

adivasi

been given the lands and resources of the Onge, have not treated them any better. They exploit and look down upon the tribal people. Alcohol was introduced and many Onges have become addicts. This addiction is now exploited – the Onge exchange valuable resources such as honey, turtle eggs, wild boar meat and ambergis for liquor.

Logging operations have also helped open up the forests, encouraging further encroachments into the tribal reserve. Consequently, illegal activities such as poaching have become rampant – resulting in a drastic decline of rare creatures like the monitor lizard, the dugong and the endemic Andaman wild pig. All these creatures are important sources of food and nutrition for the Onge. They also play an integral role in the Onge culture and society. Their unavailability leaves gaps that cannot be filled.

This sense of loss and destruction is being felt acutely by the Onge themselves. They have even articulated this in official forums when given the opportunity.

At a meeting of the District Planning Committee held in Port Blair in November 1998, the Onge representative, Tambolai, complained that settlers living in the areas near their settlement were troubling them. The point he made was that finding wild pigs in the forests was becoming difficult, and hence the timber extraction operations should be stopped. No heed has ever been paid to the real needs of the Onge.

Judicial intervention

The matters of the violation of the tribal reserve in Little Andaman and the rights of the Onge tribal community, were brought to the notice of the Calcutta High Court, Circuit Bench at Port Blair in the Writ Petition No. 76 of 1999, *Kalpavriksh, Society for Andaman and Nicobar Ecology (SANE), a Port Blair based Non Governmental Organization (NGO) and the Bombay Natural History Society (BNHS) v. Union Territory of Andaman and Nicobar Islands and Others*. The petitioners pointed out that there had been severe violations in more than two decades of timber extraction

Chronology of Little Andaman

1901	Population of the Onge	672
1911	Population of the Onge	631
1921	Population of the Onge	346
1931	Population of the Onge	250
1951	Population of the Onge	150
	Italian Anthropologist visits Little Andaman to study the Onge tribe.	
1957	Declaration of the island of Little Andaman as a Tribal reserve	
1961	Population of the Onge	129
1963	Forest dept. (FD) declares Little Andaman a Reserve Forest	
1965	Report by the 'The Inter departmental Team on Accelerated Development Programme for the Andaman and Nicobar islands,' Ministry of Rehabilitation, Govt. of India	
1970	Timber extraction begins in Little Andaman	
1971	Population of the Onge	112
1972	1st amendment to the Tribal Reserve	
	FD assessment of the timber productivity of the forests of the island	
1975	FD initiates work on the oil palm plantation	
1976	Creation of the Andaman Adim Janjati Vikas Samiti (AAJVS)	
	Presentation of the Andaman and Nicobar Forest Plantation and Development Corporation (ANFPDC) proposal for Logging and Forestry operations in Little Andaman	
1977	ANFPDC starts functioning	
1977	2nd denotification of the Tribal Reserve on Little Andaman	
1977-79	More settler families settled in Little Andaman	
1981	Population of the Onge	100
	Study of the Onge by Vishvajit Pandya, an Anthropologist	
1988	Formulation of the National Forest Policy, which makes a special case for the protection of the rainforests of the Andaman and Nicobar islands	
1989	INTACH investigation into the effects of Siltation, Logging, Blasting, other Human Derived Damages to Corals in the Andaman and Nicobar islands	
	Master plan for the tribes of the Islands by S.A. Awaradi	
	Final Amendment to the Tribal reserve	
1991	Population of the Onge	101
1995	Patenting controversy related to Onge knowledge	
	Supreme Court order on forests Writ petition filed in the Calcutta High Court	
2001	Supreme Court stops the cutting of naturally grown trees from the forests of the Islands by S.A. Awaradi Final Amendment to the Tribal reserve	

operations in Little Andaman, and the Onges had been badly affected. Various relief measures were asked for, the most prominent being that all timber extraction in Little Andaman should be stopped.

The respondents in the matter included the Union Territory of the Islands through the Lt. Governor, the ANFPDC, the Andaman and Nicobar Forest Department and the Union of India through Secretary, Dept. of Forests and Environment, New Delhi. They disputed the facts that were presented by the petitioners and in response Justice Ruma Pal and Justice Pinaki Ghose issued an order dated August 31, 1999 which read, '...According to the petitioner... the respondents had resorted to large scale deforestation without any of the safe-

guards provided for by the Supreme Court. The respondent Corporation as well as the Administration authorities have disputed this fact. They have also submitted that the entire issue regarding deforestation in all the states of the country including Andaman and Nicobar Islands was pending before the Supreme Court. It is further stated that the Administration of the Andaman and Nicobar Islands was participating in the proceedings and had filed their affidavits before the Supreme Court. It is stated by the respondent Corporation that the operation of the order dated December 12, 1996 had been subsequently modified by the Supreme Court order on January 15, 1998ⁱⁱⁱ.

In our view that since the matter is pend-

The Colonization of Little Andaman Island

Its impact on the Onge tribal community

Various schemes were proposed under the broad categories of strategy, agriculture, animal husbandry, forest, industry, fishery, water, transport, health, colonization and manpower.

The island of Little Andaman was specially earmarked for a Rehabilitation and Resettlement (R and R) programme, considering many had favourable factors like the fact that it was an island, its few inhabitants (only the Onge), and good natural and forest resources, particularly timber. The committee suggested drastic steps for the development of the Island. The suggestions made for Little Andaman included felling half of the island's forests; preparing a settlement of 12,000 settler families on the cleared land; creation of plantations of coconut, areca, and palm oil; and the use of the felled timber for wood-based industries like saw mills and plywood factories.

Had the plan been implemented fully, it would have destroyed Little Andaman and caused the extinction of the Onge tribe. Fortunately, logistical problems, lack of infrastructure and a revision of policies over time, ensured that the destruction was not complete. However, in the very conception and planning of the development programme, the Onges were sidelined and the violations had begun.

The government team that suggested the development programme ignored the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR), which had accorded the status of a tribal reserve to the entire island of Little Andaman in 1957. Further, about 20,000 hectares (ha) (roughly 30%) of the island were denotified from its tribal reserve status in two stages – in 1972 and 1977 – leaving 52,000 ha as an inviolable tribal reserve.

Indiscriminate logging

In 1976, the Andaman and Nicobar Islands Forest Plantation and Development Corporation (ANFPDC) was formed, and it presented its 'Project

A recent order of the Supreme Court has marked an important watershed in the history of the Andaman and Nicobar islands. For the first time ever, since the British set up their colony here in 1858, timber extraction operations have been stopped and the priceless rainforests have been given a crucial breather.

The Andaman and Nicobar islands are well known for being home to some of the finest rainforests, mangroves and coral reefs found anywhere in the world. The forests here are home to a large number of endangered species of flora and fauna, and have rightfully been recognized as one of the global biodiversity hotspots. Importantly they are also home to six aboriginal tribal communities that have lived here for thousands of years. These include the Nicobarese and the Shompen who are of Mongloid origin and inhabit the Nicobar group of islands. The other four are the Sentinelese, the Jarawa, the Onge and the Great Andamanese who live in the Andaman Islands and are of Negrito origin.

forests and the oceans here (see box titled 'A Precious Heritage').

A powerful two-pronged attack – on the natural resource base that sustains the Onge and on the culture of the community – has over the past three decades slowly but surely pushed the Onges to a point of no return. Though the history of the settlements, and the timber extraction operation in the Andaman Islands in general, is more than a century old, Little Andaman remained completely untouched till very recently.

The story of the Onge people's alienation began in the late 1960s, when the

Government of India planned a massive development and colonization programme for the union territory of the Andaman and Nicobar islands, in complete disregard of the fragile environment of the Islands and the rights of the tribal communities. Till this time the complete island of Little Andaman had belonged only to the Onge. As a part of the

massive development programme, thousands of mainland Indians, refugee families from erstwhile East Pakistan (now Bangladesh) and Tamils from Sri Lanka were settled here.

An 'Inter Departmental Team on Accelerated Development Programme for Andaman and Nicobar,' set up by the Ministry of Rehabilitation, Government of India, submitted its report in 1965. The plans, and more importantly, the thinking and the attitudes of the time were clearly evident in the report – popularly referred to as 'the Green Book.' It prescribed the route for the development of the Islands in general, and Little Andaman in particular.



PANKAJ SEKHSARIA

The story of the Onge

The Onges form a small community of around a hundred individuals, and the 732 sq km of the thickly forested island of Little Andaman is their only home. The community, which has flourished in the island for centuries, is today poised on the brink of extinction. Though not much is known about them, there is clear proof that they have an astonishing depth and diversity of knowledge related to the

The Onges are a community of around a hundred individuals, and the thickly forested island of Little Andaman is their only home. The community... is today, poised on the brink of extinction.

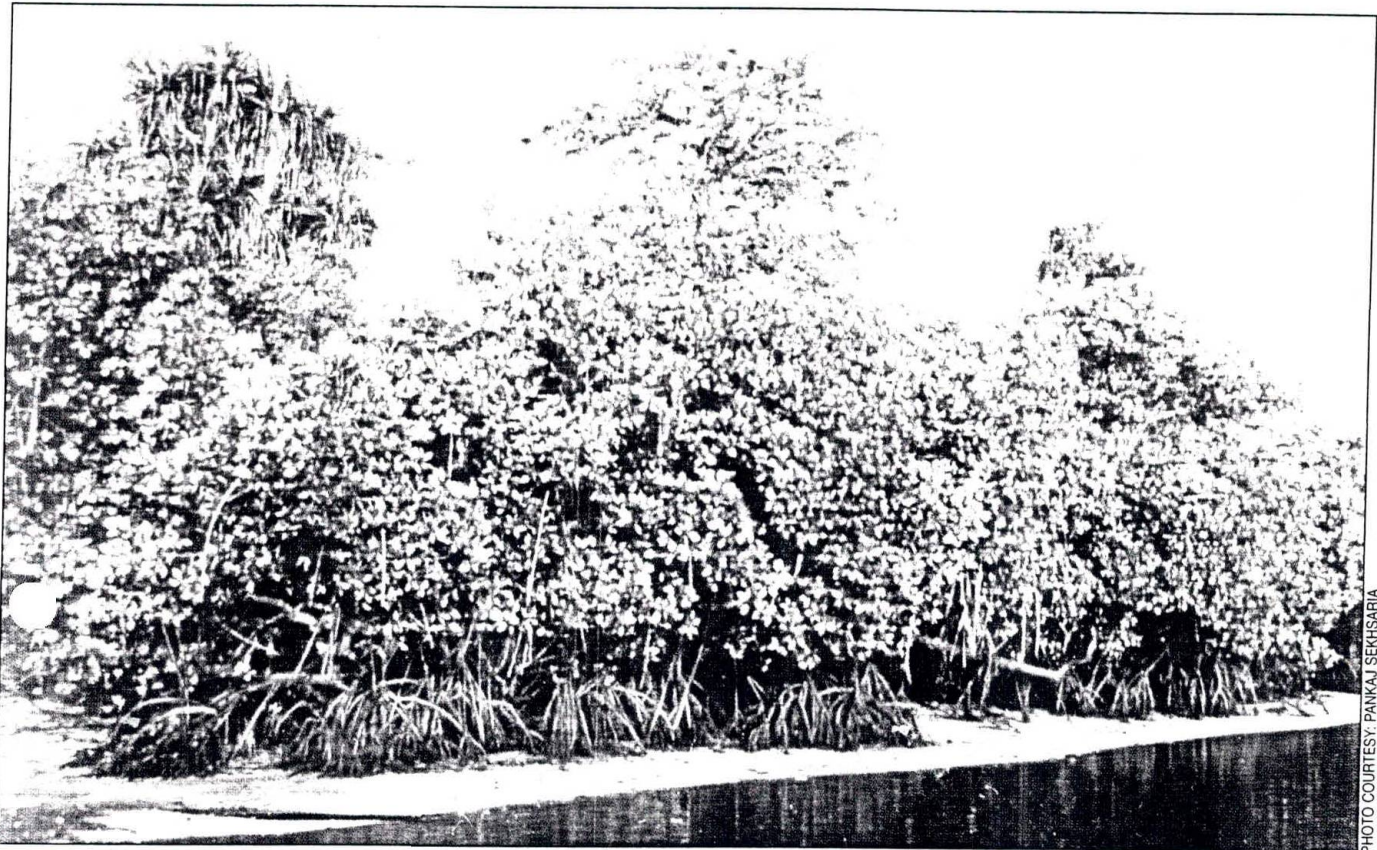


PHOTO COURTESY: PANKAJ SEKHSARIA

Mangrove forests are an important breeding ground for the diverse marine life of the area.

Report for Logging and Marketing of timber from the forests of Little Andaman.' It was estimated that a total of 60,000 ha of the island was available for logging, and that 60,000 cubic metres of timber could be extracted annually from 800 ha. Of the denotified area, 19,600 ha were handed over to the ANFPDC, and timber extraction began in 1977.

The idea of logging from 60,000 ha of the forests of Little Andaman was another clear violation of the Onge tribal reserve. When 52,000 ha of the island's total area of 73,000 ha was already a tribal reserve, how could 60,000 ha be made available for logging? Statistics also show that the area logged and timber actually extracted was in excess to what had been permitted.

Significantly, though the ANFPDC started extracting timber from the forests of Little Andaman in 1977, a lease agreement was signed between the Corporation and the Forest Department only in 1987, for a period of 30 years from 1977 to 2007. This matter of the lease was the subject of a very pertinent observation of the Calcutta High Court, Circuit Bench at

Port Blair in the case FMAT No. 3353 of 1995. Range Officer, *Andaman and Nicobar islands Forest Plantation and Development Corporation and others v. Sushil Dhali*, a resident of Ramkrishnapur of Hut Bay in the island of Little Andaman. The matter was related to a case of encroachment in the Reserve Forest area of Little Andaman by Sushil Dhali. In his order dated May 30, 1996, Justice B.P. Banerjee observed regarding the lease agreement between the FD and the ANFPDC, '...We are at a loss to understand how under the law of contract or under any other law for the time being in force the government could grant lease in 1987 with retrospective effect from 1977. The grant of lease with retrospective effect by the state authorities in favour of a Corporation is not permissible under the law...' In spite of this observation of the Court, the lease has continued to be operational till today

The other important issue related to logging in Little Andaman was the absence of a Working Plan.ⁱⁱ When this was pointed out in 1999, the FD and the ANFPDC

maintained that a Project Report (mentioned above) had been prepared by them in 1976, and since it had been approved by the Central Government, there was no need to draft a Working Plan. A look at the Project Report makes it clear, however, that it is extremely sketchy, and merely an excuse for the continued logging operations. In no way does it meet the needs of a Working Plan. A comparison of this Project Report to any of the Working Plans for other parts of the Andaman Islands, makes this amply clear. Significantly, the Deputy Conservator of Forests – Working Plan (DCF-WP) of the Andaman and Nicobar Forest Department, was also working on the preparation of the Working Plan at the same time that the Department was denying the need for one. In light of this fact it seemed amply clear that the continued timber extraction in Little Andaman, in the absence of a Working Plan, was violative of the Interim Order of the Supreme Court, dated December 12, 1996 in the Writ Petition (Civil) No. 202 of 1995, *T.N. Godavarman Thirumulkpad v. Union of*

India and Others, which said that, 'the felling of trees is to remain suspended in accordance with the Working Plans of the State Governments as approved by the Central Government ...'

Another very serious violation was committed by the ANFPDC. There was clear evidence that it had logged timber from within the boundary of the tribal reserve, making a mockery of the law and the rights of the Onges. Maps available with the ANFPDC and the Forest Department have logging coupes, dated 1990 onwards, marked clearly within the tribal reserve.

Resttlement of outsiders

Even as these violations occurred, thousands of outsiders were settled in Little Andaman since the 1970s. The settler population grew rapidly: from a few hundreds in the 1960s to 7,000 in 1984, and over 12,000 in 1991, displacing Onges from some of their most preferred habitats. Hut Bay, the main town in the Island, is an example. The ratio of the number of outsiders, with respect to the number of Onge in Little Andaman, has changed drastically against the interests of the Onge.

The Andaman Adim Janjati Vikas Samiti (AAJVS), the official tribal welfare body of the administration, introduced welfare measures that were completely unsuitable for the Onges. Foodstuff such as rice, *dal*, oil and biscuits were introduced to a community whose traditional food included the meat of the wild boar and turtle, fish, tubers and honey. The agency even offered each adult 250 gm of tobacco as a 'welfare' measure. In a blatant attempt to move the forestry operations deeper into the forests of Little Andaman, authorities sought to settle the nomadic Onges at Dugong Creek in the North East of the island, and in South Bay at the southern tip. Wooden houses on stilts, with asbestos roofing were constructed for them at these places. These structures were not suited for the hot and humid tropical environment of the Islands. The Onge preferred to live in their traditional huts in the forest nearby.

Attempts were made to introduce a cash

PHOTO COURTESY: PANKAJ SEKHSARIA



Jellyfish in the seas off Port Blair.

economy in the community, which did not have even a barter system. Ill-conceived schemes, such as the raising of a coconut plantation (in which the Onge were made workers), cattle rearing (the community does not consume milk) and pig breeding, were introduced. All of them failed.

A visit to the Onge settlement of Dugong Creek has become mandatory on the VIP itinerary. Not only are the Onge expected to perform for the pleasure and entertainment of the VIP, they are also put to work to tidy up the settlement.

The settler communities, which have

TROUBLED ISLANDS !

Writings on indigenous peoples and the
environment of
Andaman & Nicobar Islands, India

Pankaj Sekhsaria

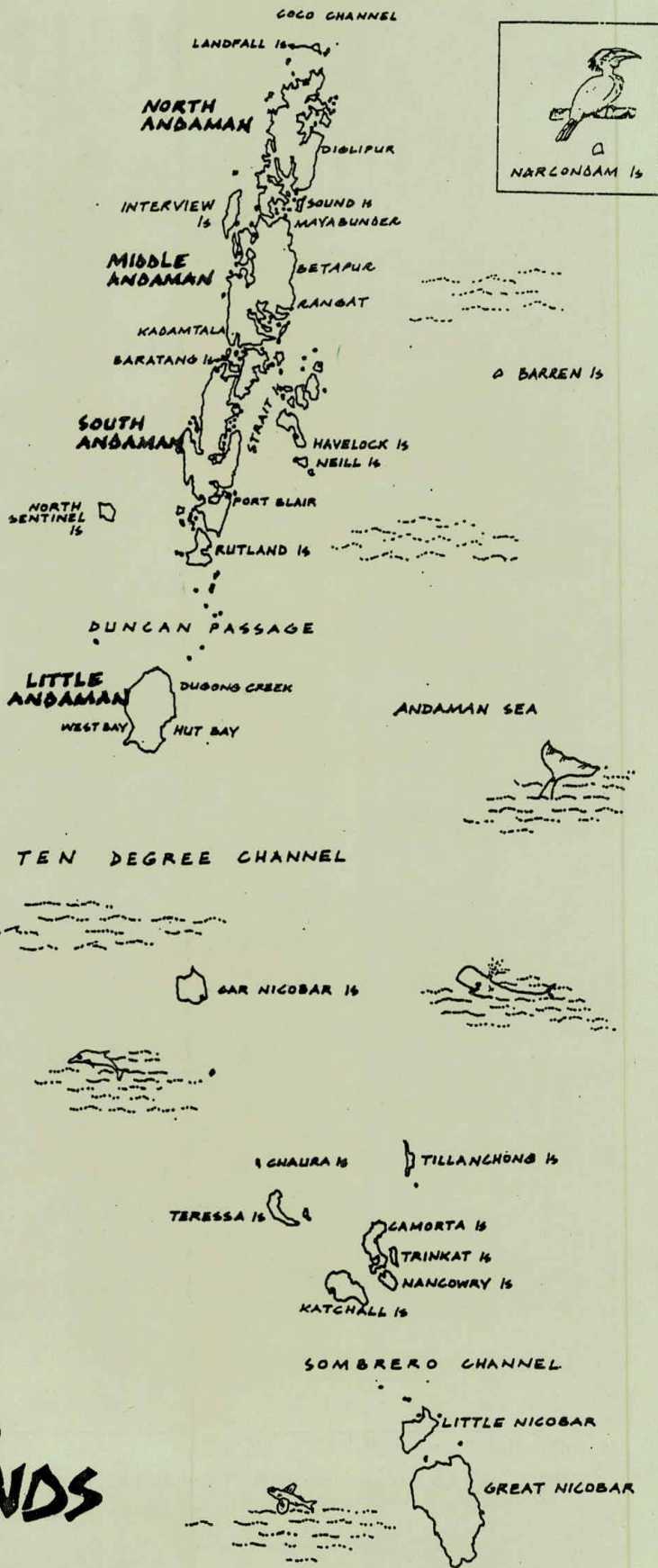
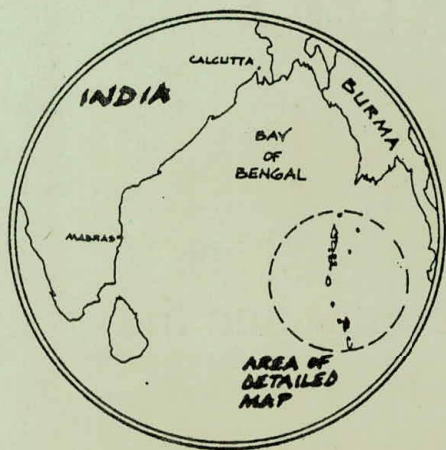
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ANDAMAN AND NICOBAR ISLANDS

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LIST OF ARTICLES

- 1) Jarawa excursions.
- 2) Embracing disease
- 3) Delivering the Jarawas.
- 4) A people in peril
- 5) Deforestation in Andaman and Nicobar: Its impact on Onge.
- 6) Logging off, for now.
- 7) A history of alienation.
- 8) The new millenium tamasha
- 9) Turtle tales.

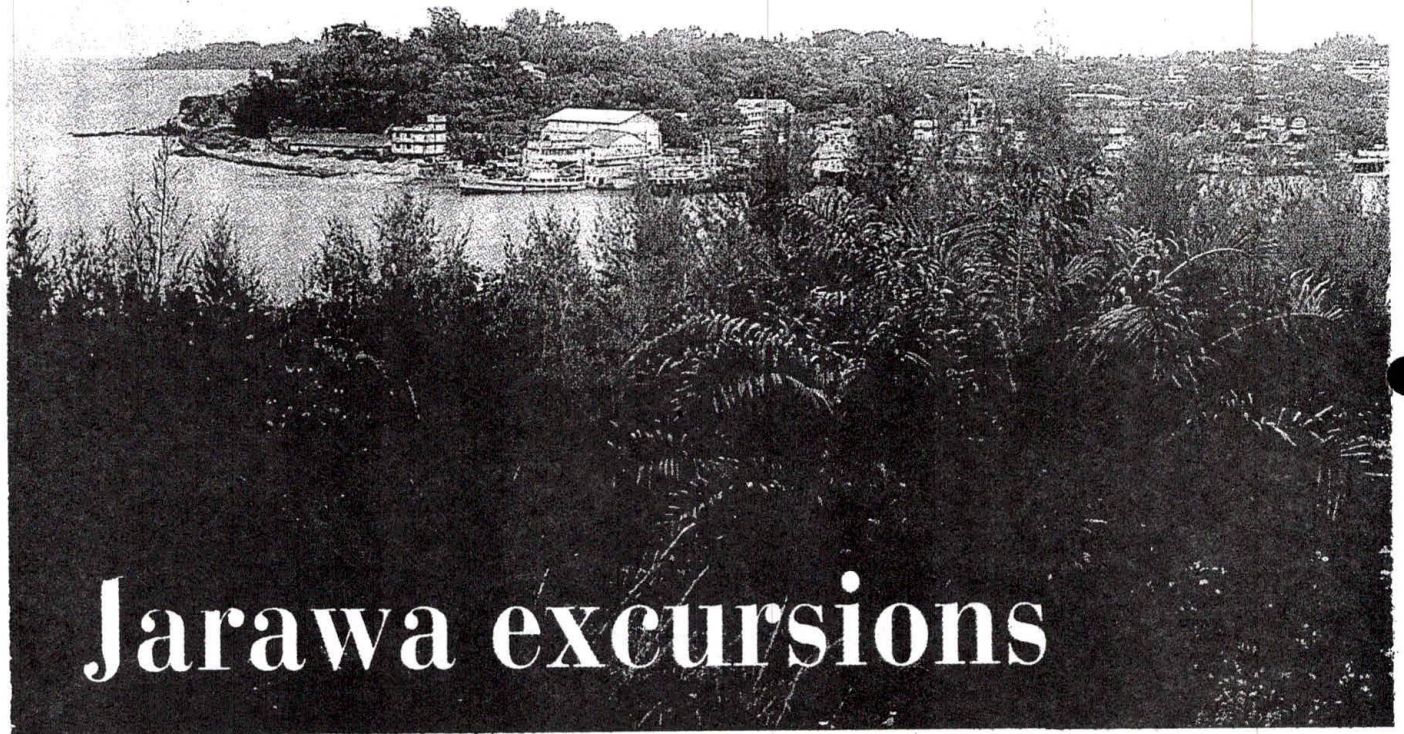
About this Compilation

Over the years there has been a reasonable amount of anthropological and academic work on the hunter-gatherer communities of the Andaman & Nicobar islands. At the same time, however, the threat to the survival of these small communities has intensified as development policies that were completely insensitive to their have been conceived, prepared and implemented here.

Little, if any, research or publication in the mainstream Indian media has been seen on this aspect of the islands in the last few decades.

Troubled Islands! is a compilation of articles since 1998 on precisely these issues. It is perhaps the most comprehensive contemporary account of the situation in the islands from a non anthropological point of view. The articles were first published in leading Indian publications that include *Frontline*, *The Hindu* and *Economic and Political Weekly*. They look at some of the key issues faced by the indigenous peoples of the islands today and follow in detail some of the major developments that have taken place over in the last few years.

■ INDIGENOUS PEOPLE



Jarawa excursions

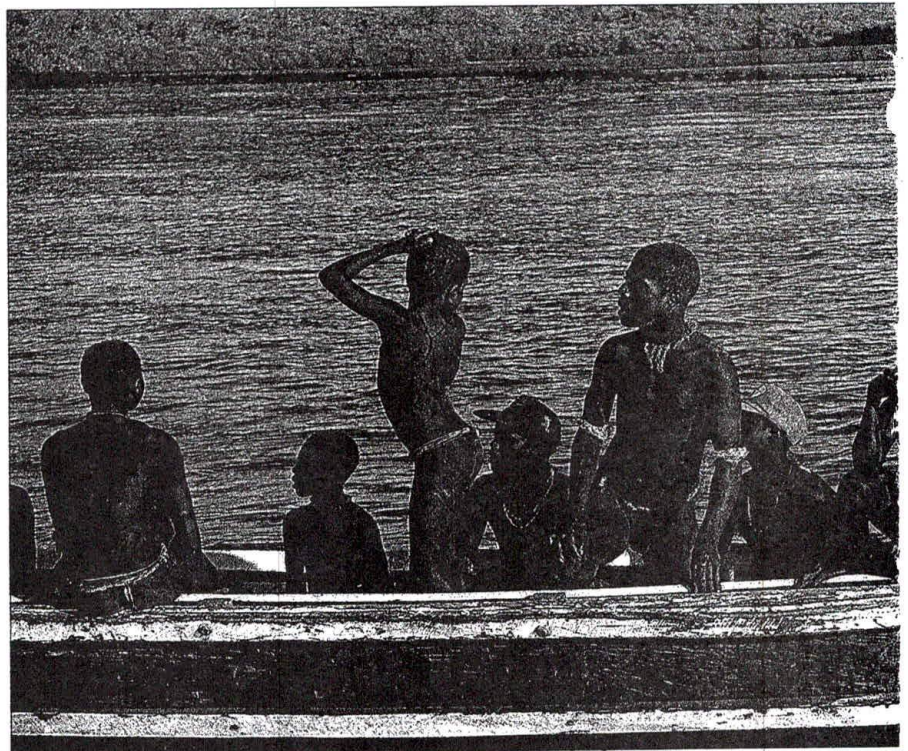
Members of the dwindling Jarawa tribal community in the Andaman and Nicobar Islands are stepping out of their forest habitats for the first time. What is in store for them?

PANKAJ SEKHSARIA

PANKAJ SEKHSARIA

IN October 1997, settlers in the Middle Andaman island, one of many that make up the Andaman and Nicobar Islands in the Bay of Bengal, were witnesses to an unfamiliar sight: a group of Jarawas, one of six aboriginal tribal communities that have lived on the archipelago for centuries, had ventured out of the forest and into modern settlements. This was the first recorded instance of Jarawas voluntarily seeking to establish contact with the settlers from mainland India. It was particularly puzzling given the fact that Jarawas have for long been hostile towards the settlers, to whom they have lost large swathes of their forests, and the tribal people have fiercely defended what is left of their traditional lands.

Over the next few months, there were several more reports of Jarawas coming out of their forests. Some of them, it was reported, were seen to point to their bellies: these were interpreted as expressions of hunger. In the belief that they had run



N. SRINIVASAN

out of their traditional food resources in the forests and were facing starvation, the local administration, led by Lieutenant-Governor I.P. Gupta, arranged for food relief. Packets containing dry fish, puffed rice and bananas were air-dropped from helicopters into Jarawa territory.

The natural resources that Jarawas have had access to have vastly diminished over time for a number of reasons, including widespread deforestation to accommodate settlers and to feed the flourishing timber industry. Even so, the theory that starvation is driving Jarawas out of the forests appears to be flawed. Jarawas have sustained themselves on forest produce for centuries, and there is no reason to believe that they have suddenly been pushed into starvation. In any case, eyewitnesses say that the Jarawas who were sighted recently appear to be healthy, robust and agile.

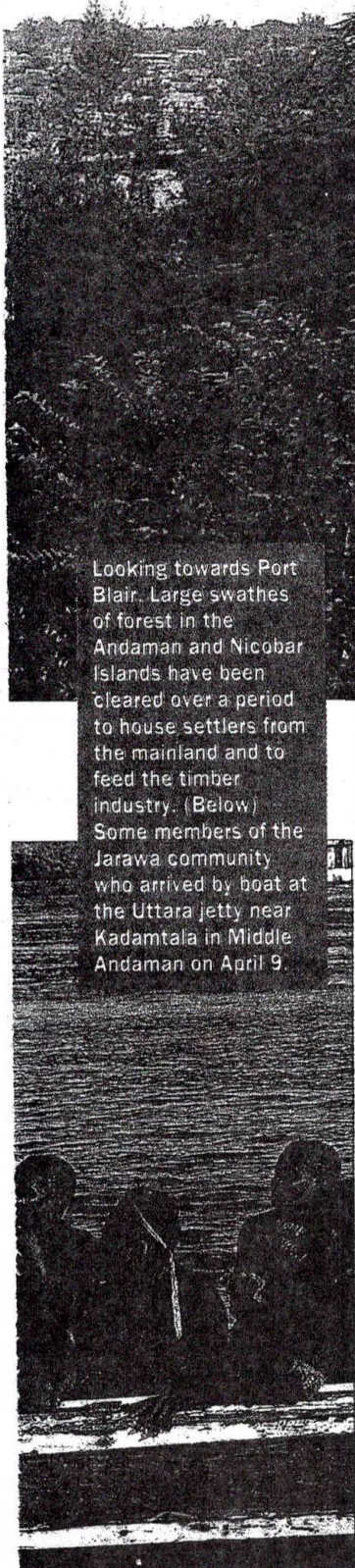
Moreover, in February and March, no person from the tribal community approached the settlements for extended periods, that is, for more than two weeks. And when they did show up, it was often in small groups of five to 10 persons.

Anthropologists, however, have another explanation for the Jarawas' curious "coming out". It relates to the experience of Enmey, a teenaged Jarawa boy, who was found with a fractured foot near Kadamtala town in Middle Andaman last year. The local residents, most of them settlers, arranged for his treatment at the G.B. Pant Hospital in Port Blair, where he was looked after well. When Enmey recovered, he was sent back to Middle Andaman, where he promptly disappeared into his forest home. Since October, it is Enmey who has largely been responsible for bringing his people out.

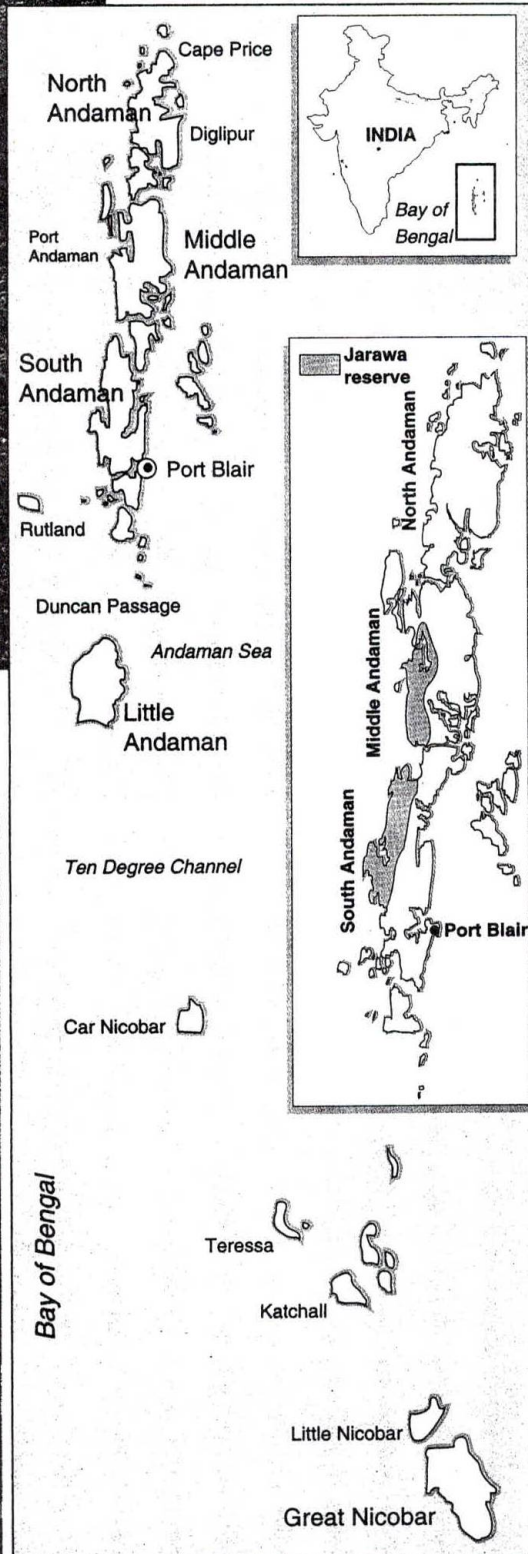
Anthropologists explain that Enmey developed a cultural affinity to the outside world: in their view, Enmey perhaps wanted others in his community to experience the settlers' hospitality that he had had a taste of. It is this, and not starvation, that had drawn the Jarawas out of the forests, they reason.

THE forests of the picturesque Andaman and Nicobar Islands are home to six tribal communities. The Andaman group of islands are inhabited by four tribes of Negrito origin: the Great Andamanese, the Onge, the Jarawas and the Sentinelese. The Nicobar group is home to two tribes of Mongoloid origin: the Nicobarese and the Shompens. Precisely when and how members of these tribes came to inhabit the islands is not known.

What is known about them is that their limited contacts with other peoples have rendered them aggressive and hostile towards outsiders: they fiercely defend themselves and their space. Many



Looking towards Port Blair. Large swathes of forest in the Andaman and Nicobar Islands have been cleared over a period to house settlers from the mainland and to feed the timber industry. (Below) Some members of the Jarawa community who arrived by boat at the Uttara jetty near Kadamtala in Middle Andaman on April 9.

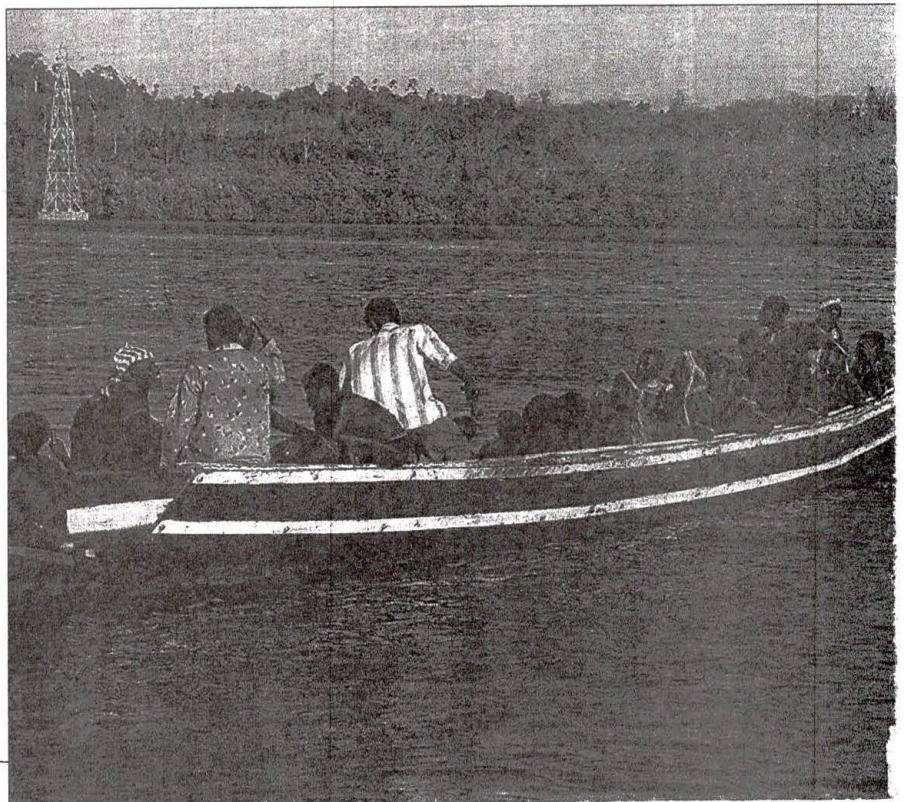


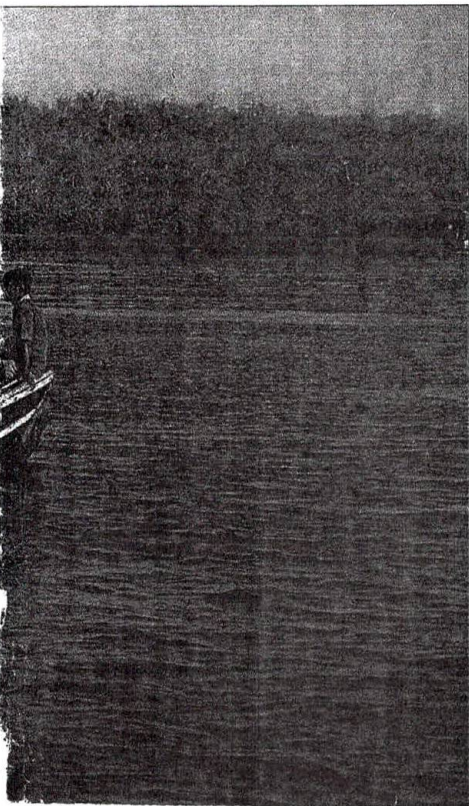
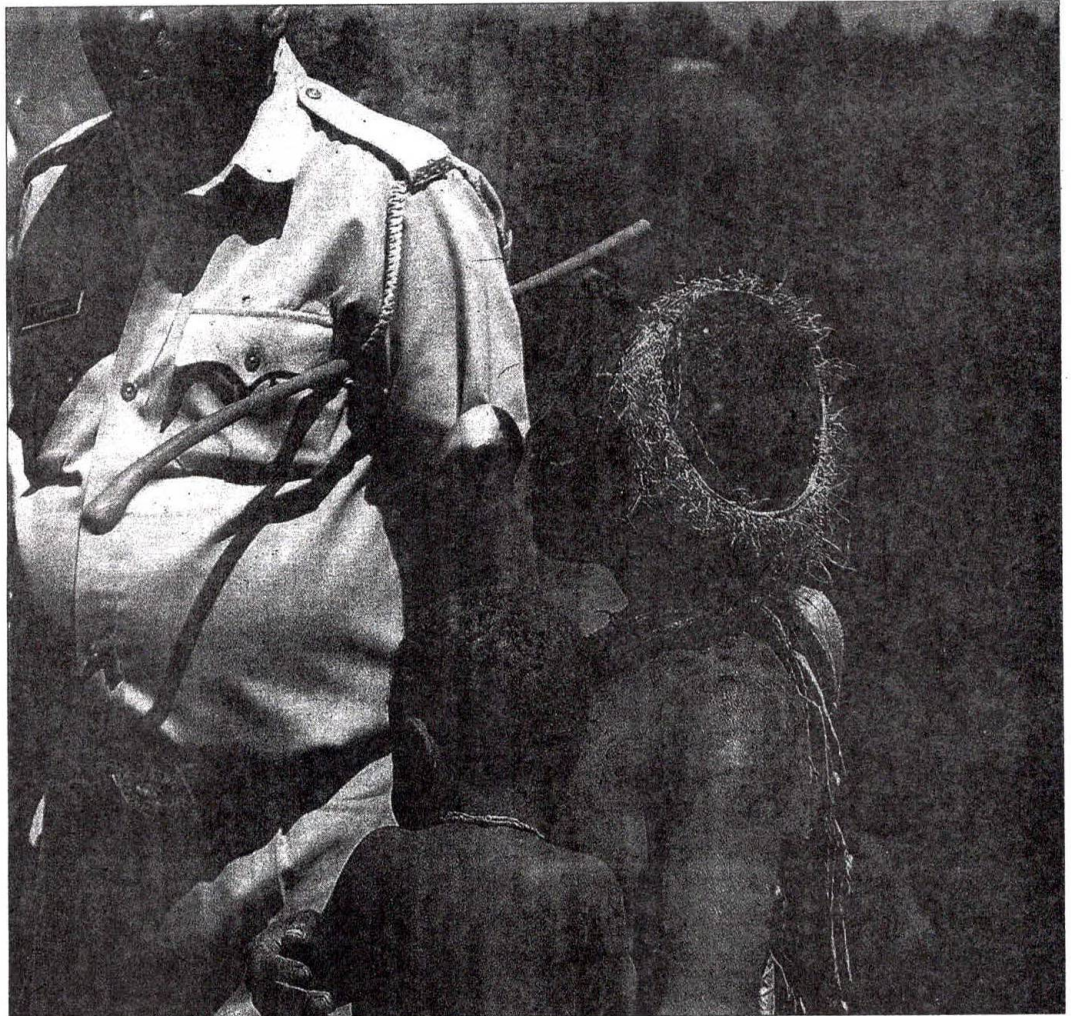


members of the tribes were forcibly taken as slaves by Arab seafarers who traded along these routes.

The establishment of penal settlements – the infamous Cellular Jail – in the islands by the British in 1858, Japanese occupation during the Second World War and independent India's colonisation and resettlement plan for the islands had the effect of further isolating the tribal communities.

The population of the islands, which was about 24,500 in 1901, is nearly four lakh today; however, the populations of the tribal communities (except the Nicobarese) have dwindled (see box). Only the Sentinelese and the Jarawas have been able to retain a semblance of their identity. The Jarawas, however, are under severe pressure. Today there are only 250 of them and vast expanses of their rain-forest homelands have been cleared to accommodate settlers and to feed the huge timber industry, on which the economic foundation of the Andamans is laid.





(Above left) Watched by curious settlers, the Jarawas wait at the jetty; (above) a Jarawa woman and her child have a brush with authority; (left) after receiving a gift of coconuts and bananas, the Jarawas head back home.

In order to protect the Jarawa way of life, a Jarawa tribal reserve was established over a 700-sq-km area: the objective was as much to keep the tribal population confined to the reserve as to prevent settlers from encroaching into it. Along the periphery of the reserve, 44 bush police camps with about 400 policemen were established. Over time, however, several encroachments were made and the function of the police force has been reduced to confining the Jarawas, who once roamed the length and breadth of the island unhindered, to the reserve area.

The 340-km-long Andaman Trunk Road, which slices through the heart of the Jarawa reserve, has opened up more areas for settlement. Right from the beginning, the Jarawas had protested against the construction of the road on the ground that it would endanger their way of life. They set up road blocks,

demolished bridges and even attacked – and occasionally killed – the workers. Work came to a halt in 1976, but was resumed soon. Traffic on the road, which was completed recently, has grown enormously.

Today, many more settlers live in the areas bordering the reserve, thereby increasing manifold the possibility of interaction – and conflict – between them and the Jarawas. Instances of people trespassing into the reserve to hunt wild boar and deer, and to poach forest produce such as honey and timber, are common. At times, the trespassers destroy the rudimentary settlements of the Jarawas. In addition, many illegal encroachments have come up in the reserve area with political patronage.

OVER the years, the island administration has tried to establish friend-

The lost races

PANKAJ SEKHSARIA

OF the six aboriginal tribal communities that originally inhabited the Andaman and Nicobar Islands, at least two – the Great Andamanese and the Onge – fell victim to the march of civilisation and everything that came with it.

The Great Andamanese, who had lived in an insular world for centuries, were the first tribal community with whom the British established contact. The Onge, who lived on the Little Andaman, were the next. Both communities suffered the ill-effects of this influence. Epidemics of diseases such as pneumonia (which broke out in 1868), measles (1877), influenza (1896) and syphilis killed hundreds of Great Andamanese. The tribal people had no resistance to these diseases, which they contracted from outsiders.

The Great Andamanese are today virtually extinct. In the early part of the 19th century, their population was estimated to be around 5,000; today, there are only 28 of them.

The Onge have fared only marginally better. Their population has dwindle

Population trends (in the Andaman & Nicobar Islands)

Year	Total population	Andamanese	Onge
1901	24,499	625	672
1911	26,459	455	631
1921	27,080	209	346
1931	29,476	90	250
1951	30,971	23	150
1961	63,548	19	129
1971	1,15,133	19	112
1981	1,88,745	25	100
1991	2,80,661	28	101
1998	4,00,000 (estimated)		

Note: Population data in respect of the Jarawas and the Sentinelese are unavailable because members of these tribal groups have in the past resisted any attempts to establish contact with them.

dled from 600 in 1901 to about 100 today. Since the 1960s the Onge homeland in Little Andaman was cleared of its verdant forests to house thousands of settlers from mainland India. A large-scale timber extraction operation was also started. Attempts are on even today to confine the Onge people to two small settlements so that the rest of the island, which is still a tribal reserve, can be opened up further.

Alcohol, which was introduced to

the Onge people by the settlers, has extracted a heavy toll. Settlers use alcohol, to which many among the Onge people have become addicted, to exploit them. The Onge give away resources such as honey, ambergris, and turtle eggs for the ubiquitous bottle, popularly known as 180.

Thus two hardy races, which flourished for centuries in these islands, have been swept aside by the tides of "civilisation". ■

ly contact with the tribal communities (*Frontline*, August 17-30, 1991), including the Jarawas. In 1974, a contact party comprising administration officials, members of the Andaman Adim Janjati Vikas Samiti (AAJVS), anthropologists

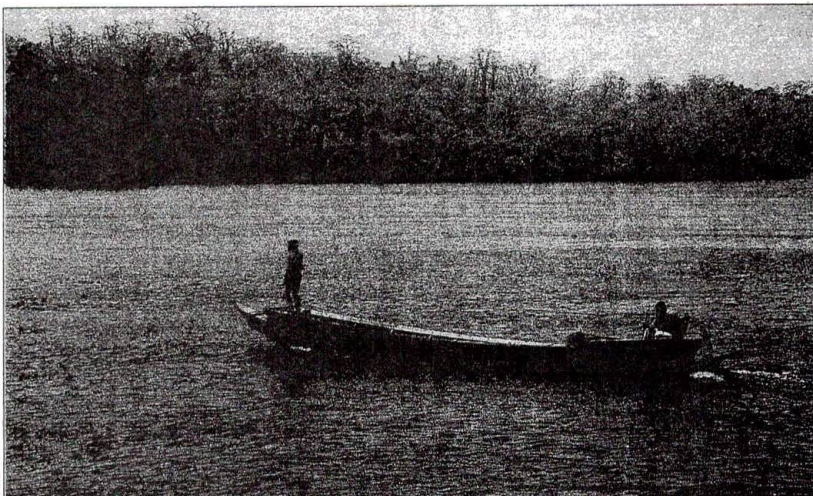
and police officials, established friendly contact with some members of the Jarawa community along the western coast of Middle Andaman. The party approached the Jarawa territory by sea and left behind gifts – bananas and coconuts – hoping to

win the confidence of the tribal people.

Critics, however, liken this to the practice of scattering rice to ensnare birds. They argue that the official policy *vis-a-vis* the tribal people is aimed at making them dependent on the administration. The pattern of the Jarawas' recent behaviour appear to bear this out: increasingly, the Jarawas who emerge from their jungles do not leave unless they are gifted bananas and coconuts.

The Jarawas have never allowed anyone access to their territory by the land route; nor, until October 1997, had they ever emerged voluntarily and unarmed from their forest homes or initiated any interaction with the outside world. Last year's development is therefore very significant, but the administration has not always responded with sensitivity to the Jarawas' needs. An incident which this writer witnessed on April 9 illustrates this point.

At 8 a.m. that day, 63 Jarawas, the largest group yet to emerge from the jungle, arrived at the Uttara jetty near



Enmey (standing), the Jarawa teenager who is believed to have played a major role in bringing people of his community out of the forest to meet the settlers.

Kadamtala. Among them were several children and women with babies. It is, of course, true that the administration has no way of knowing where and when the next group of Jarawas will turn up or just how many of them will be there; but even so, there appeared to be little evidence of planning for such contingencies.

Until such time as coconuts and bananas could be arranged for the Jarawas, they were herded into a small waiting hall at the jetty and made to wait on that hot, sweltering day without food or water. The only people at the jetty who seemed equipped to handle the situation were a policeman and three boatmen who knew some of the Jarawa people. But after a while, when the Jarawas grew restive, even the boatmen ran out of ideas. Things got a bit rough, and there was a fair bit of shoving and pushing around, which the fiercely independent Jarawas resented.

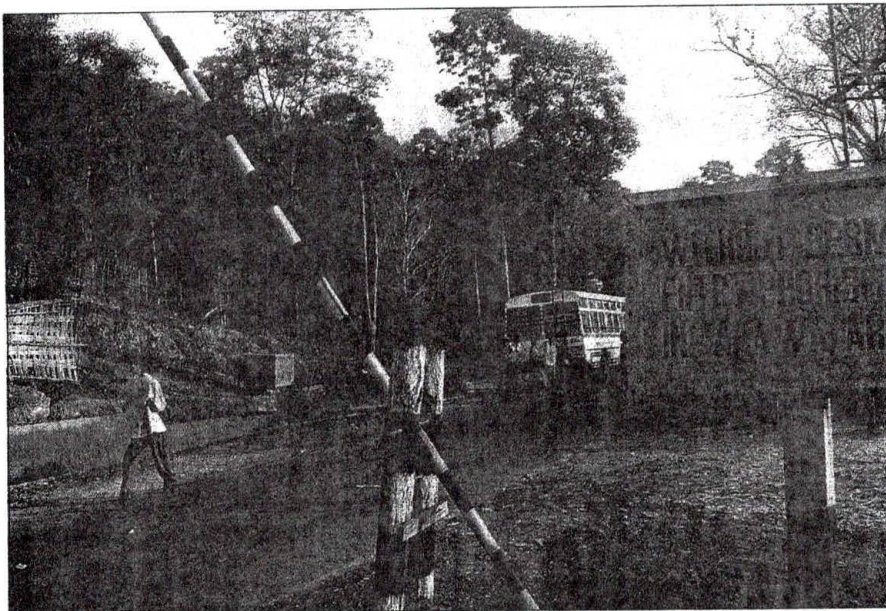
The consignment of coconuts and bananas that the local police had organised arrived around 2 p.m. Each person in the Jarawa group was given two coconuts and a bunch of bananas; the entire group was then put on boats and, escorted by armed policemen, taken back into Jarawa territory.

At the other end, however, more trouble was in store. Just as one of the boatmen was about to return, some of the Jarawa youth, who were evidently incensed by the way they had been treated that afternoon, seized the boatman's bamboo pole as he was pushing his boat into the river and tried to haul him ashore. The shaken boatman said later that evening: "I have interacted with the Jarawa people for 12 years, but for the first time in my life I was afraid. I did not know what they would do to me."

However, some of the older women of the tribe, who had known the boatman for long, admonished the youth and forced them to let him go.

Had any bodily harm been done to the boatman, the consequences would have been unpredictable: the settlers, already restive over the constant "intrusion" by Jarawas, might well have retaliated violently.

Administration officials admit in private that they are unable to do anything to ease the tension between the tribal communities and the settlers. The two groups are locked in a tussle over land rights, and the atmosphere has been vitiated by some administrative policies of the past. The Jarawas, as the original inhabitants, have the first right over this land, but not many people are willing to concede this. The ten-



At Jirkatang, the entry point to the Jarawa tribal reserve. All vehicles that enter the reserve are provided with armed guards from this point onwards. (Below) Modern settlements on the edge of the Jarawa reserve. The Andaman Trunk Road, which cuts through the reserve, has opened up more areas for settlement.



sion can be eased if the settlements of the outsiders are removed from in and around the Jarawa territory. But this requires tremendous political will and understanding, which is absent.

If anything, the weight of political support is on the side of the settlers, as is evident from a statement made in the Lok Sabha in 1990 by the Congress(I) member of Parliament from the islands, Manoranjan Bhakta. He said: "... Job-seekers (settlers) who have come (to) the island are now serious contenders for allotment of house sites and agricultural

land. Since the political system goes with the number, no political party is in a position to contradict their demands."

The numbers, clearly, are working against the Jarawas. After all, 250 individuals do not count for much in the political system. For the Jarawas, however, this battle is not about political power; for them it is literally a struggle for survival and against extinction. And if their land rights and other needs are not respected, they might very soon go down as another of the lost races of humankind. ■

EMBRACING DISEASE

In October 1997, a new chapter began in the history of the remote and ancient tribe – the Jarawa of the Andaman islands. From being a hostile, uncontactable community, they took their first step out of their remote forest home- to interact with the ‘settlers’, the people from mainland India who have settled along the forests that are their home.

In August earlier this year, less than two years since they first stepped out, the worst had begun with the death of a young woman of the community that is presently afflicted with a severe epidemic of measles and other infections. The first death was reported on 16th August, with the death due to acute broncho-pneumonia of a young Jarawa woman nick-named Madhuri by the Andaman Adim Janjati Vikas Samiti (AAJVS). It however took more than a month for the news to come out when around 30 Jarawas were admitted to the GB Pant Hospital on the 21st September. At the time of going to press, 59 Jarawas of the estimated population of 300 were in hospital suffering from measles, post measles broncho-pneumonia infections and conjunctivitis. There also is the possibility that pockets of infection remain deep in the forest and more of the tribe members may get infected. “It could well be the beginning of the end”, says Samir Acharya of the Society for Andaman and Nicobar Ecology (SANE), the 1st bring the episode to light.

What is very worrying is that the history of the Andaman & Nicobar Islands is replete with the decimation of such tribal communities by diseases that they contracted after contact with the outside world. The most chilling example is that of the Great Andamanese. Hundreds of them died in epidemics of pneumonia in 1868, measles in 1877 and influenza in 1896. Combined with other factors like massacre by the colonial powers and the shrinkage of their forest habitat because of deforestation and settlements, they were reduced from a population of around 5000 in the earlier part of the 19th century to less than 30 today. A similar devastating outbreak of measles has also been reported amongst tribal communities from around the world, the better known being that of the Nambikuara tribe from Brazil. Following an epidemic in 1945 the 10,000 strong community was reduced to less than 600 individuals.

The outbreak of the disease is an outcome of the policies and attempts of the administration to establish friendly contact with this hostile community, that had always shunned any interaction with the outside world. There still are opinions that the Jarawas should be assimilated into the modern world, but it is clear, that it is exactly this contact with the outside world that is rapidly pushing them towards annihilation.

Also the most pressing question is what should be done now? The present medical treatment is only going to work in the immediate short term, and more concrete, sustainable steps are urgently needed if further outbreaks of even worse diseases like TB or Hepatitis are to be avoided. One of the biggest vectors of outside intervention into the Jarawa territory

is the Andaman Trunk Road (ATR) that connects Port Blair to the north of the islands. The ATR cuts through the heart of Jarawa territory and has been the single most significant factor in bringing in more outsiders closer to the forest home of the Jarawas and the Jarawas themselves. It has encouraged encroachments into and exploitation of resources from inside the Jarawa reserve. From the very beginning environmental groups had been opposing the ATR, but their opinion was always ignored. “Closing the ATR and putting an end to the indiscriminate interaction between the Jarawas and the settlers would appear to be the only way to save this ancient tribe”, says Acharya. According to him the Directorate of Shipping has the resources (boats and manpower) to put in use as an alternate route between Port Blair and Middle and North Andaman islands. They have the wherewithal to taking care of the entire load of passenger and cargo traffic that uses the ATR by the sea route. This option needs to be urgently looked into and all support that may be needed to make it operational should be immediately provided.

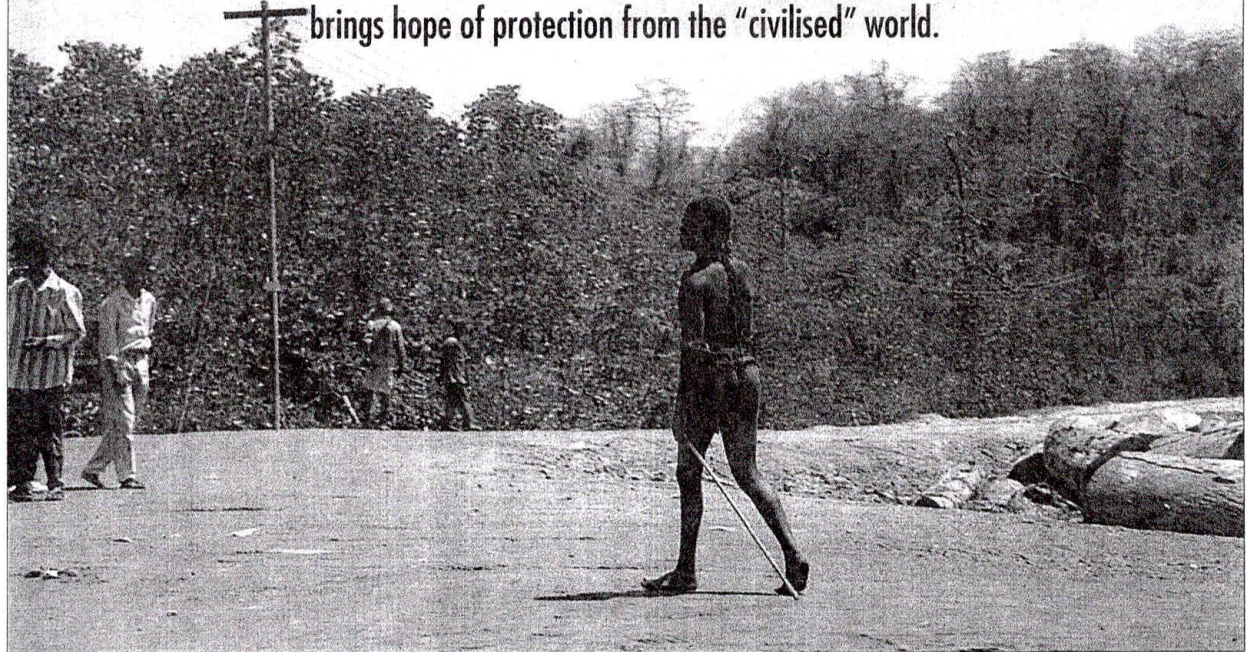
Also significant in the context is a writ petition filed recently by a local lawyer (though before the outbreak of the epidemic) asking for the rehabilitation of the Jarawa. This suggestion has been opposed by various Indian groups including SANE and Kalpavriksh. Reputed anthropologists from around the world whose expert testimonies were compiled by the London based Survival International and recently placed before the court in Port Blair via an intervention that was filed by SANE, too have argued that the Jarawas should be allowed to lead their traditional lives in the forests and any attempts to resettle / rehabilitate would only lead to disaster. Discussing the health related implications, Dr. James Woodburn of the Dept. of Anthropology in the London School of Economics and Political Science points out that when a isolated community with low population density (like the Jarawa) comes into contact with one of high density (like the settlers), the isolated group will become ill and many may die. Some of the diseases, measles for example are density dependant, and do not take root in a population with low density. When an isolated community comes into contact with outsiders, because they have not acquired immunity in childhood, they are likely to struck down by one illness after another. First they will be weakened, and if the next illness strikes during this period, people will die. “It is not unusual” he warns, “for 50% or even more of the population to die in the first months or years of extensive contact.”

Whats happening with the Jarawas today is proving to be exactly what had been predicted and unless some of the steps at correcting the situation are not taken urgently we could well be witnessing the pushing of another race of humankind into history.

Unpublished: September 30, 1999

Delivering the Jarawas

For the Jarawa tribal population of the Andaman islands, a court order brings hope of protection from the "civilised" world.



PICTURES: PANKAJ SEKHSARIA

A Jarawa tribal person and others on the Andaman Trunk Road in the Middle Andamans.

PANKAJ SEKHSARIA

COURT cases involve complex processes, which sometimes take trajectories of their own and reach destinations not quite intended at the time of their initiation. In one such instance, an order that the Port Blair Circuit Bench of the Calcutta High Court issued recently has turned out to be to the benefit of the indigenous Jarawa community of the Andaman islands.

The case had its origins in an intriguing development that was noticed in October 1997 – a drastic change in the lifestyle and attitudes of the forest-dwelling Jarawas who were previously extremely hostile to outsiders. For reasons that are not yet clear, the Jarawas voluntarily broke their circle of isolation and hostility and came out from their forest home to have peaceful interactions with the settler communities that live on the forest's edge (*Frontline*, July 17, 1998).

Almost overnight, the until then feared and mysterious Jarawa became a subject of

intense curiosity. People travelled to the margins of the forest to catch a glimpse of the Jarawa, and a small industry was created out of this. The impression gained ground that there was not enough food in the forests to support the community. Consignments of bananas, coconuts and papayas were sent in regularly and even air-dropped into the forests.

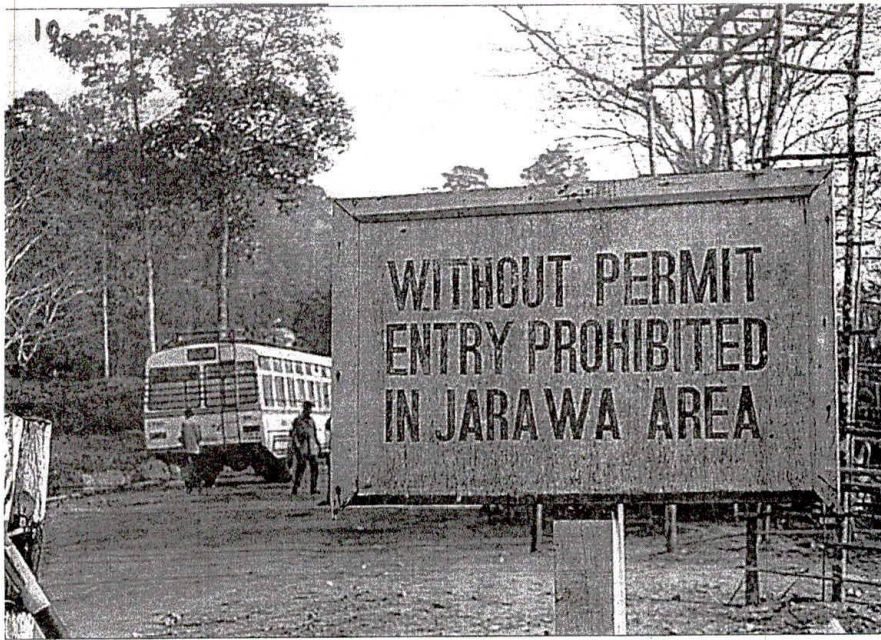
The end of the hostility of the Jarawa also saw the increased exploitation of resources from the Jarawa forest reserve. Sand mining from the beaches on the western coast of the islands and poaching and removal of non timber forest produce (NTFP) from the forest habitats increased drastically.

All this while a few anthropologists, tribal rights activists and environmentalists kept arguing that outsiders had to be stopped from contacting the Jarawas, that providing them food was not the solution and that the violation and exploitation of their forest habitats had to be stopped.

It was in this context that Shyamali Ganguly, a local lawyer, filed a writ petition before the Circuit Bench in May 1999.

The petition, a classic example of a move undertaken with the right intentions but seeking the wrong solutions, asked for the administration's help to bring the Jarawas into the mainstream and improve their lives. The examples of the Great Andamanese and the Onge (two other Andamanese tribal communities) were held out to explain how this could be done. But surprisingly, the petitioner failed to notice that both these communities are on the verge of being wiped out, primarily because of attempts to 'civilise' and take them into the mainstream, made first by the British and then by the governments of independent India. The petition also asked that the Jarawas be relocated in another area, which would then be all theirs.

At this juncture the Port Blair-based Society for Andaman and Nicobar Ecology (SANE) intervened. A vocal advocate of environmental protection in the islands, SANE has played a crucial role in fighting for tribal rights. "What was asked for in the petition would have meant certain death for the Jarawas," says Samir Acharya of SANE. SANE largely disagreed with the



On the Andaman Trunk Road, at the entry point to the Jarawa Reserve in South Andaman island. (Below) The primary health centre at Kadamtala in the Middle Andamans. A number of Jarawas who contracted diseases through contact with members of the settler communities outside the reserve, have been treated here.



views of the petitioner, particularly in the matter of relocating the Jarawas, which it felt would be disastrous for the tribal community. Most important, it requested the court to order the removal of all encroachments, camps and outposts from the Jarawa reserve and an inquiry into whether the Andaman Trunk Road (see box) ought to be closed to traffic and alternative transport routes explored.

Help also came from Survival International, the London-based tribal rights organisation, which contacted eight of the world's leading anthropologists. Their signed testimonies, which were placed before the court, unanimously said

that the Jarawas should be allowed to maintain their traditional lifestyles in the forests and that any attempts to resettle or rehabilitate them would lead to disaster.

"Historic precedents involving the relocation and sedentarisation of tribal peoples (particularly in island cultures) have often led to their complete destruction," explained Dr. Mark Levene of the Department of History, University of Warwick, United Kingdom. Levene, a research scholar working in the area of genocide in the modern world, cited examples of such genocide in different parts of the world – of Tasmanians by the British settlers in the 19th century, of Chakmas

from the Chittagong Hill Tracts (CHT) in South Asia, and of Amazonian tribes in Latin America.

Dr. Marcus Colchester of the Oxford-based Forest People's Programme argued that the relocation of the Jarawas could even be termed illegal under the International Labour Organisation's (ILO) Convention 107 and Articles 7 and 10 of the United Nations Draft Declaration on the Rights of Indigenous Peoples, which prohibit "the forcible removal of indigenous people from their lands..." and "any form of population transfer which may violate or undermine their rights..."

On the issue of health, Dr. James Woodburn of the Department of Anthropology in the London School of Economics and Political Science pointed out that "when a previously isolated community with low population density (like the Jarawas) comes into contact with one of high density (like the settlers), they are particularly vulnerable to diseases like measles against which they have not acquired any immunity in childhood." He also pointed out that this could be the main reason for the death of a large number of the Great Andamanese community in the 19th century and of the Onge afterwards.

It was almost as if Dr. Woodburn was looking into a crystal ball. A couple of months later, in September 1999, an epidemic of measles hit the Jarawa tribe. By the third week of October, 48 per cent of the estimated Jarawa population of 350 was suffering from disease and ill-health. The affected people were treated mainly at the primary health centre (PHC) in Kadamtala in the Middle Andamans and at the G.B. Pant Hospital in Port Blair. There were even reports that a couple of them had died in the forests. These reports could not be corroborated, but clearly the worst fears about their safety seemed to be coming true.

Fortunately, a team of doctors comprising Dr. Namita Ali, Director of Health Services, Dr. Elizabeth Mathews, Superintendent, G.B. Pant Hospital, and Dr. R.C. Kar, the medical officer in Kadamtala, did some commendable work, and not a single casualty was reported among those Jarawas who were admitted to the hospitals.

AS for the court case, a six-member expert committee established by the court in February 2000 submitted its report six months later, in August. The committee had the Chief Judicial Magistrate of Port Blair as its member-sec-

retary. Other members included two anthropologists, Dr. R.K. Bhattacharya and Kanchan Mukhopadhyay from the Anthropological Survey of India (ASI), and three doctors, Namita Ali, R.C. Kar and Anima Burman from Port Blair.

The committee pointed out that a preliminary study by the ASI had indicated that the forest had enough food resources to provide for the Jarawas and that there was no food shortage; that they continue to be susceptible to many infectious diseases and that vigilance should not be slackened; that the maintenance of the Andaman Trunk Road and procurement of wood for the purpose regularly degraded the forests; and that illegal fishing, poaching and removal of NTFP from the Jarawa reserve were happening regularly. Many other conclusions of the committee were reflected in the order issued on April 9 in Port Blair by Justice Samaresh Banerjee and Justice Joytosh Banerjee. A detailed, 60-page written order in the matter came from Calcutta more than six weeks later, on May 28, 2001.

The court has directed the formation of an expert committee to look into the matter and given it six months from the date of its formation to come up with a plan to deal with issues related to the Jarawas. The order also made a special reference to "Master Plan 1991-2021 for the Welfare of the Tribes of the A&N" prepared by S.A. Awaradi, former Director, Tribal Welfare, in the Andaman and Nicobar administration. It indicated that the document should be taken into consideration while formulating the final policies. For the interim period, it has ordered a number of steps to be implemented on a war footing.

The court has directed the local administration to stop poaching and intrusion into Jarawa territory and to prevent its further destruction by encroachment and deforestation. It ordered issuance of an 'appropriate notification clearly demarcating the Jarawa territory'. This would greatly help law enforcement, particularly in the detection and removal of encroachments. The court also ordered that penal measures be taken against encroachers and poachers, and importantly, against those among the police and civil authorities who are negligent in this regard.

Accepting the recommendations of the expert committee, the court directed that medical aid be given to the Jarawas only when they came out of the forest and sought it and only to the extent necessary. It asked for periodic medical programmes for the Jarawas in their own territory and only to the extent necessary so that they need not

Questions about a road

PANKAJ SEKHSARIA

THE Andaman Trunk Road (ATR) connects Port Blair in South Andaman to Diglipur in North Andamans, covering nearly 340 kilometres. Across the world, road construction, particularly in rainforest areas, has been one of the biggest reasons for the destruction of forests and their indigenous residents. The story of the ATR is no different. Directly and indirectly, it has contributed to the destruction of vast areas of evergreen rainforests in the Andamans, which has severely affected the Jarawas.

Work on the road began in 1971, and it was violently opposed by the Jarawas. But the work continued and the entire stretch was completed recently. Huge amounts of money went into its construction which could have been avoided in the first place.

The ATR is a perfect example of short-sighted planning. First, it is not the best way to travel in the islands. Most of the settlements in the Andamans are situated on the coast, so the most logical and immensely cheaper mode of transport that should have been developed is marine transport.

Every year crores of rupees and large quantities of timber go into the maintenance of the road. SANE estimates that a minimum of 12,000 cubic metres of timber from the evergreen forests is burnt annually for this purpose. Compare this with the official figure of 70,000 cu m of timber that is logged in the entire islands today, and one gets a sense of the destruction caused by the ATR. There is not enough traffic on the ATR to justify such a huge expenditure.

But the question, as always, is the same: Who's listening? ■



Maintenance work on the Andaman Trunk Road inside the Jarawa reserve. Large quantities of timber are burnt for the maintenance of the road.

come out from the forests for such aid. Significantly, the court directed that until a policy on dealing with Jarawas was finalised, no new construction or extension of existing construction should be undertaken in the Jarawa territory and no extension was to be made to the Andaman Trunk Road.

The order has been welcomed by environmental and tribal rights activists familiar with the situation in the archipelago. It

is considered a very positive order, and one with great potential for safeguarding the future of the tribal people here. Ensuring its implementation is the next big challenge, and a lot will depend on how and with how much sincerity this is done. ■

In association with The Transforming Word

Pankaj Sekhsaria is a member of the environment action group, Kalpavriksh.

■ INDIGENOUS PEOPLE

A people in peril

The Onge tribal community of Little Andaman, which is on the verge of extinction, faces a serious threat from ill-conceived development plans and their attendant maladies.

PANKAJ SEKHSARIA

ON February 26, 1999, *Andaman Herald*, a Port Blair newspaper, reported that the bodies of two young members of the Onge tribal community were found floating in a creek near their Dugong Creek settlement on the Little Andaman island. The young men had been missing for a few days apparently after having gone turtle-hunting. The cause of the deaths was not known, but drowning was ruled out. The Onge people are excellent swimmers and sailors and there is no record of an Onge drowning in a creek. The newspaper said that foul play was suspected as the post-mortem and the cremation were done with undue haste. One of the dead men

was a constable with the Andaman and Nicobar Police, according to the newspaper report.

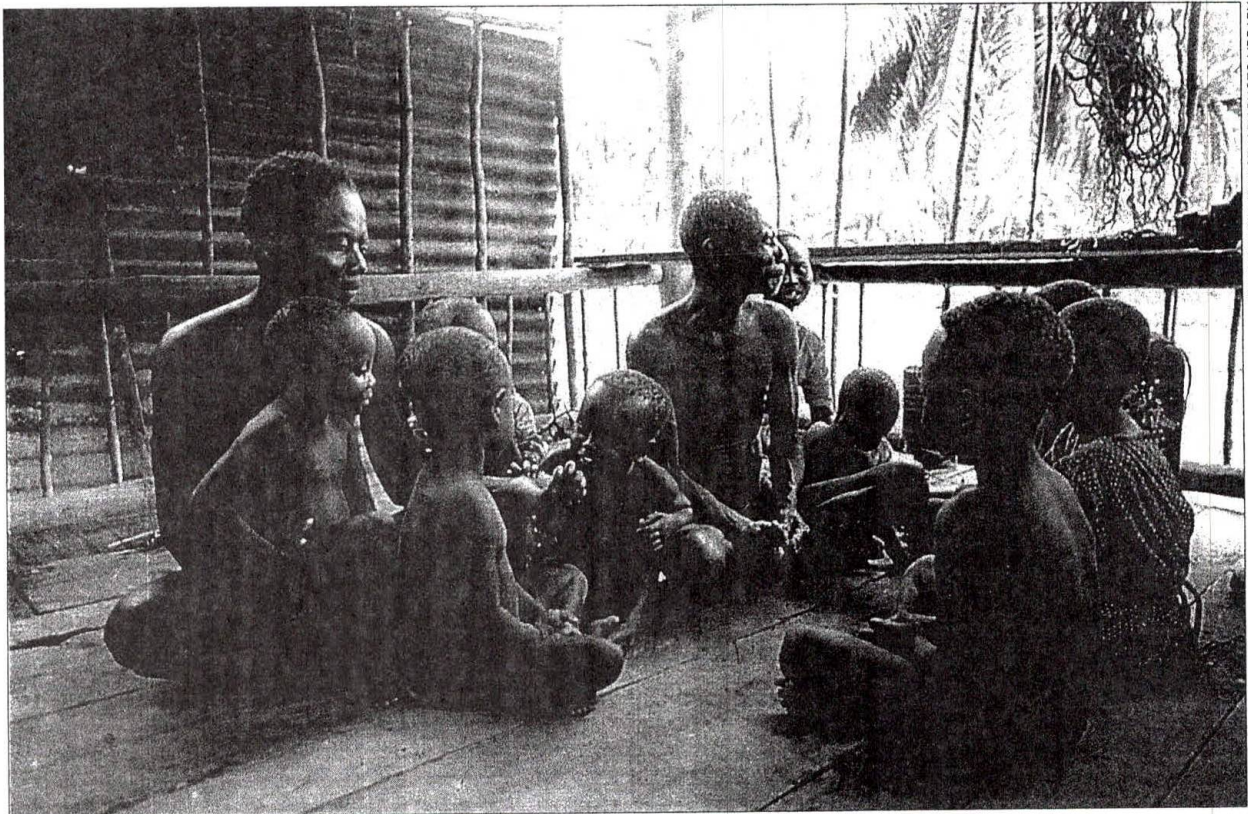
This piece of news was inconsequential except to a few concerned people. This incident, however, assumes extraordinary importance in the light of the fact that the Onge issue has a complex background and history.

THE Onge community is one of the four Negrito tribal communities that still survive in the Andaman islands. Its population today is around a hundred individuals; the 732 sq km of the thickly forested island of Little Andaman is the only area they inhabit. The community is on the brink of extinction. Additionally, one of the dead youths had reportedly complained to an adviser to

the Planning Commission, who visited the island in the recent past, about the resource depletion that the community faced owing to illegal timber logging and poaching in the forests.

The Onge community had flourished in the Andaman islands for centuries. Not much is known about the community, but whatever is known is proof enough of the astonishing depth and diversity of its knowledge (see box).

A powerful two-pronged attack – on the natural resource base that sustains the community and on the culture of the community – has over the past three decades slowly but surely pushed Onges to a point of no return. Recent investigations in Little Andaman have brought to light some glaring irregularities, and the two reported deaths are believed to be the



BITTU SANGAL/SANCTUARY PHOTO LIBRARY

The tribal community of Onges that had flourished in certain areas of the Andaman archipelago for centuries consists of only a hundred or so individuals today.

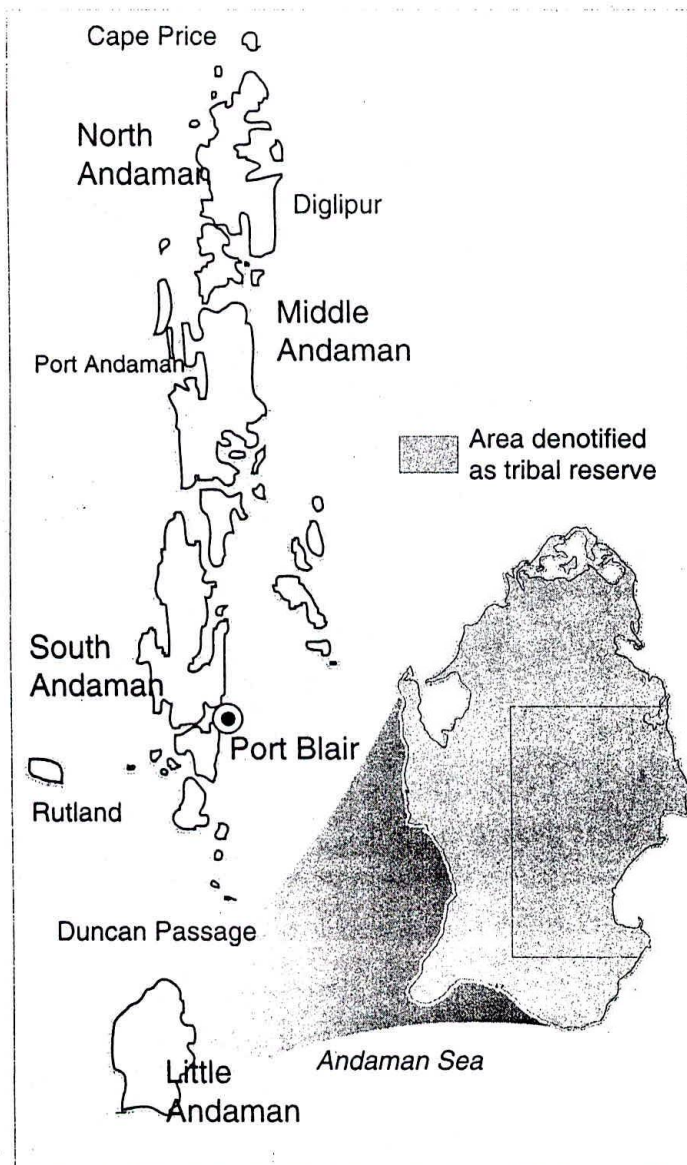
latest and the most obvious consequence of the process.

The story of the Onge people's alienation begins in the late 1960s, when the Government of India planned a massive development and colonisation programme for the union territory of the Andaman and Nicobar Islands, in complete disregard of the fragile environment of the islands and the rights of the tribal communities. A 1965 plan, prepared specifically for Little Andaman, proposed the clear-felling of nearly 40 per cent of the island's forests, the bringing in of 12,000 settler families to the area and the promotion of commercial plantations, such as those of red oil palm, and timber-based industries in order to support the settler population.

Had the plan been implemented fully, it would have destroyed Little Andaman and caused the extinction of the Onge tribe. Logistical problems, lack of infrastructure and a revision of policies over time ensured that the destruction was not complete. However, in the conception and planning of the development programme, the Onges were sidelined and the violations started.

The government team that suggested the development programme ignored the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPART), which had in 1957 accorded the status of a tribal reserve to the entire island of Little Andaman. Further, about 20,000 hectares (roughly 30 per cent) of the island was denotified from its tribal reserve status in two stages, in 1972 and 1977, still leaving 52,000 ha as an inviolable tribal reserve. Many of the proposed projects were also taken up for implementation. These included a 1,600-ha red oil palm plantation and a major timber extraction operation that continues even today.

The Forest Department leased out 19,600 ha from the denotified area to the



The coordinates of a logging site as they appear on a global positioning system (GPS) reception unit which indicate that the site may be located either on the border of the tribal reserve or be further inside the reserve on Little Andaman.

Andaman and Nicobar Forest Plantation and Development Corporation (ANFPDC), which is the sole agency responsible for timber extraction here. In 1976, the ANFPDC presented its Project Report for Logging and Marketing of timber from the forests of Little Andaman. It was estimated that a total of 60,000 ha of the island was available for logging and that 60,000 cubic metres of timber could be extracted annually from 800 ha.

Here again was another clear violation of the Onge tribal reserve. When 52,000 ha of the island's total area of 73,000 ha was already a tribal reserve, how could 60,000 ha be made available for logging? The Corporation should have limited its operations to the 19,600 ha that had been leased out to it. With 1,600 ha being under red oil palm plantation, the actual area for logging was even less, at 18,000 ha. This meant that the Corporation should have logged only 18,000 cu m of timber from an area of

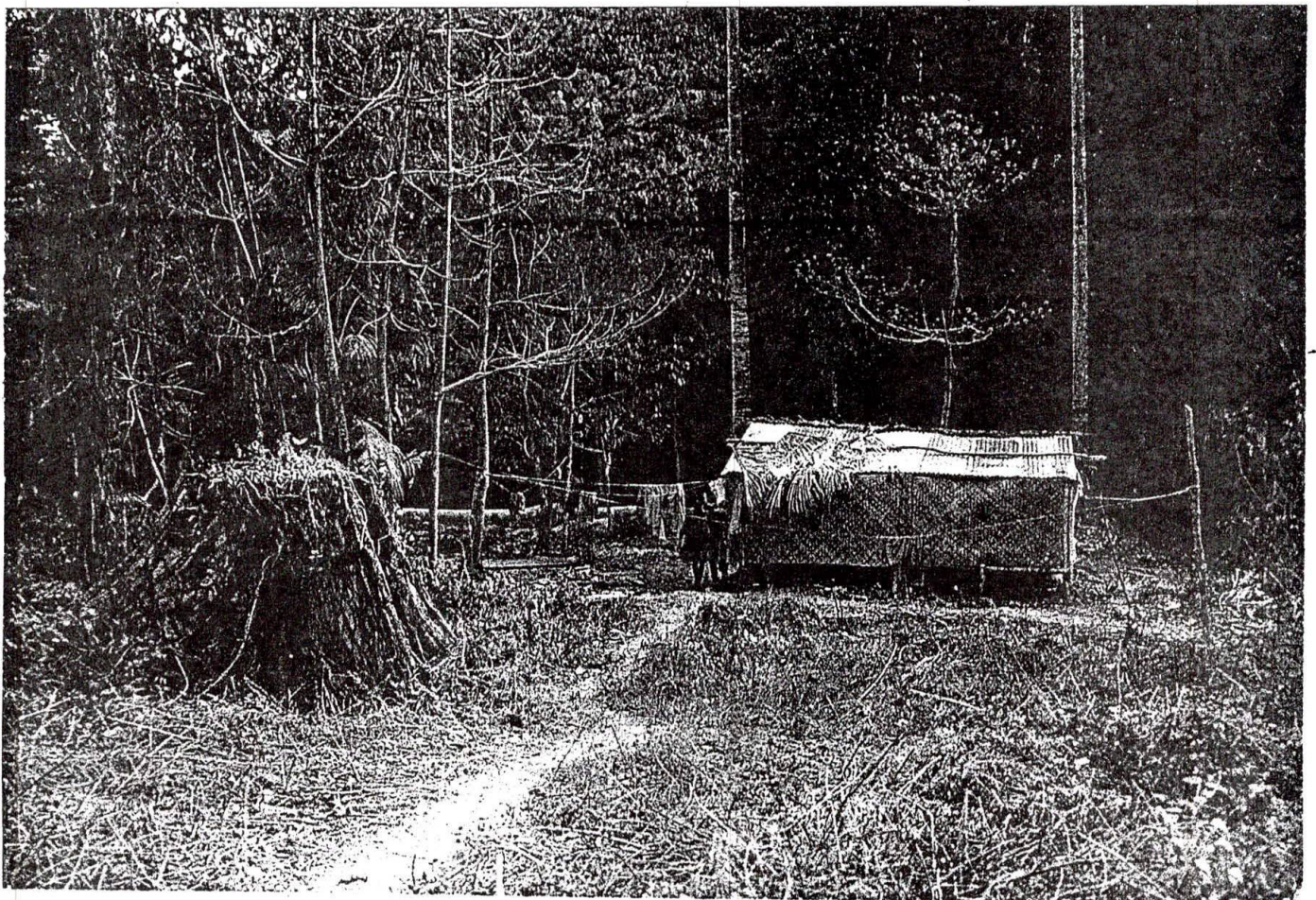
240 ha annually. The average for the actual logging over the last two decades, however, is much higher, at 25,000 cu m of timber from an area of 400 ha annually.

Furthermore, a working plan has not been prepared for the logging operations on Little Andaman. Besides, the continued logging contravenes a Supreme Court order of 1996 stopping all logging in the absence of a working plan. The Forest Department has justified the logging on the basis of its 1976 project report. However, the legality and validity of this report are open to question.

Significantly, the Deputy Conservator of Forests – Working Plan (DCF-WP) of the Andaman and Nicobar Forest Department is now reportedly preparing a working plan for the forests of Little Andaman. This clearly contradicts the present stand of the Department, which claims that the equivalent of a working plan already



Forests burnt and cleared for the creation of settlements and farms inside the Onge reserve.
(Below) A logging camp inside the reserve.



A precious heritage

PANKAJ SEKHSARIA

THE ethnobotanical knowledge of the Onge tribal community is staggering. Italian anthropologist Lidio Cipriani, who studied the community in the 1950s, was among the first of many experts to acknowledge this Onge heritage. He wrote in 1966: "In their continual search for food the Onges have acquired botanical and zoological knowledge which seems almost innate, and they know of properties in plants and animals of which we are quite unaware. Nearly every day on Little Andaman I came across this. I had only to draw a rough sketch of an animal and they knew at once where it could be found; it was only thanks to them that I was able to find the various amphibia, which subsequently proved to be new species."

Among the best-known examples of Onge knowledge is the method Onges use to extract honey from the hives of the giant rock bee. In order to ward off the bees, they use the leaves of a plant, which they call 'tonjoghe' (*Orphea katshalica*). To quote Cipriani again: "...the juice of a certain plant they call tonjoghe... has the power of deterring bees, and this knowledge (which) has been handed down from generation to generation, is applied with delightful simplicity... There are bushes of tonjoghe everywhere... the Onges simply grab a handful of leaves and stuff them into the mouth. With

some vigorous chewing they are quickly reduced to a greenish pulp... another huge mouthful is chewed on the way up and spat at the bees to make sure that they will be deterred... the bees fly away from the comb without stinging and the honey can be cut out..." causing harm neither to the collector of honey nor to the bees.

Disregarding such knowledge, attempts are made to impart modern technology to the Onge people. A few years ago the Fisheries Department posted a fisheries inspector and two fishermen at Dugong Creek to teach Onges modern methods of fishing. The fishermen admitted later that they had much to learn from the tribal community about fishing in the waters of the island.

More recently, a controversy erupted when senior researchers from the Indian Council of Medical Research (ICMR) tried to patent a discovery that would probably lead to a cure for cerebral malaria. The issue attracted international attention. The source of the medicine in question is a plant that the Onge use to treat fever and stomach disorders.

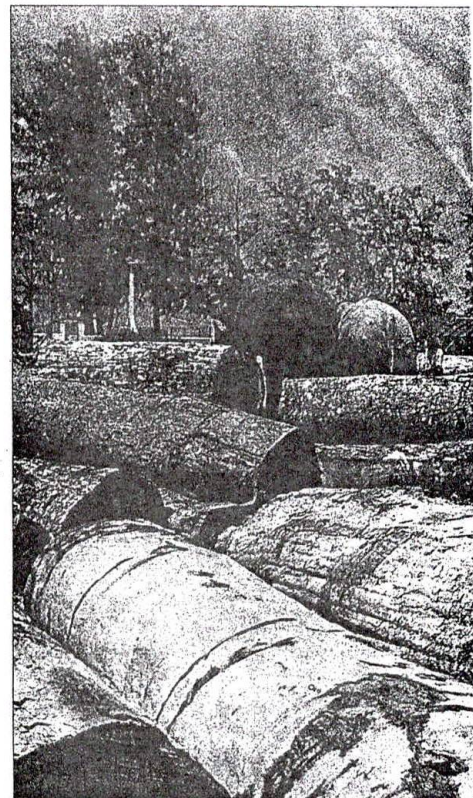
The size and nature of the wealth that lies in the island home of the Onge people are largely unknown. What is more important is that if the present situation continues, the Onge people may not survive for too long and with them will go a huge bank of invaluable knowledge. ■

exists.

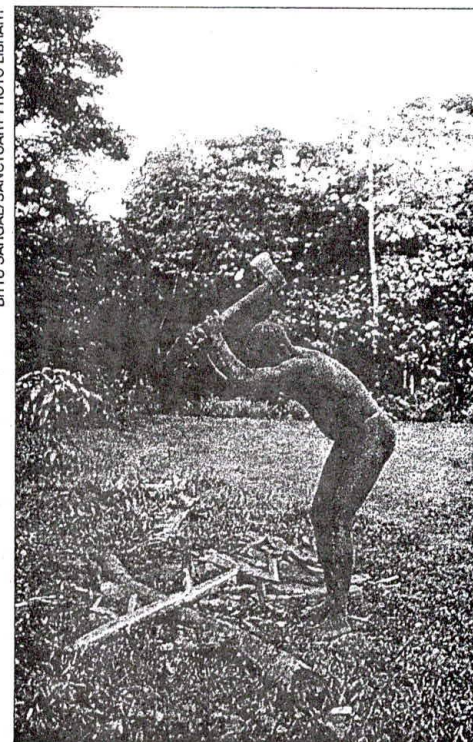
As if this was not enough, the Corporation has gone a step further; it is logging within the tribal reserve, making a mockery of the law and also the rights of the Onges. Maps available with the ANFPDC and the Forest Department have logging coupes dated 1990 onwards marked clearly within the tribal reserve.

Even as these violations occurred, thousands of outsiders were settled in Little Andaman. The settler population grew rapidly; from a few hundreds in the 1960s to 7,000 in 1984 and over 12,000 in 1991, displacing Onges from some of their most preferred habitats. Hut Bay, the main town in the island, is an example.

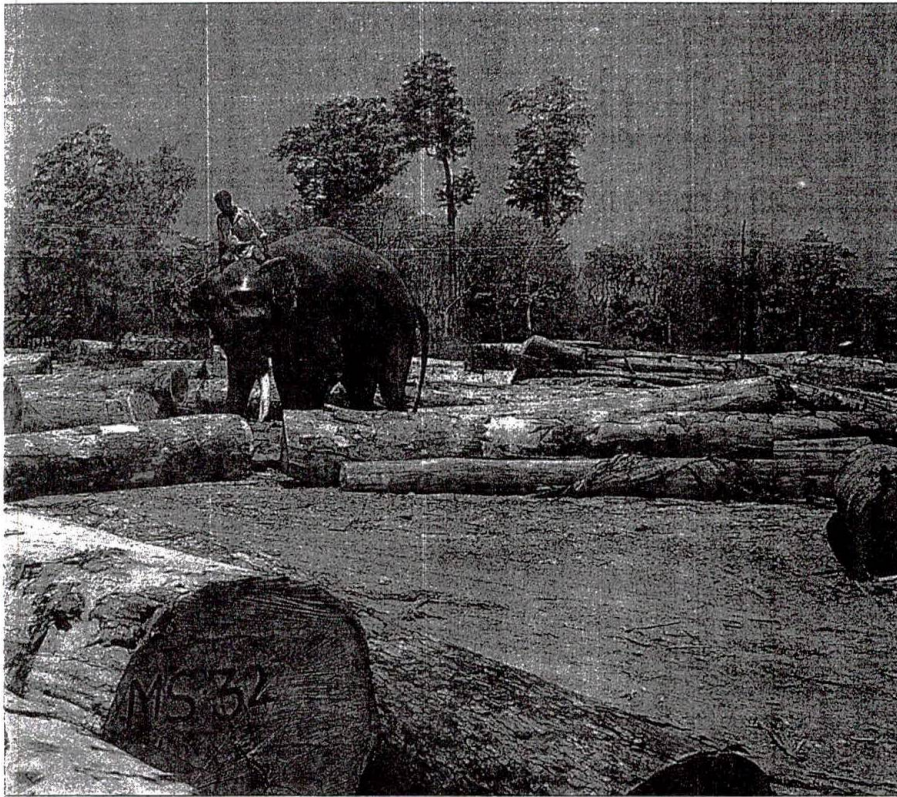
The Andaman Adim Janjati Vikas Samiti (AAJVS), the official tribal welfare body of the administration, introduced welfare measures that were completely unsuitable for the Onges. Foodstuffs such as rice, dal, oil and biscuits were introduced to a community whose traditional food included the meat of the wild boar and turtle, fish, tubers and honey. The agency even offered each adult 250 gm of tobacco as a "welfare" measure. In a blatant attempt to move the forestry operations deeper into the forests of Little Andaman, authorities have sought to settle the nomadic Onges at Dugong Creek in the northeast of the island and at South Bay at the southern tip. Wooden houses on stilts and with asbestos roofing were



Elephants at work in the huge timber yard in Hut Bay on the Little Andaman island.



The survival of the Onges can be ensured only if the present development policies vis-a-vis the tribal people are reviewed with sensitivity.



PANKAJ SEKHARIA

constructed for them at these places. These structures were not suited for the hot and humid tropical environment of the islands and the Onge people preferred to live in their traditional huts in the forest nearby.

Simultaneously, attempts were made to introduce a cash economy in the community, which did not have even a barter system. Ill-conceived schemes, such as the raising of a coconut plantation (in which the Onge people were made workers), cattle-rearing (the community does not consume milk) and pig-breeding, were introduced. All of them failed. Environmentalist Bittu Sahgal noted that during one of his visits to the Onge settlement a few years ago, the Onge people were found being used to do menial chores, such as fetching water for welfare workers appointed by the administration.

A visit to the Onge settlement of Dugong Creek has become mandatory on many a VIP itinerary. Not only are the Onge people expected to perform for the pleasure and entertainment of the VIP, but they are put to work weeks in advance to tidy up the settlement.

The settler communities, which have been handed over the lands and resources of the Onge people, have not treated them any better. They exploit and look down upon the tribal people. Alcohol was introduced and many Onges have

become addicts. This addiction is now exploited – the Onge people exchange with the settlers valuable resources such as honey, turtle eggs, wild boar meat and ambergris for liquor.

Logging operations have also helped open up the forests, encouraging further encroachments into the tribal reserve. Consequently, illegal activities such as poaching have become rampant – resulting in a drastic decline of rare creatures such as the monitor lizard, the dugong and the endemic Andaman wild pig. All these creatures are not only important sources of food and nutrition for the Onge people, but play an integral role in their culture and society. Their unavailability leaves gaps that cannot be filled.

It is clear now that the survival of the Onges can only be ensured if the present policies *vis-a-vis* development and the tribal people are reviewed with sensitivity. Serious attention must be paid to what the tribal people have to say and an honest attempt made to find out what they want. There are no signs however of that being done.

At a meeting of the District Planning Committee held in Port Blair in November 1998, the Onge representative, Tambolai, complained that settlers living in the areas near their settlement were troubling them. A major point he made was that finding wild pigs in the

Little Andaman: a chronology

- 1901: Population of the Onge 672.
- 1911: Population of the Onge 631.
- 1921: Population of the Onge 346.
- 1931: Population of the Onge 250.
- 1951: Population of the Onge 150.
- 1952: Italian anthropologist visits Little Andaman to study the Onge tribe.
- 1957: Declaration of the island of Little Andaman as a tribal reserve.
- 1961: Population of the Onge 129.
- 1965: Report by the 'The Inter-departmental Team on Accelerated Development Programme for the A&N Islands', Ministry of Rehabilitation, Government of India.
- 1970: Timber extraction begins.
- 1971: Population of the Onge 112.
- 1972: First amendment to the tribal reserve on Little Andaman.
- 1974: Forest Department assesses the timber productivity of the forests of the island.
- 1975: Forest Department initiates work on the red oil palm plantation.
- 1976: The Andaman Adim Janjati Vikas Samiti (AAJVS) is created.
- 1976: Presentation of the Forest Corporation proposal for logging and forestry operations in Little Andaman.
- 1977: The Forest Corporation starts functioning.
- 1977: Second denotification of the tribal reserve on Little Andaman.
- 1977-79: More outside families settled on Little Andaman.
- 1981: Population of the Onge 100.
- 1983: Study of the Onge by anthropologist Vishvajit Pandya.
- 1988: Formulation of the National Forest Policy which makes a special case for the protection of the rainforests of the Andaman and Nicobar Islands.
- 1991: Population of the Onge 101.
- 1995: Patenting controversy related to Onge knowledge.
- 1996: Supreme Court order on forests.
- 1999: Two Onge youths found dead.

forests was becoming difficult and hence the timber extraction operations should be stopped.

If the responses of the authorities are anything to go by, Tambolai may well have been talking to the wind. ■

Deforestation in Andaman and Nicobar

Its Impact on Onge

The Andaman and Nicobar Islands have seen widespread deforestation in the years since independence, endangering the habitat, the inhabitants and the wildlife. Only a concerted effort by the government and its agencies, the mill owners, the labour in timber felling and the NGOs can preserve the pristine biodiversity of these islands and protect the rights of the inhabitants.

PANKAJ SEKHSARIA

There is no denying the fact that India has witnessed large-scale deforestation; only 19 per cent of India's landmass is reportedly under forest cover today. This has adversely affected both human communities that depend on the forests for survival and wildlife, due to loss of habitat. Serious and detailed research by many scholars in the recent past has thrown light on this important issue, particularly in the historical context.

Though there is evidence of deforestation even in pre-colonial India, especially due to the expansion of agriculture, it has been shown beyond doubt that the large-scale destruction of the forests was started by the British, India's colonial rulers. An idea of the commercial onslaught on India's forests by the British has been pieced together by Gadgil and Guha (1992). Quoting from a number of sources, they show how the British navy's need for durable timber was increasingly being met from India, from teak *Tectona grandis* forests.

Vast tracts of forest were chopped to create the railway network that criss-crosses India today. The aim was twofold; the fast, cheap and efficient transport of inexpensive raw materials to the ports for export to Britain's industries and the quick movement of security forces to maintain the hold over the empire. For instance, between 1869 and 1885, over 65,00,000 deodar *Cedrus deodara* sleepers were extracted from the Yamuna Valley forests in the Himalayas, which in turn was necessitated because the supply of teak and sal *Shorea robusta* from peninsular India was getting exhausted. Wood for railway sleepers and as fuel for powering the locomotives facilitated the expansion

of both the railways and the British empire.

Of equal, if not greater relevance was the takeover of the forests by the British by the creation of exploitative bureaucracies like the forest department. Majority of the forests of the country were converted into state-owned and controlled reserved forests (RF), and protected forests (PF) by the enactment of the Indian Forest Act of 1865 and 1927. This resulted in the alienation of the local communities from their resources and forests and the loss of responsibility for their conservation and protection [Kothari and Pathak 1998].

Many environmental historians hold the opinion that the large-scale destruction of the forests in India is rooted in the commercially oriented forest use and ownership policies of the British government which continued even after India gained independence in 1947.

The other major cause of deforestation immediately after independence was agricultural expansion, often state-sponsored. Much of the rich moist deciduous forests of the humid, Terai region in northern Uttar Pradesh for example, were cleared to provide land to immigrants from the newly created Pakistan. Most of the woodland, once covering the Indo-Gangetic plains was also gradually converted to fields or grazing lands [Subramaniam and Sasidharan 1993]. Indeed between 1951 and 1980, according to the Forest Survey of India (1987), over 26.20 lakh hectares (26,200 sq km) of forest was converted for agriculture purposes all over India [Kothari 1993].

In more recent times it is the new policies and programmes of development;

rapid industrialisation, urbanisation and growing consumerism that have resulted in the wide scale destruction of the forests.

In certain parts of the country, particularly the rainforest regions of the north eastern states bordering China and Burma and the remote islands of the Andaman and Nicobar, a lot of the forests have been fed into the plywood mills. Other parts of India have witnessed a spurt of large projects; from big dams, and thermal power projects to huge mines and massive industrial complexes. Many of these have been located in what were once thick forest areas. So these forests were drowned in the back waters of dam projects or were cleared for mines or industrial complexes. Simultaneously, demands for food, fuel and fodder by an increasing human and cattle population have increased the pressure on the forests tremendously.

What has been equally bad if not worse is that the developmental projects very insensitively alienated communities living in the forests, depriving them of their basic sources of survival, forcing them to move away and in the process making them refugees on their own land. The very people who lived in and tended the forests for generations were forced to participate in the destruction of the forests and then also share the blame for it. This process continues even today in various forms in many parts of the country, resulting in the rapid decline in forest cover.

This case study will look at the situation in one of the remotest corners of India; the islands of the Andaman and Nicobar, a chain of over 350 islands located in the Bay of Bengal. The study looks particularly at the deforestation in the relatively

small island of Little Andaman which is also the home of a very small and remarkable but also threatened tribal community, the Onge.

The Andaman and Nicobar islands are considered to be the emergent peaks of a submerged mountain range related to the Arakan Yoma mountain range of mainland Burma. The main features of the islands include steep hills, and generally poor soil with little water holding capacity. Flat terrain is extremely limited and the larger islands have long meandering creeks along the coast. The islands are clothed in thick evergreen forests that are home to a large biodiversity and also have some of the finest mangroves and coral reefs found in the world.

There are more than 350 islands in the Andaman group and over 24 islands in the Nicobar. Only 10 per cent of the island area is inhabited by humans. The islands cover a total area of 8,249 sq kms and have a total coastline of 1,962 km which equals 25 per cent of the coastline of mainland India.

Zoogeographically the islands occupy a unique position [Saldhana 1989]. The flora that has evolved here is of a distinct nature, and though related to mainland Indian flora, shows much closer similarities to those of Burmese, Malaysian and Indonesian origins. At least 32 species and subspecies of mammals, 95 bird species and 23 reptile species are unique to the group of islands. Understandably the islands have been identified as one of the hotspots of biodiversity in India.

The islands are also home to six indigenous tribal communities; two of them – the Shompen and the Nicobari are of Mongloid origin and reside in the Nicobar group. The other four communities are of Negrito origin and live in the Andaman group. They are the Great Andamanese, the Onge, the Jarawa, and the Sentinelese. These tribes are hunter-gatherer communities and have successfully survived in these islands for centuries, much before the advent of modern man here. Their knowledge and understanding of the forests is extensive and they share a close relationship with it.

Today however, except for the Nicobarese all these communities are faced with the grim prospect of extinction as insensitive policies of the state, pressures from modern civilisation and a big timber

industry continues unrelentingly in the islands.

History of Logging

The main timber operations in these islands are limited to the Andaman islands only. Though there has been deforestation in the Nicobars for the establishment of settlements the timber industry has so far stayed away from operating there.

Like in the rest of India, the prime responsibility for starting the forestry in these islands too rests with the British. In fact the British were the first outsiders who were able to successfully establish their settlements on the islands.

It was only in 1789 that Lieutenant Archibald Blair of the Indian (British) Navy was appointed to survey the islands with a view to finding a harbour, "where fleets in the time of war can refit by any means...or to which any part or the whole may retire in the event of a disastrous conflict with the enemy." A small settlement was set up in the island of north Andaman. This however, proved disastrous due to the prevalence of various diseases, particularly cerebral malaria and the attempt was abandoned pretty soon [Whitaker 1985].

Attempts were made again by the British in the late 1850s and they were able to create Port Blair as a penal settlement in 1858, mainly for criminals from mainland India and later for freedom fighters too. Large tracts of land were first cleared in 1858 for the penal settlement itself. By 1870 a limited exploitation of hardwoods had already begun. The forest department, with the major responsibility of timber extraction was started in 1883 [Whitaker 1985]. The Chatham saw mill was set up around this time and was for a long time considered the biggest saw mill in the whole of Asia. It is operational even today.

The 1901 census report of the islands, for the first time lists forestry as a source of employment and lists about 900 individuals involved in various activities like extraction, saw mills and firewood. According to the then chief commissioner of the islands, Lt Colonel Sir Richard C Temple, "...this is a comparatively new department for utilising convict labour and is now the chief source of revenue in cash" [Census of India 1901].

Later in 1929 the Swedish Western Match Company (WIMCO) started a match splint

factory in Port Blair [Whitaker 1985]. This remained the only private forest based industry here till the early 1960s, when the plywood mills were first set up.

With India gaining independence from the British in 1947, a new phase began for the islands too. A colonial hangover was evident in independent India's 'colonisation scheme' for the islands as a part of which thousands of people were brought from mainland India and settled here.

What has also been important is the strategic location of the island chain in the Bay of Bengal, close to countries in south-east Asia and just north of an important commercial shipping lane. One strategy of the government of India to maintain its advantage and strengthen its claim over the islands has been to encourage more and more mainlanders to come and settle here. These two factors have been largely responsible for the population growth that has been witnessed in the last few decades starting in the 1950s (Table 1).

As a matter of fact, in the early years various incentives were offered to the people to come and settle in the islands. Each settler household was given four acres of flat land for paddy, five acres of hilly land for tree crops and one acre to build a homestead. Twelve tonnes of free royalty timber was given for house construction and an additional five tonnes for house repairs every five years [Saldhana 1989].

The growth in population meant that the pressures on the forest – both direct and indirect – also increased. It is clear that the growth in the timber extraction operations corresponds directly to the growth in the population of the islands (Table 2). This destruction of the forests for the extraction of timber was in addition to the clear felling that was done for the settlements themselves.

Table 1: Population Figures

Year	Total Population	Andamanese	Onge
1901	24,499	625	678
1911	26,459	455	631
1921	27,080	209	346
1931	29,476	90	250
1951	30,971	23	150
1961	63,548	19	129
1971	1,15,133	19	112
1981	1,88,745	25	103
1991	2,80,661	28	101
1998	4,00,000 (estimated)		

Source: Census of India 1995, Saldhana 1989; Voters list; 1998 general election.

It has been estimated that between 9 and 13 per cent of the total land area of the islands has been felled in little more than a century of operations [Pande et al 1991]. There is no consensus on the actual area that still remains under forest and some observers are of the opinion that even a large part of this forest is degraded and under secondary growth [Whitaker 1985].

With the growing population of migrants on the islands there was a need for the government to create employment opportunities for the people. The abundant forests and the timber within it became the obvious source for the generation of both income and employment.

The British had already started the operations, but their expansion had been limited. Till the 1960s the Chatham saw mill and the WIMCO match splint factory were the only major timber units in the islands. However the growing influx of people here meant that the industry would have to expand.

In the initial years, following independence the administration offered huge incentives to industry in the form of subsidies to make it attractive for an entrepreneur to invest here. These were largely made use of by the private plywood industry that began in the late fifties and have continued till today.

Today, the timber based industry in the Andamans comprises of two government saw mills, some small private saw mills and furniture making units and three private plywood units. It is these private plywood mills that are today the largest consumers of the timber in the islands; their intake accounting for roughly 70 per cent of the 75,000 cubic metres of timber logged here annually (personal communication of industry officials, Forest Statistics 1993-94; A and N Forest Department).

What is very significant is that 98 per cent of the plywood manufactured in the Andaman islands is not used locally (personal communication, industry officials). It is all exported to mainland India to satisfy the insatiable demands of an ever-increasing market. The government continues to offer various subsidies that include lowly priced local timber, a subsidy to the tune of 90 per cent for the transport of goods to and from mainland and a power subsidy of over 80 per cent among others [Directorate of Industries, A and N Islands, Port Blair 1991]. These subsidies

have allowed the timber industry to continue and even to make substantial profits. In effect, the exploitation of the forests here is being subsidised for the use and benefit of a far away population of mainland India that has no real stake in the islands or the conservation of its forests.

There are other interesting dimensions too. The profits made and the incentives offered by the administration encouraged the plywood mills to go in for substantial augmentation of their production capacities. Today, however, with growing awareness, intervention by the courts and change in policies, logging in the islands appears to be reducing.¹ Official figures of timber logged shows a downward trend in the last few years (Table 2). Consequently the amount of timber offered to the plywood mills too has been reduced, leaving the mills complaining about lack of enough timber and idle capacities.

Significantly, to make up for this shortage in the availability of timber the private industry has begun to import timber from Malaysia under the Open General Licence (OGL) scheme of the government of India. For the financial year 1997-98, 25 per cent of the private industry intake was met by such imports (personal communication, industry officials) – an ironic and interesting ‘robbing Peter to pay Pan’ situation.

The people who have suffered the most in these islands are the indigenous communities for whom the forests are home. This has resulted from the combined impact of the destruction of the forests and the imposition of an alien and insensitive culture that brought along with it various diseases and other vices such as alcohol and tobacco.

Except the Nicobarese, all the other tribes have suffered in varying degrees. The Great Andamanese were the first community to be contacted by the British and this was followed by the Onge who live on the island of Little Andaman. Both these communities suffered immensely from the ill-effects of the colonial contact and the interaction that followed.

The other two negrito communities, the Jarawa and the Sentinelese have scrupulously avoided contact with the outside world and even used violent means to do so. This however appears to be changing in the case of the Jarawa now. For the first time in their history they are beginning to voluntarily come out of their forest home

to interact and mingle with settlers living in the areas bordering their territory [Sekhsaria 1998]. A centuries-old isolation has been broken and the future of the Jarawa can, today, only be a matter of speculation.

Ironically (and it is certainly a powerful comment on the state of our civilisation) it is the result of this isolation and aggression against us, that these communities have managed to retain their freedom and original identity [Whitaker 1985; Paul 1992; Sekhsaria 1998]. It is here that the Jarawa and the Sentinelese have succeeded where the Onge and the Great Andamanese lost out.

Epidemics like pneumonia in 1868, measles in 1877, influenza in 1896 and syphilis killed the Great Andamanese by the hundreds. The tribals had no resistance to these diseases which they contracted from the outsiders. The Great Andamanese are today finished as an independent race of people. Their population that was estimated to be around 5,000 individuals in the early part of the 19th century today comprises of merely 28 individuals [Whitaker 1985; Saldhana 1989].

The Onge who live on the island of Little Andaman have fared only marginally better. From 600 individuals in 1901 the population has fallen to 101 individuals today (Table 1). Whereas the Great Andamanese declined because of the various epidemics, the Onge are suffering on account of the destruction of their forests and the imposition of a way of life that is alien and insensitive to them.

The destruction on Little Andaman goes even today, pushing the Onge further and further towards oblivion. The case of the Onge and the happenings on their island is a classic case of how modern notions of development are causing widespread destruction of the forests and of a

Table 2: Annual Extraction of Timber In the A and N Islands

Date	Ave Annual Extraction in Cubic Metre
Pre 1950	
1869-1929	15,300
1930-1950	49,700
Post 1950	
1951-1962	88,800
1968-1983	1,18,800
1990-1995	1,12,000
1997-98	75,000

Source: Saldhana 1989 and A and N Forest Department.

community that is dependant on them for survival. It is also representative of the general situation in the other islands in the Andamans and has many lessons for the future.

Little Andaman

This is the southern most island of the Andaman group of islands with an area of 730 sq km. The island is for most part flat. Only the central and southern portions of the island have undulating hills with the highest point rising to 156 m above sea level. The island is the only home of the Onge tribe of Negrito origin which has lived here for centuries. Today as seen earlier the community comprises of a small group of only 101 individuals [Saldhana 1989; A and N Administration 1995].

At one point of time in history the Onge too were hostile to outsiders like the Jarawa and Sentinelese today. The most well known record of their hostility is of 1867, when they killed many of the crew and burned down the British ship 'Assam Valley' that had come to the island [Whitaker 1985]. Though the history of the settlements and the timber extraction operation in the Andaman islands in general is more than a century old, Little Andaman remained completely untouched till very recently.

The 1960s saw the massive colonisation programme planned for the Andaman and Nicobar (A and N) Islands. Till this time the island of Little Andaman had belonged only to the Onge who were also known to travel in their dugout canoes to nearby islands and occasionally to Port Blair too [Whitaker 1985]. A massive development and colonisation programme was now undertaken as a part of which thousands of mainland Indians, refugee families from erstwhile East Pakistan (now Bangladesh) and Tamils from Sri Lanka were settled here.

An 'Inter Departmental Team on Accelerated Development Programme for Andaman and Nicobar', set up by the ministry of rehabilitation, government of India, submitted its report in 1965. The plans and more importantly the thinking and the attitudes of the time were clearly evident in the report which is popularly referred to as 'the Green Book' [ministry of rehabilitation, GoI, 1965]. It prescribed the route to take for the development of the A and N islands in general and Little

Andaman in particular. Various schemes were proposed for the development of the islands under broad categories of strategy, agriculture, animal husbandry, forest, industry, fishery, water, transport, health, colonisation and manpower.

The island of Little Andaman was specially earmarked for a Rehabilitation and Resettlement (R and R) programme, considering many favourable factors like a large (by the standards of the Andamans) island, few inhabitants (only the Onge) and the presence of good natural and forest resources, particularly timber.

The committee suggested drastic steps for the development of the island. The suggestions made for Little Andaman included clear felling of half of the island's forests, settlement of 12,000 settler families on the cleared land, creation of plantations of coconut, areca, and palm oil, and use of the felled timber for wood based industries like saw mills and plywood factories.

Even when the scheme for the colonisation of Little Andaman was being planned, the entire island had already been legally notified as a tribal reserve for the Onge. This had been done in 1957 itself, long before the plans for the development of the island were thought out (Protection of Aboriginal Tribes Regulation 1956, Andaman and Nicobar Administration).

It is now clear that the presence of the tribal reserve was completely ignored and all the proposals made and activities initiated were in violation of the rights of the Onge. The forest too had no value except for the timber that could be extracted from it. Otherwise they were considered useless wastelands that needed to be cleared, reclaimed, and aggressively developed.

The report emphasised that it was tentative and provisional, but the proposals that were made are clearly indicative of the scale of destruction suggested and planned. They also set the ball rolling and became the basis on which the destruction started; the twin processes of the settlement of thousands of outsiders and the starting of a huge timber extraction operation to support these settlers.

Over the last 35 years, roughly 30 per cent of the island of Little Andaman has been taken over by outsiders for settlements, agriculture, timber extraction operations and plantations [Protection Aboriginal Tribes Regulation (PATR), 1957;

Whitaker 1985; Saldhana 1989].

The first saw mill on the island was set up in 1970 and simultaneously large areas were cleared for the establishment of the settlements. As proposed in the development plan some area was also cleared for the establishment of a red oil palm plantation. About a decade ago the decision was taken that the plantation would not be expanded and fortunately that moratorium has stood [ANFPDC 1997; Bhattee 1985-86]. Simultaneously the Andaman and Nicobar Forest and Plantation and Development Corporation (ANFPDC) was created and it was given the twin responsibilities of managing the red oil palm plantation and carrying out the timber extraction operations [ANFPDC 1976].

Later on in the 1970s certain legal changes were made to the boundaries of the Onge Reserve to allow for the activities that were suggested for the island [PATR 1957]. However, 70 per cent of the island was still retained as a tribal reserve for the Onge and even today this is the status. On paper, at least this was and continues to be exclusive Onge land on which no settlement, logging activity or trespassing is allowed. Unfortunately however, this status and the protection accorded have remained only on paper.

The population on the island has continued to increase; from virtually no outsider in the 1960s to over 12,000 individuals today [A and N Administration 1995]. As more and more people move into the island from outside, good forest land within the Onge reserve continues to be encroached upon. Trespassing into the reserve area for poaching of animals like the Andaman wild pig by these settlers is also extremely common. This prized animal is endemic to the region and is very important in the diet and culture of the Onge [Pandya 1993]. Today however habitat loss and poaching have resulted in a sharp decline in their numbers [Tambe and Acharya 1997].

The area of about 20,000 hectares of the island that was handed over to the Forest Corporation has been extensively logged over in the last three decades. Recently there have been reports alleging that the Forest Corporation itself, has been violating the tribal reserve by directly logging timber from within the boundaries of the reserve. We thus have an extremely unfortunate case here where the main violator of

the law is an arm of the administration itself.

Deforestation and developmental policies have had an adverse impact on the ecology of the island and the surrounding oceans. Reduction in the number of the Andaman wild pig (*Sus scrofa andamanensis*) and the slow moving sea mammal Dugong dugon has occurred both due to poaching and habitat destruction [SANE nd; Pande et al 1991].

Large quantities of sand has been mined from the beaches for construction activities. Consequently, beaches have been destroyed, erosion by the sea has increased and in some places the beaches have simply vanished. Endangered sea turtles like the Olive Ridley (*Lepidochelys olivacea*) and the Green sea turtle (*Chelonia mydas*) which nest on the beaches here, are now reported in much smaller numbers (personal communication: settlers in the island) and coral reefs in the waters surrounding the island are being choked by the excessive runoff from areas that have been deforested [Soundarajan et al 1989].

Fate of Onge

The clearance of land for settlements and the loss of forests to logging have had a direct impact on the Onge. They have been driven away from what was their prime and preferred habitat and have been forced to move deeper into the forest [Paul 1992]. With excessive poaching of their food sources like the wild pig, survival is becoming excessively difficult for them.

Logging operations have also played the role of opening up the island further. Roads that are bulldozed in the forest to carry out logging operations give the settlers greater and easier access to areas that were otherwise inaccessible. Not only has it facilitated greater poaching, but also made it much easier for the settlers to move further and further into the forest to establish settlements. Simultaneously the Onge have had to face the onslaught of an alien, modern culture that is highly insensitive and unable to appreciate or even acknowledge their traditional way of life [Awaradi 1990].

The Andaman Adim Janjati Vikas Samiti (AAJVS), the Andaman Tribal Welfare Board of the A and N administration has a welfare scheme for the Onge, but this seems directed more towards making them

dependant on the dole offered, than to encourage them to lead their traditional and independent lives. This dole has suddenly introduced items of food like rice and sugar which were never a part of the Onge diet. The dole for the Onge at one time also included 250 gms of tobacco for each adult as a welfare measure [Awaradi 1990]. The long-term health impacts of such drastic changes can never be predicted, but the consequences can well be imagined. Attempts are also being made through the various welfare measures, to induce the Onge to give up their nomadic way of life in favour of one that is much more settled. The main aim appears to be to settle the Onge so that they no longer need the entire island to roam and use for survival. Consequently a much larger chunk of the forests which cannot be exploited at the moment will become available.

Simultaneously the settlers also introduced to these people other vices like alcohol which many Onge are now addicted to. This has made them much more susceptible to exploitation, and the settlers have made the best possible use of the situation. In exchange for the ubiquitous bottle, popularly known here as 180 (after the standard size of a bottle of alcohol of 180 ml), the Onge give away to the settlers precious resources like honey, resin, ambergris and turtle eggs.

Many experts are of the opinion that unless drastic steps are taken which include the terminating of the forestry operations in the island and stopping the cultural assault, the Onge will not survive for too long as a viable, independent group of people. The Onge can be saved only if the destruction of their forest and the colonisation of their lands are stopped.

In the short-sighted rush to exploit the forests of the Onge, certain other critical aspects of Onge culture have been completely ignored. This includes the vast storehouse of their traditional knowledge of the plants and animals. The Onge have knowledge that could prove to be a boon to the whole of mankind; it could be a new food plant or a cure for a disease that modern medicine has failed to fight. There is proof of this already, though only very minimal ethno-botanical research has yet been carried out here.

The Onge, e.g., use a particular plant 'Orphea katshalica', ('tonjoghe' in Onge language) in the process of extracting of

honey from the hives of the dangerous rock bees, 'Apis dorsata'. The leaves of the plant are chewed and the juice is smeared all over the body before they climb the tree with the hive [Dutta et al 1983; Basu 1990]. There is some ingredient in the juice that immobilises the bees and makes them harmless. The Onge keep chewing the leaf as they climb up the tree and on reaching the hive, spit some of the juice on the bees. The method is so effective that the bees are made to move away and only that part of the comb is cut away that has the honey – an entire process that is harmless to humans; to the bees and as safe and efficient as anything can be. Even more recent was the 'discovery' by the Indian Council of Medical Research (ICMR), of a plant used by the Onge, which could possibly have the cure for the dreaded, and often fatal disease of cerebral malaria. This discovery, unfortunately also got involved in an ugly patenting related controversy, obscuring in the process its importance and great potential value [Kothari 1996; Mc Girk 1998]. Far from respecting and learning from this knowledge, policies are being implemented which will eventually destroy all before it even can be documented. The Onge as the original inhabitants, have the first right over this land but not many are willing to concede this. The political will too is absent. If anything, the weight of political support is on the side of the settlers, as is evident in the statement made in 1990 by one of the most prominent and influential politicians from the islands, "...Job seekers (settlers) who have come (to) the island are now serious contenders for the allotment of house sites and agricultural land. Since the political system goes with the number, no political party is in a position to contradict their demands" [Paul 1992]. The Onge with a population of 101 individuals, certainly have no chance of being heard.

It is clear that the Onge are completely dependant of the forests for survival, and only if this fact is given the importance it deserves, can the forests and the Onge be saved. As things stand today, the future for both seems bleak. [□□]

Notes

[The issues of forestry and deforestation in the Andaman islands discussed in this paper were studied as part of a larger environmental investigation carried out in the Andaman islands

by Kalpavriksh in 1998. This article is based on a paper presented in the Asia Regional Workshop on Addressing the Underlying causes of Deforestation and Forest Degradation, held in Java, Indonesia from December 4-6, 1998. It is part of a larger environmental investigation carried out in the Andaman and Nicobar Islands by Kalpavriksh in 1998. Additional support for the writing and the presentation of this paper came from the United Nations Environment Programme (UNEP), the Netherlands Development Agency (NEDA) and the Netherlands Committee of the International Union for the Conservation of Natural Resources (NC IUCN). The study was funded by Bombay Natural History Society (BNHS), Society for Andaman and Nicobar Ecology, Andaman and Nicobar Islands Environmental Team. Officials of the Andaman and Nicobar forest department and Andaman and Nicobar Forest Plantation and Development Corporation. I acknowledge with thanks the help of Ashish Kothari, Sunita Rao, Neema Pathak, Yashodhara Kundaji, Sushruti Santhanam, Samir Acharya, Harry Andrews, Rom Whitaker, Manish Chandi, Indraneil Das, Mia Siscawati, Yoichi Kuroda, Simone Lovera, Miguel Lovera.]

† Interim order of the Supreme Court of India on the Protection of Forests (in the case TNG Thirumalpakad vs Union of India and others, Writ Petition (Civil) No 202 of 1995).

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A history of alienation

Pankaj Sekhsaria

The author is an environmental activist with Kalpavriksh, Pune.

The history of the Andaman and Nicobar islands is today a conveniently comfortable one: of the British and "Kalapani"; of World War I and the Japanese occupation, of Netaji Subhash Chandra Bose, Veer Savarkar, the first hoisting of the Indian National Flag and of modern mini India where all communities and religions live in peace and

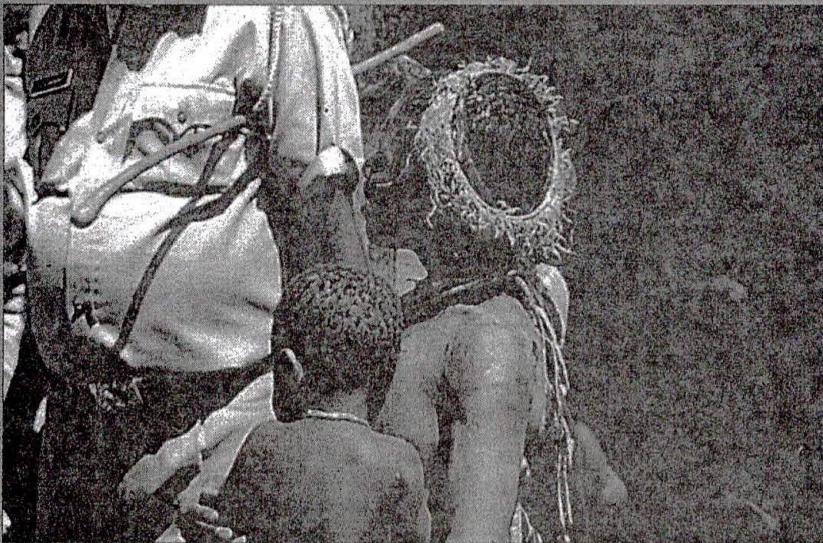
harmony.

But like all histories, this one too, is incomplete. It is the story of the victors, of the people who have today come to dominate these islands. The vanquished as they say, have no tales to tell. The history of these islands as we tell it, as we are told it is, is silent in many parts. There are gaping holes that are conveniently allowed to remain so.

This history says nothing of the past, the present and the future of these people and communities that originally belong to the islands. For that matter, the islands belong to them, but ironically the people who write the history are we, the modern democratic Indian state. The people in question are the ancient tribal communities that live here, particularly the negrito group of the Andaman islands – the Great Andamanese, the Onge, the Jarawa and the Sentinelese. These are communities that have lived and flourished here for at least 20,000 years, but the end could well be round the corner. Just a 150 years ago the population of the tribal communities was estimated to be at least 5,000. Today however, while the total population of the Andaman and Nicobar islands has risen to about four lakhs, the population of all these four communities put together is not more than a mere 500.

These communities of thousands of individuals with a living lineage going back to 20,000 years have been brought to this sorry state in a mere 150 years. It definitely began with the British and their policies. And was continued with clinical efficiency (sic) by modern independent India.

Independent India was only about a couple of decades old, a young



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thriving democracy as would have been called then. But this vibrant democracy was then already set on course to becoming a coloniser itself. From colony of the British to coloniser of the Andaman islands (and many other places too), the step for India was an amazingly easy one, almost, it would seem, a natural one! In the late Sixties an official plan of the Government of India to "colonise" (and this was the term used) the Andaman and Nicobar islands was firmly in place.

The forests were "wastelands" that needed to be tamed, settled and developed. It did not matter that these forests were the home of a myriad plants and animals that had evolved over aeons. It did not matter that ancient tribal peoples were already living here for centuries, neither that they were physically and spiritually sustained by these forests. The idea that forests could mean more than just the timber the trees provided had not even taken seed in the national consciousness. The Nehruvian dream of massive industrialisation was still calling and the rich evergreen forests of the islands promised abundant timber to fuel it. The tribals, too, had to be civilised, brought into the Indian mainstream. There was no question of trying to understand, forget about asking what was it that the Onge, the Andamanese or the Jarawa wanted themselves.

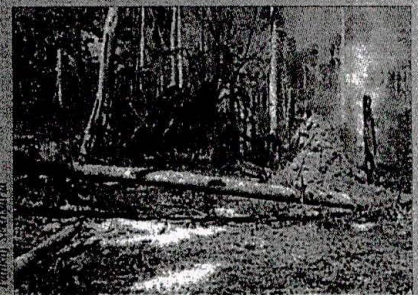
Tribal cultures the world over are intricately linked with the forests they live in. The story or should we call it the "history" of modern civilisation is largely one of the taming and the destruction of the great forests of the world and the innumerable tribal communities that lived therein. The Andaman islands is a good example. By various means, both intended and unintended, the tribal communities have been constantly alienated from their forests, their lands and their very cosmos that is built around all these.

One of the subtle but classic examples is the Hinduisation of the name Andaman itself and the attempt to pass it off as the only truth. The standard and universal answer to the question of its origin is the well known Hindu god Hanuman. That the state too conveniently believes this is evident from the fact this is the story that goes out in the sound and light show that plays every evening at the Cellular Jail in Port Blair. No one is bothered that there are many other explanations why the Andamans is called so.

Researches On Ptolemy's Geography Of Eastern Asia, a book written by Colonel GF Gerini in 1909 makes incredible reading in this context, but obviously not many have bothered to read it. It is hardly surprising then that we care even less to know what the tribals call these islands.

The repercussions of this dominant mindset is all too evident when one looks at what is happening to the forests and the tribal communities. The Great Andamanese have been wiped out as viable community. This community which had an estimated 3,000 members about a 150 years ago, is today left with only about 30. The Onges of the island of Little Andaman (they call it Egu-belong) today number only 100. The 1901 census estimated it to be 601. Till a couple of years ago the Jarawa were extremely hostile to the outside world. This hostility and self-maintained isolation in the impenetrable rainforests of these islands had ensured that their community, culture and forest home remained intact and unharmed. It was however, never our intention to let them be. The Andaman Trunk Road was constructed through the heart of the very forests the Jarawa call home. It destroyed precious forests and bought in various developments that are proving to be disastrous for the Jarawa. As a result of a combination of such factors, most not known or understood, the Jarawas recently shed their hostility and have begun to come out from their forests "voluntarily." It could well be the first step on the route that the Great Andamanese and the Onge were forced to take many decades ago. Annihilation! A huge epidemic of measles recently affected the Jarawa and a number of them are undergoing treatment for tuberculosis.

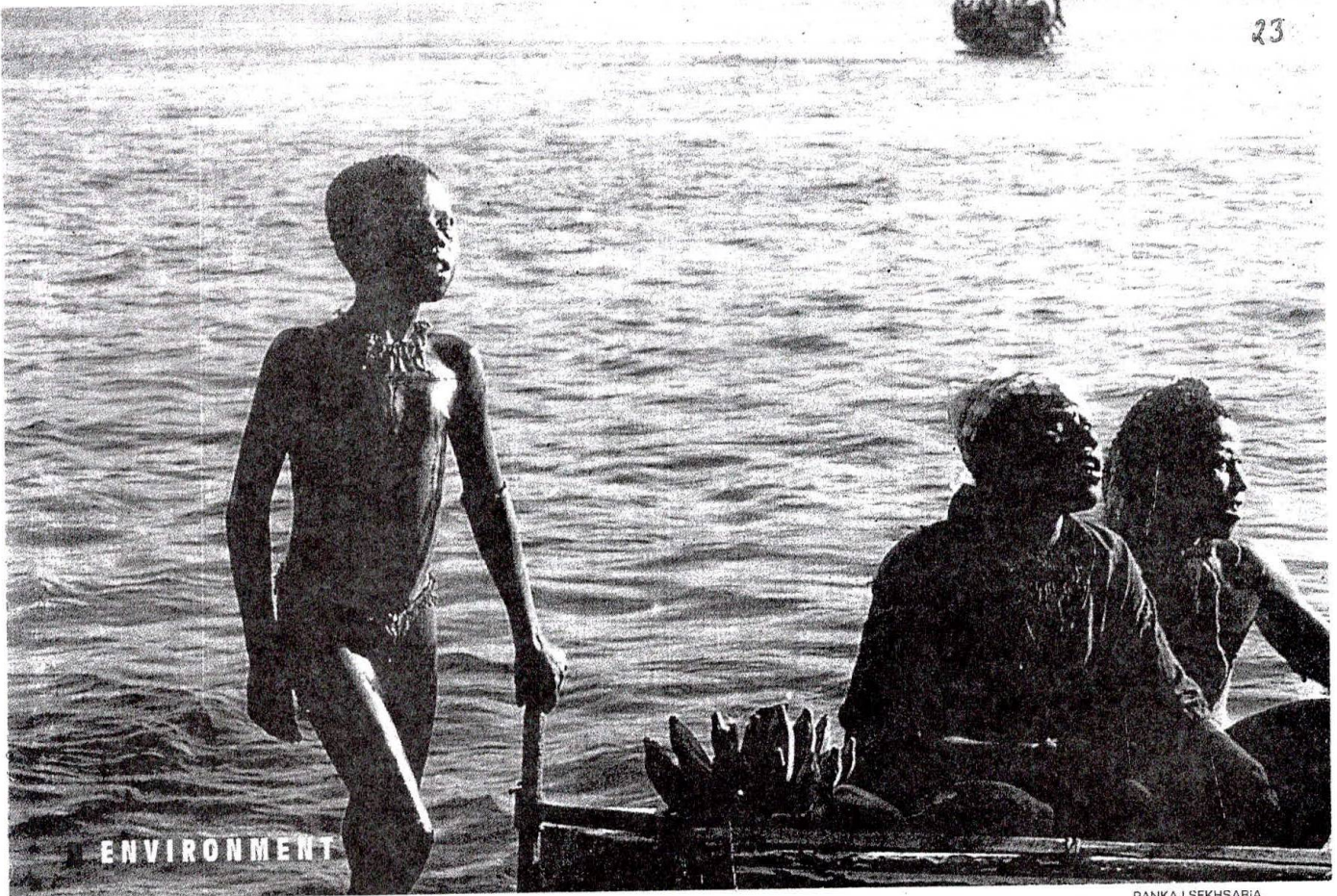
The lessons of history have not



Ranjit Sekharia

been learnt. May be they are being deliberately ignored. It could well be worth our while to get these tribals out of our way. Only then can the precious tropical hardwoods that stand in their forests and the very lands that these forests stand be put to "productive" use. Little Andaman is a classic case. Thousands of settlers from mainland India were brought and settled here and the forests were opened up for logging in the early Seventies as part of the "colonisation" plan. An Onge tribal reserve was created, but for more than a decade now this reserve has been violated for timber extraction. The attitude of the settlers who today live on the land that belongs to the Onge only reflects that of the powers that be. They ridicule the tribals as uncivilised junglees. Vices like alcoholism were introduced; the addiction is now used by the settlers to exploit the resources from the forests. Poaching and encroachment inside the Onge reserve too, are ever on the increase.

In the early Sixties, the Onge were the sole inhabitants of Little Andaman (Egu-belong). Today, for each Onge, there are at least 120 outsiders here and this imbalance is rapidly increasing. What more needs to be said?



Logging off, for now

The curbs imposed by the Supreme Court on the felling of naturally grown trees and other forestry-related activities in the Andaman and Nicobar Islands, come at a critical juncture for moves to conserve biodiversity and protect the interests of the archipelago and its communities.

PANKAJ SEKHSARIA

Forestry (in the Andaman islands) is a comparatively new department for utilising convict labour and is now the chief source of revenue in cash.

—Lt. Col. Richard C. Temple, Chief Commissioner of the Andaman and Nicobar islands, in the Census of India, 1901.

The cutting of naturally grown trees in any (on)going projects (in the Andaman and Nicobar islands)... except plantation wood is prohibited.

—The Supreme Court of India, order dated October 10, 2001.

THE Andaman and Nicobar Islands are clothed in some of the finest tropical evergreen forests in the world and are home to a large number of rare and endangered,

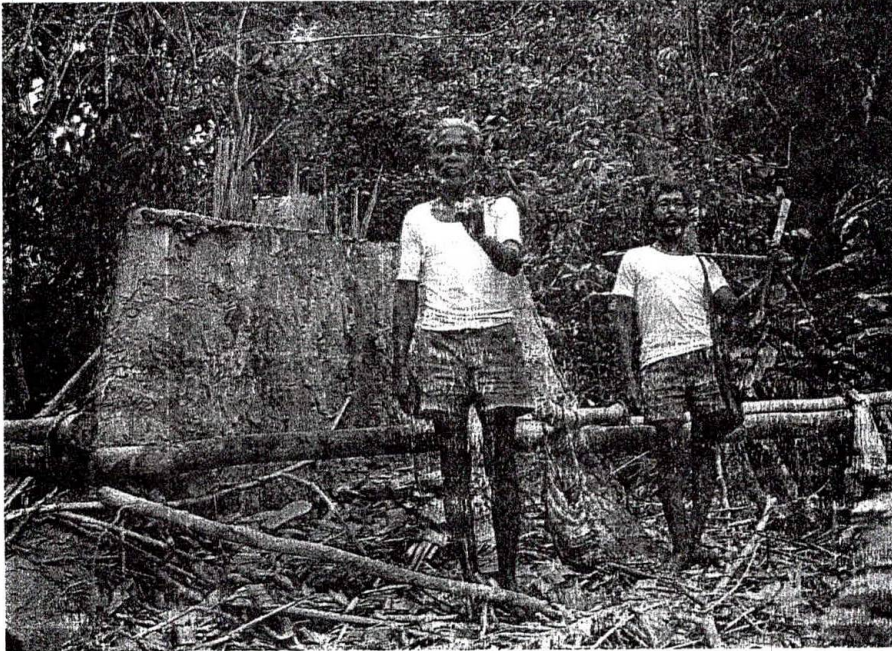
even undocumented, species of flora and fauna. It is, however, the classical “missing the forests for the wood” syndrome that has driven developmental policies in the islands for over a century. The British first set up the Forest Department here in 1883. For a region so rich in forests, its major responsibility, expectedly, was timber extraction. This has continued unabated ever since, but now a change has been forced. The October 10, 2001 order of the Supreme Court marks this significant milestone in the history of these unique islands.

Forestry operations clearly inflicted widescale damage to the island’s forests,

(Top) A few members of the Jarawa tribal community in South and Middle Andaman islands. The biggest beneficiaries of the stoppage of timber extraction operations in the islands will be their six indigenous communities.

and the biggest losers have been the indigenous communities that have lived and flourished there for thousands of years. Today, there are six indigenous communities that live in these Islands. The Nicobari and the Shompen, of Mongoloid origin, inhabit the Nicobar group of islands. Forestry operations in the Nicobars have been limited as commercial extraction of timber did not arrive in these islands. But the four tribal communities of Negrito origin that live in the forests of the Andaman group of islands have been the hardest hit by the forestry operations.

The Great Andamanese, who numbered more than 3,000 around the time the operations began, have been virtually wiped out and today just about 30 individuals survive on Strait island. The Onge of Little Andaman have suffered a fate that is only marginally better. Timber extraction started here in the 1970s. Although



PANKAJ SEKHSARIA

Timber extraction on Havelock island. Often, the felled timber is left to rot.

their population count has remained steady at around a hundred individuals since that time, the fabric of their life and society has been tattered. The Jarawas of South and Middle Andaman are better off still, because until recently they were extremely hostile to the outside world and defended their forests and way of life aggressively. However, this is beginning to change and it is feared that they too will go the way of the Great Andamanese and the Onge. The Sentinelese live on the isolated 100-sq km North Sentinel island. They remain violently hostile and therefore stand the best chance of surviving as an independent human community for some more time.

The Onge and the state of their forest home figured in the Supreme Court's order. Investigations in the early 1998 had revealed serious violations of their rights and illegal extraction of timber from the forests of Little Andaman. Ironically, the agency responsible in this case was the Andaman and Nicobar Forest Plantation and Development Corporation, which had been extracting timber since 1977. The main forms of violation included the extraction of timber from within the boundary of the Onge tribal reserve, excessive removal of timber from the area where logging was legally permitted and continued logging in the absence of a working plan as required by the Forest Conservation Act (FCA), 1980, and an interim order of the Supreme Court dated December 12, 1996 in the Godavarman case (*Frontline*, May 7, 1999).

Based on these findings, three non-governmental organisations – the environmental action group, Kalpavriksh, the Port Blair-based Society for Andaman and Nicobar Ecology (SANE) and the Mumbai-based Bombay Natural History Society (BNHS) – filed a writ petition before the Calcutta High Court, Port Blair Circuit Bench seeking an end to all logging operations in Little Andaman.

Additional proof of the impact of the forestry operations had been put together by the petitioners. These came from various sources, some relating to Little Andaman in particular and others to the islands in general. For Little Andaman, this included a 1989 study on corals by the Andaman and Nicobar Chapter of the Indian National Trust for Art and Cultural Heritage (INTACH). The study showed that the percentage of dead coral was directly related to the level of logging and soil erosion that was taking place on land. In the sea adjoining the main jetty and the timber depot of the island, the relative abundance of live coral was only about 11 per cent.

Other studies showed that endangered fauna like the saltwater crocodile and the endemic Andaman wild pig were being affected owing to logging. The Onge, who critically depend on the wild pig, had reported the same and also asked for the stoppage of logging activities on 'their' island. The most damning critique of forestry operations on the islands as a whole was contained in a 1983 report from the

Department of Environment, Government of India. Authors S.C. Nair and Shanthi Nair had argued that the basic assumption underlying the Andaman Canopy Lifting Shelterwood System (which the Forest Department has been following as a scientific system of forestry) was wrong. This forestry system, they pointed out, was leading to a preponderance of deciduous elements in the ever-green system that would eventually destroy the whole island ecosystem.

The Island Development Authority (IDA) too, in its fifth meeting held in 1989 under the chairmanship of Prime Minister Rajiv Gandhi, resolved that logging had to be phased out over the next few years. As a matter of fact, sensitive officials in the Forest Department have argued all along that the forestry operations are not in the best interests of the islands. However, the Forest Department and the local administration continued with large-scale timber extraction. As far as the petition in the High Court was concerned, they did what government institutions are best at. They stonewalled it. All that was stated in the writ petition was denied. It was further argued before the Judges that as the petition had invoked an order from the Supreme Court the matter could only be argued there. The High Court agreed, and the petitioners were forced to approach the Supreme Court in 1999 through an intervention application filed as *T.N. Godavarman Thirumulpad vs The Union of India and others* (Writ Petition 202 (Civil) of 1995).

For over two years nothing happened as far as the courts (both the High Court and the Supreme Court) were concerned. On the islands too things went back to normal after the initial shake-up after the hearings in the High Court. The matter finally came up for hearing on October 10 in the Supreme Court and in a significant order, a Bench comprising Justices B.N. Kirpal, Santosh Hegde and Ashok Bhan stayed the felling of naturally grown trees in the entire area of the Andaman and Nicobar islands.

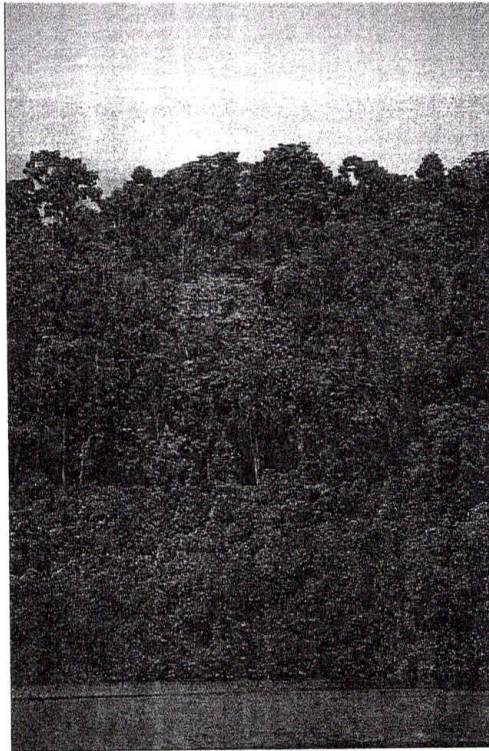
THAT the timber extraction operations involves crores of rupees annually is common knowledge. There have also been allegations that many top forest officers and administrators have made a lot of money through illegal timber extraction and transport operations. Concrete proof of this was unearthed in February 2000, even as the issue of illegal logging was pending before the Supreme Court. The matter involved the issue of unnumbered transit passes for the transport of nearly 400 cubic metres of

timber from Mayabundar in North Andaman to Chennai and even though Bishnu Pada Ray, Member of Parliament from the islands, wrote to the Chief Vigilance Commissioner demanding a probe, nothing has come of it yet. At a conservative estimate, the total consignment was worth over Rs.27 lakhs and it is being described as only the tip of the iceberg.

Significantly, the demand for timber from industries on the islands has been falling steadily over the last few years. A look at the figures show that while 47,000 cu m was legally logged in 1999-2000, the figure fell to 40,067 cu m in 2000-2001. Importantly, an increasingly large quantity of the timber was not being lifted by the industries that it was meant for. In 1999-2000, 25 per cent of the timber logged was not lifted, while in 2000-2001 nearly 42 per cent remained in the depots of the Forest Department. The fact that this reality was not taken into account while setting extraction targets for the following year is a clear indication that there are other forces at play.

Following the October 10 order, the matter came up for hearing again before a Bench comprising Justices B.N. Kirpal, K.G. Balakrishnan and Arijit Pasayat on November 23. In addition to the stay on felling of naturally grown trees, the Bench directed that, "no sawmill, plywood or veneer factory shall utilise any naturally grown trees without further orders from this court". The court appointed an expert commission under Professor Shekhar Singh of the New Delhi-based Indian Institute of Public Administration (IIPA). The commission was asked to look into the state of the forests and other related matters on the islands.

There has been some degree of resentment on the islands over the complete stoppage of forestry-related activities, particularly because of the implications on the livelihoods of those involved. Figures for 1997-98 show that there were 35 timber-based industries on the islands. These included three private plywood mills, two government saw mills, 19 private saw mills and 11 match/pencil and composite units. The three plywood mills employed an estimated 3,000 individuals and used a large chunk (nearly 65 per cent) of the timber that was cut on the islands. Over the last year or so, two of these big mills, employing an estimated 2,000 persons, shut down citing financial and administrative reasons. Other smaller units too have not been func-



PANKAJ SEKHARIA

A view of the Jarawa reserve in South Andaman island. The forests, rich in animal and plant species, are the biggest wealth of the islands.

tional. The net result was that in 2000-2001 only 24,000 cu m of timber was picked up for use when the total quantity that had been cut was over 40,000 cu m.

The 1991 Census figures had put the total number of workers in the islands at about 91,000 individuals. Those involved in forestry (including activities such as planting, replanting and conservation work) was estimated at around 10 per cent of the islands' total workforce. Latest figures of the operational industries in the islands, their capacities, and people employed are reportedly being put together by the administration as demanded by the court.

At the same time, there is another large body of opinion that sees in these developments a new chapter for the islands and the islanders. That forestry could not have gone on forever is well known and the challenge now lies in finding creative and more sustainable solutions. There are a number of areas of work that are directly related to the forests and that have the potential to provide employment to a large number of people. This includes water and soil conservation activities, social forestry and regenerating degraded forest lands, agro-forestry and a better level of wildlife conservation and protection work. Fisheries have great potential, thanks to the fish-rich seas that surround the islands. An effort needs to be made towards sustained and sustainable utilisation of these resources.

The court order comes at a significant juncture in the context of the ongoing preparation of the National Biodiversity Strategy and Action Plan. Coordinated on the islands by the Andaman and Nicobar Island Environmental Team (ANET), the draft plan was released recently. It points out that the biggest issue confronting the islands today is the rapid population growth as a result of large-scale migration from mainland India. The present estimated population of the islands is 500,000. If one were to consider just the availability of drinking water there, it will become clear that the carrying capacity of the islands has been long exceeded.

Agricultural yields in the islands have fallen and evidence from other tropical forest regions of the world shows that these soils are not conducive to agricultural activities. A horticulture-based system might have some answers. Tourism on the islands is growing rapidly and is being seen as the next big revenue earner. However, the draft plan identifies tourism as a cause for concern, unless steps are taken to ensure that it is environment-friendly.

There are other issues also on the island. There is large-scale encroachment of the forests. The mangrove cover has fallen substantially over the last few decades and coral reefs have been impacted by land-based activities such as logging, agriculture and pesticide use. All this is critically linked to the precious biodiversity of these islands, on which the lives and livelihood of their people depend.

The biodiversity strategy and action plan (BSAP) has the potential to create a broad framework in which the future of the islands can be discussed, debated and planned. The exercise of drafting it allows for extensive multi-stake holder participation. This has not been exploited to its fullest potential, with the government departments in particular lagging behind. Perhaps the court order will now lead to some action here as well.

In many ways, the mandate of the BSAP for the islands and the mandate before the commission appointed by the court overlap neatly. There are many burning issues that have to be dealt with if the future of the islands is to be secured. Logging, though critical, is only one of them. The challenge now is to find a creative way forward. ■

In association with the Leadership in Environment and Development (LEAD) Programme

THE NEW MILLENIUM TAMASHA

A tourism promotion event planned on remote Katchal, in the Nicobar islands to herald the millenium led environmentalists to launch a sustained campaign against it.
PANKAJ SEKHSARIA reports on how a potentially ruinous event was scaled down

The Royal Greenwich Observatory had announced a few years ago that the first sunrise of the new millenium would be visible from the island of Katchal in the Nicobar group of islands in the Bay of Bengal. The last few months saw the tourism industry and the A&N administration in a tizzy as they went about planning and advertising a huge millenium *tamasha* here. It was suggested that the tiny and remote island of Katchal is the only place in the world where the first sunrise will be visible and efforts were being made to get more than 20,000 tourists (largely foreigners) to Katchal for the occasion.

It appeared to be the perfect situation for a huge tourism event - an exotic, remote island, an occasion that will never come again and a government all willing to lay out the red carpet. However there were serious flaws and the entire event came to seriously questioned and opposed by a number of environmental groups from across the country. The opposition was strong and sustained and eventually the administration had to respond. In a senior secretary level meeting held in Port Blair in early August, a decision was taken to scale down the plan substantially. It was a small but encouraging victory that could well have saved the tribals and the fragile environment of the island of Katchal, from certain ruination.

The campaign that was co-ordinated by the Port Blair based Society for Andaman and Nicobar Ecology (SANE) was based on detailed research and solid facts. The very fact that Katchal was being promoted as the **only place** where the **first sunrise** of the new millenium will be visible was incorrect. A clarification issued by experts of the internationally renowned, Pune based Inter-University Centre for Astronomy and Astrophysics (IUCCA) categorically asserted that these claims were preposterous and that there were at least two falsehoods that were being perpetrated - one that the new millenium begins on January 1, 2000. and the other that Katchal is the only place where this will be visible.

Experts all over the world, and this includes the US Naval Observatories, the National Bureau of Standards and Technology, US and the Royal Greenwich Observatory, England (before its demise in 1998) have accepted and adopted January 1, 2001 as the beginning of the new

millenium. The explanation for this is rather simple. There was no zero year because we actually began this calendar with Year 1. Accordingly, the first year was completed at the end of year 1, the first century at the end of year 100, the first millenium at the end of year 1000 AD and this, the second millenium at the end of year 2000. January 1, 2000 is thus only the first day of the last year of this millenium and not the beginning of the new one. The Y2K problem seemed to have struck here as well, but in an entirely different way.

The second issue was of the site where this first sunrise would be visible. From a technical point of view the issue of the first sunrise is not as simple as it initially seems. The US Naval Observatory in its document titled 'First Sunrise of the New Millenium' discusses some of these issues in detail.....*'it is important to realise that on any January 1, the sun is continuously above the horizon across the most of Antarctica'*. So, very simply put, the place where the first sunrise of the new millenium will be seen is Antarctica. However beyond this, the questions become more involved..... Does the new day begin at local midnight, in the time defined by the local jurisdiction? Or does it begin at midnight on the meridian of Greenwich in England, which is the zero longitude meridian, i.e. 0 hours GMT also known as 0 h UT.

Significantly, the paper states that at 0 hours UT, which is generally taken to be the start of a new day, the sun is rising simultaneously along an arc that runs 650 kms east of Kerguelen island in the Indian ocean to about 640 kms east of Amsterdam island, through the Nicobar islands, up along the Burma Thailand border, through China, along the China - Outer Mongolia border, along the China-Russia border, through Siberia, and out into the Arctic ocean just north of the Poluostrov peninsula. All places along this line will experience sunrise simultaneously at 0 hrs UT on 2000 or 2001 or any other year. There is simply no unique 'first sunrise' location.

The other interesting dimension is that the time of the sunrise is always calculated for sea level. This means that if you go higher, the sunrise is seen earlier. For example if one was to move 1000 m above sea level, the sunrise would be

visible 4 minutes and 3.8 seconds earlier than the person at sea level at the same point. Theoretically this also means that if a person is roughly 100 kms west of Katchal but 1000 m above sea level he/she will see this sunrise at about the same time as an observer at Katchal who will be at sea level. The basic argument is that there is nothing spectacularly unique about the sunrise at Katchal. Various permutations and combinations would give the same results.

The arguments over the timing of the new millennium the time of the sunrise and the exact location could well have been discarded as academic ones. The logic of raising these points could have also been questioned if this unique opportunity would be beneficial to all. But that was precisely the point. There were far greater and serious issues involved in allowing this incorrectly nomenclatured event on the tiny island of Katchal argues Samir Acharya of SANE, who was the first to realise the problems with an event of such a nature

The resident population of Katchal is only 12,000, and nearly 4,000 of these are the Nicobari tribals. The impact of suddenly inducting an additional 20,000 outsiders on this island for a day or two can well be imagined. Acharya points out that this could create a huge health hazard. 20,000 people means that a minimum 20,000 to 30,000 kgs of human excreta and a few lakh litres of liquid waste will be added to the local environment and this will be in addition to unknown quantities of other solid waste like paper and plastic to name the common ones. It is well known that most diseases are spread primarily through faecal contamination of water bodies, and there is no guaranteeing that this would not happen here.

There is another important aspect that was also being ignored. Katchal is the traditional home of the Nicobari tribals. It was designated a tribal reserve under the Andaman and Nicobar Islands Protection of Aboriginal Tribes (ANPATR) -1957 and special permissions have to be obtained if outsiders want to visit here.

Additionally, the entire group of Nicobar islands has always been considered a sensitive area and the entry of foreigners is strictly prohibited. In fact, in the last thirty years, except for one single occasion not a single tribal pass has been issued to any foreigner to visit the Nicobars. The only exception was the permission given to Dr. Rene Dekkar who was specially invited by the Ministry of Environment and Forests (MoEF) of the Government of India to study the endangered bird, the megapode that is found in these islands.

It is significant, that in the past, as eminent a person as the legendary Captain Cousteau (of Calypso fame), who wanted to study corals off Nicobars was denied permission. Renowned institutions like Cambridge University, London and the Vokkenmuseum (Museum of Anthropology), Berlin too had their requests to study the wild boar and the famous pottery of Chowra island turned down. Why then questioned Acharya, was the Andaman administration taking the retrograde step of permitting 20,000 tourists of unknown vintage to visit Katchal to celebrate the non event of a pseudo-millennium sunrise? This is the ultimate degenerate step that the government can take, he says.

Besides there are other fears too. The Andaman and Nicobar islands are unsurpassed for their botanical wealth and the ethno medical knowledge of the tribals that live here is astounding. The possibility cannot be ruled out that the event could become a convenient entry point for bio prospectors and pharmaceutical multinationals who are always looking for newer, virgin areas to explore. Prevention and even a little over cautiousness is certainly a far better option than any corrective action that may be suggested in the future.

A lot of resource and public money was being spent for this event. Recently a new circuit house, which violated the Coastal Regulation Zone (CRZ), was inaugurated on the island. New work was also being undertaken for the laying of roads and pipelines and the construction of a power generating station.

For the present however brakes have been put on. Significantly however, the event has not been called off. The decision taken was that the number of tourists will be scaled down from 20,000 to only 2,000. No foreigners will be allowed to land on Katchal or any other island in the Nicobars but those interested in viewing the sunrise could view it from ships that bring them there. It has also been decided that a crew of Doordarshan will be allowed to land on Katchal and record the sunrise for posterity.

The only problem, and surprisingly nobody seems to realise it, is that this is the wrong sunrise!!!

Turtle tales

Lopsided development policies threaten the survival of rare species of sea turtles in the Andaman and Nicobar Islands. Human communities too are paying a heavy price for such short-sightedness.

Text and pictures:
PANKAJ SEKHSARIA

ONE of the most eagerly awaited events in the wildlife calendar of the country is the mass nesting of tens of thousands of Olive Ridley sea turtles on the Orissa coast. This spectacular event, which has become immensely popular, draws a lot of media attention. However, in other parts of India, there are several nesting grounds of quite a few other turtle species that do not quite draw the attention they deserve. Perhaps the most significant of these "neglected" areas are the remote islands of the Andaman and Nicobar in the Bay of Bengal.

The Orissa coast may be unmatched for the sheer numbers of nesting Olive Ridelys, but the

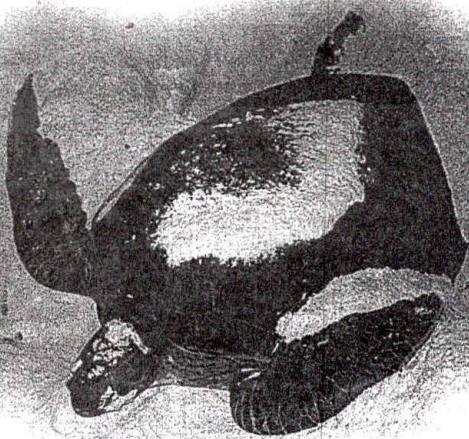
unique features of the turtle nesting grounds in the Andaman and Nicobar Islands are the many species of turtles that nest there and the spectacular beauty of the beaches and the Islands themselves.

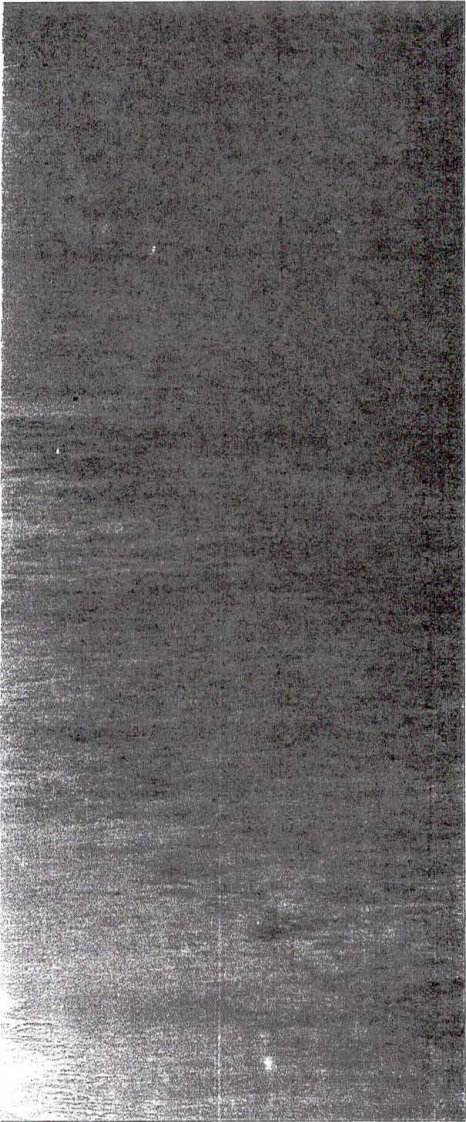
All eight species of sea turtles found

in the oceans of the world are listed as endangered in the Red Data Book of the International Union for the Conservation of Nature and Natural Resources (IUCN). The Andaman and Nicobar Islands are considered the best nesting sites in India for three of these species: the giant leatherback (*Dermochelys coriacea*), the green sea turtle (*Chelonia mydas*), and the hawksbill (*Eretmochelys imbricata*). Additionally, the Olive Ridley sea turtle (*Lepdochelys olivacea*) also nests there in substantial numbers.

Perhaps the most comprehensive study of turtles in the Islands is "The Status and Ecology of Sea Turtles in the

A green sea turtle nesting on South Sentinel Island.





Andaman and Nicobar Islands" by Sarish Bhaskar of the Madras Crocodile Bank Trust (MCBT), published in 1993. Bhaskar's study, conducted over a decade and a half, has interesting and critical information on the turtles in the Islands.

In the Islands, tribal populations such as the Great Andamanese, the Onge and the Nicobarese have traditionally hunted turtles. The small numbers of these tribal people and the fact that they resorted only to subsistence-level hunting, however, meant that the turtle species were not threatened. In fact, experts believe that the existence of tribal reserves, into which the entry of non-tribal people is restricted, has saved several species of sea turtles from extinction. For instance, the only known nesting sites of the leatherback turtle are on uninhabited Islands or in tribal reserves.

However, there are indications that the turtle population in the Islands is

dwindling rapidly owing to a variety of factors: increased pollution of the ocean waters, deaths caused by turtles being ensnared in fishing nets, continued hunting of turtles for meat, destruction of turtle nests, and large-scale destruction of beaches where turtles nest.

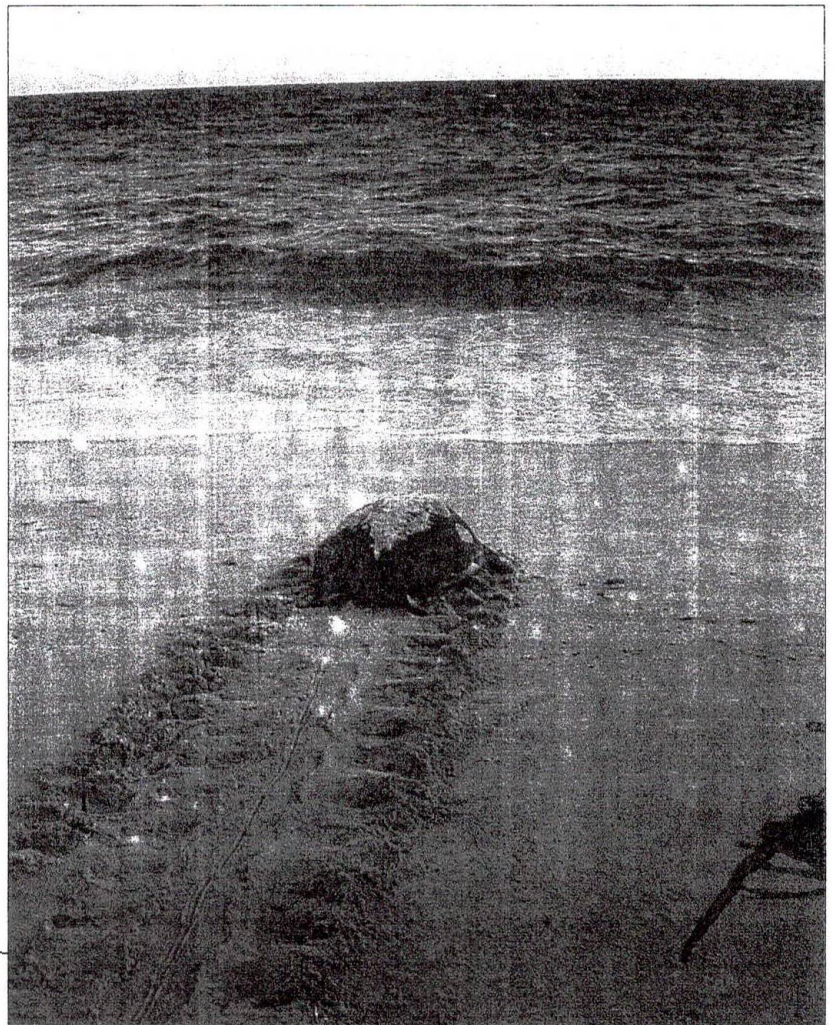
One of the most destructive influences are dogs, which were first brought to the Islands around 1860 by the British and which are now to be seen in many parts of the Islands. Dogs dig up turtle nests and destroy the eggs. They pick up turtle hatchlings as they head back to the sea after hatching; the canines have also been seen to harass the nesting adults, causing them extreme stress and on many occasions even leading to the abandonment of the nests. The problem, reported from all over the Islands, is reaching serious proportions.

The human population in the Islands too has increased rapidly in the last few decades – from 50,000 in 1950 to an estimated four lakh today – owing to large-

scale immigration from mainland India. The expansion of human settlements has reduced and even eliminated space for nesting at several locations. Additionally, it has resulted in large-scale mining of sand from the beaches for use in the construction industry. Houses were traditionally built with timber, but residents of the Islands now opt for concrete structures, and the beaches are the only source of sand. Despite the fact that beach sand, which is very fine and has a high salt content, is unsuitable for use in construction and structures built with it have to undergo major repairs within a decade, it continues to be used. In 1995-96 about 70,000 to 80,000 cubic metres of sand was mined; the figures for 1997-98 were estimated to be about 1,57,000 cu.m. As a result, the beaches, many of which are important turtle nesting sites, have been destroyed.

A visit to the beaches around Port Blair offers telling evidence of erosion and ingress by the sea. Narrow strips of sand are all that remain of the beach, and sev-

A beach on South Sentinel Island. The unique features of the turtle nesting grounds in the Andaman and Nicobar Islands are the several species of turtles that nest there and the scenic beauty of the beaches. (Below) A green sea turtle heads back to sea after laying eggs.





A dead hawksbill turtle, about a year old. Turtles that are ensnared in trawling nets are killed for their meat. (Below) An Olive Ridley, on its back, left to die in the mangroves in Wandoor, less than an hour's drive from Port Blair.



eral trees lie toppled over the shore. The scene is much the same in the beaches at Corbyn's Cove, Wandoor and Chidiyatapu, all of which are less than an hour's drive from Port Blair. In these ravaged sites, there is no more sand to be mined, and the operations have moved farther afield to more remote beaches.

In the tiny settlement of Shoal Bay 19 (SB19), about 20 km north of Port Blair, sand mining over the last decade has systematically destroyed the beach, which was a turtle nesting site. Seawater now moves further into the settlement areas and has caused extensive damage to the paddy crop. In a few other areas, the destruction of the beaches has led to increased erosion and ruined plantation crops such as coconut and areca; roads have been washed away in some places.

Such destruction of beaches poses a serious threat to turtles in the Islands. The beaches at Corbyn's Cove, Wandoor,

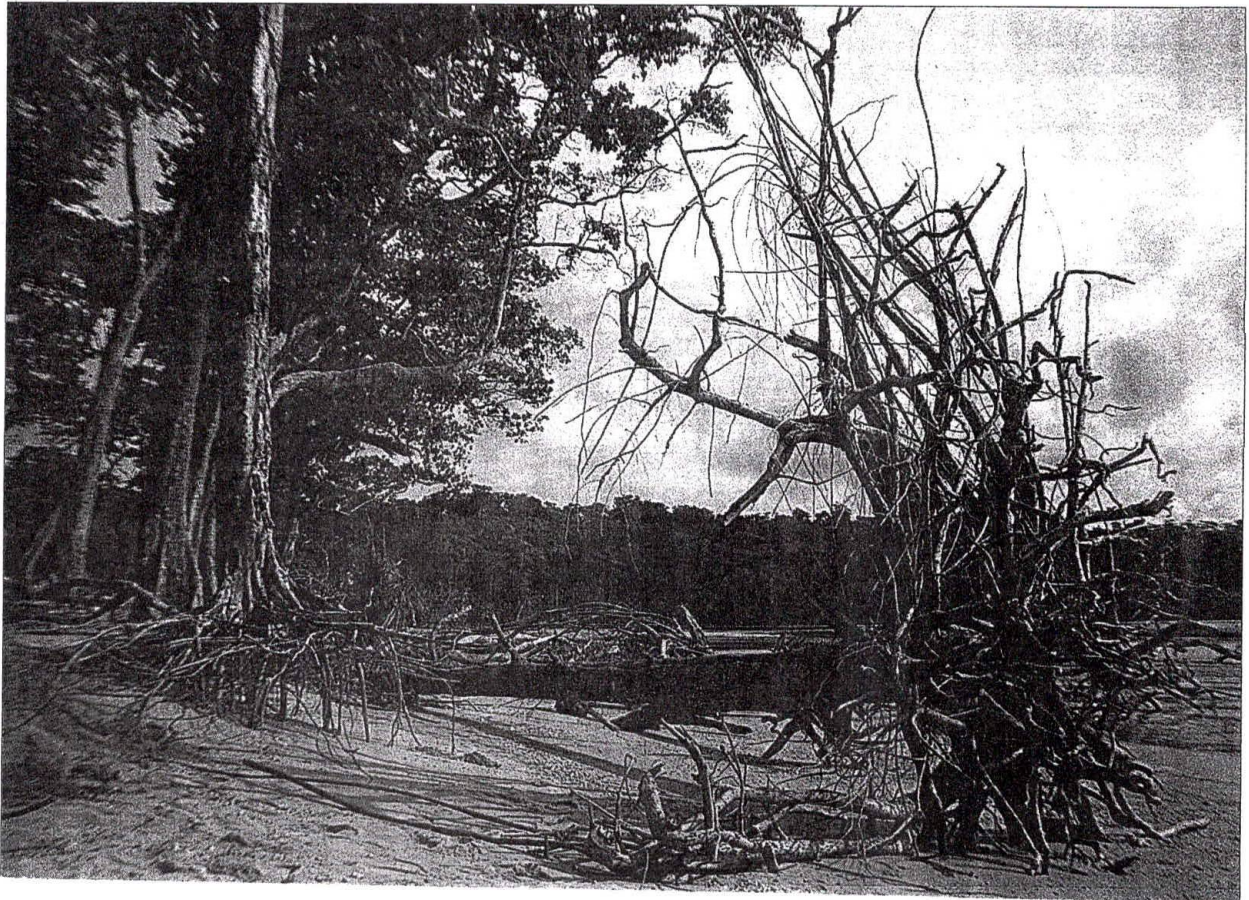


Chidiyatapu and SB19 were important turtle nesting sites. Rev. Corbyn (after whom the beach is named) observed in 1860 that there was "a large sandy beach" at the site; today, Corbyn's Cove is promoted as a tourist spot, and there is little of that beach or the turtle nesting habitat there.

The case of the Cuthbert Bay turtle sanctuary in Middle Andaman, one of the more important turtle nesting sites, is somewhat ironic. On the one hand, it is promoted as a tourist destination for its scenic beauty and its nesting turtles. On the other hand, a part of this beach has been handed over to contractors for sand mining, which affects the turtles and defeats the very purpose of establishing the sanctuary and promoting tourism. The establishment of a fishermen's colony here and the proliferation of dogs have added to the problem.

The beach at Wandoor, on the boundary of what is now the Mahatma Gandhi Marine

Soon after hatching, a young Olive Ridley ventures out to sea, at the Cuthbert Bay turtle sanctuary in the Middle Andaman, an important nesting site. (Below) A fallen mahua tree at Chidiyatapu, which was once a nesting site. Mining of beach sand for use in the construction industry has destroyed beaches which served as nesting sites.



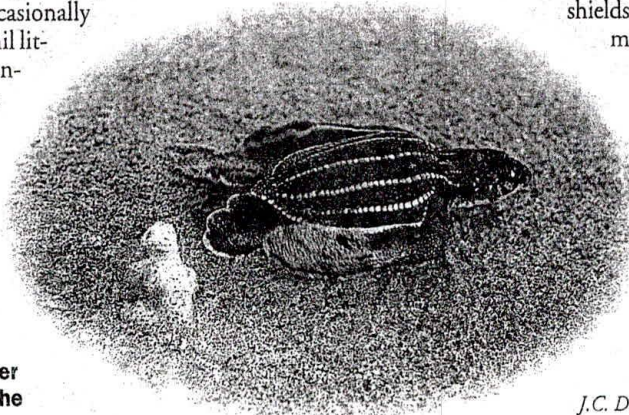
Sea turtle species

PANKAJ SEKHSARIA

MARINE TURTLE: Marine turtles lead a completely aquatic existence. The female comes ashore to lay eggs, but marine turtles otherwise do not come ashore once they reach the sea from the sands under which they hatched out. They have paddle-shaped limbs. The longer front limbs are used for swimming and are moved through water in much the same way that birds flap their wings in order to fly. The head and limbs cannot be retracted into the shell. Marine turtles may be herbivorous, carnivorous or omnivorous. They are found mainly in tropical climates but some species occasionally enter temperate seas. A Tamil literary work from the 4th century has recorded the practice of turtles coming ashore to bury their eggs under the sea sands.

Green sea turtle: Adults may attain a carapace length of over a metre and a weight of up

A young giant leatherback turtle heads for the sea after hatching at South Bay on the Great Nicobar Island.



(Based on information drawn mainly from The Book of Indian Reptiles by J.C. Daniel, published by the Bombay Natural History Society.)

National Park, was heavily mined for sand 15-20 years ago. Even the mangroves that protected the land from sea erosion were indiscriminately destroyed. Today there is little that remains of the beach. Sea erosion has increased and now threatens the road that runs along the waterfront. This is a common enough experience in the Islands, and so is the response: the people recently constructed a "sea-retaining wall" to check the erosion — a function that was hitherto provided for free by the beach sand and the mangroves. Ironically, this wall too is a concrete structure, built using sand mined from some other beach nearby.

A HUGE trade in turtle eggs and meat continues across the world, and the fishing and trawling industry too has taken a heavy toll. Among the worst sufferers have been Olive Ridleys.

Dr. Indraneil Das, Chairperson of the South Asian Reptile and Amphibian Specialist Group of the IUCN, estimates that until a few years ago 30,000 Olive Ridleys were consumed annually in the State of Kerala alone. More recently, in 1998, an equal number of dead Ridleys were washed on to the Orissa coast; the

turtles had drowned after being ensnared in trawling nets. The fat, meat and cartilage of the green sea turtle are used to make soup and other delicacies; its flippers are hacked to make shoes for protection against sharp coral. Parts of the hawksbill turtle are used to make turtle-shell products such as combs, cigar cases, boxes and various ornaments; large numbers of these species continue to be slaughtered for these purposes.

In Tamil Nadu, the carapace of the giant leatherback is used to extract oil that is applied on wooden boats to prevent leaks. The oil is also believed to have medicinal properties, principally in the cure of asthma.

The threat to the turtles from all these factors must be dealt with urgently. Solutions are needed on many fronts: an alternative medium for construction must be conceived; the dog menace must be controlled; and measures must be initiated to prevent the killing of turtles by the islanders, particularly the fisherfolk. There have in recent times been some positive moves in this direction. The Andaman Public Works Division, the largest consumer of beach sand, and the Tourism

Department have indicated a willingness to minimise the use of sand in their construction work and, where possible, opt for alternative construction materials such as timber, which is abundantly available. Non-governmental organisations (NGOs) such as the Andaman and Nicobar Environment Team (ANET), the Society for Andaman and Nicobar Ecology (SANE) and Kalpavriksh have been collaborating with the Directorate of Education in an attempt to spread environmental awareness and sensitivity among the people of the Islands.

The needs of wildlife conservation and those of human communities have always appeared to be in conflict. In the Andaman and Nicobar Islands, however, the opposite is proving to be true: the destruction of the beaches, which the turtles use for nesting, threatens the survival of not just one of nature's most magnificent creatures. Even the human communities that depend directly on this environment are being forced to pay a heavy price — ecological and economic. Sensible conservation policies must be evolved in order to ensure that for once there will be no losers, only winners. ■

Leatherback turtle: The largest of the sea turtles may grow up to two metres in length and weigh up to 600 kg. They live mainly on jellyfish and are believed to be deep-sea feeders.

Olive Ridley: Attains a carapace length of about a metre. The adult turtle is olive brown above and yellowish below and is omnivorous. It is widely distributed in the tropics of the Indo-Pacific and the East Atlantic, and is the most common species of turtle found along Indian coasts.

Hawksbill turtle: Grows up to about a metre and is distinguished by the strongly overlapping shields of the carapace. The adult is marble yellow and dark brown in colour. It is omnivorous, but is largely inclined to be carnivorous, feeding on sponges, other invertebrates and fish. Its flesh is said to be poisonous in certain seasons; instances of death from eating turtle flesh are attributed to this species. ■

A Look At The Andaman & Nicobar Islands

The Andaman & Nicobar (A&N) Islands are a group of about 306 islands, situated off the eastern coast of India, in the Bay of Bengal. They are also called the Bay Islands. Together they constitute a Union Territory (U.T.) of India. The islands are divided into two districts: Andaman to the North and Nicobar to the South. The two districts are separated by about 160 km, by the Ten Degree Channel of the sea. Being close to the equator, and surrounded by the sea, the islands have a tropical climate. Rainfall is heavy, with both north-east and south-west monsoons being received. It rains seven months in the year here!

Geographical and Physical Profile of A&N Islands	
Total area	8249 sq. km.
Area of Andaman District	6408 sq. km.
Area of Nicobar District	1841 sq. km.
Latitude	6° 45'N to 13° 41'N
Longitude	92° 12'E to 93° 57' E
Minimum temperature	16.7° C
Maximum temperature	36.1° C
Mean annual rainfall	3180.5 mm.
Average relative humidity	77%
Coastline	1962 km.
Area under cultivation	150 sq. km.
Area under plantations	300 sq. km.
Area under forests	7094 sq. km.

Source: Pande *et al* 1991

In more ways than one, each island is like a jewel in the ocean. Clothed with thick forests and fringed with mangroves, the isles look like emeralds.

The islands are mountain peaks which have emerged from the sea. They are part of a submerged mountain range related to the Arakan Yoma Range of Burma. Barring Little Andaman and a few islands in Nicobars, the land is undulating with hills and ridges. The islands are very narrow, with an average width of only 20 km. There are few perennial streams. Two known volcanic islands exist here - Barren (which erupted in 1991) and Narcondam (considered extinct).

The soil is generally poor and acidic. Soil types are variable, from heavy clay to loamy to sandy.

At present, 38 of the 306 islands in A&N are inhabited.

Importance Of A&N Islands

Islands have unique features. Surrounded on all sides by the sea, they represent little worlds in themselves. The A&N islands are particularly interesting. Many unique plants and animals are found on the islands. There are numerous habitats that exist together here. Mangroves and coral reefs protect our coastlines from storms and are vital for our fisheries. Coral reefs themselves are a living wonder. They open up a whole world of magic for us. Forests are home to hundreds of useful plants and animals. Many of them have not even been discovered as yet, although the tribals have known about them for centuries.

KALPAVRIKSH PUBLICATIONS

Treasured Islands: An Environmental Handbook for the Andaman and Nicobar Islands

Sunita Rao (1996; Revised edition 1999; Hindi version 2000).

A comprehensive workbook of information and activities, specific to the islands, but applicable to other coastal areas also. Fully illustrated. pp. 94, Rs. 120.

Treasured Islands: Glimpses of the Environment of the Andaman & Nicobar Islands.

Poster. Rs. 30

Where Communities Care: Community-Based Wildlife And Ecosystem Management In South Asia. *Ashish Kothari, Neema Pathak And Farhad Vania.* 2000.

Details: 222 pp., Quarto size, Colour cover. INR 100.00 (only in South Asia); US \$12.

Sharing The Benefits Of Biodiversity: The Kani-Tbgri Deal In Kerala, India.

R.V.Anuradha. 2000.

Details: 43 pp., Quarto size, Colour cover, Seven colour pictures. INR 40.00; US \$5.

Pelicans And People: The Two-Tier Village Of Kokkare Bellur, Karnataka, India.

K. Manu and Sara Jolly. 2000.

Details: 33 pp., Quarto size, Colour cover, Eight colour pictures. INR 40.00; US \$5.

Tribal Self-Rule And Natural Resource Management: Community Based Conservation At Mendha-Lekha, Maharashtra, India. *Neema Pathak And Vivek Gour-Broome.* 2001.

Details: 150 pp., Quarto size, Colour cover, 11 colour photos and 3 maps. INR 100; US\$10.

Source Book On Community-Based Conservation In South Asia: People, Policies And Publications. Compiled by *Farhad Vania, Neema Pathak, Ashish Kothari and Tejaswini Apte.* 2000.

Details: 127 pp., Quarto size, Colour cover. INR 75.00; US \$5.

Joint Protected Area Management - A Simple Guide: How It Will Benefit Wildlife And People.

Tejaswini Apte And Ashish Kothari. 2000.

Details: 48 pp., Quarto size, Two-tone cover. INR. 25.00; US \$3.

Coastal Conservation Through Enterprise At Rekawa Lagoon, Sri Lanka.

S.U.K. Ekaratne, S.S.Jinendradasa, M.D. Abeyisrigunawardana & John Davenport. 2000.

Details: 57 pp., Quarto size, Colour cover. Eight colour pictures. INR 60.00; US\$ 6.

Does Community Based Conservation Make Economic Sense? Lessons From India

Sushil Saigal. 2000.

Details: 80 Pp. Quarto Size, Colour Cover. 16 Colour Pictures. Inr 60.00. Us\$ 6.

Forest Revival And Water Harvesting: Community Based Conservation At Bhaonta-Kolyala, Rajasthan, India.

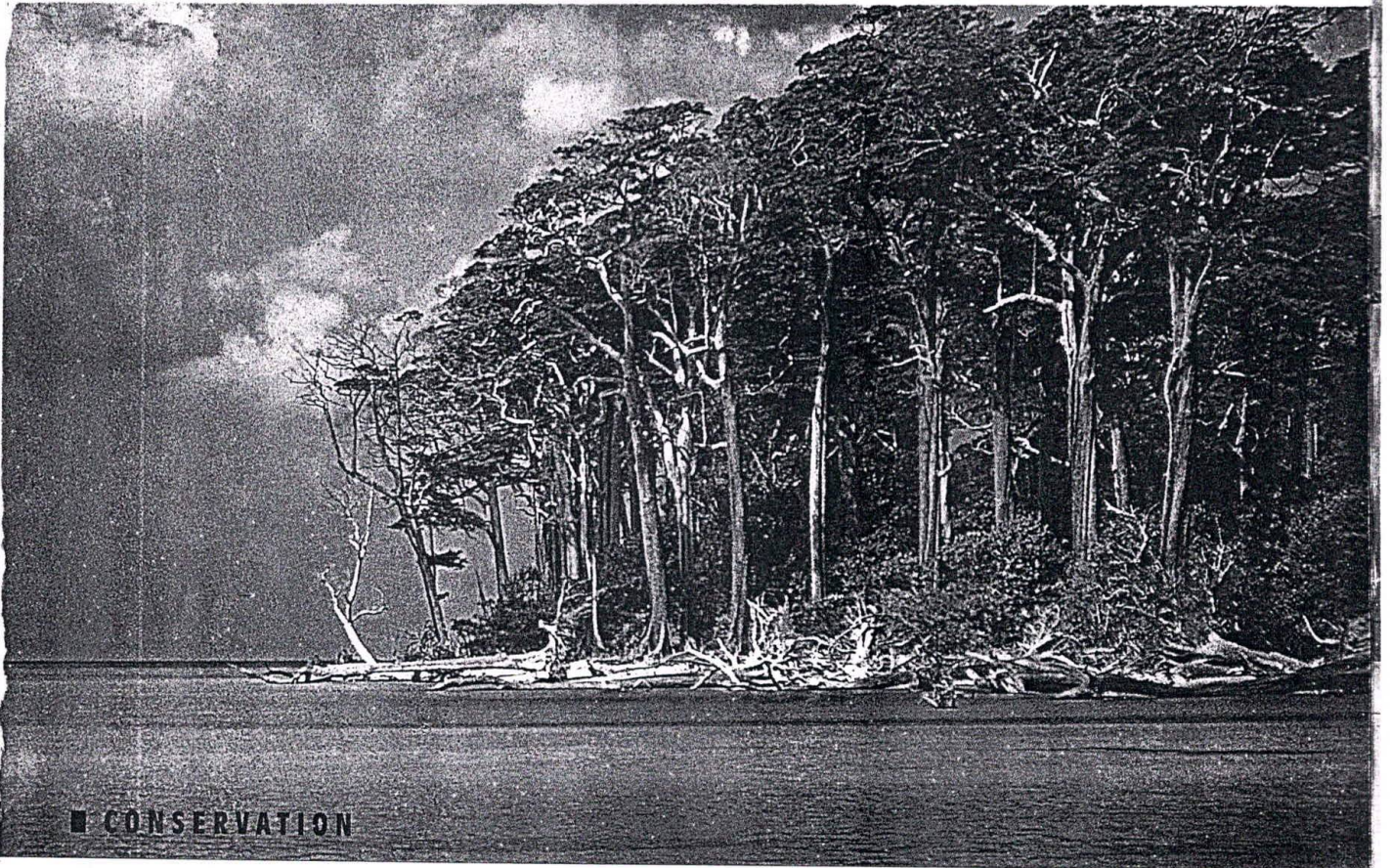
Swati Shresth with R. Sridhar. 2001.

Details: 70 pp. Quarto size, Colour cover, 12 colour pictures. INR 60, US\$6.

Customs And Conservation: Cases Of Traditional And Modern Law In India And Nepal

Ruchi Pant. 2002.

Details: (In press); Approx. 60 pp., Quarto size, Colour cover, 8 colour pictures, INR 75, US\$ 7.



■ CONSERVATION

PICTURES: PANKAJ SEKHSARIA

To save an archipelago

The Supreme Court issues landmark orders to ensure the preservation of the threatened rainforests and environment of the fragile Andaman and Nicobar Islands.

PANKAJ SEKHSARIA

ON May 7, the Supreme Court of India, while hearing a matter relating to the environment of the Andaman and Nicobar Islands, accepted the recommendations of a Commission it had appointed to look into the issues involved and passed a set of landmark orders.

The commission had made 25 major recommendations ranging from a ban on all tree-felling in the islands, except for the *bona fide* use of the local islander populations; a ban on transport of timber to any part of the country; removal of encroachments; steps to reduce immigration from mainland India; shut-down of the Andaman and Nicobar Forest Plantation and Development Corporation (ANF-PDC) that had logged the forests of Little Andaman island for years; phasing out of the existing monoculture plantations of red oil palm, rubber and teak; closing down of the Andaman Trunk Road (ATR) in the Jarawa Tribal Reserve areas and a stop to sand mining from the island's beaches.

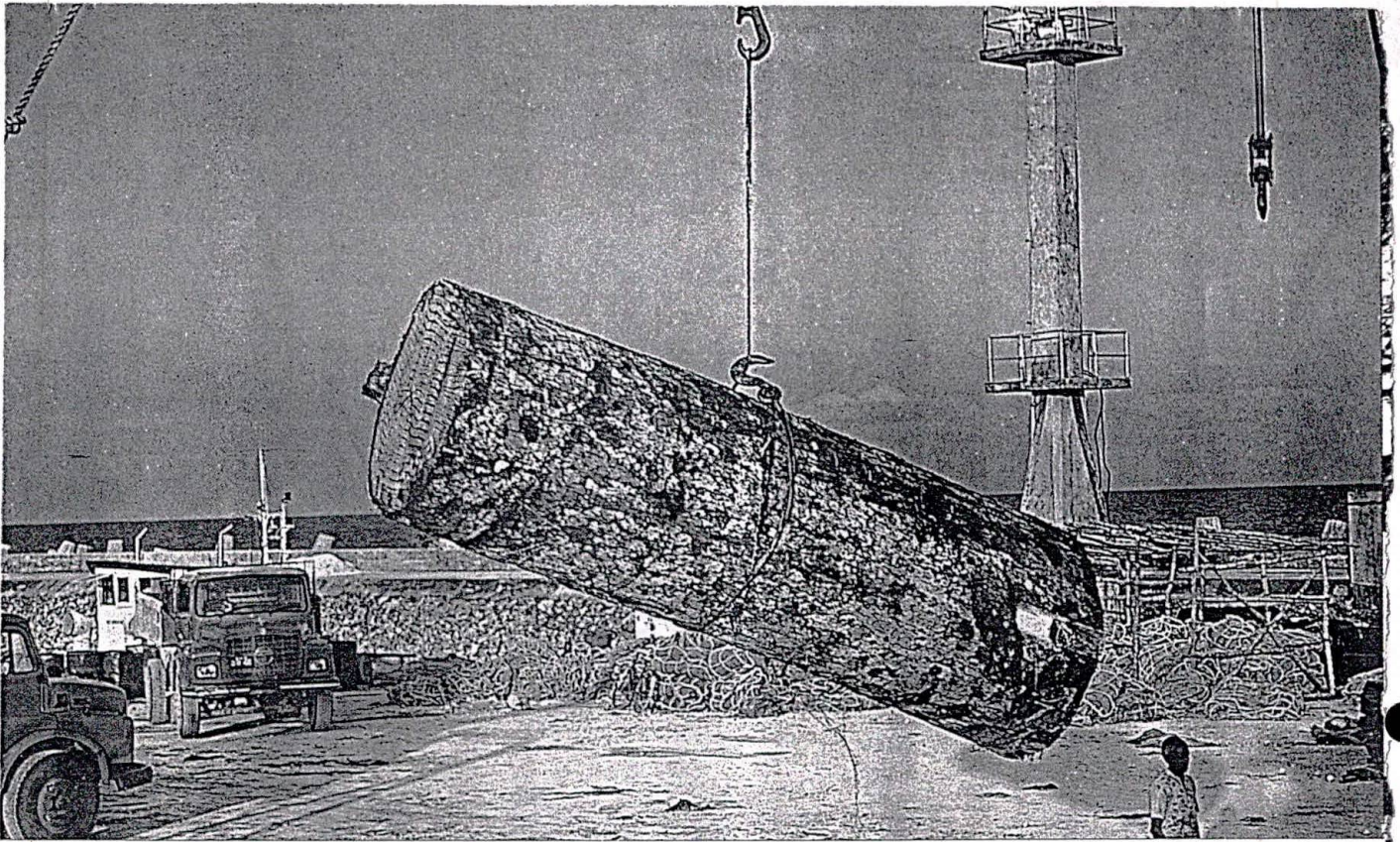
The court's orders offer the best chance to save the rich but threatened tropical rainforests and the vulnerable indigenous communities of these unique islands. The orders also have far-reaching implications for the immigrant populations that have settled here from the mainland.

The larger proceedings are part of the ongoing *T.N. Godavarman Thirumulpad vs The Union of India and Ors* (Writ Petition 202 (Civil) of 1995), better known as the 'forest case'. The orders came in a specific intervention filed jointly before the apex court in 1999 by the Society for Andaman & Nicobar Ecology (SANE), the Bombay Natural History Society (BNHS) and the environmental action group Kalpavriksh, with the support of the Environmental Justice Initiative (EJI) and the Human Rights Law Network (HRLN).

(Top) Thick tree cover in South Andaman. The Supreme Court's set of landmark orders offer the best chance to save the rich but threatened tropical rainforests of these unique islands.

During a hearing on November 23, 2001, the court had appointed the one-man Shekhar Singh Commission "to look into the state of the island's forests and other related matters," and submit its recommendations within six weeks (*Frontline*, January 18, 2002). Shekhar Singh, who has considerable experience in working on issues concerning the islands, submitted a voluminous three-part report to the court on February 18.

Understandably, there was strong opposition to some parts of the report. A flurry of activity followed, which saw a number of other parties including the Andaman Furniture Industries Association, the Andaman and Nicobar Islands Small-Scale Wood-based Industries Association and the Member of Parliament from the islands, Bishnu Pada Ray, in addition to the local administration and the Union Ministry of Environment and Forests (MoEF) filing affidavits. The general opinion in the islands favoured the shutting down of timber extraction and export operations. However, recommendations to close down the ATR



Timber being loaded on to a ship at Hut Bay, Little Andaman island. The Supreme Court has ordered that the licences of all private saw mills and wood-based industries be terminated with effect from March 31, 2003.

and phase out the sand-mining operations, both of which would affect a major chunk of the business operators here, were strongly opposed. The islands have a prominent sand mafia, that has great political and financial muscle. Today, the sand-mining industry that feeds the rapidly growing construction boom of Port Blair is posing one of the biggest environmental problems in the islands and drastic solutions are required to address the issue.

A lot of the coordinated opposition materialised in a call for a complete bandh in Port Blair by the Andaman Chamber of Commerce and Industries (ACCI) on March 12. All political parties including the Congress(I), the Bharatiya Janata Party and the Dravida Munnetra Kazhagam and a number of trader and business organisations joined the bandh. That the bandh and the opposition to the recommendations did not have universal support became evident in the next few days. In their statements dated March 16 and March 18, the Local-Borns Association (LBA) (descendants of penal settlers) and the Bengal Association Andaman and Nicobar Islands (BAANI) strongly supported the Commission's recommendations. The BAANI statement said: "There has been some discontent and opposition to the recommendations of the Commission and a fear... that this will adversely impact the people and the socio-economic situation in the islands. We, on

the other hand, feel that the recommendations are... in the best interests of the people and the environment here. The fears expressed are either out of a vested interest or an incorrect reading and interpretation of the recommendations..."

It was on May 7, just a couple of days before the Supreme Court went into vacation, that the matter came up before a Bench comprising Chief Justice B.N. Kirpal and Justices Arijit Pasayat and H.K. Sema. The Solicitor-General and *amicus curiae* in the case, Harish Salve, argued forcefully on the uniqueness and the importance of the forests and the islands that have been designated as a "global biodiversity hotspot" and the urgent need for their conservation.

Thereafter, the Bench issued orders accepting the report of the Shekhar Singh Commission, while making some "not very major" modifications (except in the matter of sand mining). While the commission had suggested that sand-mining be disallowed from September 2002, the final order of the court says that it should be phased out at a minimum rate of 20 per cent every year, so as to bring it down to 33 per cent of the present level in five years.

Families that have been identified as having encroached on forest land prior to 1978, and that had either not moved to their allotted sites or had occupied more land than they were entitled to were given one month to make the necessary corrections.

The Commission had recommended that all post-1978 encroachments be removed within six months and that the displaced families be allotted homesteads on revenue land. The court order reduced this time limit to three months.

Further, the court ordered that the licences of all private saw mills and wood-based industries in the islands be terminated with effect from March 31, 2003. It ordered that the 'Working Plans' for limited timber extraction for local use be reformulated and submitted to the court within 12 weeks. In an important step that should set a precedent for the rest of the country, the court also directed that the Working Plans be formulated by a committee that has one ecologist proficient with the island's ecology.

Environmental and tribal rights groups from across the country and abroad too have welcomed the Supreme Court's orders. The timing of the orders is also significant. This summer, large parts of Port Blair were being supplied drinking water in the pipes for a mere 20 minutes once every three days. Evidently, the Supreme Court cannot rectify this situation, but part of the long-term solution to this critical problem may well be achieved through the sincere implementation of its orders. That, however, is much easier said than done. ■

In association with LEAD-India programme.

Health

**A FACT FINDING MISSION ON THE THREATENED PEOPLES OF
ANDAMAN
AND NICOBAR ISLANDS**

C.R. Bijoy

Background:

Andaman and Nicobar islands lie in the Bay of Bengal bordered by Myanmar, Thailand, Malaysia, Indonesia and Mainland India of which they are part of. Left to itself, the Archipelago produced flora and fauna so rich in diversity, evolving rare species not found anywhere else in the world. There are over 572 islands/islets and rocks. It has a total area of 8,249 sq kms of which approximately 87% or 7,171 sq kms are officially under forest.

36 of the islands are inhabited with a population of 2,80,661 as per 1991 census (and an estimated 400,000 in 1998). Of them, 9.54% are scheduled tribes. The total tribal population excluding the Jarawa and Sentinelese (as they could not be enumerated) is 26,770. Of these, the majority (26,000) are Nicobarese of the island of Nicobar. The Andaman group of islands are inhabited by four tribes of Negrito origin : the Great Andamanese, the Onge, the Jarawas and the Sentinelese. The Nicobar group of islands are home to two tribes of Mongoloid origin: the Nicobarese and the Shompens. Although Andaman and Nicobar Islands were included in Ptolemy's cartographs, when exactly the negrito tribes arrived here is a conjecture. It is generally accepted they came via Burma at a time when they formed part of the land mass of the Arakan Range. The tentative period of their arrival is speculated to be 50-100,000 years ago.

The islands at one time were considered to be so remote that they lay "undiscovered" for thousands of years known only to the occasional Arab, Burmese or Malay traders who sought refuge there from shipwrecks. Often the tribes became victim of Malay slave traders. In 1756, the Danish East India Company managed to establish a commercial mission on the islands as a prelude to colonising them. The entire mission died in one year due to ever and successive missions met with the same fate. Between 1807 and 1848 several expeditions were undertaken by the Danes, French and the British.

British attention was first drawn when sailors who survived shipwrecks started disappearing on the islands. The investigations by British troops revealed that many of the Andaman islands were inhabited by different tribes of people belonging to the negrito race who had till now lived in complete isolation from the outside world. In 1789, the British first established a colony in Andaman. Later in 1858 large forest tracts were cleared to make room for Port Blair and also established a Penal Settlement - the famous Cellular jail - after a fierce struggle with the native inhabitants. The Japanese occupied briefly during the second world war and many tribals were killed. The British sought to discipline and "civilise" them through domestication and colonisation. Many were killed when their primitive spears proved to be no match against the guns of the British. After a tribe was forced into subjugation, its members were then used as liasons to establish contacts with other hostile tribes. Many were taken to Port Blair as specimens where they perished due to diseases. Their immunity system could not cope with diseases like common cold, influenza, ophthalmia and measles, syphilis etc. which "civilisation" took

to them. it is believed that when that at the end of 18th century, there were 15 communities out of which only 6 survived to the present times.

The population of the islands was 24,500 in 1901. After India's independence from British rule in 1947, the Indian government encouraged immigration from the mainland. Today, it is referred to as little India because they are a home to people from all over the mainland. Fortunately, partly because of their remoteness, in spite of modern development, only 36 islands are inhabited. The population of tribal communities except the Nicobarese have dwindled. The population of Great Andamanese reduced from 625 in 1901 to 28 in 1991. The population of Onge has reduced from 672 in 1901 to 101 in 1991. The Jarwas are estimated to be 250, the Sentinelese between 50m and 250 and the Shompen 223.

There have been proposals in recent times for rapid development of the island's economy. Setting up of free port and development of tourism has been argued. Claiming to base on the recommendation of UNDP/WTO study team, necessary action for construction of beach resorts, development of beaches, water sports activities, manpower planning and training, setting up of tourism development authority and effective mode of communication have been taken up in 1997-98. There are reports that caching in on the 1996 statement by Robin Catchpole, a Royal Greenwich Observatory, Cambridge, that the first rays of the new millennium at 00.00 hours GMT can be seen over a speck of an island called Katchai in the Central Nicobar group, the Andaman administration is all set to host about 20,000 tourists. Katchai is a piece of land of 17,450 ha of which 12,000 ha are protected forests and another 4,000 are under rubber plantation leaving just 1,450 ha for a living space for about 2,500 Nicobarese who have led a sequestered life all these years. It does not matter that there is a raging controversy amongst the astronomers whether Katchai indeed would actually receive the first rays of the sun in the new millennium. The administration has already embarked in preparation for this millennium bast least discouraged by ecological impact of hosting such a mega event or the social consequences of not only Nicobar group but also of the Andamans.

The Great Andamanese:

The Great Andamanese were a community of ten sub-groups. They occupy the main Andaman Island. When the first contact was established with the Great Andamanese in 1858, the estimated population was 4,800. They succumbed in 1858 to the overtures of the British to establish contact and gun power.

The British strategy to "civilise" them consisted of a combination of "punitive" expeditions and bribery. Captured tribals were taken to Port Blair and "treated kindly". Wounds inflicted were treated and some of the captured were taken back to their islands loaded with presents. Other captives were kept back as museum pieces and were even sent to Calcutta and Burma as specimens of study and ridicule or trained to serve as domestics and displayed as personal exotica. Some who managed to learn Hindustani were used as go-betweens to establish contact with the Jarawa and the Onges. Because of geographical proximity to Port Blair, they were often in direct contact with the convicts

of the Penal Settlement established there. Soon the British established an Andaman House in Port Blair where these people could come and stay with rations on-the-house and medical treatment. Creation of dependency relations was a final blow to their dignity, freedom and existence.

On contact, a large number perished because of diseases. Epidemics such as pneumonia (which broke out in 1868), measles (1877) influenza (1896) and syphilis killed hundreds. They had no resistance to these disease. From around 5,000 in early part of 19th century the population of Great Andamanese reduced from 625 to 1901, 209 in 1921, 90 in 1931, 23 in 1951 and to 28 in 1991. They were the first to be "civilised". They have ceased to exist as a community and are endangered. They had to resort to beg for a living till a few years ago, when the administration settled them on the Stuart Island where they survive on dole patiently waiting for the end of this once great people.

The Onges:

The Onges, occupying 732 sq km of the thickly forested Little Andaman Island, were the next to be "civilised" after the Great Andamanese. While contact was established with the Great Andamanese in 1858, it took the British about 30 years more to do so with the Onges. The first attempt was made in 1867 in the form of "punitive" expeditions. The captain and crew of the British ship, Assam Valley, who had landed on the island of Little Andaman to cut spar were killed by the Onges. British troops landed on the shores of Little Andaman and the ensuing battle resulted with 70 Onges dead and the Victoria Cross - the highest British honour - for 5 British soldiers. Eventually the Onges became regular visitors at the Andaman House at Port Blair.

With independence, the Government of India encouraged migration to safeguard territorial interests. The Andaman and Nicobar Protection of Aboriginal Tribes Regulation of 1957 accorded the status of a tribal reserve to the entire island. A 1965 Report by the 'The Interdepartmental Team on Accelerated Development Programme for the A & N Islands, Ministry of Rehabilitation, Govt. of India proposed clear felling of nearly 40% of the island's forests, the bringing in of 12,000 settler families to the area and the promotion of commercial plantations such as red oil palm and timber based industries. In 1967, the island of Little Andaman was opened up for settlement. In 1970 Timber extraction began. The Onges natural habitat of verdant dense tropical forests began to be destroyed in the name of development for the settlers. The 1957 Regulation was ignored and violated. 20,000 hectares (roughly 30%) of the island was denotified from its tribal reserve status in two stages, in 1972 and 1977, still leaving 53,000 hectares as an inviolable tribal reserve. The 1,600 ha red oil palm plantation work began in 1975 by the Forest Department and a major timber extraction operation continues even today.

The forest department leased out 19,600 ha from the denotified area to the Andaman and Nicobar Forest Plantation and Development Corporation - the sole agency for timber extraction here which began functioning in 1977. Furthermore a working plan had not been prepared for logging operations and the continued logging contravenes a Supreme Court order of 1996 stopping all logging in the absence of a working plan. The

Corporation has logged within the tribal reserve making a mockery of the law itself as well as the rights of Onges. The 1988 formulation of the National Forest Policy makes a special case for the protection of the Andamans and Nicobar Islands. This transmigration and colonisation programme could not be fully implemented due to logistical problems that only 3,000 families finally settled here. During 1977-79 more settlers were settled and their population grew rapidly to over 12,000 in 1991 displacing some Onges from their habitats.

Till 1976 they were sole inhabitants of the islands when they were forcibly relocated in an area of 110 sq kms by the Government of India who established the first settlement for the Onges at Dugong Creek in the northeast of the island and in 1980 the second settlement at South bay at the southern tip. The Dugong Creek consists of 26 wooden houses with asbestos roofing where temperatures rose at least 10 degrees higher than in the adjoining forest. Most of the Onges prefer to build their own temporary huts near the wooden houses. Free rations are provided which include rice, wheat, sugar, tea, milk powder, tobacco and clothes. Also included are a coconut plantation set up for their "welfare" to provide work and income. They lack interest in this alien form of labour which causes to be condemned as "lazy" by the people in charge of the settlements. Attempts to introduce poultry farming, a piggery project and a pair of cows have met with the same indifference from the Onges.

These settlements are under the charge of Andaman Adim Janjati Vikas Samiti (AAJVS) which was constituted in 1976 as an autonomous body fully financed through the special assistance of the government of India, Ministry of Home Affairs. The AAJVS introduced welfare measures that were completely unsuitable to the Onges. Foodstuffs such as rice, dal, oil and biscuits were introduced to the community whose traditional food included wild boar, turtle, fish, tubers and honey. The agency offered each adult 250 gm of tobacco as a "welfare" measure. The authorities are attempting to confine the nomadic Onges to the settlements of Dugong Creek and South bay to move forestry operation deeper into the jungle and to open up the rest of the island which is still a tribal reserve.

The Onges were still about a decade ago skilled hunters and gatherers following translocatory pattern, moving from coast to the forest and creek areas in accordance with the supply of food - turtles, dugongs, crab and fish from sea, tubers, pigs, honey, cicada grubs and fruit from the forest. They knew nothing of cultivation or domestication of animals and lead a life of self-sufficient isolation. Alcohol was introduced by the settlers extracting a heavy toll. The decline in the size of the community has led the erosion of codes of conduct, child adoption and rituals. They are forced to abandon their culture.

The Forest Corporation that is logging from inside the tribal reserve and logging more than the quantities that it should log is the main destroyer of forests. The warnings of the Anthropological Society of India and the media have been ineffective. The settlers look down upon them. Illegal poaching has resulted in a drastic decline of rare creatures as the monitor lizard, the dugong and the endemic Andaman Wild Pig which are not only important source of food for Onges but also play an integral role in their culture and society. A visit to the onge settlement of Dugong Creek has become mandatory on many

an itinerary of dignitaries. The Onge are expected to perform for their pleasure and entertainment. The population of Onge has declined from 672 in 1901 to 250 when enumerated in 1931 - a reduction of 63% and further to 101 in 1991. Today the birth of a child has become a rare occasion. They face extinction.

The Jarawa:

The Jarawas occupy an area of 785 sq. kms along the west coast of Middle and South Andamans, an area termed by the government as the Jarawa Reserve. During World War II, the Japanese captured and massacred many Jarawas. Middle Andaman and South Andaman are the focus of much of Indian immigration to Andamans. The Jarawas remain hostile. The Jarawa Tribal Reserve was established in order to protect the Jarawa way of life and to keep the tribal people confined to the reserve as also to prevent the settlers from encroaching into it along the periphery of the reserve, 44 bush police camps with 400 policemen were established. Over time, however, several encroachments were made and the function of the police force has been confined to keeping the Jarawa at bay who once roamed the length and breadth of the island unhindered.

The first group of Jarawa was captured alive only in 1968. In 1974 a contact party comprising administration officials, members of the Andaman Adim Janjati Vikas Samiti, anthropologists and police officials established friendly contact with some members of the Jarawa. Critics liken this to attempts to make the Jarawas dependent upon the administration. Every month expeditions are sent by the government because the islands which they inhabit are also inhabited by the settlers. The policies have also created tensions between the Jarawas and the settlers.

A 340 km long Andaman Trunk Road slicing through the heart of Jarawa reserve has opened up more areas for settlement. The Jarawa protests in the form of road blocks, demolition of bridges attacks and occasional killing of workers against the construction were ignored. Work came to a halt in 1976 but resumed. Traffic on the road has grown enormously. Many more settlers now live in areas bordering the Reserve thereby increasing the possibility of interaction and conflict. Hunting wild boar and deer inside the reserve by the settlers as well as poaching forest produce and timber are common. At times, the rudimentary settlements of Jarawas are also destroyed. Many illegal encroachments inside the Reserve has also come up with political patronage.

In October 1997, settlers in the Middle Andaman witnessed an unfamiliar sight of a group of Jarawas. This was the first recorded instance of Jarawas voluntarily seeking to establish contact with the settlers. Over the next few months there were several more reports of Jarawas coming out of their forests. Some of them were seen to be pointing out to their bellies which were interpreted as expressions of hunger. Packets containing dry fish, puffed rice and bananas were air-dropped from helicopters in Jarawa territory. Jarawas have sustained themselves on forest produce for centuries and there is no reason to believe that they have suddenly been pushed into starvation.

Anthropologists have another explanation. It relates to the experience of Enmey, a teenaged Jarawa boy, who was found with a fractured foot near Kadmtala town in 1997. The local residents arranged for his treatment in Port Blair where he was looked after well. When Enemy recovered, he was sent back to Middle Andaman where he promptly disappeared into the forests. Since October 1997, it is Enemy who has largely been responsible for bringing his people out to experience the settlers hospitality and not starvation. Nevertheless, destruction of natural environment and confinement of Jarawas into smaller and smaller territory are threatening facts with its impact on survival of Jarawas.

Today there are only 250 of them and vast expanses of their rainforest homelands have been cleared to accommodate settlers and to feed the huge timber industry on which economic foundation of Andamans is laid. The government's Master Plan (1991-2021) for Welfare of Primitive Tribes of Andaman and Nicobar Islands' lays out a policy of settling the Jarawa in one place, precisely the type of scheme which history has repeatedly shown to be disastrous for nomadic people. The plan for 2020 and beyond says "The Jarawas would lead the settled life with surplus economy based predominantly on fishery. There shall be two Jarawa village settlements, one in the South Andaman and other in the Middle Andaman".

The Sentinelese:

Occupying the remote and isolated North Sentinel Island and they have remained completely hostile and have never permitted anyone to land on its shores. The Sentinelese were only discovered in 1967. They are thought to number between 50 and 200 while one estimate is that they number 98. The Government of India sends expeditions sporadically - boats loaded with gifts of red ribbons, coconuts, sweet potatoes, cooked rice and aluminium vessels. The Sentinelese have known to come out to the boats accepting the gifts except cooked rice and aluminium vessels. They have made it clear that they have no desire at all to come out of their isolation and freedom.

The Shompen:

The Shompen of Nicobar number 223. They were till recently fairly isolated on the huge island of Great Nicobar. But settlements of ex-service men and developmental activities have pushed them. A friendship hut has recently been established up to facilitate contact with settlers.

The Nicobarese:

Of all the tribals of Andaman and Nicobar, the Nicobarese have been successfully assimilated, especially those living in Car Nicobar island. The Christian Missionaries had long been in touch with them converting them. their population is estimated to be 22,000.

The Other Media

From: "Kalpavriksh" <kvriksh@vsnl.com>
To: "Gam Shimray" <admin@del3.vsnl.net.in>
Sent: Tuesday, August 20, 2002 12:20 PM
Subject: for GamFw: for PS
 Gam,
 See below. May be of interest and use.
 pankaj
 People's Commission on Env't and dev't

The bit on A&N

The People's Commission on Environment and Development India, a non-governmental, non-profit association, was launched in New Delhi in 1990. It holds public hearings in the country to harvest the perspective on, and the insight into, environmental and development issues from a wide constituency of stakeholders and induct them into the government's decision-making process. Its modality of public hearing represents a novel way for the people to dialogue with government about the critical survival issues, and provides an opportunity to the people to forge partnerships for change and express their shared commitment to a new paradigm of socially equitable and environmental sustainable development.

Forests In Andaman & Nicobar

Andaman and Nicobar group of islands abound in tropical forests and rich natural vegetation. The forest cover is about 75% with a wide variation of types, including of commercial timber. The main forest types are: (i) mangrove; (ii) beach; (iii) moist deciduous; (iv) low-level wet evergreen; and (v) higher level wet evergreen. The moist deciduous and low-level wet evergreen forests are economically very important. Most of the important hard woods species, including the valuable *Padauk* (*Pterocarpus delbergioides*) and *Gurjan* (*Dipterocarpus* spp.) are found in the forest. *Gurjan*, the most important species, forms about 30.5% of the total timber extracted from the islands. No proper stock mapping has yet been done, but it is estimated that about 66% of the forest area of Andaman Islands, excluding the areas under mangrove and beach forests, is covered by wet evergreen forest and the remaining by moist deciduous forest.

One school of thought is that forests should be the basis of all development, the vegetation should not be tampered with and productive activity should be confined to utilising forest produce in forest-based industries. The soil erosion from lands cleared in the past lends support to this view. It is feared that the islands' topography and heavy rainfall will induce total soil loss if more forests are cleared.

The other view is that forests should be cleared where land is suitable for agriculture and plantation. The basis of development should be the extension of agriculture, and forests may be retained where agriculture is not profitable. Soil erosion in the past was due to lack of appropriate measures. With proper and adequate soil conservation measures, the hazards of soil erosion can be overcome.

This apparent conflict between forestry and agriculture should be resolved. A definite policy should be evolved and woven into the development strategy.

The area under forests comprises three distinct zones. First there are the hilly regions with such gradients that make forestry the best options. Any tampering with forests here will adversely affect the soil and the climate.

These regions which form about 50% of the area under forests, may be reserved for forestry.

The second zone comprises large marshy stretches of mangrove forest which have commercial value. They are a valuable asset and, if properly managed, will prove to be a permanent source of revenue. The mangroves constituting about 10% of the area under forest, are builders and guardians of land. Their destruction through over development (as is occurring in some places) will threaten the entire marine ecosystem.

Thirdly, there is the remaining 40% of forest on flat or undulating lands. They have good soil and can support both agriculture and forests. In these areas the apparent conflict between agriculture and forestry arises and needs to be resolved. It is unexceptionable that future land exploitation should produce sustainable livelihood for the maximum number of people within its carrying capacity. The future land use policy should be designed keeping these two objectives in view.

Mangroves in Andaman islands

JOHN LOBO

Former Deputy Conservator Of Forests
Andaman & Nicobar Administration

M A PARVEZ

Andaman Prakriti Samsad

The Andaman and Niobar Islands are the home to four Negrito and two Indo-Mongoloid tribes. Those belonging to the Negrito racial stock - Great Andamanese, Onge, Jarawa and Sentinelese - are still at hunting-gathering stage of economy. Small in number, sensitive and isolated, they have been under severe stress. The Indo-Mongoloid group of the Nicobarese, relatively sturdy and resilient, have accepted the challenge of change and have prospered and multiplied. The other Mongoloid community, the Shompen, semi nomadic and living in small, scattered settlements, still shy away from outsiders. They are somewhat better off than the Great Andamanese and the Onge, whose numbers have sharply dwindled. However they are not as remote as the Sentinelese and the Jarawa

The survival of all tribal communities (except the Nicobarese) is the key issue in the islands. The maintenance of ecological balance is intimately linked with their survival. Since 1901, their population has been declining.

They must be preserved and helped to develop in their own way at all cost. The four Negrito communities, and even the Shompen, must be encouraged to develop the will to survive, which they have been losing over the years. This can be done only by showing respect for their culture, which remain unique in the plurality of cultures in our country. They also possess a profound knowledge of their ecology and concern for its preservation. Survival of these groups and preservation of ecological balance are interconnected.

The Nicobarese

The Nicobarese, in many ways, are the most significant tribal population on the islands. They are horticulturists and keep large herds of pig, and are economically well off. They live on 12 islands in the Nicobar group and one island (Little Andaman) in the Andaman group. They constitute about 12% of the total population of the Andaman & Nicobar Islands. Their numbers (26,000) give them confidence, strength and power. They have had the benefit of good and able leadership for long. Having been in contact with the outside world for centuries, they have consequently been exposed to various forces of change and have shown themselves capable of absorbing the benefits of modern day welfare measures.

The Shompen

The Shompen are semi-nomadic people numbering about 200, inhabiting the southernmost island in the Nicobar group, the Great Nicobar Island. A hunting - gathering community, their subsistence economy is closely related to the ecology. They subsist by gathering food, hunting and fishing, domestication of pigs and horticulture. Primarily territory based, they rarely leave it except to go on raiding expeditions. The extent of their external contact is limited to trade with the Nicobarese. It has resulted in very little change at the levels of their social institutions. Only those in the Galathea River basin showed some change. But their dress, cooking utensils and food habits have undergone marked change because of gifting of these items by the Administration under the contact programme. The influx of mainlanders in their habitat has also caused some undesirable impact upon them.

The Onge

The hunting-gathering communities, the Onge being one of them, are typical representatives of the simplest level of human culture existing in the world. Little Andaman island has been the Onge's home from time immemorial. Earlier, their movements were confined to the island with occasional forays to other islands in their dug-out out-rigger canoes.

They have been in regular contact with outsiders for over a century. For long, they successfully evaded all attempts at contact with the outsiders. Despite their resistance, they were disturbed and were left in a state of destitution for a considerable period of time. In 1967, Little Andaman was opened up for settlement for people from outside. For the first time, the small and fragile population of 98 Onges have started living face to face with several thousand people. This had a far-reaching impact on their life and future.

The Great Andamanese

Today, the small population of only 36 is all that remains of the ten original Great Andamanese tribes that were spread out all over the Great Andaman which comprises South Andaman, Middle Andaman, North Andaman and all the interlying islands. They were a virile and strongly built people who were highly suspicious of outsiders, especially the kind that cut down the forests, disturb their tribal life and the peace of the islands.

The population on the South Andaman were the first to come in contact with the colonial authority in the penal settlements founded in 1858. As the settlements spread northwards to the Middle and North Andaman Islands, conflict intensified. Eventually friendly contacts were established with each of the tribes. However, the resulting close physical association led to the spread of new diseases brought in by outside people. Death and devastation followed on a large scale. The population continued dwindling leading to social disorganization of these once proud communities. In 1968, the Administration resettled the surviving populations on the Strait Island. The Government has been looking after them ever since.

The Jarawa

A small tribe of around 200 people, the Jarawas inhabit the west coast of the South Andaman and Middle Andaman Islands. They are classic hunter-gatherers and live on whatever forest produce they gather. They hunt animals but not birds. Because of their un-friendly stance, little that is known of their social life is based on limited observation.

They do not have friendly relations with outsiders including those settled near their habitat. Despite the odds, they have not yielded to the overtures by outsiders. After Independence (1947), an area of about 765 sq. km in the South Andaman and Middle Andaman islands was declared as the Jarawa Reserve Forests to protect them and their hunting-gathering economy. However, the settling of displaced persons in their vicinity, with the accompanying clearing of forests, had unsettling effect on them, heightening their feeling of insecurity. As a result, their forays into settlers' areas continue.

The Sentinelese

Of all the tribal societies in India and the rest of the world, the Sentinelese (estimated population around 250) are perhaps the most isolated and the most untouched culturally and biologically. They live on the small island of North Sentinel, off the west coast of South Andaman island. They are, by all evidence, a true hunting-gathering society with considerable reliance on sea resources, and appear to have close cultural identity with the three Negrito tribes. They are highly suspicious of outsiders. Because of their sensitivity in this regard, there is no administrative presence on this island.

AJOY BAGCHI

Executive Director PCED,
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Presently, all the islands of the Andaman & Nicobar archipelago, except the tribal reserve areas, are open to domestic tourists. The foreign tourists are permitted in Port Blair, Mayabundar, Havelock, Neil and Long Islands for 30 days. The visits to Jolly Buoy, Red Skin islands in the Mahatma Gandhi Marine National Park, Madhuban and Mount Harriet in South Andaman Island are allowed. The Administration has ambitious plans to promote tourism by opening up other islands to foreign tourists. Some more areas have been identified for development of beach resorts and golf courses. For golf courses, forest areas are proposed to be cleared and exotic grass species introduced. This will cause major problem for the ecosystem. The introduction of edible Giant African snail by the Japanese during their occupation of the islands has already led to disastrous consequences. They have become a serious pest for agricultural crops, plantations and forests.

These islands have all those things that attract a tourist -- natural beauty, unpolluted environment, lush green tropical forests, and unique fauna and flora. Almost all tourists visit the Marine National Park for snorkelling, scuba diving, swimming or viewing live corals and other marine fauna. These activities, if not properly regulated and managed, will lead to large-scale destruction of coral and its associates. Presently, most of the coral reefs around South Andaman are either struggling to survive or are dead. Despite a ban, indiscriminate and excessive collection of shells continue. It will further weaken the reef ecosystems, make them susceptible to infestations, and lead to ecological disturbances. The exploitation of commercially valuable shells are directly linked to tourist inflow. The availability of turbo, trochus, giant calm, cowrie and nancowrie shells has drastically fallen over the years in the off-shore areas. Dugong (herbivorous marine mammal) was common in these islands, particularly in the Dugong Creek areas of the Little Andaman Island. Now it is scarce, and a few patches of its habitat are left in the Ritchie's Archipelago and in the Nicobars. Marine turtles and saltwater crocodiles, once widely found, have been listed as endangered. Several species of mammals, birds and reptiles, endemic to these islands, are now infrequently sighted.

The promoting of tourism will have to be done within the parameters of preservation of these unique ecosystems, their carrying capacity, balanced utilisation of natural resources, national security and socio-economic conditions. The problems of environmental protection are inextricably linked to those of economic development. Development should not lead to environmental destruction, and environmental protection should not lead to economic stagnation. Development has to involve the creation of a liveable environment. Therefore, the development of tourism in these islands should focus on :

- Improved transport facilities with the mainland and between the islands;
- Easy availability of food items;
- Development of industries to process fishery and forest items so that finished, value-added items, instead of raw material, are exported;
- Encouraging upmarket, eco-friendly tourism;
- Environmental impact assessment of new areas proposed to be opened to tourists;
- Restricting introduction of exotic fauna and flora;
- Strictly banning coral and shell collection from sea and beaches;
- Assessing long-term effect on the ecosystem of increased tourism activities;
- Selective and controlled access to national parks and other sensitive areas; and
- Restricting migration from the mainland and other places.

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PREFACE

This report has been prepared under the directions of the Supreme Court of India, in a short period of 7 weeks. Consequently, it suffers from many of the shortcomings that a hurried process has. Also, because of the shortage of time, the report focuses mainly on the Andaman group of Islands. This is also because they have far greater problems related to forest working and other adverse environmental impacts, than the Nicobar group. The shortage of time also prevented a visit to the Nicobar islands, though I have visited them earlier for other purposes.

In the preparation of this report I have been greatly assisted by the help and cooperation of the Lt. Governor of the Andaman and Nicobar Islands, Shri NN Jha, and by other officers of the A&N administration, especially of the forest department. I would particularly like to acknowledge my gratitude to Shri SS Patnaik, Principal Chief Conservator of Forests, Shri PV Savant, Chief Conservator of Forests, Shri DV Negi, Conservator, Shri Khazan Singh, Chief Wildlife Warden, and Shri RSC Jayaraj, DCF, all of the Andaman and Nicobar Islands Forest Department.

Thanks are also due to Dr. Rauf Ali and Dr. Harry Andrews of the Andaman & Nicobar Environmental Team (ANET), to Dr. Ravi Sankaran of SACON, and to Shri Samir Acharya of SANE. I am particularly grateful to all the individuals, groups and associations who took the trouble and found the time to meet with me during my two visits to the Islands,

On the mainland, I benefited much from interactions with Shri JC Daniels and Shri Debi Goenka of the Bombay Natural History Society. I was also fortunate enough to meet some other members of the Society and have detailed discussions with them. Shri Pankaj Shekhsaria and Shri Ashish Kothari of Kalpavriksh also provided much useful information and ideas.

Officers of the Ministry of Environment and Forests, Government of India, especially Shri MK Jiwrajika and Shri AR Chadha, were also very helpful and forthcoming with information and advice, as were officers of the Planning Commission, Ministry of non-conventional energy and the Forest Survey of India.

Finally, I owe a large debt to my colleagues at the IIPA, especially Shri Raman Mehta, Ms. Vishaish Uppal, Shri Arpan Sharma, and Shri Harish Sharma, two of whom accompanied me to the islands and all of them toiled day and night to complete this report in time.

Shekhar Singh
New Delhi

30 January, 2002

CONCLUSIONS AND MAIN RECOMMENDATIONS

A. CONCLUSIONS

1. The Andaman and Nicobar Islands (ANI) are an internationally acknowledged hot spot for biodiversity. These islands have over 2500 species of flowering plants (223 species endemic – not found anywhere else in the world), 5100 species of animals (100 freshwater, 2100 terrestrial and 2900 marine), 179 species of corals, making it the richest coral reef in India, 52 species of mammals (33 species endemic), 244 species of birds (96 endemic) and 76 species of reptiles (24 endemic). The fact that these islands have a relatively small population and low population density, and that they are remote and difficult to access, makes them one of the last places in India where, with a little effort, biodiversity can be effectively conserved, and that too without serious adverse impacts on the local inhabitants.
2. Given the unique biodiversity values in the Andaman and Nicobar Islands (ANI) and their extreme ecological fragility, the major objective of forest and ecosystem management in these Islands should be biodiversity conservation and protection of the habitat of the tribals living in the forests. ANI has a preponderance of evergreen and semi-evergreen tropical rain forests, which are not only the richest biodiversity pools in the world but are also very fragile.
3. One of the major threats to the biodiversity of the forests of ANI is the stress on commercial forestry. The forest department and the Andaman and Nicobar Islands Forest Plantation and Development Corporation (ANIFPDC) currently follow a “conversion” forestry system where natural forests are worked, commercial species extracted and the worked forests regenerated and managed in a manner such that there is a resultant preponderance of commercial species for future harvesting. In the process, biodiversity is deliberately destroyed. Surprisingly, this is being done according to prescriptions in working plans that have been approved by the MoEF. In some areas, the natural forests have been totally cleared and replaced with plantations of padauk, gurjan, teak, or a combination of these and other commercial species. As per decisions taken by the Island Development Authority (IDA), under the Chairmanship of the Prime Minister, and

recommendations of the Director General of Forests, the Ministry of Environment and Forests (MoEF) and the ANI Administration started phasing out forest working and lowered extraction levels from 1,23,678 cum in 1988-89 to 1,03,660 cum in 1990-91. However, they subsequently arbitrarily raised the level of extraction to 1,35,523 cum in 1994-95. Fortunately, with the closing down of three of the main wood based industries, the extraction levels have now come down. Nearly 60% of the exploitable forests (excluding the tribal reserve and protected areas) in South Andamans, Mayabandar and Baratang, have already been "worked" and exploited and, consequently, their natural profile significantly changed and their biodiversity value compromised, perhaps forever.

4. Another major threat to the forests of the Islands is because of encroachment of forest areas. The A&N Administration had already identified and regularised the forest encroachments of 1367 families who had encroached up to 1978, on over 2500 ha. of forestland. However, a large proportion of these families continue to occupy additional forestland and continue to further expand and degrade their holdings. Even the families shifted to their designated sites have reportedly encroached additional land. Also, some of the families that had been identified as pre 1978 have, since then, sold their encroached land and shifted elsewhere. The families that have bought these encroached lands are now claiming to be pre 1978 encroachers. In addition, an estimated 2325 families have encroached subsequent to 1978 on 2633.654 ha of forestland. Many of these encroachments are in some of the last remaining natural lowland forests in North Andaman. They also appear to be growing in size and in numbers
5. The most significant of the remaining natural forests in Andamans are those within the Jarawa Reserve in South and Middle Andaman and the Onge Reserve in Little Andaman. In recent years the Andaman Trunk Road has been opened and passes contiguous to and in some cases through the tribal reserve. This road, and the increased access to the Jarawas, poses a major threat not only to the Jarawa tribals but also to the forests that they have protected for so many years.

6. The Ministry of Environment and Forests (MoEF) has been granting permission under the Forest (Conservation) Act, 1980 for the diversion of forestland for non-forest uses on a case-by-case basis without determining the optimality of the land use and the future options that such a clearance could compromise.
7. Poachers from Myanmar and other neighbouring countries come to poach timber, sea cucumbers and other species, especially in North Andaman. There are also local poachers operating in the Islands. The forest department does not appear to have the requisite legal and the infrastructure, especially in terms of manpower, arms, and fast boats, to prevent poaching.
8. Many exotic species of animals and plants have been introduced in the Islands, with a very destructive impact on forest regeneration. The introduction of oil palms in Little Andaman and of teak in various parts of the islands has also had a significant negative impact.
9. Approximately 2,23,937 cubic metres of sand was officially extracted from the beaches of the Islands in the three years 1998-2001. 72 beaches around the islands were used for extraction. In addition, it is alleged by local people that there is also illegal extraction of sand, which is considerable. The extraction of sand is being arbitrarily allowed by the MoEF and is causing a lot of environmental damage. It is also not a sustainable method of resource use. However, there appears to be no effort to phase out the extraction and to move towards other, more sustainable and safer, methods of construction.
10. The ability of the fragile ecosystem of these islands to withstand the impact of tourism is limited. Apart from disturbance to the forests, there is also disturbance to the marine and coastal ecosystem, especially to the coral reefs. The Islands offer a great potential for high value, low volume, specialised eco-tourism that can be done with minimal infrastructure and follows the principles of dispersion and flexibility.

B. MAIN RECOMMENDATIONS

Harvesting of Forests

1. Felling of trees and collection of non-timber forest produce (NTFP) should be banned from the forests of Little Andaman Island and all tribal reserves except for i) collection of NTFP from already worked forests of Little Andaman and from forest areas designated for the purpose in the Nicobar group of Islands, for meeting the legitimate consumption of local inhabitants; and ii) collection of timber and other forest produce by tribals living within tribal reserves for meeting their bonafide needs.
2. Harvesting of all forest produce including timber and NTFP should be completely prohibited from National Parks and Sanctuaries.
3. In addition to areas covered under 1 & 2 above, no felling of trees should be allowed in any unworked forest area, i.e., area where felling of trees as per working plans, working schemes, felling schemes or approved working plans, has not taken place earlier. There should also be no diversion of forestland from any such unworked area or from areas covered under 1 and 2 above, without the specific orders of the Supreme Court.
4. No felling of trees for whatsoever reasons or justification should be carried out to supply to, or to meet the raw material requirement of, plywood, veneer, blockboard, match stick or any other such wood based units except to local small-scale units (including saw mills) solely for meeting the local requirement for sawn timber and other wood based products.
5. For meeting the timber and other forest produce requirements of inhabitants of the ANI, felling of trees from forest areas not covered under 1, 2 & 3 above, i.e., forest area worked earlier in accordance with working plans, working schemes, felling schemes or approved working plan and excluding areas falling within national parks, sanctuaries, tribal reserves, or Little Andaman, may be allowed. Such felling may be undertaken as per prescriptions of the working plans approved by the MoEF. These plans should also contain action plans for removing, in a phased manner, trees of commercial species that are in number or concentration in excess of what is found in a natural forest of the same type and

similar location. Concurrently, efforts should be made to bring back the forest to its natural profile by encouraging /reintroducing those species of fauna and flora that naturally occurred in these forests prior to their being "converted". The working plan should also contain sufficient provisions for regeneration of felled areas. In accordance with an earlier Supreme Court order of 22nd September, 2000, felling of trees should be allowed only if sufficient financial provisions for implementing the working plan prescriptions have been made.

6. In the meanwhile, the present ban on felling of trees may be continued and the local requirement of timber and other forest produce may be met by utilising the already felled trees and sawn timber lying with the forest department and the ANIFPDC.
7. Once the stock of already felled trees and sawn timber is depleted, the local requirement of timber should be met, as far as possible, by harvesting the mono culture and mixed plantations of padauk, gurjan, teak and other species. The felling of trees from already worked natural forest, as specified in 5 above, should be undertaken only to meet the balance requirement. However, if the local requirement of timber and other forest produce is more than what could be obtained by felling of plantations and sustainably extracting trees from worked areas, as specified in 5 above, the same may be met by bringing timber in from other parts of the country. Under no circumstances should the over harvesting of the forest available for felling under para 5 above be permitted or undertaken.
8. There should be no expansion of monoculture or commercial plantations on forestland. The existing plantations of oil palm, rubber and teak are reportedly no longer viable and should be phased out. The land so released should, in so far as it is forestland, be regenerated as specified earlier. No exotic species of fauna or flora should be introduced into the islands. Accordingly, a suitable set of guidelines and procedures should be developed for the purpose. Consequently, the Andaman and Nicobar Islands Forest Plantation and Development Corporation Ltd. (ANIFPDC) should be wound up as it was primarily set up to promote commercial forestry and plantations, especially in Little Andaman.

9. Government departments, including defence and PWD, should be supplied fuel wood and other required forest produce by the forest department and should not be permitted to directly collect these from the forests.

Working Of Wood Based Units

10. There should be a complete ban on the establishment of any new wood based unit for the next 10 years.
11. All existing small-scale wood based units (saw mills) should be relocated within industrial estates or, where industrial estates are not feasible, in locations contiguous to forest offices or otherwise convenient for the forest department to monitor. This relocation should be completed within one year, after which the non-complying saw mills should be closed down. These saw mills should also be required to obtain a licence from the ANI Forest Department within three months and to maintain such records as may be prescribed by the forest department. Their licence may be renewed every year at the discretion of the ANI Forest Department, after the department has satisfied itself that a) the unit was not involved in the use of any illegal timber; b) the prescribed records were properly maintained; c) all provision of the act, rules and the terms and conditions stipulated by the forest department from time to time have been complied with. Necessary rules, guidelines etc., for the purpose, should be prescribed by the forest department within three months.
12. No subsidy of any type, including transport subsidy, should be given to any wood based unit.
13. Existing medium and large scale wood based industries (including plywood, veneer, and match industries) can be allowed to function provided they import their entire requirement of wood and other forest based raw materials from the mainland or from abroad. No subsidies should be allowed to them.
14. No timber, either as logs or as sawn timber or plywood/veneer, or in any other form, should be transported out of the Islands through any means whatsoever. This should not, however, inhibit the transportation, as personal baggage, of a reasonable quantity of wooden handicrafts by tourists or of personal articles by those permanently leaving the islands. Also, where a wood based industry, as

specified in 13 above, imports its entire wood and forest based raw material requirement, then it should be permitted to export its finished product.

Encroachments

15. Any further regularisation of encroachments on forestland in any form, including allotment/use of forestland for agricultural or horticultural purposes, should be strictly prohibited.
16. All those families who have been identified as having encroached on forest land prior to 1978 and have not yet shifted to their allotted rehabilitation sites, should be given three months notice to vacate their encroachments and shift to the allotted land. Failing this, their allotment should be cancelled and they should be forcibly evicted within three months of the deadline being over, without any further claim to land or any other form of rehabilitation.
17. Similarly, those among the pre-1978 families that have shifted to their allotted sites but have occupied more land than they were entitled to, should also be given three months notice to vacate the extra land occupied by them. On the expiry of this notice period, the allotments of those who have not complied with this notice should be cancelled and they should be forcibly evicted within three months, without any further claim to compensation or land.
18. All post 1978 forest encroachments should be completely removed forthwith and, in any case, within six months. Post 1978 encroachers (except for foreign nationals) should be allotted homesteads in revenue land and training and opportunity for self-employment or for other types of livelihood activities provided. Necessary powers for the eviction of encroachers should be given to the forest department. For the purpose, an effective action plan should be prepared and implemented under direct supervision, monitoring and control of a committee comprising of the Lt. Governor, Chief Secretary, Principal Chief Conservator of Forests of ANI, and reputed local NGO representatives. The Chief Secretary, ANI, may be asked to file a monthly progress report in the Supreme Court.
19. In order to prevent any further encroachments and rampant immigration, the Administration should, within three months, regulate the entry of people to the islands by having the Islands declared as an inner line area and by imposing

relevant restrictions under section 3 and other provisions of the Environment (Protection) Act of 1986. In accordance with this, non-residents entering the islands should have to invariably register themselves so that those who do not return to the mainland within a reasonable time can be traced and, where they have illegally encroached on land, can be evicted from these encroachments at the earliest. In addition, entry to the more vulnerable and forested areas of the Islands should be restricted. Once this regulation is in position, the administration should in a time bound manner issue identity cards to all the residents so that there is no gap in the period of identification and issuance of ID cards. This would ensure that fresh illegal encroachers are easily identified. Subsidised travel to the Islands should, once identity cards have been issued, be available only to bonafide residents of the Islands.

Other General Issues

20. For the conservation and protection of the forests and other ecosystems, an effective action plan should be prepared by the ANI Forest Department, in consultation with local NGOs and experts. This plan should also envisage a suitable enhancement of the protected area network, especially in the main islands of the Andaman and in the Nicobar Group. All unworked forest areas in Diglipur, Mayabunder, Middle Andamans and Baratang should be made into national parks, leaving a buffer belt between the national park boundary and the edge of revenue settlements, for protection by village protection committees. In addition, there should be a consolidation of the nearly hundred small island parks and sanctuaries and they should be constituted into viable units encompassing the marine areas surrounding them. This plan, after being approved by the MoEF, should be strictly implemented. The necessary funds, vehicles, equipment, human power, police help and legal power required for the effective implementation of this action plan should be made available by the ANI administration.
21. The Andaman Trunk Road should be closed to all vehicular traffic from Miletalak in South Andaman to the northern boundary of the S. Andaman Island. Similarly, it should be closed to all traffic from Kadamtala (corresponding to Prolobjig camp No.3) in Middle Andaman up to Kaushalya Nagar (corresponding to Porlobjig

- camp No. 15). This should be done within three months. Further, no person except for the Jarawas living in the Reserve should be allowed to enter the Reserve by any means unless he/she is permitted by the Principal Chief Conservator of Forests, and the Secretary, Tribal Welfare, ANI Administration, and no such permission should be granted unless the person is proceeding on bonafide work related to the welfare of the tribals or the protection of the area.
22. The practice of distributing timber and NTFP free to settlers should be discontinued. Instead, rural populations should be formed into village forest protection committees and, as per the joint forest protection norms prevalent in other parts of the country, the amount of timber and NTFP required by village communities should be given to them on the basis of a memorandum of understanding, in return for their role in protecting the forests adjacent to their settlements and in detecting and preventing encroachments.
 23. The extraction of sand should be phased out and no further extension should be granted after the current extension is over on 30 September, 2002.
 24. No concrete or permanent infrastructure for tourism should be built on any forest area in the Islands. Tourist activities in forest areas should be restricted to tented accommodation or temporary wooden/prefabricated structures that can be dismantled easily and moved to another site. These areas should remain under the control of the forest department who should be responsible for ensuring that the quantum and type of tourism is such that it does not in any way degrade the forests or other ecosystems.
 25. The felling of 27 trees for the 33 KV transmission line from Bamboo Flat to Minnie Bay, and 17 trees for construction of rural road from Adajig to Flat Bay Village should be permitted as a one-time relaxation, as these projects are already in their final stages, a small number of trees are involved and, reportedly, necessary clearances had been obtained from the MoEF prior to the Supreme Court's order of 10.01.01. However, all other proposals or clearances under the Forest (Conservation) Act of 1980 or the Environment (Protection) Act of 1986, where diversion of land or felling of trees or other activities that would have an

impact on the environment, are still to be undertaken, should be put up for review by the Supreme Court.

REPORT

I. PREAMBLE

Consequent to the order of the Supreme Court, on 26-11-2001, the Ministry of Environment and Forests issued an order on 6-12-2001 (No. 13-19/2001-SU) appointing me a Commissioner to give a report on the state of the forest and other allied matters of the Andaman and Nicobar Islands (copy of order at annex 1).

Accordingly, I made two visits to the Andaman and Nicobar Islands (ANI), the first from 16 to 21 December, 2001, and the second from 16 to 19 January, 2002. Apart from Port Blair, I also visited and held meetings in South, Middle and North Andaman during the first visit, and in Little Andaman during the second visit. In all, 33 public meetings were held and representatives of 52 groups were met (Summary of oral submissions at annex 2; copies of written submissions in Volume III). Meetings were also held with the Lt. Governor, other government officials, scientists, NGOs and with the petitioners (Detailed itinerary enclosed as annex 3)

I also travelled to Mumbai to have a meeting with representatives of Kalpavriksh and the Bombay Natural History Society (BNHS), two of the petitioners, on 24 December, 2001 and met with the Minister and officials of the Ministry of Environment and Forests, Government of India, on 4 January, 2002.

II. STRUCTURE OF THE REPORT

The report, along with the annexes and maps are in Volume I. The conclusions and main recommendations are summarised at the start of the report.

Volume II contains copies of the data that were sent by the Andaman and Nicobar (ANI) administration, copies of the memoranda submitted by the ANI administration, the Member of Parliament from ANI, the ANI Forest Plantation and Development Corporation (ANIFPDC), the various petitioners and the forest workers union. It also contains copies of various documents relied upon as a part of this study, the correspondence with various government departments and a list of people who made oral submissions during the ANI visits.

Volume III contains copies of all the other petitions and memoranda received while visiting ANI.

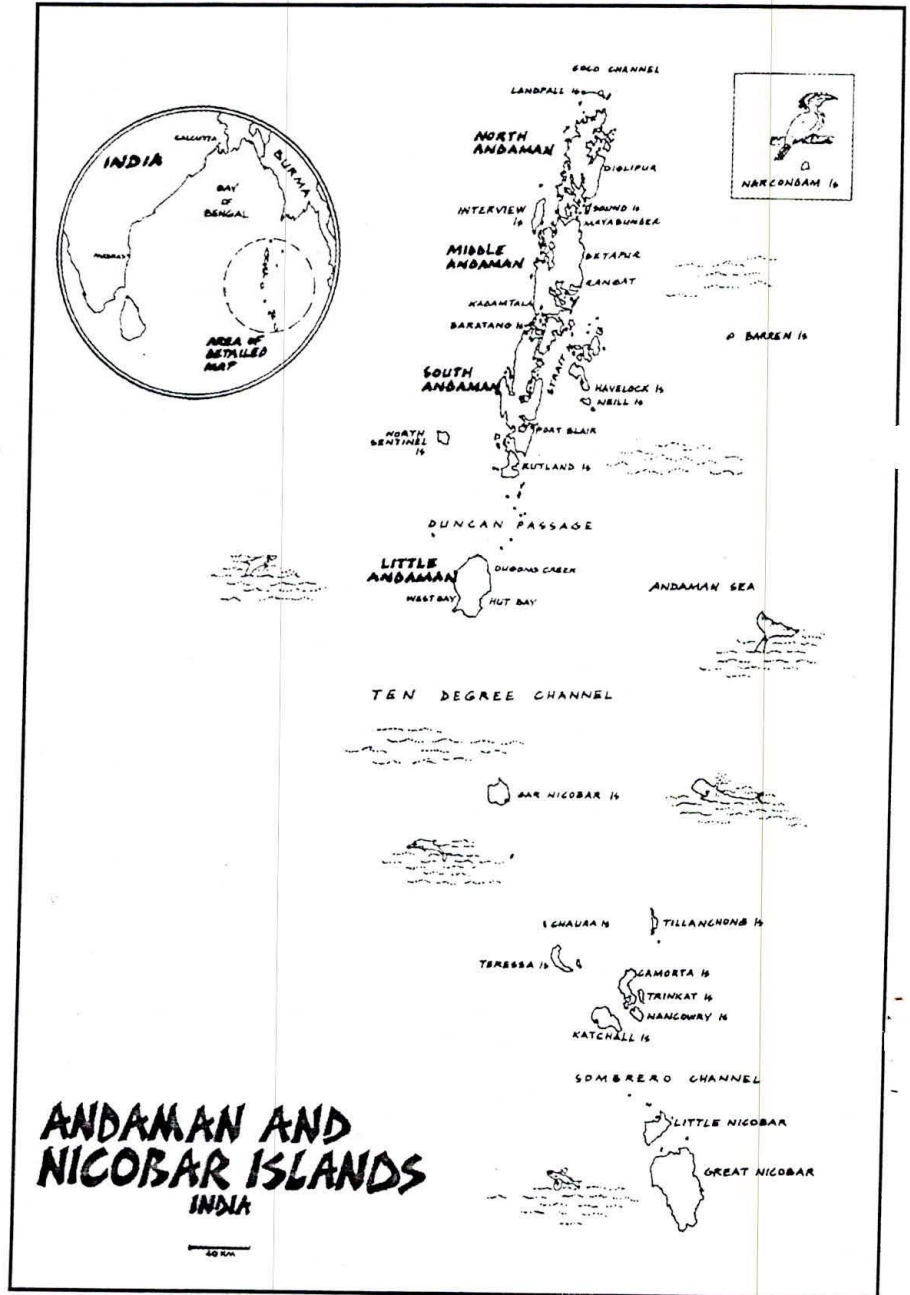
III. PROFILE OF THE ISLANDS

Location and Area: The Andaman and Nicobar group of islands is situated in the Bay of Bengal, between peninsular India and Myanmar. It is located between $6^{\circ} 45''$ and $13^{\circ} 41''$ North latitudes, and $92^{\circ} 12''$ and $93^{\circ} 57''$ East longitudes. Arranged in an arc from the north to the south, there are 349 islands, which can be distinguished into two groups geographically. Islands located north of 10° N Latitude are the Andaman group of islands while the rest belong to the Nicobar group.

Islands located north of 10° N Latitude are the Andaman group of islands while the rest belong to the Nicobar group.

The northernmost point (Land-fall island) is about 901 km away from the mouth of Hoogly River and about 190 km from Myanmar. The southernmost island is Great Nicobar, whose southern most tip is only about 150 km away from

Sumatra, Indonesia. The Capital of the Andaman and Nicobar Islands is Port Blair, which is 1255 km from Kolkata, 1190 km from Chennai and 1200 kms from Vishakhapatnam. The Union territory has two districts viz. Andaman and Nicobar.



There are 325 islands in the Andaman group while the Nicobar group has 24 islands. Total geographic area of Andaman and Nicobar Islands is 8249 sq. km., of which, the Andaman group of islands cover 6408 sq. km., while the Nicobar group covers 1841 sq. km. The recorded forest area is 7170.69 sq km (86.93%) and the actual forest cover is 7606 sq km (92.2%).

Out of the total 349 islands only 38 islands are inhabited, 24 in the Andaman group and 12 in the Nicobar group.

There are 547 villages in this Union Territory, of which 504 are inhabited and the remaining 43 are uninhabited. Of these, 355 villages (334 inhabited and 21 uninhabited) are in Andaman district and the remaining 192 villages (170 inhabited and 22 uninhabited) are in the Nicobar district. [District Census handbook of Andaman District, 1991]

Geography and Geology: These islands are the summits of a submerged mountain range lying on the great tectonic suture zone extending from the eastern Himalayas along the Myanmar border to the Arakan and finally Sumatra and Lesser Sundas.

The physiography of these islands is characterised by undulating topography and intervening valleys. There are, however, some flat islands like Car Nicobar and Trinket.

There are no major perennial fresh water rivers in these islands except Kalpong in North Andaman and Alexendra, Dagmar and Galathea rivers in Great Nicobar. There are several rain fed streams, which dry up during summer. The coastline of these islands forms a large number of bays, lagoons and serpentine creeks, and has a length of about 1962 km. At several places tidal creeks penetrate far inside the land and form outlets for fresh water streams.

Two islands of volcanic origin are found here- the Narcondum and the Barren Islands. The former is now apparently extinct while the latter is still active. [Andaman and Nicobar forest Department Report]

Soil: Soil cover is rather thin, varying from 2m to 5m. It is mostly alluvial on hilltops while diluvial in ridges and valleys. The coastal flats have an admixture of sand, silty clay and diluvial material with fine fragments of coral lime. The soil is, in general, mild to moderately acidic with high humus on top. [Andaman and Nicobar forest Department Report]

Climate: These islands have a tropical climate, which is warm, moist and equable. The temperature ranges from 18⁰ C to 34⁰ C. The proximity of the sea and the abundant rainfall prevent extremes of heat. An average of 3000 mm per year is received from southwest and northeast months. Humidity is high varying from 66 to 85%. In normal conditions the wind speed is fairly constant (5 knots per hour) but during cyclonic weather it may go as high as 12 to 13 knots per hour. [Andaman and Nicobar forest Department Report]

Demography: The population of these islands as per the last three censuses is shown in the following table:

Population	1981	1991	2001
Andaman District	157,821	241,453	314,239
Nicobar District	30,433	39,208	42,028
Total	188,254	280,661	356,265

The table above shows that the population is growing at a rapid pace. This increase is mainly due to the immigration of people from mainland. The density of population in ANI is about 43 persons per sq. km (All India: 324). Population is mainly dominated by settlers from mainland. Tribal population constitute only 9.45% of the total population. Main occupations of people include agriculture, animal husbandry, fishing, forestry and plantations, construction, transport, trade and commerce. [Andaman and Nicobar forest Department Report and Census of India 2001]

IV. IMPORTANCE OF A&N BIODIVERSITY

The Andaman and Nicobar Islands are an internationally acknowledged hot spot for biodiversity. This is despite the fact that there have been very few intensive studies in these Islands and many of the species still remain to be discovered or identified. However, even the little that is known is enough to establish the very high biodiversity value of these islands.

The fact that these islands have a relatively small population and low population density, and that they are remote and difficult to access, makes them one of the last places in India where, with a little effort, biodiversity can be effectively conserved, and that too without serious adverse impacts on the local inhabitants.

ANDAMAN & NICOBAR ISLANDS BIODIVERSITY AT A GLANCE

•Plant diversity:

–About 2500 flowering plants described

–14% (223 spp.) are endemic- found no where else in the World - and 40% of non-endemics have only extra-Indian distribution

•Animal diversity:

–5100 animals described (100 freshwater, 2100 terrestrial and 2900 marine)

–Coral reefs richest in India- 179 spp.

–Mammals- 52 spp of which 33 are endemic (63%), Birds- 244 spp of which 96 are endemic (39%) and Reptiles –76 spp of which 24 are endemic (32%)

(Source: ANI Forest Department Presentation)

Animal Life

Nature has endowed these islands with a unique and varied animal life both on land as well as in sea. Faunal distribution in these islands is influenced by fauna of both Indo-Chinese and Indo-Malayan regions. Large mammals are absent in both Andaman and Nicobar Islands. Geographic Isolation of these islands has resulted in high degree of endemism. The surrounding seas are equally rich in marine biodiversity. Endemism is more pronounced in land animals.

Faunal diversity and endemism in A & N Islands

Animal Group	No. of special Subspecies	No. of Endemics	% Endemism
Terrestrial Fauna			
Mammalia	55	32	61.5
Aves	246	99	40.2
Reptilia	76	24	31.6
Amphibia	18	3	16.7
Mollusca	110	77	70.0
Arachnida	94	38	40.4
Hemiptera	146	22	15.0
Diptera	214	24	11.2
Coleioptera	878	92	10.5
Lepidoptera	426	52	12.2
Isoptera	40	19	47.5
Odonata	36	4	11.1
Annelida	30	9	30.0
Total	2,366	495	20.92
Marine Fauna			
Mammalia	7	-	-
Reptilia	12	-	-

Animal Group	No. of special Subspecies	No. of Endemics	% Endemism
Pisces	1,200	2	0.2
Echinodermata	350	4	0.4
Mollusca	1,000	18	1.9
Crustacea	600	6	1.0
Polychaeta	184	4	2.2
Anthozoa	326	2	0.6
Porifera	72	-	-
Meiofauna	490	102	21.0
Total	4,241	138	0.11

Mammals: Out of 55 terrestrial and 7 marine mammal species reported so far, **32 species are endemic**. Common mammals found here are Andaman Wild Pig, Crab eating macaque, Andaman masked palm civet, Dugong, Dolphin, Whale, Spotted deer, Andaman spiny shrew, Nicobar tree shrew, Andaman horse-shoe bat, Lesser short nosed bat, elephant etc.

Birds: The rich avi-faunal diversity has always attracted ornithologists and bird watchers to these islands. As many as 246 species and sub species of birds are reported to inhabit these islands and of these **99 species and sub-species are endemic**. Some important species are Andaman Teal, Megapode, Narcondum hornbill, Nicobar pigeon, Green Imperial Pigeon, Nicobar Parakeet, Crested serpent eagle, White-bellied sea eagle, Edible-nest swiftlet, Emerald dove etc.

Reptiles: Sandy Beaches of these islands are famous for turtle nesting. There are 76 terrestrial reptiles. **Of these 24 species are endemic**. Important species include four main species of sea turtles viz., Leatherback turtle, Green sea turtle, Hawksbill turtle, and Olive Ridley turtle. Also found is the Salt-water crocodile, Water monitor lizard, Reticulate Python, sea snakes and many other varieties of snakes including King Cobra.

Corals: ANI are the richest of the Indian region in coral diversity with as many as 179 species covering 2000 sq km. Coral reefs are important breeding and nursery ground for fish and many other organisms and have been aptly called "The Tropical Rain forests in the Sea".

Marine Life: Due to its long coastal stretch, these islands have a very rich marine biodiversity. They harbour more than 1200 species of fish, 350 species of echinoderms, 1000 species of molluscs and many lower forms of life. Among vertebrates, dugongs,

dolphins, whales, salt-water crocodiles, sea turtles, sea snakes etc. are common. (Source: *Andaman and Nicobar Islands: Forests and Environment, Department of Environment and Forests, ANI Administration, March 2001*)

V. THE STATE OF THE FOREST AND OTHER ALLIED MATTERS

Given the unique biodiversity values in the Andaman and Nicobar Islands (ANI) and their extreme ecological fragility, the major objective of forest and ecosystem management in these Islands should be biodiversity conservation. The other objectives that need to be concurrently kept in mind are:

- a. Protection of ecological services, like soil and water conservation.
- b. Provision of timber and non-timber products for local use.
- c. Protection of the habitat of the forest based tribals of the Islands.
- d. Recreation.

The fact that ANI has a preponderance of evergreen and semi-evergreen tropical rain forests makes the conservation of forests from the point of view of both biodiversity and ecological services particularly important. Rain forests are not only the richest biodiversity pools in the world but are also very fragile. Most of the nutrients are in the vegetation and the forest litter and the soils are usually shallow. The slightest disturbance of the forest leads not only to significant loss in biodiversity but also to aggravated water runoff and soil erosion. The erosion of soil depletes the land and adversely affects the marine ecosystem, which receives the eroded soil. This is especially true of the ANI, where the topography is undulating and rainfall high. The fact that most forestry operations are carried out so as to finish just before the monsoons further aggravates the situation, as the soils that have been disturbed by the forestry operations do not have time to stabilise before torrential rains wash them out to the sea. Consequently, the coastal and marine ecosystem, including the very rich corals reefs and other marine life, gets badly affected.

The loss in floral biodiversity has an effect on the faunal biodiversity, affecting species of insects, birds, mammals, reptiles and others. This, in turn, also affects the coastal and marine biodiversity.

Keeping this in mind, the major threats to the forests and other ecosystems of ANI are outlined below.

A. COMMERCIAL FORESTRY

One of the major threats to the biodiversity of the forests of ANI is the stress on commercial forestry. For over a hundred years the forests have been subjected to increasing commercial exploitation. The forest department currently follows a “conversion” forestry system where natural forests are worked, commercial species extracted and the worked forests regenerated and managed in a manner such that there is a resultant preponderance of commercial species for future harvesting. In the process, biodiversity is destroyed deliberately. For example, the *Working Plan for The Forests of Little Andaman Islands (1999 to 2009)* states:

“Measures to Attain Special Objectives of Management: It is Proposed to attain the special objectives of management by adopting a suitable natural regeneration technique, supplemented by artificial means wherever necessary, without any deterioration in the site quality, so that the natural forests of Evergreen, Semi-Evergreen and Deciduous types are converted into forest areas containing a higher percentage of more valuable timber species thus increasing the productivity and potential value of these forests. In such places where natural regeneration technique does not result in adequate stocking, it is augmented by dibbling/broadcasting of seeds of valuable species like padauk, gurjan, White Chuglam, Badam etc. and if necessary artificially planting seedlings from nursery stock.” (Emphasis added. Written By Prakash M. Bhatt, IFS, Deputy Conservator of Forests,)

Similar passages are found in other working plans of the ANI forest divisions. What is surprising is that the Ministry of Environment and Forests (MoEF) is, even now, approving working plans with such objectives.

In some areas the natural forests have been totally cleared and replaced with plantations of padauk, gurjan, teak, or a combination of these and other commercial species (annex 4).

Forests were also leased out to the private industries and, from 1977, to the Forest Corporation, to fell and “regenerate”. Though the practice of leasing forests to the private industry finally stopped in 1990-91, the corporation continues to directly fell and regenerate forests in Little Andaman and in North Andaman Islands.

Whereas this approach might have been in consonance with earlier thinking about forest management, for over two decades now the value of conserving biodiversity is well understood and accepted.

The forests of Andamans have been systematically converted from natural, biodiversity rich, forests to commercial "plantations" primarily to meet the raw material demand of the four medium sized wood based industries that were established in the Islands. These were:

- a) WIMCO in South Andaman
- b) Andaman Timber Industry (ATI) in South Andaman (Installed capacity 31,160 cum pa)
- c) Jayshree Timber Products, Middle Andaman (28,300 cum pa)
- d) Kitply Industries Ltd. in Middle Andaman (31,650 cum pa)

Of these, WIMCO closed down some years back and the Andaman Timber Industry and Jayshree Timber Products closed down recently, for various reasons, though prior to the Supreme Court order of October, 2001. Only Kitply Industries was still functioning when the Supreme Court ordered a ban on the felling and processing of all naturally grown trees.

These industries, apart from getting timber from the forests, have also been provided a handsome transport subsidy by the government, to bring in materials and to export their finished products.

The Ministry of Industry, Government of India, had sanctioned a Transport Subsidy Scheme for the wood based industries in the ANI from 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 scheme was amended in 1993 to benefit wood based industries for a period of five years only from the date of commencement of commercial production.

This scheme was again amended, in 1995, and subsidy continued to be paid to the units, irrespective of size, beyond the stipulated 5 years, from March 1995 to March 2000. There is now a proposal to further extend this scheme for, it is argued, that

such subsidies are necessary to ensure that employment is provided in the forest based industries. (Source: Note from the Planning Commission –copy at Volume II page 309).

It is interesting to note that while the three industries, ATI, Jaysree and Kitply, totally employed 1994 persons directly, in the last four years (1997-2001) they drew transport subsidies from the government of around Rs. 15 crores, with an annual peak of over 5 crores in just 1999-2000 (For details, see Volume II, page 135-136).

It is questionable, therefore, as to how much, if any thing at all, they contributed to the local economy.

In fact, the Minutes of the Island Development Authority (IDA)¹ meeting of December, 1986, under the chairmanship of the then Prime Minister, record that:

“ Shri Romi Khosla stated that 75 percent of the timber extracted in the islands is used for plywood and match factories, and not for construction purposes. In fact, timber is not used at all as an economic base for durable assets of the Islands. ...Large factories are consuming large amounts of timber in ways which only destroy the inheritance. PM said that such industry should be shut down at the earliest...” (Proceedings of the first meeting of the IDA, 27 December 1986, para 14).

In January 1989, again under the chairmanship of the then Prime Minister, the IDA decided that:

“... wood extraction to feed the existing industries should be completely phased out in the next few years; if necessary, one should even import the wood needed” (Minutes of the Fifth Meeting of the IDA, January 1989, item No. 6, ix e)).

The then Inspector General of Forests (now re-designated as the Director General of Forests) visited the Islands in October 1989, and also recommended that:

“Timber extraction in A&N Islands should be restricted to maximum of 1,15,000 cu.m. which is the current requirement and it should be further reduced in

¹ The IDA was constituted on 8th August, 1986 with the Prime Minister as the Chairperson. The members include the Finance Minister, Deputy Chairman of the Planning Commission and ministers of various other ministries (transport, tourism, planning, communications, defence, environment & forests, information and broadcasting, various officials and experts. The functions of the IDA are to (i) decide on policies and programmes for an integrated development of the Islands (ANI and Lakshadweep) keeping in view all aspects of environmental protection as well as the special technical and scientific requirement of the Islands, and (ii) review progress of implementation and impact of the programmes of development.

subsequent years by phasing out supply of timber to major wood base industries.”
(*Timber Extraction in Andaman & Nicobar Islands*, AG Oka, 1989).

Despite this, the Ministry of Environment and Forests and the A&N Administration, after affecting an initial decline in extraction levels from 1,23,678 cum in 1988-89 to 1,03,660 cum in 1990-91, again raised the level of extraction to 1,35,523 cum in 1994-95 (annex 5). Considering there was no subsequent decision of the IDA or the Prime Minister, reversing the earlier decision, it is not clear on what basis this was done. Fortunately, with the closing down of three of the wood based industries, the extraction levels have now come down.

In addition, timber is also being supplied to the two government saw mills, one in Chatham, South Andaman (installed capacity 24,000 cum pa) and one in Betapur, Middle Andaman (5000 cum pa) (Source: ANI administration, copy at Volume II page 204).

Some of the timber sawn is being exported to the mainland. This is mainly sold in Chennai and Kolkata. The ANI administration maintains depots in these two cities for selling the timber it exports. However, the quantity of sawn timber exported by the administration has not crossed 1000 cum pa for the last 10 years and has fluctuated between 130.77 cum in 1998-99 to 868 cum in 1991-92 (Source: ANI administration, Volume II, page 152).

Locally, timber is used by small-scale sawmills, which numbered about 35 in 2001, with a total installed capacity of around 60,000 cum per annum and an operating capacity of about 25,000 cum pa (annex 6). In addition, there are also over 130 small furniture manufacturers using about 1600 cum of sawn timber (equivalent to about 3000 cum of logs) per year. Much of the timber processed by these two categories is for domestic use, though a small proportion (614 cum in 2000-01) is sent out to Chennai and Kolkata (annex 7).

Only the government saw mills are permitted to saw padauk, the major hardwood in the Islands. This is reportedly being done in order to prevent theft of padauk from the forests. However, as the government saw mills are located only in South and Middle Andaman, the availability of such hardwoods to the people in other parts of the Islands is a problem.

As a result of the commercial orientation of forestry in the Islands, at present nearly 60% of the exploitable forests (excluding the tribal reserve and protected areas) in South Andamans, Mayabandar and Baratang, have already been “worked” and exploited and, consequently, their natural profile significantly changed and their biodiversity value compromised, perhaps forever. Though the ANI forest department have stated that the total area of forests that they work is only 30%, this includes the area of the numerous outlying islands, mostly very small (see list of national parks and sanctuaries at annex 8). Given the nature of island ecology, the biodiversity values of the larger islands are much higher, by and large, than those of small islands of usually 1 sq km or less. Though this is an accepted scientific fact, the actual position in the ANI does not seem to have been studied in detail. The only study that could be found was by Dr Priya Davidar of the Salim Ali School of Ecology and Environmental Sciences. She states:

“...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 sq km in area. Islands smaller than 1 sq km had records of 36 species of forest birds and 39 species of butterflies. On islands smaller than 0.1 sq km, in area, only 20 species of forest birds and 21 species of butterflies were recorded” (‘Conservation Priorities for the Andaman and Nicobar Islands’, *Journal, Bombay natural History Society*, 93(3), December 1996, p 556 –copy at Volume II, page 277).

Therefore, though many of these small islands, which are in any case mostly inaccessible and therefore not economically viable to work, have been excluded from the “working circle”, much of the larger islands, which are far richer in biodiversity, have been worked. Also, in terms of ecological services, like soil and water conservation, the larger islands are far more vulnerable as they are the ones where a majority of the population resides.

In all these areas the vast majority of non-commercial species have either disappeared or their composition been significantly changed. Though enough evidence of this exists, there appear to be very few studies documenting exactly what changes have actually occurred and what species have been lost or decreased in distribution and number. The two studies found dealt with just tree species. One is an unpublished MSc

dissertation of Sonali Pandit, of the Salim Ali School of Ecology and Environmental Sciences, Pondicherry University, (*Regeneration of Important Rainforest Tree Species in Virgin and Selectively Logged Sites in the South Andaman Islands*, not dated). This dissertation was based on a field study of three sites in South Andaman, one that was undisturbed, and the other two that had been worked, of which one was regenerated from 1955 and the other from 1986. According to this study, there were major differences between the composition of the first, undisturbed, patch and the remaining two. Most notable was the fact that the undisturbed site had a predominance of rare, non-commercial species, while in the latter two these had almost disappeared and the preponderance was of commercial species (annex 9).

The second study, done by the Forest Survey of India (FSI) of the Ministry of Environment and Forests, Government of India, also suggested a similar decline in biodiversity (copy at Volume II, page 36-53).

During the second visit to Andamans, the forest department organised for me a visit to what was presumably a good regeneration site. This was a forest "regeneration" site of 1951, in South Andaman. This visit also revealed that the regenerated area had a preponderance of commercial species and that the species composition had drastically changed from its natural profile (forest department report at annex 10).

Recommendations

Forest Harvesting

- 1) Felling of trees and collection of non-timber forest produce (NTFP) should be banned from the forests of Little Andaman Island and all tribal reserves except for i) collection of NTFP from already worked forests of Little Andaman and from forest areas designated for the purpose in the Nicobar group of Islands, for meeting the legitimate consumption of local inhabitants; and ii) collection of timber and other forest produce by tribals living within tribal reserves for meeting their bonafide needs.***
- 2) Harvesting of all forest produce including timber and NTFP should be completely prohibited from National Parks and Sanctuaries.***
- 3) In addition to areas covered under 1 & 2 above, no felling of trees should be allowed in any unworked forest area, i.e., area where felling of trees as per***

working plans, working schemes, felling schemes or approved working plans, has not taken place earlier. There should also be no diversion of forestland from any such unworked area or from areas covered under 1 and 2 above, without the specific orders of the Supreme Court.

- 4) No felling of trees for whatsoever reasons or justification should be carried out to supply to, or to meet the raw material requirement of, plywood, veneer, blockboard, match stick or any other such wood based units except to local small-scale units (including saw mills) solely for meeting the local requirement for sawn timber and other wood based products.*
- 5) For meeting the timber and other forest produce requirements of inhabitants of the ANI, felling of trees from forest areas not covered under 1, 2 & 3 above, i.e., forest area worked earlier in accordance with working plans, working schemes, felling schemes or approved working plan and excluding areas falling within national parks, sanctuaries, tribal reserves, or Little Andaman, may be allowed. Such felling may be undertaken as per prescriptions of the working plans approved by the MoEF. These plans should also contain action plans for removing, in a phased manner, trees of commercial species that are in number or concentration in excess of what is found in a natural forest of the same type and similar location. Concurrently, efforts should be made to bring back the forest to its natural profile by encouraging /reintroducing those species of fauna and flora that naturally occurred in these forests prior to their being "converted". The working plan should also contain sufficient provisions for regeneration of felled areas. In accordance with an earlier Supreme Court order of 22nd September, 2000, felling of trees should be allowed only if sufficient financial provisions for implementing the working plan prescriptions have been made.*
- 6) In the meanwhile, the present ban on felling of trees may be continued and the local requirement of timber and other forest produce may be met by utilising the already felled trees and sawn timber lying with the forest department and the ANIFPDC.*

- 7) *Once the stock of already felled trees and sawn timber is depleted, the local requirement of timber should be met, as far as possible, by harvesting the mono culture and mixed plantations of padauk, gurjan, teak and other species. The felling of trees from already worked natural forest, as specified in 5 above, should be undertaken only to meet the balance requirement. However, if the local requirement of timber and other forest produce is more than what could be obtained by felling of plantations and sustainably extracting trees from worked areas, as specified in 5 above, the same may be met by bringing timber in from other parts of the country. Under no circumstances should the over harvesting of the forest available for felling under para 5 above be permitted or undertaken.*
- 8) *There should be no expansion of monoculture or commercial plantations on forestland. The existing plantations of oil palm, rubber and teak are reportedly no longer viable and should be phased out. The land so released should, in so far as it is forestland, be regenerated as specified earlier. Consequently, the Andaman and Nicobar Islands Forest Plantation and Development Corporation Ltd. (ANIFPDC) should be wound up as it was primarily set up to promote commercial forestry and plantations, especially in Little Andaman.*
- 9) *At the same time, efforts should be made to reduce the level of demand for timber and for firewood. For the purpose, the A&N Administration should investigate and implement methods of achieving this, including the conversion to the wood and bamboo based "Assam type" construction, which is both less timber intensive, and safer in earthquakes, than the present all-timber or RCC buildings.*

Wood Based Industry

- 10) *There should be a complete ban on the establishment of any new wood based unit for the next 10 years.*
- 11) *All existing small-scale wood based units (saw mills) should be relocated within industrial estates or, where industrial estates are not feasible, in locations contiguous to forest offices or otherwise convenient for the forest department to monitor. This relocation should be completed within one year, after which the*

non-complying saw mills should be closed down. These saw mills should also be required to obtain a licence from the ANI Forest Department within three months and to maintain such records as may be prescribed by the forest department. Their licence may be renewed every year at the discretion of the ANI Forest Department, after the department has satisfied itself that a) the unit was not involved in the use of any illegal timber; b) the prescribed records were properly maintained; c) all provision of the act, rules and the terms and conditions stipulated by the forest department from time to time have been complied with. Necessary rules, guidelines etc., for the purpose, should be prescribed by the forest department within three months.

12) No subsidy of any type, including transport subsidy, should be given to any wood based unit.

13) Existing medium and large scale wood based industries (including plywood, veneer, and match industries) can be allowed to function provided they import their entire requirement of wood and other forest based raw materials from the mainland or from abroad. No subsidies should be allowed to them.

14) No timber, either as logs or as sawn timber or plywood/veneer, or in any other form, should be transported out of the Islands through any means whatsoever. This should not, however, inhibit the transportation, as personal baggage, of a reasonable quantity of wooden handicrafts by tourists or of personal articles by those permanently leaving the islands. Also, where a wood based industry, as specified in 13 above, imports its entire wood and forest based raw material requirement, then it should be permitted to export its finished product.

B. USING UNTREATED TIMBER FOR CONSTRUCTION

Another factor contributing to an increasing demand of timber is the fact that most of the timber used in the Islands is not treated prior to being used for construction purposes. This results in its having a very short life, requiring replacement every three or four years. Despite the fact that the then Inspector General of Forests, Government of India, had recommended way back in 1989 that: "No timber should be used without proper preservative and seasoning treatment to prolong the life of timber" (Oka 1989), the current installed capacity for treating timber is only 1,900 cum per annum. (Annex 11),

which is far below the local requirement of treated timber, estimated to be around 5 to 10 thousand cum per annum. Treated timber has a life that is reportedly ten times greater than that of untreated timber. Therefore, by treating all timber, the demand should come down ten fold.

Recommendation

15) All timber, bamboo and cane used for construction and requiring treatment in order to extend its durability and life, should be so treated and the administration should ensure that requisite capacity to treat all such timber is in position within a period of six months. After the expiry of this period, no timber, bamboo or cane of the type requiring treatment should be sold for use in building and construction activities, or used for such purpose, unless it has been appropriately treated.

C. ENCROACHMENTS

Another major threat to the forests of the Islands is because of encroachment of forest areas. The A&N Administration had already identified and regularised the forest encroachments of 1367 families who had encroached up to 1978, on over 2500 ha. of forestland. They were to be regularised/resettled in one hectare land each and 1367 hectares of forestland had, with the approval of the MoEF, been denotified in 1988 for the purpose. However, a large proportion of the families that had to be shifted have not been shifted to their designated sites. Therefore, they continue to occupy forestland and to further expand and degrade their holdings (Source: ANI administration, Volume II, pages 171- 173, 71-76). There is no obvious reason why these families have not yet been shifted, despite decisions in the IDA and other bodies to this effect.

Meanwhile, many of the families who continue in, or have been shifted to, their designated sites of 1 ha each have, reportedly, encroached additional land and are now sitting on areas far in excess of those allotted to them. Concurrently, those families who have not yet been shifted continue to reside in forest areas on sites that are mostly much larger than 1 ha and often progressively increasing.

Besides, reportedly some of the families originally identified as pre 1978 have now moved away and in their place new families have settled on their encroached land. These families are reportedly now claiming pre-1978 status.

In addition, an estimated 2325 families have encroached subsequent to 1978 on 2633.654 ha of forestland (details at annex 12). These have now been identified though little action seems to have been taken to remove them from the forest areas.

Unfortunately, many of these encroachments are in some of the last remaining natural lowland forests in North Andaman. Also, they appear to each be growing in size and collectively growing in numbers (Aerial pictures of encroachments in the forests of Diglipur, North Andaman, enclosed from page 47 onwards. Maps of encroachments at annex 13-18).

Recommendations

- 16) Any further regularisation of encroachments on forestland in any form, including allotment/use of forestland for agricultural or horticultural purposes, should be strictly prohibited.*
- 17) All those families who have been identified as having encroached on forest land prior to 1978 and have not yet shifted to their allotted rehabilitation sites, should be given three months notice to vacate their encroachments and shift to the allotted land. Failing this, their allotment should be cancelled and they should be forcibly evicted within three months of the deadline being over, without any further claim to land or any other form of rehabilitation.*
- 18) Similarly, those among the pre-1978 families that have shifted to their allotted sites but have occupied more land than they were entitled to, should also be given three months notice to vacate the extra land occupied by them. On the expiry of this notice period, the allotments of those who have not complied with this notice should be cancelled and they should be forcibly evicted within three months, without any further claim to compensation or land.*
- 19) All post 1978 forest encroachments should be completely removed forthwith and, in any case, within six months. Post 1978 encroachers (except for foreign nationals) should be allotted homesteads in revenue land and training and opportunity for self-employment or for other types of livelihood activities provided.*
- 20) The forest officials in the ANI should be given requisite powers to do this, including:*

- *Power of summary eviction of encroachments: As in the case of Madhya Pradesh, vide Section 80A, IFA, 1927.*
 - *Magisterial powers to assistant conservators of forests: The Assistant Conservators of Forests should be appointed as executive magistrates/special executive magistrates in order to oversee the evictions carried out by the Range Officers on receipt of orders of eviction from the estate officers.*
- 21) *For the purpose, an effective action plan should be prepared and implemented under direct supervision, monitoring and control of a committee comprising of the Lt. Governor, Chief Secretary, Principal Chief Conservator of Forests of ANI, and reputed local NGO representatives. The Chief Secretary, ANI, may be asked to file a monthly progress report in the Supreme Court.*
- 22) *In order to prevent any further encroachments and rampant immigration, the Administration should, within three months, regulate the entry of people to the islands by having the Islands declared as an inner line area and by imposing relevant restrictions under section 3 and other provisions of the Environment (Protection) Act of 1986. In accordance with this, non-residents entering the islands should have to invariably register themselves so that those who do not return to the mainland within a reasonable time can be traced and, where they have illegally encroached on land, can be evicted from these encroachments at the earliest. In addition, entry to the more vulnerable and forested areas of the Islands should be restricted.*
- 23) *Once this regulation is in position, the administration should in a time bound manner issue identity cards to all the residents so that there is no gap in the period of identification and issuance of ID cards. This would ensure that fresh illegal encroachers are easily identified. Subsidised travel to the Islands should, once identity cards have been issued, be available only to bonafide residents of the Islands.*
- 24) *Divisional Forest Officers and, where relevant, village protection committees, as described later, should be made responsible for prevention, early detection and quick eviction of new forest encroachers.*

25) The forest department should be strengthened and appropriate village institutions set up for the purpose, as detailed later.

D. ROAD THROUGH THE JARAWA TRIBAL RESERVE

Perhaps the best remaining natural forests in the Andaman Islands are in the tribal reserves. The most significant of these are the Jarawa Reserve in South and Middle Andaman and the Onge Reserve in Little Andaman. Due to the earlier hostility of the Jarawas, these areas were left alone. However, in recent years the Andaman Trunk Road has opened up and passes contiguous to and in some cases through the tribal reserve (map at annex 21). This road, and the increased access to the Jarawas, poses a major threat not only to the Jarawa tribals but also to the forests that they have protected for so many years. The road has also made it easier for encroachments to take place in the forests by allowing easy access to many forest areas that were earlier not easily approachable.

Interestingly, a high level committee constituted at the behest of the then Prime Minister, Mrs. Indira Gandhi, had suggested in the early 1980s that, as regards the Andaman Trunk Road:

- i) though the absence of any road would be the ideal condition for the Jarawa, the next alternative would be
- ii) to realign the road so as to orient it as far away from the boundary for the Jarawa Reserve as possible.”

Recommendation

26) The Andaman Trunk Road should be closed to all vehicular traffic from Miletalak in South Andaman to the northern boundary of the S. Andaman Island. Similarly, it should be closed to all traffic from Kadamtala (corresponding to Prolobjig camp No.3) in Middle Andaman up to Kaushalya Nagar (corresponding to Porlobjig camp No. 15). This should be done within three months. Further, no person except for the Jarawas living in the Reserve should be allowed to enter the Reserve by any means unless he/she is permitted by the Principal Chief Conservator of Forests, and the Secretary, Tribal Welfare, ANI Administration, and no such permission should be granted unless the person is proceeding on bonafide work related to the welfare of the tribals or the protection of the area.

E. DIVERSION OF LAND AND FELLING OF TREES FOR DEVELOPMENT PROJECTS AND ACTIVITIES

From time to time the Ministry of Environment and Forests (MoEF) has been granting permission under the Forest Conservation Act for the diversion of forestland for non-forest uses. Naturally grown trees are also being cut for various purposes including for the development of tourist and defence infrastructure. However, there appears to be no land use plan for the Islands and clearances seem to be given on a case by case basis without determining the optimality of the land use and the future options that such a clearance could compromise.

The defence forces have recently constituted a combined command of the Navy, Air force and Army, in the Islands. However, there appears to be no clear understanding of how much land they would require and how many trees need to be cut in the process. There have been requests from them for allowing the felling of over a thousand trees for clearing approaches to runways and for other such requirements. However, no one was able to give a consolidated picture of the requirements. Though efforts were made on both the visits to talk to the armed forces representatives on this matter, they were not available.

Recommendations

- 27) *The felling of 27 trees for the 33 KV transmission line from Bamboo Flat to Minnie Bay, and 17 trees for construction of rural road from Adajig to Flat Bay Village should be permitted as a one-time relaxation, as these projects are already in their final stages, a small number of trees are involved and, reportedly, necessary clearances had been obtained from the MoEF prior to the Supreme Court's order of 10.01.01. However, all other proposals or clearances under the Forest (Conservation) Act of 1980 or the Environment (Protection) Act of 1986, where diversion of land or felling of trees or other activities that would have an impact on the environment, are still to be undertaken, should be put up for review by the Supreme Court.*
- 28) *For the conservation and protection of the forests and other ecosystems, an effective action plan should be prepared by the ANI Forest Department, in consultation with local NGOs and experts. This plan should also envisage a*

suitable enhancement of the protected area network, especially in the main islands of the Andaman and in the Nicobar Group. All unworked forest areas in Diglipur, Mayabunder, Middle Andamans and Baratang should be made into national parks, leaving a buffer belt between the national park boundary and the edge of revenue settlements, for protection by village protection committees. In addition, there should be a consolidation of the nearly hundred small island parks and sanctuaries and they should be constituted into viable units encompassing the marine areas surrounding them. This plan, after being approved by the MoEF, should be strictly implemented. The necessary funds, vehicles, equipment, human power, police help and legal power required for the effective implementation of this action plan should be made available by the ANI administration.

- 29) *Appropriate regulations under existing Acts like the Environment (Protection) Act of 1986, with similar objectives as The Delhi Preservation of Trees Act, 1994, currently in force in the Union Territory of Delhi, should be set in place in ANI, within six months, to regulate the felling of trees on non-forest land.*

F. POACHING

Both the government and the local people reported the incidence of poaching of trees, other forest produce, wild animals and marine life. It was stated by many of the citizen groups that poachers from Myanmar and other neighbouring countries also come to poach timber, sea cucumbers and other species, especially in North Andaman. There are also local poachers operating in the Islands. The forest department does not appear to have the infrastructure, especially in terms of manpower, arms and fast boats, to prevent poaching. Also, they appear not to have requisite powers to deter poaching and effectively apprehend poachers.

Recommendations

- 30) *The Forest Department should be immediately strengthened in order to be able to effectively prevent poaching.*
- 31) *Forest officers should be given adequate powers, under the Indian Forest Act of 1927 (IFA,) as has been done in other states, to meet the threat of poaching.*
- These could include:*

- *Power of confiscation: as provided for vide Section 52, 52A, 52B and 52C IFA, 1927 in Bihar, Section 52A and 52B in Himachal Pradesh, Section 52, 52A, 52B, and 52C in Madhya Pradesh, Section 62A to 61G of Goa, Section 61a to Section 62G of Gujarat, and Section 61A to 61G of Maharashtra.*
- *Increase in the limit fixed for amount of compensation for trees under section 68(3) IFA, 1927: The present limit of Rs. 50 is required to be increased to Rs. 10000/- as in Goa.*

32) *A co-ordination mechanism should be set up where the forest department, the civil administration, the Coast Guard and the Combined Defence Command in ANI can take co-ordinated action against poachers, especially against foreign poachers.*

G. INTRODUCTION OF EXOTICS

The introduction of exotics is always a threat to ecosystems, but it is a special threat to Island ecosystems, as is obvious in the ANI.

Over the years, many exotic species of animals and plants have been introduced in the Islands, some deliberately and many accidentally. Some of those that have had a very destructive impact on forest regeneration include the spotted deer (cheetal) and the elephant. The deer, reportedly brought for aesthetic purposes, have proliferated widely due to the absence of any natural predator in the Islands and have significantly retarded forest regeneration. The elephants were brought to the Islands by a timber logging company, which subsequently abandoned them. Reportedly about sixty of them have become feral and are seriously impacting on the forests in the regions that they are found. The introduction of dogs and cats, many of which have turned feral, also pose a great threat to turtle breeding and other indigenous species

There has also been infestation by various exotic species of weeds, which could prove to be a major deterrent to the regeneration of degraded forest areas, especially areas freed from encroachment.

The introduction of oil palms in Little Andaman and of teak in various parts of the islands has also had a significant negative impact. In fact, the areas in Little Andaman where oil palms were introduced show up clearly as degraded forests in the remote sensing map prepared by the Forest Survey of India (FSI) (maps at annex 19).

Recommendations

33) No exotic species of fauna or flora should be introduced into the islands.

Accordingly, a suitable set of guidelines and procedures should be developed for the purpose.

34) A time bound action plan should be drawn up to deal with the exotics already on the island, including weeds, and their removal/eradication should be taken up on a war footing, including the translocation of elephants back to the mainland and the inhibition of breeding, by deer, by darting the alpha males with anti-fertility drugs, as has been successfully tried in other countries.

H. COLLECTION AND DISTRIBUTION OF ROYALTY FREE TIMBER AND NON-TIMBER FOREST PRODUCE

Apart from commercial timber, the forests of these Islands are also providing timber and NTFP for use by the local people (annex 20). There is also "royalty free" distribution of timber.

In addition, government departments like PWD (for construction and repairs of roads) and the defence forces also directly access fuel wood. This not only leads to unregulated extraction but, in some cases, as along the Andaman Trunk Road, is leading to perceptible forest destruction.

Recommendations

35) The practice of distributing timber and NTFP free to settlers should be discontinued. Instead, rural populations should be formed into village forest protection committees and, as per the joint forest protection norms prevalent in other parts of the country, the amount of timber and NTFP required by village communities should be given to them on the basis of a memorandum of understanding, in return for their role in protecting the forests adjacent to their settlements and in detecting and preventing encroachments.

36) Government departments, including defence and PWD, should be supplied fuel wood and other required forest produce by the forest department and should not be permitted to directly collect these from the forests.

37) Concurrent efforts should be made to minimise demand for forest-based resources. The Administration should encourage the use of sawdust as fuel, as

is the practice in many other parts of the country. They should also investigate the possibility of replacing firewood as a domestic fuel by gas and consider giving a one-time subsidy for the purchase of gas stoves and cylinders to the poor rural population. Adequate supply of LPG to the Islands should be ensured on a priority basis.

I. MINING OF SAND

The erosion of the beaches and the depletion of coastal and marine species all have an impact on the forests and on the overall ecological status of the Islands. Coastal erosion affects the forests and degrades them directly. Besides, the complex interaction between insects, birds and forest plants gets disrupted as soon as there is degradation of coasts and coastal and marine species. Forest working also affects the coastal ecosystem, especially the coral reefs, by accentuating the flow of silt into the water.

Under the Coastal Regulation Zone (CRZ) notification under section 3(1) and section 3(2)(v) of the Environment (Protection) Act, 1986 and rule 5(3)(d) of the Environment (Protection) Rules, 1986 declaring coastal stretches as coastal regulation zone (CRZ) and regulating activities in the CRZ, "Mining of sands, rocks and other substrata materials, except those rare minerals not available outside the CRZ areas," were banned. However, a special exception was made for the ANI, as under.

"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 up to 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."

The MoEF has further extended the period up to 30 September, 2002. However, there is no assessment of either the general environmental impact on the ecosystem of the Islands because of the extraction of sand, nor a location-specific assessment of the impact of extraction on each specific beach/coastal stretch from where such extraction takes place. Therefore, it is not clear on what basis the MoEF has allowed and continues to allow the extraction of sand.

According to the figures supplied by the ANI administration, approximately 2,23,937 cubic metres of sand was officially extracted from the beaches of the Islands in the three years 1998-2001. 72 beaches around the islands were used for extraction (annex 22). In addition, it is alleged by local people that there is also illegal extraction of sand, which is considerable.

Sand is primarily extracted for construction purposes. It is undeniable that the extraction of sand is causing a lot of environmental damage and that this is not a sustainable method of resource use. However, there appears to be no effort to phase out the extraction and to move towards other, more sustainable, methods of construction. Also, as the Islands are located in a high earthquake-risk zone, it is undesirable to construct concrete buildings there. Alternative construction material is available in the Islands and the small amount of concrete that still might be needed can easily be made using rock dust.

Recommendations

38) The extraction of sand should be phased out and no further extension should be granted after the current extension is over on 30 September, 2002.

39) As already mentioned earlier, alternate material for construction, including treated bamboo and soft woods, should be encouraged as this is less damaging to the environment and safer in case of an earth quake. Stone dust should be utilised where use of concrete is essential.

J. INAPPROPRIATE TOURISM

The ability of the fragile ecosystem of these islands to withstand the impact of tourism is limited. Apart from disturbance to the forests, there is also disturbance to the marine and coastal ecosystem, especially to the coral reefs. This can be seen in the Wandoor National Park where the coral reefs, in the two islands open to tourists (Jolly Buoy and Redskin),

have almost totally been destroyed. There is also the problem of water availability, disposal of garbage, generation of electricity and the construction of other infrastructure. Also, as most of the food and other goods sold in the Islands are imported from the mainland and the government pays a hefty subsidy for their transportation to the Islands, it is unlikely that the expenditure by the tourists for goods and services in the islands, would result in any net benefit to the economy. In fact, tourists coming by ship are often a net drain on the economy, as the government subsidy on each passenger ticket is also very high.

The Islands offer a great potential for high value, low volume, specialised eco-tourism that can be done with minimal infrastructure and follows the principles of dispersion and flexibility. Special-interest tourists, wanting to view the unique and rich biodiversity of the Islands, can be accommodated in wilderness areas in small clusters of tents with low concentrations in any one place. The location of these tents can be shifted every two or three years to ensure that no one site is inordinately impacted. Besides, there can be some ship-based tourism where specialised tourists are taken around in a ship that anchors at spots of tourist interest and allows day trips in small numbers. In fact, there are already foreign yachts coming and anchoring in the islands, but very little benefit flows from them to the local economy (annex 23).

Recommendations

- 40) No concrete or permanent infrastructure for tourism should be built on any forest area in the Islands. Tourist activities in forest areas should be restricted to tented accommodation or temporary wooden/prefabricated structures that can be dismantled easily and moved to another site. These areas should remain under the control of the forest department who should be responsible for ensuring that the quantum and type of tourism is such that it does not in any way degrade the forests or other ecosystems.*
- 41) A proper eco-friendly tourism plan should be developed for the Islands within one year. This plan should also do an economic and a distributional analysis to highlight how tourism can make a net contribution to the economy of the Islands and how the economic benefits can be equitably distributed among the various segments of the local society and generate local employment.*

42) Such a plan must be in conformity with the requirement for conserving the ecological and cultural integrity of the Islands and not pose a security threat to this strategically important area.

Miscellaneous Recommendations

- 43) The forest department and the administration of ANI should make public at the beginning of each year the proposed uses of natural resources, including forests. This detailed information specifying, among other things, uses, locations, quantum, purpose and users, and giving details of the basis on which these decisions have been made, should be published in the local news papers and also made available on a web site to be maintained for the purpose by the administration. At the end of each year, actual use, deviations from the proposals and the reasons thereof, must also be similarly made public.*
- 44) The various forest working plans/protected area management plans should also be made accessible to the public, as soon as they are approved. Copies should be kept at all public libraries and other accessible places in the Islands. In addition, copies should be freely made available to the general public, on demand, after charging actual costs of photocopying.*
- 45) All officers of the administration, including forest officers, should undergo an orientation training of at least five days, every three years, to acquaint themselves with the ecological characteristics of the Islands and the options available for their economic development in an environmentally and socially sustainable manner. Officers being posted from the mainland to these islands should be so oriented within three months of their posting.*
- 46) The Government of India and the ANI Administration should consider setting up an Island Development Institute in ANI, that can become a centre of research, training and education for managing island and coastal ecosystems in a sustainable manner. This institute could not only cater to national needs but, over time, also become a regional institution. A proposal to the effect already exists and was submitted to the IDA many years back. It can be suitably modified and considered.*

47) There are many areas that need to be properly researched and many problems that need innovative solutions. These include:

- *A assessment of the ecological differences between worked and un-worked forests.*
- *Methods of returning the worked and encroached forests to a their natural state.*
- *Methods of further working forests in a manner that minimises impact on biodiversity and the environment.*
- *Methods to conserve soil and water.*
- *Feasibility of generating energy through non-conventional methods, including wind and tidal energy.*
- *Methods of treating garbage and other pollutants, thereby protecting the coastal and marine environment from degradation.*
- *Methods of using alternate building materials that are environmentally friendly and sustainable.*

These and other required studies should be commissioned on a priority basis so that their findings can be urgently applied for the betterment of the islands.

VI. SOME POSSIBLE IMPLICATIONS OF THE RECOMMENDATIONS

1. There is likely to be some loss of employment, as detailed below, if these recommendations were followed.
 - a. Loss of about 300 jobs if Kitlpy Industries close down as a result of these recommendations.
 - b. Loss of about 2000 jobs if the Andaman & Nicobar Islands Forest and Plantation Development Corporation closes down.
 - c. Loss of some employment (exact quantum not known) due to the ban on export of timber. However, this is likely to be very small, as very little timber was being sent to the mainland by private sawmills. In 1998-99 it was 923 cum, in 99-2000 it was 570 cum and in 2000-01 it was 614 cum.
 - d. Surplus staff in the forest department due to curtailing of forest working and extraction.

- e. Some loss of livelihood due to the banning of extraction of sand.
 - f. Some loss of road transport related employment due to the banning of traffic on the Andaman Trunk Road.
 - g. Need for additional sources of livelihood for about 2300 post 1978 forest encroachers, once they are removed from the forests.
2. However, following from these recommendations, there will also be significant cost saving and additional employment opportunities, as detailed below.
- a. Savings on transport subsidies to the forest based industry to the tune of rupees five to six crores per year.
 - b. Savings from the closing down of two forest depots, one in Chennai and one in Kolkata, reportedly around rupees one crore a year.
 - c. Additional employment for setting up forest protection forces.
 - d. Additional employment in regenerating encroached areas and earlier worked forests.
 - e. Additional employment in the shipping sector due to increased ferry traffic after closing down the Andaman Trunk Road.
3. There are other relatively untapped or under-utilised areas of employment that can be developed. Including:
- a. Fisheries – especially coastal – with local involvement. Current estimates suggest that only a small proportion of the fishery potential is being tapped. The islands have a continental shelf of 16 to 35 thousand sq km (according to different sources) and an exclusive economic zone (EEZ) of 600,000 sq km., which is 28% of the total Indian EEZ. The total potential has been variously calculated to be between 12,000 and 1,60,000 tonnes of fish (*Master Plan for Andaman and Nicobar islands for the Development of Fisheries*, Government of India, Ministry of Agriculture, 1989), just from the shelf area. However, more recent estimates are between 45,000 and 1,60,000 tonnes pa. According to the ANI administration, the current levels of harvest are just a fraction of the harvestable potential (Volume II, page 136).

- b. Production of goods/food for local use – and the consequent removal of subsidies for transportation of these goods from the mainland. At present, almost all the goods for local consumption come from the mainland. Their transportation, by ship, also costs the government dearly in subsidies. However, many of these goods can be produced locally. This would not only promote local employment and save on subsidies, but also cut down on the requirement for cargo space.
- c. Handicrafts. There is great potential for developing artisanal handicrafts industry and this could provide significant additional employment.
- d. Swiftlet nest cultivation. This is potentially a very lucrative activity. There is great demand for swiftlet nests in the nearby Southeast Asian countries, and 1 kg fetched between Rupees one and two lakhs. A note describing the potential has been enclosed in Volume II, page 300.
- e. Orchids cultivation. This, again, has tremendous potential, as these islands have a large number of very beautiful and rare orchids.
- f. Spices/ Medicinal plants – without expanding agricultural land. All official settlers in the islands were given two hectares of flat (valley) land and two hectares of hill land. Much of this hill land is still forested and its conversion to agricultural land, apart from not being economically viable, would also cause significant soil erosion and disrupt the water cycles. Therefore, this land can be used for activities conducive to soil and water conservation, like high value spices/medicinal plants. There are many valuable spices and medicinal plants that are found in the Islands.
- g. Eco tourism. This, again, has tremendous potential. High value specialised ecological tourism can generate a fair amount of local employment at all levels.
- h. Water and soil conservation works. These are desperately needed in the ANI, which has acute water shortage and is also losing a lot of its topsoil, thereby disrupting the terrestrial, coastal and marine ecosystem. Existing schemes of the government of India, like the watershed programme, can

be extended and strengthened in these islands to both conserve the environment and generate employment.

4. Consequently, the potential for additional employment, if properly developed, is enough to offset any adverse impacts of the recommendations. Besides, if the Island is developed as a centre of education, research and training in island and coastal management, as recommended earlier, many additional jobs can be created. In fact, over time, caution will have to be exercised to ensure that the requirement for human power in the Islands does not exceed the local supply, necessitating further migration from the mainland.
5. There is also some concern expressed by the ANI forest department that if felling in unworked forests was banned then the worked forests and plantations would not be able to support even the local demands for timber. However, detailed discussions with the department and a scrutiny of documents and data brings out the following facts:
 - a. The total area of worked forests in the Andamans, excluding Little Andaman, is approximately 1,00,000 ha.
 - b. Most of these forests were worked in a manner such that only a proportion of the mature trees of commercial species were extracted and the immature ones left.
 - c. Therefore, in each hectare of the worked forests there should now be a large number of mature trees that were either left behind as mother trees or that were immature when the logging was done fifty to sixty years ago, but are now mature and ready for harvesting.
 - d. As the surplus number of commercial trees, in excess of what would have been their numbers in a natural forest, have to be removed in order to allow the forests to return to as close a natural form as possible, the extraction of these mature trees would serve the dual purpose of providing timber for local consumption and returning the forests to a near-natural profile.
 - e. It has been estimated that at least 10 cum per hectare can be safely and sustainably extracted from these worked forests, though once working

plans are made the figure might go up. Therefore, given that the total available worked forest is 1,00,000 ha, the total availability of commercial timber would work out to 10,00,000 cum. This would be enough to meet the local timber demands (calculated at 30,000 cum per year currently, but likely to go down once timber conservation efforts are put in place) for at least 30 years, by which time additional timber would have become mature and harvestable.

- f. In addition. There are over 12,500 ha of plantations of hardwoods done in the islands (annex 4). It is estimated that these plantations, that in any case need to be cleared so that the land can be regenerated, will provide 300 to 500 cum per hectare, depending on the species. This would work out to between 37,50,000 cum to 62,50,000 cum of timber, which would by itself be enough to meet the local hardwood requirements (calculated to be about 25,000 cum per annum - for details see Volume II -page 154-55, 161) for between 150 and 250 years. Needless to say, both in the plantations and in the worked forest areas, extraction should start first in the earliest plots and proceed to newer ones so that adequate time is given for regeneration.
6. The forest department has also expressed a concern that if no export of timber is allowed to the mainland then this might lead to the artificial manipulation of timber prices locally and prices would be artificially forced down, as the forest department would have no option but to sell their timber locally or have it perish. However, considering that the forest department saw mills have a combined capacity of 29,000 cum pa they could, if required, process all the timber that is harvested in a year, thereby preventing it from deteriorating. Besides, once the capacity to treat timber has been enhanced, as recommended, there should be no danger of any timber being wasted if the local sawmills do not pick it up. In case timber in any month is not picked up, felling for subsequent months or seasons could be trimmed to take this into consideration.

7. A concern has also been expressed that forests need to be worked in case they are to remain healthy and “over mature” and dead trees need to be removed. There is also the view that once a tree reaches a certain age, it has a “negative increment” and, therefore, must be cut. However, these arguments do not stand up to scientific scrutiny. Forests have existed and continue to exist in areas where they have never been “managed” by human beings. There are many examples of this in the Andaman and Nicobar Islands itself. The concern for negative increment and for “healthy” forests is a concern that might be relevant to commercial plantations but is certainly not tenable where natural forests are concerned. In fact dead trees are as important a part of natural ecosystems, both as habitat to specialised species of fauna and flora and an input into the soil, as are live trees.

THE TRIBES OF THE ANDAMAN ISLANDS

[BACKGROUND MATERIAL FOR THE FACT FINDING MISSION]

INTRODUCTION

Development and destruction, change and continuity, traditional and modern, and civilization and backwardness are two sides of the same coin. The history of the world is a mute witness to the hoary past of the vanquished, the conquered and the subjugated in the face of the onslaught of civilization. This seems to be true in the case of the tribes of the Andaman and Nicobar Islands. The indigenous Tribes of the islands seem to be fighting a losing battle against all the odds of civilization, imported in the islands, ever since the colonialists' adventures in the 'treasure island', that could be exploited to the advantage of the powers-that-be, even at the cost of the original inhabitants of the land. Unfortunately this story continues even 53 years after the independence of the country. In fact, the British legacy of 'colonialism' has perpetuated with the neo-colonialist forces operating in the islands with full gusto and vigour that has left the 'leftover' tribes virtually panting for breath and on the verge of extinction. It is a question of time before a rich living cultural heritage of the Tribes in the Andaman and Nicobar Islands will be a thing of the past.

This research looks into the painful past and the gory present of the 'vanishing tribes' of the Andaman Islands with a view to raise some pertinent issues that could give them a lease of new life, of hope and of survival with full human dignity in the third millennium. This report will attempt to highlight various themes pertaining to the Andaman Tribes as given below:

1. The land and its people
2. Present Socio-economic and political Scenario in the islands
3. The Surviving Tribes of the Andamans and their Plight
4. Observations based on the available Literature.

THE LAND AND ITS PEOPLE

Andaman Islands:

Bhatt (1998:27) classifies the Andaman and Nicobar Islands as “an India outside India, outside the mainland in the Bay of Bengal, but one which is as much a part of India as any other”. The British took over the islands and handed them over to India at independence. They had turned the islands into dreaded islands with its cellular jail for the freedom fighters who had preferred the violent course. ‘Kala Pani’ (Black Waters, Life Imprisonment) was given to the dreaded criminals in the eyes of the British. When the Japanese occupied these islands during World War II, they were symbolically handed over to Netaji Subhas Chandra Bose’s provisional Government of Free India, the cellular jail was closed and the prisoners freed. When the British reoccupied the islands after the war, they had no time to open the cellular jail.

Some Indian traditionalists believe that the name Andaman was derived from Hanuman, but this is too far-fetched to be accepted. There is no historical or literary evidence to suggest that ancient India had contacts with the Andamans. Even the south Indian kings who set sail to countries in south-east Asia and led successful expeditions are not known to have taken much interest in these islands (Bhatt, 1998:28). Even the scholars and anthropologists are not clear about the background of the main tribes of these islands, namely the Great Andamanese, the Onge, the Jarwa, the Shompen, and the Sentinelese. aptly said, “Their past remains obscure, the present clearly unpleasant and the future grim, and uncertain”.

We do not have much authentic historical information of Andamans before the 18th century. But, as Majumdar (1975:35-38) observes, the geographical situation of the islands is such that it must have been known to the navigators in this region from a very early period. The earliest reference to the Andamans perhaps occurs in the *Geographica*, a Greek work on Geography, written by Claudius Ptolemaeus, the celebrated Greek astronomer, mathematician and geographer of the 2nd century A. D. He mentions a number of islands whose people went naked and were cannibals. Among these he mentions Bazakata (or Bazakota) and the ‘Island of Good Fortune’. The account of the Chinese traveller I-tsing (7th century A. D.) of the ‘Andaban’ is said to represent the Andamans, and the ‘country of the Naked People’ refers to the Nicobar Islands. The first authentic and detailed account of the Andamans, are from the writings of two Arab travellers of the 9th century A. D., namely Abu Zaid Hasan and Sulaiman. It is now agreed by all that the islands Najabalus as called by them, refer to Andamans. Marco Polo, the Venetian traveller who visited the Andamans on his way to China in A. D. 1290, refers to the islands as ‘Angamanain’. A few European travellers who visited the Andamans have their own accounts. Friar Odoric (1322) calls the people of these island “dog-faced, cannibals, also traders”. Nicolo conti (c. 1440) mentions the Andamans as ‘Andamania’ which according to him means the “Island of Gold”. Cesare Federici (1569) in Ramusio speaks of the terrible fate of the crews wrecked on the Andamans. Majumdar finds it difficult to assess the value of the above accounts. However, he observes that in recent years we have fairly authentic account of the Andamans in (1) the writings of Archibald Blair (2) Col. Syme’s “Embassy to Ava” and (3-4) R. H. Colebrook’s two accounts, towards the end of 18th century. The Calcutta Monthly Register (November, 1790) contains a brief account of the Andamans evidently written by a member of the Party sent by the Government of India to survey the Andamans. The works of Mouat (1863), Radcliffe-Brown (1922), and other scholars are also very informative. After the independence of India Government-sponsored ‘Anthropological Survey of India’ has carried out a series of surveys followed by some publications. Even if these Government reports are biased in favour of the Government, they could surely enlighten those who would like to have some background knowledge of the life and activity in the Andaman and Nicobar Islands.

Geographical Location:

The Andaman and Nicobar Islands are 1255 kms. from Calcutta and 1190 kms. from Chennai, and 580 kms. from Rangoon. Every year more than a lakh people travel to the islands and from by ship. There are 572 islands in the archipelago but only 36 are inhabited: 24 in the Andaman group and 12 in the Nicobar group of islands (Bhatt, 1998:27). Some are too small and with little or no water. The Andaman group has, at the extreme north, Land Fall Island which is about 900 kms. from the mouth of the Hoogly river and about 190 kms. from Burma. This island is followed by the three main islands: (i) North Andaman, (ii) Middle Andaman, and (iii) South Andaman – all of them separated from each other by shallow seas. This area is known as Great Andaman. Towards South of Port Blair lies little Andaman Island. Besides, there are many small islands.

These islands are like a pearl necklace in the sea and the extreme eastern point, the Pygmalion Point, now called the Indira Point is only 154 km. away from Indonesia's Sumatra island. Humidity in these islands is very high, around 80 per cent and does not go down below 70 per cent (Bhatt, 1998:27).

These islands are located between 6 and 14 degrees of the North Latitude and 92 and 94 degrees of East longitude (Bhatt, 1998:41)

HISTORICAL BACKGROUND & ADMINISTRATIVE DIVISION

Penal Settlement in Andamans:

From an early period the British had conceived of an idea of maintaining a penal settlement for Indian criminal convicts far away from their motherland across the seas. In fact the first settlement of their dream was the Fort Malborough at Benkoelen, west of Palembang in the Sumatra Island, established in 1787. It was later removed to Penang. Penal settlements were also established at other places like Malacca, Singapore, Arakan and Tenasserim. A penal settlement was also established in 1789 in the Andamans and was called Port Cornwallis. It was abandoned in 1796, but was reestablished at Port Blair in 1858 (Majumdar, 1975:iii).

The Andaman penal settlement was established soon after the Sepoy Mutiny in view of the confinement of the prominent rebels who were, in the eyes of the Government, too dangerous to be allowed to mix with ordinary criminal convicts. The Wahabi fighters against the British, and the Burmese rebels were also sent to the Andamans. In view of restricting the political prisoners to solitary confinement the notorious Cellular Jail was constructed early in the present century. (Majumdar, 1975:iii).

During the Freedom struggle the journalists with seditious writings were confined in the Cellular Jail. The first batch of the revolutionaries from Bengal convicted in the Alipore Bomb Case in Calcutta High Court in 1909, were sent to the Cellular Jail. Three batches of revolutionary prisoners were sent there with occasional intervals. The first interval was due to the general declaration of amnesty on the occasion of the introduction of new reforms under the Act of 1919. Later, dispatch of prisoners to the Andamans was suspended under a general decision adopted from time to time to abolish the penal settlement in the Andamans. At least on three occasions the Government of India formally announced to abolish the penal settlement but was later compelled to reverse the decision due to various circumstances. At last the Japanese captured the Andamans on 23 March 1942, during the Second World War. It was a deathblow to the penal settlement. But when the British reoccupied the Andamans after the Japanese surrender on 16 August 1945, they finally abolished the penal settlement. A thing of the past the Andamans penal settlement has now become a major tourist attraction (Majumdar, 1975: iv).

The British interaction with the Aborigines of the Andamans:

According to Majumdar (1975:79) the British were faced with two problems by the creation of the Penal Settlement: (a) the general policy to be adopted towards the aborigines, (ii) the creation of a suitable

machinery of administration to have control over the convicts to regulate the relation between them and the aborigines.

"The British", reports Majumdar (1975:79), "gave due weight and consideration to the problem of the treatment of the aboriginal peoples of whose very primitive culture and general habit, customs, and manners they possessed only a general knowledge, somewhat vague in character". The impression they had of the aborigines was that even if they were not cannibals they were naked, lived upon raw fish and flesh, were isolated and hostile to the outsiders. With this type of knowledge as the background, the British formulated a policy of behaviour for their officials which was sympathetic towards the natives. In fact the Government of India issued instructions to P. Walker, the Superintendent of Port Blair:

You will adhere strictly to the conciliatory line of conduct which has hitherto been observed toward the aborigines, that you will absolutely prohibit any aggression upon them, and that force on no account be restored to unless it be absolutely necessary to repel their attacks. (Home - J., O.C. No. 10, 16 July 1858).

1. To carry out these instructions was not easy. There were clashes between the two. The spirit of hostility of the aborigines to the British and the Indians can be thus illustrated (Majumdar, 1975:81):
2. The murder of two English and one Indian officers of a vessel engaged in surveying a small island in February 1858
3. Two hundred and twenty eight convicts escaped during the months of March and April 1858. Out of these 88 recaptured, the rest were massacred by the aborigines or fell victims to disease and starvation
4. On March 5, 1858, the midshipman of the brig Nutlah, engaged in survey work, having offended the aborigines by his conduct, there was an open clash between the aborigines and the men of the vessel, and one of its officers was killed.
5. On 25 April 1858, while a survey vessel was cruising near the coast some Andamanese were seen lighting fire on the beach and a few were engaged in launching a boat. The survey party in the vessel, without any warning and for reasons best known to them, fired shells on these Andamanese. The Secretary of State justly observed how "for no offence that that of lighting a fire in their own woods, or launching a boat in their waters, British officers fired shells and rockets among the islander".
6. On 9th June 1858, an unarmed party of sailors was suddenly attacked by a number of the Andamanese armed with bows and arrows, but none was killed in the attack.

Majumdar observes that only the British version of the above incidents based on the report of the local officials were available and they were highly coloured in favour of the British. Though P. Walker, the Superintendent of Port Blair was instructed to adopt a "conciliatory approach" towards the aborigines, he came to the conclusion that there was not a "slightest chance of being able to effect anything with them by a conciliatory policy", and so he adopted a policy of "coercion and chastisement or "a policy of blood and iron" towards the Andamanese (Majumdar, 1975:81). Consequently, on 5th July 1858, Lieutenant Templer of the Indian navy on duty in Andamans chased some canoes of the Andamanese when an aborigine in one canoe tried to get away from the armed boat of the settlers. Naturally the Andamanese in his fright, shot an arrow on the party which was returned with fire, killing the unfortunate man. Three canoes were seized by Templer who rushed to the encampment of the Andamanese near the beach where several huts were destroyed by his men. In this action five or six Andamanese were killed. After obtaining permission from Walker, Templer destroyed about forty huts of the Andamanese.

Thus due to the faulty policy of P. Walker there were so many skirmishes and even armed attacks. The aborigines felt threatened as the aliens were penetrating into their territories. As a result the aborigines carried out a series of organized, pre-meditated, unprovoked attacks on the British and Indians in quick succession during the months of April and May 1859 (Majumdar, 1975:82-83).

- The first attack on 6 April 1859, when 248 convicts at work, by about 200 aborigines armed with bows and arrows. Three convicts were killed, one was wounded and died the next day, and five more or less severely wounded with arrows.
- The second attack on 14 April 1859. About 1500 aborigines armed with small axes and knives, bows and arrows, attacked two divisions of convicts about 446 in number. They killed three and severely wounded six of the convicts. The twelve convicts in fetters were carried away by them and were never heard of again.
- On May 17, 1859 the attack by the aborigines attacked the British and occupied the station. When they were driven out after the arrival of the fresh troops under Lieutenant Warden, they carried away everything they found of any worth, particularly tools and implements. A small number of Andamanese were killed and seriously injured. This engagement was later came to be known as the 'battle of Aberdeen' (Majumdar, 1975:82-83).

When P. Walker was succeeded by Captain Haughton, there was a change in the British attitude. Haughton gave instruction to his people not to attack the Andamanese without any provocation. Despite his conciliatory moves there were a few cases of skirmishes. In the year 1860 things improved with Dr. Gamack, the Civil Assistant Surgeon of Port Blair who made friendly gestures to a few men of Aka-Bea-da tribe on the Chatham Island in Port Blair. Gifts were offered to the aborigines and they were received. Later on, in spite of the gifts given to them attacks were conducted on the settlement, but now there was an opening to befriend the aborigines and employ them in the settlement. This process of earnest efforts of making friendly relations with the aborigines went on which passed through many ups and downs. Two reasons why the British policy failed were: (i) persistent hostility of certain tribes, and (ii) outbreak of various types of epidemics among the friendly tribes (Majumdar, 1975:88-90).

The Jarawa continued to be hostile. They are hostile even to this date. On many occasions they attacked the settlements. It was also observed that those who were friendly with the outsiders got a variety of diseases.

- As far back as 1866, there was a noticeable increase of sickness among the aborigines. Not a single child out of one hundred fifty, born in the Andaman Home during 1864 to 1870, lived for more than two years.
- The aborigines outside the Andaman Home fell victim to malaria that became epidemic due to clearance of forests.
- The aborigines suffered from the dangerous disease of syphilis, presumably contracted from the convicts in charge of the Home.
- Even the children suffered from hereditary syphilis. The whole race was faced with extinction and the Government confessed that it was beyond its power to check it.
- Syphilis did not stand alone. Other sicknesses followed in quick succession. First came the epidemic of ophthalmia which broke out in July 1876. It lasted for about six months and made many aborigines partially or entirely blind. The measles broke out in March 1877, and this disease was also brought by the convicts from the mainland. The boys of the orphanage caught it and passed it on to the aborigines in general. Fifty one persons died of this. Attempts were made to segregate the aborigines affected with measles, but they fled in fear, and even patients fled from hospitals. Thus the disease spread rapidly and within two or three years half the original inhabitants of the Great Andaman island and almost the entire population except the Jarawas of South Andaman between Port Campbell and Middle Strait died of measles.
- Syphilis and measles were the main instruments of destroying the whole race of aborigines in the Andamans. The work of destruction was accelerated by the epidemic mumps that broke out in August 1886, and that of influenza in April 1890. The infection of influenza, like that of syphilis was believed to have been brought by the convicts from India and it spread rapidly throughout the islands.
- Another disease gonorrhoea first appeared in an Andaman Home in July 1892.

- By the end of the 19th century these diseases practically exterminated the aborigines of the Andamans except the two hostile tribes, Onges and Jarawas. The population of none of the twelve tribes except these two and the Yere exceeded 100 in 1901 and six of them numbered less than 50. By 1931 even the number of the Yere was reduced to 46.

According to Census 1951 the gradual extinction of the Andamans tribes is shown in the table below:

Sl. No.	Tribe	Estimated number in					
		1858	1901	1911	1921	1931	1951
1	Chariar	1005002	3996	3671621	1748181	9246462	3315050
2	KoraTo	0070050	48	8034923	0165..1..225	
3	baYere	0300	218	6101563	9143462	0120	
4	KedeJu	1003005	59	1231	31		
5	waiKol	0030070	48				
6	Bojigya	0600	11				
7	bBea		50				
8	Balawa		37				
9	Onges		19				
10	Jarawa		672				
11			585				
12							
TOTAL	4,800	1,882	1,317	786	460	460	233

(Majumdar 1975: 93)

Commenting on the above census figures Majumdar observes that it cannot be accepted as far as the Jarawa and the Onges are concerned. For these being hostile tribes living in isolation, it was difficult to count their number.

In 1961 only six of the original tribes existed. There are 4 Negrito tribes in the Andaman Islands. Their population too was reduced. Their number can be shown below:

Sl. No.	Tribal community	Population	Remarks
1	Andamanese (other than the three tribes noted below)	19	Living in Great Andaman along with civilised population.
2.		500	
3.	Jarawas	129	(Estimated) living in the Western coast of Middle & South Andaman.
4	Onges	50	Living in Little Andaman (Estimated) living in North Sentinel Island.
	Sentinelese		

(Majumdar,

1975:94)

There are 2 Mongoloid tribes in the Nicobar group of islands: 1. the Nicobarese 2. the Shompens

Administrative Division: Before the formation of the Andaman and Nicobar districts, the Union territory of Andaman and Nicobar Islands was a uni-district territory. In the year 1974 the districts of Andamans and Nicobars were formed vide Andamans and Nicobar Administration's Notification No. 110/74/F-15-145/74-J dated 19-7-1974 (Bhatt, 1998:37).

Districts with Headquarters:

District	Headquarters
1. Andamans -	Port Blair
2. Nicobars -	Car Nicobar

The Andamans district was constituted with four *tehsils*:

(1) Diglipur (2) Mayabunder (3) Rangat (4) South Andaman.

The South Andaman *tehsil* was further bifurcated into two *tehsils* in 1975 vide Andaman and Nicobar administration's Notification No. 106/75/F 40-6/74-J dated 30th October, 1975. The names of the new *tehsils* were:

(1) Port Blair, and (2) Ferrargunj.

At the time of 1981 census the district of Andaman comprised five *tehsils*. A brief account of each of them will highlight the prospects and the problems of the *tehsil*:

1. **Diglipur *tehsil*:** This consists of 39 inhabited villages spread over four inhabited islands: (a) Narcondam (b) East © North Andaman (Part), and (d) Smith. This *tehsil* is located at the northern most part of the country.
2. **Mayabunder *tehsil*:** There are 58 inhabited villages in this *tehsil* according to 1981 census. These villages form part of five inhabited islands: (a) North Andaman (Part), (b) East © North Andaman (Part), and (d) Smith. This *tehsil* is located at the northern most part of the country.
3. **Rangat *tehsil*:** This consists of 66 inhabited villages that mainly spread over part of Middle islands. Falling in this *tehsil* are: (a) Porlob, and (b) Long islands.
4. **Port Blair *tehsil*:** This *tehsil* has the highest number of 81 inhabited villages among the five *tehsils*. These villages are located in 9 inhabited islands: (a) North Passage, (b) Strait, © Baratang, (d) Peel, (e) Havelock, (f) Neil, (g) South Andaman (Part), (h) Ruthland and (I) Little Andaman. Port Blair, the seat of the Andaman and Nicobar administration is located in this *tehsil*.
5. **Ferrargunj *tehsil*:** This consists of 76 inhabited villages. All these except one are located in South Andaman Island (Part). The other village Viper is located very near South Andaman Island.

Community Development Blocks:

1. North Andaman
2. Middle Andaman
3. South Andaman

The Municipal Board: (Bhatt, 1998:47)

- The Municipal Board located in Port Blair runs these Islands. Total number of seats in the Board is 15 of which 11 are elected and 4 are nominated
- There are 11 Municipal Wards in Port Blair
- A Pradesh Council has been set up under the Andamans and Nicobar Islands regulation, 1979 ????

(not in the print)

The Pradesh Council consists of (i) the Administrator, (ii) the Member of the House of People representing the Union territory, (iii) the Chairman of the Port Blair Municipal Board and 25 persons elected or nominated from the areas of the Union Territory.

- In addition to these two members are nominated by the Administrator, one belonging to any of the Scheduled Tribes of Andamanese, Onges and Shom Pens and one woman, if no woman becomes a member of the Pradesh Council under any of the foregoing clauses.

The Pradesh Council may discuss and make recommendations to the Administrator on the following matters:

matters of the Administration relating to the Union Territory – policy and schemes of development

the five year plans and annual plan proposals for the development

the estimated receipts and expenditure pertaining to the Union Territory to be credited to and to be met from the Consolidated fund of India.

Proposals for undertaking legislation for the union Territory with respect to any of the matters enumerated in the State list or in the concurrent List in the 7th Schedule to the Constitution.

Any other matters which the Administrator may refer to the Pradesh Council for consideration and advice.

Till 11th November 1982 the Chief Commissioner was the administrative head of the Union Territory. From 12th November 1982, the territory has been placed under the charge of the Lt. Governor. The Union Territory is represented in Parliament by one elected member to Lok Sabha.

Parliamentary Constituencies along Assembly segments (1996): Andaman and Nicobar Island Constituency.

Natural Resources in the Islands

Forest:

Nearly 90% of the land in the island is under forests and precious teakwood can be found here. High rainfall and equable but warm temperatures ensure that vegetation is in abundance. The padauk is the wood in demand (Bhatt, 1998:28).

Ends here

The Andamans and Nicobar Islands abound in forest wealth. Forests are the main source of this territory's revenue and are one of the major sources of its economic development. The forests are mostly tropical evergreen, with more than 200 species of which only fifty-five are of commercial value at present. Bhatt (1998:39) reports that forestry in this territory dates back to 1883 when there was no regular working plan. The harvesting of timber then was confined to a few species only, such as Padauk, Silvergrey and Kokko. Then the only processing unit was the Government Saw Mill at Chatham was initially established in 1883. Apart from this there was a match-splint factory established in the private sector by M/s WIMCO in 1929. By 1930-31, more species found their way into the market due to development of match and plywood industries in the country. Consequently, forestry operations were intensified. These operations had a setback during the Second World War. But after the British reoccupied the territory the operations were resumed once again. The partition of India created problem for the islands because forests had to be cleared to accommodate the displaced persons for permanent settlement.

Government of India is responsible for the approval of the working plans and projects for the extraction of the timber. These plans are spread over an area of 540,000 hectares. Timber extraction is done by the Government agency and also by private contractors. Bhatt (1998:40) reports that the harvested forest areas are being scientifically regenerated under regeneration schemes for perpetuating tree cover and also for increasing the yield. The regeneration is usually done by natural and artificial methods. The natural regeneration is carried out under the standard Andamanese canopy-lifting Shelter-wood system. Under this scheme the endemic species of plants are encouraged, by planting such seedlings.

The forests of the Andaman and Nicobar Islands have been categorized as one of the highest potential productivity zones in India owing to favourable climate and edaphic factors obtaining in these islands. The annual sustained stock of valuable timber has been reckoned approximately 3 lakhs cubic metres. In addition, it is also estimated that about 4 lakh cubic metres in the form of wood chips would also be available from non-commercial trees, lops and tops of commercial trees and other leftover material in the forests (Bhatt, 1998:40).

During the year 1977-78 the Andamans & Nicobar Islands Forest & Plantation Corporation was established to utilize the additional available timber potential. The Corporation plays an important role in the production of wood and establishment of wood based industries, building up infrastructure and also for raising economic plantations (Bhatt, 1998:40).

The main source of forest Revenue is sale of timber since there is no significant minor forest produce. The timber extracted is supplied to the local forest based industries, departmental sawmills and other government departments. After meeting the local demands for logs and sawn timber, the surplus is shipped to mainland depots for sale and supply to the various agencies through the Agency of D.G.S. & D and railway etc. As the main economy of these islands is based on forestry and forest produce, the wood based industries have to play an important role for the economic development of these islands. Accordingly, emphasis was laid in the latter part of the last decade on processing and manufacturing of finished products from a large quantity of commercial timber by the local wood based industries (Bhatt, 1998:40).

Natural Gas:

The Oil and Natural Gas Commission (ONGC) of the Government of India has done considerable oil exploration and the hopes are high as some other countries in the same geological belt like Myanmar, Indonesia and Malaysia, have rich natural gas resources. Drilling has also been going on offshore wells close to the islands (Bhatt, 1998:28).

Fauna:

Except for elephants and deer these islands do not have much by way of animal life, specially wild life. But there are a number of bird species in different islands such as Magapod, Hornbill, Nicobar pigeon. Magapod, found on the island of the same name can change its colours and often mingles with the background of the landscape. The Hornbill found on Narcondom is also a rare species. There are about 200 bird species in Andamans. The Nicobar pigeon is plum coloured, has a grey neck and head and snow-white tail (Bhatt, 1998:28). There are many varieties of reptiles such as snakes, poisonous centipede, green lizards, fish, etc. Shells, crabs, dolphins and sharks are also available in abundance.

During the last decade, emphasis was also laid on protection and conservation of wild life in these islands. The Wildlife (Protection) Act, 1972 was promulgated. Four Wildlife sanctuaries and an area of about 8000 hectares have also been declared as National Parks Biosphere Reserve in these islands. The Andamans and Nicobars Administration has also planned to establish a project to study the bio-ecology of the rare and threatened species of these islands and to establish a Marine national Park and a Turtle and Crocodile Farm (Bhatt, 1998:40).

PRESENT SOCIO-ECONOMIC AND POLITICAL LIFE IN THE ISLANDS 4

[A] ECONOMIC LIFE:

1. Agriculture: (*Bhatt, 1998:43*):

- Hilly and mountainous terrain, heavy rainfall, undulating nature of soil – these islands are ideally suited for raising plantation crops.
- Undeveloped agriculture until recently. Paddy has been the only good crop raised in the territory. It was sown in an area of 3748 hectares during 1955-56.
- The first plan to develop agriculture here was introduced only during the Second Five Year Plan. In this, besides bringing more area under paddy cultivation, cultivation of coconut, arecanut and a variety of fruits were also encouraged.
- By the end of 1991-92, 12000 hectares of land were brought under paddy cultivation together for Andaman and Nicobar Islands. Considerable emphasis was laid on achieving self-sufficiency in food-grains for the inhabitants of these islands.
- Under the programme of minor irrigation and drainage, the department provides loan-cum subsidy for construction of ponds and installation of pump sets.
- Apart from paddy, other crops grown in the district are Banana, Coconut, Rabi, Pulses, Arecanut, oil seeds, fruits and vegetables.

2. Industries: (*Bhatt, 1998:44*)

- Industrially backward area and the Government of India has classified this territory under Category 'A' a special region/ No Industry District.
- To promote new industries and develop the existing industries, the Industries Department was upgraded to a full-fledged Directorate in the year 1978. Simultaneously in the same year, the district Industries Centre was also set up.
- No sale tax is levied on the goods of this Union territory. As an incentive small scale units are exempted from octroi duty for import of plant, machinery and equipment from the mainland.
- Under the Industrial Estate Programme, small scale units are provided with industrial sheds and developed plots for setting up their units in this area.
- Package assistance is being rendered by the Directorate of Industries and the district Industries Centre to the entrepreneurs in setting up industrial activities in this backward area.

At present five DGTD units including one Government Saw Mill are functioning in these islands:

1. WIMCO Manufacture of match splints.
2. Andaman "Timber Industries Manufacture of plywood block boards.
3. Jayashree timber products Manufacture of plywood.
4. Asian Woods and Manufacture of plywood polymers Pvt. Ltd. Veneers.
5. Government Chatham Sawn timber.

910 small-scale industries were also functioning and registered with the State Directorate in this Union Territory.

3. Trade and Commerce:

Some of the most common commodities manufactured imported and exported in the town are as shown below:

Name of the towns	Most important commodity		
	Manufactured	Exported	Imported
1	2	3	4
Port Blair	Ply wood & match splints	Timber (including sawn timber)	Cereals & all kinds of edible oils

Ply wood and match splints play a very important role in the economy of the Islands. Timber is the most important commodity exported from the town. The most important commodities imported in the town are cereals and all kinds of edible oils (Bhatt 1998:44). **[B] TOURISM:**

- Andamans and Nicobars are one of the few places where man has survived in his original form and manners withstanding the onslaught of the march of the civilization.
- The natural scenic beauty, serpentine creeks, palm fringed sandy beaches, coral reefs, evergreen forests, undulating green hills, fabulous underwater life – a paradise for the domestic and foreign tourists.
- Of late restrictions of foreign tourists have been relaxed.
- The places of historical and tourist interests are: (a) Anthropological Museum, (b) Marine Museum, © Chatham Saw Mill, (d) Wimco Factory, (e) Zoological Gardens, (f) Chiriya Tapu, (g) Wandoor Beach, (h) Viper Island, (i) Corbyn's Cove, (j) Sipighat Farm, (k) Ross Island, (l) Cellular Jail, 9m) Dalthaman Tank, and so on.
- These 'dreaded' islands now have become a haven for tourism and other enterprises. People from different parts of India have settled there. Among the settlers there are Hindi speaking, Malyalis, Bengalis, Tamil, Telgu and the Chotanagpur Tribes.

Taking into account the tremendous potential tourism in the islands, the Government of India is planning to develop one or two islands here as beach resorts5_ **[C] EDUCATION:** According to 1991 census, the population of total literate (excluding those of the age group of 0-6 years) was 150269 persons. Of the 90709 were males and 59560 females. In the rural areas of the district 97636 persons (58637 males and 38999 females) were literate and in urban areas 52633 persons (32072 males and 20561 females) were literate. The rate of literacy of this population to the total population as per 1991 census are shown below 6:

	Persons	Males	Females
Total	74.52	80.31	67.15
Rural	71.15	77.25	63.61
Urban	81.69	86.59	75.08

(1991 Census)

[D] HEALTH AND HYGIENE:

In the year 1991-92, there were 2 Hospitals, 3 community Health Centres, 4 Dispensaries, 14 Primary Health Centres, 64 Sub-Centres and 5 Urban Health Centres in the district. Thus in the North Andamans there were 14 small and big centres; in Middle Andamans there were 26 of them and in the South Andamans there were 52 centres and sub-centres (Bhatt, 1998:46). Owing to these Health centres the life expectancy rate may have increased for those who have an access to them. Ironically, the very civilization that is supposed to facilitate health and hygiene and reduce the mortality rate has been responsible for the decline in the primitive tribal population in the Andamans and Nicobars islands.

[E] POPULATION (GENERAL, SC/ST)

According to 1991 census the total population of the district is 241453 persons, comprising of 133058 males and 108395 females. Rural population of the district is 166498 persons ((90675 males and 75823 females) and urban population is 74955 persons (42383 males and 32572 females).

Of the six tribes in Andaman and Nicobar Islands the Jarawa and the Sentinelese still live in isolation. The Administration is trying to befriend them by sending contact parties.

In some cases the political and criminal prisoners after their release continued living there joined by their families later. According to the 1991 census there was a population of 2800661 in an area of 8249 sq.km.

The decennial growth rate of population of the district as a whole in relation to the state between the period 1981 and 1991 is given below:

State /District	Decennial growth rate of population (per cent) 1981-91		
	Total	Rural	Urban
Andaman & Nicobar Islands	47.88	46.87	50.72
Andaman District	51.68	52.12	50.72

(Bhatt, 1998: 38)

ANDAMAN AND NICOBAR ISLANDS

Population of State by Rural-Urban Residence, 1901-1991

CENSUS YEAR	TOTAL	RURAL	URBAN
1901	24649	24649	-
1911	24659	26459	-
1921	27086	27086	-
1931	29463	29463	-
1941	33768	33768	-
1951	30971	23182	7789
1961	63548	49473	14075
1971	115133	88915	26218
1981	188741	139107	49634
1991	280661	205706	74955

(Bhatt, 1998:32)

The Scheduled tribes' population of the district according to 1991 census is 1917 persons of which 1415 persons are enumerated from urban areas and 502 from the rural.

Per cent Decadal Variation of Population (1901-11 to 1981-91)

Total/ Rural/ Urban	Census								
	Decades								
	1901-11	1911-21	1921-31	1931-41	1941-51	1951-61	1961-71	1971-81	1981-91
Total	+7.34	+2.37	+8.78	+14.61	-8.28	+105.19	+81.17	+63.93	+48.70
Rural	+7.34	+2.37	+8.78	+14.61	-31.35	+113.41	+79.72	+56.45	+47.88
Urban							+80.70	+89.31	+51.02

(Bhatt, 1998:32)

Total Population of Scheduled Tribes 1991

Total/ Urban	Population						Scheduled Tribes Rural/ Urban
	Persons	Males	Females	Persons	Males	Females	
Total Rural	280661205	154369111	126292	267702626	137501343	1302012832	188
Urban	706 74955	986 42383	93720	8 502	6 314		
			32572				

(Bhatt, 1998:33)

List of Scheduled Tribes Orders (Amendment) Act, 1976

1. Andamanese, Chariar, Chari, Kora, Tabo, Bo, Yere, Kede, Bea, Balawa, Bojigiyab, Juwai, Kol.
2. Jarawas
3. Nicobarese
4. Onges
5. Sentinelese
6. Shom Pens

**Religion-wise Breakup of Population as per 1991 Census
(at district level)**

ANDAMANS

Religion	Number
Hindus	179772
Muslims	20228
Christians	39897
Sikhs	870
Buddhists	320
Jains	16
Other Religions & Persuasions	102
Religion not stated	248

NICOBARS

Religion	Number
Hindus	9749
Muslims	1126
Christians	27314
Sikhs	480
Buddhists	2
Jains	1

Table 1: Distribution of population by Religion, India, 1991

SI N	India/ UT	Total Rural Urban	Populat ion	Hindus	Muslims	Christians	Sikhs	Buddhists	Jains	ORP+	RNS++
1	2	3	4	5	6	7	8	9	10	11	12
1	INDIA	Total Rural Urban	838,583 ,988 622,812 ,3 76215,7 71,612	687,646, 721522,8 96.62516 4,750,09 6	101,596, 05765.56 3,69536. 032,362	19,640,28 413,485.2 616,155,0 23	16,259,74 412,473,4 303,786,3 14	6,387,5004,1 27,4842,260, 016	3,352,706 997,7182, 254,988	3,269,3552, 981,632287 ,723	415,5692 70,47914 5,090
2	Anda man & Nicob ar Island s	Total Rural Urban	280,661 205,706 74,955	189,5211 33.22856 293	21,35412 ,4848.87 0	67.21158, 3318,880	1,3507515 99	32242280	17134	25623224	6306255

+ ORP stands for other religions and persuasions. ++ RNS stands for religion not stated.

III THE SURVIVING TRIBES OF THE ANDAMANS AND THEIR PLIGHT

[1] THE GREAT ANDAMANESE

[A] General Information (Singh 1994:363-366)

- the census of 1981 showed only 42 persons of the tribe left in a colony on the Strait Island
- the language they speak is Andamanese belonging to the Andamanese group of languages
- the link language is Hindi and the script Devanagri (Singh 1994:363-366)
- exhibit predominance of blood group A (59%) followed by B (23%) and O (9%)
- they are short statured, the average height being 148 cm, and broad-headed (cephalic index: 82) with true pepper corn type of hair (Singh 1994:363-366)
- the females have steatopygia (excessive accumulation of fat at the buttocks) (Singh 1994:363-366)

[B] Eating and Drinking Habits:

- they eat fish and the meat of wild boar, turtle and dugong, but avoid beef and flesh of buffalo
- they smoke beedis, cigarettes, chew betel leaves with lime, areca-nut and tobacco leaves and drink tea often (Singh 1994:363-366)
- a few of them drink alcoholic drinks occasionally

[C] Living Conditions & Situation:

- had their major encounter with outsiders in AD 1789, when Lieutenant Archibald Blair of the British navy landed in these islands. Earlier records by Radcliffe-Brwon (1948) show that these islands were dreaded.
- they are vanishing fast. It will be no surprise if they are wiped off the face of the earth not before it is long (Radcliffe-Brown, 1948).

[D] Social Organization of the Tribe:

[1] Tribes and sub-tribes:

- earlier comprised of 10 different tribes – Cari, Bo, Jeru, Kede, Puchiwar, Bale, Bea, Kol, Juwoi and Kora. Each tribe was further divided into two sub-groups, namely Ar-yoto (coastal people) and Erem-taga (forest dwellers) (Radcliffe-Brown, 1948).
- In 1981 only three tribes – Jeru, Cari and Bo. (Singh 1994:363-366)

[2] Marriage Rituals:

- Group exogamy was strictly observed prior to their permanent settlement in the Strait Island in 1970. Due to the decrease in population this is no more in practice.
- Earlier a boy and a girl with the same name could not marry even though they were no blood relations. The post-marital residence now is neo-local (Singh 1994:363-366)
- Divorce and remarriage is permitted. On account of small number now decrease in the incidents of divorce
- Arranged marriage by the elders without the consent of the bride or the bridegroom, since the choice is limited
- Monogamy is strictly followed and nuclear type family is common
- The person bearing the name of the deceased inherits his property (Singh 1994:363-366)
- In the presence of the people the bridegroom is made to sit on the lap of the bride and they embrace each other

- in 1981, they offered tea along with turtle meat and the traditional items to invitees on social occasions. The exchange of garlands by the bride and bridegroom during a marriage is also a recent phenomenon.

[3] Death Rituals:

- they bury the dead along with the personal belongings at a place adjacent to the settlement. There is no period of death pollution and it may last from one month to a year
- on the last day of pollution, they hunt a turtle and arrange a feast

[4] Economic Organization:

- they continue hunting and fishing, but not in the traditional form. They collect firewood and edible items
- some of them are employed as salaried staff in government nurseries, health centres, etc.
- they make use of the plantation and horticulture facilities provided by the government.

[5] Political Organization:

- owing to a decline in population, the traditional political organization has ceased to exist
- now the oldest person in the community is selected as the chief and the next senior person as the vice-chief
- these two persons act as mediators between the people and the administration
- they also have control over the social affairs of the community

[6] Religious Organization:

- they follow their traditional religion according to Singh (1994).. they worship a deity called Billikhu, specially during birth, marriage and adolescence ceremonies
- now some of them keep pictures of Hindu gods and goddesses in their houses and offer prayers to them
- whenever they visit Port Blair or other places, they attend local fairs and festivals and also visit the temples.
- In 1961 census of their total population of 19 persons, 13 were Christians, while 2 were Buddhists and 4 were the followers of 'indefinite beliefs'
- According to 1971 census out of their total population 4 persons were returned as Hindus, 1 person as a Buddhist and 19 as followers of other religions.
- In 1981 census out of their total population of 42 persons, 25 were Hindus and 17 Buddhists.

[7] Position of women:

- Women participate in all social, economic and religious activities and enjoy the right of inheritance
- They collect fuel, roots, tubers and honey and work.
- During pregnancy, adolescence and death, they observe taboos on certain food items and movements
- The old and the experienced women render help during childbirth and a baby is named before it is born. There is a tendency to perpetuate one's name by giving it to the newborn in the community. a ceremony is observed to mark the onset of adolescence for both males and females

[E] Culture Contact and Change:

- Due to close contact with outsiders and adaptation to the new environment, they have forgotten almost all their folk songs, folk lore, art and crafts relate to hunting and food gathering activities.
- Basketry is the handicraft which exists today
- The Great Andamanese maintain a harmonious relationship with the government officials at their settlement in Strait Island who are posted to look after them.
- They sell coconut, fish, honey and sea shells to such communities as the Bengali and the 'local born' residing in the nearby islands.
- Sometimes they participate in certain public functions organized by the Andaman and Nicobar administration and the settlers.
- Earlier they had marriage relations with the Burmese settlers.
- Nowadays they are politically conscious and take part in the elections.
- The entire community lives in a permanent settlement provided by the Andaman and Nicobar administration. They have been provided with concrete houses with electricity. The settlement has a community hall, nursery, dispensary, well, co-operative store, etc. The Strait Island is connected by a ferry launch service to Port Blair and Rangat. The Great Andamanese have responded positively to the development projects. They have benefited from the facilities of formal and non-formal education. According to the 1981 census, out of their total population, 14 persons (8 males and 6 females, viz., 33.33%) are returned literate (Singh 1994:366).

[2] THE JARWA:**[A] General Information:**

They are one of the four Negrito tribes of the Andaman Islands. They inhabit the west coast reserved area of 765 square kms. In the South and Middle Andaman Islands (Singh, 1994:420). According to Radcliffe-Brown (1948), they are the descendants of emigrants who at sometime in the past made their way across from little Andaman and thrust themselves upon the inhabitants of Rutland island and the South Andamans, maintaining their footing in the new country by force of arms. The Aka-Bea tribe of the Great Andamanese division had referred to them as the Jarawa or Yerawa, a name which is still in use. Singh (1994:420) observes that the estimated Jarawa population of 275 persons is larger than the 1981 census enumeration of 31 persons, of whom 21 are males and the rest females. Their language has been included in the Andamanese family of languages. The Jarawa are monolingual and do not know any other language apart from their mother tongue Jarawa. Until now they have not developed any system of writing.

The concept of individual leadership seems to be lacking among them. The 1981 census records did not show any religion stated by the Jarawa. Though they live naked, the Jarawa love to adorn their bodies with clay paintings of innumerable designs. Even their wooden buckets, chest guards and bows are ornamented with symmetrical zig-zag or criss-cross designs. Men women, children paint their bodies with red ochre or white clay in various geometric patterns. This seems to be a kind of folk art of some social significance.

[B] Physical Description:

- Both the male and female remain naked. However, sometimes strings made of bark and leaves are used as ornaments. The males use a special folded bark chest guard.

- They are of Negrito stock and are short statured with a dark skin and frizzy hair
- The occurrence of steatopygia (accumulation of fat giving a characteristic shape to the buttock) in post-puberty is a typical feature of their women.

[C] Economy:

- They are a hunting gathering community living a semi-nomadic life. They are reported to have two major territorial divisions. They move in small groups within each territory for hunting and gathering food and get together at times.
- The making of baskets and mats, shell necklaces and weapons of metal are part of the traditional craft.

[D] Food Habits:

- They eat pork, turtle meat, eggs, fish, molluscs, roots, tubers and honey
- They do not consume any alcoholic drink or narcotics
- Of late some of them have started liking for coconut, banana and boiled rice, which they get once a month from a team of officials and experts who visit their area to establish contact.

[E] Social Institutions:

[1] Marriage and Family:

- Adult marriage in practice. Monogamous marriage.
- Their smallest social unit consists of a mal, a female and their unmarried minor children. During the hunting and gathering expeditions a few families move together and each family gets a share of the catch. However, the items gathered by the members of a family are shared among them.
- Hunting, fishing and collecting honey are the men's jobs. They alone handle bows and arrows and spears (Singh 1994:420).

[2] Women in the Jarawa Community:

- They only do small-scale fishing with baskets and also help in collecting roots and tubers
- The broad three layered bark sheath worn by the men-folk, including very young boys, covers their belly and chest. This is used for carrying arrows and knives and for protecting the vulnerable parts of the body. This type of bark sheath is not worn by the women or by any other Negrito tribe or anyone else in the Andaman Islands.
- The females take active part in their economic activities, except in hunting with a nbow and arrow.
- The pattern of interaction of the women with their male members and with the non-Jarawas visiting their area suggests that the Jarawa women enjoy a status equal with the men, if not higher.

[3] Rituals of the Dead:

- Practically nothing is known about their life cycle rituals except that the small bones of dead persons are collected after the flesh decays, and one such piece is hung by the relatives around the neck or waist

[F] Culture Contact and Change:

- For more than a century the Jarawa have preferred to remain aloof, maintaining a hostile and unfriendly attitude towards 'aliens'.
- It is only recently that a section of them has shown a friendly attitude. Even then hostile encounters between the Jarawa and the non-Jarawa take place whenever the former get provoked by the activities of the latter close to the reserved area.
- Steps are being taken to establish friendly contacts with them. This is being done cautiously with a view to ensure that a community which has succeeded in maintaining its unique culture against heavy odds not become extinct. (Singh 1994:421)

In 1999 their population was about 250 individuals. Unlike the Great Andamanese and the Onge they escaped devastation mainly due to their hostility to the outside civilization. In October 1997, for the first time, the extremely hostile Jarawas came out from the forests to interact with the settler populations. The official explanation for this change of attitude among the Jarawas was that they faced an acute shortage of food in their territory. Sekhsaria (1999b) observes that it was a very convenient explanation which ignored the policies that the administration had followed in the past few decades. Like the Onge the Jarawa also have been pushed in from all sides.

The areas of the Jarawas have some of the largest sources of timber. Once they are tamed or 'domesticated' by the so-called civilized society, the mainlanders hope to extract and exploit these resources. The mining of sand from the beaches within the Jarawa reserve has already begun. Sometimes when the Jarawa go to the settlements they are now looked down upon as intruders. Conflict situations are on the rise and there have been incidents of the Jarawa being thrashed by the settlers. To the superior arms and ammunition power of the modern people how can the Jarawa resist?

The settlers have been offering them tobacco, gutkha, etc., to befriend them. Liquor may follow soon.

A major change that has taken place in the Jarawa community – they have started wearing clothes; dancing to the tune of Hindu film music, munching away at a packet of "Uncle Chipps"? (Sekhsaria 1999b).

[3] THE ONGE:

[A] General Information:

- According to Singh (1994:944) the term Onge means man. These people belong to the Negrito racial stock. They are now concentrated in two settlements – (i) the Dugong Creek, and (ii) the South End, both situated in the Little Andaman island in the islands of Andaman and Nicobar. According to the 1981 census, their population is 97 (51 males and 46 females). But in the 1971 census they were 112 in number.
- The Onge language belongs to the Andamanese family of languages. They have no script. Some of them are conversant with the local form of Hindi.
- They are short statured, with a broad head shape, a short and broad face, pepper corn head hair, scanty hair on the body and face, and a broad nasal profile
- The presence of steatopygia is a characteristic feature of the Onge women.
- It is reported by Verma (1989) that the Onge have a high rate of sterility (30.4%) mortality among them, and also greater homogeneity for eleven red cell enzymes and serum proteins, which might cause harmful effects (Singh 1994:945).
- They consume fish, the meat of wild boar, turtles and dugong and roots, tubers, fruits and honey. Wheat and rice have become staple food in recent years. Tea is their favourite drink.

[B] Social Organization:

- The Onge were divide into three territorial groups: (i) Girmeka-gobeule, (ii) Engakwale, and (iii) Girera-gabeule. Each such group was constituted with a number of patrilineal descent units (berai). A berai is composed of five to seven nuclear families, which are linked through agnatic relations.
- Marriage between different berai is the norm. they are monogamous.
- Their rule of residence has changed from patrilocal to neolocal.
- Absence of bride price and dowry is an important feature of this community.
- Marriage by mutual consent and with parental approval is the social norm.
- Divorce is not socially recognized, but separation is permitted.
- The nuclear family has become the common type now.
- The task of collection of wild roots, tubers, fruits and firewood is carried out by the women, in addition to their usual household duties.
- The Onge women command a good deal of influence and respect in the community.

[C] Rituals and Ceremonies:

- the rituals and ceremonies associated with the initiation of boys (tanagiru) and the onset of puberty for girls (horangabey) are significant.
- Birth and marriage rituals are conducted in a simple manner. Soon after childbirth, the placenta is buried on the spot where the baby was born. Some restrictions are imposed on he mother regarding the food she eats after delivery. A traditional method of greeting, whereby the bride sits on the bridegroom's lap and they embrace each other, is an important aspect of an Onge marriage. A feast is also hosted on the occasion.

They bury the dead inside the hut, under the cot of the deceased person. The custom of exhuming the lower jaw (innibirangey) of the corpse after some period is the traditional practice.

[D] Socio Economic & Political Life:

- They depend on forest produce and sea resources for their livelihood. They live by hunting, fishing and collecting. Nowadays, they are also employed as wage labourers on the plantations in their own settlement. Some essential food and other items are given free to them.
- A few are also engaged in salaried jobs. According to the 1981 census, 71 persons (43 males and 28 females), of heir total population are returned as workers. Of them 69 persons are engaged in the collection of forest produce, hunting, fishing, etc. the remaining two persons were engaged in other jobs.
- The Onge have no traditional political organization of their own.
- The socio-economic affairs of the community are regulated entirely by the elderly men and women. One person has been representing the Onge since early 1980s, at the Pradesh Council, the legislative body of the Union territory.
- The Onge exhibit skill at making baskets (toley), mats, wood containers (ooku) for the collection of honey, and canoes dug out from a single tree trunk and fitted with out-riggers. They prepare two types of baskets with thin cane strips. The smaller type shows much artistic expertise and is used for storing cooked meat, roots and tubers. Both men and women weave these baskets. From the bark of a particular plant, the women make strings for their ceremonial dress. Waist belts across the chest have ceremonial significance. These are afforded to the men by their women relatives.

[E] Religious Belief:

- they believe in the existence of spirits dwelling in the jungle, the sea and the sky.
- Out of their total population of 97 persons, 74 had been recorded as followers of 'other religions', which refers to their traditional faith. The rest have not stated their religion (1981).
- In 1961 and 1971, the census figures state that their entire population followed 'indefinite belief', denoting their indigenous religion.
- They paint their face and body with clay, and this signifies their relationship with nature in a symbolic form.
- White clay (oikaloï) is painted on the face and body almost daily as a protection from evil spirits and mosquitoes. Red ochre (oikaro) mixed with lard is smeared during the mourning period.
- They also decorate the ceremonial hunting bows and arrows with bark strings. The honey container (ooku) is made from the Kwallalu tree, the outer part of which is decorated with cane straw strips after it is blackened by slowly burning the layer of wax pasted on it.

[F] Culture Contact and Change:

- To some extent they have developed contacts with the Bengali, Nicobarese, Tamil, Telgu, Mopilah, Ranchi tribes, and others.
- They frequently visit the Bengali refugee settlers at Vivekandnapuram village and the times these items are exchanged for their forest produces.
- Some welfare and development measures were undertaken for the Onge since 1976, and these activities have been entrusted to a local organization, *Andaman Adim Janjati Vikas Samiti (A.A.J.V.S.)*. Some of the development works are appreciated by the Onge.
- According to 1981 census, out of their total population of 97 persons, 25 were returned as literate (22 males and 3 females).
- The Samiti has made available to them drinking water, creches for the children, health care services, electricity, and a few more amenities in Dugong Creek, which have been appreciated by the Onge. But such facilities are yet to reach the South Bay settlement.

The exclusive home of the Onge, the 730 sq. km. Island of Little Andaman and Nicobar islands was chosen for the settlement of the outside population from India. Forests had to be felled to make the land cultivable for the settlements. Large-scale plantations were planned. Timber based industries were opened for the support of the settlers (Sekhsaria 1999b).

- A red oil palm plantation was created over an area of 1,600 hectares.
- Logging of the trees started.
- About 12,000 families were expected to be brought into Little Andaman, but fortunately only 3,000 families could be brought as of today (Sekhsaria 1999b).
- At the turn of the century their number was 670 but today at the close of the century they are about 100 Onge only.

[4] THE SENTINELESE:

[A] General Information:

This is perhaps the most isolated tribal community of the county. The name by which they identify themselves is not even known. The name Sentinelese is derived from the name of the island they inhabit they have no contact outside their exclusive Andaman island of North Sentinel situated 64 km. South west of Port Blair in the Andaman and Nicobar islands. The Onge call this island Chankute. Their population was about 100, though the census 1981 could not record any (Singh 1994:1067). The Sentinelese in 1999 estimated about 100 individuals. They are hostile to the outside civilization (Sekhsaria 1999b).

They, like other Negrito tribes of the islands, are said to have migrated here in the prehistoric times. A few scholars suggest that their ancestors drifted to this island during a cyclone, when they came out of Little Andaman island for fishing on small out-rigger canoes. They speak their own tongue is called Sentinelese, which is not understood by other Negritos. Yet, this language is said to belong to the Andamanese family of speech.

The Sentinelese men wear a bark waist-belt, which is specific to this community. Both men and women wear nothing except leafy ornaments. In physical appearance, they are dark complexioned, are of medium height, and are not different from other Negritos.

[B] Economy:

- They are hunters and gatherers. They hunt wild boar, turtle and fish with bows, arrows and spears. For fishing and turtle hunting they also use single out-rigger canoes. Wild boars, sea turtles, different kinds of fish and molluscs, fruits, roots and tubers form their main food. Their dependence on sea-food is apparently more than that of the Jarawa and the Onge, the other two hunter and gatherer communities of the islands.

[C] Social and Economic Life:

- They are said to have communal huts. Only a large encampment of 18 small lean-to type huts were seen in a forest clearing in 1967. Each hut had a fire place. The presence of small huts and separate hearths in each of them indicate their semi-nomadic nature and gathering pursuits. Some fruits were also seen dumped at a place in an earlier party.
- The presence of more than one fire place in the long huts suggests that occasionally more than one family shared such a hut.
- Hunting and fishing with bows and arrows seems to be carried out by the men, while the collection of fruits, tubers and other edibles is done by both sexes. Fishing with small round nets in shallow water is done by the females only.
- Their crafts include the making of baskets, mats, bows and spears, bark belts for men (these are much narrower than those used by the Jarawa and cover only the waist region), shell necklaces, headbands, etc. their artistic disposition is expressed in painting their bodies with white clay and from their leaf ornaments, baskets, bows and arrows.
- Culturally too they seem to be in no way different from the other Negrito hunter-gatherers in the Andamans.

[D] Culture Contact and Change:

- The Andaman Islands have been the exclusive home of the Negrito hunter-gatherers for thousands of years. They were averse to outsiders disturbing them here. The establishment of a permanent settlement here by the British in 1858 was very much resented and resisted by them. It took the

British several years to settle themselves and establish friendly relations with the tribes of Great Andaman and they left the Sentinelese alone.

- Serious efforts at making contacts started only in 1967 through joint expeditions of the Anthropological Survey of India and the Andaman and Nicobar Administration and this continued through the 1970s and 1980s.
- Initially the Sentinelese resented the intrusion of outsiders. On many occasions they used their bows and arrows to defend their land against any suspected aggression.
- Efforts to be friendly towards this community had occasionally been made by the Andaman and Nicobar Administration by presenting them with some gifts like coconuts, bananas and pieces of iron from a distance by a team of officials and experts.
- They did accept those gifts, which were very discreetly dropped ashore by the official parties that visited them occasionally, but they did not allow them to reach hand-shaking distance.
- Finally, in early 1991, the Administration and the Anthropological Survey of India succeeded in making friendly contact with them. During the joint expedition to the North Sentinel Island on January 4, and 22nd February 1991, the Sentinelese for the first time approached the lifeboat and received a gift of coconuts. A few of them also boarded the lifeboat during the February visit. There were men, women and children in these groups. The officials stood in the water near the shore and more gifts were given, however, even more were demanded. A few women indicated their annoyance at not receiving their adequate share (Singh, 1994:1066-1069).
- More such visits are envisaged after careful and cautious planning, to gradually build up the friendly contact further.
- However, the Administration wishes to ensure that no harm comes to the Sentinelese in the process.
- Friendly contacts with the Jarawa (in 1974) and the Sentinelese have been achieved entirely through peaceful means, a landmark development in anthropology and administration (Singh, 1994:1066-1069).

OBSERVATIONS

On the basis of the above literature, we can come to the following conclusions:

1. The primitive tribes of the Andamans, namely the Great Andamanese, the Onge, the Jarawa, and the Sentinelese are a threatened species. They are on the verge of extinction. Sekhsaria (1998:68) reports, "The population of the islands, which was about 24,5000 in 1901, is nearly four lakhs today, however, the populations of the tribal communities (except the Nicobarese) have dwindled." It is true, the vast area of their rainforest homelands have been cleared to feed the huge timber industry, on which depends the economy of the Andamans.

Population trends (in the Andaman & Nicobar Islands)

Year	Total Population	Andamanese	Onges
1901	24,499	625	672
1911	24,45	455	631
1921	27,080	209	346
1931	29,476	90	250
1951	30,971	23	150
1961	63,548	19	129
1971	1,15,133	19	112
1981	1,88,745	25	100
1991	2,80,661	28	101
1998	4,00,000 (estimated)		

(Sekhsaria 1998:70)

2. Tribes' symbiosis with nature and the sustainable nature of their economy had sustained them for centuries before their over-exposure to the 'intruders' starting from the colonial regime. In order to preserve the Jarawa way of life and culture, a Jarawa tribal reserve was established over a 700-sq-km area with an objective to keep the tribal population confined to the reserve as to prevent settlers from encroaching into it. The Bush police was established who basically indulged in restricting the Jarawa to the reserve area. But many illegal encroachments have come up in the reserve areas with political patronage. That the political support is on the side of the settlers, is evident from a statement made in the Lok Sabha in 1990 by Manoranjan Bhakta, the Congress (I) member of Parliament from the islands: "...Job-seekers (settlers) who have come (to) the island are now serious contenders for allotment of house sites and agricultural land. Since the political system goes with the number, no political party is in a position to contradict their demands." (Sekhsaria 1998:69-70). Thus the attitude of the settlers including elected representatives of various levels, the approach of their social and political organizations, towards indigenous peoples is biased and anti-tribal. There is not only a lack of sensitivity but also an attitude of aggression that leaves the aborigines pushed to the brink.

3. The Andaman and Nicobar Islands are rich in natural resources and there is a competition to have control over them and over their management. The Andamans tribes cannot withstand the pressure of the outsiders who outnumber and outsmart them.

- The main threats to these endangered species can be identified in terms of deforestation and environmental destruction. Hundreds of thousands of hectares of forest cover have been depleted in the past and it continues even today.
- As far as the Jarawa are concerned the forests and resources on their territory were attacked in terms of clearing them for settlements of mainlanders. The Andaman Trunk Road was constructed that cuts through the heart of Jarawa territory and large-scale logging operations continue even today, moving further into the forest home of the Jarawa. The Jarawa who were once the master of the land have now been restricted to a small 720 sq. km. Reserve on the western coast. Their natural resources have diminished due to deforestation in order to accommodate settlers and to feed the flourishing industries (Sekhsaria 1998:67)
- Thousands of hectares of deciduous forests have been depleted with adverse impact on the climate, health, economy and culture of the people. The studies of the late 1980's show that soil erosion was effected due to the indiscreet felling of the trees. Clearing of the trees resulted in the death of coral in the surrounding seas (Sekhsaria 1999b). Habitat destruction and excessive poaching by the settlers has resulted in a sharp decline in the numbers of the endemic species such as the Andaman Wild Pig, endangered sea turtles that nest on the island's beaches and the dugong that was once common in the coastal waters (Sekhsaria 1999b). All these creatures are vital sources of food for the Onge. They also play an integral role in their culture and society (Sekhsaria 1999b). The attitude of the settlers is arrogant, insensitive and ignorant towards these Onge. This attitude does not acknowledge the knowledge that the Onge have. The Onge are expert navigators and make excellent sea-worthy outrigger canoes. They have knowledge of the plant that may have cure for the dreaded disease of cerebral malaria. They also know the use of sedate while extracting honey from the beehive (Sekhsaria 1999b). Destruction of land and forests coupled with cultural domination has broken the backbone of the social fabric of Onge community.
- There has been an encroachment of the aborigines' natural habitat pushing them back, restricting them to small areas.
- Government-sponsored development projects & activities have either been assimilative in nature insensitive to the socio-cultural ethos of the tribes making them dependent on the mercy of the benefactors, thus taking away the freedom of the tribes. There has always been not only a tendency but attempts of forced assimilation of the tribes in to the so-called 'mainstream' of the so-called 'civilized society'.
- Though there are instructions (as during the British Government as well) to take a 'conciliatory' approach towards the aborigines, the settlers and the Government machinery often find themselves in conflicts with the aborigines harassing and even killing them. Inflicting physical violence against the tribes has become very common under the pretext of self-defense, whereas, in fact, the aborigines' attacks are in self-defense.
- The drive to develop the tourism industry to attract foreign tourists has serious impact on the life and culture of the tribes.
- Diseases such as (i) Epidemics of pneumonia in 1868, (ii) Measles in 1877, (iii) Influenza in 1896, and (iv) Syphilis, almost wiped the Great Andamanese off. It is reported that in August 1999, there was an outbreak of measles and subsequent respiratory complications, including tuberculosis and conjunctivitis among the Jarawa (Venkateswar 2000:38).
- Their addiction to tobacco and liquor took heavy toll. Their population has come down to only 28 now from an estimated 5,000 in the 19th century.
- The main sources of the above-mentioned threats are the vested interests – industrialists, traders, settlers, Government, etc.

- The methods employed in these threats are basically “Befriending the tribes” through coercion, allurements, capture, threat, force. It should be noted that the Great Andamanese were befriended by the outsiders following the establishment of the British Penal Colony in 1858. The British used the Great Andamanese for searching convicts who escaped from the cellular jail and in fighting other hostile tribes in the islands, particularly the Jarwa. An Andaman home was established to “educate” and “civilize” the Great Andamanese.
- In the context of the Jarawas it is observed that due to the increasing human pressure on the islands, and the continuing encroachment into their territory which is their prime hunting and fishing land, the Jarawas have started visiting the settlements. Meanwhile the administration continues to allot land to settlers, or legalize encroachments along the borders of the contested forest tracts (Venkateswar 2000:37).

5. The role of administration:

- The aborigines’ policy of the Government seems to be very much the same as that of the colonial regime. In the words of Venkateswar (ibid.), “The British version of the colonial economy was one which trafficked in the circuit of tobacco, tea, sugar, opium and alcohol, bringing the islands firmly within the ambit of the British Empire. The subsequent Indian variant, also colonial in its dimensions as it pertains to the islanders, further deprives them of control over their traditional resource base. It was merely a transfer of power between two colonial regimes, with very little to differentiate the two. The colonizer changed from the ‘white man’ to the ‘brown’ one after 1947, who, like the former, proceeded to shoulder ‘the white man’s burden’ of undertaking to ‘u-lift’ the ‘backward primitives’.
- To add to the ongoing escalation of tension between the tribes and the settlers, a local lawyer in Port Blair filed a writ petition asking for the ‘rehabilitation’ of the Jarawa like the Andamanese and Onge. The Port Blair based Society for Andaman and Nicobar Ecology (SANE) in turn, filed an intervention against such a move, arguing that it would only expose the Jarawa to further diseases. Survival International, a London based activist organization, issued a worldwide call to anthropologists and others to send testimonials denouncing the writ petition. At present, the case on behalf of the Jarawa is being handled by a human rights law firm in Mumbai (Venkateswar 2000:38).
- In case of the escalating tension between the Jarawa and the settlers, the Administration officials admit that they are unable to do anything. The two groups are locked in a tussle over land rights, and the atmosphere has been vitiated by some administrative policies of the past. The Jarawa are the original inhabitants of the land and they have the first right over this land, but not many people are ready to concede this. The solution of this problem requires tremendous political will and understanding which is found missing in the approach of the administration (Sekhsaria 1998:71).
- In the independent India the Government Policy of ‘colonisation’ was implemented in 1960’s thousands of settlers from mainland India were brought in, totally disregarding the rights of the indigenous communities. Today the same policy is being continued under the pretext of ‘civilizing’ the tribes without realizing its adverse effect on their life and culture. Sekhsaria (1998:70) has rightly observed in the context of the Great Andamanese and the Onge that they “fell victim to the march of civilization and everything that came with it”.
- The role & function of such state institutions as the Anthropological Survey of India, the Andaman Adimjati Vikas Samiti, and the Forest Department seem to be dubious.

(A) *The Anthropological Survey of India (ASI):*

- The efforts by the administration to uproot the aborigines from their homeland and settle them elsewhere has virtually backfired. The Onge of Little Andaman, for instance, as reported by

Venkateswar (2000:33), lived unhindered and carefree life earlier until the mid-sixties. Later on, the Anthropological Survey of India (ASI) was established in Port Blair in 1952, and the research teams visiting the islands frequently. The new programme for the development of Little Andaman, the former inhabitants were sequestered in two permanent settlements at two ends of the island: Dugong Creek, the larger settlement in the north, and South Bay at the southern tip of the island. Similarly, the Andamanese were resettled on Strait Island.

(b) *Andaman Adimjati Vikas Samiti:*

- The AAJVS and the administration tried to befriend the tribes through “contact missions” to offer them gifts of coconuts and bananas. In other words they tried to bribe them for their own ulterior motives.
- Pankaj reports that the Andaman Adim Jan Jati Vikas Samiti (The Andaman Tribal Welfare Society), AAJVS, and the administration has encouraged the Onge to change their traditional lifestyle and move into settlements created for them. It is still a blatant attempt of the settlers to have an easy access to the land and timber of the island (Sekhsaria 1999b). Doles were offered to the Onge by the AAJVS – milk powder, rice, dal, bread, biscuits, even tobacco at the rate of 250 gms per adult. Thus the Onge have been systematically weaned away from their nutrient rich, traditional diets and have become increasingly dependent on the government handouts to meet their needs (Sekhsaria 1999b). The settlers even introduced liquor to these people. Thus they have become susceptible to exploitation. Precious resources like honey, resins, ambergris and turtle eggs are now exchanged by them for the ubiquitous bottle popularly known as 180.
- The “contact efforts” of the Andaman Adim Janjati Vikas Samiti (AAJVS), anthropologists and police officials to establish friendly contact with the Jarawa community, and leaving behind gifts of bananas and coconuts, tobacco, etc., have been looked by the critics as “scattering rice to ensnare birds”. They argue that these efforts are aimed at making them “dependent on the administration” (Sekhsaria 1998:70).

(c) *Forest Department & its Role:*

- The role of the Forest Department is far from satisfactory. The story started way back in the 1960s when the Government of India planned a massive colonisation programme for the Union Territory of the Andaman and Nicobar islands in complete disregard for the rights of the aborigines over there. A 1965 plan for Little Andaman, proposed the felling of nearly 40% of the island’s forest for the settlement of 12,000 families, and to promote the commercial plantations, such as red oil palm and timber based industries in order to support the settler population (Sekhsaria 1999a:68).
- The government team that was in favour of the development programme ignored the Andaman and Nicobar Protection of Aboriginal Tribes Regulation (ANPATR), which had in 1957 accorded the status of tribal reserve to the entire island of Little Andaman. Besides, about 20,000 hectares (30%) of the island was denotified from its tribal reserve status in two stages, in 1972 and 1977, still leaving 52,000 hectares as an inviolable tribal reserve.
- The Forest Department leased out 19,600 hectares from the denotified area to the Andaman and Nicobar Forest Plantation and Development Corporation (ANFPDC), which is the sole agency responsible for timber extraction there. In 1976, the ANFPDC presented its Project Report for Logging and Marketing of timber from the forests of Little Andaman. It was estimated that a total of 60,000 hectare of the island was available for logging and that 60,000 cubic metres of timber could be extracted annually from 800 hectares (Sekhsaria a:68).
- If 52,000 hectares of the island’s total area of 73,000 hectares was already a tribal reserve, how could 60,000 hectare be made available for logging? The Corporation should have limited its operation to the 19,600 hectares that had been leased out to it. With 1,600 hectares being under red oil palm plantation, the actual area for logging was even less, at 18,000 cubic metres of timber from an area of 240 hectares annually. The average for the actual logging over the last two decades,

however, is much higher, at 25,000 cubic metres of timber from an area of 400 hectares annually. Instead of complying with the Supreme Court order to stop logging, the Forest Department has justified the logging on the basis of its 1976 project report. Significantly, the Deputy Conservator of Forests – Working Plan (DCF-WP) of the Andaman and Nicobnar Forest Department was busy preparing a working plan for the forests of Little Andaman (Sekhsaria a:68).

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Pankaj, Sekhsaria, "Tribal Trauma – the Andamans Story", THE HINDU, Sunday, June 6, 1999. _ It has not been established that these primitive tribes practised cannibalism and were involved in trade.

But there are no mines of gold in these islands. These informations are valid for the general population in the islands other than the four primitive tribes. Whereas the Great Andamanese and the Onges have yielded to the outside pressure and are involvement in the economic and social enterprises of the non-tribes, the Jarawa and the Sentinelese have been totally isolated and hostile. _ This initiative of the Government, which has already been started by the department of Tourism, has further escalated tension between the aborigine tribes and the 'outsiders'. Developing certain islands as tourist resorts necessarily implies acquisition of the tribal land. The surviving tribes further being confined to their isolated islands are reacting to these developments by attacking the workers of the road-construction and any strangers for that matter.

The table shows a very high percentage of literacy in the urban and the rural population. Where are the tribes? How to develop the tribes without harming their socio-cultural fabric of their life? If the Government and the Government-sponsored agencies are unmindful of these elements could some sympathetic NGOs make concerted efforts to do the same?

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IDENTIFICATION OF THE THREATS FACED BY THE ANDAMAN TRIBES AND THEIR SOURCES

A land of paradoxes! A Rich Land with the poor 'vanishing' Indigenous Tribes! That is how the Andaman Islands can be described. It has everything – rich flora and fauna, the sea all around, the unexplored minerals, and above all a rich cultural heritage of the indigenous populations. Civilization has not yet dawned upon them. So long as they were beyond the reach of the so-called 'culture' and 'civilization', they had been able to sustain themselves. The moment the colonizers and their successors tried to 'civilize' them, their number started to decline. This is not a cooked up story. It is unfortunately the reality. Whereas on the one hand a lot of incentives are given to the settlers for exercising their mastery over nature in terms of their control over land, sea, rivers and forest, the indigenous tribes are so much pushed to the brink, they have no choice but to come out of their hiding, begging for food. It is, in fact, at the cost of the Indigenous people that the settlers thrive. The dangers that a community faces can be both internal and external. In the case of the Great Andamanese, the Onge, the Sentinelese and the Jarawa, it is the external hegemonic, oppressive, Mafia agencies pose the biggest challenge to their physical survival leave alone cultural, social and political.

On the basis of the information available we can now identify the threats to the four remaining or 'vanishing' tribes of the Andaman Islands at different fronts.

Deforestation: One of the social workers in the Andamans James William, who has lived and worked in the islands for five years, reports that the main threat to the indigenous tribes is the environmental destruction not only by way of deforestation but also by damaging the seashore. According to him the entire forest is being indiscriminately felled. There is no settlement of the land. Rare animals, plants and bird species are disappearing. There is no proper re-forestation to replace the trees cut for commercial purposes. The forests are being cleared to settle people. This process has not only depleted the forest cover but has also helped the acceleration of the diseases like malaria, as cleared forests have become breeding sites for mosquitoes.

Encroachment: There is encroachment of the common property resources by three main agencies – the State, the Officers and the Settlers. The three seem to be hand-in-glove with one another. The State, according to its whims and fancies, is appropriating lands for various so-called administrative purposes and settling the outsiders. The settlers who are mainly the Bengalis, Malyalis, Tamils, Goans, and so forth, take it as their birthright to acquire land for their settlement and cultivation. The officers who represent the government and are basically settlers themselves, misuse their power and position to acquire tribal lands to serve their own interests rather than working for the welfare of the Indigenous tribes.

Tourism: As far as tourism is considered government has high claims but except for the construction of the expensive guest houses and hotels nothing much has been done. These expensive hotels and mansions are put up at the cost of the indigenous population. Not much has been done to foster tourism though a lot of land has been grabbed by the administration for the same. Flight and voyage are too expensive for common people. Hence, tourism industry has become a monopoly of the rich and the high.

According to the Annual Report of the Ministry of Home Affairs-1997-98, based on the recommendation for the UNDP/WTO study team, necessary action for construction of beach resorts, development of beaches, water sports activities, man-power, planning and training, setting up of tourism development authority and effective mode of communication had already been taken up in the current year. India Tourism Development Corporation for Andaman & Nicobar Administration has plans for the expansion of the tourism industry in these islands to increase the foreign exchange. As a result hotels and travels to the islands are expensive and far beyond the reach of common man. All foreign nationals require prior permission from the Ministry of Home Affairs, Government of India for visiting any place in the Island for a period beyond 15 days. For visits within the Port Blair Municipal Area, Jolly Buoy and Cinque Islands, a foreign national could obtain permission from the following authorities for a period of 15 days for tourism purpose only: (i) Indian Mission outside India, (ii) Foreigners' Regional Registration Officers at Delhi, Bombay and Calcutta, (iii) Chief Immigration Officer, Madras, and (iv) Immigration Officers at the Immigration Check Post in the Airports at Delhi, Bombay, Calcutta, Madras

and Port Blair. Foreigners are, however, not allowed to visit the tribal areas and certain other restricted areas.

Those interested in photography and investigation inside a sanctuary or a national park, need to obtain permits from the Chief Wildlife Warden. Taking pictures of the airport, government dockyards, defence establishments, naval wharf, Dhanikari Dam and Chatham Saw Mill is strictly prohibited. Surprisingly until recently hunting wildlife was permitted on showing a valid license. In order to transport any wild animal, trophy or article outside the islands, a transit pass had to be obtained from the deputy Conservator of Forests, Wildlife Division, Port Blair. This was widely misused for hunting, resulting in the extinction of the wild animals, birds, etc. With specific permits obtained from the Fisheries Department, carrying sea fans and seashells exceeding 10 pieces were allowed.

Thus there are laws, but there are too many loopholes as well. And most of the time it is the protectors of the law who are responsible for breaking it. The indigenous people who were the erstwhile masters of the land have now become paupers in their own territory. Those who used to go about with bows and arrows hunting for their livelihood, cannot even carry their traditional weapons today. Those who taught the world about the sustainable management of natural resources are themselves on the verge of extinction. On the contrary, the outsiders, the settlers have the modern know-how and they are flourishing in the islands. The administrators, the forest officials and the police, in the past as well as at present, have sided with the rich and the powerful and the poor have nowhere to go.

Welfare Measures: According to the Annual Report 1997-98, during the year 1997-98, an outlay of Rs. 2,010.00 lakhs had been allotted for construction of 10 kms. rural roads, 10.50 kms. trunk road and 1.5 km. of new link road in Port Blair Head Quarter area, in addition to improving 20 km. of fair weather road to all weather road and construction 5 permanent bridges. The expenditure up to December 1997 was Rs. 1,468.97 lakhs. The works were in different stages of progress.

It is true, basic amenities and facilities are required for the inhabitants of the islands, but the nature of development is oriented towards the safety and security of the settlers alone. From the point of view of the four indigenous tribes of the Andamans, these roads and bridges do not matter at all. The question therefore is – development from whose point of view? From the point of view of the indigenous tribes or from the point of view of their exploiters? Though Government has allotted funds for the welfare of these tribes as well, but besides abortive contacts with some of these hostile tribes and a few welfare measures that basically benefit the government machinery itself, nothing extraordinary has been done. In the name of the tribal welfare the money allotted is being channeled to those already affluent. Tribal students mainly from Nicobar islands are benefiting from the government schemes to some extent. According to the provision of the government the tribal students undergoing higher education are supposed to be reimbursed all hostel expenditure in the form of scholarships. Besides, tribal students should also be paid scholarship at the rate of Rs. 150/- per month. A scholarship of Rs. 65/- per month was to be paid to the students at post matric level. At the elementary and secondary education stages, incentives like free uniforms, free stationery, free books, attendance scholarship at the rate of Rs. 10/- per month for boys and Rs. 15/- per head per month for girls, free travel concession and mid-day meals were to be provided. This works very well in the paper. In practicality very little percolates down to the real beneficiaries. According to the five observers who have worked in the Andaman and Nicobar islands for five to seven years, government officials are pocketing the money meant for the indigenous tribes.

Government has also funds for social welfare and health and family welfare. The Annual Outlay for Medical and Public health for the year 1997-98 was Rs. 15.59 crores and the expenditure up to December 1997 was Rs. 10.45 crores. A scheme named "Planned families by 2000 AD" had been implemented during the current year 1997-98. The Administration had also initiated action to constitute a separate Health Centre for Non-CHS doctors of this territory. During the year 1997-98 an outlay of Rs. 175.00 lakhs had been provided under sub-sector Social Welfare against which an amount of Rs. 22.90 lakhs had been spent up to December 1997. Similarly, against the budgetary allocation of Rs. 55.00 lakhs under the Nutrition sub-sector Rs. 25.45 lakhs had been utilized up to December 1997. But again,

much of the money was eaten up by the rotten corrupt system and its tainted officers. Thus the dreams of the indigenous tribes to see the light of day still remains too far-fetched to be realized concretely.

In field of education, the Annual Plan provision for the year 1997-98 was 3,314.00 lakhs out of which Rs. 1,455.07 lakhs had already been spent up to December 1997. Schooling facilities had been provided at least in the paper in almost all the habitations of the territory. The education department is said to be catering to the need of the entire population of this Union Territory through a total of 344 Educational Institutions from pre-primary to degree level. Action is said to have been initiated for setting up two Ashram Schools in Tribal area, 24 Non-formal Education Centres, 20 Pre-Primary Schools and 15 Primary Schools. In addition, it is supposed to have a plan to upgrade the existing educational institutions - 10 Primary to Middle Schools, 4 Middle to Secondary Schools and one Secondary to Senior Secondary School. In the paper it all looks so lucrative but the fact is that the indigenous tribes are still a neglected lot.

Rampant corruption has left the islands the inhabitants still marginalized. The Government allocates so much money for the uplift of the tribes but much of it is consumed by the P. W. D. in collaboration with the contractors who get contracts for buildings, roads and forests without any sensitivity to the indigenous people and their culture. In various governmental programmes and projects the cultural elements of the indigenous population are not taken into consideration. And the history of the tribal development and welfare schemes has shown us that unless and until they are taken into account a welfare measures, however genuine they may be, will not succeed.

Assimilation of the Tribes in the Mainstream: The efforts of the government and the anthropologists have been to assimilate the tribes into the national mainstream. Contact parties have been organized in the past and these efforts are still continuing. Even force has been used to subdue the tribes and force them to accept the modern civilization. In the past tribal settlements have been attacked and their property destroyed. They have even been murdered. Some tribals from among the Great Andamanese and the Sentinelese are found to be in the state police or in the government as class IV employees. It has been reported that aware of their plight they have tried to lodge complaints with the higher authorities even at the cost of their lives. Thus physical violence has become a common means to exercise control over the local indigenous people. The Constitutional safeguards are many but the executors of the law themselves have become the defaulters.

According to the observers, public life is marred by party politics, nepotism, and corruption. When somebody reaches the officer's post he tries to make up for what he had to pay as bribe for his job. Threat is only for the tribes and the labourers and the weaker sections in the Andamans social hierarchy. Those at the bottom are not allowed to come up. Heavy amount of bribe is not possible for the ordinary people even if they are qualified.

The Great Andamanese were befriended by the outsiders following the establishment of the British Penal Colony in 1858. The British used the Great Andamanese for searching convicts who escaped from the cellular jail and in fighting other hostile tribes in the islands, particularly the Jarwa. An Andaman home was established to "educate" and "civilize" the Great Andamanese

The role of administration

What is the role & function of the administration in protecting these indigenous people? What is the role & function of the administration in abetting the forces that threaten the survival of these indigenous peoples?

The islands are allotted huge amounts of money but only small portions are being utilized. Mighty little is reaching the poor indigenous tribes. Why should they still go naked? A large sum is given to feed and clothe them, still they go hungry. As a result the tribes have to come to the jetty begging. Where does that large sum vanish? One can count these indigenous people in fingers and yet they cannot be fed by the administration. One of the reasons as to why even the Jarawas have come out on the roads asking the passengers to give them something to eat. Earlier, as we know, these people were violent, but now they

have been tamed by the modernizing forces. If deforestation and destruction of the environment were controlled, the Jarawa would not have to go round begging from the outsiders.

Role & Function of State Institutions

The Anthropological Survey of India: They have not been able to adequately survey the entire island due to inaccessibility. The Census reports on the composition of the population and the religions of the people therein are faulty. The religious affiliations of the indigenous tribes are not specified.

Andaman Adimjati Vikas Samiti: According to the observers in the Andaman and Nicobar Islands, this organization has achieved little. In fact nothing substantial has been achieved. More details of this organisation will be given later. This observation was made by James William who has worked as a social worker in the Andaman and Nicobar Islands for six years.

Forest Department: Those responsible for the forests are migrants. They destroy more than they can protect. They are erecting quarters. Much timber goes waste. They do not allow people to touch them. They themselves have a share in the hunt but do not allow people to even touch the animals. Deer, crocodiles, turtles, birds are fast disappearing.

Forest Cover and the Forest Department: The data below in various tables give us an idea of how much forest cover the Andaman and Nicobar Islands have in comparison to that of the entire country and the rate at which the forest cover are being depleted every day.

Table – 1

Geographical area (GA), recorded forest cover (RFC) & actual forest cover (AFC) of various states/ Union Territories (UTS) of India (Sq. km.): 1997 assessment

GA	RFC	% age of RFC to GA	AFC	% of AFC to G. A.	% age of AFC to RFC	Reserved forest	Protected forest	Unclassified forest
8249	7171	86.93	7613	92.30	106.16	2929	4242	-----

Source: Mo EF. 1997. The State Forest report, pp. 11-12. Dehra Dun: Forest Survey of India. Ministry of Environment & Forests According to the 1997 assessment of the state forests by the Ministry of Environment and Forests, the geographical area was 8249, recorded forest cover was 7171 and the percentage of the recorded forest cover to geographical area was 86.93%. But the actual forest cover was 7613 sq. km., that is more than the recorded forest cover. Therefore the percentage of the actual forest cover to geographical area was 92.30%. the percentage of the actual forest cover to the recorded forest cover was 106.16%. the reserved forest was 2929 sq. km., whereas the protected forest was 4242 sq. km.

The table below shows a comparative assessment of the forest cover between 1995 and 1997.

Table – 2

Comparison of forest cover (sq. km.): 1995 & 1997 assessments

1995	1997	Change in forest cover
7615	7613	-02

Source: Mo EF. 1997. The State Forest Report, pp. 11-12. Dehra Dun: Forest Survey of India. Ministry of Environment & Forests In 1995 assessment the total forest cover of the Andaman and Nicobar islands was 7615 sq. km. Which became only 7613 sq. km. In the year 1997. Thus there was a depletion of two sq. km. Forest cover in just two years. It is likely that unofficially this depletion could have been much higher than this. It is very interesting to note different types of forests in the Andaman and Nicobar Islands that are shown in table - 3 below.

Table - 3**Extent of Dense forest, Open forest & Mangrove (sq. km.): 1997 assessment**

Dense forest	Open forest	Mangroves	scrub	Non-forest	total
6520	127	966	-----	636	7613

Source: Mo EF. 1997. The State Forest report, pp. 11-12. Dehra Dun: Forest Survey of India. Ministry of Environment & Forests It should be noted that the total dense forest as recorded in 1997 was 6520 sq. km, the open forest 127 sq. km., the mangroves 966 sq. kms., and non-forest 636 sq. kms. Thus there was a total cover of of 7613 sq. kms.

Critical Review of the Missionaries' Activities

They are mainly working in the Nicobar island. They are involved in the contact work and education. They need to be immersed into the culture of the people. But there is no headway. They need to collaborate with the NGOs to make the Andamans Islands a better place for the Tribes to live in.

Some of the missionaries who have been in these islands for the last six years observe that there is need to adopt and educate them without disturbing their culture. If they are not helped to adapt to the changing circumstances and prepared for the coming challenges of modernity they will soon be extinct. There is need to learn their languages, customs, lifestyle. Introduce them to better living standard. Let them not be like creatures of a zoo or objects of anthropological research who are only meant to be studied and not treated as human beings. Why should they be kept 'protected' as in zoos. Give them facilities to progress in life.

The laws as the Andaman and Nicobar Protection of Aboriginal Tribes Regulation, 1957: they have protected the Nicobarese and helped them but others have not benefited from these laws.

Policies as the National Forest Policy: forests are not preserved. There are no new forest areas. Contractors have damaged trees. Valuable trees are disappearing.

Plans as the Master Plan <1991-2021> for Welfare of Primitive Tribes of Andaman & Nicobar Islands: Some plans and policies are good sounding but their implementation is not sincere. Evaluation, reevaluation is very much needed.

Tourism Projects: only new construction of a good landing strip; flight is so expensive that it discourages many tourists. Ships are less frequent than needed. Guest houses must become attractive (they only look). A lot of development is needed especially in transport and communication.

The settlers consider themselves a privileged class. They are not so enthusiastic about sharing th rights and privileges. They look at others as threats to their privileged position. Their social organizations & attitude towards indigenous people are that they are confined to their own social groups. They are not broad-minded. They are not much concerned about others. Their primary concern seems to be voters' number. If they do not vote for them they are ignored. So indigenous people are not much of their interest and concern as they are not cultured enough to use their franchise.

Contact persons especially for the Jarawa are not trained or qualified. One needs tact and selflessness. The tribes especially the Great Andamanese are cheated and exploited. They are not looked after well. They have tried to contact them but there have never been serious efforts to uplift them. They would prefer to keep the indigenous people as they are – in the forest, uncultured. Will it really take ages to bring them to civilisation? They are left to remain backward. These are capable of learning. They pick up fast.

In the Independent India the Government Policy of 'colonisation' was implemented in 1960's. thousands of settlers from mainland India were brought in, totally disregarding the rights of the indigenous communities.

A short term suggestion for their welfare will be to let them consider them as genuine human beings and not as museum pieces or creatures in wild life sanctuaries. Give them proper security. Give them all possible amenities, above subhuman level. A long terms strategy could be in terms of preparing them for roles or trade, employment. Prepare them to integrate them into governing and decision making process help them to stand on their own feet for heir own rights. Enable them to qualify for a job (good education). Teach then agriculture, job opportunities, self-help (employment), farming and not just hunting.

The main problems faced by the tribes are in terms of Security, threats, food, education, employment, clothing, shelter ,etc. Alienating programme, proper drinking water.

diseases such as (i) Epidemics of pneumonia in 1868, (ii) Measles in 1877, (iii) Influenza in 1896, and (iv) Syphillis, almost wiped them off. Their addiction to tobacco and liquor took heavy toll. Their population has come down to only 28 now from an estimated 5,000 in the 19th century.

Their number is diminishing. Officials should be alert and sensitive to their need and conditions, miseries. If we study the statistics of the Tribes of the Andamans we discover that what we find in books or papers are not accurate. They are Indians, genuine aboriginals, indigenou. They have always been on the receiving end ever since their contact with the British.

**Table -
Tribal population in Andaman & Nicobar Islands (1981)**

Sl. No	Tribes	1901	1911	1921	1931	1941	1951	1961	1971	1981
1	Andamanese	625	455	209	90	----	23	19	24	26
2	Jarawas	468*	114*	114*	70*	----	50	500*	----	31
3	Sentinelese	117*	117*	117*	50*	-----	----	50*	-----	---
4	Onges	672*	631*	346*	250*	----	150	129	112	97
5	Nicobarese	5962	7991	8248	9589	12252	11902	13903	17874	21685
6	Shom Pens	348*	375*	375*	200*	-----	20	71	92	223

* Estimated population The analysis of the demographic changes of the Andaman and Nicobar Islands in the nine censuses from 1901 to 1981 is interesting. Owing to the hostility of some of the tribes their estimated population only could be given. Whereas the population of the Nicobarese on the whole has increased except in 1951, the number of all the tribes has invariable increasingly decreased. However, the estimated numbers may not necessarily be close to their real number. But the fact is that their number has gone down due to various reasons.

**Table -
Break up of the Religious community & the sex ratio**

Religious community	persons	males	females	Sex ratio (female per 1,000 males)
Buddhists	127	93	34	366
Christians	48,279	26,935	21,339	792
Hindus	121,793	69,933	51,860	742
Jains	11	5	6	1,200
Muslims	16,188	8,973	7,215	804
Sikhs	991	543	448	825

Census of India, 1991 The table above is an expression of the general attitude towards the indigenous tribes of the Andaman and Nicobar Islands. The census enumerators have elsewhere enumerated the estimated number of those tribes who due to their hostility could not be counted. But ironically their religions which are basically tribal religions, could not find a column in the census charts. Does it mean that their number is returned as Hindus as in the case of some other tribes of India who due to dubious

reasons are clubbed with the Hindus. Here it should be clear that the tribes of India were never Hindus, nor are the tribes of Andamans Hindus.

NAVY BASE

The Indian Express, New Delhi, November 10, 2000: the Government has already announced setting up of a tri-services command on the strategically located Andaman and Nicobar islands. It is projected as a clear signal to clamp down on increasing arms and narcotics running by insurgent groups through sea lanes in the bay of Bengal.

The Indian Express, New Delhi, November 11, 2000: The Andaman tribes seem to be facing all odds, so much so that even the protectors of the vanishing tribes, the government machinery and the government policies, all seem to be going against the helpless tribes who are caught unawares of the impact of the so-called 'civilization' and 'domestication' drive. The government decision to install a Tri-services command in Andamans has already become controversial not only among the inhabitants of these islands but also among the human rights activists as well. The Government claims this will help the country in its "look east" policy. But this is far from convincing. The threat perception is being looked at more as a lame excuse to expand its military base rather than anything else.

The rationale for increasing the forces in the Andamans is to protect the 300 odd uninhabited islands along with the Malacca Straits as many trade ships pass through this strait than that through the Suez Canal and the Panama Canal, as reported by Rear Admiral (retd) Raja Menon. Another reason for the reinforcement of the naval base in the Andaman islands as reported in the Naval Headquarters is, to protect the trade route. It is alleged that this part of the country has become a haven for "gun running, smuggling, piracy on high seas, narcotics trade and the use of some of the uninhabited islands as dumping grounds by the LTTE, Mynamarese rebels and now even suspected Indonesian rebels".

The Navy has not yet been given the overall command of the new dispensation in the Andamans. At present, the Andaman islands and the region are protected by Fortress Commander Andaman (FORTAN), a Vice-Admiral. There is a brigade of the Army under him. But the Indian Air Force (IAF) operates independently in consultation with the FORTAN. There is also an amphibious unit of the army for seaborne operations. The IAF also has a helicopter unit in the Nicobar islands and a liaison unit in the Andaman islands.

The implications of the increased force level are the availability of more men and material at the disposal of the Command, including more helicopters, gunships and even fighter aircraft. When the new tri-services command is set up, three star generals of the Army, Navy and the Air Force will command on rotation.

The naval establishment in the islands will also help India to forge closer ties with the Indian ocean rim countries in its long term plan to emerge as the dominating power in the region. Joint exercises with the navy of Japan, Indonesia among other countries like Vietnam and engaging neighbours like Myanmar are all a part of the "look east" policy. Recent courting of Myanmar is an indication that India's foreign policy with the "friendly" neighbouring countries will be to have them as her allies to counter any effort to destabilize the country by the hostile neighbours.

Economic reason is given as the main rationale to have a revision of the previous policy. Malacca Straits is said to be the busiest trade route and is affected by piracy and smuggling. The trade route passes barely 30 miles from the Indian territory. If the Navy Base comes to a reality, the menace created by the smugglers will be contained and will help tilt the trade in India's favour.

The increased Army strength will protect and patrol the islands. The idea is also to keep China out of the Indian Ocean Region as China is present in the Mynamarese Coco islands as well.

Forestry

According to the Indian Council of Forestry Research & Education, Dehra Dun, ICFRE (1995:137), the statewise details of data on sawmill, production of timber and poles, production of firewood and bamboo, sal seeds and tendu leaves gums and resins, canes and other NTFP, etc., for VIIth and VIIIth Five Year Plans, were not available.

Table -

Distribution of geographical area and actual forest cover (1995:23)

Geographical area (sq. km.)	Actual forest cover (sq. km.)	Actual forest cover as % of geographical cover
8249	7624	92.4

Indian Council of Forestry Research & Education, Dehra Dun, ICFRE According to the Indian Council of Forestry Research & education, the total geographical area of the forest cover was 8249 sq. km. whereas the actual cover was 7624 sq. km. The actual forest cover as percentage of geographical cover was 92.4%.

Table -

Per Capita Forest Cover

Population ('000)	Actual Forest Cover (sq. km.)	Per Capita Forest Cover (ha)
281	7624	2.71

Source: SFR, 1993, F.S.I. & Census of India 1991.

According to SFR 1993 & Census of India 1991, the per capita forest cover was 2.71 hectares. The next table shows the recorded and actual forest cover-comparative situation of the Andaman and Nicobar Islands to the All India forest cover and their percentage.

Table -

Recorded & Actual forest cover-comparative situation

(Area in square km.)

	Recorded forest area	actual forest cover – 1993 assessment	Percentage (col. 3 to col.2)
A & N Islands	7171	7624	106.32
All India	753005	640107	85.01

Source: SFR 1993, FSI & SFD

The recorded forest area in the Andaman and Nicobar Islands was 7171 sq. km. Whereas it was 753005 sq. kms. at the all India level. The actual forest cover in 1993 assessment was 7624 sq. kms. as far as the Andaman and Nicobar Islands were concerned, whereas it was 640107 sq. kms., at all India level. Thus the Andaman and Nicobar Islands had the 106.32% of the total forest cover available elsewhere in India. Thus the All India forest cover was only 85.01% when compared to the forest cover of the Andaman and Nicobar Islands.

According to the India 1998, the forests cover 7,171 sq. km of the total area of the islands. All types of forests are found in the islands, such as giant evergreen, hilltop evergreen moist, deciduous littoral and sub-mounting swamp forest. A large variety of timber is found in the Andaman group of islands. The most valuable timber is padauk and gurjan. These species are not found in Nicobar. Recently, there is an increase in the forest cover in these islands and now more than 91% land is under forest.

Table -

Financial targets & achievements under afforestation schemes since the 7th Five Year Plan

1985-86		1996-87		1987-88		1988-89		1989-90		1990-91		1993-94		1994-95	
(A)	(U)	(A)	(U)	(A)	(U)	(A)	(U)	(A)	(U)	(A)	(U)	(A)	(U)	(A)	(U)
136.20	104.20	122.00	127.54	143.50	153.36	259.50	259.50	245.00	112.95	239.16	96.21	114.85	127.60	127.50	

A + Allocation U = utilisation Source: NAEB, Min of E & F of India, New Delhi.

Wildlife Sanctuaries in India 94, area (sq. km.) – 455.48 National Parks – 6 (sq. km. 315.61)

- Marine
- Middle Button
- Mount Harriet
- North Button
- Saddle Peak
- South Button No. of national parks, sanctuaries & their area

National parks	6
Sanctuaries	94
Total protected area (sq.km.)	775.99

Source: DiG. Wildlife. Ministry of Environment & Forests. New Delhi.

Assistance for development of sanctuaries & national parks during VIIIth plan scheme

1987-88	12.60 (lakhs)
1988-89	6.61
1990-91	0.47
1991-92	}
1992-93	} N A
1993-94	}

Source: Director. Project Tiger. Bikaner House. and New Delhi.

Statewise breakup of wildlife sanctuaries

Total G. A. (Geographical area)	Total F. A. (Forest area)	% age FA/GA	No. WSs (wildlife sanctuaries)	Area WSs	% age WS/GA	FAC of WSs	%age FAC/FA
8249	7171	86.93	94	460.38	5.58	460.38	6.42

Source: Protected Areas for biodiversity conservation in India Problem & Prospects. Paper for T.E.R.I. UF Workshop I.F.M.E.R., Feb 1994 & SFD.

STATEWISE BREKUP OF NATIONAL PARKS

Total G.A.	Total F. A.	% age FA/GA	No. NPs	Area NP	% age NP/GA	FAC of NPs	% age FAC/FA
8249	7171	86.93	6	315.61	3.83	34.11	0.48

Source: Protected Areas for biodiversity conservation in India Problem & Prospects, Paper for T.E.R.I. UF Workshop I.F.M.E.R., Feb 1994 & SFD.

State-wise breakup of protected area

Total G. A.	Total F. A.	% age FA/GA	No. PAs	Areas P As	% age PA/GA	FAC of PAs	% age FAC/FA
8249	7171	86.93	100	775.99	9.41	494.49	6.90

Source: Protected Areas for biodiversity conservation in India Problem & Prospects, Paper for T.E.R.I. UF Workshop I.F.M.E.R., Feb 1994 & SFD Statewise commercial production of plywood since 1988

(in sq. mt. – 4 mm. Basis)

No. of units	Capacity in sq. mt.	1988	1989	1990	1991	1992	1993
2	8056654	5989248	63770720	6543846	6513000	6574651	6458697

Source: Federation of India Plywood & Panel Industries

According to the TERI ENERGY DATA DIRECTORY AND YEART BOOK 1998-99 (1998:243), "WIDE DISPARITY EXISTS WITHIN THE COUNTRY ON THE EXTENT OF FOREST COVER. WHILE FORESTS IN THE Andaman and Nicobar Islands occupy as much as 86.9% of the total geographical area, in Haryana they account for only 3.8% of the total land. States like Arunachal Pradesh, Himachal Pradesh, Manipur, Mizoram, Nagaland, and tripura have over 50% of their land area under forests, while Gujarat, Jammu and Kashmir, Punjab and Rajasthan have less than 10%. The forrest area in other states ranges between 10% and 50%."

According to the Census of India 1981, the lists of Scheduled Castes and Scheduled Tribes, notified by the President in 1950 were revised by the Scheduled Caste and schedule Tribes Order (Amendment) Act, 1956. With the reorganisation of the states in 1956, the orders were further modified by the Scheduled Castes and Scheduled Tribes list (Modification) Order, 1956. According to the Constitution (Andaman & Nicobar Islands) Scheduled Tribes Order, 1959 notified for this Union Territory, there are 6 Scheduled Tribes in these islands and only these tribal countries are entitled to be enumerated as Scheduled tribes at the census in this Union Territory. According to that order the following tribes in these islands are recognised as Scheduled tribes in the areas specified therein:

This order may be called the constitution (Andaman & Nicobar Islands) Scheduled tribes Order, 1959.

The tribes or tribal communities or parts of or groups within tribes or tribal communities, specified in the schedule to this order shall for the purpose of the Constitution be deemed to be scheduled Tribes in relation to the union Territory of the Andaman and Nicobar Islands so far as regards members thereof resident in the localities specified in relation to them in that schedule.

The Schedule:

I. in the Andaman Island:-

1. Andamanese including Chariar or Chari, Kora, tabo or Bo, Yere, Kede, Bea, Balawa, Bojigiyab, Juwai and Kol
2. Jarawas
3. Onges
4. Sentinelese

II. In the Nicobar Islands:-

1. Nicobarese
2. Shom Pens

On the 1st of March 1981, the population of this Union Territory was 188,741 consisting of 107,261 males and 81,480 females as against 115,133 persons in 1971, consisting of 70,027 males and 45,106 female. The Andaman and Nicobar Islands ranked 28th in terms of 1981 population with the density of 14 persons per sq. km. In 1981, there were 51,941 census houses and 40,671 households. In 1981, only one urban unit, i.e., Port Blair in the whole of Andaman and Nicobar Islands which accounted for 26.30 % of total population and remaining 73.70% population resided in rural areas.

FISHERIES

As against the total allocation of Rs. 440.00 lakhs under Plan for the year 1997-98, an expenditure of Rs. 151.66 had been incurred up to December 1997. As a result of the implementation of various schemes during 1997-98, there was an increase in fish landing. 15,705 tonnes of marine fish was landed by the private fisherman and tribals upto November 1997.

INDUSTRY

There are 1,119 registered small scale village and handicrafts units, besides four medium sized industrial units. Recently promoted engineering units are engaged in the production of saw dust, briquettes, polythene bags, PVC conduit pipes and fittings, paint and varnishes, fibre glass and mini flour mills, soft drinks and beverages, steel furniture as MS barrels, aluminium doors and windows, etc. small scale and handicraft units are also engaged in shell crafts, bakery products, rice milling, furniture making, oilseeds crushing, etc. the Andaman and Nicobar Integrated Development Corporation established in 1988, has started its activities in the field of civil supplies, tourism, fisheries, industries and industrial financing.

AREA, POPULATION AND HEADQUARTERS OF DISTRICTS

District	Area (sq. km)	population	Headquarters
Andaman	6,408	2,41,453	Port Blair
Nicobar	1,841	39,20	Car Nicobar

HISTORY AND GEOGRAPHY The Andaman and Nicobar Islands, an Union territory, are situated between 6* and 14* North latitude and 92* and 94* East Longitude. This group of 572 islands/islets lie in the Bay of Bengal 193 km from cape Negaris in Burma (myanmar), 1,255 km from Calcutta and 1,190 km from Chennai. Two principal group of islets are Ritchie's Archipelago and Labyrinth islands. The Nicobar islands are situated to the south of Andamans, 121 km from Little Andaman island. There are 36 inhabited islands, including 24 in the Andamans and 12 in the Nicobar District.

The original inhabitants of the islands lived in the forests by hunting and fishing. There are four Negrito tribes, viz., the Great andamanese, the Onge, the Jarawa, and the Sentinelese, in the Andaman group of islands, and two Mongoloid tribes, viz., Nicobarese and Shom Pen in the Nicobar group of islands. Among these, the Jarawas and the Sentinelese have not yet learnt the concept of covering their bodies.

The modern history of the Andaman and Nicobar Islands begins with the establishment of a settlement by East India Company in 1789. However, in 1796 this settlement was abandoned. Following the first war of Indian Independence in 1857, the British India Government founded the penal settlement in these islands in 1858, primarily known as Kalapani, for the transportation of mutineers, political prisoners and dreaded criminals from the mainland India which continued till the second World War. During the Second World War, the Japanese forces occupied the Andaman and Nicobar islands in 1942. Further, following the surrender of the Japanese forces in the Second World War, the British India Government reoccupied these in 1945 and continued their administration of these islands till the Independence of the country in 1947.

Atrocities on the Jarawa Tribe

It has been often alleged that the Jarawa are hostile by nature, attacking people from other tribes or communities. The picture painted of the Jarawa is one of naked, carrying bows and arrows, ready to shoot anyone and everyone. But that is not the whole truth. It has been observed that the Jarawa are not hostile by nature and that they do not attack anyone without reason. They attack only in self defence or retaliated when they felt that the 'outsiders' were encroaching upon their resources endangering their own very existence. The following pages try to substantiate through various anecdotes and events the above argument. Jayant (1990) reports that the Jarawa and the non-Jarawa encounters are not very uncommon. Ever since the British tried to establish friendly contacts with the Jarawa during the years of the second penal settlement (1858-1946) and later on by the authorities of the Andaman Administration, no real headway was made during a period of more than a century. The great Andamanese and the Onge were friendly, towards outsiders. The Jarawa maintained a tense relationship with all non-Jarawa. If we seriously ask why always a conflictual relationship prevailed between the Jarawa and the non-Jarawa we find a startling answer.

1. The Jarawa situation during penal settlement: Earlier a more friendly relationship prevailed between the Jarawa and the British, so much so that the Jarawa were more friendly than the Onge or the Great Andamanese. During the first settlement Colebrooke (1789-90) and Blair (1789-96) came in contact with the Jarawa. Their identity as a separate tribe was not known. Colebrooke met the Jarawa in December 1789 at Dandas point, kept a wounded person on the ship Ranger for three weeks, also went up the Bumlitan creek as far as Bumlitan and met another Jarawa and at Mount Pleasant hill near Viper Island met another Jarawa, who exchanged his bow and arrow for a knife. At Dandas Point he again met the same Jarawa with a woman and a girl and once again found him friendly (Andaman and Nicobar Gazetteer, 1908:31).
2. But during the second penal settlement, efforts to make contacts were futile. The Jarawa had become hostile. It is surprising that the friendly disposition of the Jarawa of 1790 had turned hostile over a span of 70 years or so. The penal settlement was first established at Chatham Island in 1789. But was wound up in 1796. The Jarawa living near the present Dandas Point and Bumlitan near the creek were not particularly affected. The second penal settlement was established in 1858 in Ross Island. Initially the Jarawa were not affected by the establishment of the penal settlement. The Great Andamanese also had to suffer on account of the Penal settlement. Frequent incidents of fighting became a routine. The British were busy making reconciliatory approaches toward the great Andamanese and not towards the Jarawa. The British opened the Andaman Home for their experiment with the tribes. This was established in 1863 when they came to know of the Jarawa. They took help of the Great Andamanese and the armed police, through several expeditions. In all these expeditions the Jarawa habitant was invariably attacked and damaged. Hence they also retaliated whenever they could in self-defence. Thus the Jarawa attacks were in order to safeguard their own interests only in terms of preventing the outsiders from exploiting the natural resources of their own territory affecting their very existence.
3. The Jarawa attack in December 1875 whereby the Jarawa captured 6 convicts, 5 of them returned after 19 days. Early next year there was two more expeditions. Again the Jarawa huts were looted

- and their weapons and utensils brought back. Clashes were frequent because the Jarawa now distrusted everyone. One or two Jarawa were captured but still there was no breakthrough in using them as go between as help for friendly relations. On the contrary when kept in the Andaman Home, they became sick and either died after a while or had to be released since the death of a Jarawa in the custody of the non-Jarawa might have further aggravated the situation.
4. With the help and experience of befriending the Onge, one British administrator tried to establish friendly contacts with the Jarawa. In the case of the Onge, it was successful. The strategy or the method followed was – capture them, give them good treatment, send them back with lots of gifts, and wait for their response. The British in fact did follow this strategy by capturing some of them, treating them nicely, keeping them at his residence for a few days and then releasing them with a lot of gifts as tokens of friendship. It was successful. But in the case of the Jarawa, it did not work. Jayant argues that most likely the Jarawa were suspicious and afraid of the experiments on them through the Onge and the Great Andamanese. Hence the hostility continued. The use of the Andamanese by Portman was a crucial error resulting in the failure to establish contact with the Jarawa. There were cases of continuous molesting of the Jarawa and the inciting the coastal Andamanese against them that triggered off the Jarawa offensive. Cipriani (1966:6) wrote, “It was our fault if the Jarawa became hostile”. Jayant further gives chronological anecdotes to show how the ‘outsiders’ from the time of the British have been responsible for attacks on the Jarawa, their murders and the destruction of the Jarawa habitat.
 5. There was a lot of encroachment and deforestation by the British. The Jarawa were afraid and suspicious that this would escalate affecting their very survival. Hence they were hesitant to accept any offer from the civilized world. Encroachment on their territory was a provocation and caused fighting.
 6. The British used their usual tactics of DIVIDE AND RULE. They exploited the hostility between the Jarawa and the Onge or between the Jarawa and the great Andamanese. The Great Andamanese took advantage of the firearms provided by the British to settle scores with the Jarawa. In every expedition without exception, a large number of Jarawa were killed and their habitat damaged.
 7. By 1902 the Jarawa had become unfriendly. On 24th February 1902 with Vaux as the then D.C. in Port Blair, with the Deputy Conservator of Forests, a policeman, 3 convict servants and 16 Andamanese entered the Jarawa area and attacked them. A number of children were captured with the help of the Andamanese. Meanwhile, the Jarawa shot Vaux who succumbed to his injury.
 8. On March 20, 1910, Fawcett who was in military command led a large party on a punitive mission. The Jarawa were attacked in the middle of the night when they were dancing and celebrating. Due to darkness the Jarawa managed to escape.
 9. L. MORGAN led the expedition on 26th February 1918. The Jarawa village was raided. One Jarawa was wounded with buckshot at close range. A good deal of blood flew out which could be seen on the drain, which the Jarawa crossed.
 10. In 1921 and subsequent years the Jarawa began to come into the settlement. In 3 years 21 convict settlers were killed and finally another punitive expedition was sent in 1925.
 11. Captain West, MC, along with a platoon of 30 men of the Kachin Military Police started operations simultaneously at Alipur, Jatang, Middle Strait, Ike Bay and the northern extremity of Southern Andaman. There was a major attack by the Jarawa on the expeditionists at Ike Bay. About 40 Jarawa participated in the battle. During the course of operations 37 Jarawa were claimed to have been shot and were seen to have dropped, but in actuality only 6 were found dead. This expedition did not however stop the Jarawa raids. They raided Hobdaypur, Ferrarganj and several other areas. In 1929, a forest camp at Baja Lungta in Middle Andaman was attacked. The Jarawa were shot during this encounter.

In September 1938 an attempt to intercept a party of Jarawa who had killed 3 forest Department employees near Waterfall Valley. A police picket on Bluff Island surprised the Jarawa on a raft and an attempt was made to capture them alive. The Jarawa attacked with the flight of arrows, and the police replied with buckshot and rifle fire. The Jarawa jumped overboard and swam back to Spike Island with great ease. One woman and four children remained on the raft and they were brought to Port Blair (McCarthy 1940).

The hatred of the Jarawa increased due to another incident – During the Japanese occupation (March 1942-1945) indiscriminate bombing, firing in several part of these islands, including the Jarawa territory – damaging their habitat.

After independence in 1947 the practice of sending punitive expeditions were abandoned and about 765 sq. km. Of the South and Middle Andaman, forest was declared as Jarawa Reserve Forest to provide them with their own area for their hunting-gathering economy and also to give them some protection. The Jarawa had no knowledge of it. They felt provoked by influx of people. There was a large-scale deforestation. There were several developmental activities too. With a view to attaining self-sufficiency in the matter of food, the policy of colonization of these islands was adopted. The govt. of India accepted the West Bengal Govt.'s proposal that displaced persons from East Pakistan be rehabilitated in the Andamans. As a result in 1949, about 178 families came and settled down in the Andamans. In 1950 and 1951 two more batches came and settled down in the vicinity of the Jarawa area. The establishment of these new settlements must have had an unending effect on the Jarawa and feeling of insecurity. There was a feeling of suspicion and hatred towards one another.

Outsiders encroached the Jarawa land without even realizing it. The minority Jarawa had no way of protesting as others did. As a result, the settlers developed counter-hatred toward the Jarawa. Due to the encroachment of the land there were resentment, tension, conflict, litigation, etc. Hence they hit back at outsiders in self-defense.

During 1946-81 there were 27 incidents at Jirkatang and 21 incidents at Tirur in south Andaman that led to damage or casualties amongst the non-tribals. But little is known on the Jarawa side (Report of the Committee of Anthropologists on the Jarawa and the Shom Pen, Part I, 1981). According to Census of India 1961 there were as many as 86 cases of the Jarawa raids between 1946 and 1963. Of these in 10 cases 14 non-Jarawa lost their lives and in 3 cases 5 Jarawa were killed and three captured. The Table below gives a brief account of these 13 incidents (Census of India, 1961:121-4):

Table –
Jarawa incidents during 1946-1963 causing loss of lives:

Sl. No.	Date & place of occurrence	Remarks
1.	14 th Sept. 1948 Betapur	30 Jarawa raided the Survey Camp and a coolie was killed.
2.	19 th Oct. 1948 Foul Bay, spike Island	Messrs Joseph. Gupta. Pooviah & Belliappa came across 3 Jarawa men and a boy. One was shot dead while escaping and the rest were captured.
3.	1 st April 1949 Foster Martin Valley, Bajalungta	The Jarawa attacked 5 mazadoor. One was killed and others escaped.
4.	27 th Dec. 1949 Prolog Jig. Elewettee Valley. Middle Andaman	5 Ranchi coolies on pig hunting were attacked by the Jarawa and 2 were killed, one wounded and others escaped unhurt.
5.	11 th Jan. 1952 Lakda Lungta, Middle Andaman	A group of 50 Jarawa attacked the forest camp and injured one mazadoor. One Jarawa was shot dead.
6.	7 th Oct. 1952 North Andaman	The Jarawa in the jungle attacked a cave-cutting party.

		One mazadoor was killed, one was injured and the others escaped unhurt.
7.	28 th Nov. 1952 Prolog Jig, Middle Anadaman	About 30 Jarawa attacked labourers working in the forest. One was killed and 2 seriously injured.
8.	3 rd Oct. 1957 Kalsi Bush, Police Camp No. 3	The Jarawa attacked 3 Bush Policemen who were having a wash in a nullah near the outpost. One policeman was injured. Police opened fire and 3 Jarawas were killed, of whom one was brought to the camp while the remaining bodies were taken away by the Jarawa.
9.	18 th April 1960 Charalungta, Kalsi No. 6	Some Jarawa attacked four Bush Policemen. One was killed. Others escaped unhurt
10.	21 st Oct. 1960 Post No. 3, Randugtan, Tirur	The Jarawa attacked 3 Bush Policemen on a patrol duty. Two were killed and one escaped with a couple of injuries.
11.	27 th Jan 1961 Leaves inlet	2 Karens were killed and their dead bodies taken away by the Jarawa
12.	12 th Feb. 1961 Jishtang	The Jarawa killed a Ranchi forest worker.
13.	9 th Dec. 1968 Puttatang	One forest worker was killed by the Jarawa

(Source: Reference by Jayant, 1990: 48-49) There is an interesting account of the 11 January 1952 incidents at Lakda Lungta by S. K.

Gupta in Census of India 1951 (Vol. 17, Part I & II, 1955: Appendix A). According to him, the Jarawa did not shoot before they were shot at and came out in the open, in front of the camp, where they were four Bush Policemen. This is quite contrary to their ambushing habits. This resentment has, however, been described as incorrect by A. K. Ghosh, Chief Commissioner (ibid.). according to him the Jarawa were in bark armour and were evidently scouts. As soon as they were sighted they shot arrows at the policemen, slightly injuring one of them. When the police fired, one Jarawa dropped dead while others ran away injured, into the forest.

According to Gupta the Jarawa came out in the open early morning and walked right into the camp, making no attempt to shoot, indicating of their friendly visits. His explanation is that after the 1949 incidents the Forest Department bottled them between Lowis Inlet and Lakda Lungta on the west and a zigzag along Yaratil Jig to Rangat and Happy Valley to the east, very narrow at certain points. This restricted the existence for a people who had been moving within 25 miles of Port Blair. There was an overture for peace. But this shooting of the Jarawa might in all probability stiffen them up (ibid.).

Cases of the Jarawa attacks after Independence mostly occurred in the vicinity of their territory, in which individuals were set upon. Large-scale attacks in the settlement area were rare. The construction of the Andaman Trunk Road through South Andaman brought a large number of labourers into the Jarawa land and also disturbed the area by felling of trees, blasting by explosives, construction of labour camps, etc. There was an influx of large number of people. The Jarawa had two alternatives:

- I. either to surrender to the larger society, or
- II. to continue to strive ferociously to maintain their independent existence

There were friendly gestures by Bush Police. Though they were to protect the settlers from Jarawa raids, they visited the Jarawa area of Middle Andaman to drop gifts like coconut pieces of iron, strips of red cloth, etc. During the second and subsequent Five Year Plan provisions were made for continuing the practice of leaving such gifts in areas inhabited by the Jarawa.

There was a major breakthrough in the situation:

1. In February 1974, friendly gestures towards a contact party led by members of the Bush Police, who used to visit the area from time to time: A Jarawa man swam across and came on board and collected the gifts.
2. Earlier in 1968, three Jarawa boys were captured near a village in Kadamtala and were brought to Port Blair, were kept for about a month; they were treated well and then set free near their area with a large quantity of gifts (Pundit 1974). In fact, the method adopted by Portman in 1879-94 was followed.
3. Some 20 Jarawa men came down to Kadamtala from the nearby forests primarily to take away whatever iron tools – agricultural implements, nuts and bolts of doors, etc. They were also looking for coconuts and bunches of bananas. They were unarmed. The villagers got up when the dogs barked. Most of them escaped but 3 boys were overpowered. Next day they were brought to Port Blair and kept these for a month under the observation of 2 anthropologists of the ASI. They were released with gifts including a pig (Razeq 1968). Thus there came about a lot of openness but a setback due to some misdeeds by poachers in the Jarawa area. After the breakthrough achieved in February 1974 at least 3 major incidents of the killing of poachers by the Jarawa or Middle Andaman have been recorded.

Just one year after the first contact with the Jarawa on 9th February 1975 a party of Karen comprising 10 poachers who had set up camp at Flat Island near Chhotalingbang Bay was attacked by the Jarawa. The Jarawa captured one Karen and injured 3 others. The body of the captured Karen could not be recovered.

In another incident on the same island 5 persons were killed. They were camping there to collect edible birds' nests and trap pigs, deer etc. One person managed to escape. The bodies of the killed could not be recovered. Trespass to the extent of setting up camps in Jarawa territory so provoked them that they resorted to killing the poachers. After that the Jarawa became more hostile.

On the 31st March 1977, two Jarawa – one old and another young, the latter having an old punctured bullet wound on his right thigh, expressed their willingness to remain with the Contact Party after the other Jarawas had left the boat. They were brought to Port Blair and kept in the Government Guest House. The wound was x-rayed twice. They were taken to different places in Port Blair. The Andamanese were brought to see them and vice versa. But there was no communication. On 7th February 1977 the Jarawa were taken back to Yadita Point near Chhotalingbang Bay when they expressed their desire to return. When they had reached, 21 Jarawa were on the shores. They embraced their respective female partners and children. They displayed pleasure and affection on being reunited with their loved ones, and there was happiness all around (AAJJVS 1977:77-79).

But this new found amity did not last long. After a gap of little less than three months the Jarawa of the same Chhotalingbang Bay area killed 5 poachers at Flat Island. It was on 20 April 1977. Matter was reported to Bush Police. On May 2, 1977 a party went to Flat Island to investigate but no Jarawa appeared. There was mistrust.

Between 1983 January and February 1988, there were 28 incidents of hostile encounters with Jarawa. Of these, in 8 cases 17 non-Jarawa lost their lives. The number of the Jarawa casualties is not known.

There was another contact trip in April 1985. It showed a friendly disposition of the Jarawa. They displayed their possession and played with them. They were friendly with the adjacent villages also.

In 1986, a young man of village Kadamtala was kidnapped by the Jarawa when he was engaged in cutting some wood near his home adjacent to the forest. But they untied his hand later. The boys managed to escape. Now they even trust the Contact Party. It is reported that they leave their own children on the beach and go for their work. Women also are ready to hand over their babies to the Contact Party. On February 3, 1988 at Yadita Point 27 Jarawa of whom 20 were children within the age of 2-10 years, were contacted. It was clear that the Jarawa had no intention of hurting anyone without reason or provocation. The Jarawa did not equate the member of Contact Party with other hostile non-Jarawa. They demonstrated their faith in them.

On the basis of the above evidences the author come to the conclusion that

1. the Jarawa in all probability were not unfriendly towards the outsiders, at least during the first penal settlement.
2. The indiscriminate clearing of the forest during the second penal settlement reduced their area of movement and their resources zone, creating fears that they might lose their territory.
3. Before friendly relations were established with the Great Andamanese, no efforts were made to contact the Jarawa.
4. All the efforts to capture the Jarawa either as part of punitive measure or for befriending them were made with the help of the Great Andamanese with whom the Jarawa had traditional rivalry. Thus they became non-acceptable to the Jarawa.
5. A number of measures by the present Government like construction of roads, acquisition of land and felling of trees for rehabilitation have directly affected this small population. Therefore progress has not been satisfactory in establishing good relations with the Jarawa, though the government has made sincere efforts in that direction.
6. Poaching in the Jarawa territory and some other provocative incidents, deliberate or otherwise, have also reduced the pace of such progress.

All the allegations against the Jarawa being hostile are incorrect because they have shown the friendly gestures right from 1790 as in 1974. It was the attitude and encroachment of the people into their territory affecting their existence that made to revolt and protest in forms of skirmishes and attacks. Hence the Jarawa relations have to be understood in their proper perspective

In 1969 the government constituted a study team on the Negrito Communities of the Andamans. The Bush Police force set up in 1905 was recommended for alternative function as its objective. About the same time, on the advice of the Ministry of Home Affairs, the government of India, an advisory committee on 'Primitive Tribal Groups' was set up with a view to receiving expert opinion on specific tribal development policies for this area. The committee included eminent anthropologists from universities and also from Anthropological Survey of India.

It was felt that for the implementation of tribal development policies, a voluntary organization would be more effective. And so the ANDAMAN ADIMJATI VIKAS SAMITI (AAJVS) was established in March 1976. The Samiti is financed by the Central Government, channeled through the Andaman Administration.

After the formation of AAJVS, a 'Jarawa cell' was constituted to consolidate friendship with the Jarawa and to learn their language in a planned way. The cell comprised representatives of the Andaman Administration and the Bush police, experts from Health Department and Anthropological Survey of India, Port Blair.

Keeping in view the suggestions offered by the study team in 1969 the AAJVS formed a sub-committee to propose a new role for the Bush Police. Based on the recommendations of the sub-committee, the following new roles were prescribed for the Bush Police:

1. To protect the Jarawa tribals though not, of course, at the expense of the non-tribals and to prevent any untoward incident involving tribals and non-tribals, ensuring at the same time that no annoyance whatsoever is caused to the Jarawa by any act on the part of the Bush Police.
2. To assist and protect official parties workers visiting or working around reserved areas.
3. To make an all out effort to develop better relations with the Jarawa and endeavour to learn their language.
4. To prevent violation of laws in all the tribal areas of the Andaman and Nicobar Islands.

- 5. To prevent unauthorised persons from entering, shooting, fishing, killing wildlife and otherwise poaching by land or sea in the tribal areas of the Andaman and Nicobar Islands.
- 6. To prevent unauthorised contact with the Jarawa and with other tribal people who are still to react favourably to modern civilisation in the Andaman and Nicobar Islands.
- 7. To prevent entry or intrusion of unauthorised people into the Jarawa and other tribal areas in Andaman and Nicobar Islands.
- 8. To prevent removal of any jungle produce by unauthorised people from any tribal area of the Andaman and Nicobar Islands (AAJVS, 1977:61).

In 1980, a high level committee was constituted as desired by the Prime Minister, Indira Gandhi – to study the effect of the construction of the Andaman Trunk Road which would pass through the Jarawa area in South Andaman. Construction of a 23 km. stretch between 87 km and 110 km points of the Andaman Trunk Road.

The Committee made an on the spot study in 1981. These were the suggestions given:

- I. though the absence of any road would be the ideal condition for the Jarawa, the next alternative would be
- II. to realign the road so as to orient it as far away from the boundary for the Jarawa Reserve as possible.

Do's and Don'ts to take note of:

- i. No measure resulting in large-scale deforestation. Hence no permanent camps were encouraged.
- ii. No Great Andamanese in the Contact Party but the Onge for help.
- iii. No poaching in the Jarawa territory
- iv. Medical treatment to the Jarawa
- v. Genuine efforts to learn their language
- vi. Bring the Jarawa to visit and know others
- vii. The Sundaram Committee (1969) had recommended in its report that such gifts be distributed as may gradually make the Jarawa economically dependent on the administration. Giving them coconut, rice, iron, banana, red cloth, etc.
- viii. Help of Bush Police to contact and for friendly relations
- ix. Effort in bringing about change in the attitude of people towards the Jarawa. Sympathy for them. Not to look at them as 'sub-human'.

Appendix: Jarawa incidents over 5 years (1983 – February 1988)

Incidents	- 28
Persons killed	- 11
Persons missing	- 02
Persons injured	- 03
Jarawa attack on	- trucks, forest guards, construction workers, coolies, buffaloes, cows, settlements.

The Great Andamanese, Welfare measures & their Problems

According to Chakraborty (1990:55-59) under welfare programme the families of the Great Andamanese tribe were resettled in 1969 in an island 3.11 sq. km in area, to provide them protection from exploitation by outsiders. But the resettlement was not congenial to their traditional activities of hunting, gathering and cultural. They had to cope with the new environment. It was a traumatic experience for them – there was loss of heir land, loss of socio-cultural practices, vast land and food resources. Welfare measures were conducted through AAJJVS 1976: with the following aims:

1. To protect the health and prevent the extinction of the primitive tribal groups
2. To promote their economic and social developments
3. To take a comprehensive view of their problem in view of national policy for their development.
4. To develop measures for coordination among governmental, institutional and non-governmental organizations for the protection of their economic and social environment, which are essential for their survival and growth.

To overcome the problem of inter-island communication, the Samiti purchased a vessel with special central assistance. A jetty has been constructed at Strait Island. The Andaman Administration has also supplied the Great Andamanese with two country boats for hunting and fishing

On the recommendation of the Samiti, the Director, Medical and Health Services, Andaman and Nicobar Islands, has prepared individual charts and case sheets for the tribals to record their physical conditions. They have been given prophylactic immunization against communicable diseases like tuberculosis, smallpox, diphtheria and tetanus.

The Great Andamanese mostly suffer from anaemia, diarrhea, dysentery and frequent worm infections, probably from the use of polluted water. There is a loss of resistance. They are confined to unhygie place with an inadequate knowledge of proper clothing. De-addiction efforts to free them from opium addiction. A Great Andamanese was sent to the Government Hospital Madras for treatment for a suspected lung abscess. One of the girls underwent an operation at the Vellore Hospital, Madras for congenital heart defects.

They were made to be dependent on government for supplies. But there was no variety in the supplies. They were given the pocket money, which were unfortunately spent on alcoholism. At Strait Island there was a generator. There was a television set at Port Blair. Strait Island was closed to the visitors. Coconut plantation. But they do not consume even one coconut a week.

Medical department deutes compounder for 3 to 6 months. But there is negligence of their duty. They are addicted to alcoholism; therefore medicines do not work. Their community centre is used as Balwadi School. Books and charts are supplied.

The police party posted there to check the intruders in the island has cleared parts of the virgin forest to collect commercial timber for their personal use.

The 3.11 sq. km island housing 28 surviving Great Andamanese is overburdened by the posting o 14 outsiders (7 police personnel, one compounder, an electric generator operator, a wireless operator, a

- plantation in charge with his family and a social worker). It is time to check on the posting of outsiders in order to prevent the collection and misuse of natural resources in and around the island, it is imperative that the resources are exploited exclusively in the interests of the Great Andamanese.

Free ration makes them idle and corrupt. They should be encouraged to work and earn their living.

Finally, the persons who are to be deputed to these regions for the welfare of these tribals must be well-trained in welfare activities. The senior officials in the AAJVS have a more sympathetic and humanitarian attitude towards the vanishing tribe and should be dedicated to their work.

Conclusion:

The Great Andamanese originally consisted of 10 distinct tribes with separate territorial affiliations and their respective dialects. All these tribes could be broadly divided in two groups: (i) the Northern, and (ii) the Southern. Of these 10 six have become extinct now. The remaining four are facing the threat of extinction. The population of the Great Andamanese has declined for several reasons:

1. About 1788-89 the Andamanese with a population of 5,000-8,000 resisted the first attempt of the British while establishing a settlement there. The encounters resulted in the loss of a large number of the tribals. Decline also due to vices borrowed from the new settlers – addiction to alcoholism and opium, syphilis, venereal diseases. Europeans introduced several diseases like measles, dysentery, T. B., venereal diseases, etc.

Every prey to disease if small group for the following reasons:

1. endogamous marriage – the disease can spread easily
2. this is further accelerated due to their ignorance of the dire consequences of the diseases
3. The outsiders, i.e., the bearers of such diseases would not care either to enlighten the tribals about preventive measures or to get them cured.
4. Their lack of knowledge about these alien diseases deprives them of the opportunity to adopt any remedial measures, and this as, Rivers pointed out they lose all interest in life and wait for total extinction.

The Acute Problem face by the great Andamanese:

1. Scarcity of manageable mates. Presently only 9 females and 14 males. Most women incompatible in age.
2. No maintenance of traditional territorial affiliation. No longer former tribal or local group affiliation.
3. Failure to retain their language. Picking up Hindi words.
4. Former system of territorial rights of hunting, fishing and gathering has ceased to exist due to extreme depopulation coupled with the concentration of population at one place.
5. Dependence on sea and forest has disappeared.
6. No one left with proper knowledge of their old life cycle rituals
7. Contact with outsiders for over a century. But cultural divide between the Andamanese and the outsiders.
8. Change and persistence. As far as the language is concerned, there is infiltration of Hindi. In economy, several food items are adopted. Socio-cultural rituals – there is resistance to outsiders but there is also a simplification of the traditional. In matters of belief and practice – maintaining more or less traditional forms.

Contact with the Onge: A Historical Overview

In his study Basu (1990) finds that the Onge were isolated from the civilized world. There was no communication with the outside world except with the unfortunate shipwrecked crews whom they had

murdered. For a considerable period the Onge could successfully thwart all attempts at contact for conciliation by outsiders through their hostility towards all strangers. In 1867 the Captain and 47 crewmembers of the ship Assam Valley who landed in Little Andaman to cut spar never returned. A search party led by Mr. Homfrey was sent for the missing persons, but the party failed in its mission due to the hostility of the Onge. Then the ICS Aracan, sent on a punitive expedition to the island, located the remains of the murdered men. The expedition resulted in severe fighting, with the Onge killing at least 70 of them (Census of India 1931).

The next expedition was sent from Port Blair in 1873 under the leadership of General Sir Donald Stewart. When the members of the expedition trained to land at Jackson Creek the tribal people attacked them. After that, some sailors of a Burmese ship Quangoon landed for water at Hut bay, the present headquarters of Little Andaman only to be attacked and killed by the tribal people. Consequently, in retaliation, a punitive expedition under Captain Wimberley was sent to Hut Bay, and the party killed a number of communal huts and canoes. After this massacre any outsider did not visit the island until 1878. It was in the same year that Col. Cadell and Portman, on their way back from the Nicobar Islands, had succeeded in meeting a group of the Onge in Little Andaman who were not hostile and in fact embraced the Great Andamanese who accompanied the expedition party. But the strangers were attacked by another group of the Onge at another point of the island. Numerous gifts were left with the group that showed the first sign of friendliness, for future encouragement.

More conciliatory efforts were made. More visits and presents followed. The British administration's policy – to capture them, treat them well and send them back with gifts. Col T. Cadell and Portman were given the main responsibility of carrying out the expeditions for establishing contacts. Presents were left at different places. Parties refrained from counter-attacking. During an expedition to Cinque Island in 1885, twenty-four tribals (8 men + 6 women + 10 children) were caught. They were thought to be Jarawa. But they were from Little Andaman who had come there in search of turtle eggs in their own canoes. Eleven of tribals were brought to Port Blair; the rest were released with their canoes. Good treatment was meted out to them.

In 1886-87, Portman became the first man who dared to stay on Little Andaman for two and a half months in all-subsequent visit. Portman and his men never encountered hostility from the Onge. In 1930, three Onge were persuaded to accompany the Census Superintendent Mr. Bonington to Car Nicobar along with a few Great Andamanese as guards. The Onge were frightened of the Nicobarese. As a result one escaped and never returned. Another jumped in the sea and drowned himself. The remaining had to be kept locked up, to be released in Little Andaman subsequently. There were regular visits. The Onge learnt the use of iron during the visit of Malay pirates or Chinese traders. They used to collect iron pieces from the shipwrecks. Iron was in use before their contact with Portman. There was the introduction of the dogs among the Onge only after the establishment of contact.

Rehabilitation & Settlement:

Their huts were disturbed and canoe plundered and many of them were killed during the course of reconciliation attempted by the British. In a state of destitution to languish. There were changes from the British to Japanese and back to British aggravated the situation.

It was only after the formation of the AAJVS that certain welfare measures were taken up among the Onge. Then the Onge were living in groups at Dugong Creek, Jackson Creek and South Bay. As a first step towards welfare, the Onge of Dugong Creek and Jackson Creek were rehabilitated at Dugong Creek and the South Bay group was settled where it was.

1. Dugong Creek Settlement: it is two hours from Hut Bay on motor boat. It was set up during 1976-77. There were 26 wooden huts. There was a dispensary, a powerhouse, multi-purpose cooperative Society and residence of staff of the Samiti, and a nursery school.
2. The South bay Settlement: it is 22 km South of Hut Bay. It came to being about 1980 in small with only 5 wooden houses. It was constructed by the welfare agency. The houses are similar to those of Dugong Creek. Plantation in charge for practical purposes was responsible for the Onge's welfare.

• The Onge prefer to live in traditional houses. They keep change in site of habitation due to severe tick problem, and in event of death in the settlement.

• The Administration had started lots of welfare schemes. The establishment of AAJJVS in 1976 was helpful. They were rehabilitated. They have given job for the Onge to collect coconuts. There are horticulture and agriculture schemes for them.

My own observation on the Government schemes and the approach of the AAJJVS is that there is seemingly a good will but when it comes to taking the real stand in favour of the Andamanese tribes that may adversely affect the interests of the Settlers, the agencies involved in the development works go back on their policies of support to the primitive tribes. Hence, the claims of the Government (Refer to the recent visit of Shri Jual Oram, the Minister of Tribal Affairs to the Andaman & Nicobar Islands from 9th to 13th November 2000.) and those of the AAJJVS of the tribal welfare and their safeguarding of the interests of the tribes have to be taken with a pinch of salt.

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Terms of Reference
Andaman Fact-finding Mission, October 2002

1. To document the living conditions and situation of the threatened indigenous peoples, namely the Great Andamanese, the Onge, the Jarawa and the Shompen (including human rights violations) directly (where possible) and from secondary sources
2. To identify and record the threats faced by these threatened peoples viz. Environmental destruction, deforestation, encroachment by state and settlers, development projects and activities, tourism, forced assimilation, physical violence etc. their extent and impacts including health related threats.
3. To locate the source of these threats and methods employed,
4. To critically review the role and functions of the administration in protecting these indigenous peoples and/or abetting the forces that threaten the survival of these indigenous peoples,
5. To critically review the role and functions of such state institutions as the Anthropological Survey of India and Andaman Adim Janajati Vikas Samiti, Forest Department etc.,
6. To review the functioning, adequacy or inadequacy of the specific laws (as the Andaman and Nicobar Protection of Aboriginal Tribes Regulation, 1957), policies (as the references in National Forest Policy), plans (as the Master Plan <1991-2021> for Welfare of Primitive Tribes of Andaman and Nicobar Islands, tourism projects etc.) that have been in operation in the past and present.
7. To evaluate the attitude and approach of the settlers, and their social and political organisations, towards the indigenous peoples including elected representatives of various levels.
8. To specifically evaluate the intentions and consequences of official expeditions into the territories of the threatened indigenous peoples.
9. To review the situation with reference to the Constitution and legal provisions, ILO Conventions 106 and 169 and the UN Draft Declaration of the Rights of Indigenous Peoples,
10. To formulate a list of demands in terms of actions to be carried out to prevent the threats, protect and promote the threatened indigenous peoples.

HRM - please place these in a new resource file
Indigenous People of the Andaman + Nicobar Islands
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2/19/02

11. To formulate policies and guidelines to be followed, both short term and long term.

12. To make recommendations for changes in laws, policies and plans, and suggest mechanisms to monitor their implementation.

W.P(C)No. 202 OF 1995
ITEM Nos.16 to 25 & 29 COURT No. 1 SECTION PIL
S U P R E M E C O U R T O F I N D I A
R E C O R D O F P R O C E E D I N G S
I T E M N O . 1 6
I.A. No. 502 in W.P.(C) No. 202/1995

T.N. GODAVARMAN THIRUMALPAD Petitioner
VERSUS
UNION OF INDIA & ORS. Respondents
(for intervention)

with I.A. No. 737 in I.A. No. 502 in W.P.(C) No. 202/1995
(for directions)

ITEM NO.17-635 in W.P.(C) No. 202/95.
(for impleadment and directions)

ITEM NO.18@@@
CCCCCCCCCC

I.A. Nos. 697-698 in W.P.(C) No. 202/95.
(for directions and exemption from filing O.T.)

ITEM NO.19@@@
CCCCCCCCCC

I.A. Nos. 695 With 706 in I.A. Nos.695-696 in W.P.(C) No. 202/95
(for directions and exemption from filing O.T.)

ITEM NO.20@@@
CCCCCCCCCC

I.A. Nos.723-724 in W.P.(C) No. 202/95.
(for intervention and clarification/modification)
WITH
I.A. No. 711 in I.A. No. 502 in W.P. (C) No. 502/1995
(For intervention/modification/clarification and directions)

ITEM NO.21@@@
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I.A. No. 566 in W.P.(C) No. 202/1995.
(Suo-motu action taken by this Hon'ble Court on the statement of Mr.
K.N. Raval, learned Additional Solicitor General on behalf of Central
Government showing the position of the cases approved for diverting a
forest land stipulation for compensatory afforestation under the
Forest Conservation Act and the compensatory afforestation done funds
to be utilised and actually utilised).

ITEM NO.22 @@@
CCCCCCCCCC

I.A. No. 738 in I.A. No. 502 in W.P.(C) No. 202/1995
(for intervention on behalf of Andaman Furniture Industries

Association)

with

I.A. No. 739 in I.A. No. 502 in W.P.(C) No. 202/1995
(for clarification/modification of order dated 23.11.2001 on
behalf of Andaman Furniture Industries Association)
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With

W.P.(C) No. 118/2002 (Ashit Baran Chakravorty vs. UoI)

ITEM NO.23@@@
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I.A. No. 295 in W.P.(C) No. 202/1995
(interim application through Amicus Curiae for directions regarding
the State of Assam PCCF Order dated 12.2.1998)

ITEM NO.24@@@
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I.A. No. 424 in WP (C) 202/1995
(Interim application on behalf of the applicant, Santosh Bharti)
With
I.A. No. 729 in I.A. No. 424 in W.P. (C) No. 202/1995
(For modification of Court's order dated 22/09/2000)

ITEM NO. 25@@@
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Contempt Petition (C) No. 193/2001 in W.P. (C) No. 202/1995
[District Forest Officer, Tamil Nadu Vs. Gowri Shankar]

AND

ITEM NO. 29@@@
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IA NOS. 754 & 755 in WP (C) No. 202/1995
T.N. Godavarman Thirumalpad Vs. Union of India & Ors.
(For directions and impleadment)

Date : 07/05/2002 These Petitions were called on for hearing today.

CORAM :

HON'BLE THE CHIEF JUSTICE
HON'BLE MR. JUSTICE ARIJIT PASAYAT
HON'BLE MR. JUSTICE H.K. SEMA

Amicus Curiae Mr. Harish N Salve, SG (AC)
Mr. U U Lalit, Adv. (AC)
Mr. Siddharth Chaudhary, Adv.

For Petitioner(s) Mr. Mahendra Vyas, Adv.
Mr. P K Manohar, Advs.

For Ministry of Environ-
ment & Forests/UoI Mr. A D N Rao, Adv.
Mr. R N Poddar, Adv.
Mr. S Wasim A Qadri, Ms. Alka Agarwal,
Mr. A K Raina, Mr. P Parmeswaran,
Ms. Anil Katiyar and Mr. B V Balram
Das, Advs.

For M/o Railways Mr. Mukul Rohtagi, ASG.
Ms. Alka Agarwal, Adv.
Mr. B. V. Balaram Das, Adv.
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For Applicant (s)

IA 695 & 706 Mr. S Ravindra Bhat, Adv.
Mr. Prashant Bhushan, Adv.

IA 737 Mr. Altaf Ahmad, ASG
Mr. Monoher Singh Bakshi, Ms. Sunita Sharma,
Mr. Ashok Bhan and Mr. D S Mahra, Advs.

IA 502 Mr. Colin Gonsalves, Adv.
M/s. Ritwick Dutta, Vipin Mathew Benjamin,
Aparna Bhat and Sweta Kakkad, Advs.

IAs 634-635,697-698 Mr. Mukul Rohtagi, ASG
Ms. Tasneem Ahmadi, Mr. Bharat Sangal,
Ms. Sangeeta Panicker and Mr. R K Mecolt
Singh, Advs.

IA 723-724 Mr. K K Venugopal, Sr. Adv.
Mr. Gopal Jain, Adv.
Ms. Ruby Singh Ahuja, Adv.

IA 711 Mr. M N Krishnamani, Sr. Adv.
Mr. Parthapratim Chaudhuri, Adv.
Mr. Soumyajit Pani, Adv.
Mr. K S Rana, Adv.

IA 738 & 739 Mr. S Muralidhar, Adv.
Mr. S Vallinayagam, Adv.
Mr. Shreyas Jayasimha, Adv.

in WP 118/02 Mr. M L Lahoty, Adv.
Mr. Paban K Sharma, Adv.

Mr. Himanshu Shekhar, Adv.

in IA 295 Mr. Harish N. Salve, S.G. (A.C.)
Mr. Siddharth Choudhary, Adv.
Mr. U.U. Lalit, Adv. (A.C.)

in IA 424 Mr. Vivek Tankha, Adv. Genl.
Mr. S.K. Agnihotri, Adv.
Mr. Rohit K. Singh, Adv.
Mr. Anil Kumar Pandey, Adv.

in IA 729 Mr. Prakash Shrivastava, Adv.

in IAs 754 & 755 Mr. Raj Panjwani, Adv.
Mr. Vijay Panjwani, Adv.

in Cont. Petn. 193/01 Mr. V. Balaji, Adv.
Mr. P.N. Ramalingam, Adv.

Ms/ Arputham Aruna & Co., Advs.(NP)
For Respondent(s)
State of Assam Ms. Krishna Sarma, Adv.
Ms. Asha G Nair and Mr. V.K. Siddharthan,
Advs. for M/s. Corporate Law Group, Advs.

Andaman & Nicobar Mr. Altaf Ahmad, ASG
Administration Ms. Sunita Sharma and Mr. Ashok Bhan. and
Mr. D.S. Mahra, Adv.

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: 4 :

State of Andhra Pradesh Mr. T V Ratnam, Adv.
Mr. K Subba Rao, Adv.

State of Arunachal Mr. Anil Shrivastav, Adv.
Pradesh

State of Bihar Mr. B B Singh, Adv.

State of Chhatisgarh Mr. Prakash Shrivastava, Adv.

UT of Chandigarh Ms. Kamini Jaiswal, Adv.
Ms. Aishwarya Rao, Adv.

UT of Daman & Diu, Mr. Kailash Vasdev, Sr. Adv.
Dadra & Nagar Haveli Ms. Sunita Sharma, Adv.
& Lakshadweep Mr. D S Mahra, Adv.

State of Goa Ms. A Subhashini, Adv.

State of Gujarat Ms. Hemantika Wahi, Adv.
Ms. Sumita Hazarika and Ms. Aruna
Gupta, Advs.

State of Haryana Mr. J P Dhanda, Adv.
Ms. Raj Rani Dhanda, Mr. K P Singh
and Mr. D S Nagar, Adv.

State of Himachal
Pradesh Mr. Naresh K Sharma, Adv.

State of Jharkhand Mr. Arup Banerjee, Adv.
Mr. Ashok Mathur, Adv.

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Mr. Satya Mitra, Adv.

State of Kerala Mr. K R Sasiprabhu, Adv.

State of Mizoram Mr. Hemantika Wahi, Adv.
Ms. Sumita Hazarika and Ms. Aruna Gupta,
Adv.

State of M.P. Mr. Vivek Tankha, Adv. Genl.
Mr. S K Agnihotri, Adv.
Mr. Anil Kumar Pandey, Adv.
Mr. Rohit K Singh, Adv.

State of Meghalaya Mr. Ranjan Mukherjee, Adv.

State of Manipur Mr. Gireesh Kumar, Adv.
Mr. K H Nobin Singh, Adv.

State of Maharashtra
Mr. S S Shinde and Mr. S V Deshpande, Adv.

State of Nagaland Mr. Kailash Vasdev, Sr. Adv.
Ms. V D Khanna, Adv.

State of Orissa Mr. Raj Kumar Mehta, Adv.

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: 5 :

Govt. of Pondicherry Mr. V G Pragasam, Adv.

State of Punjab Mr. Atul Nanda, Dy. Adv. Genl.
Mr. Rajeev Sharma, Adv.

State of Sikkim Mr. A Mariarputham, Adv.
Ms. Aruna Mathur, Mr. Anurag D Mathur,
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Mr. Rahul Singh, Adv.

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Mr. Mahesh C. Kaushiwa, Adv.

Mr. Ajay K. Agarwal, Adv.
Mr. Mahesh Chandra, Adv.

State of U.P. Mr. Ajay K Agrawal, Adv.
Ms. Alka Agarwal, Adv.

State of West Bengal Mr. Avijit Bhattacharjee, Adv.
Mr. Atanu Saikia, Adv.

For UOI in IA 295 & Mr. Soli J. Sorabjee, A.G.
424 Mr Prateek Jalan, Adv.
Mr. R.N. Poddar, Adv.
Mr. B.V. Balaram Das, Adv.

in CP 193/2001 Mr. Joseph Pookkatt, Adv.
Mr. Prashant Kumar, Adv.
Mr. Prasenjit Keswani, Adv.

UPON hearing counsel, the Court made the following
O R D E R

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After hearing the learned Amicus Curiae, counsel for the parties and taking into consideration the affidavit of the Union of India - Ministry of Environment and Forests in relation to survey of eco-system of Andaman and Nicobar Islands, the learned Amicus Curiae has made certain suggestions.

There does not seem to be any objection to this Court in accepting the Report of Shri Shekhar Singh that some modifications have been suggested. We therefore, in the first instance, accept the Report of Shri Shekhar Singh.

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On a query being raised by us, Mr. Altaf Ahmed, learned Additional Solicitor General, appearing for The Union Territory of Andaman & Nicobar Islands on instructions informed the Court that there is no social forestry in Andaman & Nicobar Islands. The wood which is being cut is from the natural forest and plantation of teak etc. has taken place in the forest, which had been worked and approximating 40,000 cubic metres of wood is cut from the forest annually for the purposes of the small mills the total logging of wood being approximately 1,30,000 cubic metres per year. In the last two years, this figure has come down but the fact remains that instead of resorting to social forestry and thereby providing employment to the

people in growing forest at the present moment the natural forests are being cut and the timber sawn.

Andaman & Nicobar Islands is one of the hot spots and is in the eco-fragile area and has, therefore, the eco-diversity thereby has to be preserved. For this, it is essential that the natural forest is protected and re-generation allowed to take place.

We are also informed that the existing saw-mills have a subsisting licence valid till 30th March, 2003. The saw-mills and the other wood-based industries in the Andaman & Nicobar Islands are not permitted to cut the trees and supplies to them are made only by the Government itself or through its Corporation. Some of these saw-mills and industries have logs of wood and sawn timber in their stock. It would therefore be iniquitous to deprive them of an opportunity to utilise the stock for which payment has been made to the Government for the purchase of wood. However, it is to be borne in mind that fresh logging of wood must cease immediately.

After taking all facts and circumstances into consideration, we issue the following directions:

- (1) All felling of trees from the forest of little Andaman Islands, the national park and sanctuaries, the tribal reserves and all other areas shall stand suspended.
- (2) For the areas in which there are working plans, the Government through the Chief Secretary shall disclose on an affidavit -
 - (i) The extent of felling and re-generation permitted under these working plans during the last 10 years.
 - (ii) The compliance with re-generation/re-plantation/re-forestation targets under the working plans and reasons if any for the shortfall.
- (3) The working plan of the Andaman & Nicobar Islands should be re-worked on the basis as was applied to the State of M.P. and others, namely that before any felling of trees, there should first be compulsory afforestation/re-generation, the felling permissions would be based upon the extent of re-generation of forest undertaken and not the other way round.

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- (4) No felling of tree (under the working plan or otherwise) shall be permitted for meeting any raw material requirements of the plywood, veneer, black board, match

stick or any other wood-based industry.

(5) In drawing up the new working plans the Government shall formulate a Committee with one Ecologist who is proficient with the ecology of Andaman.

(6) The working plans so formulated shall be placed before this Court within a period of twelve weeks.

(7) The trees felled under the working plan in the manner indicated aforesaid should be utilised for the requirements of the local inhabitants.

(8) The licences of all the saw-mills and wood-based industries shall not be renewed after 31st March, 2003. This will not debar the authorities from cancelling licences in accordance with law, if there is no breach of the Licence Committee by the Licencees before that date.

(9) The ecology of the area does not permit any kind of industrial activity for which the wood is likely to be consumed. Therefore, licences of wood-based industries shall stand cancelled but they will be permitted to exhaust the existing stock till 31st March, 2003.

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(10) The Union of India if it so adopts and thinks appropriate may take steps for re-locating the dislocated wood-based industries in the main land area anywhere in India as long as it is not within the vicinity of forest area. Henceforth for meeting the local requirements it is only the Government saw-mills which shall operate.

No fresh wood or logs shall be given to any of the saw-mills or the wood-based industries till fresh working plans are prepared and submitted to this Court and the approval obtained.

(11) With immediate effect, there will be no movement of logs or timber in any form including sawn timber from Andaman & Nicobar Islands to any part of India or anywhere else.

(12) Regularisation of encroachments on forest land in any form, including allotment/use of forest land for agricultural or horticultural purposes, shall be strictly prohibited.

(13) All those families who have been identified as having encroached on forest land prior to 1978 and have not yet shifted to their allotted rehabilitation sites, shall be given one month's notice to vacate their encroachments

and shift to the allotted land. Failing this, their

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allotment shall be cancelled and they shall be forcibly evicted within three months of the deadline being over, without any further claim to land or any other form of rehabilitation. Such notices should be issued within six weeks.

(14) Similarly, those among the pre-1978 families that have shifted to their allotted sites but have occupied more land than they were entitled to shall also be given one month's notice to vacate the extra land occupied by them. On the expiry of this notice period, the allotments of those who have not complied with this notice shall be cancelled and they should be forcibly evicted within three months, without any further claim to compensation or land. Such notices should be issued within six weeks.

(15) All post 1978 forest encroachments shall be completely removed within three months.

(16) For the eviction of encroachers, an effective action plan shall be prepared and implemented under direct supervision, monitoring and control of a Committee under the Chairmanship of the Lt. Governor with Chief Secretary, Principal Chief Conservator of Forests and reputed NGO representatives, its members. The Chief Secretary, Andaman & Nicobar Islands, shall file every month an affidavit about progress of eviction of encroachments.

...11/-

.PA

: 11 :

(17) The process of issue of identity cards to all the residents shall be completed within a period of six months.

(18) The extraction of sand shall be phased out @ minimum 20% per year on reducing balance basis to bring the sand mining to the level of 33% of the present level of mining within a maximum period of 5 years.

(19) The approvals accorded by Ministry of Environment & Forests under the Forest (Conservation) Act, 1980, shall be reviewed by a Committee consisting of Secretary, Environment & Forests, Director General of Forests and at least one non-official member of the Forest Advisory Committee constituted under the Forest (Conservation) Rules to restrict the approvals to the barest minimum needed to serve emergent public purposes. Felling of trees shall

commence only after the process of compensatory afforestation has actually been undertaken on the ground. In future, the proposals shall be considered for approval only after detailed Environmental Impact Assessment has been carried out through an independent agency identified by Ministry of Environment & Forests.

(20) Specific actions shall be undertaken by Ministry of Environment & Forests/Andaman & Nicobar Islands Administration on the other recommendations of Shri Shekhar Singh Report which are not specifically dealt with in above
....12/-
.PA

: 12 :

orders. Ministry of Environment & forests and the Andaman & Nicobar Islands Administration shall file an affidavit within three months giving details of action taken by them on each of such recommendations.

Copy of this order be sent by the Registry to the Chief Secretary, Andaman & Nicobar Islands for information and compliance.

IA NOs. 502, 737 in 502, 695, 723-724, 711, 738 in 502, 739@@
EE
in 502, WP(C) 118/02, 424, 729 in 424 & Cont.@@
EE
Petn.(C) 193/2001@@
EEEEEEEEEEEEEEEEEEEE
List after the ensuing summer vacation.

IA NOs. 634-635 & 697-698@@
EE
List on 9th May, 2002.

IA No. 295@@
EEEEEEEEEEEE
Learned Attorney General states that in principle it is necessary and desirable that a National Empowered Committee should be constituted. He states that certain modalities have to be worked out before the order in this behalf could be finally passed. In view of the above, to come up on 9th May, 2002.

...13/-
.PA

: 13 :

IA No. 566@@
EEEEEEEEEEEE

BACKGROUND INFORMATION ON AICFAIP

The All India Coordinating Forum of Adivasis/Indigenous Peoples (AICFAIP) is a collective expression of resistance, struggles and solidarity. It emerged from various processes at different levels that have been going on for the past 16 years or so. Interactions, linkages and alliances in different parts of Adivasi/ indigenous peoples' regions of India over issues and struggles, political demands and political ideologies of diverse nature contributed to its emergence.

Organising the 3rd International Conference of the International Alliance of Indigenous/Tribal Peoples of the Tropical Forests at Nagpur in 1997 created yet another historic opportunity drawing representatives to the national organising committee of the conference from various regions. After the conference, the expanded group decided to constitute AICFAIP as a loose Forum to fulfill the long felt need of a platform of indigenous peoples' movements to strengthen the dynamics of the coming together locally, regionally and nationally in a creative manner.

AICFAIP provides a means of communication, interventions, support actions in struggles and common actions. It has also constituted working groups on women, threatened peoples, biodiversity and indigenous peoples rights, and generation of reports and publications on issues and struggles.

The Forum is now made up of more than 70 Adivasi/ indigenous peoples' organisations and demarcated into five regions, viz.: North-East, North Central, South Central, Western and Southern regions, based on the concentration and distribution of Adivasi/indigenous communities and their history. Any struggle based Adivasi/indigenous peoples' mass organisation and any struggle based mass organisations taking up indigenous peoples' issues can be part of the Forum.

The Secretariat

All India Coordinating Forum of the Adivasis/Indigenous Peoples
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Subject: Indegenous people in the Commonwealth

Date: Tue, 20 Aug 2002 10:59:38 +0530

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To: "Tiplut Nongbri" <tnongbri@satyam.net.in>, "Thelma Narayan (Dr.)" <sochara@blr.vsnl.net.in>, "Pradip Prabhu" <pradip_prabhu@yahoo.com>, <nandinisundar@yahoo.com>, <sjstudes@bol.net.in>

Part 1.1 Type: Plain Text (text/plain)
Encoding: quoted-printable

~~Part 1.1~~
20/8/02
Ja
Sri

Apologies for Cross posting:

Dear Friends,

The London based Commonwealth Policy Studies Unit (CPSU) has just prepared a memorandum for the Commonwealth Heads of Government in the context of the WSSD which starts later this month.

Some details and the executive summary of the memorandum are pasted below. If anyone wants to have a look at the full memorandum, please do let me know.

As part of the process initiated by the Commonwealth an Expert Regional Meeting on Indigenous Rights in South and South East Asia, was held in New Delhi on March 11th-13th, 2002, where many issues regarding indigenous and adivasi people in this region were also discussed.

THE MINER'S CANARY

Indigenous Peoples and Sustainable Development in the Commonwealth

A Commonwealth Policy Studies Unit Memorandum to Commonwealth Heads of Government attending the World Summit on Sustainable Development (WSSD), August 26 - September 4, Johannesburg, South Africa, 2002 by Professor Paul Havemann, University of Waikato, New Zealand and Dr Helena Whall, Indigenous Rights in the Commonwealth Project, CPSU.

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EXECUTIVE SUMMARY

Indigenous Peoples are like the miner's canary, when their cultures and languages disappear this reflects the profound sickness in the ecology. Biological and cultural diversity are basic indicators of ecological health and they are also the means whereby sustainable ecological health is sustained. Indigenous Peoples account for most of the world's cultural diversity and are also stewards of most of its biological diversity.

That Indigenous Peoples play a vital role in the conservation of biological diversity -the key to sustainable development - was explicitly recognised for the first time in Rio at the United Nations Conference on Environment and Development (UNCED), 1992. Rio produced a number of agreements recognising the key role of Indigenous Peoples in sustainable development.

However, over the past decade, few of these agreements have been adequately honoured. The World Summit on Sustainable Development (WSSD), to be held in Johannesburg, South Africa, August 26 - September 4 2002, provides an opportunity for states to transform the rhetoric of the UNCED into reality.

While the Commonwealth of 54 nations has explicitly recognised that a viable sustainable development policy has to give equal priority to the environment and the market, it has still not acknowledged the critical role that Indigenous Peoples can play in sustainable development.

It is critical that the Commonwealth recognise the vital nexus between Indigenous rights and sustainable development. The Commonwealth is home to approximately 150 million persons who describe themselves as Indigenous Peoples - the traditional stewards of the cultural and biological diversity of the Commonwealth. However, the Commonwealth has yet to acknowledge the significant contribution of Indigenous Peoples to this diversity. Moreover, it is turning a blind eye to the systematic homogenization processes that are underway in many of its member states. In many Commonwealth states, unsustainable development projects are routinely being undertaken that threaten and sometimes destroy indigenous communities and their livelihoods, thus destroying the unique cultural and biological diversity of the Commonwealth. If the Commonwealth is serious about its commitment to promoting and protecting cultural and biological diversity, it must recognise the special role Indigenous Peoples can play in preserving this diversity. In this Memorandum, it is argued that the Commonwealth must place Indigenous rights at the heart of its sustainable development agenda.

This Memorandum provides a brief background to the World Summit on Sustainable Development (WSSD), 1992; it outlines the reasons why Indigenous Peoples must be allowed to play a major role in sustainable development; it examines the Commonwealth's commitments to sustainable development and its failure to recognise the centrality of Indigenous rights to sustainable development; it then looks ahead to what might be achieved at the WSSD, 2002, and how the Commonwealth can take forward progress made at the WSSD at the forthcoming CHOGM, 2003. The Memorandum concludes by outlining the specific recommendations of the CPSU for the Commonwealth.

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----- Original Message -----

From: The Other Media
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Sent: Saturday, August 10, 2002 9:12 PM
Subject: Andaman Fact Finding Mission: Dates and plan

12 August 2002

The Members

Fact Finding Mission on the Threatened Peoples of Peoples and Nicobar Islands

Dear Members of the FFM,

Greetings.

Thank you for volunteering to be a member in the Fact Finding Mission on Andaman. Further to the communications on the above subject, please note the following:

1. The dates for the FFM is fixed for October 11-20, 2002. The plan is as follows:

- Oct.11 : Arrival at Calcutta
- Oct.11-12 : Briefing, review and finalisation of the Terms of Reference and plan of field work
- Oct.13/14 : Departure to Andamans
- Oct.14-19 : Field Work
- Oct.19-20 : Return to Calcutta
- Consolidation and finalisation of Report
- Plan for follow up actions
- Oct.20/21 : Departure from Calcutta

2. The following materials are attached:

- a) Terms of Reference of FFM
- b) Background note
- b) Background Report (for your information only and not for circulation)

3. URGENT

a) Kindly inform the Secretariat your suggestions and any additional information you may have

b) Kindly send the addresses with phone/email of any contacts you may have in Andamans so that the Secretariat can immediately contact them to mobilise logistic support at Andamans.

4. The names and addresses of the FFM Members are given below for quicker communication amongst members:

1. Pradip Prabhu, Convenor
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A hard copy of the same is also being sent by post. Please acknowledge.

Subject: Re: Andaman Fact Finding Mission

Date: Sat, 31 Aug 2002 19:23:20 +0530

From: "The Other Media" <admin@del3.vsnl.net.in>

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"Thelma Narayan (Dr.)" <sochara@blr.vsnl.net.in>, "Tiplut Nongbri" <tnongbri@satyam.net.in>,"Kalpana Sharma" <ksharma@vsnl.com>, "Pankaj Sekhsaria" <pankajs@pn3.vsnl.net.in>

CC: <rights@onebox.com>, <rights@rediffmail.com>

Dear Team members,

See the discussion initiated by Marianus and Pankaj below. They are very interesting and I would request all to share your views as well.

Marianus came to the Secretariat today and has kindly agreed to up-date the background report basing on the new developments. It will be good if members also share their views and give suggestions so that he can improve upon it.

In solidarity,

Gam

=====

Dear Marianus,

The points that you have raised are very very critical and this Fact Finding Mission needs to keep all of these in mind before we go into the issue.

As far as the structuring and time frame for the fact finding mission goes, it is upto the organisers and the Team Leader to take the decisions.

Regarding some of the substantive points that Marianus has raised, here are some responses and reactions from my side.

The issue of mainstreaming the tribals or allowing them the opportunity to decide versus the 'leave them alone like museum pieces' is an old and alive discussion and debate. It is a very easy (though important) question to raise. The difficulties come when you are forced to move beyond raising the questions and start to take a position of some sort. It is, I realise, important to raise the questions, but that is not enough by itself. I know its a difficult question to answer and difficult issue to resolve. I have for example faced it constantly in the last five years, and this question comes up every single time there is a presentation or a discussion.

Let me put forward another question in response to this very valid question. Do we want live museum pieces or do we want dead museum pieces? I think the question of museum pieces Vs their right to integrate etc. etc. will come only after this other question has an answer. I know, this does sound a little crude and even patronising, but I say this because the question here is not merely one of their human rights, it is a far more basic one of their survival. A look at the history of the islands and of the indigenous peoples is very revealing here. These people are being simply wiped out in the process of trying to integrate them. The Great Andamanese are gone, the Onge are headed in that direction and I do believe that the Jarawa have also been initiated in that direction. Where is the question today of what the Great Andamanese want or what their human rights should be, if their very basic survival as living human beings, and viable communities is in serious question. If this is where they, and importantly, we stand, I have no problem in saying that for the moment, we should leave them as they are and look at ourselves and what we are doing with them, their forests and their lands.

As far as updating the material in considered, particularly in the context of the orders of the courts -

I have sent a set of writings to Gam, which has articles on the latest issues with respect to the orders. Those might have the updates that are needed. I could also send you the court orders and the reports that were submitted to the Supreme Court by Shekhar Singh after he was appointed as Commissioner.

pankaj
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A+M file
3/9

T.M.
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Dear Pankaj,

Interesting points! The idea of a kind of a brief "pilot project" is good but cannot go on postponing the project endlessly in my opinion. I am, however, open to any new suggestions, new developments, even to a change in the original schedule.

My point "No. 5" has been misunderstood. It will be the last thing to suggest to "befriend" and "meet" the 4 tribes, that too in 10 days' time, and that too by 8 of the teammates! On the contrary, the intention in raising the issue is precisely to dissuade the team if at all "befriending" them is in the agenda. As of now it was not very clear as to how we would operationalize our objectives.

At the same time the issue of "leaving them in isolation" like museum pieces can be contested. What human rights are we talking about if these tribes are not allowed to share the resources with the rest of the country? What right do we have to prevent them from participating in the decision making process for their own dignity and self-esteem? Who are we to decide for them? Why can't we prepare them to decide for themselves? Are we of the view that they can be "fully human and fully alive" only in the reserves and jungles they are confined to? Is that what we mean by their "human rights"? Or we have to think of a strategy for them that will give them their due not as "objects" but very much as "subjects".

Plurality of ideas will throw better light on these issues, or else we may fall in the same trap as the British or the so-called neo-colonisers. This interaction will surely help us come to some sort of a consensus our objectives and methodology. We do not know in what way our objectives can be achieved. That is quite a different question. The question of change and continuity, their negotiations with the latest development ..., etc., coping with modernization, etc., are some of the points one cannot really ignore.

I am not arguing for one stand or the other, just throwing a few disturbing questions within the larger framework of the present-day discourse on insider-outsider, local-global, traditional-modern, etc... When we discuss our strategy these things will probably emerge more sharply.

Pankaj, could you enlighten me as to how the old paper can be updated. You have, of course, sent quite a bit of updated material yourself. But in the light of the SC & HC judgements, and in the light of our aims and objectives, can you give me some guidelines for the upgrading of the work. Meanwhile I am in touch with the Andaman House for some relevant materials. I am not sure if they will give me anything new. Regards,

Marianus