroachments on map are enclosed as Annexure II- 1 to 6
- 3.2.2. The list of the localities enclosed.
- 3.2.3. The area encroached in each location enclosed.
- 3.2.4. The detail of families involved is enclosed.

3.3 The details of relocation of encroachment before 1978

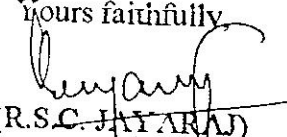
- 3.3.1. The location of the relocation sites on map is enclosed as Annexure I
- 3.3.2. The list of the localities that are relocated is enclosed.
- 3.3.3. The forest area as well as revenue area that used for the purpose of relocation is enclosed.
- 3.3.4. The details of families that are to be relocated is enclosed.

12. Map of the forest areas in A&N with the following details:

The map is enclosed as Annexure III

Encl: As above

Yours faithfully,


(R.S.C. JAYARAJ)

Deputy Conservator of Forests
(Headquarters)

Point 3.1.2 - 3.1.4

LIST OF PRE 1978 ENCROACHERS ALONG WITH LOCALITY AND EXTENT OF ENCROACHMENT						
SI No	Division	Range	Locality	No of Encroachers	Area in hect.	Remarks.
A	South Andaman	Garacharama				Selected Plots For Re Settlement **
1			Makka Pahar	36	73.76	**
2			Munda Pahar	6		
3			Chidia Tapu&	1	9.76	
4			Bara Balu	7		
5			Line Dera&	5	15.12	
6			Gupta Para	6	17	
7			Kodia Ghat&			
			Burma Nallah	28	39.52	**
		Manglutan				
8			Indira Nagar	23	28.661	**
9			Mamyo	4	9.5	
10			Naya Sahar	2	1.228	
11			Hasmatabad	8	15.234	
12			Mirchi Dera	1	1.28	
13			Jirka Tang No 6	1	0.62	
14			Mile Tilak	1	0.06	
			TOTAL	129	211.743	
B	Bara Tang	Bara Tang				
15			Roglachang	1	0.6	**
16			Nayaghar	1	4.52	**
17			Lokhno Khana			**
18			South Creek	9	22.86	
			TOTAL	11	27.98	
C	Mayabunder					
19			East of Bajota			**
20			kanchi Nallah	13	19	
21			Tugapur 7&	1	9.9	
22			Tugapur 8	1	37.9	
23			Cipi Tikry	3	28.3	
24			Pudumadurai	3	4.5	
25		Tugapur	Adjoining Rest Camp near Tugapur V			**
26			Budha Nallah	36	77.37	
27			Hara Tikry	39	82	
28			Austin II	29	66.07	
29			Chuglum Ghoom	23	28.52	
30			North of Chalnpur			**
31			Pudumadurai	6	9	
32			South West of Karmatang No 10	26	26.1	**
33			Borang	4	7.86	
34			Aaustin X	1	3.8	
35			Paiket Bay	25	77	
36			East of Karmatang No 10 Karmatang	10		**

37		Palket Bay	32	44.25	
38	Tugapur	South West of Tugapur-8	23	37.9	**
39		West of Webl			**
40		Bamboo Nallah	11	17	
41		Austin II	15	66.07	
42		Karmatang No 9	27	26.1	**
43		Harl Bay	17	35.86	
44		Gana Dabla	15	45.46	
45		Bera Dabla	23	20.38	
		TOTAL	383	770.34	
D	Middle Andaman				
46		Lauki Nallah	17	22.55	**
E	North Andaman				
47		Gandhi Nagar	123	192.8	**
48		Sila Nagar	2	5.12	
49		Haridas Kattai	19	38.1	
50		Bandhan Nallah	11	25.85	
51		Ganesh Nagar	117	215	**
52		Khudi Ram Pur	2	2.7	
53		Shanti Nagar	59	90.4	**
54		Lamiya Bay	25	49.25	
55		Lakshmipur	9	14.5	
56		Milan Gram	10	19.2	
57		Desh Bandhu Gram	5	9.2	
58		Shyam Nagar	3		
59		Patti Level	12	21.74	
60		Sila Nagar	4	5.12	
61		Gana Level	9	9.6	
62		Jaganath dera	16		
63		Paschim Sagar	155	269	**
64		Tal Bagan	70	131	
65		Burma Chad	53	114.9	
66		Radha Nagar	86	151.42	
67		Narayan Tikry	24	42.66	
68		Narikol Denga	13	18.8	
			827	1426.37	
		GRAND TOTAL	1367	24458.827	

LOCATION WISE LIST OF SELECTED DE-RESERVED BLOCKS FOR RESETTLEMENT OF PRE 1978
ENCROACHERS WITH AREA AND No OF ENCROACHERS TO BE SETTLED

Sl No	Division	Plot No	Location/ Name of Block	Area in Hects	No of Encroachers To be Settled	Remarks
A	South Andaman					All the Nineteen Plots have been De-notified vide Notification No. Sectt/12-9/37/H&R Dated 29/6/89.
1		I	Indira Nager	38	38	
2		II	Macca Pahar	56	56	
3		III	Kodia Ghat/Burma Nallah	35	35	
				129	129	
B	Baratang					
4		I	Roglachang	1	1	
5		II	Naya Garh	1	1	
6		III	Lokhnokhana	9	9	
				11	11	
C	Mayabunder					
7		I		21	21	
8		II	Adjoining Rest Camp near Tugapur VI	127	127	
9		III	North of Chainpur	6	6	

10		IV	South West of Karmatang No 10	56	56	
11		V	East of Karmatang No 10	42	42	
12		VI	South West of Tugapur 8	23	23	
13		VII	West of Webi	26	26	
14		VIII	Karmatang No 9	82	82	
				383	383	
D	Middle Andaman					
15		I	Lauki Nallah	17	17	
E	Diglipur North Andaman					
16		I	Gandhi Nagar	155	155	
17		II	Ganesh Nagar	119	119	
18		III	Shanti Nagar	152	152	
19		IV	Paschim Sager	401	401	
				827	827	

Total Area of All the 19 Plots: 1367 Hactares.

Total No of Pre 1978 Encroachers to be settled. 1367 Nos.

List of post-78 forest encroachment localities, no. of families involved and the extend of area encroached

Sl. No	Name of the Division	Name of the Range	Location	No. of families	Area (in ha.)
1	Diglipur	Diglipur	1. Burmachad	73	120.500
			2. Elizabeth bay	130	133.840
			3. Beachdera	86	96.000
			4. Karen Basti	23	25.800
			5. Coffee Dera	30	35.050
			6. Umerchad	53	54.650
			7. Ganeshnagar	101	100.450
			8. Shantinagar	48	57.350
			9. Shyamnagar	84	72.000
			10. Gandhinagar	66	60.110
			11. Radhanagar	86	87.500
			12. Sagardeep	35	29.580
			13. Keralapuram	4	02.000
			14. Swarajgram	23	26.500
			15. Laxmipur	15	21.500
			16. Shibpur	2	01.000
			17. Lamiyabay	8	11.000
			Total	867	934.830
		Pachimsagar	1. Pachimsagar	127	111.050
			2. Talbagan	93	105.900
			3. Kishorinagar	13	14.100
			Total	233	231.050
		Kalighat	1. Narikaldanga	5	5.500
			2. Pathilevel	8	8.000
			3. Jaganathdera	6	5.900
			4. Bamboolevel	2	2.000
			5. Narayan tikri	7	7.000
			6. Gunnalevel	6	6.540
			7. Nabagram	6	4.000
			8. Nischintapur	3	2.060
			9. Kalighat	1	0.500
			10. Ramnagar	6	6.000
			Total	50	47.500
			Grant Total	1150	1213.380
2	Middle Andaman	Betapur	1. Cutbert Bay	104	102.000
			2. Dhaninallah	31	31.000
			3. Panchawati	11	14.140
			4. Sippihat	11	12.800
			5. Sukhanallah	3	3.700
			6. Lowki nallah	149	129.550
			7. Japan tikri	4	4.000
			8. M. Valley	4	2.490
			9. T.V. Kulam	2	1.730
			Total	319	301.410
		Long Island	1. Sickman dera	46	31.350
			Total	46	31.350
		Bajlungta	1. Makarta Valley	9	13.000
			2. Foster Valley	9	15.000
			Total	18	28.000

		<i>Rangat</i>	1.Goal Pahar Total	20 20	18.500 18.500
		<i>Bakultala</i>	1.Kalsi/Charlungta Total	8 8	20.500 20.500
			Grant Total	411	399.76
3.	South Andaman	<i>Jirkatang</i>	1.Jirkatang No.2 Total	3 3	3.020 3.020
		<i>Tushnabad</i>	1. J/Nallah	5	6.720
			2. Habdipur	4	5.150
			3. Balughat	1	2.000
			Total	10	13.870
		<i>Garacharma</i>	1. Birdline/ Brichgunj	15	11.913
			2. Bimbliton	6	3.722
			3. BadaBalu	2	1.960
			4. G/Para/Linedera	12	22.500
			5.Mundapahar	1	0.520
			Total	36	37.615
		<i>Manglutan</i>	1. New Wandoor/ Wandoor	75 1	68.390 1.500
			2. Manglutan	10	6.440
			3. Nayashar	14	16.850
			4. Maymyo	5	1.800
			5. Dhanikhari	3	3.000
			6. Hasmatatabad Total	108	97.980
			Grant Total	157	155.485
4	Baratang	<i>Adajig</i>	1.Adajig Total	23 23	0.726 0.726
		<i>Nilambur</i>	1. Oralkatcha	8	1.434
			2. Mirch Tikri	2	4.000
			3. Khatta Khari	10	7.548
			4. Jarawa Creek	5	3.125
			5. Wrafters Creek	4	3.050
			6. Kattan	5	2.150
			7. Nayadera	8	8.000
			8. Bamboonallah	1	0.050
			9. Khadi Basti	7	0.126
			10. South Creek	1	0.050
			11. Flat Bay	3	3.000
			12.Baludera Total	2 56	2.500 35.033
		<i>Havelock</i>	1.Kalapather	1	0.240
				1	0.240
			Grant Total	80	35.999

5	Mayabunder	Mayabunder	1. Baindabla	42	55.300
			2. Pylon Nallah	67	98.500
			3. Badadabla	16	22.500
			4. Bacon Bay	17	29.000
			5. Mohan Pur	9	14.500
			6. Shri Nagar	6	7.000
			7. Pembroke Bay	21	21.000
			8. Sona Plot	9	14.200
			9. Ganadabla	8	14.000
			10. Gargan Tikry	2	3.000
			11. Shikari Dabla	4	4.000
			12. Goptapoda	8	7.500
			13. Bacon Dabla	4	7.000
			14. Balmicreak	16	20.500
			15. Carlus Plot	8	11.800
			16. Chandlevel	8	11.000
			Total	243	340.800
		Tugapur	1. Bamboo Nallah	2	4.500
			2. Tugapur VII	9	9.500
			3. Tugapur VIII	3	5.500
			4. Tugapur II(D/Sec)	3	4.100
			5. Chugloomigoom	13	14.400
			6. Sippi Tikry	18	20.300
			7. Pudumadurai	5	6.200
			8. Chainpur	1	1.200
			9. Ashanagar	23	22.680
			10. 40 Acre Bajota	1	1.500
			11. Birsa Nagar	3	3.900
			12. Budhanallah	2	2.200
			13. Kainchi Nallah	2	2.500
			14. Ganesh Nagar-I	25	38.200
			15. Ganesh Nagar-II	23	30.000
			16. Peinma dabla	2	2.400
			17. Baludera	5	6.000
			18. Sundari Kari	6	7.800
			19. Karanj Kari	5	6.400
			20. Karanj Kari	15	19.100
			21. Gora Ridge	7	7.000
			Total	173	214.400
		Karmatang	1. Dhaninallah	6	11.100
			2. Paikat Bay	8	11.900
			3. Karmatang IV	6	7.000
			4. Karmatang	34	44.000
			Total	54	74.000
			Grant Total	473	628.800

PHONE: 91(O) 3192 33233

FAX: 91(O) 3192 30113

MOST IMMEDIATE
SUPREME COURT MATTER

No. F.22 (E)/156/23

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN & NICOBAR ISLANDS
VAN SADAN - HADDO

Port Blair, dated the January 18, 2002

To
Prof. Shekhar Singh,
IIPA, Indraprastha Estate,
Ring Road, New Delhi - 2

Sub: - IA 502 in W.P.NO 202/95 (T.N.Godhavarman Thirumalpad Vs. UOI & Ors.)
Furnishing of information to the Commission - reg.

Sir,

In continuation to our letter No. F.22 (E)/156/ dated 7th January 2001 on the subject cited above following information are sent herewith

1. Details regarding land allotment in defence establishments in A&N Islands in the last five years: -
No land has been allotted.
2. Details of the goods imported in A&N from the mainland:
The details are enclosed as Annexure I.
3. Details regarding stone quarrying in A&N Islands: -
 - 3.1 The map is enclosed as Annexure II
 - 3.2 The details of the locations is enclosed.
 - 3.3 The details of area is enclosed.
 - 3.4 The quantum of stone extracted is enclosed.
4. Details regarding stone crushing units in A&N Islands: -
 - 4.1 The map is enclosed as Annexure II.
 - 4.2 The installed operating capacity is enclosed.
5. Details and status of the Voluntary Retirement Scheme(s) that have been offered by the large and medium scale wood based industries to their workers
 - 1.M/S. Javashree Timber Products Ltd.: -
Out of a total work force of about 780 employed by M/S.JTP Ltd. it has been reported that almost 730 employees have so far opted for the Voluntary Retirement Scheme floated by the employer in April, 2001 after bilateral discussion.
 - 2.M/S.Andaman Timber Industries Ltd.: -
Out of the total work force of about 818 employed by M/S. ATI Ltd. it has been reported that almost 790 employees have so far opted for the Voluntary Retirement Scheme floated by the employer in July, 2001 after bilateral discussion.
6. The details of the poaching of timber and other terrestrial and marine wild products for the last five years: -
 - 6.1 The location map is enclosed as Annexure III
 - 6.2 The quantities that are estimated to be illegally extracted of each category of wild products timber, animal products, nests etc: -
It is assumed that the illegally extracted quantities are three times more than the quantities seized/offence detected (Details shown in 6.3 below).
 - 6.3 The seizures that have taken place of illegal consignments by either the Forest Department, Police, Coast Guard or Navy and details like: -

6.3.1.1 Type of wild product eg. timber, animal products, nests etc., and their quantities.

The items of forest and wildlife products seized for the last five years by the Forest Department are as follows

S.No	Items	Total
1	Posts (Nos)	544
2	Ballies (Nos)	5152
3	Thatching leaves.(Nos)	43460
4	Cane (Rmt.)	261907
5	Bamboos (Nos)	62977
6	Sawn Timber (Cbm)	1563
7	Round Logs (Cbm)	358
8	Dinghi (Nos)	55
9	Burr (Nos)	22
10	Mangrove Fruit (Kg)	536
11	Buttress (Nos)	1
12	Sea Sand (Cbm)	3300
13	Stone Chips (Cbm)	110
14	Dhup resin (kg)	18
15	Sea Gravels (Cbm)	1.5
16	Wild Pig (No)	34
17	Birds (Nos)	87
18	Venison (Kg)	881
19	Deer (Nos)	82
20	Deer Skin (No)	1
21	Deer Horns (No)	13
22	Cane Fruit (kg)	990
23	Pig Meat (kg)	53
24	Dead Whale (Nos)	1
25	Shells (kg)	2750
26	Fire wood (Cord)	94
27	Swift-Let-Nest (Kg)	14
28	Sea Cucumber (Kg)	141
29	Green Sea Turtle (Nos)	2
30	Crocodile fat (lit)	5
31	Water monitor lizard	2
32	Corals (Nos)	6
33	Turtle Meat (kg)	3
34	Green Imperial Pigeon (Nos)	16
35	Engine Dinghi	8
36	Dried Sea Cucumber (Nos)	203
37	Snorkel Mask	2
38	Trochus niloticus (Nos)	4182
39	Red Corals (bags)	27
40	Crocodile Skull (Nos)	1
41	Crocodile Skin (Nos)	1

6.3.1.2

The nationality of the people arrested along with the consignments:
All are Indians.

Encl: As above

Yours faithfully,

(R.S.C. JAYARAJ)

Deputy Conservator of Forests
(Headquarters)

(171)

DETAILS OF GOODS IMPORTED INTO ANDAMAN AND NICOBAR ISLANDS FROM MAINLAND.

1.1 Types of Goods imported since last three years:-

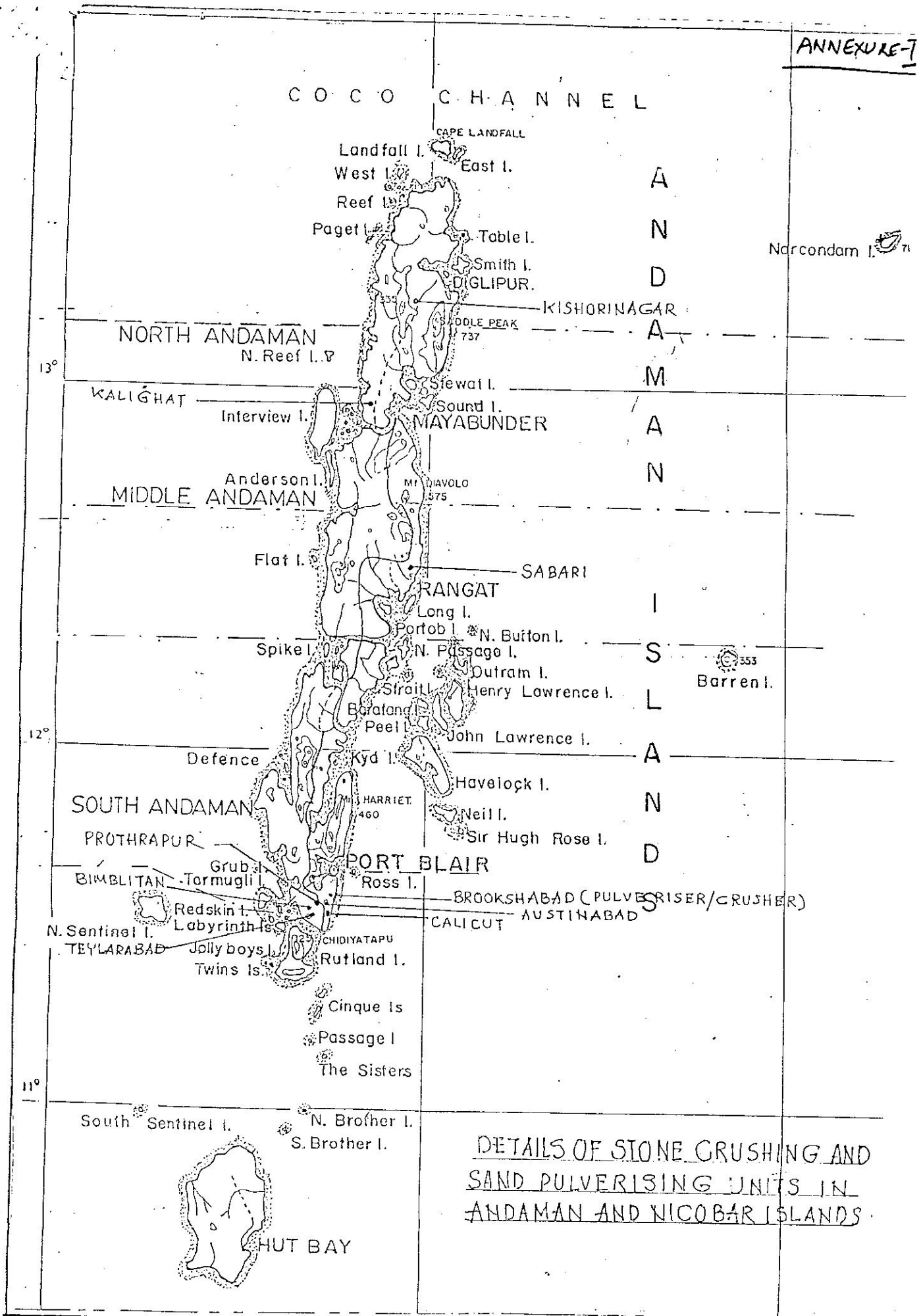
Sl No	Types of Goods	Year					
		1998-99		1999 - 2000		2000 - 2001	
		Quantity (In Mts.)	Value (Rs. in Lakhs)	Quantity (In Mts.)	Value (Rs. in Lakhs)	Quantity (In Mts.)	Value (Rs. In lakhs)
1.	2.	3.	4.	5.	6.	7.	8.
1.	POL Products	86623		93552		92001	
2.	Bitumen	3135		5284		8269	
3.	Cement	58228		65797		91622	
4.	Timber	125		8575		10	
5.	Other Building Material	661		661		5107	
6.	Rice	43650		47142		14980	
7.	Sugar	8203		9593		5828	
8.	Wheat	12569		14269		4293	
9.	Pulses	1310		1810		10416	
10.	Fertilizer	2473		2597		1032	
11.	Chemicals	1845		1919		104	
12.	Fruits & Vegetable	14016		17135		13952	
13.	Edible Oil	4595		5514		396	
14.	Iron & Steel	9944		11734		74811	
15.	Machinery	3243		3438		693	
16.	Other Metal Products	2383		2526		4252	
17.	Salt	1193		1241		184	
18.	Tea	361		390		17	
19.	Coffee	295		310		-	
20.	Oil Cake	1770		1823		153	
21.	Frozen Shrimp	137		144		5	
22.	Cooking Coal	1934		-		-	
23.	General Cargo	121031		119563		33876	

1.2 Value of the import of such goods.

Not Available with this Board.

1.3 Quantum of import of such goods.

Year	Quantity of goods (In Mts.)
1998 - 1999	379724
1999 - 2000	415017
2000 - 2001	362001



DETAILS OF STONE CRUSHING AND
SAND PULVERISING UNITS IN
ANDAMAN AND NICOBAR ISLANDS

DETAILS OF STONE CRUSHING AND SAND PULVERISING UNITS IN ANDAMAN AND NICOBAR ISLANDS

Extraction details of Quarries where Stone Crushers are installed

S. No	Name of Quarry	Installed capacity -Annual	Actual Annual crushing of stone products	Remarks
(1)	(2)	(3)	(4)	(5)
1.	<u>In South Andaman Area</u> 1. <u>Brookshabad</u> 2. <u>Prothrapur</u> 3. <u>Calicut</u> 4. <u>Austinabad</u> 5. <u>Teylarabad</u> 6. <u>Bimbliton</u>	About 30 Crushers are installed in all the above Quarries with each having a crushing Capacity of about 30 cum / day	1.0 Lakh Cum	Complete data about each of the Quarry where the Crushers are Installed is being collected. As soon as the complete data is available from the division it would be consolidated and furnished.
2.	<u>In Middle Andaman Area</u> 1. Sabari Quarry	6000 Cum	3000 Cum	Two crushers are being operated in the capacity of 15 Cum / day. Therefore Annual capacity would be about 6000 Cum
3.	<u>In Mayabunder Area</u> Nil	Nil	Nil	Earlier there were few Quarries where crushers were installed and at present no crushers are in Operation
4.	<u>In North Andaman Area</u> 1. KihoriNagar Quarry 2. Kalighat Quarry	20,000 Cum 20,000 Cum	15,000 Cum 9500 Cum	Recently a crusher has been installed at shyam Nagar Quarry but crushing has since been started

Extraction Details of Quarries where Sand Pulverization Plants are installed

S. No	Name of Quarry	Installed capacity in Cum	Actual crushing of sand in Cum	Remarks
1.	<u>Brookshabad Quarry</u>	50,000 As per the agreement the installed capacity can be enhanced up to 1,00,000. Cum	25,000	This year the installed capacity could not be crushed due to various reasons like shifting of crushers on the other side of Airport etc. The expected crushing for the remaining period of the current year is about 15,000 Cum @ 5000 Cum per month.

PHONE: 91(O) 3192 33233

FAX: 91(O) 3192 30113

MOST IMMEDIATE
SUPREME COURT MATTER

No. F.22 (E)/156/240

**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN & NICOBAR ISLANDS
VAN SADAN - HADDO**

Port Blair, dated the January 18, 2002

To
Prof. Shekhar Singh,
IIPA, Indraprastha Estate,
Ring Road, New Delhi - 2

*Sub: - I.A 502 in W.P.NO 202/95 (T.N.Godhavarman Thirumalpad Vs. COI & Ors.)
Furnishing of information to the Commission - reg.*

Sir,

In continuation to our letter No. F.22 (E)-156 dated 7th January 2001 on the subject cited above following information are sent herewith

1. The details of the subsidies, including those given on transportation, for export of goods in the A&N Islands last ten years from 1991 to 2001: -

The information is enclosed.

1. The details of the subsidies, including those given on transportation, for export of wood and other products from the A&N Islands last ten years from 1991 to 2001: -

The information is enclosed.

Encl: As above

Yours faithfully,

(R.S.C. JAYARAJ)

Deputy Conservator of Forests
(Headquarters)

Transport Subsidy paid to industries for import of goods from mainland India to Andamans for the last 10 years since 1991 2001

Year	Medium Scale Wood based Industry		SSI Wood Based		Other Industries		Total	
	No. of Unit	Amount	No. of unit	Amount	No. of Unit	Amount	No. of unit	Amount
1991-92	3	29.14	0	0.00	2	5.58	5	34.72
1992-93	3	57.25	0	0.00	4	5.72	7	62.97
1993-94	3	43.57	0	0.00	2	2.29	5	45.86
1994-95	3	95.10	0	0.00	2	5.01	5	100.11
1995-96	0	0.00	0	0.00	3	1.28	3	1.28
1996-97	0	0.00	0	0.00	2	0.38	2	0.38
1997-98	3	63.52	0	0.00	1	0.64	4	64.16
1998-99	3	62.56	0	0.00	2	1.09	5	63.65
1999-2000	3	100.60	0	0.00	0	0.00	3	100.60
2000-01	3	73.26	0	0.00	3	11.46	6	84.72
		525.00		0.00		33.45		558.45

- Transport Subsidy paid to industries for export of goods from A & N Islands to mainland India for the last 10 Years from 1991 to 2001.

Year	Medium Scale Wood based Industry		SSI Wood Based		Other Industries		Total	
	No. of Unit	Amount	No. of unit	Amount	No. of Unit	Amount	No. of unit	Amount
1991-92	3	129.50	14	44.35	0	0.00	17	173.85
1992-93	3	71.74	14	51.52	0	0.00	17	123.26
1993-94	3	107.01	8	38.22	0	0.00	11	145.23
1994-95	3	300.30	18	171.60	0	0.00	21	471.90
1995-96	0	0.00	0	0.00	0	0.00	0	0.00
1996-97	0	0.00	6	89.13	0	0.00	6	89.13
1997-98	3	254.08	6	48.19	0	0.00	9	302.27
1998-99	3	250.24	8	57.97	1	6.00	12	314.21
1999-2000	3	402.49	0	0.00	0	0.00	3	402.49
2000-01	3	293.06	4	33.45	0	0.00	7	326.51
		1808.42		534.43		6.00		2348.85

PHONE : 91(O) 3192 33233
FAX : 91(O) 3192 30113
MOST IMMEDIATE
SUPREME COURT MATTER

No. F.22 (E)/156/ 238
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN & NICOBAR ISLANDS
VAN SADAN - HADDO

Port Blair, dated the January 18, 2002

To
Prof. Shekhar Singh,
IIPA, Indraprastha Estate,
Ring Road, New Delhi - 2

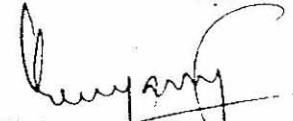
*Sub: - LA 502 in W.P.NO 202/95 (T.N.Godhavarman Thirumalpad Vs. UOI & Ors.)
Furnishing of information to the Commission - reg.*

Sir,

As desired by you during the discussions had with Shri. D.V.Negi. IFS, CF
(SC), I am sending herewith the list of Plantations.

Encl: As above.

Yours faithfully,



(R.S.C. JAYARAJ)
Deputy Conservator of Forests
(Headquarters)

**LIST OF PLANTATIONS RAISED IN SOUTH ANDAMAN FOREST
DIVISION**

Sl.No	Year	Location	Area in ha.
(1)	(2)	(3)	(4)
A. TEAK PLANTATIONS			
1.	1954	Jirkatang	02
2.	1956	Mile Tilak	08
3.	1956	Green Tilak	04
4.	1957	Jirkatang	20
5.	1957	Green Tilak	38
6.	1958	Jirkatang	33
7.	1958	Green Tilak	12
8.	1959	Jirkatang	34
9.	1960	Jirkatang	44
10.	1960	Mile Tilak	22
11.	1965	Beachdera	24
12.	1966	Beachdera	20
13.	1966	Jirkatang	40
14.	1967	Beachdera	20
15.	1967	Jirkatang	54
16.	1968	Burataga	30
17.	1968	Beachdera	20
18.	1969	Burataga	30
19.	1970	Burataga	30
20.	1970	Pochang	30
21.	1970	Beachdera	38
22.	1971	Burataga	40
23.	1971	Pochang	40
24.	1972	Pochang	70
25.	1972	Burataga	70
26.	1972	Ograbraj	40
27.	1973	Pochang	70
28.	1973	Burataga	70
29.	1973	Jirkatang No3	20
30.	1973	Burmanallah	24
31.	1973	Burmanallah	40
32.	1974	Pochang	40
33.	1974	Burataga	40
34.	1975	Pochang	35
35.	1975	Burataga	35
36.	1975	Burmanallah	50
37.	1978	Burmanallah	30
38.	1981	Rutland	20
		Total	1287

B. MATCHWOOD PLANTATIONS			
(1)	(2)	(3)	(4)
1.	1957	Jirkatang	09
2.	1957	Green Tilak	05
3.	1958	Jirkatang	20
4	1958	Green Tilak	06
5	1959	Jirkatang	16
6	1959	Green Tilak	10
7	1960	Jirkatang	11
8	1960	Green Tilak	10
9	1961	Jirkatang	34
10	1962	Green Tilak	12
11	1962	Jirkatang No.3	40
12	1962	Green Tilak	20
13	1963	Jirkatang	40
14	1963	Green Tilak	20
15	1968	Beachdera	10
16	1969	Beachdera	10
17	1970	Beachdera	10
18	1971	Beachdera	10
19	1972	Beachdera	10
20	1973	Beachdera	10
		Total	313

C. PADAUK PLANTATIONS			
(1)	(2)	(3)	(4)
1.	1885	Wimberlygunj	26
2.	1886	Wimberlygunj	06
3.	1887	Wimberlygunj	45
4	1889	Wimberlygunj	70
5	1896	Wimberlygunj	60
6	1897	Wimberlygunj	18
7	1902	Wimberlygunj	75
8	1903	Wimberlygunj	06
9	1904	Wimberlygunj	40
10	1904	TLD	26
11	1905	Brindaban	26
12	1906	Wimberlygunj	68
13	1907	Wimberlygunj	74
14	1908	Gopalaka barg	49
15	1908	Wimberlygunj	49
16	1910	Wimberlygunj	54
17	1912	Kadakachang	50
18	1913	Mathura	50

19	1913	Kadakachang	35
20	1914	Kadakachang	30
21.	1914	Wimberlygunj	30
22.	1914	Mathura	30
23.	1915	Mathura	35
24.	1915	Wimberlygunj	35
25.	1915	Kadakachang	35
26	1916	Wimberlygunj	26
27	1970	Burmanallah	100
28	1973	Punanallah	06
29	1973	Burmanallah	61
30	1975	Burmanallah	25
31	1976	Burmanallah	25
32	1978	Burmanallah	61
33	1980	Burmanallah	30
34	1980	Rutland	20
35	1981	Rutland	20
36	1981	Burmanallah	30
37	1983	Burmanallah	30
38	1990	Wimberlygunj	60
		Total	1578

D. ROSE WOOD PLANTATIONS

1.	1953	Jirkatang	03
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E. CHOOI PLANTATIONS

1.	1972	Beachdera	16
2.	1973	Beachdera	10
		Total	26

F. CASHEWNUT PLANTATIONS

1.	1958	Mile Tilek	02
2.	1959	Mile Tilek	04
3.	1959	Jirkatang	02
4.	1961	Jirkatang	02
		Total	10

ABSTRACT

1	Teak	1287
2.	Matchwood	313
3.	Rosewood	03
4.	Cashew	10
5.	Chooi	26
6.	Padauk	1578
	Grand Total	3217

LIST OF PLANTATIONS RAISED IN BARATANG FOREST DIVISION

Year	Species	Location	Area in ha.
(1)	(2)	(3)	(4)
1954	Teak	Wrafters Creek	1
1955	Teak	Wrafters Creek	8
1956	Teak	Wrafters Creek	22
1957	Teak	Wrafters Creek	18
1958	Teak	Jarawa Creek	36
1959	Teak	Nilambur	16
1959	Teak	Wrafters Creek	5
1960	Teak	Nilambur	41
1961	Teak	Nilambur	100
1961	Teak	Evergreen Island	32
1961	Teak	Wrafters Creek	24
1962	Teak	Nilambur	16
1962	Teak	Evergreen Island	38
1962	Teak	South Creek	112
1963	Teak	Evergreen Island	44
1963	Teak	Nilambur	26
1963	Teak	Roglachang	16
1963	Teak	South Creek	44
1963	Teak	Wrafters Creek	42
1964	Teak	Wrafters Creek	45
1964	Teak	Nilambur	40
1964	Teak	Roglachang	41
1964	Teak	South Creek	18
1964	Teak	Evergreen Island	60
1965	Teak	Wrafters Creek	49
1965	Teak	Middle Strait	56
1965	Teak	Roglachang	44
1966	Teak	Middle Strait	56
1966	Teak	Wrafters Creek	44
1966	Teak	Roglachang	40
1966	Padauk	South Creek	13
1967	Padauk	South Creek	20
1967	Teak	Roglachang	44
1967	Teak	Middle Strait	54
1967	Teak	Wrafters Creek	22
1968	Padauk	South Creek	14
1968	Teak	Roglachang	40
1968	Teak	Middle Strait	32
1968	Teak	Wrafters Creek	28

1969	Teak	Roglachang	40
1969	Teak	Middle Strait	40
1969	Teak	Wrafters Creek	20
1969	Padauk	Preeti Creek	14
1970	Padauk	South Creek	24
1970	Teak	Wrafters Creek	30
1970	Teak	Roglachang	30
1970	Teak	Middle Strait	30
1971	Teak	Middle Strait	40
1971	Teak	Wrafters Creek	40
1971	Teak	Roglachang	40
1971	Padauk	South Creek	24
1972	Padauk	South Creek	20
1972	Teak	Roglachang	20
1972	Teak	Wrafters Creek	52
1972	Teak	Middle Strait	88
1972	Teak	South Creek	40
1973	Teak	Middle Strait	30
1973	Teak	Wrafters Creek	90
1973	Teak	South Creek	40
1974	Teak	Wrafters Creek	50
1974	Teak	South Creek	40
1974	Teak	Middle Strait	30
1975	Teak	South Creek	55
1975	Teak	Wrafters Creek	40
1975	Padauk	South Creek	25
1976	Padauk	South Creek	65
1976	Teak	Wrafters Creek	35
1977	Teak	Wrafters Creek	20
1977	Teak	South Creek	10
1977	Padauk	South Creek	10
1978	Padauk	South Creek	10
1978	Teak	Wrafters Creek	20
1979	Teak	Wrafters Creek	20
1979	Padauk	South Creek	20
1980	Padauk	South Creek	20
1980	Teak	Wrafters Creek	20
1981	Teak	Wrafters Creek	20
1981	Padauk	South Creek	30
1982	Padauk	South Creek	30
1982	Teak	Wrafters Creek	20
1983	Padauk	South Creek	30
1983	Padauk	Wrafters Creek	20
1984	Padauk	South Creek	30
1984	Padauk	Wrafters Creek	20

1985	Padauk	Wrafters Creek	30
1986	Mixed	Wrafters Creek	80
1986	Mixed	Middle Strait	90
1986	Mixed	Sundergarh	100
1992	Pynma	Sundergarh	20
1994	Mixed	Sundergarh	30
		Total	3173

**LIST OF PLANTATIONS RAISED IN MAYABUNDER FOREST
DIVISION**

Year	Species	Location	Area in ha.
(1)	(2)	(3)	(4)
1926	Mixed	Sound Island	2.6
1927	Mixed	Sound Island	3.0
1928	Mixed	Sound Island	3.6
1929	Mixed	Sound Island	6.9
1930	Mixed	Sound Island	19.0
1931	Mixed	Sound Island	12.5
1932	Mixed	Sound Island	10.3
1933	Mixed	Sound Island	6.5
1934	Mixed	Sound Island	3.8
1953	Balsa	Austin I	0.2
1953	Rosewood	Austin I	3.2
1954	Teak	Austin I	0.3
1955	Teak	Austin I	11.3
1956	Teak	Interview I	2.0
1956	Balsa	Austin III	1.6
1956	Teak	Austin II	29.1
1956	Teak	Austin III	18.6
1957	Balsa	Austin III	2.0
1957	Teak	Austin II	10.1
1957	Teak	Austin III	14.2
1957	Matchwood	Austin II	10.1
1957	Matchwood	Austin III	12.1
1957	Matchwood	Austin III	12.1
1958	Teak	Interview I	2.0
1958	Teak	Austin III	12.1
1958	Teak	Tugapur IV	12.1
1958	Teak	Tugapur II	19.4
1958	Matchwood	Tugapur IV	14.2
1958	Matchwood	Tugapur II	7.8
1958	Rosewood	Tugapur II	1.2
1958	Teak	Tugapur I	35.5
1959	Matchwood	Tugapur II	10.1
1959	Rosewood	Tugapur II	12.1
1959	Balsa	Tugapur II	0.7
1959	Mahogani	Tugapur II	0.3
1960	Cashewnut	Austin I	4.0
1960	Teak	Tugapur I	89.0
1960	Matchwood	Tugapur IV	16.2
1960	Rosewood	Tugapur IV	12.1
1961	Teak	Austin IV	32.4

1961	Teak	Austin IV	43.0
1961	Teak	Tugapur V	44.1
1961	Cashewnut	Tugapur III	1.2
1961	Cashewnut	Tugapur I	2.0
1961	Cashewnut	Austin I	0.8
1962	Teak	Austin IV	40.5
1962	Teak	Tugapur I	40.5
1962	Teak	Tugapur II	81.0
1962	Teak	Interview I	20.2
1963	Teak	Tugapur I	47.3
1963	Teak	Tugapur II	41.0
1963	Teak	Austin IV	20.2
1963	Teak	Interview I	12.1
1963	Teak	Tugapur I	17.4
1964	Teak	Tugapur I	37.2
1964	Teak	Tugapur II	89.0
1964	Teak	Austin IV	20.2
1965	Teak	Tugapur II	123.4
1965	Teak	Tugapur V	18.2
1965	Rosewood	Tugapur V	3.2
1966	Teak	Tugapur I	17.4
1966	Teak	Tugapur V	185.0
1966	Teak	Tugapur V	40.5
1967	Teak	Austin IV	33.6
1968	Teak	Tugapur I	10.1
1968	Bamboo	Tugapur I	20.2
1968	Teak	Tugapur V	73.0
1968	Teak	Tugapur V	14.2
1968	Teak	Austin IV	32.4
1969	Bamboo	Tugapur I	2.0
1969	Teak	Tugapur V	32.4
1969	Teak	Tugapur V	12.1
1969	Teak	Austin IV	20.2
1970	Bamboo	Tugapur I	2.0
1970	Bamboo	Austin I	6.1
1970	Teak	Tugapur V	32.4
1970	Bamboo	Tugapur V	2.0
1971	Teak	Tugapur V	16.2
1971	Padauk	Tugapur V	10.1
1971	Matchwood	Tugapur V	4.0
1971	Teak	Austin IV	24.3
1971	Cane	Austin I	20.2
1971	Bamboo	Austin I	8.1
1971	Cane	Tugapur I	20.2
1972	Bamboo	Austin I	8.1

1972	Teak	Austin I	54.7
1973	Teak	Tugapur I	57.0
1973	Padauk	Tugapur I	10.1
1973	Matchwood	Tugapur I	4.0
1972	Cane	Austin I	20.2
1972	Bamboo	Tugapur I	8.1
1973	Teak	Tugapur V	20.2
1973	Teak	Austin IV	20.0
1974	Teak	Tugapur I	20.0
1974	Teak	Tugapur IV	20.0
1974	Padauk	Austin IV	10.0
1974	Padauk	Tugapur II	10.0
1976	Teak	Tugapur VI	10.0
1976	Padauk	Tugapur IV	30.0
1977	Padauk	Austin IV	10.0
1977	Padauk	Tugapur VI	10.0
1977	Padauk	Tugapur VI	10.0
1982	Mixed	Austin X	14.0 (ANIFPDC)
1984	Padauk	Austin X	10.0 (ANIFPDC)
1985	Coconut	Austin X	1.0 (ANIFPDC)
		Total	2175.0

LIST OF PLANTATIONS RAISED IN MIDDLE ANDAMAN FOREST DIVISION

I. TEAK PLANTATIONS

S.No	Year of formation	Locations	Area in ha	Remarks
(1)	(2)	(3)	(4)	(5)
1.	1956	Pencharta	0.81	
2.	1957	Pencharta	18.21	
3	1958	Borniyol Coupe IV	20.24	
4	1959	Pencharta, Borniyol Coupe IVb	50.59	
5	1960	Pencharta, Borniyol Coupe IV & V	10.12	
6	1961	Borniyol Vb & Vib	10.12	
7	1962	Porlobjig Ia & IV a, C.F.O.Nallah, Borniyol Vc & VIb	175.24	
8	1963	Porlobjig IV & Va, Sagwan Nallah, Borniyol VIb	130.31	
9	1964	Porlobjig Va, Borniyol VIIb, Thoraktang, Sagwan Nallah	259.41	
10	1965	Polobjig Va, VIa and VIIa, Thoraktang, Sagwan Nallah, Borniyol VIb	182.12	
11	1966	Borniyol VIb, Madrasi Nallah, Porlobjig VIa & VIIa, Thoraktang	211.66	
12	1967	Borniyol VIIa, Madrasi Nallah, Thoraktang	188.19	
13	1968	Thoraktang, Madrasi Nallah, Borniyol VIIb, Porlobjig VIIA	151.76	
14	1969	Bakultala, Thoraktang	73.66	
15	1970	Thoraktang, Parnashala, Sabari, Sagwan Nallah	125.00	
16	1971	Borniyol XI, Porlobjig XI, Thoraktang, Parnashala, Sabari	208.00	
17	1972	Thoraktang, Parnashala, Sabari, Porlobjig IX & XV, Borniyol XI, Sagwan Nallah, Charlungta	345.00	
18	1973	Thoraktang, Parnashala, Sabari, Porlobjig IX & XV, Borniyol XI, Sagwan Nallah, Charlungta	344.00	
19	1974	Thoraktang, Porlobjig IX &	205.00	

		XV, Borniyol XI, Sagwan Nallah, Borniyol XI Parnashala		
20	1975	Thoraktang, Porlobjig IX & XV, Borniyol XI, Sagwan Nallah, Borniyol XI Parnashala	280.00	
21	1976	Porlobjig XV, Borniyol XI, Charlungta	140.00	
22	1977	Porlobjig XV, Borniyol XI, Charlungta	130.00	
23	1978	Porlobjig XV, Charlungta	50.00	
24	1979	Yeratiljig	20.00	
25	1980-1982	NIL	NIL	
26	1983	Yeratiljig	60.00	

II. PADAUK PLANTATIONS

S.No	Year of formation	Locations	Area in ha	Remarks
(1)	(2)	(3)	(4)	(5)
1.	1963	Porlobjig Va	8.09	
2.	1965	Porlobjig VIIa	0.81	
3	1967	Borniyol VIIa	30.35	
4	1968	Porlobjig VIIa	14.16	
5	1969	Thoraktang	8.09	
6	1971	Porlobjig IX	20.00	
7	1972	Porlobjig IX, Borniyol XI	30.00	
8	1973	Porlobjig IX	20.00	
9	1974	Porlobjig IX & XV	50.00	
10	1975	Sabari	40.00	
11	1976	Sabari	40.00	
12	1977	Parnashala	20.00	
13	1978	Yeratiljig	30.00	
14	1979	Yeratiljig	40.00	
15	1980	Yeratiljig	40.00	
16	1981	Yeratiljig	20.00	

III. MISCELLANEOUS SPECIES

S.No	Year of formation	Species	Locations	Area in ha
(1)	(2)	(3)	(4)	(5)

1.	1957	Matchwood	Borniyol IIIb	16.19
2.	1958	Matchwood	Borniyol IV Borniyol IV	40.47 8.09
3	1959	Dalbergia Sissoo	Donald Valley Donald Valley	0.81 8.09
4	1960	Dalbergia Sissoo	Borniyol Vb	20.23
5	1961	Rosewood	Borniyol Vb	40.47
6	1962	Matchwood Matchwood Matchwood Cane	Porlobjig IV Borniyol IVb C.F.O.Nallah Borniyol IIIb	20.23 4.85 16.19 4.05
7	1963	Matchwood Cane	Porlobjig Va Borniyol IIIb	20.23 6.07
8	1964	Matchwood	Porlobjig Va	3.64
9	1965	Matchwood Rosewood Cane	Porlobjig VIIa Porlobjig VIIa Borniyol IVb	4.05 0.81 14.16
10	1966	Cane	Borniyol VIIIb	12.14
11	1967	Cane	Borniyol VIIIb	10.12
12	1968	Bamboo Matchwood	Borniyol VIIIb Porlobjig	20.22 10.12

**LIST OF PLANTATIONS RAISED IN DIGLIPUR FOREST
DIVISION**

Year	Species	Location	Area in ha.
(1)	(2)	(3)	(4)
1972	Teak	Smith Island	26
1975	Teak	Laxmipur	40
1977	Teak	Laxmipur	30
1978	Teak	Laxmipur	10
		Total	106

PHONE : 91(O) 3192 33233

FAX : 91(O) 3192 30113

MOST IMMEDIATE
SUPREME COURT MATTER

No. F.22 (E)/156/ 239

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN & NICOBAR ISLANDS
VAN SADAN - HADDO

Port Blair, dated the January 18, 2002

To
Prof. Shekhar Singh,
IIPA Indraprastha Estate,
Ring Road, New Delhi - 2

*Sub: - 1A 502 in W.P.NO 202/95 (T.N.Godhavarman Thirumalpad Vs. UOI & Ors.)
Furnishing of information to the Commission - reg.*

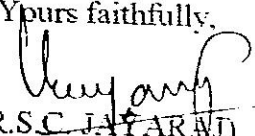
Sir,

In continuation to our letter No. F.22 (E)/156/ dated 7th January 2001 on the subject cited above I am sending herewith the following: -

- (a) The list of Saw Mills is enclosed as Annexure I. The list furnished earlier may please be treated as cancelled. (*Location map enclosed*)
- (b) The map showing the area where timber extraction has been carried out in the following divisions are now revised and enclosed. The old maps may please be returned. The maps of the other divisions are correct.
 - (i) Diglipur Division. (Annexure- II)
 - (ii) Mayabunder. (Annexure-III)
 - (iii) Little Andaman. (Annexure-IV)

Encl: As above

Yours faithfully,


(R.S.C. JAYARAJ)

Deputy Conservator of Forests
(Headquarters)

LIST OF SAW MILLS				
S.No	Name & Address of the Unit	Activity	Installed capacity (cbm)	Operating Capacity (Cbm)
1.	2	3.	4.	5.
I. PRIVATE SAW MILLS				
MEDIUM SCALE INDUSTRIES				
1.	M/s. Andaman Timber Industries, Bambooflat, (South Andaman)	Commercial Plywood	31,160	31,375
2.	M/s. Jayashree Timber Products, Bakultala, (Middle Andaman)	Plywood, Block board, veneer	28,300	22,875
3.	M/s. Kitply Industries Ltd, Long Island, (Middle Andaman) (Previous known as M/s. Albion Plywood)	Plywood, Veneer	31,650	19,541
SMALL SCALE INDUSTRIES				
4.	M/s. Vana Pana Pencil Industry, Garacharma, (South Andaman)	Pencil Slat, Sawn Timber, Match Frame Work,	1800	1126
5.	M/s. Balamurugan Pencil Industry, Sippighat, (South Andaman)	Pencil Slat	1200	429
6.	M/s. Andaman Cottage Pencil Industry, Prothrapur, (South Andaman)	Pencil Slat, Sawn Timber	3600	763
7.	M/s. M.S.Pencil Slat Industry, Sippighat, (South Andaman)	Pencil Slat	2400	399
8.	M/s Wood Link Products, Mayabunder, (North Andaman)	Pencil Slat	1200	69
9.	M/s Bharat Splints Manufacturing Industry, Manpur, (South Andaman)	Pencil Slat, Sawn timber	1200	654
10.	M/S Andaman Cottage Match Industry, Garacharama, (South Andaman)	Pencil slats	1200	726
11.	M/s Arasan Cottage Match Industry, Bhathubasthi,	Match Splints, Sawn Timber	3600	657

	(South Andaman)			
12.	M/S Asia Timber Products, Hut Bay, (Little Andaman)	Match Splints, Pencil Slats, Veneers, Sawn Timber	10000	10423
13.	M/s United Match Timber Chemical, Mayabunder, (North Andaman)	Match splint, Sawn Timber, veneers & Pencil Slats	6000	-
14.	M/S Andaman Wood Products, Junglighat, (South Andaman)	Sawn Timber	3500	814
15.	M/s Sea Island Saw Mill, Ograbraj, Port Mouat, (South Andaman)	Sawn Timber	1800	757
16.	M/s Raj Kumari Saw Mill Junglighat, (South Andaman)	Sawn Timber	1800	646
17.	M/s Kamakshi Furniture Saw Mill, Sippighat, (South Andaman)	Sawn Timber	1800	416
18.	M/s M.S. Timber Industry, Sippighat, (South Andaman)	Sawn Timber	2400	984
19.	M/s Green Island Timber Industries, Rangat, (Middle Andaman)	Sawn Timber	1800	299
20.	M/s Durga Saw Mill, Diglipur, (North Andaman)	Sawn Timber	1800	200
21.	M/s Bepari Wood Industries, Diglipur, (North Andaman)	Sawn Timber	1800	30
22.	M/s Samarias Trading Company, Aerial Bay, (North Andaman)	Sawn Timber	1800	600
23.	M/s Mayabunder Saw Mill, Mayabunder, (North Andaman)	Sawn Timber	3000	670
24.	M/s Teja Engineering Products, Dundas Point, (South Andaman)	Wooden Boats & Wooden furniture	600	379
25.	M/s. Island Industry, Hut Bay (Little Andaman)	Sawn Timber	-	930
26.	M/s. Mukesh Lall Saw Mill, Dhanikhari (South Andaman)	Sawn Timber	1800	782
27.	M/s. Dori Lall Saw Mill, Junglighat, (South Andaman)	Sawn Timber	-	116

	Andaman)			
28.	M/s. Dori Lall Saw Mill, Prothrapur, (South Andaman)	Sawn Timber	.	632
29.	M/s. Raj Shipping Timber Industry, Dundas Point, (South Andaman)	Sawn Timber	1800	150
30.	M/s. Silver Jubilee Saw Mill, Kadakachang, (South Andaman)	Sawn Timber	1800	469
31.	M/s. Island Wood Products, Havelock, (South Andaman)	Sawn Timber	900	-
32.	M/s. Andaman Wood Link Products, Mayabunder, (North Andaman)	Sawn Timber	1200	231
33.	M/s. Rehabilitation Multipurpose Co-operative society Ltd., Rangat, (Middle Andaman)	Sawn Timber	750	500
34.	M/s. Vinay Lall Saw Mill, Austinabad, (South Andaman)	Sawn Timber	.	-
35.	M/s. Elephant Saw Mill, Campbell bay (Great Nicobar	Sawn Timber	420	420
36.	M/s. Ram Saran Saw Mill, Campbell Bay, Great Nicobar	Sawn Timber	300	300
37.	M/s. Chuk Chuki Saw Mill, Car Nicobar	Sawn Timber	.	-
38.	M/s. Kanuse Saw Mill, Car Nicobar	Sawn Timber	.	-
II GOVT. SAW MILLS				
1.	Govt Saw Mill, Chatham, Port Blair	Sawn Timber	24000	15000
2.	Govt Saw Mill, Betapur, Middle Andaman	Sawn Timber	5000	3000

331-7509
211-6148044

No.F.22(E)/156/245
**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
ANDAMAN AND NICOBAR ISLANDS**

Port Blair, dated the 25th Jan., 2002

To
Prof. Shekhar Singh,
Indian Institute of Public Administration,
Indraprastha Estate, Ring Road,
New Delhi-110002
Fax No. 011 3319954

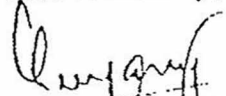
Subject: Furnishing of information regarding extraction of timber from 1980-81 to
2001-02 regarding.

Sir,

As requested by you, the information on extraction of timber from 1980-81
onwards is furnished here with:

YEAR	TIMBER (in cum.)
1980-81	165726
1981-82	162241
1982-83	147308
1983-84	147309
1984-85	132579
1985-86	145305
1986-87	131888
1987-88	115801
1988-89	123678
1989-90	117746
1990-91	103660
1991-92	105319
1992-93	125670
1993-94	130136
1994-95	135523
1995-96	126579
1996-97	107443
1997-98	77097
1998-99	62623
1999-2000	47617
2000-2001	40053
2001-2002	Nil

Yours faithfully,


(R.S.C. Gyalraj)


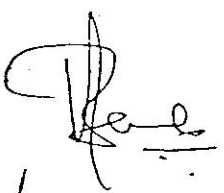
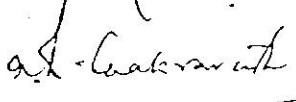
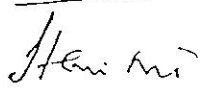
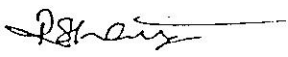



Deputy Conservator of Forests
(Headquarters)

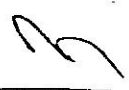
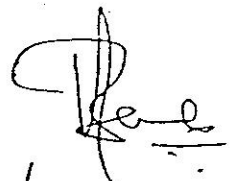
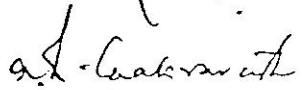





LIST OF PEOPLE MET

16-12-2001 SS Saw mills assoc.

1. ANIL GOEL, Partner in
Andaman Cottage Pencil Wood
Industries, Port Blair.
2. Mukesh Lal, Proprietor
Dhani Khani, S. Andaman.
3. M. SUBRAMANIAN, Owner
M.S. Timber Industries.
I.T.S. Pencil Slab Industry.
4. P.B. Poovosah, Manager
Sea Island Saw Mill (P) Ltd.
5. P.B. Poovosah, Manager
Mayabunder Saw Mill (P) Ltd.
6. K.V. VARGHESE, GENERAL MANAGER
ARASAN COTTAGE MATCH INDUSTRIES
VANA-PANA PENCIL WOOD INDUSTRIES.
SOMARIO TRADING CO. (SAW MILLS)

7. MR. SRICHADEN, PROPRIETOR,
BHARTH SPLITS MANAFTERS,

Name	Address	Sign
Mohamed H. Sadwet	President ACCI	
Hunt Barker	Director, Kityly Ind. Ltd. Long Island.	
A. B. Chakravarty	Adviser, Asia Timber Products Hut Bay	
J. N. Arora	Vice President A.C.C.I.	
R. K. SHARMA	Director , Kityly Ind. Ltd.	
T. R. Krishnan Rao	Andaman Manager, Asia Timber products. Ltd. Little Andaman.	
Sonjib Chondhury	Director Andaman Wood Products (P) Ltd Tonghighat, Port Blair.	
G. DHANAKARAN	Joint Secy, ACCI	

Name	Designation + Address	Sign
Mohamed H Isakwet	President ACCI	
Frank Barker	Director, Kityly Ind. Ltd. Long Island.	
A. B Chakravarty	Adviser, Asia Timber Products Hut Bay	
J. N. Ayres	Vice President A.C.C.I.	
R. K. SHARMA	Director , Kityly Ind. Ltd.	
T. R. Krishnan	Assistant Manager, Asia Timber Products Little Andaman.	
Sonjib Chondhury	Director Andaman Wood Products (P) Ltd Tughlight, Port Blair.	
G. DHANAKARAN	Joint Secy, ACCI	

6-12-2001 Indian National Port & Dock Workers Federation.

पति

पति

Name

Designation & Address

P. Shanti Krishna President, Handri Bhawan,
INTUC Post Blair.

SP. KARIYAL VALAVAN, Gen. Sec
INTUC

..

3. Subbairao Secy INTC
Mandri Bhawan "

1. Vemanna Secretary
INTUC "

ARNAL KANTI BISWAS President Furniture
Andaman Furniture Association

Rajal Mondal. Secretary Andaman Furniture Association

Bilal ch. Helder. Secy
16/12

Qazi Muzibur Rahman -

tarish Sarkar -

Qazi
Admission 4/12

16-12-2001

Andaman Forum For
Development, Justice and
Protection of Environment
Designation & Address

Name

DR. ROHHATA LALL Eye Specialist A-1-R-Road
27 MB
Dillaniper Post House
S.S. Melity, Govt. Servant, Jungli Ghat P/B
Sharda Ram Vice President Dading Town P/B
Madam Mohan Lal Govt Servant Naya gaon, P/B
Island Forum etc.

16-11-2001 ANET, SANG, Bengali Association.

Name	Designation & Address
RAUF ALI	ANET, Wandoor
Susheel Dixit	ANET, Wandoor
DEEPAK GOVIND	ANET WANDOOR
ID. TABRAIZ - Advocate	Advocate
A.K. Banerjee	Boys' Ambler SANE
AMIRACHARYA	SANE
B. C. DUTTA ROY	SANE
A.R. BISWAS.	BAANI
MANISH CHANDI	ANET, WANDOOR.
D.P. MUKHOPADHYAY	Andaman Prakashan
ANAND BHANUJAY	Andaman Prakashan

NAME	DESIGNATION & ADDRESS	Andaman Herman Welfare Orgn
V. Sankaranarayanan	Joint Secretary	
V. Kumar	U/President	
K. Permal	President	

Name Designation & Address.

Social Welfare Board

- 1) Shelly Ghosh. Vice President - P.D. Mahala Mondal, - Aberdeen Bazar,
- 2) Smt. Shanta Singh — Shanta Singh
- 3) Miss Kusum Devi President Puriyodashi - Holihallud
- 4) Smt. Neela Devi - Social worker (Pratham Pus)
- 5) Smt. Jamuna Devi - Panchayat member (Gurachon)
- 6) Naheesa — Municipal. control - ~~for~~
- 7) Parmila Devi — B.C. M. S. (R).
- 8) Zoraha Bibi - Social worker -
- 9) Kunti Devi - Social worker (Dolly Gij) R. Des
- 10) Asura Muqta -
- 11) ~~Jamuna Dai~~ —
- 12) Dayo Pati — School line
- 13) Sumari Devi — School line
- 14) Prem Devi — School line
- 15) ~~Jamuna Dai~~ —

NAME

DESIGNATION +
Address

LOCAL BORN'S Association.

- 1) Baluch Pers, Member L.B.A. 2
 - 2) Dr. Prem Kishan, Chairman, Board of Welfare
Trusts.
 - 3) Govind Ram, Genl. Secy, L.B.A. 1
 - 4) John Lobo, President, LBA Ames
-

17.12.2001

NAME

ADDRESS

- Group 1: Panchayat Samit
- 1) Malay kr Biswa
Panchayat Meru ~~Chir~~ vill. Manpur, P.O. Harpalitband Ferrang
S/Andaman.
 - 2) Ashok kr Dan. - Ak DAS
Panchayat Meru. vill. Manpur, P.O. Harpalitband
S/Andaman.
 - 3) Shi. Bimal kr Biswa
Pramuch
Panchayat Samit Ferrang. S/A. vill. Manpur, P.O. Harpalitband
S/Andaman.
 - 4) Shi. S.S. ~~Ante~~ Ram, Secretary to Pramuch, Panchayat Samit
(E.O.) Ferrang.

NAME

ADDRESS

GRP-2 (Press)

1. Mr K. Ganesham
Chief Editor, Andaman Express
Daily Newspaper, Phangkyong.
2. D. Chaki
Correspondent, Andaman Express

- Group 3
3. Shi K. C. Roy, A.S.T.
Under D.E.O. South Andaman.
 4. Shi Totin Mandal.
Cultivator, R/o. Sipighat, S/A. जीतीन मंडल
17/12/2001

Group 4:

NAME

ADDRESS

ARIE M. MUSTAPA.

GAFODR MANZIL
Aludeen Bayan.
744101

NAME

Group 5: Govt Employees

ADDRESS

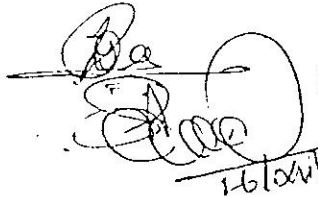
M. Bahulayan.

Andamans & Nicobar
Govt. & Workers Union.

R. Mungesan.

③ D. Laxman Rao

K. K. Srinivasan


16/04/2001

Group 6:

Panchayat Zilla Parishad.

NAME

ADDRESS

25 Panchayats

S. S. Balakrishnan Nair

Pradhan, Baidh Gaiy Goom
Panchayat.

Nelson Pradhan Singh
Maricaray

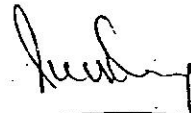


R. R. Shetty Up Pradhan P/Blair.

Smt Minati Biswas Zilla Parishad member

Bhadrachari P.S.M. H/Blair

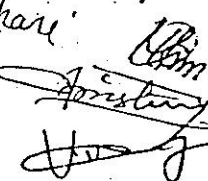
S. N. Biswas



M. K. ANNIE Pradhan Mithakhar
Indrajit Mishra G.P. Choudhary

Vincent Walter Sippikat

Panchayat member



NAME ^{Congress Party} ADDRESS Group 1

- 1 - Tagmarayan Acting President
Pradesh Cong.
Dr. Ismail. *Tagmarayan* 17/12/75
- 2 - N. Ravindran - Gandhi Bhawan N. Ravindran
Post Bham.
- 3 - Mangal Singh, President. DCC *Mangal Singh*
- 4 - Sanjay Choudhary - Gen. Secretary
DCC. *Sanjay Choudhary*

NAME ADDRESS Group 8

T. Ramani/Sum Postmort

NAME ADDRESS Group 9

Basant Lal Naya Gauran
Arvind & Ravi Sharma T/glet

NAME ADDRESS Group 10

M. Sadasivam CPI (ML), Prem Nagar
N.K.P. Nair (K.S) AICCTU, Prem Nagar. *M. Sadasivam*

NAME ADDRESS

Grp 11

Nabha kr. Pshad
Zilla Parishad
Marine Hill, Port Blair

B3

Jeevan Walter May
Zilla Parishad Member
Long Island

Zeeji

VISHAL JOLLY
Adhyaksh Zilla Parishad
AE N - Islands
Marine Hill, Port Blair

Vishal jolly

A. RAMA NATHAN
UNIT President
Long Island

Rah

S. Jayakumar
up. prakas
Long Island

Shy

B. KAMARAJ B.M.
Kitply worker
Long Island

S. Narayan B.M.
Kitply worker
Long Island

E. Gajetane
KIT. PLY
LONG ISLAND

Shy

S. Bhima Rao.
Kistply Worker Shoo
Long Island.

T. Konda Rao. T.K. RAO
Kistply Worker
Long Island.

R. Devaraju
Kistply Workers B
Long Island.

NAME	ADDRESS	GRP 12 AIR
A. S. BIRGHI	News Editor, All India Radio, Port Blair,	
R. K AMAL	Correspondent " "	

Name | Designation & Address 17-12-2001.

GHAYAS. MESHACK - AN Peoples Voluntary Organisation
Opposite Head Post Office,
Port Blair, Andamans.
Phone 30389.

G. CHANDER SHARER

- do -

AL. SEVUGA MOORTHY

- do -

Name (നാമം) Designation & Address (ആവേശം)

1. G. Bhakuntla (GPM) ~~SS~~ Gram panchayat member.

2) Prabha Tete

~~SS~~ - do -

3) Maniam Xalxo

~~MS~~ - do -

4) Smti Bahlan Ekta

~~SS~~ - do -

5) Smti Bernadeth Sorany

~~SS~~ Pradhan (Sudergam)

6) Saethir Toppo

~~SS~~ UP Pradhan

7) S. Laxmanan

8) Ajit Toppo

~~MS~~ Shamin

9) P.V. Naganathan

~~SS~~

10) Bimal Bage

Gingay John Toppo

~~SS~~

11) Roy George

~~SS~~

13. N. D. SELLAR NDS
14. T.istus Surin (Pradhan N/A) Si
15. S. George Victor Victor
16. Ramanathan R
17. Bibwasi Surin Surin
18. ANTONY XAVIER UP-PRAMUKH P/Samiti, Rangal AS
19. SIRAJ-S. (G.P.M.) S
20. ROBERT BALMOCH (G.P.M.) R
21. BIMAL KUMAR. (G.P.M.) B
22. Babbar B
- 23) Patie Korketta (G.P.M.) P
24. G. KURMA RAO (MEMBER 2.P. DEBATA G) G
-
25. Golabi Mandal. (G.P. member chundergarh) G
26. Kosto Kharia (chundergarh) K
27. Sukhni toppo Public S

18/12/01
[NEW POLIC-27 people]

5-12-2 न।।।

पता


क. द. 1. 1. 1. 1. 1.

पंचायत.

1) K. Babu K. Talu

Ch Babu

2. Sampad K. Roy

Sarpanch, K. Talu. 

3. JYOTIRMAY BAWALI

UP-PRADHAN. UTTARA

4. DEBEN MAZUMDER

ZILLAPARISHAD

5. SUKLAL MANDAL

MEMBER -

SABTRI DAS

PRADHAN
K/TALA


18/12/07

TARANGADHALI

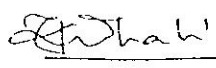
PRADHAN
UTTARA



SUKLA MANDAL

SUR- PANCH

UTTARA



MEMBER

K/TALA

Sukla Mandal

18-12-2001

Rangat

Name

Designation & Address.

- 1) Shri Animesh Haldar - P.S.M Sabai ~~Haldar~~
- 2) Shri Sukumar Mazumdar pramukh } ~~Shri~~
P.S. Rangat }
- 3) Shri Anil Haldar Pradhan ~~Haldar~~
K. Nagar
- Shri Sabita Sarkar Pradhan
Sabari
5. N.N. Basu Panchayat Samiti member D/Pur ~~Basu~~
15/12
6. Shri - Smit K. Mazumdar - Secretary - A.S.N. Panchayat - Shri
Part B. Unit,
7. K. Ramamurthy - Panchayat Samiti member N/Haldar. ~~K. Ram~~
8. Prem Kumar P.S.M K. Nagar ~~Prem~~
9. M. Ramakrishna Grampanchayat Rangat Garbha - ~~M. Ram~~
B.T.P. ~~15/12~~
- 10) Deborato Haldar (working comite member) ~~Haldar~~
1. S.N. Sengupta, ~~S.N. S.~~ S. Lat Committee - B.T.P. ~~S.N. S.~~
11/12/2001
2. A.K. Madhuban ~~A.K. Madhuban~~
3. Marboot Ahmed ~~Marboot Ahmed~~
M. Ahmed
4. N.S. Vasuki Pradhan. G.P. Baktul Tah. N.S. Vasuki
5. S.R. SINGH Pradhan Rpt
6. Sovana Roy z/p member Rpt ~~S.R. S.~~
~~Roy~~
7. Sanolanna wadmeher Rangat Grampanchayat ~~Sanolanna~~
18. D. K. L. Z.P.M B/T ~~D. K. L.~~
19. Vivekananda Hazra ~~Vivekananda Hazra~~
20. Manojan Haldar ~~Haldar~~

Name नाम	Designation & Address पद	Highlights कलिंगात
1. Nerajan Barai	P.S.M. vill. Nabagram	
2. Anurupam Halder	2 P.M. North Andaman	Barai
3. Miss Swari Uraon	P.S.M. vill. Nabagram - S/ Andaman	Halder
4. Shri. Ashok Das. (Pradhan)	Kalighat - N/Andaman.	Shri.
5. Shri Baddeo Uraon (Pradhan)	Nabagram Gram Panchayat.	Chandra
6. Shri Arun Biswas (U.P. Sarpanch)	Ramnagar	Shri
7. Shri Nabakumar Chakraborty	Pradhan, Nabagram	Shri
8. Shri. Anurupa Maiti	Pradhan	Shri
9. Shri Manmohan Singh	Kishore Nagar	Shri
10. Shri. Ganesh Kumar Paul	K/ghat - B.T.P.	Shri
11. Shri. Ram Das	P.R.M. Kalighat	Shri
12. Shri. - K. K. Momin	P.R.M. Kalighat	Shri
13. A. S. Lata Halder		Shri
14. Uday Shankar Singh	General Secretary (I.N.C.)	Shri
15. N. K. Mandal	(Social Worker)	Shri
16. T. Johnson		Shri
17. P. ZAFAR	Pradhan, Kalighat	Shri
18. P. K. Hall		Shri
19. N. K. Singh	U.P. Pradhan K/ghat	Shri
20. Ranjiban Sarkar	(Member of CPI (M))	Shri
21. P. L. K. Momin	Contractor	Shri
22. Mathivanan		Shri
23. Suresh chandran		Shri
24. Shri. Kishor Kumar	Apil, Dypet -	Shri
25. Dibakar Das	Kalighat	Shri

23. Basun Kr. Mandol ~~Kishor Kumar~~ Bardol

19-12-2001. Kalighat Govt. Contractors

Name Designation & Address

P.T. Mathuram

Dibakar Das

Chandra construction

P. L. Kumarasamy

Basun Kr, Sikdas

= Dibakar

= Dibakar

Bardol

Bardol

Bardol

22. Susanla Mazunder.

Bennig.

JUNE							JULY						
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MAY
Wednesday 2
122 - 245 Week 18

Swamy Omkaranand

General Secretary

Port Corporation

Workers Union

HUT BAY - 744202

Met on
17.1.02
at Little Andaman
also met Cooperation
employees association
off.

2001

CORRESPONDENCE

26 December, 2001

Dear Shri Patnaik,

It was a pleasure to meet you once again and to interact with you. My trip to the Andamans was very useful and I have, I think, got a reasonable idea of the sentiments of the public and the thinking of various concerned government departments, regarding the matter at hand.

I am now working at finalising the report as soon as possible and, to this end, might trouble you and your officers for some further information. I also hope to visit the Islands once again, sometime in January, before finalising the report.

With regards and all the best of wishes for the new year,

Yours sincerely,

Shekhar Singh

Shri S.S. Patnaik, IFS
Principal Chief Conservator of Forests
Andaman and Nicobar Islands
Van Sadan
Port Blair

26 December 2001

Dear Shri Jaya Krishnan

As you are aware, the Supreme Court has ordered the preparation of a report on the state of forests and other allied matters regarding the Andaman and Nicobar Islands. Accordingly, your Ministry has issued order No. 13-19/2001-SU dated 6 December, 2001 appointing me a commissioner for the said purpose.

In this connection, if your Ministry is interested in expressing any views on the matter I would be grateful if a written submission is sent as early as possible. The possibility of submitting an interim report by 4 January, 2001, to deal with some immediate problems, is under consideration and any submissions regarding this must be received on or before 2 January, 2001. The final report is likely to be ready for submission by 25 January, 2001, and submissions pertaining to that should be received on or before 11 January, 2001.

In case any representative of the Ministry would like to supplement the written submissions through a presentation or briefing, that could be fixed immediately after the receipt of each of the written submissions.

I would be grateful for any early indication of whether or not the Ministry is proposing to make any written and oral submissions.

With regards,

Yours sincerely,

Shekhar Singh

Shri P.V. Jaya Krishnan, IAS
Secretary
Ministry of Environment and Forests
Government of India
New Delhi

26 December 2001

Dear Shri Sekhsaria,

As you might be aware, the Supreme Court has ordered the preparation of a report on the state of forests and other allied matters regarding the Andaman and Nicobar Islands. Copies of the relevant orders are enclosed.

In this connection, if your organisation is interested in expressing any views on the matter I would be grateful if a written submission is sent as early as possible. The possibility of submitting an interim report by 4 January, 2001, to deal with some immediate problems, is under consideration and any submissions regarding this must be received on or before 2 January, 2001. The final report is likely to be ready for submission by 25 January, 2001, and submissions pertaining to that should be received on or before 11 January, 2001.

In case any representative of your organisation would like to supplement the written submissions through a presentation or briefing, that could be fixed immediately after the receipt of each of the written submissions. You might also like to nominate the persons who can represent your organisation in this matter.

I would be grateful for any early indication of whether or not your organisation is proposing to make any written and oral submissions.

With regards,

Yours sincerely,

Shekhar Singh

Shri Pankaj Sekhsaria
Kalpavriksh
Apartment 5, Shree Dutta Krupa
908 Deccan Gymkhana
Pune 411 004

FAX: 020-565 4239

26 December, 2001

Dear Shri Jha,

It was a pleasure to meet you once again and to partake of your and Mrs. Jha's wonderful hospitality. My trip to the Andamans was very useful and I have, I think, got a reasonable idea of the sentiments of the public and the thinking of various concerned government departments, regarding the matter at hand.

I am now working at finalising the report as soon as possible and, to this end, might trouble you and your officers for some further information. I also hope to visit the Islands once again, sometime in January, before finalising the report.

With regards and all the best of wishes for the new year,

Yours sincerely,

Shekhar Singh

Shri N.N. Jha, IFS (Retd.)
Lt. Governor
Andaman and Nicobar Islands
Raj Niwas
Port Blair

MOST IMMEDIATE

27 December, 2001

Dear Shri Mangotra,

The Supreme Court of India, in their order dated 23.11.2001, have asked me to prepare a report on the state of the forests and other allied matters for the Andaman and Nicobar Islands. Copy of the relevant order is enclosed.

In this connection, I would be grateful if your Ministry makes available for my use any reports or data regarding the potential of developing non-conventional sources of energy in these Islands. I am also interested in any technology available to use saw-dust for fuel.

I would also be grateful for any other relevant information or documents that you could provide me.

As I hope to finalise my report by the middle of January, I would be grateful if these documents are provided as soon as possible and not later than 7 January, 2002.

With regards,

Yours sincerely,

Shekhar Singh

Shri A.K. Mangotra
Joint Secretary
Ministry of Non-Conventional Energy Sources
Block 14, CGO Complex
Lodhi Road
New Delhi 110 003

Encl: aa



सत्यमेव जयते

A.K. Mangotra
Joint Secretary
Tel : 4361027 / Fax : 4367413
e-mail : mangotra@sansad.nic.in भारत सरकार

अपारम्परिक ऊर्जा स्रोत मंत्रालय

Government of India

MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES

ब्लॉक नं 14, केंद्रीय कार्यालय परिसर, लोदी रोड, नई दिल्ली-110 003

BLOCK NO.14, C.G.O. COMPLEX, LODI ROAD, NEW DELHI - 110 003

2/1/2002-P&C

D. O. No.

03.01.2002

Dated

Dear Professor Shekhar Singh,

Kindly refer to your letter dated 27th December, 2001 requesting for information on developing non-conventional energy sources in the Andaman and Nicobar Islands. I am enclosing a brief note on 'Non-conventional Energy Programmes in the Andaman & Nicobar Islands' indicating potential, achievements and present status of various NRSE programmes for your perusal.

As far as the technology available to use saw dust for fuel is concerned, I may suggest that briquetting technology can be used for making briquettes from saw dust and this could be used as a general fuel. In addition, biomass gasifier systems based on saw dust as a fuel are also available.

I hope the above information will serve your purpose.

With regards, *Dr. B. V. Singh*
Yours sincerely,

A.K. Mangotra
(A.K. Mangotra)

Encl: As above.

Professor Shekhar Singh
Indian Institute of Public Administration
Indraprastha Estate
Ring Road
New Delhi - 110 002.

MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES

**BRIEF NOTE
ON
NON-CONVENTIONAL ENERGY
PROGRAMMES IN THE
ANDAMAN & NICOBAR ISLANDS**

**January, 2002
BLOCK NO.14, CGO COMPLEX
LODHI ROAD, NEW DELHI - 110 003**

MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES

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NAME OF THE STATE - ANDAMAN & NICOBAR ISLANDS

I. General Information :

The Andaman and Nicobar Islands were constituted into a Union Territory in November, 1956. The Islands are in two groups: the Andaman and the Nicobar, with a ten-degree channel separation the two. They stretch over 500 miles of water in the Bay of Bengal. Geographically, They are situated between the 6th and 14th parallel of north, latitude and between 92 degree and 94 degree of east longitude. Although the Andaman Islands, large and small, number about 239, the bulk consists of three closely connected large islands. North, Middle and South Andamans, which with other two Islands, Baratang and Rut-Land, almost form one landmass known as the Great Andamans. In the Nicobars, there are 19 islands of which 13 are inhabited by about 12,000 aboriginal tribesmen. Most of them live on Car Nicobar, the northern most of the archipelago. Half of the total area is covered by the Great Nicobar, which is almost uninhabited. Port Blair, the capital of the Andaman and Nicobar Islands, is 120 miles from Cape Negrais in Burma, 780 from Calcutta and 749 from Madras.

II. General Profile (From India 2000 book as per 1991 census)

1. Total Area (Sq. Kms) : 8,249
2. Population (Nos. in crores) : 2,80,661
Scheduled Tribes : 27,000
3. Total Nos. of Districts : 2
4. High Focus Areas : All Regions in the Islands

III. Implementing Agencies

Implementing Agency/Department	Contact Persons	Programmes handled
Electricity Department , Andaman & Nicobar Islands, Port Blair.	Manohar Singh Superintendent Engineer, Ph. No.03192-32404, 32685 Fax No.03192-33365	All Programmes

IV. Achievements under various New & Renewable Sources of Energy (NRSE) Programmes:

SL No.	Sources/Systems	Estimated Potential	Cumml. Ach. as on 31.03.01	Acht. during 2000-01	Exp. during 9 th Plan as on 31.03.2001 (Rs.in Crs.)
A	POWER GENERATION				
1.	Wind Power (MW)	-	-	-	0.00
2.	Small Hydro Power (MW) (up to 25 MW)	6.14	-	-	7.905
3.	Biomass Power/ Cogen. (MW)	-	-	-	0.00
4.	Biomass Gasifier (kW)	-	167	-	0.00
5.	Solar Photovoltaic Power (kW)	-	-	-	0.205
6.	Energy Recovery from wastes (MW)	-	-	-	0.00
B	DECENTRALISED ENERGY SYSTEMS				
7.	Family Type Biogas Plants (Nos.)	22,000	137	-	0.00
8.	Community/Institutional/Night-soil based biogas plants (Nos.)	-	-	10	0.00
9.	Improved Chulha (No. in lakhs)	0.40	0.32	0.01	0.00
10.	Solar Photovoltaic (SPV) Programme				0.102
	i. Solar Street Lighting Systems (Nos.)	-	346	12	
	ii. Home Lighting Systems (Nos.)	-	391	1	
	iii. Solar Lanterns (Nos.)	-	538	104	
	iv. SPV Power Plants (kWp)	-	149.14	-	
11.	Solar Thermal Programme				0.00
	i. Solar Water Heating Systems (sq.m. area)	-	-	-	
	ii. Solar Cookers (Nos.)	-	59	-	
	iii. Aditya Solar Shops (Nos.)	-	-	-	
12.	Wind Pumps (Nos.)	-	2	-	0.005
13.	Aero-generators / Hybrid Systems (Nos.)	-	-	-	0.00
14.	Solar Photovoltaic Pumps (Nos.)	-	5	-	0.00
C	OTHER PROGRAMMES				
15.	Battery Operated Vehicles (Nos.)	-	-	-	0.00
16.	Energy Parks (Nos.)	-	6	-	0.071
17.	Integrated Rural Energy Park (Nos.)	-	5	-	0.120

V. Funds Released during the 9th Plan period under various New & Renewable Sources of Energy Programmes

<u>Year</u>	<u>Amount (Rs. in crores)</u>
1997-98	0.040
1998-99	0.134
1999-2000	0.184
2000-2001	8.049
Total	8.407

VI. Status and major issues of the New & Renewable Sources of Energy Programmes

1. Small Hydro Power Programme

Andaman & Nicobar Islands have limited potential for the development of small hydro power projects due to its topography. One SHP project namely Kalpong of 5.25 MW have been recently set up in the Islands. The Kalpong SHP Project is on the Kalpong river in North Andaman and is the first hydro power project in the Andaman & Nicobar Islands.

In addition to this, following potential sites have been identified to develop SHP projects.

S.No	Sites	Estimated Potential
1.	Dhari Kai	400 kW
2.	Karang	270 kW
3.	Panchwati	150 kW
4.	Rangat	225 kW
5.	Vasunchana-II	100 kW

2. Solar Photovoltaic Programme

Under Solar Photovoltaic Demonstration Programme 300 Solar Lanterns, 200 Home Lighting Systems and 20 Street Lighting Systems were sanctioned during 2000-2001. The A&N Islands Administration has not reported any progress. No targets have been allocated under Solar Photovoltaic Demonstration Programme during 2001-02.

3. Solar Photovoltaic Water Pumping, Windmills and small aerogenerators/ hybrid systems

- No study has been undertaken by the Ministry so far for assessing potential of Solar Photovoltaic water pumping systems, water pumping windmills and small aerogenerators/ wind-Solar Photovoltaic hybrid systems in Andaman and Nicobar islands.
- 5 numbers of Solar Photovoltaic water pumping systems and 2 numbers of geared type water pumping windmills have been installed in the islands under the programmes of the Ministry since 1993-94.

- There may be suitable sites in the islands for installation of water pumping systems such as Solar Photovoltaic pumps and water pumping windmills depending on requirement of water and water table. Considering the location, it may be possible to provide electricity in these islands through stand along wind-Photovoltaic hybrid systems of 1 kW - 10 kW capacity at the suitable sites.

4. Biogas Programme

No targets have been fixed for installation of Biogas Plants for the last two years. However, the A&N Islands Administration has been asked to set up Biogas plants as per their requirement according to provision contained in the Ministry of Non-conventional Energy Sources Biogas Scheme.

5. Solar Power Programme

- In March, 1999, the Ministry has sanctioned two grid interactive Solar Photovoltaic Power Projects of 50 kWp each for Neil Island at a total cost of Rs.1.98 crores and Long Island at a total cost of Rs.1.93 crores as diesel savers to Andaman and Nicobar Administration. The Ministry of Non-conventional Energy Sources share is Rs.1.00 crore for each project. The project is under implementation and the work order has been placed by Andaman & Nicobar Administration on Bharat Heavy Electrical Ltd. HEL in October, 2001.
- A&N Administration has submitted a Detailed Project Report for a 100 kWp grid interactive Solar Photovoltaic power project for Havelock Island. The Internal Committee recommended the project to be taken up in two phases of 50 kWp each. The Ministry has requested A&N Administration to provide certain additional information regarding the procurement procedure to be followed by the Administration.

6. Biomass Gasifier Programme

- No specific study has been conducted to assess the potential of biomass in the Andaman & Nicobar Island. The gasifier systems based on coconut shell and saw dust etc. installed so far in the Andaman & Nicobar Island are given below:-

No. of systems	Capacity (in kW)/Mode
17	167 (Power / Energy)

- The biomass based gasifier systems for thermal as well as electrical applications can be a viable option so as to utilize suitably processed available biomass from coconut shell, saw dust and other forest residue / waste etc. in Andaman & Nicobar Island.

7. Wind Power

- Ministry had tried to explore the wind potential in the A&N Islands. 10 wind monitoring stations have been commissioned and operated at various sites in the Islands. The names, longitude /latitude, period of operation alongwith the annual mean wind speed and annual mean wind power density of the sites are given in the Annexure. It was found that the winds in A&N Island is low to moderate. Efforts are being made to develop a wind diesel hybrid system to generate power. It will help in diesel saving, which is otherwise very expensive due to high cost of transportation and storage.
- A team of officers from Ministry of Non-Conventional Energy Sources (MNES) and Centre for Wind Energy Technology (C-WET), visited the Islands during February, 2001 to prepare a work plan for wind power development in A&N Islands. On the basis of recommendations of team, A&N administration is taking up further wind resource assessment at few more sites.

Annexure

LIST OF WIND MONITORING STATIONS WITH M.A.W.S AND M.A.W.P.D. (AS ON 30.04.2001)

SL. NO.	SL. NO	STATION	Type of Instru- ment	Commenced in (month/ year)	Closed (month/ year)	Mast Height (M)	Latitude		Longitude		Elevation (masl)	Annual Mean Wind speed (KMPH)		Annual Mean Wind Power Density W/m2	
							°	'N	°	'E		Measured at 20/25m	Extrapola- ted 30m	Measured at 20/25m	Extrapola- ted 30m
		1. ANDAMAN & NICOBAR ISLANDS													
1	1	BARKATH LINE	SW	03/92	12/93	20	11	39	92	45	52	12.70	13.60	63	78
2	2	CHUCKMACHI	NRG	03/97	10/98	20	08	10	93	10	20	14.41	15.09	66	86
3	3	KEATING POINT	NRG	03/97	05/99	20	09	15	92	48	2	16.08	19.10	114	175
4	4	MINYUK	NRG	03/97	10/98	20	08	15	93	08	20	14.03	15.03	63	77
5	5	PHEONIX BAY	SW	05/92	12/93	20	11	40	92	44	31	13.10	13.80	69	79
6	6	POKKADERO	SW	05/92	12/93	20	12	53	92	54	28	11.80	15.00	63	139
7	7	RAMAKRISHNAGRAM	SW	05/92	12/93	20	13	14	92	57	40	11.40	-	55	-
8	8	SABARI	SW	05/92	12/93	20	12	30	92	53	100	4.25	-	-	-
9	9	SOUTH BAY	NRG	03/97	10/98	20	10	34	92	25	2	13.04	-	107	-
10	10	VIKAS NAGAR	NRG	03/97	05/99	20	08	04	93	32	40	-	-	-	-

MOST IMMEDIATE

27 December, 2001

Dear Dr. Roy,

The Supreme Court of India, in their order dated 23.11.2001, have asked me to prepare a report on the state of the forests and other allied matters for the Andaman and Nicobar Islands. Copy of the relevant order is enclosed.

In this connection, I would be grateful if the NRSA makes available for my use the following:

1. Time scale maps/imagery of the forest cover of the A&N Islands, in as large a scale as available.
2. Any other information regarding forests and environment of the A&N Islands, or about other matters, that might be relevant to the task in hand.

As I hope to finalise my report by the middle of January, I would be grateful if these documents are provided as soon as possible and not later than 7 January, 2002.

With regards,

Yours sincerely,

Shckhar Singh

Dr. P.S.Roy
Director
National remote Sensing Agency
Dehradun

Encl: aa

भारतीय सुदूर सम्येदन संस्थान
Indian Institute of Remote Sensing
(नेशनल रिमोट सेन्सिंग एजेंसी)
(NATIONAL REMOTE SENSING AGENCY)
(अन्तरिक्ष विभाग, भारत सरकार)
(DEPT. OF SPACE, GOVT. OF INDIA)

4, कालीदास मार्ग, पोस्ट बाक्स नं० 135, देहरादून-248 001 (भारत)
4, KALIDAS ROAD, P.B. No. 135, DEHRA DUN-248 001 (INDIA)

दूरभाष / TELEPHONE : (0135)
तार / GRAMS : रिमोटिपी
: REMOTIPI
टेलिक्स / TELEX : 0585-224
फैक्स / FAX : 0135-741987
0135-748041

Dr. P.S. Roy
Dean, IIRS

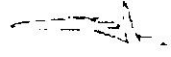
No. IIRS/DBT/2001
Dated : 31st December, 2001

Dear Prof. Singh,

This has reference to your letter dated December, 27th, 2001 requesting for Time scale maps/imagery of the State of Forest Cover of A&N Islands. We have taken up the project on Biodiversity Characterisation in Andaman & Nicobar and only 70% of the work is completed. At this juncture we are not in a position to provide the information as desired. It may take one year to complete the work.

With season greetings & regards,

Sincerely yours


(P.S. Roy)

Prof. Shekhar Singh
Indian Institute of Public Administration
Indraprastha Estate
Ring Road
New Delhi - 110 002

MOST IMMEDIATE

27 December, 2001

Dear Dr. Saxena,

The Supreme Court of India, in their order dated 23.11.2001, have asked me to prepare a report on the state of the forests and other allied matters for the Andaman and Nicobar Islands. Copy of the relevant order is enclosed.

In this connection, I would be grateful if the FSI makes available for my use the following:

1. Time scale maps of the forest cover of the A&N Islands, in as large a scale as available.
2. Any other information regarding forests and environment of the A&N Islands, or about other matters, that might be relevant to the task in hand.

As I hope to finalise my report by the middle of January, I would be grateful if these documents are provided as soon as possible and not later than 7 January, 2001.

With regards,

Yours sincerely,

Shekhar Singh

Dr. Alok Saxena
Jt. Director
Forest Survey of India
Dehradun

Encl: aa

भारतीय वन सर्वेक्षण,
पर्यावरण एवं वन मंत्रालय,
कौलागढ़ रोड, पी०ओ०-आई०पी०ई०
देहरादून-248195

भारत सरकार
Government of India



by letter
Forest Survey of India
Ministry of Environment & Forests
Kaulagarh Road, P.O.-IPE
Dehradun-248195

No. 14-17/99-VM (Vol-I)- ६३

Dated 3 January, 2002
4

To

Shri Shekhar Singh,
Indian Institute of Public Administration,
Indraprastha Estate, Ring Road,
New Delhi-110002

Sub: Supply of maps.

Ref: Your letter dated 27th December, 2001

Sir,

Kindly refer your above cited letter. This is to inform you that Forest Survey of India prepares Forest Cover Maps using Satellite data on 1:250,000 scale which depict forest cover by density classes showing dense forest with crown density 40% and above, open forest with crown density 10% to 40%, scrub below 10% crown density and mangrove vegetation. Forest cover maps on larger scale are not available. FSI is assessing the forest cover of the country since 1987 on a two-year cycle. We are sending herewith forest cover maps and related information from 1993 assessment onwards.

Information prior to 1993 assessment is also available with FSI (from 1987 onwards). However due to changes in the scale of data, geographic area corrections and technology improvement the period of time, comprising forest cover assessments prior to 1993 assessments may not be useful in giving actual changes in the forest cover. Therefore, forest cover maps based on 1993, 1995, 1997 and 1999 assessment are enclosed for the needful. A copy of State of Forest Report- 1999 and a brief report on forest cover assessment is also being sent herewith for ready reference.

Encl: 36 maps.

1 State of Forest Report-1999.
1 brief note.

Yours faithfully,

Alok Saxena

(Alok Saxena)
Joint Director (NFDMC)

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भारतीय वन सर्वेक्षण,
पर्यावरण एवं वन मंत्रालय,
कौलागढ़ रोड, पी०ओ०-आई०पी०ई०
देहरादून-248195



Forest Survey of India
Ministry of Environment & Forests
Kaulagarh Road, P.O.-IPE
Dehradun-248195

FOREST COVER ASSESSMENT

Forest Survey of India assess forest cover of the country on a two year cycle based on interpretation of satellite data. First assessment of forest cover of Andaman and Nicobar Islands was made in 1987 by visual interpretation of Landsat MSS satellite data on 1:1 million scale having 80 meter resolution. Subsequently three assessments are done in 1989, 1991 and 1993 by visual interpretation of Landsat TM satellite data on 1:250,000 scale having 30 meter resolution. Thereafter fifth and sixth assessments were made in 1995 and 1997 using IRS-1B LISS-II data on 1:250,000 scale having resolution 36.25 meters. The seventh assessment was made in 1999 using IRS-1B, 1C & 1D data on 1:250,000 scale. The resolution of IRS-1B (LISS-II) sensor is 36.25 meters and IRS-1C & 1D (LISS-III) is 23.5 meter

The forest cover assessment of the last four cycles (i.e. from 1993 onwards) is given in annexure-I.

Actual Forest Cover by Density Classes and Mangrove vegetation

Density class	Area in sq.km.			
	Data period Jan. & Feb. '91	Data period Jan., March, Nov. & Dec. '93	Data period Dec. '94	Data period March '97, Jan.-March '98
	1993 assessment	1995 assessment	1997 assessment	1999 assessment
Dense forest (Crown density above 40%)	6567	6524	6520	6515
Open forest (crown density 10-40%)	91	125	127	125
Mangrove	966	966	966	966
Total	7624	7615	7613	7606

Change in forest cover with respect to previous assessment

	Area in sq.km.		
	1993-95	1995-97	1997-99
Denser forest	-43	-4	-5
Open forest	+34	+2	-2
Mangrove	-	-	-
Total	-9	-2	-7

The above table reveals that there has been a net decrease of 18 sq.km. in the forest cover of Andaman and Nicobar Islands during the period from 1991 to 1998. The changes are observed mainly in Survey of India topo sheet No. 86 C & G, 86D, H and 87B.

27 December, 2001

Dear Shri Patnaik,

Thank you for the data on NTFPs, which I received today. I am enclosing a list of some additional information that I need in order to write the final report. I would be grateful if this information is sent to me no later than 7 January, 2002, so as to allow me to study it before I come to Port Blair.

I am truly sorry for the trouble I am giving you, but I need to make sure that the data given to the Supreme Court, through my report, are comprehensive, up to date and authentic. I believe most of this information is already available with you and with other departments and, therefore, it might not be difficult to send it across to me.

With regards,

Yours sincerely,

Shekhar Singh

Shri S.S. Patnaik
Principal Chief Conservator of Forests
Andaman and Nicobar Islands
Van Sadan
Port Blair

Encl: aa

MOST IMMEDIATE

27 December, 2001

Dear Shri Thomas,

The Supreme Court of India, in their order dated 23.11.2001, have asked me to prepare a report on the state of the forests and other allied matters for the Andaman and Nicobar Islands. Copy of the relevant order is enclosed.

In this connection, I would be grateful if the Island Development Authority (IDA) secretariat, at the Planning Commission, make available for my use the following documents:

1. Agenda and minutes of the various IDA meetings held to date.
2. Agenda and minutes of any other committee meetings (including IDA steering committee, tribal welfare committee, etc.) that deal with forests and environment, including both terrestrial and marine environment.
3. Any other documents, reports or data regarding forests and environment.
4. Details of subsidies being provided for transportation and any other aspect for or to the A&N Islands.
5. Any other documents relevant to the issues being dealt with.

As I hope to finalise my report by the middle of January, I would be grateful if these documents are provided as soon as possible and not later than 7 January, 2002.

In case the IDA secretariat would like to express any views on the matter being looked at, a written submission may kindly be sent by the same date.

With regards,

Yours sincerely,

Shekhar Singh

Shri P.S.S. Thomas
Advisor
Planning Commission
Yojna Bhawan
New delhi 110 001

Encl: aa



योजना आयोग
योजना भवन
नई दिल्ली-११०००१
PLANNING COMMISSION
YOJANA BHAVAN
NEW DELHI-110001

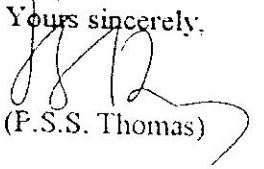
P.S.S. Thomas
Adviser (HUD)
Telfax No.3718031

New Delhi, the 28th Dec., 2001

Dear Prof. Shekhar Singh,

Please refer to your letter dated 27th December, 2001 addressed to me, regarding preparation of report on the state of forests and other allied matters for the Andaman and Nicobar Islands - IDA. The subject matter is being dealt with by Shri P.K. Mohanty, Pr. Adviser in the Planning Commission. Accordingly, your letter has been forwarded to him for necessary action at their end.

With regards,

Yours sincerely,

(P.S.S. Thomas)

Prof. Shekhar Singh
Indian Institute of Public Administration
Indraprastha Estate, Ring Road
New Delhi-110002
FAX No. 3319954

Copy to Shri P.K. Mohanty, Pr. Adviser, alongwith fax letter received from Prof. Shekhar Singh.

MOST IMMEDIATE

28 December, 2001

Dear Shri Jaya Krishnan,

Further to my letter of 26 December, 2001, regarding the report to the Supreme Court on the Andaman and Nicobar Islands, I would be grateful if the Ministry also sends me a copy each of the proposal and, where applicable, the clearance letter of any clearances given for the Islands under the EP Act or the FC Act, in 2001, and also any request for clearances pending with your Ministry.

I would be grateful if this information is sent so as to reach me no later than 7 January, 2002.

Also, if your Ministry or any of its organisations has any report or information pertinent to the matter in hand, I would be grateful if this is supplied to me no later than 11 January, 2002.

With regards,

Yours sincerely,

Shekhar Singh

Shri P.V. Jaya Krishnan, IAS
Secretary
Ministry of Environment and Forests
Government of India
New Delhi



BY HAND
OUT TODAY

तार :

Telegram : PARYAVARAN,
NEW DELHI

दूरभाष :

Telephone : 4362875

E-Mail Address :

A.R.Chadha,
Deputy Inspector General of Forests

भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स
PARYAVARAN BHAVAN, C.G.O. COMPLEX
लोदी रोड, नई दिल्ली-110003
LODHI ROAD, NEW DELHI-110003

DO No 13-19/2001-SU

Dated 21st Jan, 2002

Dear Shri *Shekhar Singh,*

With reference to your letters dated 26.12.2001, 28.12.2001 & 15.1.2001, I am directed to enclose herewith the desired information alongwith the copies of proposals and clearances given under EPA and F (C) Act. In case of clearances under Forest (Conservation) Act involving area more than 20 ha, copies of the proposals are also enclosed herewith. As the proposals involving less than 20 ha. are dealt at Regional Office of Ministry of Environment and Forests at Bhubneswar, the copies of clearances given by Regional Office are enclosed. As the said proposals are in Regional Office at Bhubneswar, the copies of the said proposals can be called from Regional Office, Bhubneswar, if required. As per records presently only one proposal (Kamta Pilpilo Road) is pending in the Ministry under Forest (Conservation) Act, 1980 for want of CRZ clearance.

2. I am also directed to say that Andaman & Nicobar Forest & Plantation Development Corporation Ltd as well as local administration have submitted detailed Memoranda to you. We may kindly be informed, if any specific clarification is required by you in the matter.

With regards,

Encl./ As above

Yours sincerely,

(Signature)
(A.R.Chadha)

Shri. Shekhar Singh,
Indian Institute of Public Administration,
Indraprastha Estate,
Ring Road,
New Delhi-110 002.

Government of India
Ministry of Environment & Forests
F.C. Division

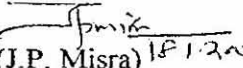
SUB: PROJECTS RELATING TO FORESTRY CLEARANCE IN
ANDAMANS & NICOBAR ISLANDS GIVEN DURING 2001.

Reference letter dated 28.12.2001 from Sh. Shekhar Singh, IIPA on the above subject. Six (6) proposals, involving forest land more than 20 ha. have been accorded clearance under Forest (conservation) Act, 1980 during 2001 which are as under:-

- i. Diversion of 95.00 ha. of forest land for construction of Prem-Bahadur Nallah Minor Irrigation Scheme in Great Nicobar.
- ii. Diversion of 45.00 ha. of mangrove forest land for developing a fresh water lake at Flat Bay in South Andaman.
- iii. Diversion of 43.40 ha. of forest land for construction of Swaroop Nallah Minor Irrigation Scheme in Great Nicobar.
- iv. Diversion of 32.50 ha. of forest land for construction of Korang Nallah Minor Irrigation Scheme in Middle Andaman.
- v. Diversion of 22.20 ha. of forest land for developing an eco-friendly tourist village at Mark Bay in North Passage Island.
- vi. Clearance of naturally growing trees over 37.12 ha. in funnel areas forming approach to the Air Force Runway in Car Nicobar.

A photocopy of each proposal and their approval letters are placed below.

2. Proposals involving diversion of forest land upto 20 ha. are processed by Regional Office, Bhubaneswar. During 2001, eleven (11) proposals have been approved and copies of the approval letters are placed below. The original proposals are not immediately available as they are kept at Bhubaneswar. If Prof. Singh requires any particular proposal, we may retrieve from Bhubaneswar, which is likely to take some time.
3. As per records available, no proposal from A & N Islands received during 2001 is pending for disposal.
4. However, a proposal for diversion of 69.68 ha. of forest land for construction of road at Kamorta-Pipillow and link roads connecting Daring & Kakana in Kamorta Island of Andaman & Nicobar Islands submitted by the Andaman & Nicobar Administration during 1999 is pending since the user agency need to obtain CRZ clearance. A photocopy of the proposal is placed below.


(J.P. Misra) 18.1.2002
A.I.G.(FC)

DIG(SU)

Sub: Information with regard to environmental clearance to the developmental projects of Andaman & Nicobar Islands - regarding

FR is a communication from the Prof. Shekar Singh, IIPA, New Delhi received through Shri A. R. Chadha (SU), DIG, with regard to the above mentioned information. Shri Chadha informed that the information is required to be sent to Prof. Shekar as desired by Secretary (E&F), who has been appointed as a Commissioner of Inquiry as per the orders of Supreme Court in a court case.

Prof. Shekar have requested for copies of the proposals received, the environmental clearances issued and information on the pending projects of the Andaman & Nicobar Islands.

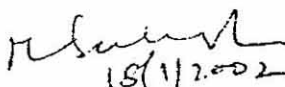
During the year 2001, four proposals have been received for environmental clearance. Clearances have been accorded for two proposals and additional information was sought in respect of the remaining two proposals. The following documents are placed below:-

- i) Copies of the four project proposals received.
- ii) Copies of the environmental clearances issued for two projects.
- iii) Present status of the two pending proposals.


We may obtain approval of SS (RP) before sending the above information / documents to Shri Chadha, who is coordinating the compilation of the information in the Ministry for onward transmission to Prof. Shekar of IIPA.

Submitted for consideration and approval please.

129/AD(415)
12/1/02


15/1/2002
(M. Subba Rao)
Additional Director (S)

Director (Dr. S. K. Aggarwal)


18/1/2002
18/1

SS (RP)

Dir (Dr. S. K. Aggarwal)

A.R.
Chadha
(SU)

The requisite information is sent herewith for your taking further necessary action. 18/1/2002

7

List of Projects from Andaman & Nicobar Islands cleared during 2001

S.No.	Name of the Project(s)	Date of clearance
1.	Additional scheme of power evacuation for 20 MW power station at Bambooflat, A&N Islands by Electricity Department, A& N Administration.	22.08.2001 (copy enclosed)
2.	Construction of berths no. 3& 4 at Haddo Wharf by Andaman & Lakshdweep Harbour Works(ALHW)	04.10.2001 (copy enclosed)

201

List of Projects from Andaman & Nicobar Islands pending as on 15th January, 2002

S.No	Name of the Project(s)	Date of Receipt	Status
1.	Extension of Deep Water wharf at Hut Bay in Little Andaman by Andaman Lakshadweep Harbour Works (ALHW)	05.12.2001	Additional information/ clarifications sought on 14.1.2002 regarding oil spill management plan, EIA, EMP, sewage treatment etc .
2.	Construction of Deep water wharf at Campbell Bay by Andaman Lakshadweep Harbour Works (ALHW)	05.12.2001	Additional information / clarifications sought on 15.1.2002 regarding oil spill management plan, EIA, EMP, sewage treatment, dredging and disposal of dredged material etc.

31 December, 2001

Dear Shri Vittal,

The Supreme Court of India, in their order dated 23.11.2001, have asked me to prepare a report on the state of the forests and other allied matters for the Andaman and Nicobar Islands. Copy of the relevant order is enclosed.

While on a recent visit to the Andamans I was given a copy of a letter written to you on 11 March, 2000, by the Member of Parliament, regarding alleged irregularities in the shipment of timber to the mainland. A copy of the letter is enclosed for ready reference.

I would be grateful if you could share with me the status of this complaint and any other details possible. As the report has to be finalised soon, I would be grateful if this information is sent to me preferably by 7 January, 2002.

With regards and best wishes for a prosperous and happy new year,

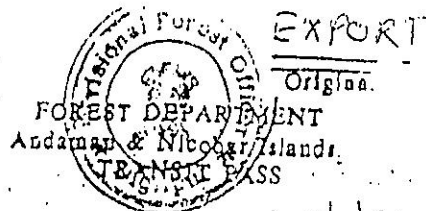
Yours sincerely,

Shekhar Singh

Shri N. Vittal
Chief Vigilance Commissioner
Central Vigilance Commission
Satarkata Bhawan
GPO Complex
Block A, INA
New Delhi 110023

Encl: aa

Nº 112750



FOREST DEPARTMENT
Andaman & Nicobar Islands
TRANSPORT PASS

EXPORT

Original

D/Pur

DIVISION

A/Bay

REVENUE STATION

Date 19/2/2000

1. Name & Residence of Pass Holder M/S. Raj Kumar
2. No & Date of permit of certificate or order Said m/s. P/B lot, D/Pur

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)

Vide D.F.O's No. D/T/69/555
dated 10th February 2000
Round logs

1) Curjan - 155 logs - 203.433 m³

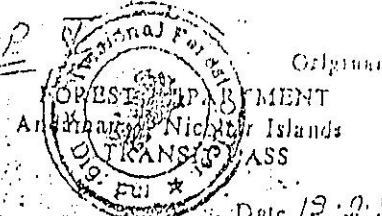
RKS

1.00

9. Locality whence collected A/Bay, Diglipur to Chennai
10. Place from where to be transported Diglipur to Chennai
1. Destination Chennai
2. Route of transport By ship S.M.L. Saverker
3. Date of issue 19/2/2000
4. Date of expiry 5/3/2000

Signature & Designation of Issuing Officer
Range or Revenue Station
Diglipur

Nº 112749



FOREST DEPARTMENT
Andaman & Nicobar Islands
TRANSPORT PASS

Original

EXP

D/Pur

DIVISION

A/Bay

REVENUE STATION

Date 19.2.2000

1. Name & Residence of Pass Holder M/S. Raj Kumar
2. No & Date of permit of certificate or order m/s. P/B lot, D/Pur

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)

Vide D.F.O's No. D/T-69/554
dated 11 Feb 2000

1) Badam 19 logs 15.873 cm

2) Red Dhup 6 logs 6.772

3) J. Acum 2 logs 2.264

27 L 24.909 cm

1.00

9. Locality whence collected Acum Bay, Diglipur
10. Place from where to be transported Diglipur to Chennai
1. Destination Chennai
2. Route of transport By ship S.M.L. Saverker
3. Date of issue 19-2-2000
4. Date of expiry 05-3-2000

Signature & Designation of Issuing Officer
Range or Revenue Station
Diglipur

Chief Vigilance Commissioner Takes Up The Case Of Mr. Sajwan

Staff Reporter : New Delhi - It is reported that the chief vigilance commissioner of India Mr N Vittal has taken up the matter of Mr. B.S. Sajwan Managing Director of the forest corporation in regard to export of round logs to Chennai which banned. It is further reported that two fake transit passes have been recovered from the forest corporation office and filed with the chief vigilance commission. It may be recalled that in our issue of 24th February 2000 we have reported the sale of round logs in contravention of the bone. It was reported that the permission for this illegal transportation was obtained from the Lt. Governor and kept in file by Mr. Sajwan. Later the permission was utilised by Mr. Sajwan according to his convenience. No tender was called on all India basis in order to favour a particular firm.

EXPORT
Original
FOREST DEPARTMENT
Andaman & Nicobar Islands
TRANSIT PASS
No 112750

Date 19/2/2000
D/Pur DIVISION A/Bay REVENUE STATION
1. Name & Residence of Pass Holder M/S Raj Kumar
2. No & Date of permit of certificate or order 19/2/2000

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)

Vide D.F.O's No. D/T/69/555
dated 10th February 2000
Round logs

Curjan - 155 logs - 203.433

RKS

7 Locality whence collected A/Bay Disapur
8 Place from where to be transported Disapur
9 Destination Chennai
10 Route of transport By Ship S.M. Sakor Kor
11 Date of issue 19/2/2000
12 Date of expiry 6/3/2000

Signature & Designation of Issuing Officer
Range or Revenue Station
District

EXPORT
Original
FOREST DEPARTMENT
Andaman & Nicobar Islands
TRANSIT PASS
No 112749

Date 19.2.2000
D/Pur DIVISION A/Bay REVENUE STATION
1. Name & Residence of Pass Holder M/S Raj Kumar
2. No & Date of permit of certificate or order 19/2/2000

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)

Vide D.F.O's No. D/T-69/554
dated 11 Feb 2000

1) Badam 19 Logs 15.873

2) Red Dhur 6 Logs 6.772

3) J Am 2 Logs 2.264

27-1-24.900
cm

9 Locality whence collected A/Bay Disapur
10 Place from where to be transported Disapur
11 Destination Chennai
12 Route of transport By Ship S.M. Sakor Kor
13 Date of issue 19-2-2000
14 Date of expiry 06-3-2000

Signature & Designation of Issuing Officer
Range or Revenue Station
District

Chief Vigilance Commissioner Takes Up The Case Of Mr. Sajwan

Staff Reporter : New Delhi - It is reported that the chief vigilance commissioner of India Mr N Vittal has taken up the matter of Mr. B.S. Sajwan Managing Director of the forest corporation in regard to export of round logs to Chennai which banned. It is further reported that two fake transit passes have been recovered from the forest corporation office and filed with the chief vigilance commission. It may be recalled that in out issue of 24th February 2000 we have reported the sale of round logs in contravention of the bone. It was reported that the permission for this illegal transportation was obtained from the Lt. Governor and kept in file by Mr. Sajwan. Later the permission was utilised by Mr. Sajwan according to his convenience. No tender was called on all India basis in order to favour a particular firm.

Annexure F
Bishnu Pada Ray
MEMBER OF PARLIAMENT
(LOK SABHA)



Camp. : ANDAMAN HOUSE
12, Chanakya Puri, New Delhi - 21
Ph. 4102017, 6876120, 6871443

P.O. PORT BLAIR
ANDAMAN, PIN-744 101
Tele. : 03192-31004 (O)
03192-33275, 36835 (R)
11th March 2000

Dear Mr. Vittal,

Export of timber in the form of round logs from the A & N Islands is normally banned. However, in special cases, the Administrator has the power to grant an export permit.

Recently, the IB at Port Blair found a ship MV Savarkar carrying round logs bound for Chennai from Diglipur in North Andaman. The Principal Chief Conservator of Forest's office had no knowledge of this. They subsequently found out that Mr. B.S. Sajwan, the Managing Director of A & N Forest & Plantation Development Corporation had personally carried a file and got it signed by the Principal Chief Conservator of Forests and the Lt. Governor, thereby keeping the Forest Office in ignorance. The matter was reported in a local paper also a copy is enclosed for your kind information.

The consignment was being carried under four Transit Passes issued by the Range Officer, Diglipur. Curiously, while two Transit Passes are machine numbered, two others do not bear any number at all - (copies of the Transit Passes are enclosed).

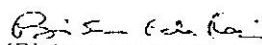
I understand that at least three more shiploads of timber had gone to Chennai before this and one more after.

This IB had apparently informed the Chief Vigilance Officer of this matter and suggested a vigilance probe. But the CVO told them that the export had been permitted by the Administration.

I do think that the CVC should take a look into the affair.

With regards,

Yours sincerely,


(Bishnu Pada Ray)

FOREST DEPARTMENT

Andaman & Nicobar Islands

ORIGINAL

No.

Transit Pass

Date 19/2/2000

Digpur

DIVISION A/Roy

REVENUE STATION

- Name & Residence of Pass Holder m/s. Masan Cottage
- No. & Date of permit or certificate or order m/s. Masan Cottage

Kind of Forest Produce	No. of pieces, packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount paid
(3)	(4)	(5)	(6)	(7)	(8)
Vide D.F.O's No. D/T/68/565 dated 11.2.2000					
Round log 20 ft. 20 ft.					
1) Curjan - 299	-	343	737	cbm	
2) B/chuglan - 13	-	10	636	"	
3) T/peug - 6	-	8	472	"	
4) Pyinma - 1	-	0	901	"	
5) Teyum - 2	-	1	964	"	
321 logs				365.710 cbm	
(Amp)					

- Locality whence collected A/Roy
- Place from where to be transported Digpur to Chennai
- Destination Chennai
- Route of transport by ship Smt. Sorekhar
- Date of issue 19/2/2000
- Date of expiry 6/3/2000

Signature & Designation of Issuing Officer
Range or Revenue Officer
Digpur

Andaman & Nicobar Islands

Transit Pass

No.

Date 17/2/2000

Digpur

DIVISION A/Roy

REVENUE STATION

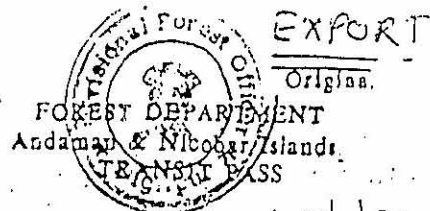
- Name & Residence of Pass Holder m/s. Masan Cottage
- No. & Date of permit or certificate or order m/s. Masan Cottage

Kind of Forest Produce	No. of pieces, packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount paid
(3)	(4)	(5)	(6)	(7)	(8)
Vide D.F.O's No. D/T/49/586 dated 11.2.2000					
Round log 20 ft. 20 ft.					
1) Pyinma - 125.60	Rmt.	183	16	119	
2) Teyum - 113.00	"	28	-	5.585	
3) B/chuglan - 215.80	"	44	-	0.917	
4) T/peug - 45.40	"	10	-	0.5-10	
1099.80				272	
(STE)					

- Locality whence collected Somman Sow mlu. A/Roy
- Place from where to be transported Digpur to Chennai
- Destination Chennai
- Route of transport By ship Smt. Sorekhar
- Date of issue 19/2/2000
- Date of expiry 6/3/2000

Signature & Designation of Issuing Officer
Range or Revenue Officer
Digpur

No. 112750



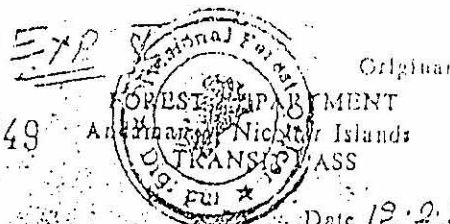
Date 19/2/2000
 D/Pur DIVISION A/Bay REVENUE STATION
 1. Name & Residence of Pass Holder M/S. Raj Kumar
 2. No. & Date of permit of certificate or order 155 logs, 203.433 m³

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)
Vide D.F.O's No. D/T/69/555 dated 10 th February 2000					
Round logs					
Gurjan - 155 logs - 203.433 m ³					
(RKS)					
1.00					

- Locality whence collected A/Bay Dislipur
- Place from where to be transported Dislipur
- Destination Chennai
- Route of transport By ship S.M.L. Sakor Kar
- Date of issue 19/2/2000
- Date of expiry 6/3/2000

Signature & Designation of Issued Officer
 Range or Revenue Station
 Dislipur

No. 112749



Date 19.2.2000
 D/Pur DIVISION A/Bay REVENUE STATION
 1. Name & Residence of Pass Holder M/S. Raj Kumar
 2. No. & Date of permit of certificate or order 155 logs, 203.433 m³

Kind of Forest Produce	No. of pieces packages or bundles	Measurements Cubic content or weight	Marks Hammer or other	Rate	Amount
(3)	(4)	(5)	(6)	(7)	(8)
Vide D.F.O's No. D/T-69/554 dated 11 Feb 2000					
1) Badam	19 Logs	15.873 m ³			
2) Red Dhup	6 Logs	6.772 m ³			
3) J. Acorn	2 Logs	2.264 m ³			
(KS)				2745	24.909
				cm	
1.00					

- Locality whence collected A/Bay Dislipur
- Place from where to be transported Dislipur
- Destination Chennai
- Route of transport By ship S.M.L. Sakor Kar
- Date of issue 19-2-2000
- Date of expiry 06-3-2000

Signature & Designation of Issued Officer
 Range or Revenue Station
 Dislipur

Chief Vigilance Commissioner Takes Up The Case Of Mr. Sajwan

Staff Reporter : New Delhi - It is reported that the chief vigilance commissioner of India Mr N Vittal has taken up the matter of Mr. B.S. Sajwan Managing Director of the forest corporation in regard to export of round logs to Chennai which banned. It is further reported that two fake transit passes have been recovered from the forest corporation office and filed with the chief vigilance commission. It may be recalled that in our issue of 24th February 2000 we have reported the sale of round logs in contravention of the bone. It was reported that the permission for this illegal transportation was obtained from the Lt. Governor and kept in file by Mr. Sajwan. Later the permission was utilised by Mr. Sajwan according to his convenience. No tender was called on all India basis in order to favour a particular firm.

CONFIDENTIAL
MOST IMMEDIATE
OUT TODAY

Inder Singh
Dy. Secretary
Tel. No. 4618499

DO No. 000/04/UTS/006
Government of India
Central Vigilance Commission
Satarkata Bhawan,
Block-A, GPO Complex,
INA, New Delhi - 110023.

10 JAN 2002

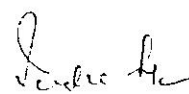
Dear Shri Singh,

Please refer to your DO letter No. Nil dated 31.12.2001 addressed to Shri N. Vittal, Central Vigilance Commissioner asking for the action taken by the Commission on the complaint made by Hon'ble MP Shri Vishnu Pada Ray regarding alleged irregularities in the shipment of timber to the mainland, Andaman & Nicobar Admn.

2. It is intimated that the Commission had already closed the allegations made in the complaint of the Hon'ble MP, as the same were found to be baseless according to the Andaman & Nicobar Admn. This is for your kind information.

With regards,

Yours sincerely


(INDER SINGH)

Prof. Shekhar Singh,
India Institute of Public Admn.,
IP Estate, Ring Road,
New Delhi.

MOST IMMEDIATE

15 January, 2002

Dear Shri Mohanty,

Kindly refer to my letter of 27 December which was forwarded to you by Shri PSS Thomas, Advisor., copy enclosed for ready reference. Therein, I had requested certain documents and data from the IDA, in connection with the report I have to submit to the Supreme Court about forests and other allied matters in the Andaman and Nicobar Islands.

I had requested for:

1. Agenda and minutes of the various IDA meetings held to date.
2. Agenda and minutes of any other committee meetings (including IDA steering committee, tribal welfare committee, etc.) that deal with forests and environment, including both terrestrial and marine environment.
3. Any other documents, reports or data regarding forests and environment.
4. Details of subsidies being provided for transportation and any other aspect for or to the A&N Islands.
5. Any other documents relevant to the issues being dealt with

From these, only the minutes of various IDA and Steering Committee meetings have so far been received. I would be grateful if the remaining documents required, especially the agenda papers of these various meetings and the agenda and minutes of the committee set up to look at tribal issues, are sent to me at the earliest, or I be informed by when they would be available, so that I can inform the Supreme Court accordingly. I would also be grateful for the early receipt of the other information asked for.

With regards,

Yours sincerely,

Shekhar Singh

Shri P.K.Mohanty
Principal Advisor
Planning Commission
Yojna Bhawan
New Delhi 110 001

Encl: aa

MOST IMMEDIATE

15 January, 2002

Dear Shri Jaya Krishnan,

Kindly refer to my letter of 28 December, copy enclosed for ready reference, seeking certain information and data from your Ministry in connection with the report I have to submit to the Supreme Court about forests and other allied matters in the Andaman and Nicobar Islands.

I had requested for some of the data by 7 January and the remaining by 11 January, 2002, in order to ensure that the report is submitted in time to the Supreme Court. However, none of the required information has yet been received.

I would, therefore, be grateful if the required information is sent to me at the earliest or I be informed by when it would be available, so that I can inform the Supreme Court accordingly.

With regards,

Yours sincerely,

Shekhar Singh

Shri P.V. Jaya Krishnan, IAS
Secretary
Ministry of Environment and Forests
Government of India
New Delhi

Encl: aa

MOST IMMEDIATE

15 January, 2002

Dear Dr. Roy,

Kindly refer to my letter of 28 December, copy enclosed for ready reference, seeking certain information and data from your agency in connection with the report I have to submit to the Supreme Court about forests and other allied matters in the Andaman and Nicobar Islands.

I had requested for some of the data by 7 January and the remaining by 11 January, 2002, in order to ensure that the report is submitted in time to the Supreme Court. However, none of the required information has yet been received.

I would, therefore, be grateful if the required information is sent to me at the earliest or I be informed by when it would be available, so that I can inform the Supreme Court accordingly.

With regards,

Yours sincerely,

Shekhar Singh

Dr. PS Roy
Director
IIRS, National Remote Sensing Agency
Dehradun

FAX: 0135-741987

Encl: aa



भारतीय लोक प्रशासन संस्थान

इन्द्रप्रस्थ एस्टेट, रिंग रोड, नई दिल्ली-110002 दूरभाष : 331-7309

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MOST IMMEDIATE

15 January, 2002

Dear Shri Mohanty,

Kindly refer to my letter of 27 December which was forwarded to you by Shri PSS Thomas, Advisor., copy enclosed for ready reference. Therein, I had requested certain documents and data from the IDA, in connection with the report I have to submit to the Supreme Court about forests and other allied matters in the Andaman and Nicobar Islands.

I had requested for:

1. Agenda and minutes of the various IDA meetings held to date.
2. Agenda and minutes of any other committee meetings (including IDA steering committee, tribal welfare committee, etc.) that deal with forests and environment, including both terrestrial and marine environment.
3. Any other documents, reports or data regarding forests and environment.
4. Details of subsidies being provided for transportation and any other aspect for or to the A&N Islands.
5. Any other documents relevant to the issues being dealt with

From these, only the minutes of various IDA and Steering Committee meetings have so far been received. I would be grateful if the remaining documents required, especially the agenda papers of these various meetings and the agenda and minutes of the committee set up to look at tribal issues, are sent to me at the earliest, or I be informed by when they would be available, so that I can inform the Supreme Court accordingly. I would also be grateful for the early receipt of the other information asked for.

With regards,

Yours sincerely,

Shekhar Singh

Recd.
8/1/02
Shri P.K. Mohanty
Principal Advisor
Planning Commission
Yojna Bhawan
New Delhi 110 001

Encl: aa

MOST IMMEDIATE

23 January, 2002

Dear Shri Jaya Krishnan,

Kindly refer to my letter of 15 January, 2002, seeking certain information and data from your Ministry in connection with the report I have to submit to the Supreme Court about forests and other allied matters in the Andaman and Nicobar Islands.

I have, since, received copies of various clearances sought and given under the FC Act and the EP Act.

While perusing the documents sent, I notice that no documents pertaining to clearance sought or given for the extraction of sand, under CRZ of the EP Act, are included. I would, therefore, be grateful, if you could confirm to me that no such clearance was sought or given for the Andaman and Nicobar Islands during 2001 or 2002. I ask this because, in the notification of 4 August, 2000, regarding the CRZ, your ministry has specified that:

“Provided that in the Union Territory of the Andaman and Nicobar islands, mining of sands may be permitted by the Committee which shall be constituted by the Lieutenant Governor of the Andaman and Nicobar Islands consisting of Chief Secretary; Secretary, Department of Environment; Secretary, Department of Water Resources; and Secretary, Public Works Department. Committee may permit mining of sand from non-degraded areas for construction purposes from selected sites, in a regulated manner on a case to case basis, for a period upto the **30th September, 2000**. The quantity of sand mined shall not exceed the essential requirements for completion of construction works including dwelling units, shops in respect of current year and 2000-2001 annual plans. The permission for mining of sand may be given on the basis of a mining plan from such sites and in such quantity which shall not have adverse impacts on the environment.”

This clearance was only till 30 September, 2000. However, reports given to me in Port Blair suggest that the mining of sand has officially continued even after that. I would, therefore, be grateful if the correct position is intimated to me as soon as possible along with the relevant documents.

Contd....2

As I hope to finish my report by the end of this week, I would be grateful if the relevant documents are sent to me in the next day or two. If this is, for some reason, not possible, could you please let me know by when the documents would be available so that I can accordingly inform the Supreme Court.

With regards,

Yours sincerely,



Shekhar Singh

Shri P.V. Jaya Krishnan, IAS
Secretary
Ministry of Environment and Forests
Government of India
New Delhi

OTHER DOCUMENTS

[*Reprint From:* Journal, Bombay Nat. Hist. Society, Vol. 93 (3) December 1996]

CONSERVATION PRIORITIES FOR THE ANDAMAN
ISLANDS

By Priya Davidar

CONSERVATION PRIORITIES FOR THE ANDAMAN ISLANDS

PRIYA DAVIDAR¹

A survey was conducted in the Andaman Islands to look at the distributional patterns of forest birds and butterflies. These two taxa were used as indicators to see what type of reserves would best conserve the biodiversity. This study showed that forests on large islands and undisturbed evergreen forests are important reservoirs of biodiversity in the Andaman islands.

INTRODUCTION

The Andaman and Nicobar chain of islands lying in the Bay of Bengal between 6° 45' N and 13° 41' N latitude have a rich and varied biota, both terrestrial and marine. These unique ecosystems are under increasing pressure from human activities (see Saldanha 1989, Whitaker 1985), and unless protected, will be decimated rapidly. More than a hundred protected areas, namely Sanctuaries and National Parks have been earmarked in the Andaman and Nicobar islands (Pande *et al.* 1991). Although this sounds impressive, their importance for the conservation of biodiversity needs to be examined (Davidar *et al.* 1995).

In order to see where and what type of reserves are needed to protect the terrestrial biota, a rapid assessment was conducted in the Andaman group of islands using two taxa, forest birds and butterflies. Forty seven species of forest birds were selected using Ali and Ripley (1987) and from field observations. These were surveyed on 45 islands and butterflies on 25 islands. This was not meant to be precise or exhaustive, but to give a quick and approximate estimate of species and their distributional patterns. Most of the results of this study have been published or are under publication (Davidar *et al.* 1995, Davidar *et al.* in press, Devy *et al.* in press). In addition to this, general information gleaned from many field trips gave a good grasp of what should be the focus of conservation efforts.

STUDY SITE

The Andaman chain of islands, about 6000 km²

in area, are considered to be a continuation of the Arakan Yoma chain of Myanmar. It is separated from the Nicobar group of islands by the 10 degree channel. These islands are considered to be truly oceanic as they were never completely separated from the continent during the Pleistocene glaciation (Ripley and Bechler 1989). Most of the land mass is made up of large continuous islands such as North, Middle, Baratang, South and Rutland islands. The Little Andamans, another large island lies about 67 km south. This large island mass is surrounded by smaller islands and archipelagos. Human colonisation of the Andamans has been limited by water. The climate is tropical and oceanic with rainfall from both the SW and NE monsoon winds. There is a climatic gradient from the North to the Little Andamans with the north having a drier and more seasonal climate. Thus the North Andamans have predominantly drier forests whereas the South Andamans have more evergreen forests, (Davidar *et al.* 1995).

METHODS

The surveys were carried out in the dry seasons of 1992, 1993 and 1994. A total of 45 islands were surveyed for forest birds and 25 for butterflies. The survey covered the North Andaman islands and islands surrounding it, Baratang Island, Ritchie's archipelago and other islands off the Middle Andamans. The South Andamans and Labrinthy archipelago, Rutland and the Little Andaman Island. Different sites and vegetation types were selected on the large islands whereas the smaller islands were completely surveyed. Transects were selected in a site on an island. The vegetation types were noted. Forest birds seen or heard along the transect were

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recorded between 0700 h and 1000 h. Transects were walked separately for butterflies and species seen 5 m on either side of the transect were recorded. For more detailed methodology see Davidar *et al.* 1995. The sampling was repeated in each site for several days until no new species were recorded.

RESULTS AND DISCUSSION

Importance of Forests on large islands: This survey clearly showed that forests on large islands are very important in the conservation of biodiversity. All the 47 species of forest birds and 57 species of butterflies (out of a total of 65 species recorded in this survey) were recorded on islands larger than 30 km² in area. Islands smaller than 1 km² had records of 36 species of forest birds and 39 species of butterflies. On islands less than 0.1 km² in area, only 20 species of forest birds and 21 species of butterflies were recorded.

Of the forest birds recorded, *Coracina striata*, *Chrysococcyx xanthorhynchus*, *Oriolus xanthornus* and *Terpsiphone paradisi* were not recorded on islands smaller than 30 km² (Davidar *et al.* 1995). This non random distribution of forest birds suggests that small islands, however numerous, are not equivalent to large islands for the conservation of biodiversity.

However, 58 of the reserves in the protected area network are smaller than 1 km² and of these 13 are less than 0.1 km² in area (Pande *et al.* 1991). Only 4 of the reserves are larger than 30 km². As forests on large islands are not adequately represented in the current protected area network, it is important that remaining patches of primary forests on large islands are protected on a priority basis. These patches should be large enough to include the vegetational and habitat diversity and adequate numbers of the rarer species.

Importance of wet evergreen forests: The study shows that many of the butterfly species recorded, for which adequate data exists, were recorded only in evergreen forests (Devy *et al.* in press). Of the 65 species of butterflies recorded, 25 appear to be habitat specialists, and of these 10 were

evergreen forest specialists. The presence of evergreen forests on an island significantly increases its butterfly diversity (Devy *et al.* in press). Islands off the main North Andaman island which have deciduous forests have fewer species of butterflies than islands of equivalent sizes off the South Andaman island with evergreen forest. While this could be a seasonal phenomenon, it is well known that many tropical butterfly species are habitat specialists and many are adapted to tropical wet forests and the loss of these forests will result in the extinction of many species (see Devy *et al.* in press). The primary wet evergreen forests of the Andaman islands are being destroyed and degraded at an alarming rate by forestry operations and encroachments. These forests should be protected on a priority basis.

Unique species: Species such as the Narcondam Hornbill (*Aceros narcondami*) which are found only on Narcondam island, and the Andaman teal (*Anas gibberifrons*) which depend on transient water bodies deserve particular attention. The Narcondam Hornbill enjoys protection, and the ecological requirements of the teal need to be studied and certain areas set aside for its protection. Likewise too for unique species of plants, invertebrates, reptiles, amphibians, etc.

Management Issues: As there is a north-south vegetational gradient, reserves should ideally be located along this gradient. Reserves should also be of sufficient size to include the habitat and vegetational mosaic.

The North Andamans has the Saddle Peak National Park which has stunted evergreen forest. However, this Park is poorly managed, with intense grazing pressure from domestic animals and encroachments. The Kalpong Hydel project in the North Andamans will further reduce the extent of evergreen forest by submersion (Ellis 1989). The Jarawa tribal reserve which covers a fairly large area in the Middle and South Andamans acts as a de facto protected area. However, the survival of the forests and the tribals are increasingly under threat from illegal logging and encroachments. This area

should be strictly protected from external threats.

There are no protected areas on Ritchie's archipelago, where primary forests are found in inaccessible areas of Havelock and on small islands such as Wilson. Forests on the other large islands such as Peel, John Lawrence and Henry Lawrence are mostly degraded. Therefore, the primary evergreen forests still remaining in the Ritchie's archipelago should be protected.

Evergreen forests in the South Andamans are protected in Mt. Harriet and the Wandoor Marine National Park, which has many forested islands. Rutland is heavily deforested, but areas of forest still remain which can be protected.

The Little Andamans is a large and isolated island. Its geographic isolation accelerates speciation processes and also makes the species more vulnerable to extinction. A large area of primary forest can be declared a National Park and in this Centenary year of Dr. Salim Ali, can be named after him. It will be a fitting tribute to him. Protecting large areas of forest on the large islands will be adequate to conserve the vegetational mosaic and species diversity. The other problem is the management and protection of these reserves under difficult field conditions. Even professional ecologists often find it difficult to do extensive field work, and one cannot expect the less motivated forest staff to work miracles. While small, isolated islands are naturally protected, it will be difficult to protect forests on the large islands. Infrastructural facilities, staff and equipment are needed to protect these reserves. Imaginative and well regulated ecotourism could be a potential source of revenue and tribals such as the Onges

could play an important role in reserve management.

ACKNOWLEDGEMENTS

While preparing this manuscript for the Salim Ali Centenary issue of the Journal of the Bombay Natural History Society, I found a letter from Dr. Salim Ali from which this excerpt is taken. It was with regard to participation in a symposium held in November 1977. It summarises his expectations of his students and the high standards he set for them.

'Yes, I do expect you to have something ready for the Symposium that does not let you or me down. All who are or have been my students, or whose interest in birds has been influenced in any degree by my work, are expected to participate actively. I shall be disappointed if you do not present something, and am rash enough to believe that what you do present will be worthwhile.'

This paper is dedicated to the memory of Dr. Salim Ali, teacher and guide. His dedication and professionalism, kindness and humour will never be forgotten.

This study was made possible through numerous field trips sponsored by Pondicherry University. The Ministry of Environment, France, funded the survey. I am grateful to the Forest Department, Andaman and Nicobar Islands for permission to conduct this study and for help at all times. I am deeply indebted to my students, Soubadra Devy, T. Ganesh, T.R.K. Yoganand and N. Joshi for carrying out the survey under difficult field conditions. Dr. J.M. Thiollay contributed greatly to developing this project and to data collection in the field.

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Brief of a tour note to A & N Islands of Director (F) E

Issues related to Forest & Wildlife sector in A&N Island Territory

The important issues pertaining to Forestry & Wildlife Sector were discussed with the officials of the Administration. A summary of the discussion is as below:

1. There is no provision of subsidy for supply of timber to the industries. Timber is supplied by the Forest Deptt. and Forest Corporation to the industries at rates fixed by the Administration based on element of royalty, actual cost of production, indirect overhead expenses and departmental margin of profit. It may be mentioned that the price of different category of log timber is revised annually as is evident from the table - 4(A).

Only a 5% rebate is given to SSI units to ensure proper utilization of all categories of timber by these units. It was clarified that the timber supplied to SSI units accounts for only 15% of the total timber harvested and supplied to all wood based industries. It was also mentioned that this rebate to the SSI units is gradually reducing as is evident from the figures below.

<u>Year</u>	<u>% of Rebate to SSI units</u>
1993-94	15
1994-95	10
1995-96	10
1996-97	10
1997-98	10
1998-99	8
1999-2000	5

2. The harvesting of timber is carried out departmentally by the Forest Deptt. and ANIFPDC (Andaman & Nicobar Islands Forest Plantation and Development Corporation). The system of harvesting timber through private or contractor agencies has been totally dispensed with since 1990-91 to ensure sustainable management of forests. The extraction is strictly as per the prescription of the Working Plans, which have been approved by the GOI. The Division-wise period of current Working Plan is shown in the table 8.

3. The level of extraction of timber has reduced due to environmental reasons and it is now steady at around 70,000 cub.m. per year. The production of timber in different years is shown in the table - 1 (A). It is projected that the level of extraction will remain the same for the next three years. The year-wise projection for production of timber is shown in the table 1 (B).

4. The extracted area is subsequently put under natural regeneration for five years. It is ensured that all the harvested area is undertaken for natural regeneration and if the natural regeneration is not proper, it is supplemented with enrichment plantation. The natural regeneration is found satisfactory, however, no evaluation has been done by the Deptt.

5. Forestry sector continues to be the major sector of revenue earning though there has been greater emphasis on conservation and sustainability. The extraction target has reduced from 1,35,000 cub.m in 1994-95 to about 66,500 cub.m during 1998-99. Even though the extraction target has been reduced by about 49% between 1994-95 and 1998-99, the revenue realization has by and large been maintained at some level by upward revision of sale price of timber which has been of the order of 12% on an average per annum. The year wise realization of revenue from timber and other forest produce is shown in table - 6.

6. The local people and the settlers enjoy the benefit of rights and concessions over forest produce and they are totally dependent upon forest produce for house building and maintenance and agricultural purposes. The requirement of timber for house construction has reduced substantially due to substitution of bamboo and cane. Thatching leaves are required in large quantity by the local people. Forest Deptt. is implementing the scheme of "Development of Minor Forest Produce" wherein, bamboo and canes are planted for sustained supply. The indigenously grown bamboo is hollow and therefore solid variety of bamboo is introduced to provide for better quality building material on sustained basis.

7. Out of 8249 sq.km of geographical area 7171 sq.km (86%) is declared as forest and even in non-forest area 6% of the area has dense tree cover. Considering the diversity and uniqueness of animal and plant life and the fragile nature of the eco-system, the Govt. has declared 9 National Parks and 96 Sanctuaries and one Biosphere Reserve. Out of the declared forest area, 56% is still maintained in its pristine glory in the form of coastal forest belts (13%), small islets and Protected Areas (7%), Tribal Reserves (36), National Parks, Sanctuaries and Biosphere Reserves (overlapping), etc without any biotic interference. It is only 3155 sq km (44%) of the forest area that is used for sustainable harvest.

Observations:

1. Harvesting of timber continues to be the major activity of the Forest Deptt. The extraction of timber is about 70,000 cub.m per annum. The working of forests is strictly as per the provisions of Working Plan and the total area that is harvested is put under natural regeneration and at times supplemented with enrichment plantation. Natural regeneration will have to be given adequate attention. However, no study has been carried out to assess the status of natural regeneration with regard to crop composition, land degradation and ecological considerations. It is imperative to undertake such studies to comprehend the environmental impact of this operation and also to assess the level of sustainable extraction.

2. Forestry sector continues to be the major revenue earner. Realisation of maximum revenue should not be the consideration for fixing the targets, as the same should be in consonance with the sustainable harvesting of forests with greater emphasis on bio-diversity and environmental conservation. The

supply of timber to industries should be strictly on the market price with no element of subsidy. A long-term projection of sustainable availability of timber as per Working Plans approved by the Govt. of India is essential to facilitate the timber units to work out their timber plans accordingly.

3. The majority of the population depends on forest resource for building material, fuelwood and agricultural purposes. The forests should be managed so as to supply these basic requirements on sustained basis. Keeping in view the increasing demand of these produce due to population growth and immigration of people from mainland, development of minor forest produce (including bamboo and cane) should be given adequate attention. Bamboo is an alternative to timber for house building and hence propagation of better quality bamboo should be considered on priority.

4. The Forests are rich in diversity of flora and fauna. Eco-tourism is the potential area for development without damaging the pristine glory of nature and disturbing the eco-system. Development of eco-friendly beach resorts in eco-villages should be preferred.

5. Proximate to the neighbouring island countries and a vast extent of Territory rich in forest and marine resource make it vulnerable to raiding by miscreants with the help of local people. Poaching of terrestrial animal and marine life should be controlled by effective patrolling and the infra-structure should accordingly be strengthened. Strict surveillance on illegal felling of trees by raiders from neighbouring countries is essential. It is considered desirable that Indian Navy and Coast Guard are associated with the issue of tackling poaching and illegal felling of trees.

I. (A) TIMBER PRODUCTION (CATEGORYWISE) In Cum

CATEGORY	FOREST DEPTT	ANIFPDC	TOTAL
1993-94			
Ornamental wood	5657	957	6614
Superior Hard wood	12703	6223	18926
Standard Hardwood	51614	24707	76321
Softwood	11574	16701	28275
Total	81548	48588	130136
1994-95			
Ornamental wood	3845	1020	4865
Superior Hard wood	23056	6485	29541
Standard Hardwood	43681	22566	66247
Softwood	16649	18221	24870
Total	87231	48292	125523
1995-96			
Ornamental wood	4258	479	4737
Superior Hard wood	7364	5269	12633
Standard Hardwood	53622	26287	79909
Softwood	12334	16966	29300
Total	77578	49001	126579
1996-97			
Ornamental wood	4598	651	5219
Superior Hard wood	9525	5464	11989
Standard Hardwood	44139	31117	75256
Softwood	8954	6351	15305
Total	64186	43583	107769
1997-98			
Ornamental wood	3728	613	4341
Superior Hard wood	25315	12621	37936
Standard Hardwood	11462	5043	16505
Softwood	9091	9224	18315
Total	49596	27501	77097
1998-99			
Ornamental wood	2964	611	3575
Superior Hard wood	20997	13097	34094
Standard Hardwood	6043	6898	12941
Softwood	5112	6901	12013
Total	35116	27507	62623
1999-2000			
Total Extraction (Categorywise details not finalised)	25418	21999	43417

I (B) : YEARWISE PROJECTION FOR EXTRACTION OF TIMBER FOR NEXT THREE YEARS.

YEAR	ANNUAL TARGET OF EXTRACTION (PROJECTED)
2000-2001	70,000 (Cum)
2001-2002	70,000 "
2002-2003	70,000 "

(ANIFPDC & FOREST DEPT) Total area involved in extraction

YEAR	AREA (IN HECTARES)
1993-94	3292
1994-95	4256
1995-96	4520
1996-97	2702
1997-98	2280

2. UTILISATION OF TIMBER EXTRACTED YEARWISE

Timber in this territory is extracted mainly by Govt. agencies such as the Forest Department, and Forest Plantation Development Corporation. The extracted timber is distributed to local major and small scale Industries and also to the Govt. and Private Saw Mills. Sawn timber from Govt. Mills of A & N Islands are also transported to Forest Depots at Calcutta and Chennai for disposal. The following tables shows the details of disposal / Utilisation of timber extracted in this territory.

(A) : DISPOSAL OF LOGS TO VARIOUS AGENCIES BY FOREST DEPTT. AND FPDC.

YEAR	SOLD TO MAJOR INDUSTRIES	SOLD TO PENCIL SLAT INDUS.	SOLD TO MATCH INDUS.	COMPO SITE UNITS	ISSUED TO GOVT MILLS	SOLD TO OTHER SAW MILLS	SHIPMENT TO MAIN LAND	TOTAL
1994-95	71737	1779	1147		11002	5126	10766	101558
1995-96	81268	1676	1383	250	16244	5506	1040	107367
1996-97	60886	2480	1459		17657	15488	Nil	97972
1997-98	53015	1234	1833		11684	7694	Nil	75460
1998-99	35402	706	1078		14296	5269	Nil	56751

3. TOTAL INTAKE AND OUT TURN OF CHATHAM SAW MILL FOR THE LAST FIVE YEARS

YEAR	INTAKE	C.U.M OUTTURN
1995-96	13089	6831
1996-97	14393	7749
1997-98	12092	6004
1998-99	11577	5680
1999-2000	10601	4571

(B) DISPOSAL OF SAWN TIMBER BY CHATHAM SAW MILL.

YEAR	QUANTITY OF TIMBER DISPOSED(In Cum)
1994-95	5,739
1995-96	6,541
1996-97	6,575
1997-98	5,815
1998-99	5,068
1999-2000	5,328

4. : (A) PRICES OF LOG TIMBER (IN RUPEES)

CATEGORY	1995-96	1996-97	1997-98	1998-99	1999-2000
PADAUK	6700	7705	9276	10600	11400
ORNAMENTAL WOOD	4880	5612	6874	7700	00
GURJAN PLY	4450	5118	6392	7000	7600
OTHER PLY	3810	4382	5149	5600	6100
SUPERIOR HARDWOOD	3810	4382	5149	5600	6100
STANDARD HARDWOOD	3180	3657	4133	4600	5000
SOFTWOOD (PAPITA)	1420	1775	2000	2300	2500
OTHER SOFTWOOD	1570	1963	2215	2700	2900
MISCELLENIOUS TIMBER	1570	1963	2215	2600	2800

5. BENEFIT AVAILABLE TO SETTLERS OR LOCAL PEOPLE IN TERM OF RIGHTS AND CONCESSION FOR THE LAST FIVE YEARS (MAJOR ITEMS)

YEAR / MODE OF DISTRIBUTION	TIMBER (IN CUM)	BAMBOO (IN NOS.)	CANE (IN RMT.)	THATCHING LEAVES (IN NOS.)
<u>1994-95</u>	21490	756000	399570	2886403
On Payment of Royalty				
Free of Royalty	1348	905665	249533	3749750
Total	22838	1661665	618103	6236153
<u>1995-96</u>	11551	971677	639933	3026513
On Payment of Royalty				
Free of Royalty	727	1096675	213216	3618245
Total	12278	2068352	853149	6644758
<u>1996-97</u>	3728	547771	576290	4788685
On Payment of Royalty				
Free of Royalty	698	734830	207892	3168600
Total	4426	1282601	784182	7957285
<u>1997-98</u>	---	733563	434773	2141063
On Payment of Royalty				
Free of Royalty	157	626714	121254	2112450
Total	157	1360277	556027	4253513
<u>1998-99</u>	3	640025	289531	1946803
On Payment of Royalty				
Free of Royalty	42	528800	117167	2390820
Total	45	1168825	406698	4337623

6. REALISATION OF REVENUE FOR TIMBER AND OTHER FOREST PRODUCE (RS. IN LAKHS)

YEAR	TIMBER SALE	FIRE WOOD & CHARCOAL	TIMBER ROYALTY	FIRE WOOD & CHARCOAL ROYALTY	NON-TIMBER FOREST PRODUCE ROYALTY	MISCELLANEOUS	GROSS REVENUE
1995-96	2481 600	10.928	283 833	0.847	9.262	24.049	2810.529
1996-97	2368 766	21.090	433.295	0.808	8.064	23.069	2855.092
1997-98	2371 818	15.003	135.475	0.638	17.248	123.224	2663.406
1998-99	1952.797	18.550	188.537	0.520	16.063	22.804	2199.273
1999-2000	1354 800	14.240	301.800	0.430	7.950	33.140	1712.360

7. ANIFPDC

The annual report of ANIFPDC for the last five years is enclosed

8. WORKING PLAN

DIVISION	PERIOD OF CURRENT WORKING PLAN
SOUTH ANDAMAN	1999-2000 (Expired in March, 2000)
BARATANG	1999-2009
MIDDLE ANDAMAN	1993-2003
MAYABUNDER	1997-2007
DIGLIPUR	1998-2008
NICOBAR DIVISION	Not yet prepared and no work of extraction is undertaken
LITTLE ANDAMAN	1999-2009

9. (A) MEDIUM AND SMALL SCALE INDUSTRIES - THEIR INSTALLED CAPACITY

A detailed statement showing name, year of establishment, location, installed capacity etc for major and small scale industries of this territory is enclosed as ANNEXURE -A separately.

(B) LOCAL AVAILABILITY AND IMPORT OF TIMBER BY MAJOR INDUSTRIES

Timber in log form are allotted to all major industries by Forest Deptt and also by ANIFPDC. In addition to the local availability of timber thus allotted, some of the major industries are importing timber from abroad. A detailed statement showing timber imported by some of the major industries for the last three years is enclosed as ANNEXURE -B. However the prices of such timber imported are not readily available.

10. (A) FOREST BASED COTTAGE INDUSTRIES, CANE UNITS ETC.

The following statement shows total number of forest based cottage industries, cane units and bamboo units etc registered / unregistered upto 1998-99.

1 Pencil Slat Industries	6 Nos.
2. Cottage and Match Industries	: 2 Nos.
3. Composite Units	: 2 Nos.
4 Private Saw Mills	27 Nos.
5 <u>Wooden Furniture Marts</u>	
(a) Registered Units	: 223 Nos.
(b) Unregistered Units	: 44 Nos.
6 Bamboo Manufacturing Units	: 72 Nos.
7 Cane Manufacturing Units	: 142 Nos.

Details of such cottage and small scale industries may be seen at ANNEXURE -A

10. (B) FUEL WOOD SUPPLIED

YEAR	QUANTITY SUPPLIED (IN CUM)
1994-95	54161
1995-96	48585
1996-97	42993
1997-98	30510
1998-99	30645

ANNEXURE : B

YEAR WISE TIMBER ALLOTTED, LIFTED AND IMPORTED BY MAJOR INDUSTRIES (PLYWOOD) IN A & N ISLANDS (IN CBM)

NAME OF INDUSTRIES	ALLOTTED			LIFTED			IMPORTED	GRAND TOTAL
	DEPTT.	FPDC	TOTAL	DEPTT.	FPDC	TOTAL		
1	2	3	(2+3)=4	5	6	(5+6)=7	8	(7+8)=9
1997-98								
Andaman Timber Industries	10525	6300	16825	10168.310	6503.531	16671.741	6674.750	23346.491
Kitply Industries	9025	4800	13825	8594.620	4800.190	13394.810	5096.829	18491.639
Jayshree Timber Products	9800	5525	15325	9688.892	5580.929	15269.821	4068.354	19338.175
TOTAL	29350	16625	45975	28451.822	16884.650	45336.372	15839.933	61176.305
1998-99								
Andaman Timber Industries	8125	6885	15010	3501.525	4666.001	8167.526	7839.202	16006.728
Kitply Industries	7600	4910	12510	5069.764	3036.790	8106.554	3030.801	11137.355
Jayshree Timber Products	8330	5380	13710	7784.171	5293.475	13077.646	9104.202	22181.848
TOTAL	24055	17175	41230	16355.460	12996.266	29351.726	19974.205	49325.931
1999-2000								
Andaman Timber Industries	9152	4476	13628	Nil	479.000	479.000	6698.636	7177.636
Kitply Industries	10548	3080	13628	1703.000	3634.000	3634.000	4026.854	7660.854
Jayshree Timber Products	6723	6905	13628	3162.446	8569.446	8569.446	7361.490	15930.936
TOTAL	26423	14461	40884	4865.446	12682.446	12682.446	18086.980	30769.426

Developing a protected area network in the Nicobar islands: The perspective of endemic avifauna

Excerpted from: Sankaran, R. 1997. Developing a protected area network in the Nicobar Islands: The perspective of endemic avifauna. *Biodiversity and Conservation* 6: 797-815.

Introduction

Of the 3704 species of fauna (excluding marine forms) recorded in the Andaman and Nicobar islands, 487 (13%) are endemic (Rao, 1989). Endemism is very high in some groups such as birds where 39% are endemic (Sankaran and Vijayan, 1993), and in other vertebrates (Rao, 1989) and flora (Rao, 1986; Balakrishnan, 1989) as well. The biological importance of the Andaman & Nicobar islands is reflected in global conservation concerns as the Andaman and Nicobar islands are two of the 221 major Endemic Birds Areas worldwide (ICBP, 1994). In the South Asian context, these islands are of particular importance. Of the 176 species of avifauna that are endemic to the zoogeographic subregion of the Indian peninsula and its environs (Ali and Ripley, 1983), 15 are endemic to the Andaman and Nicobar islands. Thus while these islands account for only 0.2% of the land mass of South Asia, they have approximately 8.5% of its endemic avifauna.

To conserve its flora and fauna, a protected area network has been suggested for the Andaman and Nicobar islands (Rodgers and Panwar, 1988), and nearly 12% of its land mass are protected as nature reserves (Pande *et al.*, 1991). However, this is inadequate because biological characteristics, particularly 'hot spots' of endemism have not been taken into consideration. Most protected areas are on small, uninhabited islands, and most inhabited islands which are large and subject to anthropogenic pressures are not protected. There exists a need for the refinement and restructuring of the protected area network in the Andaman and Nicobar islands.

The Nicobar islands

The Nicobar group of islands can be divided into three distinct subgroups (Fig. 1), based on floral, faunal and anthropogenic characteristics. The southern most is the Great Nicobar subgroup consisting of 11 islands and islets, four of which are inhabited. About 58 km north, is the Nancowry subgroup, which consists of 10 islands and islets, of which one island and two islets are uninhabited. The northern most subgroup comprised of Car Nicobar and Batti Malv, is 88 km north of the Nancowry subgroup. Batti Malv is uninhabited. (Fig. 1, Appendix 1).

The forest type of the Nicobar Islands can be broadly classified as tropical evergreen, with inland areas being either forest or grasslands and a significant proportion of the coast being mangroves (Balakrishnan, 1989). The only perennial rivers of the group are found on Great Nicobar. The habitat characteristics of the islands vary. In the Great Nicobar subgroup, all islands are densely forested. In the Nancowry subgroup, the central portion of all islands, excepting Katchall and Tillanchong, are grasslands. In the Car Nicobar subgroup, Batti Malv is forested, while most of Car Nicobar is either coconut plantation or forest, with a small area under grasslands.

Methods

Important islands and island subgroups: Important islands for the development of protected areas were identified by a hierarchical classification based on the degree of endemism, the number of endemics and the number of threatened endemics in an island subgroup. The degree of endemism that a species or subspecies exhibits was categorized into four levels: (a) the species is endemic to the Nicobar islands (b) the species is endemic to the Andaman and Nicobar islands (c) the subspecies of a species present on neighbouring mainlands is endemic to the Nicobar islands and (d) the subspecies of a species present on neighbouring mainlands is endemic to the Andaman & Nicobar islands.

Designing of Protected Areas: As the Nicobar islands are inhabited by ethnic tribes, and are rich in endemic flora and fauna, the protected areas proposed by this study are Biosphere Reserves as these are meant to safeguard both natural habitats as well as traditional and sustainable use of resources. In the Indian context, a Biosphere Reserve is comprised of a single or several core areas that are inviolate, with a surrounding buffer zone that has multiple uses, including exploitation of natural resources. In India, the core areas of Biosphere Reserves are either National Parks or Sanctuaries. In the demarkation of the Biosphere Reserves proposed here, the core areas include all contiguous areas that are either forest or grassland, and which are relatively

undisturbed. Where human settlements are present, a distance of approximately 2 km from the edge of the settlement, or the base of an adjacent hill range have been used as boundaries for the core areas.

Endemism in avifauna in the Nicobar islands

Of the 270 species and subspecies of avifauna recorded from the Andaman and Nicobar Islands, 105 are endemic. This high proportion of endemics (39%) is due to a high number of endemic subspecies. Of the endemic species and subspecies, 79 (or 75%) are subspecies of species found on neighbouring mainlands. Of the 51 endemic species and subspecies found in the Nicobar islands, five species (with three subspecies) are endemic to the Nicobar islands, seven subspecies (of four species endemic to the Andaman & Nicobar islands) are endemic to the Nicobar islands, 24 are endemic subspecies of species found on neighbouring mainlands and 12 are subspecies endemic to the Andaman and Nicobar islands of species found on neighbouring mainlands (Tables 1 & 2).

The distribution of the endemic avifauna indicates that there are three distinct subsets of the Nicobar islands which are found in the three island clusters, Car Nicobar, Nancowry and Great Nicobar, that are present (Fig. 1). Each subgroup has its own distinct avifauna while sharing some taxa with the other subgroups (Table 3). The avifauna of the Nancowry subgroup shows a marginally greater affinity to that of the Great Nicobar subgroup (Jaccard's coefficient of similarity 0.489) than it does to that of Car Nicobar subgroup (0.463), while the avifauna of both Great Nicobar and Car Nicobar are relatively dissimilar (0.295). The Nancowry subgroup shares some taxa with each of the other subgroups exclusively, while apart from the avifauna common to all Nicobar islands, the Car Nicobar and Great Nicobar subgroups do not share taxa exclusively between them (Table 3).

Important island groups / islands for avian conservation

Two questions need to be addressed while planning a protected area in the Nicobar islands. First, whether prioritization can be done between island subgroups and second, the protection of which islands will result in optimal conservation of endemic taxa.

The prioritization of island subgroups for the development of protected areas, based on the endemic avifauna is difficult because each subgroup has its own distinctive taxa. However, The Nancowry and the Great Nicobar subgroups can be considered as priority subgroups as they not only have the maximum number of endemics, but have exclusive endemic species as well. A choice cannot be made between these two, as each subgroup are similar in the number of endemic taxa present at higher levels of endemism (species endemic to the islands; Table 1). At lower levels of endemism (subspecies of species of neighbouring mainlands), the Great Nicobar subgroup has more exclusive endemics, while the Nancowry subgroup has more shared endemics (Table 2). Thus, biological considerations as reflected by endemism in avifauna, indicate that protected areas are required on all subgroups. However, as 17% of the endemic avifauna of the Nancowry subgroup are threatened, which is considerably more than either the Car Nicobar (8%) or Great Nicobar subgroups (3%), the development of protected areas is most urgently required in the Nancowry subgroup. Though Car Nicobar has its own distinctive avifauna at lower levels of endemism, and therefore merits conservation, the subgroup must perforce be excluded because of the practical problems in developing a protected area due to high human populations, and alternate conservation approaches need to be devised.

In the Great Nicobar subgroup, the formation of a protected area on Great Nicobar effectively conserves all avian taxa endemic to this subgroup, as all avian taxa of the subgroup are present on the island. The high densities of some endemic species like the megapode in Little Nicobar (Sankaran, 1995a,b), merits its inclusion into a protected area network (see also Rodgers and Panwar, 1989). In the Nancowry subgroup, Camorta is the most important island as it has 31 of the 35 endemic taxa present in this subgroup. The inclusion of Katchall in the protected area network will effectively conserve 34 of the 35 endemic taxa. The one remaining endemic is an endemic subspecies of a species of neighbouring mainlands, and is also present on Great Nicobar, and hence not of undue concern. The inclusion of Nancowry island as a satellite protected area has merit due to its proximity to Camorta, and the low anthropogenic pressures. In conclusion, the development of protected areas on Great Nicobar, Camorta and Katchall, with satellite protected areas on Little Nicobar and Nancowry will effectively conserve the Nicobar islands.

Some socio-political considerations and its implications for habitat loss

The Nicobar islands is populated by two distinct groups, tribals and Indian mainlanders. The tribals subsist on horticulture, fishing and hunting (Saldanha, 1989). Loss of habitat by the Nicobaris has been due to the conversion (or intermixing) of coastal forest into coconut and other plantations, and excepting under conditions of high population densities, have not seriously altered habitats (Appendix 1). Immigration of mainlanders into the Nicobar islands began in 1969, when 337 families were settled on the southeastern coast of Great Nicobar, and in the early 1970s when 268 families were settled on Katchall, as part of a colonisation programme (Saldanha, 1989). With subsequent immigration, mainlanders now account for 36% of the population of the Nicobar islands. The resultant loss of habitat includes: (a) Great Nicobar, where the majority of a 35 km long and approximately two km wide strip is now either agriculture, habitation, or degraded forest; (b) Katchall, where there is a rubber plantation and associated habitations; (c) Car Nicobar, which has an airport and has undergone considerable urbanisation, and (d) Camorta and Teressa, where cashew and other plantations have been created on the grasslands. Habitat loss due to urbanisation and/or the development of related infrastructure has taken place on several islands.

Considering that in the 2000 years that the tribals have inhabited the islands (Singh, 1978), they have caused a loss of less than 10% of the habitat, and in the 25 years since Indian mainlander colonisation nearly 4% of the habitat has been lost to them, the rate of habitat loss has been considerably more due to mainlanders than tribals. Though the settlement programme has been abandoned, the threat of further habitat loss is considerable. As the islands wholly depend on government subsidies, there is pressure to generate revenue from them. Thus, there are proposals to develop a refuelling and dry dock base at the mouth of the Galathea river, and develop Great Nicobar as a free trade port. Apart from these mega-projects, there are proposals to develop a hydel project on Great Nicobar, increase the acreage of rubber and cashew plantations in the Nancowry subgroup, expand defense facilities, and there are several ongoing projects like the development of road networks and the expansion of fishing activities.

Two legislations have bearing on conservation in the Nicobar islands. First, these islands have been designated as a tribal area which prohibits the commercial exploitation of natural resources, entry of, and the ownership of land by non-tribals. The exceptions are Great Nicobar and Katchall where only about 10% and 90% of the islands have been designated as tribal areas. Second, the Protection of Aboriginal Tribes act (1957) exempts tribals in the Nicobar islands from the Indian Wildlife Protection Act (1972), and the Indian Forest Act (1980).

The implications of the socio-political considerations are: First, as on most islands tribal population densities, rate of population increase and consequently rate of habitat destruction are low, the threat of immediate widespread deforestation due to tribals is not significant. Second, significant habitat loss has been due to the colonisation of the islands by mainlanders over the last three decades, and is likely to be the major cause for habitat loss in the future due to developmental activity and demographic changes, and are likely have the greatest impact on Great Nicobar and Katchall. Third, the development of protected areas will not impinge upon tribals rights, but will serve to protect their interests.

Developing a protected area network in the Nicobar islands

As in the Nicobar islands, the major cause for habitat loss till date and the probable cause in the future, are development programmes and the demographic changes arising from it, conservation action needs to focus primarily on this threat. A protected area network in the Nicobar islands should serve as a means to control depredation of natural resources by giving adequate legislation to all contiguous undisturbed habitat to prevent or contest future programmes or development activities that will cause widespread habitat loss.

Existing Protected Areas In the Nicobar islands: Only four of 23 islands in the Nicobar group have Protected Areas. Batti Malv (2 sq km), Tillanchong (17 sq km) and Megapode Island (0.13 sq km), all uninhabited, are Wildlife Sanctuaries. Great Nicobar is a Biosphere Reserve (885 sq km), with two core areas; the Campbell Bay National Park (426.23 sq km) and the Galathea National Park (110 sq km). As about 30% of the Nicobar islands have already been protected as nature reserves, before developing a protected area network it is necessary to examine whether the existing protected areas are adequate, and what flaws if any need to be rectified.

Diamond (1975) proposed that if 10% of a habitat is protected as a single undivided reserve, then approximately 50% of the species restricted to that habitat type can be saved. Assuming that this is realistic, then with about 50% of Great Nicobar (and 44% of the subgroup) being protected as nature reserves, one should expect that

almost all endemic taxa should survive the loss of all other habitat in the subgroup. In the Nancowry subgroup, only 2% is protected which should result in a little over 25% of the species endemic to this subgroup surviving large scale habitat loss. Thus, while there clearly is a need for an increase in the protected area in the Nancowry subgroup, protection in the Great Nicobar subgroup is apparently adequate to prevent loss of species. However, the design of the protected area network in the Great Nicobar subgroup is inadequate because:

- (1) While about 40% of the coastal area of Great Nicobar is uninhabited, the National Parks protect less than 15% of its coastal forest (Fig. 2). Moreover, it excludes the southern tip, which is the largest uninhabited lowland forest in the Nicobar group, and has the greatest abundance of endemic avifauna. The implication of these are (a) as colonisation takes places primarily on the coast, the areas most likely to undergo habitat loss are inadequately protected. This is a serious flaw as the coastal forests, particularly the lowland forest of the southern tip are areas which are the primary nesting habitat of species like the Nicobar Megapode (Sankaran, 1995c), and possibly the areas of greatest abundance for most other species, and (b) the area which is most vulnerable to development programmes and further colonisation (the southern tip of Great Nicobar) is currently unprotected.
- (2) Excepting for parts of the coast, Great Nicobar is covered by contiguous undisturbed primary forest. Despite this, the National Parks leave unprotected a broad strip of uninhabited forest between them thus exposing the centre of the island to the threat of deforestation, as it is accessible by a road that bisects the island into two. This will probably result in fragmentation of the habitat on Great Nicobar and the two National Parks will become discontinuous.
- (3) Buffer zones of Biosphere Reserves are designated as areas of multiple use, and should cover areas that are inhabited or used by man. Though less than 10% of Great Nicobar is under human use, 35% of Great Nicobar has been designated as a buffer zone. Moreover, the buffer zone does not include any area that is under human use, and consists only of such undisturbed forests where the influence of mainlanders is non-existent, and the influence of tribals minimal.

Proposed Protected Area Network: For the survival of species, there is a need for large areas to be protected as nature reserves (Saunders *et al.*, 1991; Dinerstein and Wikramanayake, 1993; Burkey, 1995). In contrast to continental systems, where the protection of a single large reserve of a region may adequately protect most species endemic to it, in islands because of intra-archipelago speciation (Diamond, 1977), a network of such protected areas that incorporates all distinctive flora and fauna is necessary (e.g. Diamond, 1986). In the Nicobar islands, such a network will need to be constituted of protected areas in the Nancowry and the Great Nicobar subgroups, because biological considerations, as reflected by endemism in avifauna, indicate that both subgroups are equally distinctive. The protected area network in the Nicobar islands should be in the form of two Biosphere Reserves, with multiple core areas with the status of National Parks. The core areas of the Biosphere Reserves must be on Great Nicobar, Camorta and Katchall, with satellite protected areas on Little Nicobar and Nancowry. Because of the biological vulnerability of islands (Care-Reid, 1990), some form of protection to all islands is necessary. Thus all islands not designated as core areas should be included in the buffer zone, whereby some limits on human activities can be enforced.

The proposed redesigned Great Nicobar Biosphere reserve (Fig. 2), rectifies the flaws in the existing one, and consists of a single core area on Great Nicobar, that merges the two existing ones and includes the southern tip of the Island, and another core area on Little Nicobar (see also Rodgers and Panwar, 1988). The proposed Nancowry biosphere reserve consists of core areas on Camorta, Katchall and Nancowry. Tillanchong, the only uninhabited island in the subgroup, and already a Wildlife Sanctuary, should be the fourth core area (Fig. 3). The buffer zone of both Biosphere reserves is to cover all inhabited areas surrounding the core areas, and include all islets and other islands in the respective subgroups.

The core areas of the proposed protected areas thus protects all contiguous forests and grassland habitats on those islands by whose conservation all endemic avifauna of the Nicobar islands will be conserved. The most important implication of this is that the probability of the development projects that are currently envisaged being implemented will be minimal. The inclusion of all areas used by man as well as the other islands on which core areas are not proposed in the buffer zone of the biosphere reserves, will result in the deterring of programmes that are inherently damaging to the habitat, but concurrently fostering traditional sustainable

lifestyles of the indigenous people.

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Table 1. Enumeration of species endemic to the Nicobar islands

	<u>Species endemic to the Nicobar Is.¹</u>			<u>Species endemic to the A & N Is.²</u>	
	Endemic full spp.	Endemic spp.	Shared endemic spp. > 1 subgroup	Endemic spp. (ssp.)	Shared endemic spp. (> 1 subgroup)
Nicobar islands	5	6	-	7 (4)	-
Great Nicobar subgroup	1	2	1	2	1
Nancowry subgroup	1	2	1	2	2
Car Nicobar subgroup	0	1	0	1	2

Note: ¹ Full species endemic to Nicobar islands, which are either monospecific and endemic to a particular subgroup, or have two subspecies which are either endemic to different subgroups, or are common to two island subgroups. ² Full species endemic to Andaman & Nicobar islands, which either occurs as a single subspecies endemic to the Nicobar islands and is present on all subgroups, or have two Nicobar endemic subspecies which are either endemic to a particular Nicobar island subgroup, or are common to two Nicobar island subgroups.

Table 2. Enumeration of endemic subspecies of species of neighbouring mainlands & islands.

	<u>Species of neighbouring mainlands and islands outside the A & N Islands</u>		
	Endemic spp.	Shared endemic spp. > 1 subgroup	Endemic spp. shared with the Andaman Is.
Nicobar islands	24	-	12
Great Nicobar subgroup	4	13	8
Nancowry group	1	16	10
Car Nicobar group	3	10	8

Table 3. Avifaunal affinities within the Nicobar islands

	Total endemic taxa	Car Nicobar	Nancowry	Great Nicobar	-----Shared with-----	
					All Nicobar	Andamans
Car Nicobar	25	5 (20%)	4 (16%)	0	8 (32%)	8 (32%)
Nancowry	35	4 (11%)	6 (17%)	7 (20%)	8 (23%)	10 (29%)
Great Nicobar	32	0	7 (22%)	9 (28%)	8 (25%)	8 (25%)

Table 4. Status of the endemic species of avifauna and status

	Total no. of endemics	Exclusive endemics	En	Vu	Nt	Dd	Lc	Ab
Nicobar islands	51	39	2	5	12	7	23	2
Great Nicobar subgroup	32	9	1	0	9	4	17	1
Nancowry subgroup	35	6	1	5	9	5	14	1
Car Nicobar subgroup	25	5	2	0	6	3	13	1

Key: En=Endangered, Vu=Vulnerable, Nt=Near threatened, Dd=Data deficient,
Lc=Less concern, Ab=Abundant

Appendix 1. Habitat loss and human population densities in the Nicobar islands.

Island	Area ^a (sq km)	Historical extent ^b		Forest loss (km ²) ^c by: Tribal	% Habitat loss		1991 Human density		Other	1981-1991 (% rise)
		Forest	Grassland		Other	Forest	Grassland	Tribal		
Car Nicobar	126.9 24.9	124	3	50	5	45	0	124.4	28	
Batti Malv	2.1	2	0	0	0	0	0	0	0	0
Chaura	8.2 9.6	6.7	1.5	6	0	75	5	145.9	3.5	
Teressa	101.4 45.8	65.7	35.7	15	1	20	3	15.9	1.6	
Bompoka	13.3	10	3.3	2	0	30	0	3.8	0	0
Tillanchong	16.82	16.82	0	1	0	6	0	0	0	0
Katchall	174.4 37.3	174.4	0	20	10	17	0	14.3	14.8	
Camorta	188.2 31.7	142.6	45.6	15	3	16	4	7.5	8.3	
Nancowry	66.9 43.4	63.1	3.8	10	0	18	0	13.6	1.6	
Trinkat	36.3 7.7	30.3	5.96	10	0	65	0	9.6	0	-
Great Nicobar	1045.1 35.4	1045	0	15	75	9	0	0.5	6	
Little Nicobar	159.1 5.3	159.1	0	12	0	8	0	1.9	0.1	
Kondul	4.6 2.6	4.6	0	1.5	0	33	0	30.2	1.7	
Pilo Milo	1.3 36.9	1.3	0	1	0	77	0	83.8	10	
Megapode	0.13	0.13	0	0.05	0	50	0	0	0	0
Meroe	1.4	1.4	0	0.8	0	40	0	0	0	0
Treis	0.1	0.1	0	0.3	0	50	0	0	0	0
Trax	0.4	0.4	0	0.1	0	50	0	0	0	0
Menchal	0.7	0.7	0	1	0	67	0	0	0	0
Nicobar group	1947.35	1848.35	98.86	161	94	14	3	12.8	7.4	

28.8

Note:

- ^a All areas are in sq km. There is a discrepancy between the published records of the area of the Nicobar islands as a whole, and the sum of each island from the district records.
- ^b The historical extent of the forest (prior to human colonisation), was assumed to be the entire island (minus beaches, high tide mark to forest, assumed at a standard 10 m width for the entire coastline, and inland water bodies assumed at 0.1% of the area) and for those islands with grasslands, the area of the island minus the area of grasslands, from Government records.
- ^c Estimates for loss of habitat are approximations (see methods).

Implementation of an In-situ & ex-situ conservation programme for the Edible-nest Swiftlet *Collocalia fuciphaga* in the Andaman & Nicobar Islands

Introduction

Ever since the 16th century, when swiftlet nests became an important item in Chinese pharmacy and cuisine, the edible nests of swiftlets have been exploited throughout their range (Medway 1963, Lau & Melville 1994). Today, at prices between US\$ 2000 – 4000 per kilogram (approximately 100 nests), the wholly white edible nests of swiftlets rank amongst the world's most expensive animal products.

Swiftlets construct their nests by using saliva to bind materials together (Kang *et al.* 1991). While most species use saliva to bind leaf, moss, or feathers into nests, the Edible-nest Swiftlet *Collocalia fuciphaga* builds nests wholly of 'saliva', a mucilaginous secretion of the paired sublingual glands (Marshall and Folley 1956), which enlarge during the breeding season (Medway 1962). Upon drying, the saliva forms a hard cement, and secures the bracket shaped nest to the wall as well as forming the cup (Kang *et al.* 1991). These wholly white nests are under immense collection pressures as they have been traditionally believed to possess powerful medicinal and aphrodisiac properties, and wide spread declines in populations have been documented (Lau & Melville 1994). However, when scientifically managed, the nests of swiftlets can be harvested sustainably, without reducing breeding populations (Medway 1966), and even increasing them (Mardiastuti & Soehatono 1996, Nugruho & Whendrato 1996, Phach 1996).

Two species of swiftlets are present in the Andaman & Nicobar Islands. The commercially important Edible-nest Swiftlet *C. fuciphaga*, which ranges from the Andaman & Nicobar Islands in the west through Indonesia and to the Philippines in the east, and the non-commercial Whitebellied Swiftlet *C. esculenta* which is common in the Andaman & Nicobar Islands.

Swiftlets in the A & N Islands

The Problem

Sankaran (1988, 2001) identified the problem of conserving swiftlets at two levels: collection and trade. Protection, as a conservation measure is not feasible for the following reasons.

First, to protect swiftlet-breeding sites, a protection camp has to be established at the mouth of the cave. Since protection has to be done round the clock, at least four watchmen are required per cave. Thus, an extremely high number of people will have to be employed, and intensively supervised, for protection, by itself, to be an effective conservation tool. This is clearly not feasible over larger areas.

Second, protection camps established some distance from the caves are ineffective, as nest collectors are then able to bypass the protection camp or raid the cave in the night. As the

majority of swiftlet breeding sites are at inaccessible locations, establishing protection camps at the mouth of the cave for over 95% of swiftlet caves cannot be done.

Third, the watchmen should be very highly motivated for effective protection. To ensure this they will have to be intensively supervised and the caves periodically surveyed to ensure that there is no pilferage of nests. This is also not feasible over larger areas.

As the entire trade in swiftlet nests is across international borders, there was a strong case for the inclusion of swiftlets into the CITES appendices, whereby trade can be effectively controlled. However, as there have been innovative harvesting systems, where free-living swiftlets nest in human habitation and are optimally managed, and the population of swiftlets has significantly increased, the species was not included in the CITES Appendices, and swiftlet nests can be legally traded in the international market. This non-inclusion will make an Indian attempt at stopping trade ineffective, exacerbated by fact that swiftlet nests can be easily concealed and smuggled.

Scientific management and harvesting systems has been recognized and recommended as the correct conservation approach for swiftlets worldwide.

The Solution

A simple and innovative method for the ex-situ conservation of swiftlets has been developed in Indonesia, where existing structures in which the non-commercial Whitebellied Swiftlet nest are developed and renovated, or new structures are built so as to attract the Whitebellied Swiftlet. Eggs of the commercially important Edible-nest Swiftlet are then transferred from specifically protected caves to the nests of the Whitebellied Swiftlet, who act as foster parents by incubating the eggs and rearing the young Edible-nest Swiftlet. As swiftlets are very parochial, the young Edible-nest Swiftlet when fledged continue to return to the house and when mature begin nesting there, a new population of the Edible-nest Swiftlet is established. As the house is 'owned', and as it is in the best interests of the owner to manage his swiftlets scientifically, the population is safe and secure from indiscriminate nest harvesting, and therefore grows. Indonesia now produces over 65,000 kilograms of swiftlet nests per annum from houses, indicating a base population of over four million breeding birds. Swiftlet farming in Indonesia generates revenue of over US\$ 100 million and considerable employment opportunity both in swiftlet houses as well as in the cleaning, processing and packaging of swiftlet nests.

The conservation of the Edible-nest Swiftlet lies in both an in-situ and ex-situ approach. The in-situ conservation programme should revolve around the protection of a few cave or cave complexes, so as to build up wild populations and to source eggs of the Edible-nest Swiftlet as well as to provide livelihoods for locals augmented by incomes from the sale of nests once nesting is completed and the chicks have fledged. The ex-situ programme should revolve around the creation of new populations of the Edible-nest Swiftlet in houses that already have populations of Whitebellied Swiftlet, and develop new, cost effective houses, in which the Whitebellied Swiftlet can be induced to breed, and subsequently populations of the Edible-nest Swiftlet established by transferring eggs from the protected caves. A central facility, for example the house at Tugapur, needs to be developed so as to facilitate the dissemination of knowledge

and technology as well as for the distribution of eggs. In the Andaman & Nicobar Islands, this innovative conservation programme will not only result in the survival of the Edible-nest Swiftlet, but also form an important source of revenue and employment for the islands.

Implications of the Programme in the Andaman & Nicobar Islands

Survival of the species

The Edible-nest Swiftlet in the Andaman & Nicobar Islands is threatened (Sankaran 1998, 2001), with further declines in population between 1997 and 2002, strengthening the view that extinction is imminent in most breeding sites. By protecting certain caves, this programme will result in the prevention of extinction of the species in the Andaman & Nicobar Islands.

Economic benefit for the islands

The economy of the Andaman & Nicobar Islands runs almost wholly on subsidies from the Government of India. As a result, there are immense pressures on the islands to generate revenue, thereby significantly reducing the current levels of subsidy. In the islands, all programmes to generate revenue will be largely natural resource based. Considering the biological importance and fragility of these islands, virtually any revenue-generating programme is inherently seriously damaging to the environment. There is an urgent need to develop sustainable and environmentally non-damaging programmes that will generate adequate revenue for these islands. Swiftlet nests are valued at well over Rs 100,000/- (US\$ 2000/-) per kg, and under optimal conditions production can be as high as a kilogram of nests per six m² of farm area. Thus, swiftlet farming as well as sustainable harvesting regimes from caves has the potential of becoming a significant earner of revenue in the islands.

Employment

An important offshoot of the production of nests from swiftlet farms is in the processing and packaging of swiftlet nests industry. As each nest has to be cleaned individually by hand, there is tremendous scope for generating employment opportunities, particularly for women. A single worker is able to process and clean about 250 grams of swiftlet nests per day. Thus the scope of employment is directly proportional to the amount of nests produced.

Biological control of pests

Swiftlets are insectivorous, preying exclusively on aerial insects. They therefore play a very major role in the biological control of insect pests.

Recognising the above and considering the following, the State Wildlife Advisory Board, Andaman & Nicobar Islands, under the Chairmanship of the Chief Secretary, A & N Islands, approved in 2001, the implementation of the programme for the in-situ & ex-situ conservation of the Edible-nest Swiftlet in the Andaman & Nicobar Islands.

- a) The Edible-nest Swiftlet is neither globally critical, endangered, or threatened, (BirdLife Red Data Book);

- b) The Swiftlets are not protected under any of the schedules of the Indian Wildlife (Protection) Act, 1972, and that harvesting and trade is permissible under International Laws including CITES;
- c) Under existing Indian laws, the conservation of the Edible-nest Swiftlet is well within the purview of the powers of the Chief Wildlife Warden under the Indian Wildlife (Protection) Act, 1972;
- d) Scientifically managed harvesting regimes of Swiftlets has been recommended by CITES, and accepted by the Conference of Parties, of which India is a signatory;
- e) Innovative conservation strategies are required not only to conserve the Edible-nest Swiftlet but also to provide alternate sources of livelihood for nest collectors, particularly because protection of the species is neither feasible nor practical and is therefore not a pragmatic solution;
- f) The programme is ethically acceptable, as it neither involves the killing of young or adults, nor are the birds constrained in anyway; that Swiftlet nest harvesting is analogous to milking of free ranging cows; and,
- g) The implementation of innovative programmes of sustainable utilisation of natural resources alternate to current development strategies are crucial to the economic development of fragile biodiversity hotspots like the A & N islands;

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alternatives to ATR.

Reduced duration for Inter-Island Water-transportation.

The Crafts which are advanced & modernized versions; may be called as unconventional Catamarans but technically they are named as TRIMARANS, WIGS & SLICE.

TRI-MARANS & TRI-CATS are basically distinctive vessels, which combine an aluminum structure with GRP or FRP (GRP not certified by USCG but certified by MSA, UK); fairing panels for appearance. These vessels have short / long additional center Bow for improved Sea keeping and they can be further fitted with Ride-control-System. They are designed to be driven by three water-jet-engines or caterpillar-diesel-propelled engines each fitted onto tail ends of main hull & auxiliary hulls (can be single or twin-screws).

WIGS are monohull vessels with bird-shaped wings drawn down in the water level as that of vessel's keel-line and same can be fitted with any type of engines either with single or twin-screws.

SLICE: the structure comprises what is essentially a catamaran type vessel with the struts and bulb-shaped hulls below. The two above water demi-hulls are connected by a bridging structure for & aft and the open well can be filled with a non-structural payload module up to 57ft by 43ft; the payload capacity being 50 tonnes. These figures can be varied according to requirements. Machineries are in the forward pods, which have propellers at their aft ends. Engines are coupled to gearboxes with 6:1 reduction & two Lips CP propellers (dia: 7.2ft).

FOIL-CATS: A fine lined catamaran supported on T-foils forward under each hull and a full width aft foil. The aft foil has a center support and two outboard struts which also form the waterjet intakes. Some of these foil-cats have forward struts, which is used for steering.

The Sea-keeping aim for all these above vessels are to permit stable & unrestricted operations up to Sea-state-5 and there is an automatic motion control system; the TASC integrated Ballast & Fin-control system. (Touch Screen Advanced Ship-control System). The combination of a stable ride and high speed made these above named vessels an attractive option for Hawaiian & Tahitian Inter-island ferry-traffics along with ocean-traffics that are plying between any Island-Mainland sectors through the world.

Specifications for the water-borne-crafts, which will be useful for transportation from Port Blair to Northern Islands, can be raised according to the requisition of Marine Department from the data's given below:

Passenger Capacity: 100 to 300

Cargo space for : 100 MT to 300 MT

Speed : 20 to 30 Nautical mile per hour.

These vessels can cover Diglipur within 4 hours & Southern Islands (Nicobar/ Hut Bay) in about 8 hours and they should be brought into the services as early as possible for the reasons stated below

- Modernizing shipping sector as per ISM requirements.
- Reducing time factors & utilizing the same energy.
- Providing much better comfort to passengers at most reasonable rate.
- Minimizing chances of road accidents (ATR) & air pollutions.
- Employment generations for local people by providing specific training.
- To make Islanders enjoy similar facilities as that of Mainlanders.

Voyage between Portblair~Middlestrait (Orolkatcha), Orolkatcha~Kadamtala & Kadamtala~Rangat can be made navigable subject to following factors being taken care of:

- Hydrographic department of Indian Navy should be instructed to conduct thorough underwater survey at regular intervals and provide the same information to Marine department frequently.
- Navigating charts for these areas should be made in large scale & they should be only made in Mercator mode.
- Navigating markings & Bouyage should be accurate to mark Transit-system for maneuvering of the vessels.
- Vessels streaming in this passage should not be more than 65 mtrs. In L.O.A. & Beam should be less than 17 mtrs.
- These crafts need to be fitted with Bow-thruster & preferably should be provided with Twin-screws for advanced maneuverability.
- All the above-mentioned vessels must carry GPS to ascertain their position from time to time & should be provided with ARPA.

Passage between Portblair~Middlestrait (Orolkatcha), Orolkatcha~Kadamtala, Kadamtala~Rangat will be reduced by half duration than what is taken at present.

With the Introduction of Trimarans, SLICE, Foil-Cats, WIGS & Wave-piercing catamarans passage to other Islands will be reduced to as per following table and the incurring cost can also be maintained below than the existing one.

Place	Distance	Duration	Journey Time (At Present) .
Port Blair ~ Rangat	50 Nautical Miles	About 2 hours.	About 7 hours
PortBlair~Mayabunder	75 Nautical Miles	About 3 hours	About 11 hours
Port Blair ~ Diglipur	157 Nautical Miles	About 5 hours	About 13 hours
Port Blair ~ Hutbay	65 Nautical Miles	About 2.5 hours.	About 10 hours
Port Blair ~ Nicobar	170 Nautical Miles	About 8 hours.	About 17 hours

Above chart-table gives an indication of shape of things to come in future that would definitely change the shipping transportation system and the livelihood of people in the A & N Islands.

Interested parties may contact Peeam Enterprises & Constructions at following E-mail address for further details:

papamkjee@rediffmail.com OR mikepijush@hotmail.com Phone : 03192-36628

70m Monohull

Large passenger monohull for open sea routes



Passengers 800
Speed: 35 knots

49m Tricat

Development of commuter catamaran for coastal waters



Passengers 439-463
Speed: 43-46 knots

45m Monohull

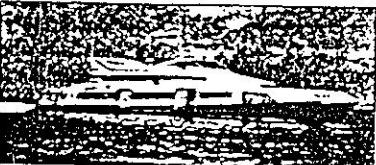
Large, low cost monohull for high density passenger routes



Passengers 500
Speed 35 knots

45m Transcat

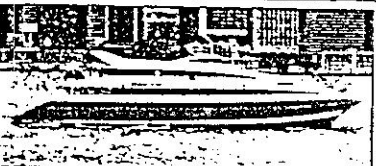
Commuter catamaran for rivers / estuaries, low-wash, very low fuel consumption



Passengers 500
Speed 25-32 knots

45m Tricat

Fastest catamaran in the world with super styling



Passengers 300-430
Speed 36-50 knots

37m Atlantic Class

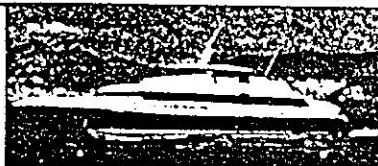
Fastest SWATH in the world in service in open Atlantic



Passengers 350-450
Speed 27-32 knots

36m Solent Class

Fast low-wash catamaran



Passengers 306
Speed 38 knots

35m Monohull

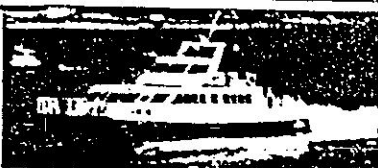
Simple monohull for sheltered waters



Passengers 170-210
Speed 28-33 knots

30m Solent Class

Fast low-wash catamaran - smaller version of 36m Solent Class



Passengers 120-150
Speed 30-38 knots

30m City Slicker

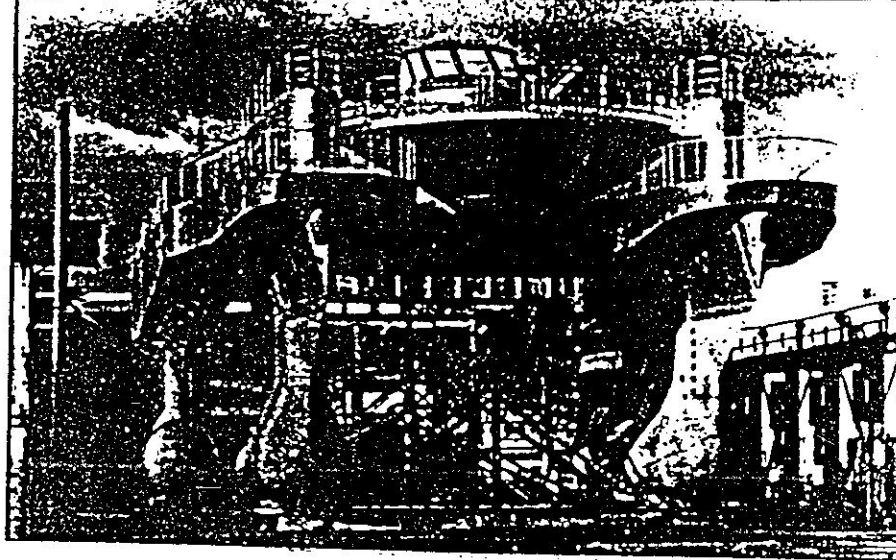
River / estuary low-wash catamaran



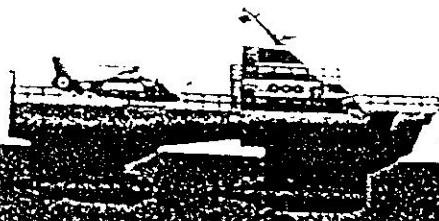
Passengers 105-140
Speed 30-38 knots

L.O.A 37 mtr @ 30 knots (nautical mile) Draft: 4' 27 mtr (full)

Beam 18 mtr in: 6850 HP PRICE: 15 million \$
 Passenger capacity 50 Nos. US\$ 15 million



Government:



- Drug Interdiction
- Coast Guard Search and Rescue Helicopter
- Environmental Cleanup and Oil Spill Recovery
- Pilot Boat

By adding different superstructures, the basic

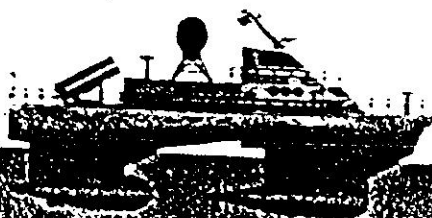
Commercial:



- High Speed Ferry
- Cruise Ship
- Casino Boat
- Offshore Oil Support Vessel

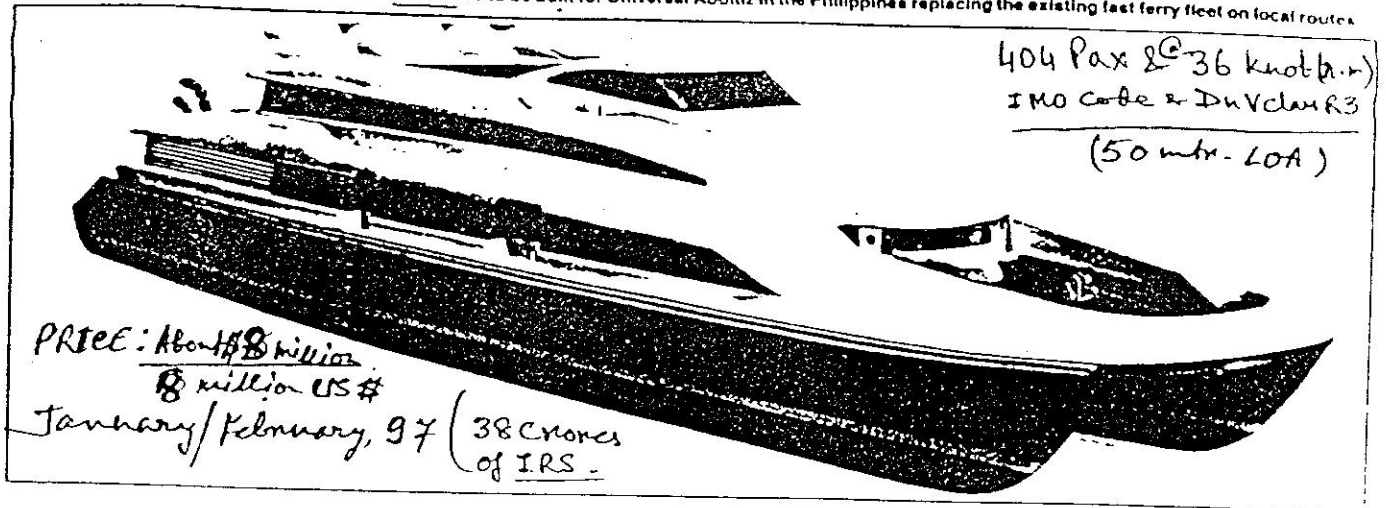
Craft can be reconfigured for military, official, commercial purposes with the good seakeeping as a requirement

Military:

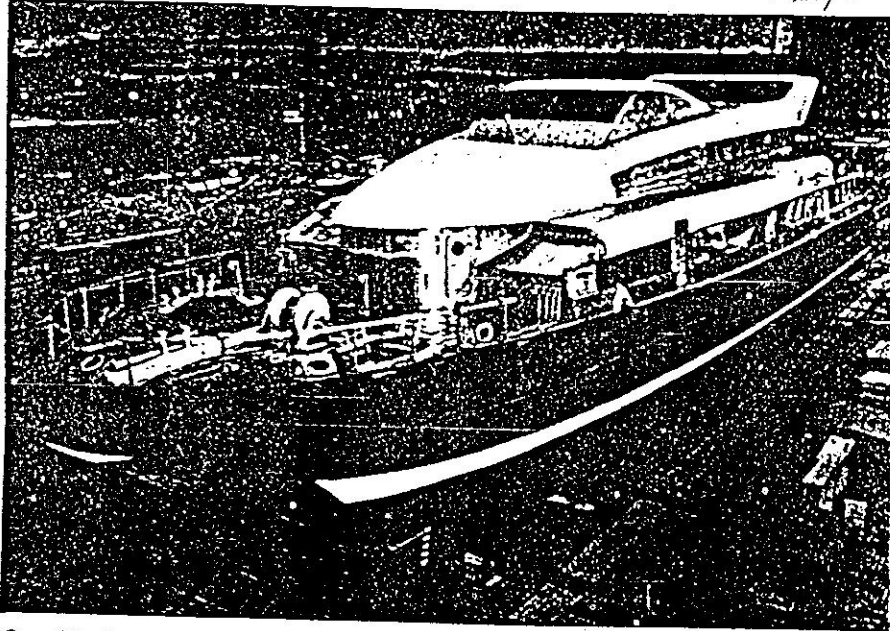


- Missile Launching Platform
- Sonar Surveillance Craft
- AUV / UUV Underwater Vehicle Support
- Test Range Support
- Command, Control, and Communications Platform
- Special Warfare
- Range Support

Four, possibly ten of these 33' not 50 metre TriCats are to be built for Universal Abolitz in the Philippines replacing the existing fast ferry fleet on local routes

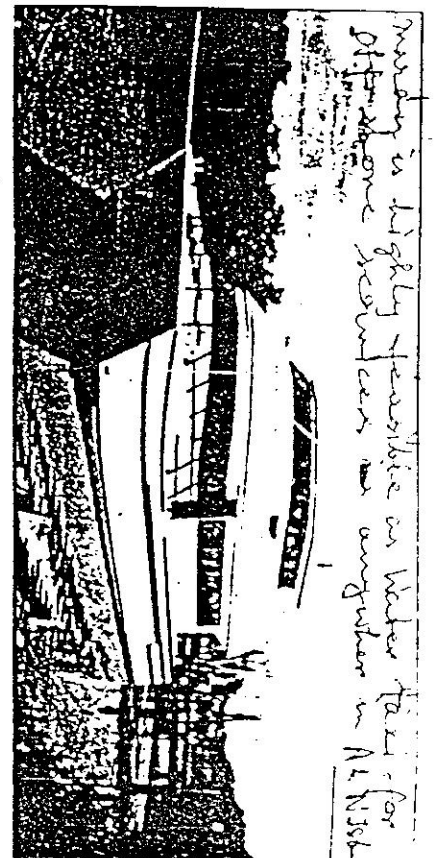
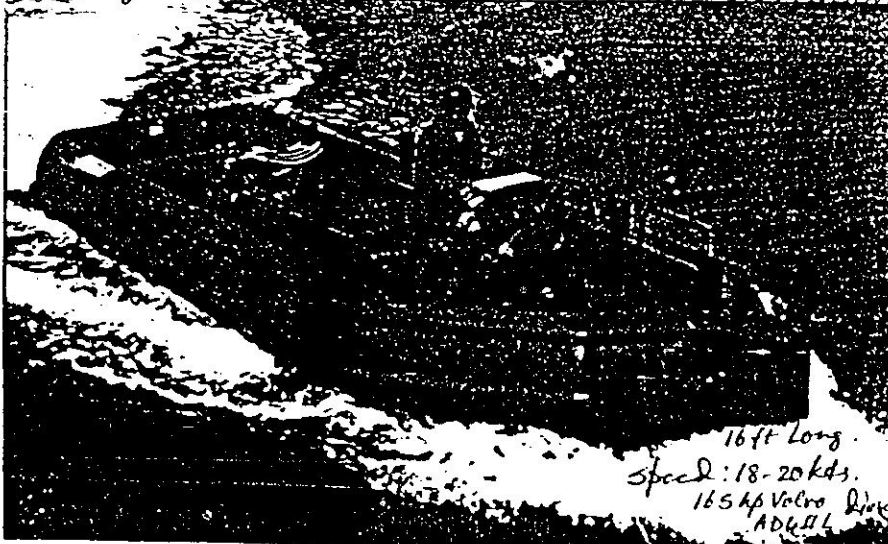


TEU (45 mtr. L.O.A. - 318 Pax & 45 knot nautical mile).

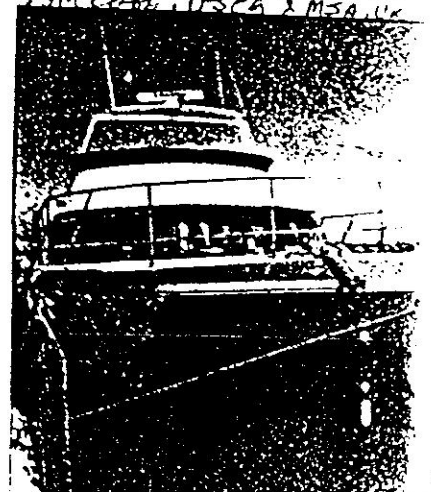


One of the first batch of FBM TriCats under construction. This example was subcontracted to Babcock Rosyth Fabricators in Scotland (hull and superstructure), and BRF have also built four other superstructures.

The robust steel Chalix 2 workboat has RIB-like features. Can be converted to small passenger boat with more length for 100-150 passengers.



Fishing Trimmer: 3/8, 20 Knot.
L.O.A.: 7 to 12 mtrs. Hull: Comb.
of Aluminium with FRP. 15 HP
ISM CODE, USCG & MSA UK



(From Coord Unit, SP Division, Pkg. Commission)

ANDAMAN & NICOBAR ISLANDS :
TRANSPORT SUBSIDY & FOREST-BASED INDUSTRIES

1. The Ministry of Industry, Government of India, had sanctioned a Transport Subsidy Scheme for certain specific areas including A & N Islands (from 1976) for the wood based industries in 1971. Under this scheme, 90% of the cost of transportation of raw material from the main land to the islands and 90% of the cost of transportation of the finished goods to the mainland was reimbursed to the Medium and Small Scale Units by the Ministry of Industry. This notification was amended on 28.7.1993 to benefit wood based industries for a period of 5 years from the date of commencement of commercial production.
2. Based on the recommendations of the Expert Group constituted by the Planning Commission under the Chairmanship of Development Commissioner, Small Scale Industries, Ministry of Industries in November, 1993, an amended scheme for these Islands was sanctioned by Planning Commission as a State Plan scheme under which the subsidy was continued to be paid to the units (irrespective of size) beyond the stipulated 5 years from 1995 to March, 2000. At present 38 wood based industries (3 in medium sector and 35 in small scale sector) are beneficiaries of this scheme which is now operated under 2 separate schemes viz., Island Transport Subsidy Scheme and Inter Island Transport Subsidy Scheme. During the year 1993-99, 28 small scale units and 3 medium scale units were disbursed subsidy to the tune of Rs. 59.67 lakhs and Rs. 312.80 lakhs respectively under Island Transport Subsidy Scheme 1995, while 28 small scale units and 3 Medium Small Units were disbursed subsidy to the tune of Rs. 45.63 lakhs and Rs. 421.14 lakhs respectively under Inter Transport Subsidy Scheme 1995.
3. This issue was discussed during the 1999-2000 Annual Plan discussions for Andaman & Nicobar Islands held on 21-5-99, wherein it was agreed that the "entire structure of subsidies in the islands needed a re-look" after receiving inputs from all concerned on the matter, the following issues are framed for consideration:

Justification for extension:

4. Chief Secretary, A&N Islands has outlined a strong justification for the continuance of the transport subsidy scheme in the islands beyond 31-3-2000. The basic argument relates to the positive direct and indirect economic effects of the subsidy. Chief Secretary has indicated that if the subsidy is suddenly withdrawn, the 38 wood based industrial units that are dependent on the subsidy would be forced to close down. Presently, about 5,000 persons are said to be directly employed by these industries, while indirectly employment of about 50,000 is apparently being generated in ancilliary activities due to the presence of these industries. Further, it has been noted that while the financial burden of the transport subsidy is of the order of Rs. 5 cr. per annum, the annual revenue earnings of the Forest Department from the industries concerned is of the order of Rs. 30-35 cr., while excise duties paid amounts to another Rs. 5 cr. However, it has been noted that the subsidy could be scaled down from 90% to "ultimately 50% in a period of 5 to 10 years after the expiry of the next extension".

Report of DIP&P Working Group

5. Recently, on 6-12-99 Ministry of Commerce and Industry, Department of Industrial Policy & Promotion had set up a Working Group headed by their Economic Adviser to study the issue of extension of the transport subsidy scheme. The report of the Working Group has since been submitted. The basic recommendation of the Working Group is that the scheme of transport subsidy should be extended in the case of J&K, Himachal Pradesh, hill districts of Uttar Pradesh, Sikkim, Darjeeling, A&N Islands and Lakshadweep on the lines of the extension given to the North Eastern Region i.e. upto 31-3-2007. It has also been recommended that the schemes may be transferred to the States along with the commitment to provide adequate funds

Planning Commission views:

6. Planning Commission has observed that the case of A&N is somewhat different from other north-eastern (NE) or hill States. Whereas subsidy may be justified for hill and NE States with a view to encourage industrialization, such subsidy would only increase in-migration of mainlanders to A&N Islands, which is environmentally and economically not desirable. It increases the cost of providing infrastructure and other services. For forest based industries, such a subsidy is even more undesirable, as it increases deforestation. Therefore, subsidy on forest based industries should be phased out. In case the extension of the Transport Subsidy

Scheme in A & N Islands is felt unavoidable, the exact terms and conditions of such an extension would need to be worked out. While the intention should not be to cause any sudden disruption in the economy of the Islands, the scope for scaling down the subsidy element in the scheme over the next few years has to be explored.

National Forest Policy:

7. Annual Plan document pertaining to Forestry sector of the Union Territory indicates that about 1/3rd of forest area is managed for production forestry and about 2100 ha. of area is harvested annually which requires regeneration. There is a separate scheme for logging and utilization with substantial outlay amounting to almost 1/4th of the total proposed outlay for forestry sector. It needs to be seen whether these logging operations are being undertaken on a scientific basis according to approved working plans, what is their impact on the ecology of the U.T., and what are the terms of the MOEF approval to these working plans. National Forest Policy places emphasis on the ecological role of the forests, and on meeting the subsistence needs of the rural community. Meeting the needs of the industry comes much lower in priority. The scheme for subsidization of timber supply to the industry needs to be reviewed in this light.

Cost-Benefit Study:

8. Planning Commission may consider getting an Evaluation Study done focusing on the social and economic benefits and costs to the island economy of the transport subsidy to wood based units, and consider the findings of the study for a subsequent stand-alone review of the scheme.

A study
by ISEC, Blore
has been entrusted
in Dec 2001.

Subsidy Payment Backlog

9. In the financial year 1999-2000 the backlog which was to be paid to the units has been indicated by the Administration to be approximately Rs. 7.92 crores. The demand for the financial year 1999-2000 till 31st December, 1999 is Rs. 8.47 crores. In the plan for the year 1999-2000, there is a provision of Rs. 8.47 crores to be paid as subsidy to these units. A&N Island Administration has requested an additional amount of Rs. 5 crores in the RE 1999-2000 to pay the backlog of demand for subsidy by these wood based units.