

Elephant Poaching in Bandipur Tiger Reserve, southern India



A Study on the Mortality of Asian Elephants (*Elephas maximus*) due to Poaching and Other Causes, Poachers and Anti-Poaching Strategies

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(AERCC- a Division of Asian Nature Conservation Foundation-ANCF),
C/o Centre for Ecological Sciences, Indian Institute of Science, Bangalore

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Preface: Among all the elephant conservation issues the issue of poaching, on a large or small scale will have a severe effect on elephant populations. If female elephants select males with larger tusks as an indication of good health, the poacher selects the same males for their wealth. Even on a small scale, the selective poaching of males, especially males with large tusks, will have a severe impact on elephant population viability. Understanding the problem of poaching is not that easy. It is about knowing the poachers, their age, number, location, strategies, availability of resources, and their skill to undertake undercover operations. It is also about knowing the numerical and structural changes in the elephant population, birth and death rates and the effect of poaching on the population numbers. The list becomes never ending. By the time the issue is understood in its entirety, with knowledge gained and effective strategies adopted, we would have ended up losing all our elephants.

This assignment was not part of any specific project with funds acquired for it, but developed while engaged in elephant / large mammal and their habitat related surveys or studies. This was an opportunity that presented itself while waiting for forest officials for meetings or discussions. Official records relating to elephant numbers/ deaths, causes were painstakingly noted down in field note-books during the period of waiting to meet officials. Later, while halting at rest houses or anti-poaching camps, the information on location of elephant death incidences, forest compartment/ range, elephant age and height, circumference of the leg, poacher's name, age, village, etc., were culled out, and a pattern was found regarding frequency of occurrence, age and class of elephant deaths, names of poachers, their age class and group size. While traveling through the forests, starting time of entry and exit from the forest, every single observation of animal presence or their signs were noted down. Thanks to the Casio Triple Sensor Wrist Watch displaying time digitally, it even gave the details of altitude of the site or habitat type. On reaching anti-poaching camps located deep inside the forest, casual talks with watchers revealed information about their age, experience, salary, family status, animals seen, elephant deaths and their encounter with poachers (if any). This information was then transferred to the field note-book before going to bed.

The strength of volunteers is commendable, they traveled from Bangalore to Bandipur using their own money; initially they did not know the purpose of traveling to those villages located close to the forest, where poachers were reported or had been arrested. They enjoyed the scenery of the mountains, paddy fields, and houses; without any opinion or preconceived ideas, met the villagers at small tea-stalls or in public places or even arrack/toddy shops. In the evening at the rest-house or anti-poaching camps, the volunteers were made to recall their observations, what they had listened to, what they saw, and the sessions becoming never ending and stimulating. The next day, with some level of training or understanding about the problem, they continued their village visits, observed everything objectively, spoke to the villagers sensibly, extracted details of their socio-economic conditions, life style, facilities, wildlife and other aspects of the problem. After reaching Bangalore, identifying the value of the trip, they wrote about their observation; (see Appendix 9 for an example) and having gained a variety of local knowledge, the volunteers also translated news items carrying the details of elephants, deaths, poaching arrests, poachers' names, age, locations of seizures of tusks and weapons.

Again, singly or with the group, trips were made by us to those villages, where the poachers were arrested or encountered. Including, damage to crop and properties, the intolerable problems caused by elephants and other wildlife to the people in these villages was visible; Sharing their concern for their property, sympathizing with their problems (on witnessing elephant pad mark or dung piles on crop lands) and when asked why they did not shoot these elephants, the villagers confided that they didn't

shoot them but showed us the poachers houses who indirectly helped them to shoot the elephants that destroyed their life and properties. The poachers welcomed us, took us to the forest, demonstrated their skill of killing the elephants and the strategies they adopted to kill elephants or any other wildlife. The poachers also made sincere attempts to feed us wildlife meat showed the village market and exclusive houses where meat was sold, they even bargained price of meat for us and when the meat was not available, they gave us a simple village lunch.

All this information directed us to see the problem scientifically or objectively and seeing the wealth of information, just extracted through the opportunistic sampling, GIS experts extended their help and developed maps related to the subject. The cameras sincerely documented the events and some photographs came by post. This accumulated, but carefully extracted detail on various aspects of elephants, poachers, villagers and other associated issues was responsible for this report. Effectively, not more than two weeks were spent to achieve this, considering the duration of the investigation, consistency or reliability of the truth of the same may be questioned, but this could act or motivate others to initiate investigations. While creating the document, it was felt that it should not go as just a research publication or as a popular or adventurous assignment but it should have a value to the end user. Initially, based on all these efforts, a draft document was created and dispatched or handed over to the experts, officials (see Appendix 10 for examples inputs and feedbacks) particularly range or/and divisional forests officers of Bandipur Tiger Reserve, Mudumalai Wildlife Sanctuary, Wayanad Wildlife Sanctuary and some other Forest Divisions adjoining the reserve.

Later, while going through some documents in a range office, signs of the draft document sent to them being used by forest officials were felt, the information that the department considered important was underlined by the staff who had been using the document. We were informed by the range officer who knew about the assignment that the report had given them the necessary information as to where and who to search for in case any wildlife crime occurred. We also understood that this investigation and the resulting document was a motivating factor for re-designing the structure and facilities of the anti-poaching camps where watchers live and continue their daily assignments. The range officer felt the document may help them even after several years as regular visits of the villages and investigations of the current status of the people mentioned in the report would give an impression that they were being monitored.

Acknowledgements: This assignment was possible with support and motivation given by the forest officers, particularly Deputy Directors of Bandipur Tiger Reserves: Mr. Rajagopal, Mr. Kantharaju, Assistant Conservators of Forests: Mr. Rajendra, and Mr. Prasad, all the Forest Range forest officers of Bandipur Tiger Reserve, particularly, Mr. Mohamed Shrief, and Mr. Ravindra. Mr. Udayan, IFS, Wildlife Warden, Mudumalai Wildlife Sanctuary, gave critical inputs on the earlier version of the documents.

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Many volunteers from the Indian Institute of Science, with varied background traveled to the villages close to the forest, to be part of this assignment and provided their valuable observation. Villagers shared their joy and sorrow of being close to the forests, welcomed us to their homes, crop land, gave very good food and became one of the sources for the knowledge gained on this subject. Tribal trackers, forest watchers and other staff walked with us for several kilometers, showed elephants, other wildlife, elephant and other wildlife deaths; the forest staff at the anti-poaching camp spent a lot time with us, shared their experience, food and blankets to make the assignment meaningful.

Executive summary: Bandipur Tiger Reserve is one of the least fragmented habitats in south India. However, reported death of elephants due to poaching and human - elephant conflict is very high and many reasons could be attributed to this.

An investigation into elephant deaths due to poaching, human-elephant conflict, natural and other causes was carried out. More emphasis was laid on understanding the problem of poaching, poachers identifying the causes and providing suitable management-oriented recommendations.

From 1994 to 1998, 156 elephants died in Bandipur TR due to many reasons. Out of 156 deaths, 42% was due to natural causes, 19% due to poaching, 16 % due to disease, 12% due to human-elephant conflict and 8 % due to other reasons, which include death by accident, killed by tigers, etc

Except in 1994, for all other years, death due to natural causes was high but in 1994 more elephants died due to poaching. Crop raiding related deaths caused by reprisal by people and electrocution was the second major reason for all the years except 1998, when poaching was the second major cause.

Adult male deaths due to poaching and natural causes show that except for the year 1997, death by poaching was relatively more for all the years.

An average of 31 elephant die every year in Bandipur Tiger Reserve due to various reasons of which 45 % are males, 46 % females, 6.15 % male calves and 3 % female calves. Of 14 male deaths every year, 6 to 7 elephants die due to poaching alone.

There could be a relationship between human-elephant conflict and elephant poaching, as in some seasons the elephants are often near human habitation as seen by very high dung densities close to human habitation. Elephants being close to human habitation may result in severe human elephant conflict and a negative interest in conservation of the species by locals. And proximity to human habitation may make them easy targets for poachers.

Poaching of elephants for tusks in Bandipur TR has been reported since a long time. Recorded number of elephants killed due to poaching since 1974 to 1998 is about 57 animals for the reserve.

Elephant poaching is reported every month, the deaths of elephants ranged from 1 to 7 animals, and the number of elephant deaths in July was very high.

The seasonal occurrence of deaths due to poaching suggests that, more elephants were killed during first wet season. Begur, Moliyur and Moolehole report relatively more elephant deaths due to poaching during the first wet season. During the second wet season, poaching caused more elephants deaths in Moyar, Moliyur Range had poaching problem during all three seasons.

Ranges where more deaths have taken place (Begur, Moliyur and Maddur) are very remote, located very far from their administrative offices and staff quarters, and have human habitations and notorious poachers close to the forest.

Of the 30 cases of poaching reported for five years, 23 cases had tusks missing, of these; in seven cases tusks were recovered. Three cases had no details of the personnel involved or other information of the incident.

To understand the effect of poaching and other causes on elephant population, 130 elephants were classified for their age and sex. It was found that the reserve had 43% adult females and 4% adult males (15 to 40 years). With this ratio and the number of adult male deaths due to various causes, including poaching, the mortality rate of adult is very high for the reserve and it would have severe effect on elephant population.

The forest department has taken several anti-poaching measures to control poaching; anti-poaching camps have been established in the Reserve. However, two years before establishing the camps, 11 elephants were poached and two years after establishing 12 elephants were poached. An animal was poached close to two anti-poaching camps and another incident took place two km from an anti-poaching camp. It can be noted that the total area covered by the patrolling parties considering all camps is less than 10 % of the total area of the Reserve. Quantification of effort was involved, strategy followed, success or failure not have been reviewed scientifically.

Each camp is 8-10 km away from each other and may not be an ideal distance between two different camps. Only 25 % of the staff appears to be efficient as most of them are above 40 yrs old. Insufficient funds and lack of reliable communication systems are major problems and the living conditions of the camp staff are poor.

The mean age of poacher involved in the poaching activities in this region was 34 yrs, the age class of 25 to 40 yrs dominated accounting for 79%. The group size of the poachers entering forest range from 1 to 10 individuals and group size of 3 individual dominated. Out of 58 locations from which poachers were known to arrive, eighty five percentage were within 10km from the forest and about 45% of were from within 5 km distance.

There are two distinct poachers' centres in Kerala; poachers from Sasimala, Chamapara, Seethamound, Pulpalli, Parakadavu, Mullankolli, Vandikadavu, Koppiset and Kolavalli villages form the Pulpally Poachers' Centre, operating in Begur, Gundre, AM Kudi (Kalkere) and Moolehole ranges. Poachers from Sultan Bathery poachers' centre mainly operate along the tri-junction of the three states, particularly in Moolehole of Bandipur (Karnataka), Mudumalai (Tamil Nadu) and Kurchiat of Wayanad (Kerala).

Karnataka poachers are referred to as the Moyar group, Hediyaala group and Naganapura group. Moyar Group operates in Gopaldaswamy betta area of Moyar range. Hediyaala group operate along the periphery of Katwal, Moliyur, and up to Maddur. Naganapura Group operates in areas of Naganapura and adjoining Hediyaala.

Among all these poaching groups, Kerala group dominates a major percentage of the poaching. Associated activities are done by Vellutha Abubakkar, Podiyan, Chazhipara Babu and Elias of Sultan Bathery Center. But, it's not clear who the poachers are and where they come from in the Pulpally Centre.

The ivory obtained from Bandipur Tiger Reserve by the Kerala poachers goes to Trivandrum, Cochin and Calicut. Sultan Bathery - Calicut - Mangalore - Bombay - Middle East (Dubai) could be one of trade routes for tusks of elephants poached in Bandipur. The local poachers from Hediyaala sell their ivory to Jaipur through middlemen in Mysore.

Elephant tusks are regularly taken to Junaid Sait of Mattanjery in Cochin. Mattanjery could be a place where all the tusks are sold. Adimali of Iuddki district Kerala is also another important tusk trading center and Adimali Thomas could be a main man in this deal. Kerala groups are very active and they will continue to be actively involved till very effective anti-poaching strategies are adopted.

The poachers operating in these areas appeared to be economically rich, and poaching continues because of its entertainment value. However, the agricultural practices are not economical. Some crops are severely damaged by wild animals including elephants in the region. As mentioned earlier, this conflict may result in a negative approach to conservation by the people living here who directly or indirectly support poachers.

The essential needs of the staff are inadequately distributed and they are also poorly paid. Insufficient funds and lack of reliable communication systems are major problems. Sensitive ranges are very remote, staffers show less interest and motivation in working in these remote and poorly equipped regions.

Begur, Gundre, Kalkere and Moolehole, ranges have a common boundary with Kerala. Inter-state cooperation is essential to prevent elephant poaching. Kurchiat, Muthanga, Sultan Bathery (Wayanad Wildlife Sanctuary), Chedulayam (Wayand south Forest division), N. Begur, Gundre, Mulehole, Kalkere, Hedyala (Bandipur National Park), Mudumalai, and Kargudi (Mudumalai Wildlife Sanctuary) are the sensitive ranges for elephant poaching in this region. Selection of personnel, from the Range Officer to the ground staff, should be based on ground knowledge, intelligence gathering, use of fire arms and other related skills.

Places such as Purathakoli (Chowdalli section, N. Begur range), Honnamana Kollachi (Bannur section, Gundre range) and Nayahalla (Hosahalli section, Gundre range) should have permanent anti-poaching camps as poachers from Sultan Bathery taluk, Vandikadavu, Sasimala, Seethamont, Chamapara and Kolavalli enter Bandipur through these places.

Priority should be given to legally empowering wildlife law enforcers, allowing the Reserve staff to use fire arms, increasing the penalty for poachers and legally controlling the possession of fire arms and ammunition by the local people. Poaching as an offence should be made non-bailable, even in the High Court. Till the case is disposed, the party should be kept in jail. The monitoring of the cases should be done through regular meetings.

Regular meetings between Superintendents of Police and Deputy Conservators of forests, circle inspectors of police and range officers, counterparts in neighbouring divisions, circles and ranges, particularly in the interstate border areas, will improve the efficiency of enforcement. More importantly, the meetings alone will not solve the problem, follow-up is also equally important.

A special cell, comprising of police, forest department and NGOs should be formed to monitor poaching cases. This cell should aim for details of the people and villages involved, the economic status of the people living close to the reserve, expected age class of unemployed youth who could be involved in these illegal activities and other related information. This cell can also be used to establish intelligence gathering networks and undercover investigations.

The welfare of the ground staff needs to be given high priority. Frequent interaction between the higher level forest officer and the lower level staff is very important, as it would help in understanding the problems of the ground staff and the facilities given to them. Most of the forest areas are very remote.

If the tribal or local people get involved in any illegal activity, they get very little money out of it. To prevent these tribals and locals from entering the forest, more job opportunities should be given to them, and their life style improved.

Introduction and objectives: Habitat fragmentation, developmental activities within the available elephant habitat and poaching for ivory are the major threats to the elephant population in India. Deaths due to human-elephant conflict are also increasing at an alarming rate. Bandipur Tiger Reserve is one of the least fragmented habitats in south India (AERCC, 1998). However, reported death of elephants due to poaching and human - elephant conflict is very high (AERCC, 1998) and many reasons could be attributed to this.

The following proximate reasons could be identified for the high rate of poaching in Bandipur Tiger Reserve.

1. The habitat may support a relatively high density of elephants (AERCC, 1988) with a reasonable number of males
2. The Reserve has a 190 km boundary with human habitations (Kantharaju, 1999) for whom the reserve is easily approachable and also easy to traverse across the entire length as the habitat is undulating (the average elevation is 1000 mtrs),
3. The Reserve falls within a forest area encompassing three different states, where the interstate co-operation in controlling illegal activities is poor.

Elephant poaching appears to be severe problem in the reserve; within 5 years, the reserve lost 30 male elephants due to poaching alone. In 1997 poaching began on January 1st itself. Between January and September 1998, 5 elephants were poached. Two elephants died due to poaching in Maddur range within a month. There were 2 cases of poaching in Hediya sub-section, one elephant was poached in Hediya range and another was poached in Moliyur range. On 15th August 1998, India's Independence Day, a male of 25-30 yrs was poached in N. Begur range. In October 1998 a male elephant carcass without tusks was found near Nayanpura forest, under Hediya range. The tusker was seen 15 days earlier with a wound, it died later and its tusks were missing. Probably, the tusker was followed by local poachers, who later shot it and removed the tusks. The continuous incidents of poaching for the previous five years, from all the ranges of the reserve, led to discussions and critical ground action on the issue.

A survey on elephant deaths due to poaching, human-elephant conflict, natural and other causes was carried out. More focus on the problem of poaching, poachers and identifying the causes was made to provide suitable management-oriented recommendations.

As there was no information on the status of poaching and other issues related to it, this was also a situation wherein different issues needed to be investigated within a short period of time. Elephant deaths due to various reasons, the status of poaching across years, number of tusks lost, recovered, poachers involved, arrests made, status of anti-poaching camps and their functions were to be investigated. Understanding the occurrence of poaching of elephants from different ranges during different months and seasons has the advantage of knowing existing man power, facilities provided, officers posted, anti-poaching strategies adopted, proximity to human habitation and other factors. Once the details of sensitive areas, months, seasons, and other associated factors become known or identified, an effective management strategy can be evolved.

Knowing who the poachers are and where they come from and where the material goes ultimately, is very important in understanding the problem. Once the groups operating in the Reserve, the strategies they adopt and the final destination of ivory are identified, it will enable enforcement agencies to take

action. Moreover, the information on the actual destination would help in educating the people against the use of ivory.

There was a need for establishing contacts with some of the ex-poachers and with poachers suspected to be continuing their operations in Kerala and Karnataka. There was also a need to open a dialogue with these people to understand the problem, their mode of operation, strategies to be followed to control the poaching issue. To know or solve or control the issue, factors such as the reason for the personnel becoming poachers or being involved in other illegal activities, the ecological history, land use pattern of the location from where poachers come and their socio-economic conditions were to be taken into consideration.

Methodology:

General:

The study started with field investigation (Figures 1a, b, c and d) which included visiting locations of elephant deaths due to various causes over the last five years (1994 to 1988), habitat assessment, age and sex classification of elephants, and visits to anti-poaching camps and villages (from



Figures 1a and b: Field investigations on elephant deaths due to various reasons

visiting locations of elephant deaths due to various causes over the last five years (1994 to 1988), habitat assessment, age and sex classification of elephants, and visits to anti-poaching camps and villages (from



Figure 1c: Field investigations on elephant deaths

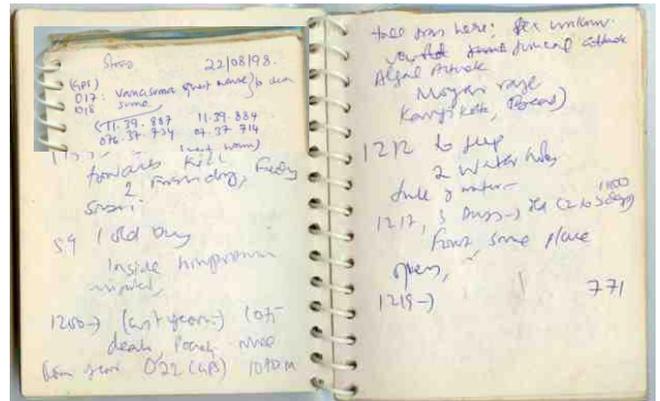


Figure 1d: Field information on habitat, elephant status and poaching recorded in field note book

where poachers are reported), meeting different authorities (police and forest departments and NGOs, elephant and other wildlife poachers), going through the records of elephant deaths and poaching incidents and arrests by both Police (Figure 1e and f) and FD.

The source of data for elephant deaths were the Forest Department (henceforth FD). However, use of records of the forest department brings into question uniformity in maintenance of records, percentage of data not included (various reasons) and variation in the area covered over the years, i.e., whether a designated area is uniformly covered across the years. In the absence of long-term scientific investigations and difficulties in obtaining such information, the cause and pattern of elephant deaths were to be arrived at only from existing Forest Department records.

Record of the number of elephants killed by poachers since 1974 was obtained. Elephant death data base maintained by Wildlife Trust of India (WTI) was used to compare and assess the consistency and reliability of records. More emphasis was given to records available from 1994 to 1998. The data was pooled for 5 years (1994 to 1998) and the data for individual years also analysed.

This data included: reasons for death, trend, comparison of adult male deaths due to poaching and due to natural causes, male elephants poached and female elephants' deaths due to natural causes, deaths of males and females due to all causes, the influence of conflict related deaths (shot and/or electrocuted) on poaching. Based on the amount of rain received, three different seasons such as dry, wet I and wet II were identified (Varman and Sukumar, 1993) and which helped in understanding the deaths of elephants during different months, seasons and ranges.

A ground survey was carried out on elephant distribution across forests and close to human habitation. For this purpose, the number of elephant dung piles was counted along the trails in the different habitats (moist deciduous, dry deciduous, thorn forest regions and forests close to human habitation). A total of 36 km were walked during the dung survey in these forests. Dung observation was restricted to 1 meter on either side of the trail and the encounter rate of dung piles/km and a crude density/km² were also calculated.

A note was made of the status of the tusks during investigation, tusks missing, recovery, arrest of poachers and details of ivory trade through the details provided in the records and through ground investigation and interviews with FD staff, poachers and local people. Details of the gangs involved, information of the incidents, location of poachers, success and failure in recovering the tusks, registration of cases, existing co-ordination between the forest department and other investigation agencies were arrived at through records and personal interviews with the concerned people.

Effect of poaching and other causes on elephant population was done by estimating age and sex classes of elephants. A total of 156 elephants were enumerated, of which 130 were classified for their age and sex. Age classes were divided under adults (age classes 30-40, 20-30, 15-20, 10-15) sub adults (age class 7-10, 5-7) juvenile (age classes of , 3-5, 2-1) and calf (1-2,0-1) for both sexes. With this

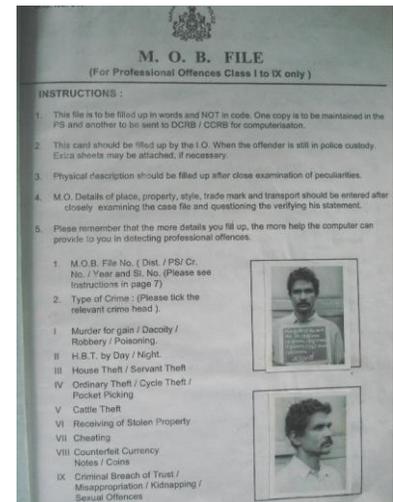
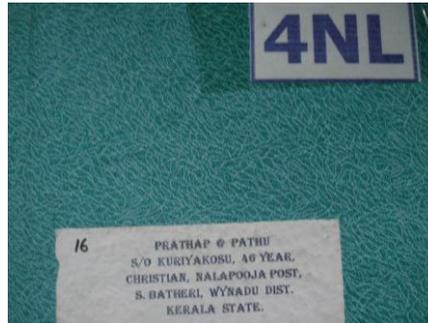


Figure 1e and f: Poilce records connected to personnel arrested for poaching elephants

information, percentage of adult females (15 to 40 years), adult and juvenile females (3 to 15 years), adult males (15 to 40 years) and sub adult and juvenile males (3 to 15 years) was arrived at (Varma, per.obs.,).

Population structure and data obtained (Varma, per.obs.) from a long-term monitoring of elephant population in Mudumalai Wildlife Sanctuary, which has similar habitat and is geographically connected to the Reserve, was used. Density of elephants for the Reserve was arrived at from Desai et al. 1985, and from the forest department census data for 1993 and 1997 (AERCC, 1998). The annual mortality rate of males was arrived at from Sukumar 1989. Comparison of percentage of adult males for the population and their death rate was made, to see the effect of deaths (including elephant poaching).

Anti-poaching camps were visited to know the location, living conditions, facilities provided, distance from human habitation, distance between any two camps, manpower, amount spent/camp, time staff stayed in the camp, time of patrolling, status of attendance and field diaries maintenance. Area covered, animal species observed by the patrolling staff and other related information was also gathered. Number of elephant deaths due to poaching, before and after establishing the camps was also considered. Visits to the villages close to Bandipur Tiger Reserve, in Kerala (from where some poachers were known to enter), was made to check the efficacy and villager's opinions on the camps and the anti-poaching strategies.

From the arrest, investigation records and other sources (news paper articles on wildlife crimes), information was gathered on the mean age of poachers, the age class, group size and mean group of poachers entering forests for poaching, distance from the forest to the poachers location and different states and groups. Information was also collected on distinct poaching centres in Kerala and Karnataka, their area of poaching, land use pattern, ecological history of the location, source of weapons, method of killing, duration of stay and strategies followed (poaching, transporting the tusk, identification of middle man, or tusk dealer).

Records on various offences related to poaching and ivory trade registered by the forest and police departments, personal interaction with ex and current poachers, local people, retired forest and police officials were also sources of data. The offence included illegal trespass or entry into reserve forests; attempt to hunt with a gun, poaching of wild animals and the offence of possession of animal meat and their body parts.

Study region: Bandipur NP, situated in Karnataka of southern India (Figure 1), covering an area of 874 km², is situated at the convergence of Western and Eastern Ghats (Perumal, 1973; Krishnan, 1973; Neginhal, 1974; Basappanavar, 1985; Natarajan, 1988; and Ramaiah and Rajeev, 1993), serving as a vital link in the seasonal movement of elephants from Mudumalai Sanctuary and Satyamangalam forest division in the east and south east to Rajeev Gandhi National Park and Wayanad Sanctuary in the west and North West (AERCC, 1998).

The terrain is undulating with low hills, and the altitude varies from 800 m to 1500 m. The highest peak is Gopalswamy Betta (1450 m). The Nugu and Kabini rivers flow through the northern portions of the Reserve, and are the main sources for water during the dry season. The reservoirs across the Nugu and Kabini are also among the northern boundary of the Reserve. The mean annual rainfall varies from 625 mm to 1250 mm from the eastern side to the western side of the Reserve. The Reserve contains a large

number of waterholes and check-dams. There are 187 waterholes, of which 134 are artificial and seasonal, and 50 perennial (Kantharaju, 1999).

Administration: The Reserve has 9 administrative ranges, viz., (1) Moyar, (2) Bandipur, (3) Moolehole, (4) Maddur, (5) A.M. Gudi (Kalkere), (6) Hediya, (7) Moliyur, (8) N.Begur and (9) Gundre. The Reserve is administrated by a Field Director (Conservator of forests), one Deputy Director (Deputy Conservator of forests), two Assistant Conservators of forests, 9 Range Forest Officers and 23 Foresters. The Reserve has nineteen sections and 101 Beats for the practicality of administration (Kantharaju, 1999).

Vegetation: The reserve is dominated by mixed dry deciduous forest type (Kantharaju, 1999). Based on the forest cover, the Reserve can be divided into 3 main types as follows. 1. Dense forest, which includes mixed deciduous forest (603 km²). This type of vegetation roughly encompasses the high rainfall areas in the west, especially on the Reserve's western border with Wayanad wildlife sanctuary in Kerala. 2. Open forests of dry deciduous type (206 km²). 3. Tropical dry thorn forest (34 km²), both these vegetation dominates the eastern, lower rainfall areas. To the eastern most portions lie the scrub forests (Figure 2a).

The vegetation in the central portion is dry deciduous (Figure 2b), the vegetation in the western part of the reserve is moist deciduous (Figure 2c). The vegetation, therefore, changes from scrub type to moist deciduous type from east to west. The reserve also has forest plantations (Figure 2d and 3).



Figure 2a: Scrub forest



Figure 2b: Dry deciduous forest



Figure 2c: Moist deciduous forest



Figure 2d: Forest Plantation

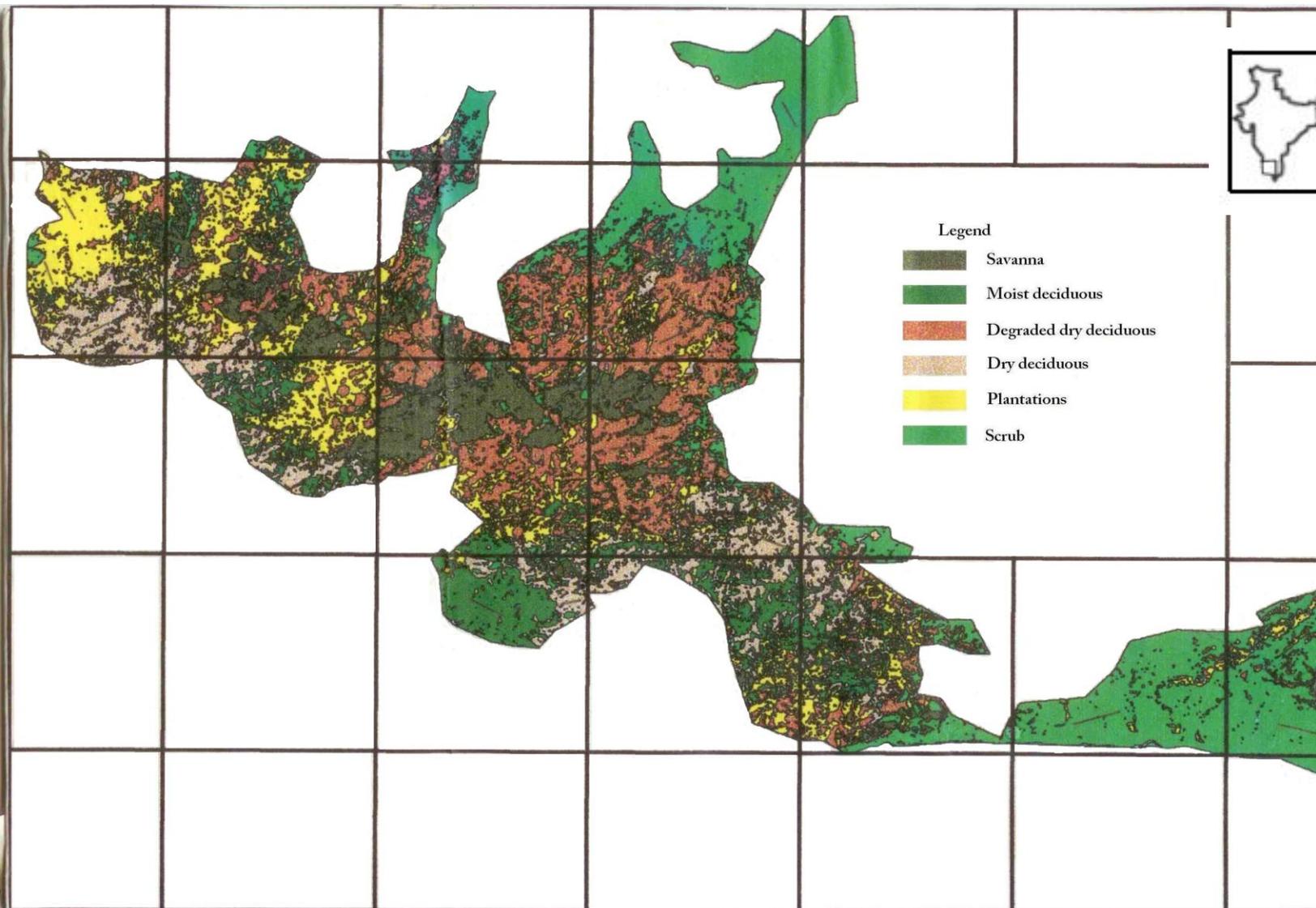


Figure 3: Location of BTR and its vegetation types and their distribution

Asian Elephants in the reserve: Although the Asian elephant is found in diverse vegetation types, like tropical evergreen, semi-evergreen, mixed deciduous, thorn forests and grasslands, their density is reported to be high in deciduous forests (Sukumar, 1986). The combination of dry deciduous, moist deciduous and thorn forests is expected to provide seasonally changing resources and may support a higher density of elephants.

With the occurrence of large and contiguous mixed deciduous, thorn and grassland patches, the forest complex of Bandipur Tiger Reserve, Mudumalai and Wayanad Wildlife Sanctuaries, Rajeev Gandhi National park, (Hunsur) Sathyamangalam and Nilgiri North territorial forest divisions (Figure 4) provide a suitable habitat for Asian elephants (AERCC, 1998). These factors, including a combination of mixed deciduous, thorn forests and grassland patches, and large contiguous habitat give rise to a

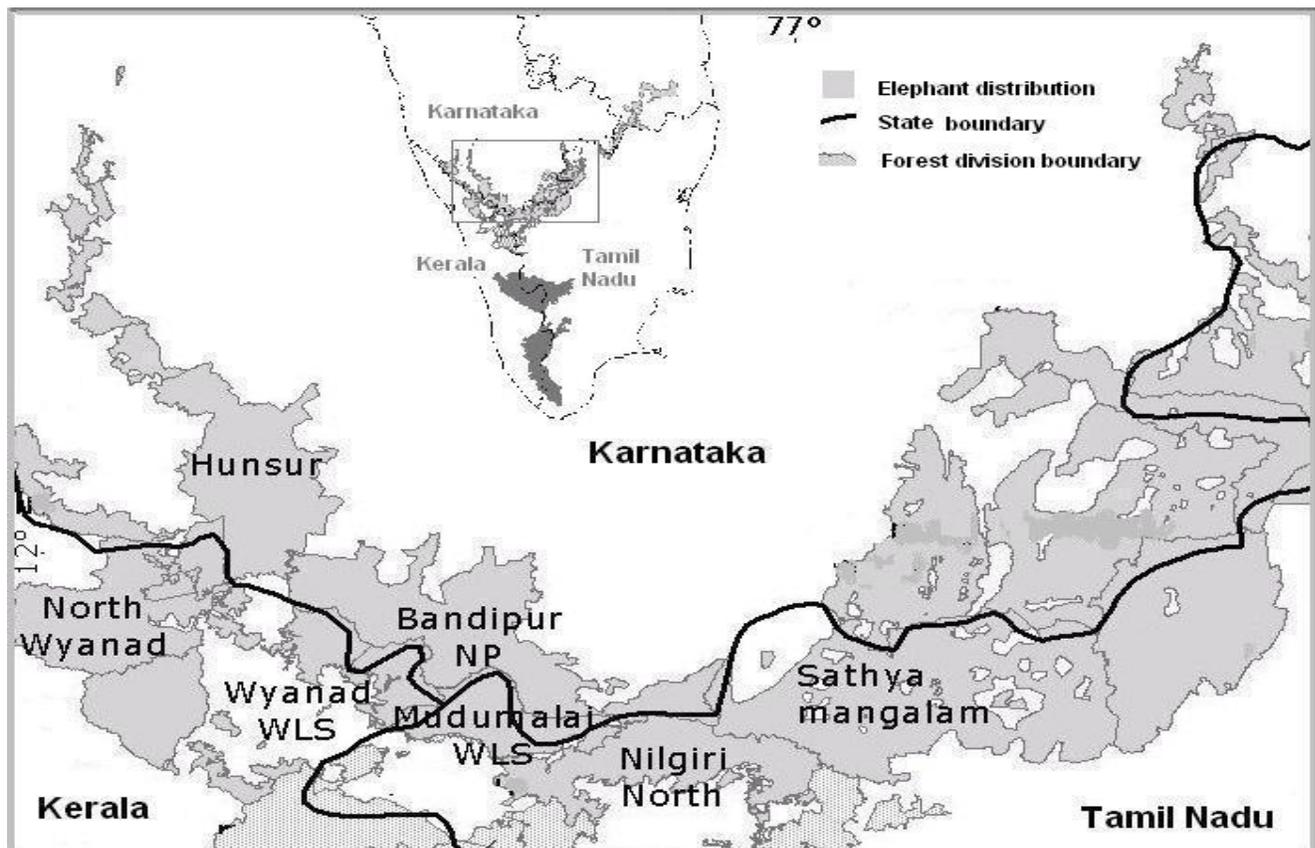


Figure 4: Asian Elephant distribution in different forest divisions (including Bandipur Tiger Reserve)

higher density of elephants in the Bandipur Tiger Reserve. The Reserve supports a density of 2-5 elephants per sq. km, which changes seasonally (AERCC, 1998).

Elephants are reported in all 9 administrative ranges and density changes seasonally. During summer, more elephants are reported in Gundre and N.Begur. These two ranges have moist deciduous forest and the backwaters of Kabini. During the wet season, elephants move towards the eastern side to Moyar, Bandipur, Maddur and Hediya, and crop raiding also starts at the same time (Perumal, 1973; Krishnan, 1973; Kantharaju, 1999).

People: The northern part of the Reserve has a 190-km boundary with human habitation and is surrounded by about 200 agriculture-based villages with a population of 1, 60,000 people and 2, 85,000 cattle (Kantharaju, 1999). The eastern side of the Reserve has rain fed dry crop cultivation, which is not intensive as the land is not fertile and the return from this rain fed cultivation is not economical.

The western side of the Reserve, towards the Kabini reservoir and backwater and Kannegakahole (Kerala State is separated from Karnataka by this stream and same is called Kanaram Pulza in Kerala), has more wet crop cultivation (Easa and Sankar, 1999). The villages displaced by the submergence of Kabini reservoir were rehabilitated close to these regions. The Reserve, adjoining some parts of Kerala, had a Pulpally Devasam (Temple) forest land of 14000 acres in the 1960s.

It's reported that settlers, from southern Kerala, encroached this area and the temple now has only 30 acres of forest left. The encroachers, labourers, landless and marginal farmers, illiterate and unskilled workers and the unemployed have an impact on the Tiger Reserve (Perumal, 1973; Krishnan, 1973; Neginhal, 1974; Basappanavar, 1985; Natarajan, 1988; Ramaiah and Rajeev, 1993; Kantharaju, 1999).

Elephant deaths and their causes in BNP: From 1994 to 1998, 156 elephants have died in Bandipur TR due to many reasons. Out of 156 deaths, 42% was due to natural causes, 19% due to poaching, 16 % due to disease, 12% due to human-elephant conflict (shot dead or electrocuted) and 8 % due to other reasons, which include death by accident, killed by tigers, etc.

Although disease and tiger killings may also come under natural causes; in order to know the proportion of elephant that die exculsively due to diease and tiger kill, both these were brought under different catogories. Out of the 156 dead elephants, 45% were males, 46% females and 9% calves. Reported deaths of elephants have increased since 1994 and there was a peak in elephant mortality in 1996. However, there was a decline in deaths reported since 1997 (Figure 5).

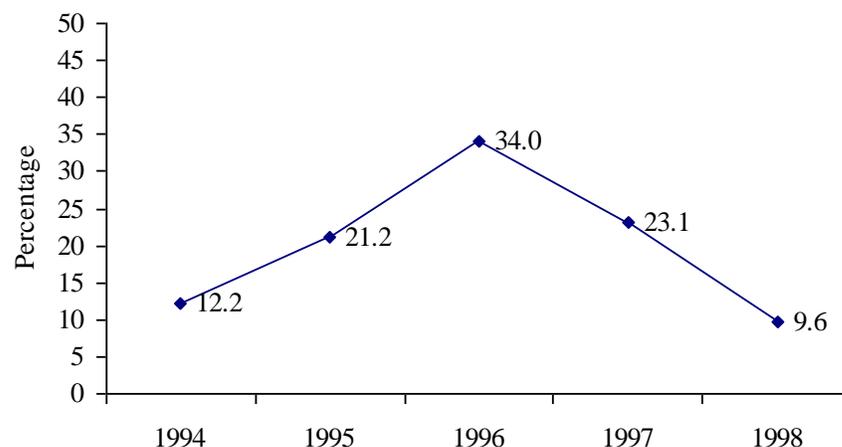


Figure 5: Patterns of deaths of elephants in Bandipur TR

Except in 1994, for all other years, death due to natural causes (Figure 6a and b) was high, and in 1994



Figure 6a: Elephant death; identified as natural cause



Figure 6b: Elephant death; identified as natural cause

more elephants died due to poaching (Figure 7). Death due to crop raiding (crop raiding related deaths caused by reprisal with people) and electrocution was the second major reason in 1995 and for 1998, poaching was the second major cause (Figure 7).

The comparison of natural deaths of all age–sex classes and poaching shows that, there were more elephant deaths due to poaching in 1994 than natural causes. For the years 1995 to 1997, death due to natural causes was more. For 1998, though deaths due to natural causes were higher than other causes, however the difference between natural cause and poaching may not be significant.

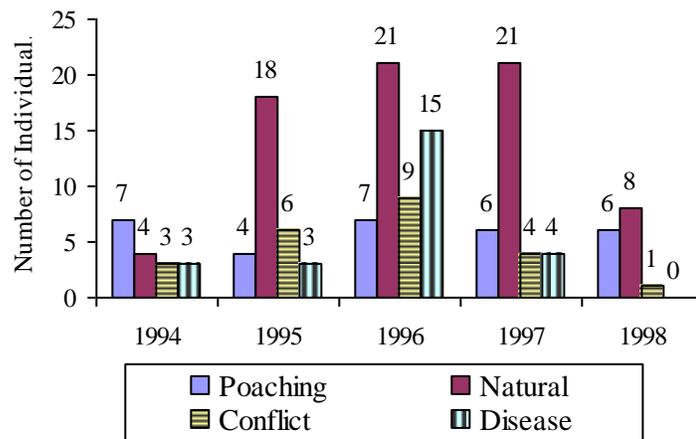


Figure 7: Status of elephant deaths due to different causes during different years in Bandipur TR

Adult male deaths due to poaching and natural causes are presented in Figure 8. Except for the year 1997, death by poaching was more for all the years.

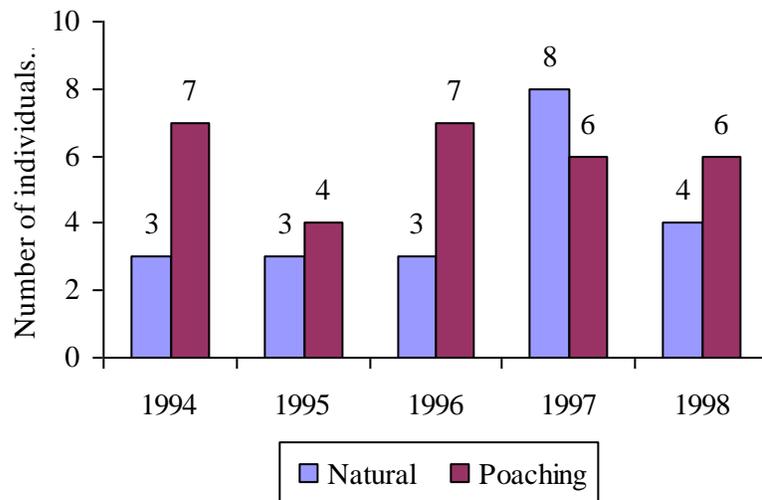


Figure 8: Male elephant deaths due to Natural cause and poaching for different years for Bandipur TR.

Comparison of deaths of male elephants poached and female elephants dead due to natural cause show that, natural death of females was more from 1995 to 1997 and but for 1994 and 1998, more males died due to poaching (Figure 9).

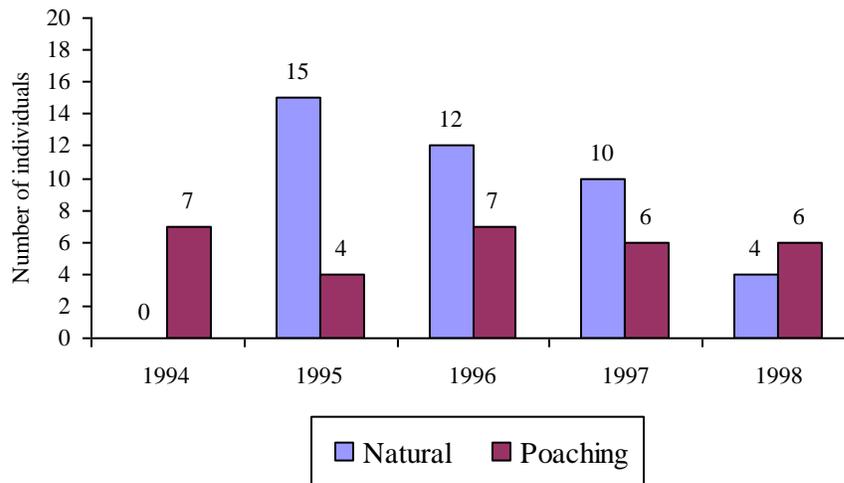


Figure 9: Deaths of male elephants poached and female elephants dead due to natural cause for different years in Bandipur TR

Comparison of deaths of males and females due to all causes show that more males died during 1994 and 1998 and the death rate for both male and female was equal in 1997. In 1995 and 1996, more females died compared to males (Figure 10).

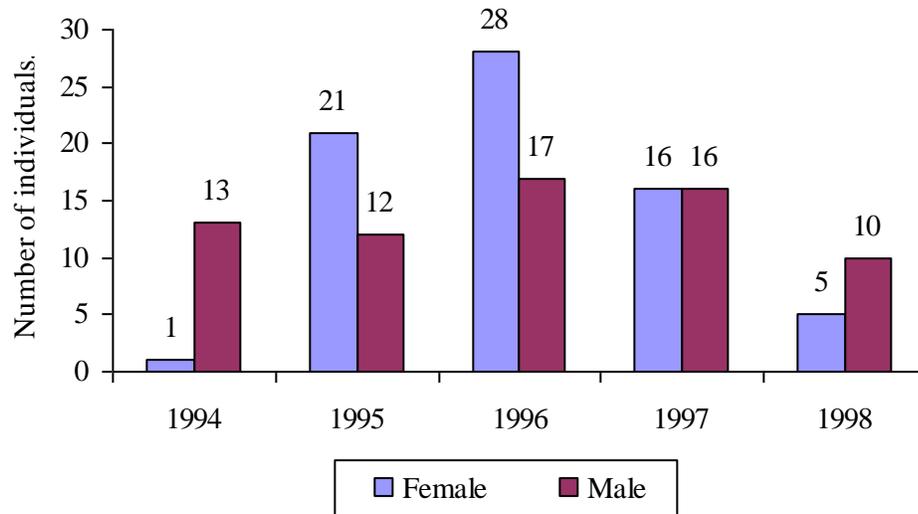


Figure 10: Deaths of males and females due to all causes for different years in Bandipur TR

The death of elephants due to various causes, for different years and age and sex class is reported in Table 1. The pattern of deaths shows that except for 1998, death of adult males occurred due to the causes listed. In 1998, it was only natural and poaching related deaths. In addition to poaching, conflict related deaths (shot and electrocuted) were one of the major causes (Figures 11a and b) for adult male deaths in the reserve.



a



b

Figures 11a and b: Elephant visiting villages (a) and getting killed by conflict related issues (b) are major conservation challenges in Bandipur Tiger Reserve and adjoining Mudumalai Forests

Conflict related deaths are reported every year, minimum of one elephant and a maximum of 9 elephants die due to conflict related causes every year in the reserve. Within this electricution of elephants appeared to be on increase (Table 1)

Table 1: Elephant mortality due to various reasons

Year	Cause	Number	Male	Female	Male calf	Female calf
1994	Natural	4	3	0	1	1
	Crop raiding	3	2	0		1
	Disease	3	1	1		1
	Electrocution	0	0	0		
	Poaching	7	7	0		
	Others	2	0	0	1	
	Total	19	13	1	2	3
1995	Natural	18	3	15	0	0
	Crop raiding	5	1	4	0	0
	Disease	3	2	1	0	0
	Electrocution	1	1	0	0	0
	Poaching	4	4	0	0	0
	Others	2	1	1	0	0
	Total	33	12	21	0	0
1996	Natural	21	3	12	5	1
	Crop raiding	2	0	2	0	0
	Disease	15	3	12	0	0
	Electrocution	7	5	2	0	0
	Poaching	7	7	0	0	0
	Others	1	1	0	0	0
	Total	53	19	28	5	1
1997	Natural	21	8	10	2	1
	Crop raiding	2	1	1	0	0
	Disease	4	0	4	0	0
	Electrocution	2	1	1	0	0
	Poaching	6	6	0	0	0
	Others	1	0	0	1	0
	Total	36	16	16	3	1
1998	Natural	8	4	4	0	0
	Crop raiding	1	0	1	0	0
	Disease	0	0	0	0	0
	Electrocution	0	0	0	0	0
	Poaching	6	6	0	0	0
	Others	0	0	0	0	0
	Total	15	10	5	0	0

Every year due to various reasons, an average of 31 elephants die in Bandipur Tiger Reserve, out of which 45 % are males (an average of 14 elephants every year), 46 % females, 6.15 % male calves and 3 % female calves. Out of 14 male deaths every year, 6 to 7 elephants die due to poaching alone.

Poaching and natural factors are major causes for male elephant deaths. Females die largely due to natural causes, followed by disease and crop raiding (Table 2).

Table 2: Elephant deaths for the 5 years (1994 – 1998) due to different causes

Cause	Male		Female		Male calf		Female calf			
	Total	Mean*	Total	Mean*	Total	Mean*	Total	Mean*		
Natural	72	14.4	21	4.2	41	8.2	7	1.4	3	0.6
Crop raiding	13	2.6	4	0.8	8	1.6	1	0.2	0	0
Disease	25	5	5	1	18	3.6	1	0.2	1	0.2
Electrocution	10	2	7	1.4	3	0.6	0	0	0	0
Poaching	30	6	30	6	0	0	0	0	0	0
Others	6	1.2	3	0.6	1	0.2	1	0.2	1	0.2
	156	31.2	70	14	71	14.2	10	2	5	1

*Mean per year

In addition to poaching, conflict related deaths (shot and electrocuted) also influence overall death of male elephants in the Reserve. There could be a relationship between conflict and elephant poaching and also elephant distribution along the human habitations.

Relationship between human-elephant conflict and elephant poaching: The survey of elephant habitat usage pattern within different forest types and forest edges (close to human habitation) suggests that elephant dung encounters during the first wet season is biased towards the habitat close to human habitations (Table 3). A total of 36 km were walked during the survey in these forests, out of this 2.26-km were covered in forests close to human habitation. A total of 183 dung piles were counted during the 33.7 km walk inside the forest.

The 2.6 walk in the forest area close to human habitation had 64 dung piles. This indicates that in some seasons the elephants are seen often near human habitation. Dung densities in scrub and moist deciduous forests close to human habitation were very high, this was particularly so in the moist deciduous forest near Kolavalli village, Kerala and the foot hills mixed deciduous and scrub forests of Gopal Swamy betta, Karnataka.

Table 3: Status of elephant dung encountered/km across different habitats and human habitation

Forest types	Forest interior				Forest edge (close to human habitation)			
	Distance covered (km)	Number of dung piles	ER/km	Dung density/ km ²	Distance covered (km)	Number of dung piles encountered	ER/ km	Dung density/ km ²
Dry								
Deciduous	15.8	148	9.4	4668	****	****	****	****
Moist								
deciduous	14.5	14	0.9	484	1.73	19	10.9	5491
Thorn	3.9	21	5.4	2675	0.53	45	84.9	42452

ER: Eelephant Dung Encounter Rate, *****: No assesement was made.

The dung densities estimated for the forest and forest edges may be an over estimate. Although dung piles were considered only within a meter of either side of the trail, the area calculated through this approach would have been over estimated; the results of dung encounter rates may be indication of density, reflecting the higher density of elephant dung piles along the forest edges.

Elephants being close to human habitation may result in severe human elephant conflict and locals may develop a negative conservation interest towards the species. And as the elephants are close to human habitation they may be an easy target for the poachers. Kollavalli village and Gopal Sawamy Betta region reportedly have a link with the poaching issue. Kollavalli is one among the villages from where poachers are arrested and elephant deaths due to poaching have been reported in Gopal Swamy betta region of the reserve.

Poaching: Poaching of elephants for tusks in Bandipur Tiger Reserve has been reported since a long time and a record of the number of elephants killed by poachers is available since 1974. The number of elephants killed due to poaching since 1974 to 1998 is about 57 animals (Table 4 - deaths reported for 1974 to 1993 is of the financial year April to March and in 1994 for the calendar year - January to December).

Table 4: Poaching cases recorded from 1974 to 1998

S.No	Data from FD records		Data from WTI* records	
	Year	Animal poached	Year	Animal poached
	1974 - 77	0	1977	2
	1977 - 78	2	1978	4
	1978 - 79	4	1979	0
	1979 - 80	0	1980	1
	1980 - 81	2	1981	1
	1981 - 82	1	1982	1
	1982 - 83	2	1983	4
	1983 - 84	5	1984	2
	1984 - 85	3	1985	1
	1985 - 86	5	1986	6
	1986 - 87	0	1987	1
	1987 - 88	0	1988	0
	1988 - 89	0	1989	0
	1989 - 90	0	1990	0
	1990 - 91	0	1991	0
	1991 - 92	0	1992	1
	1992 - 93	3	1993	1
	1994	7	1994	0
	1995	4	1995	4
	1996	7	1996	6
	1997	6	1997	13
	1998	6	1998	9
		57		57

WTI: Wildlife Trust of India

According to the forest department records from 1987 to 1992, no deaths of elephants due to poaching were reported. However, this could also be due to the deaths not having been recorded or reported. The elephant death data base maintained by Wildlife Trust of India (WTI) suggests during 1987 and 1992 the occurrence of one case of poaching.

Both sources confirm that the deaths of elephants due to poaching (Figure 12) were on the increase from 1994 to 1998. According to FD data, during this 5-year period alone, 30 elephants died and this accounts for 52% deaths of the total a 22 year period (1974 to 1998).

Within three years period (1994, 1996 and 1997), 23 elephants were poached. In 1998, from January to September, 6 elephants were poached, reflecting the same trend of 1994 and 1996.



Figure 12: Elephant death due to poaching

Seasonality in elephant poaching: The pooled data for 5 years (1994 to 1998) show that poaching is reported every month. The deaths of elephants ranged from 1 to 7 animals, and the number of elephant deaths in July was relatively high. March, May, September and December had one elephant death each. The month wise elephant mortality for 5 years is given in Figure 13.

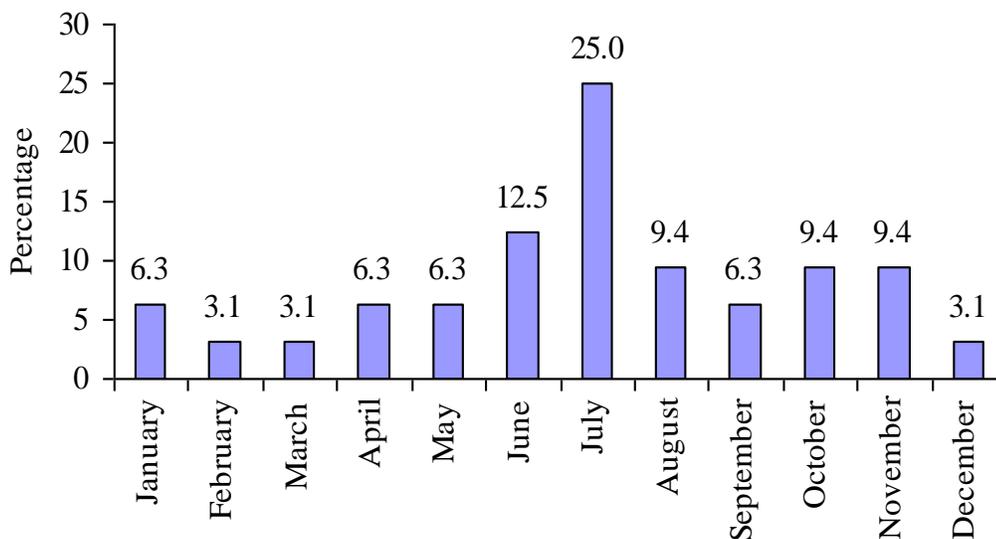


Figure 13: Month wise elephant mortality due to poaching for 5 years in Bandipur TR

The data for individual years also show similar pattern for the months; July followed by May, June and November reporting relatively more elephant deaths due to poaching (Figure 14)

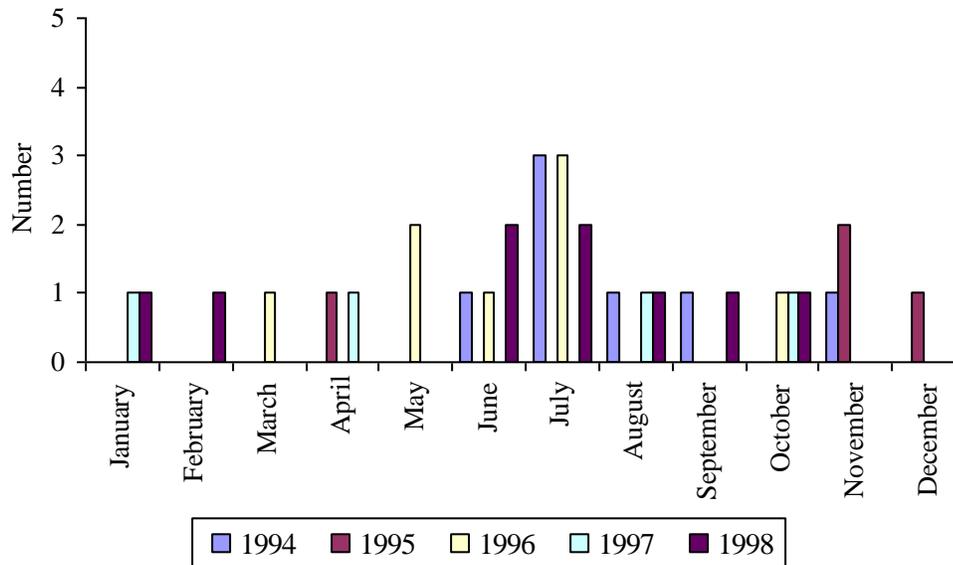


Figure 14: Pattern of elephant deaths due to poaching for individual years in Bandipur TR

From 1994 to 1998 details of range wise elephant deaths are available and this provides an insight into the ranges that are prone to elephant poaching. During the first wet season (Figure 15) a total of 16 elephants were killed, accounting for 53 % of the deaths that occurred for all seasons. Both dry and second wet seasons account for 23 % of deaths. In second wet season (Figure 16), 31 % deaths occurred in Begur range, 25 % in Moliyur range, 19% in Moolehole range, and 12.5 % for both Hediyaala and Maddur ranges. During dry season (Figure 17), 42 % of the deaths occurred in Maddur and Moliyur ranges, and 14% in Begur range. For the second wet season, 57 % of the deaths occurred in Moyar range, 28 % in Moolehole range and 14 % in Moliyur range.

This seasonal occurrence of deaths due to poaching suggests that more elephants were killed during first wet season. Ranges such as Begur, Moliyur and Moolehole encounter relatively more elephant deaths due to poaching during the first wet season.

Moyar range could be a sensitive area for poaching during second wet season. Moliyur and Maddur have more deaths during dry season and Moliyur Range has a poaching problem during all three seasons. The death of elephants during different seasons depends on a number of reasons: 1, where they are, 2, their number and 3, the level of protection available in a given area. If the density of elephants is high during wet season, it would be reflected in the deaths also (more elephants would die). As there is no information on seasonal density of elephants, no firm conclusion could be made.

However, during the first wet season, because of high and continuous rainfall, and poor facilities provided to the patrolling staff, it can be expected that the patrolling intensity would go down or be almost nil, which may lead to more poaching. More importantly during the wet season, the probability of detecting dead elephants decreases due to less or no patrolling, fast decay rate of carcass, and mild odour of the carcass (using which the dead animals are located normally). Despite these problems, if more poaching deaths are reported during the wet season, it clearly indicates an even higher death rate.

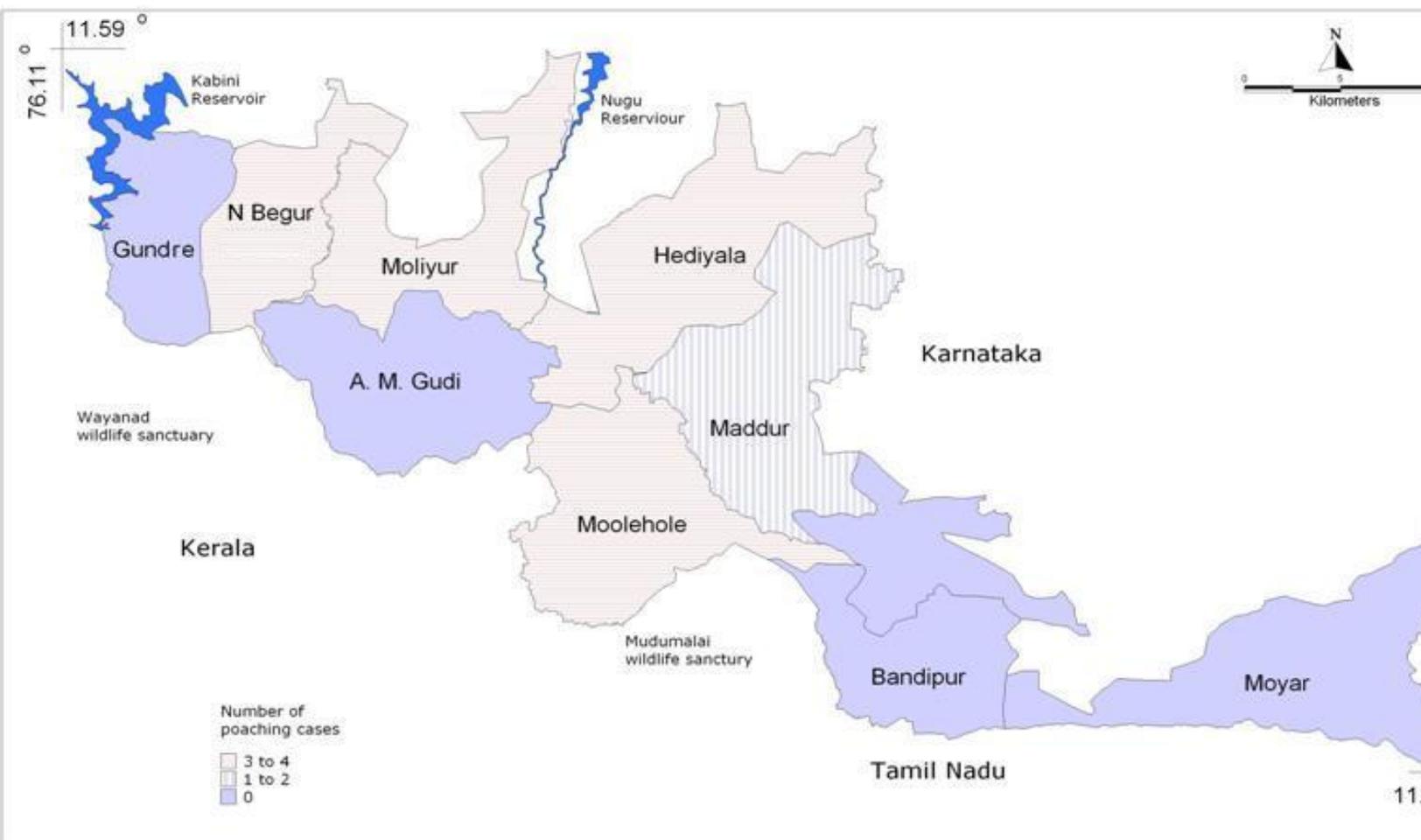


Figure 15: Pattern of elephant deaths due to poaching for the first wet season in Bandipur TR

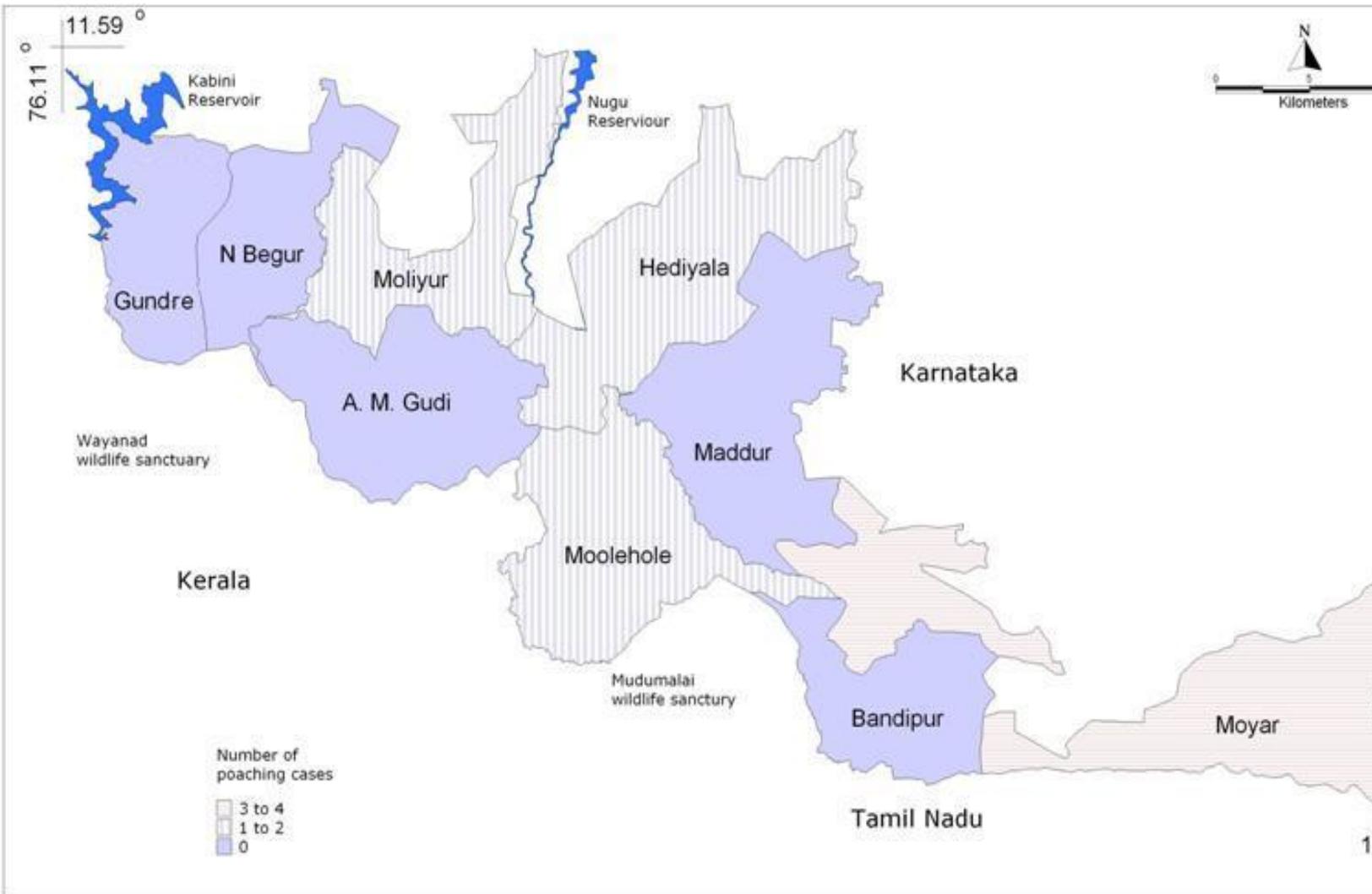


Figure 16: Pattern of elephant deaths due to poaching for the second wet season in Bandipur TR

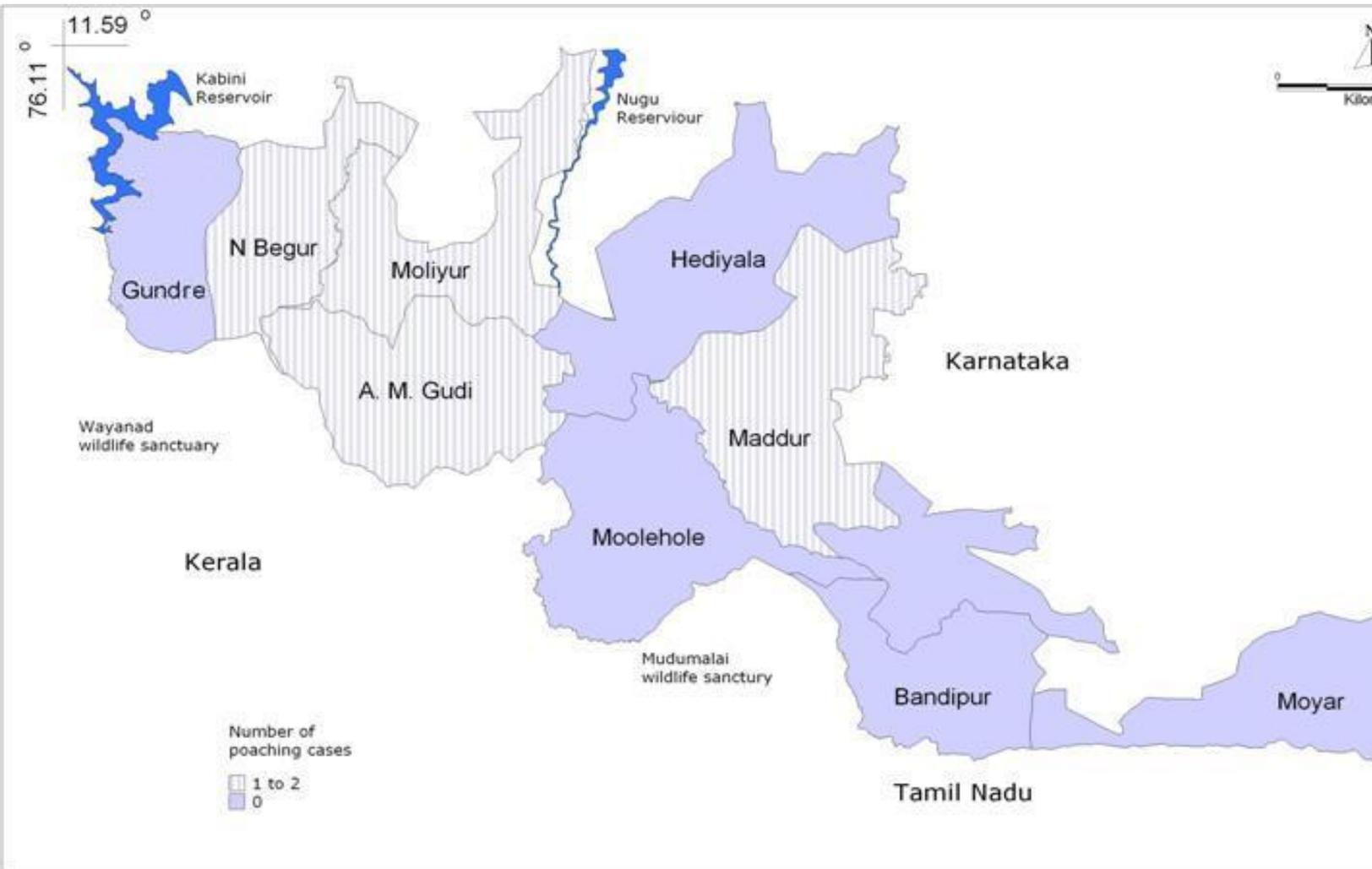


Figure 17: Pattern of elephant deaths due to poaching for the dry season in Bandipur TR

The range wise deaths of elephants are given in Table 5. Gundre and AM Gudi ranges are newly established and these ranges are included under N. Begur and Moliyur respectively. Number of elephant deaths for 5 years in N. Begur and Moliyur are higher than other ranges.

Poaching is reported every year in Begur since 1994, in Moliyur since 1995 and in Maddur since 1996. Till 1995, poaching was reported in Moolehole range and after 1996; no elephants have died due to poaching in this range. In Moyar range, poaching was a problem till 1997, and no poaching has been reported there since then.

Hediyala range reports the death of an elephant in 1994 and there were no deaths reported there in 1995 and 1996. However, poaching started again in 1997 and continues.

Table 5: Elephant deaths due to poaching in different ranges

Year	Hediyala	Moliyur	Maddur	Mulehole	N. Begur	Gundre	Moyar	AM Kudi
1994	1	0	0	2	3	0	1	0
1995	0	1	0	1	1	0	1	0
1996	0	2	1	2	1	0	1	0
1997	1	1	2	0	1	0	1	0
1998	2	2	1	0	1	0	0	1
%	12.9	19.4	12.9	16.1	22.6	0.0	12.9	3.2



Figure 18: Elephant that was poached on India's Independence Day at remote region of the reserve

It was found that ranges where more deaths have taken place (Begur, Moliyur and Maddur) are very remote (Figure 18), located very far from their administrative offices and staff quarters, and have human habitations and notorious poachers close to the forest.

In some ranges, poaching incidents have stopped (Moolehole and Moyar ranges for example). It could be due to the presence of efficient officers posted in these areas or due to the arrest of a particular poaching gang, responsible for the continuous killing of elephants there.

Figure 19 gives the geographical locations of the ranges and the number of death reported for each range.

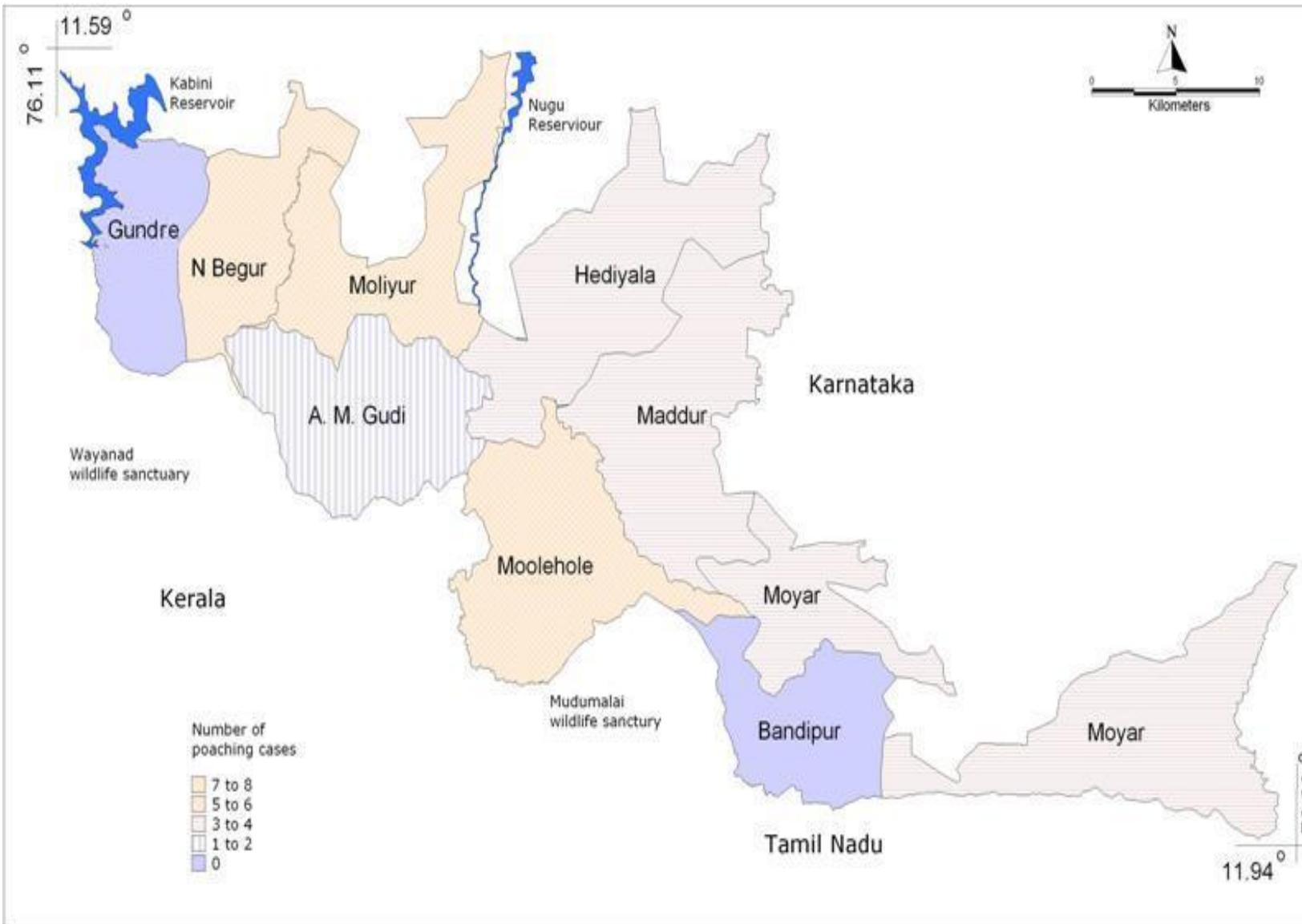


Figure 19: Pattern of elephant deaths due to poaching for all seasons across different ranges in Bandipur TR

Status of the tusks and investigation: The department has a collection of tusks following elephant deaths from various causes (including poaching) (Figure 20). Of the 30 cases of poaching reported from 1994 to 1998, 23 cases (76%) had tusks missing and only in seven cases, they were recovered. In these seven cases, 3 have no details of the culprits involved or other information of the incident.



Figure 20: collection of tusks from different sources including natural deaths and poaching in Bandipur TR

In 2 cases, the poachers were from Moyar and adjoining range areas. In one case, the poachers were from Kerala and in another the poachers were from Hediya. Of the seven cases of poaching reported in 1994, in only one case, the tusk was recovered. Out of 4 cases for 1995, in 2 cases the tusks were stolen.

In 1996, out of 7 cases, in only two cases the tusks were recovered. For 1997, in no case the tusks were recovered. Out of 6 cases in 1998, only for two cases the tusks were recovered and the culprits arrested and the investigation is on. The number of cases for which the tusks have been stolen and recovered for different ranges for 5 years is given in Table 6.

Table 6: Tusk detection details

Year	No of cases	Tusk stolen	No tusk recovered/year	% tusk recovered
1994	7	4	1	14.3
1995	4	4	2	50.0
1996	7	5	2	28.6
1997	6	4	0	0.0
1998	6	6	2	33.3

This failure to seize tusks is detrimental to preventing further poaching as it allows poachers to trade these tusks at a time/ place convenient to them.

Effect of poaching and other causes on elephant population: Overall, an average of 14 males die every year in the reserve and the effect of these deaths on elephant population remain unknown. To answer this question, it is important to know what proportion of males are adults.

During our study in Bandipur Tiger Reserve, a total of 156 elephants were enumerated, of which 130 were classified according to their age and sex. Of the 130 elephants classified, 43% were adult females (15 to 40 years), 20% sub adult and juvenile females (3 to 15 years), 4% adult males (15 to 40 years) and 16% sub adult and juvenile males (Table 7).

Table 7: Age and sex classes of elephants classified

Female Age Class	No. of Individual	Female Age class	No. of Individual	Male Age class	No. of Individual	Male Age class	No. of Individual
30-40	18	3-5	6	15-20	2	3-5	3
20-30	32	5-7	11	20-30	3	5-7	12
15-20	6	7-10	2	30-40	1	7-10	1
		10-15	7			10-15	6
Total	56		26		6		22
%	43.45		20		4.61		16.92

The population has adult male (Figure 21) to female (Figure 22) ratio of 1:9.3; however, we are not clear as to what proportion of the population was classified during our survey.



Figure 21: Adult male of above 15 years

For a clearer understanding of the population structure and the effect of poaching on the population, data is used from a long-term monitoring of elephant population in Mudumalai, which has similar habitat and is geographically connected to the Reserve. The population has 35 % adult females, 18 % sub-adult and juvenile females, 2.15 % adult males, 14 % sub-adult and juvenile males and 14 % calves of different ages (Varma, unpublished data).

elephants (1993), and the census in 1997 estimates 2200 have estimated a crude density of 1 animal/km² for Bandipur, Mudumalai and Nagarhole complex and expect the ecological density of elephants to fluctuate seasonally. It's possible that the numbers estimated by the forest department censuses are on the higher side .

The forest department estimated 1990 elephants for the Reserve. Desai et al., (1985)



Figure 22: Different age and sex class of an elephant herd; including an adult female

The number of elephants in the Reserve may only be between 800 to 1000 animals, according to the crude density of 1 animal/km² estimated by Desai et al. (1985). As there are two different density estimates for the Reserve (forest department and Desai et al), there are 350 adult females and 21 adult males, (with the male to female ratio of 1:16.6) for the density of 1 animal/km² (Desai et al. 1985). For the forest department census data (1993), the number of adult females and males would be twice the number estimated by Desai et al. (1985).

The annual mortality rate due to natural causes estimated to be 10 to 15 % for males who are more than 5 years old (Sukumar, 1989). If we assume the Reserve has similar population structure and death rate, the number of male deaths due to natural causes would be 2 to 3 elephants per year. But the Reserve loses, on an average, 14 male elephants per year. This mortality rate is very high and if the same trend continues, this will have a severe impact on the elephant population. It is also possible that, as there is no scientific criteria followed to estimate the age of dead elephants, there is a chance for sub-adult and juvenile males to be included in this category, or the Reserve has many more than the estimated 21 (for 1 animal/km²) or 42 (for 2 animals/km²) male elephants. Given this situation, it's very essential to have long-term studies on the population of elephants in Bandipur Tiger Reserve.

Anti-poaching measures: The forest department has taken several anti-poaching measures to control poaching. Initially, only 4 anti-poaching camps were established in the Reserve. After several poaching incidents in 1996, the number of camps has been increased to 19.

These camps are located in vantage points, close to human habitations, deep inside the Reserve (Figure 23a and b) and close to game roads and highways passing through the Reserve (Figure 24). Each camp has manpower of about five persons which includes one forest guard, 2 permanent watchers and 2 temporary watchers. At any given time, 3 staff stays in the camp and they work in shifts. Regular attendance is mandatory and a field diary is maintained.

The area covered, animal species observed and other related information is reported in the diary. The attendance and the diary is periodically checked by inspecting forest staff and visiting officers. To monitor the patrolling operation, the staff are instructed to leave identification marks, which are checked regularly. The department has spent a considerable amount of money in establishing and operating the camps.

The establishment cost of each camp is about Rs.10, 000 (1 US\$ = 42.7 Indian Rupees) used for constructing the shed with a 100-mtr trench on all four sides. Food allowance of Rs. 360 rupees/month/per person is given, and totally Rs.1 lakh (1, 00000 rupees) is spent for each camp/year.



Figure 23a: Structural design and location of an anti-poaching camp



Figure 24b Structural design and location of an anti-poaching camp

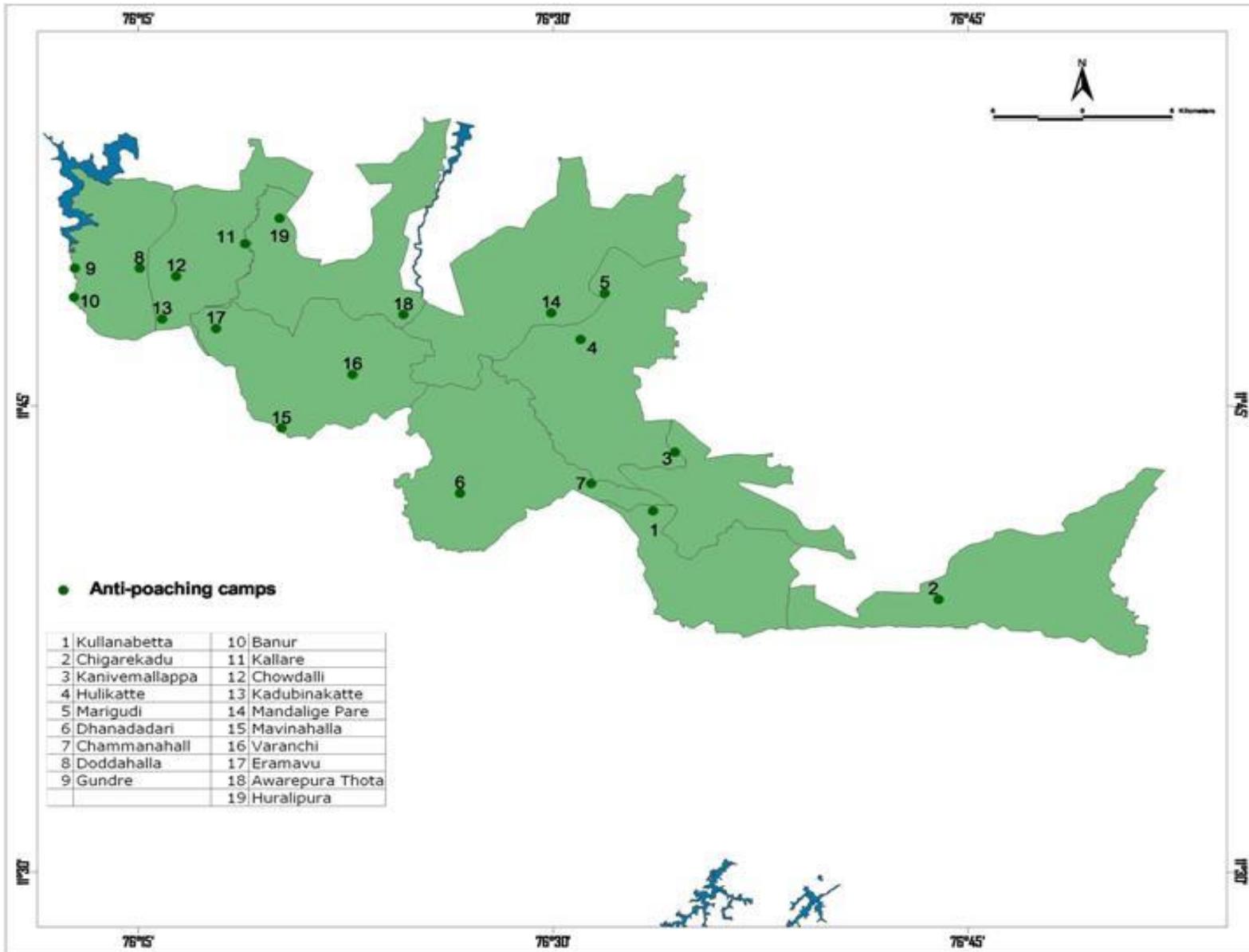


Figure 24: Location and distribution of anti-poaching camps established in Bandipur TR

The functioning and efficiency of the camps: Out of the 19 anti-poaching camps, 6 camps in



Figure 25: Patrolling of forests by anti-poaching camp staff

Doddahalla, Gundre, Bannur, Kalari, Chowdahalli and Eremavu were visited. The camps in Doddahalla and Chowdahalli were visited twice. Regular patrolling operations (Figure 25) from these camps were noticed. Out of four camps visited in the night, 3 had staff staying in those remote areas and one was locked and no staff was staying there. They were informed that the staff had closed the camp and gone home without informing the concerned section officer. Due to poor staff strength the staff posted in the camps were not allowed to go to their homes for the festival and hence, at times camp staff left the camp without any notice.

Out of four visits to 3 different camps during the day, one had staff informing us that they had just returned from the patrol and in another no staff were seen during the day and we were informed that they had gone to patrol the area. In the other two camps, the patrolling party was seen arriving at the camp after we reached the place. Observations of villagers in Kerala, close to Bandipur Reserve, and from where some poachers are reported, revealed some information on the efficacy of such camps. The villagers spoke about the anti-poaching camps and regular patrols of the Karnataka forest department. These observations may suggest that, there is regular patrolling by the forest staff, that they are able to identify the poached animals even from remote areas (Figure 26 and 27), that the camps are functioning and the staff are doing their duty relatively well. Identification of dead elephants due to poaching is an important part of reducing incidents of poaching.



Figure 26: Identification of the location the poached elephants in a remote region of the reserve by the forest staff

The Reserve does have a very effective and knowledgeable ground staff. For example, the forest staff comprising Kempanna (forest guard), Tahavarakatta (MR watcher) and M. Bellaiah (MR watcher) were responsible for catching the poachers who operated in Moyar region. It's worth mentioning here that the forest staff was given Rs. 2000 and Rs.1000 (for each watcher) respectively as awards. Job opportunities have been also given to ex-wood smugglers and animal poachers; they have been very effective in knowing and dealing with poachers. A forest watcher (Moyar range), once a sandal wood smuggler and animal poacher, was responsible for catching a poaching gang after joining the department.

It is important to know the efficacy of these operations, which may be also known from the number of poaching detected or controlled after establishing the camps. It can be noticed that in two years (1994 and 1995), before establishing the camps or with very few camps in operations, 11 elephants were poached. After establishing or increasing the number of anti-poaching camps (for a two-year period - 1996 and 1997), within 2 years 12 elephants were poached. If poaching incidents in 1998 are included,



Figure 27: Forest staff pointing out the gun shot location in poached elephant body

then the Reserve has lost 19 elephants since 1996. An animal was poached in March 1997 between Kerala and Karnataka boundary, and there are two anti-poaching camps located within a 2 to 3 km distance of the incident. The poaching of 15th August 1997 on India's Independence Day, took place two kms from an anti-poaching camp. Another elephant, which died on 1st January 1998, was also poached not far from a camp.

If camps were not there the situation could have been even worse. On the negative side, it appears the camps solve this problem only to a small extent as there are very few camps for the vast area of the Reserve. They may only act as poaching detection camps, not for

preventing the incidents. It should be noted that detection of crime plays a critical role in preventing the same. Earlier before establishing or increasing number of camps, poaching cases were not even detected. The total area of the Reserve is about 900 km², and if all the camps go through patrolling, they may cover a total of 35 to 40 km² (if each party of the 19 camps walks for 20 km per day with an average visibility of 100 meters on either side). The total area covered by the patrolling party is less than 10 % of the total area of the Reserve. To increase the area covered, more camps need to be established. However, given the manpower and infrastructure available, all the man power resources cannot be oriented only towards anti-poaching activities and it may not be economical to have more camps. The other reason for uncontrolled poaching is that the existing camps may not be located in strategic or vantage points. It was understood from the forest staff that there are some vulnerable points such as Puradakolli (Begur range), Honnammana Kolache and Nayihalla (Gundre ranges), where no camps are established.

Currently, each camp is 8-10 km away from each other. This may not be an ideal distance between two camps. If the routes through which poachers enter are identified and blocked, that may prevent the poachers' entry. However, with the existing camps and manpower, if there were many routes used by poachers, it would be very difficult to identify all the entry points and block them. It was noticed that the patrolling parties cover a considerable distance and at least they are out in the forest from morning to lunchtime. This time may be sufficient enough to know the movement of people and illegal activities. If the poaching group enters at any time, patrolling can identify their tracks or movement.

However, it's important to know about the distance and area covered while patrolling, locations visited and the strategies the party followed while on patrol. The factors such as type and quality of training given to the staff to track or investigate the movement and other activities of the poachers also

determines patrolling efficiency. The area is vast, and whatever distance one covers, the chance of encountering and apprehending poachers may be less. If the poachers who are well equipped and have better strategies are determined to kill, it would be very difficult to guard all the animals.

Insufficient funds and lack of reliable communication systems are other major problems. For example, Gundre and AM Gudi ranges are newly established with little or no infrastructure. No facilities and no vehicles are available here. AM Gudi range has a Tata 407, an old vehicle, which has no use inside the forest. There are no wireless sets. Even if available, they are not in working condition and have gone for repair. These two ranges are very remote, staff show less interest and motivation in working in these remote and poorly equipped regions. Totally 18 staff members were posted in 3 camps in Gundre range, out of which 9 were above 45 years old, 3 above 35 years old and only 6 of the staff were 25 to 28 years old. Some of the staff who were above 35 to 40 years old were very active, and knew the terrain very well. However, some of the younger staff (25 years) were not efficient or not interested in their duty.

The other most important issue could be the manpower available and the resources and facilities provided to the ground staff. It was noticed that the camps had low staff strength. Only 25 % of the staff appeared to be efficient as most of them were above 40 yrs old. The region is very remote and no staff is interested in working there, the camps have poor facilities and some camps had no wireless or communication system. The staff based at the camp suffers due to mosquitoes in the night. Be it winter or rainy season, the living conditions of the camp staff are poor. It's cold and the camp roof leaks heavily. No warm clothes, rainproof clothing or materials are provided. During the rains, the patrolling staff uses umbrellas, while walking long distances carrying heavy guns on their shoulders (Figures 28a and b).



a



b

Figures 28a and b: Patrolling the forest during rainy season with umbrella one hand and the gun on other hand

Except Gundre and other camps which are located close to water sources, water scarcity is a severe problem in many of the camps. Water for the camps is taken from the waterhole (which elephants and other animals also use – Figure 29). During summer, water is supplied to the camp from the range headquarters. The staff posted in these camps show less interest in coming back to the camp as the employees who go on leave do not come back on time to replace others. As there is no alternative, most of the staff stay here and do not get rest at all. On the other hand, the poachers are motivated and are well equipped. They have been observed using sophisticated guns since a long time. For example, in

1986, during a patrolling operation in the night by Maddur RFO, a poaching party was encountered. The party escaped into the jungle leaving behind many things, among which were many sophisticated guns of foreign make. The present camps are characterized by lack of quantification of effort involved and strategy followed. The success/ failure of anti-poaching camps is not reviewed scientifically.

Poachers

Strategies: The gang carrying provisions enter the forest very early in the morning or late in the evening, and look for animals, with an experienced person or a tribal as a guide. It appears tribals are involved in every poaching case in the region. The tribals who assist the group know the forest very well, and may also know the person who is patrolling the forest. They are able to lead the gang inside the forest anytime, be it day or night. The group is very careful while in the forest. When they are on the move, silence is maintained at all costs, no tree cut, no walking on the main path and no talking; communication is only through signs, any information is exchanged only during the night, when they halt.

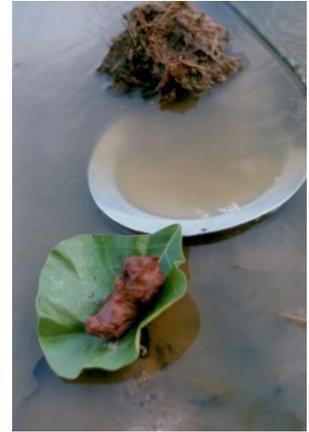


Figure 29: Source of water for the camp; note elephant dung in the source of water

Generally two guns are carried with the team; the team possesses it or it is purchased from places like Kallur, Sulthan Batery, Wayanad, or it is taken from other poachers. Once, police confiscated two guns (one a 5 1/2 ft load gun and another of 5 ft length), along with elephant tusks, 197 small bullets, 1160 balls, binoculars and headlights from a gang of poachers. The gang searches for elephants. Some times, within a day or two the animal would be found. Once a gang looked for elephants the whole day and at 5 in the evening they saw a tusker. Once an animal is spotted, a marksman shoots the animal (Figures 30a, b).



a



b

Figure 30a and b: Experienced marks man demonstrating to the investigator the distance and position maintained to shoot elephants; note animal's response towards the marksman

In one case, the poacher killed an elephant with gunshots to the forehead and the elephant died in a sitting position with its body supported against a tree. When death of an elephant is confirmed, the leader along with one more person or people hired exclusively chops the tusks off the dead animal with a saw. According to a poacher only 30 minutes is needed to remove the tusks from a dead elephant. The trunk is cut and the head is chopped (Figure 31a and b). After culling and removing the tusk, poacher/s may continue their operation and stay in the forest for sometime. At least 2 days maybe spent in the forest looking for more elephants before reaching their destination. One gang, during their 16 days trip, shot no elephant, as they did not encounter any tusker. If a group going for hunting does not find anything, they kill whatever they see on their way back.



Figure 31a and b: Poached and head chopped wild elephants

The frequency of killing may vary: a poacher who was arrested had killed 10 days before his arrest, in three months following his release; two more elephants were killed in the space of 2 months. 2 years before this incident, one more elephant was killed by the same person. Within 2 years a total of four elephants were killed by one poacher and his gang and another group killed 2 elephants within 2 weeks. In one case, based on the tusk size, the animal killed was around 20 yrs old. One of the poached animals' shoulder height was 224 cm and was estimated to be 15 to 20 years old. The group members vary, but one or two common people remain in the team; sometimes family member, brothers or father and son are part of the team.

One or two days before finding a buyer, the tusk is brought to the house of the main poacher or leader and buried in the backyard of the house. In one case tusks of 142 and 132 cm were cut into six pieces and kept secretly in the upstairs of a poacher cum dealer's house, and tusks were kept for more than 6 months after they killed the animal. The approach of keeping tusks in particular places has two advantages: the evidence of crime is hidden in a safe place and there is no need to carry or keep the material till a potential buyer is found.

At times, some weapons or their parts are also hidden within the forest. In one case, a two member gang killed a tusker and the tusk was removed using an axe. Later the tusk cut into six pieces was covered with banana chips in a bag and was kept in one poacher's house. Both traveled from Manandavadi (Wayanad) by bus to Cochin as a dealer had agreed to come to a bus stop. In some cases, the middle men or dealers come to meet the poachers directly after a telephone message is given to them and sometimes the material is carried directly to the dealers.

Every time the tusks are sold, the money is shared equally among the main members of the gang. The trackers who accompany them are paid a small part of the money; say up to 400 rupees before or after selling the tusk. According to an active poacher, at no time has a poacher been caught or arrested inside the forest by the department. The arrests are purely made by chance, or due to rivalry between groups of poachers.

One poacher was 100 % sure that no hunter was going to be caught by the forest officials, while in the forest. Arrest is possible due to a gang fight or rivalry between different poachers operating in this region. When they are arrested, poachers do not disclose the truth or reveal their materials. Only after several hours of investigation, the investigating team makes some progress. In one incident, several hours of denial was followed by a search yielding 2 guns and the tusk from a poacher’s house.

The Forest or police department after getting information on a gun-shot from a reliable source or wireless operator, try to reach the spot; operation in the night is very tough; vehicle sound or torch light alerts the poachers. The FD party often found the poachers sleeping with a fire on. The poachers light a fire in the hope that no forest officials would come to such a remote place at that time of the night.

According to a local person who knows many poachers and their activities, the poachers, when they camp in the forest, always sleep away from the fire. When a patrolling party comes, they initially shoot at the fire. In the Mudumalai Forest shoot out, a poacher was killed as he was sleeping close to the fire with his head covered. The fire helps identify the poachers, and some times the gang gets caught, but the people who assist them, the tribals, invariably escape.

Age group: The mean age of poachers involved in the poaching activities in this region was 34y (SE=4.1, N=52) and the age ranged from 20 to 76 years. The age class of 25 to 40y dominated (Figure 32) accounting for 79% of the poachers’ age.52% poachers come from the age class of 30 to 40 years.



Figure 32: Age class distribution of poachers operating in Bandipur TR and adjoining regions

Group size: the group size of the poachers range from 1 to 10 individuals (see Appendix 1 for more details), the mean group was 4 (SE=0.3, N=36) and group size of 3 individuals dominated (Figure 33)

followed by 2 and 6 individuals (17%) and 4 (14%). A very rarely seen size was 10 (only 3% or only one incident).

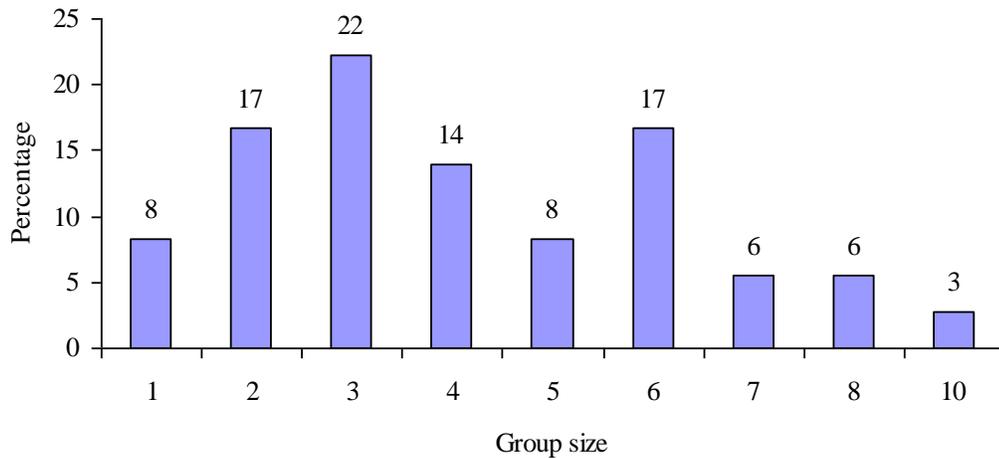


Figure 33: Group size distribution of the poacher entering forest for poaching in Bandipur and adjoining regions.

Distance from the forest: The distance from poachers location (Figure 34) to Bandipur Tiger Reserve, shows that poachers arrive from a distance ranging from 0 to 100 km and the mean distance was 7km (SE=1.73, N=58). Out of 58 locations from where poachers were known to arrive, eighty five percent were within 10km from the forest and about 45% from within a 5 km distance

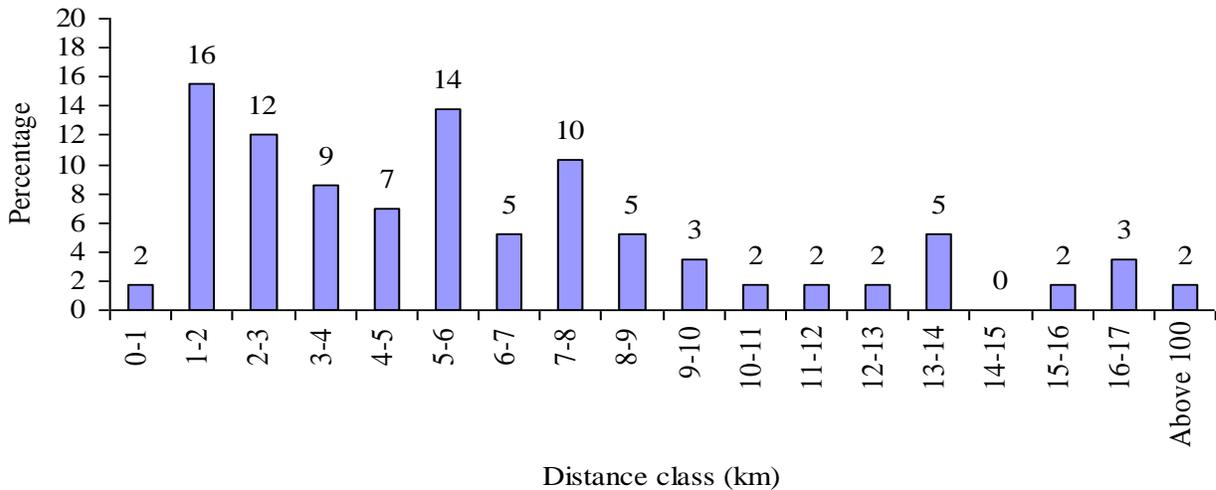


Figure 34: distribution of distance classes from poacher's location to Bandipur TR

Different states and groups

Kerala Poachers: There are many big and small poaching groups (Figure 35) operating in Bandipur Tiger Reserve since a long time. The poaching incidents, the investigations and dialogus with poachers (Appendix 2) suggest that the poachers from Kerala dominate this region. They are mainly from Wayanad district, which shares borders with Bandipur Tiger Reserve. There are two distinct poachers' centres in Kerala, namely Pulpally and Sultan Bathery.

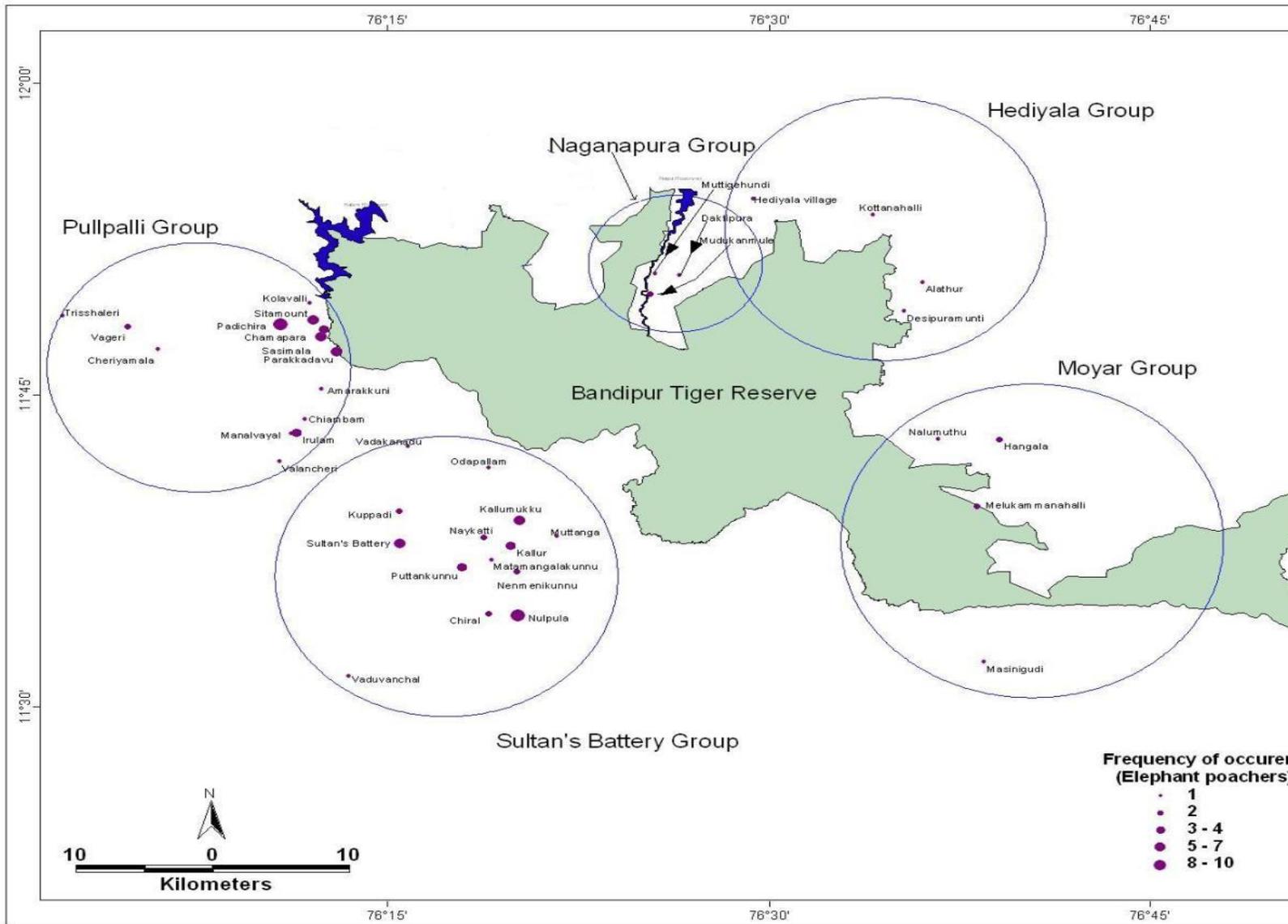


Figure 35: Different groups of poachers who operate in Bandipur Tiger Reserve

Villages such as Pulpally, Sasimala, Chamapara, Seethamound, Parakadavu, Vandikadavu, Mullankolli and Kolavalli, are part of Pulpally Centre, located on the Kerala-Karnataka border and reportedly have regular poachers. The Sultan Battery centre has villages such as Muthanga, Kallur, Kallumukku and Thottamoola. Small but numerous groups from these two centres are regularly involved in poaching of elephants and other animals.

Pulpally Group: Poachers from this centre or group operate in Begur, Gundre, AM Kudi (Kalkere) and Moolehole ranges of Bandipur Tiger Reserve. This group could have been responsible for elephant deaths in these ranges. This group operates in this area as it is easy to traverse and is less undulating. The forest boundary is just a few meters away from the settlements to which this group belongs.

This group knows the forest and the terrain well, and they operate on their own, occasionally accompanied by tribal guides. Gundre and Bannur anti-poaching camps of Gundre range of Bandipur TR close to the villages come under Pulpally centre. Some people living in these villages invariably poach animals, including elephants.

Movement of people from these areas is regularly reported and they operate in the night. In 1997, during an encounter by a patrolling staff at 10.30 p.m., a poacher from Kolavalli, was shot and injured, and was later shifted to the hospital.

The villages such as Vandikadavu, Kappiset, Kolavalli (located in Kerala), Bairakuupa and Bavali (located in Karnataka) act as main junction points for many other villages of the regions, connected by roads to major cities of the region; tusks poached in the forest can be easily transported anytime from this place.

Kappiset junction to Sultan Bathery (the other poacher's centre) is about 25 km. In addition to Bairakuupa and Bavali (Karnataka), in Vandikadavu, Marakkadavu and Perikallur (Kerala), wild animal meat is regularly sold. The raw meat is sold for 60 rupees/kg and the dry meat for 80 rupees/kg and the demand for meat during some popular festivals is reported to be high. According to the forest and police officials, Bairakuupa is famous for a number of illegal activities. Some local popular newspaper reporters also confirm that sandal and other timber smuggling, arrack distilling, illegal transport of meat; gambling and other illegal activities are regularly reported from here. A poacher had confessed that the gun he was using for poaching was purchased from Bairakuupa.

Based on various offences related to poaching and ivory trade registered by the forest and police departments (see Appendix 3 for arrests and encounters with poachers) since 1986, a number of people have been identified as regular poachers and their names and associated details are given in Table 8.

Table 8: people who have been identified as poachers operating in Pulpally Poacher's centre

S.no	Name	S/o	Location	Remarks
1	Koli Rajan		Seethamont	Arrested once for elephant poaching, has been operating as a poacher for the last 5 years.
2	Benni	Kuriakose	Seethamont	
3	Ambali Joseph		Sasimala	Known to kill both elephants and bison.
4	Prasanna		Chamapara village.	
5	Babu (a) Appy	Kumar	Parakadavu village.	
6	Medical Mohan		Seethamont	
7	Issac		Seethamont	
8	Mathaias	Thomas	Seethamont	
9	Joseph	Antony	Seethamont	Known to be a regular bison hunter, also an elephant poacher.
10	George Varghese		Chamapara village.	
11	Babu Pulickal		Parakadavu village.	Arrested once and released on bail.
12	Sukumaran	Narayanan	Padichira village.	
13	Kunjumon Kunnathakal		Padichira village.	
14	Raju		Padichira village.	
15	KV Jose	Varghees	Sasimala	
16	O.K Kunju	Kumaran	Sasimala	
17	KT Bader	Thomas Kothyathu,	Sasimala	

Sultan Bathery Group: There are 10 to 15 poachers or groups operating from the Sultan Bathery Centre Poachers from Sultan Bathery mainly operate in Kerala and Tamil Nadu forests and occasionally along the tri-junction of the three states, particularly in Moolehole of Bandipur (Karnataka), Mudumalai (Tamil Nadu) and Kurchiat of Wayanad (Kerala). Of these groups, 3 main groups including Podiyan (tribal), Vellutha Abubakar and Chazhipara Babu are very active (see Appendix 4 for poachers profile). These poachers have been involved in many cases of elephant poaching in Kerala (Wayanad), Karnataka (Bandipur and Nagarhole) and Tamil Nadu (Mudumalai), and none of them have been convicted so far due to lack of evidence.

Names and associated details of people who are reported to be the main poachers from Sultan Battery Centre are given in the Table 9

Table 9: people who have been identified as poachers operating in Sultan Bathery Poacher's centre

S.No	Name	S/o	Location	Remarks
1	Kumerical Elias,	Paulose	Kallumukku.	
2	Chazhipara Babu		Kallumukku.	
3	Narayan		Naikatty.	
4	Gopalan.			
5	Elias		Naikatty.	
6	Vattakunnu Jose		Kallumukku	
7	Kunj Agasthy		Thottamoola	
8	Vellutha Abubakar		Kallur.	
9	Mathachan,		Sultan Bathery.	
10	Jose Chundatta,		Vadakanadu	
11	Chazhipara Elias		Kallumukku.	
12	Podiyan		Kallur.	
13	Naxalite Ravi		Sultan Bathery.	
14	Chazhipara Babu,		Thottamula.	
15	Karunakaran,		Nenmenikunnu.	Known to be an old poacher
16	Ummer		Muthanga	Died in a recent encounter with Tamil Nadu Forest Department

Kerala Forest Department has developed a comprehensive list of persons involved in elephant and other animal poaching and attempts to hunt animals. The offences include illegal trespass or entry into reserve forests, attempt to hunt with a gun, poaching of wild boar (*Sus scrofa*) sambar (*Cervus unicolor*), spotted deer (*Axis axis*), gaur (*Bos gaurus*), langur (*Presbytis entellus*), hare (*Lepus nigricollis*), elephant (*Elephas maximus*), tiger (*Panthera tigris*), and leopard (*Panthera pardus*). The offences of possession of animal meat and body parts, poaching of wild boar by crackers, killing of a leopard with an axe and attempt to hunt tigers have also been included. The list providing details of offences from 1987 to 1996, the names of the poachers and associated information are given in the appendix 1.

Karnataka Poachers: Two to three small groups of poachers operate from the Karnataka side of Bandipur Tiger Reserve. These groups were identified based on the arrest of a person involved in poaching for a long time. These groups are referred to as the Moyar group, Hediya group and Naganapura group.

Moyar Group: During 1995 (18-12-95), a male elephant was poached in Mastu Mukki peak in Moyar range. The poachers were identified and the tusks recovered. In this case, Shivamallu from Kalipura village, Puligi Madeva from Mela Kammanalli, (originally from Punjur of Chamarajnaragar) and Papa, a tribal from Agalhala village and Krishna, Masinagudi, Nilgiris were arrested in Masinagudi, Nilgiris of Tamil Nadu, located close to Mudumalai Wildlife Sanctuary.

In 1996 (12-10-96), the same people were involved in an other case of elephant poaching near Agalhala, Alugattai area, Hangala section, Moyar range. The tusk is now in police custody. In 1997

(27-10-97) in Alugattai, one male was poached, the tusk stolen and the same group's involvement is suspected in this case.

Puligi Madeva and his group are from Melkammanalli of Moyar range and operate in Gopalaswamy betta area of Moyar range. Madeva was suspected of having good contacts with the notorious poacher and sand wood smuggler Veerappan.

It has been told that he was one of the men responsible for Veerappan kidnapping the wildlife photographers Krupakar and Senani from their house close to the eastern boundary of the Tiger Reserve. The reason given for Madeva's role in the kidnapping was that the wildlife photographers' land was in the same place where Madeva and his group operated, and their presence (wildlife photographers) could deter poaching of elephants and other illegal activities by the group and they therefore wanted to eliminate the photographers from there.

Its known that the notorious poacher Veerappan operated mainly in Moyar Valley, Sathyamangalam, Chamarajnar, Kollegal and Cauvery forest divisions as he was very familiar with these areas. Puligi Madeva may have operated as an agent for Veerappan in this region. It's interesting to note that, according to Puligi Madeva, Veerappan had come to Bandipur region only when he kidnapped wildlife photographers and others.

Secondly, Veerappan himself was very scared of the poachers from Kerala (as he had mentioned in his interviews that he had very few friends among the Kerala poachers). Names and associated details of people who are reported to be the main poachers from Moyar Centre are given in the Table 10.

Table 10: people who have been identified as poachers operating from Moyar

S.No	Name	S/o	Age	Address	Remarks
1	Shivamalu	Jewerey Gowda alias Chevere Gowda	28	Nalumuthu, Kallipur, Gundalpet Taluk, Karnataka Melukammanahalli	Marksman
2	Madeva alias Puligi Madeva	Kuttraiah,	35	PO,Hagadahalla, Gundalpet Taluk, Karnataka Melukammanahalli	Marksman and a tribal
3	Sanna Madeva		26	PO,Hagadahalla, Gundalpet Taluk, Karnataka	Tribal
4	Karibedda alias Basava	Karinaika,	32	Hangala village, Gundalpet Taluk, Karnataka	Tribal
5	Papa	Chikkamadaiah	35	Hangala village, Gundalpet Taluk, Karnataka	Tribal
6	Krishna	Javare	35	Masinigudi, Gudalore Taluk, Nilgiris, Tamil Nadu	Tribal

Hediyala and Naganapur centres: There is no distinct boundary between these two centres, villages such as Katwal, Maddur, Moliyur, Hediyala, Mudubanna Moole, Seegevadi, Naganapura, Deshipura, Kotthanahalli and Alathur come under these two centres and the villages are known to have regular wood smugglers and animal poachers.

Hediyala Group: In Hediyala, one week after a poaching incident, local people gave information to the Forest Department about the group involved in the incident. The gang of 5 persons from Moliyur, one person from Hediyala and a middleman from Mysore were identified. Among them, three were lambanis (a tribal who lead a gypsy life, known to live in Maharashtra, Andhra Pradesh and northern Karnataka), one was a Muslim and one person who assisted the party into the forest was another local tribal. Except the middleman who got anticipatory bail, others have been arrested and the case has been registered in Gundlupet police station. Forest Department is assisting the police in investigating the case.

In this case, 2 guns, rosewood and a pair of tusks were confiscated from the group. According to this gang, they have been operating in the area, along the periphery of Katwal, Moliyur, and up to Maddur, and have killed 3 elephants within 2 to 3 years. They have shown the places where they killed the elephants, to the investigating agency. In the recent killing, after shooting the animal, the tusk was kept in the forest before transporting it to Mysore in 2 days. In Mysore, the tusk reached another person from whom it went to Jaipur.

The Hediyala group may be replaced by Kulla and gang, arrested by Nanjangodu Police in 1997. The group was recently established, and operates in Hediyala, Moliyur and Katwal areas. This group has been identified as potential traders of ivory for Jaipur and Rajasthan. The Hediyala group had killed 2 elephants within 2 weeks (last week of June and first week of July 1997) and was arrested immediately after the second incident.

Names and associated details of people who are reported to be the main poachers from Hediyala Centre are given in the Table 11

Table 11: people who have been identified as poachers operating from Hediyala

S.No	Name	S/o	Age	Address	Remarks
1	Mubarak	Mareed	30	Hediyala village, HD Kote Taluk, Karnataka	Non-tribe Marksman - makes his own muzzle loading guns
2	Mahadeva	Maddaiah		Vaddabogi, Mudabanna Moole village, HD Kote Taluk, Karnataka	
3	Thirupathy	Venkataramaiah	26	Seegavadi village, B. Matakeer post, HD Kote Taluk, Karnataka	Lambani
4	Jayaram	Kariyabogi	22	Madukanamule village, Muthigehundi post, HD Kote Taluk, Karnataka	Tribal
5	Raju	Cheluvaiah	35	Dakayithipura village, No 48, KEB Colony, Jothinagar, Mysore, Karnataka	Tribal
6	Babu alias Payajulla	Adam Shab	40		Non-tribe

It also appears that the Hediya group members are not professional killers and they were actually small-scale smugglers, regularly smuggling rose and teak wood from the area. However, one person among the group appears to be a professional killer and has made his own rose wood muzzle loaders. Apart from elephants, they have been killing other game, such as sambar (*Cervus unicolor*), wild boar (*Sus scrofa*) and gaur (*Bos gaurus*) in the region.

Naganapura Group: Apart from these main groups (Moyar and Hediya) from Karnataka, there was another group operating from Naganapura and villages adjoining Hediya. The area comes under Nanjangud Police control. Two elephant poaching cases have been reported (registered) in Nanjangud police station (Figure 36) since 1994. The first occurred on 15th June 1994 near Ballurundi. A male

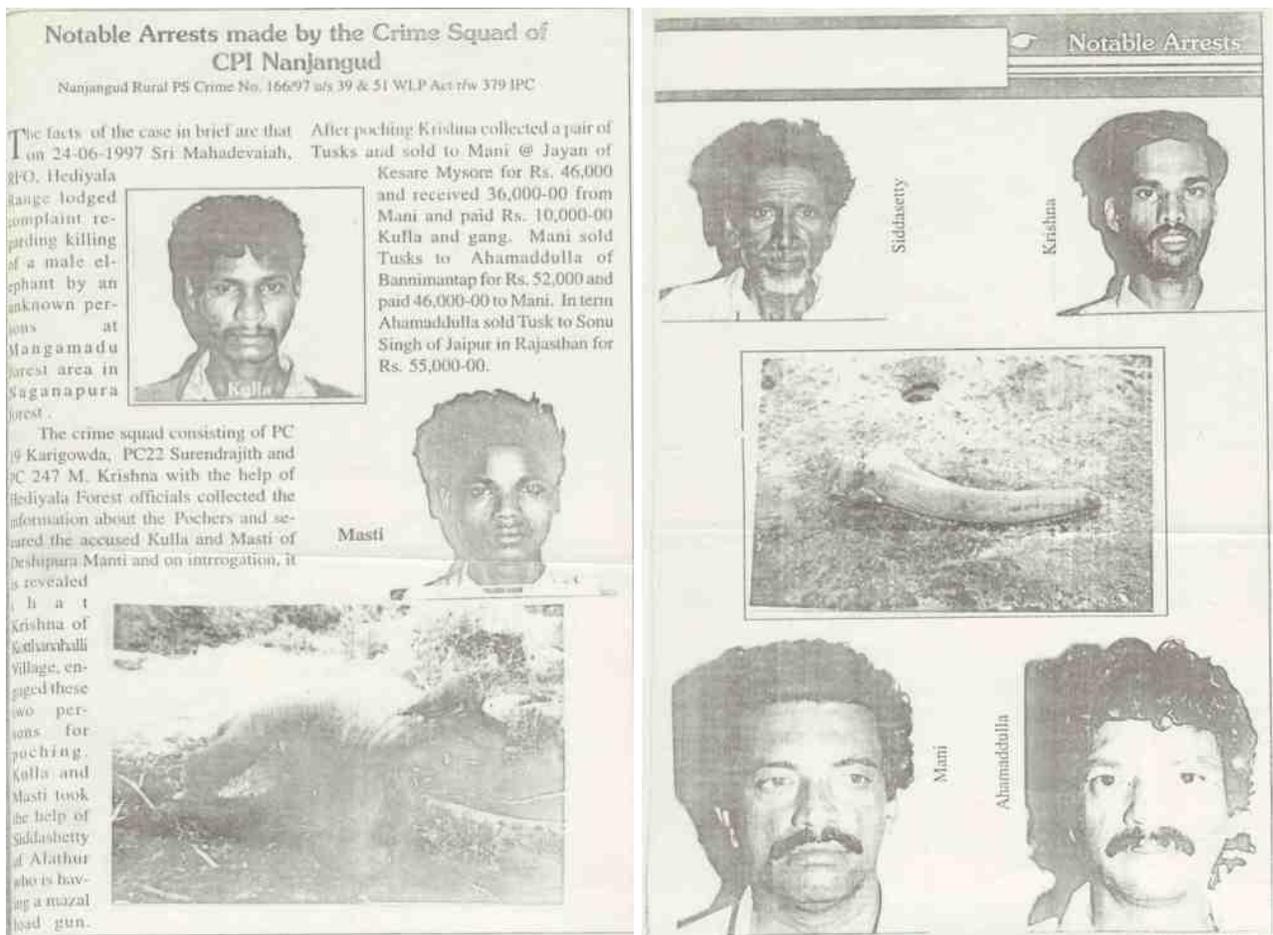


Figure 36: Poacher's group arrested by Karnataka Police and the news item describing the incident elephant was killed and the tusk removed. No further information is available on the case. The tusks have not been recovered, nor the culprits arrested so far. The second case was registered on 24th June 1997 in Naganapura. In this case, Kulla and Masti (tribal) Sidda shetty and Krishna of Naganapura were involved. Siddachetty supplied a gun to the poaching party, Krishna mediated and carried the tusk to Mysore, where it was given to a Keralite to be sold at Jaipur. The gang was arrested and was in jail for 2 months, after which they came out on bail.

The animal which died in Naganapura forest was reported to be a regular crop-raider. According to the forest department staff, the animal was seen with a wound in its neck region where pus had formed.

The animal was under regular observation, and one day it died and the tusk was removed by unknown people. It was suspected that Kulla and his gang, operating from Deshipura (Naganapura), could have removed the tusk. Three persons from the gang, Krishna, Taj and Chenna, were arrested. Kulla, since the first case, has been absconding.

In the recent case, where the tusk was missing from a dead male in Naganapura, the elephant could have been followed by the local people. It's assumed that it would be very difficult for the Kerala poachers to come and remove the tusk or else they might have some connection with the local people and have a base there. From 1995 to 1998, 6 cases of poaching have been filed in Gundlupet police station, 3 cases during 1995 and 3 in 1998. Names and associated details of people who are reported to be the main poachers from Naganapura Centre are given in the Table 12

Table 12: people who have been identified as poachers operating from Naganapura

S.No	Name	S/o	Age	Address	Remarks
1	Kulla	Masthi		Muthanga, Wayanad, Kerala	Non-tribe
2	Masthi	Madaiah		Desipuramunti, Karnataka	Non-tribe
3	Siddesetty,	Venekarastty		Alathur, Karnataka	Non-tribe
4	Krishna Jayan, Alias	Thammanegowda		Kothanahally, Karnataka	Non-tribe
5	Mani Ahamed Ulla			Mysore, Karnataka	Non-tribe
6	Alias Ahmed			Hanumathapura, Mysore, Karnataka	Non-tribe

According to the police, since 1988, nearly 59 poachers were operating in Bandipur and adjoining forest areas. The department is maintaining a photographic profile of these poachers, with the address and other details. Names and associated details of people who are reported to be the main poachers from Police records are given in the Appendix 5 (see Appendix 6 for photographs of some of the offenders and 7 for an example M.O. B card developed for offenders)

Current status of poachers and poaching in BTR: Among all these three poaching groups, Kerala group (both Pulpally and Sultan Bathery) is very active. In Wayanad region 90 % of the poaching and associated activities are done by Vellutha Abubakkar, Podiyan, Chazhipara Babu and Elias of Sultan Bathery Center. Poaching has almost come to a halt in this region as the police and the forest department is on the search for Vellutha Abubakkar and Chazhipara Babu, after the shoot out in Mudumalai. There are no poaching incidents after Puligi Madeva's gang was arrested. The local poachers from Hediyaala have been arrested.

Very distinct groups of poachers have been identified from the Sultan Bathery Centre. For the Pulpally center, it's not clear who the poachers are and where they come. Prasanna (table 8) and his group, Sunil and Bomman who were arrested by the Kerala forest department, can be expected to continue the operation in this region. The forest and police departments find it very difficult to arrest anyone here.

One Rajan and Benni of Seethamound were arrested in a case of an elephant being poached in Begur range of BTR in August 1998 (see Appendix 8 for News paper articles and their English translation). Later, the Kerala court asked the police to surrender the person based on a written complaint given by relatives of the arrested person.

Arrest of poachers, documentation of poaching incidents, identification of the middle men; intelligence gathering in Kerala was comparatively good. It is said that if 100 elephants were poached in this region, only one would be from Kerala. Once the Kerala forest department arrests poachers and the case is transferred to other states, the case is not followed up. For example, the Kerala FD arrested a poaching gang headed by Prasanna and the case was registered. All relevant information on the deaths, tusk harvested and other details were obtained from the poachers. As the poaching took place in Bandipur NP, the case was transferred to Karnataka FD. The FD did not have adequate manpower and strategy and the poachers were out on bail. This was the status of many other cases that were transferred between the states.

Positive and negative interaction between different poaching groups, particularly Pulpally and Sultan Bathery, can be noticed, Puducheri Mohanan, who was arrested by the Kerala forest department for his involvement in elephant poaching with a group of 9 persons, helped Prasanna of Pulpally region get introduced to a tusk dealer Adimali Thomas. According to a very reliable source, Sudhakar of Sultan Bathery Centre helped Kerala forest department to arrest Prasanna.

Lack of co-ordination between the police and the forest department is another problem; the Forest Department (FD) blames the police for corruption. The police in turn blame the FD of functioning more as a revenue department than protecting the forest, of not performing its duty properly and that most of its problems would be solved if it spent only 1 % of its resources and time profitably. Moreover, not much interest is shown by the forest department in collecting information on poaching incidents and poachers.

Two distinct categories of poachers could be seen from the region. One category of poachers operating in these areas are economically rich, and poaching continues because of its entertainment value.

The second category of poachers who we met in person, and whose information we collected from their parents, relatives and friends (one poacher we were never able to meet, but his mother, wife, and her parents contributed a lot towards understanding the problem), are all at present in a very terrible condition, economically isolated, and without respect from the society. The cases in which they were involved take a lot of time to settle. A lot of money has been spent by them fighting the cases, by selling their land, and collecting loans. After the arrest, visiting the police station regularly to sign a register also makes them feel more isolated.

According to a poacher, at no time has a poacher been caught or arrested inside the forest by the department. The arrests are purely made by chance, or due to rivalry between groups of poachers. He is 100 % sure that no hunter is going to be caught by the forest officials, while in the forest.

Ivory trade by these groups: There is evidence to support that the ivory obtained from Bandipur Tiger Reserve by the Kerala poachers goes to Kerala. Poaching by different groups at different times has been taking place in this Reserve since a long time. In one poaching case in 1978 in Ainurmargudi RF,

the poachers escaped with injury. Through the information got from a private medical attendant in Kerala, the gang was nabbed and the ivory recovered in Trivandrum. Poacher Prasanna, who was arrested by the Kerala Forest Department, has confessed that he and his gang have been regularly selling tusks to a dealer in Adimalai of Idukki district, Kerala. The Sultan Bathery gang has confessed to having sold tusks to a dealer in Cochin.

These reliable sources suggest that Wayanad district of Kerala can be a main trading centre for tusks of elephants poached in Bandipur Tiger Reserve and adjoining reserves. From Wayanad (particularly Sultan Bathery town) the tusks may go to various places such as Trivandrum, Cochin and Calicut.

The coastal town of Calicut in Kerala could be an important exit point for ivory from Kerala. It can be speculated that the tusks obtained by Kerala poachers finally reach the Middle East (particularly Dubai).

Some Keralites settled in the Middle East can function as the marketing community for the groups, middle men or the agents (Menon et al 1997).



Figure 37: Ivory trade reoutes identified based on investigations and information appeared in news items

There could be many trade routes (Figure 37) for tusks of elephants poached in Bandipur and adjoining reserves. Sultan Bathery - Calicut - Mangalore - Bombay - Middle East (Dubai) or some other city in other countries (Figure 38a, b, c and d) can be one route. Tusk recovery in the past from Trivandrum suggests this place could also be a major trading centre.

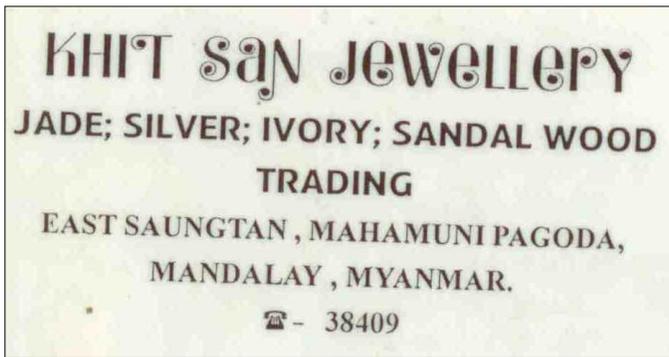
Trivandrum was Kerala's old ivory carving centre. From here the tusks could go through Calicut and Mangalore or directly to Mumbai (Bombay) and to the Middle East. Cochin can be another trading centre in Kerala.



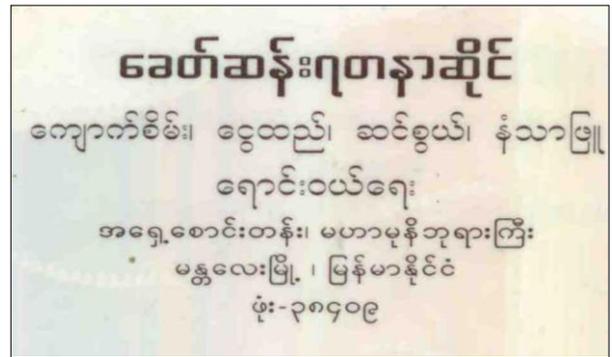
a



b



c



d

Figure 38a, b, c and d: Ivory trade investigation in an international market (a), note; budda (who preached non violence) idol made out ivory by killing elephants (b) and business cards with ivory trading (c and d)

Tusk dealing from Sultan Bathery to Cochin in Kerala has been regularly reported. In September 1996, a gang that was arrested had sold the tusk to Junaid Sait of Cochin. The tusk dealer was also arrested in that connection. One Sudhakar of Vazhavatta along with K. V. Bhaskaran and Puducheri Mohanan sold the tusk to Sait. In August 1998, the Cochin Police arrested one Saji for carrying 21 kg of tusks (See Appendix 8 news paper item for more details). During this incident, Suddhakar of Vazhavetta, an accomplice of Saji escaped (see newspaper report). The tusk was brought from Wayanad to be sold to a dealer who was to meet them at a particular place. The tusk was planned to be taken to a dealer, Junaid Sait of Matancheri in Cochin. The dealer who was arrested in Kerala in September 1996 by Kerala Forest Department, had confessed that he had sold nearly 100 pairs of tusks within 4 to 5 years

It has been established by the Karnataka Police that the ivory trade is much more brisk in Kerala than in other states in southern India. Raw ivory is sold for Rs. 10,000/kg and the carved ones are priced at about 1 lakh/kg. A pair of tusks of a fully grown elephant can weigh about 30 kg, fetching 5 lakh rupees (see news paper item). Local people including tribals who are involved in this activity get very little money. For instance, for 3 cases of poaching in Hediyaala only Rs. 8000 was given to the gang which killed the animals. But the middleman got Rs. 20,000 to 30,000 for the 1995 case and the tusk is said to have been sold for 60,000 - 70,000 rupees.

It's important to know where the stock of ivory from Moyar goes. If we assume that Puligi Madeva the leader of the group was selling the tusk harvested through Veerappan, there is a possibility that Veerappan could be selling his ivory to a middleman or agent in Kerala. Menon et al 1997, report ivory reaching Sultan Bathery from Kollegal (Karnataka) and Sathyamangalam (Tamil Nadu). Elephants killed by local groups in Kollegal or by Veerappan from Kollegal and Sathyamangalam may be coming to Sultan Bathery, and the stock of Puligi Madeva may also reach this place.

It has been established that the local poachers from Hediyaala sell their ivory to Jaipur through middlemen in Mysore. This group has been operating in this region very recently and has been sending the ivory to Rajasthan. It is possible that the group or middlemen have no local trading centre and send the ivory to Jaipur. Or there could be a demand for ivory in Jaipur and the marketing community in Jaipur, looking for a source of ivory, may have identified the local groups and middlemen operating from Hediyaala and Mysore. Mysore is one of India's oldest carving centres and it can act as a trading centre for the ivory which reaches Jaipur.

Ivory users and the trade in Rajasthan: There is enough information available on Kerala poachers who operate in Bandipur Tiger Reserve, ivory trading centres, trade routes and the at the final destination of the ivory. It's essential to have more information on ivory users, the trade and the route to Rajasthan. It's a known fact that Jaipur in Rajasthan, Agra and Varanasi (Uttar Pradesh) are major ivory carving centres in north India. Other places, such as Udaipur, Sikar and Jhunjhunu of Rajasthan also have major and minor ivory carving centres. Martin & Vigne (1989) estimated there were 800 ivory carvers from Jaipur. Carving centres in Rajasthan have electric lathe machines as opposed to the manual-work of southern ivory carvers, indicating the advancement of ivory trade in this region. In Rajasthan, ivory products, particularly ivory bangles, are used in wedding ceremonies, where they are given as dowry by the bridegroom to the bride.

Different communities in Rajasthan are known to use ivory in their wedding ceremonies, namely, the Rajputs, Chowdharys (farming community) and Raikas (shepherds), and the people who closely follow the traditions of Rajputs. The Rajputs are said to be using 4 to 5 ivory bangles, while the shepherds and chowdaris wear ivory bangles throughout their life on the full length of both arms.

The economic status of different communities in Jaipur, Rajasthan may also influence their use of ivory products and its trade. It's expected, if there is a demand for ivory due to this custom, the communities which are not rich enough to meet the demand with real ivory, may go for fake ivory. If these communities use ivory bangles for their wedding ceremonies, it's important to know the number of wedding ceremonies that take place with tradition of using ivory, the percentage of population using ivory, the source of elephant population and number of elephants killed in southern India for meeting the ivory demand in Rajasthan.

It is very interesting to note that if ivory is used for adorning the arms for a long time and its origin is from Asian elephants, it loses its whiteness and becomes yellow. Most carvers in south India prefer Indian ivory to work on while Jaipur carvers seem to find no great difference in the ivory, some of them preferring African ivory for their work (Menon et al 1987). As the African ivory maintains its whiteness for a long time, it would have more demand which would be fulfilled by the many marwaris settled in African countries. They could be a regular source of ivory to Rajasthan. The demand for Indian or Asian elephant ivory depends on the time it takes to become yellow. If Indian ivory is used, the nearest source for it would be the central, northeast or north Indian elephant populations. However, how much of ivory is reaching Rajasthan from south India?

It is assumed that, poaching of elephants in south India was dominated by Veerappan before his death and many other smaller gangs operating in Kerala. As Kerala has very big carving centres, it can be expected that ivory could go to Kerala and from there to its final destination, the middle east countries. The Hediyaala experience and the case registered in Nanjangud Police Station during 1996-97 also confirm that ivory also goes to Jaipur. It can be speculated that ivory obtained by local poachers in Karnataka, mainly from Bandipur and Nagarhole, would reach Jaipur or other parts of Rajasthan. It appears that apart from ivory bangles, there is an illegal market for ivory and other materials in Rajasthan. Ivory items are regularly marketed in Falna in Rajasthan. Pali in Jodhpur is reported to be making ivory bangles and other items. However, this information is yet to be confirmed and investigated.

Poachers Centres, People, ecological history and land use pattern:

Pulpally Centre: Includes poachers from Pulpally and other villages coming under Pulpally and Mullankolli panchayats of Wayanad district of Kerala. The places offer an interesting history, the name of Pulpally is locally known as thatched house, where Sita Devi lived with her two sons, Lava and Kusa. Sasimala a place near Pulpally, was initially referred to as Sisumala, where Sita’s two sons used to play. There is a Sita Devi temple (Figure 39a) in Pulpally which attracts many crowds during it’s annual festival celebrated from 18th



Figure 39a: Sita Devi Temple

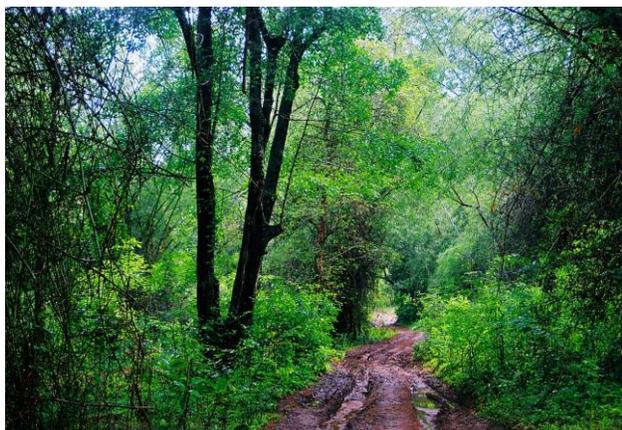


Figure 39b: Forest associated to the temple

to 23rd of Malayalam month *Dhanu* (January first week). It is reported that Pulpally region had 14000 acres of forest area (Figure 39b) under the Sita Devi temple (under Pullpally Devasam) in the 1950s. Settlers from southern Kerala reportedly encroached upon forest (Easa, and Sankar, 1999) land of the devasam and now it has only 30 acres of forest left. Kannaram Puzha separates the village from the forest; there are many salt licks in this area, which attract both animals and poachers. The legendary

king Kerala Varma (Pazhassi Raja) was killed by the British in this area.

The current land use pattern in this region is dominated by agricultural practices and the major crops cultivated are pepper (*Piper nigrum*) ginger (*Zingiber* sp.), paddy (*Oryza sativa*), banana (*Musa* sp.) and coconut (*Cocos nucifera*). Small-scale rubber (*Hevea brasiliensis*) and tapioca (*Manihot* sp.) cultivation is also part of the agricultural practice here. It was observed that currently these agricultural practices are not economical due to many reasons. Pepper and ginger are attacked by Bacterial wilt and leaf Blight diseases (locally called *drudavaattam* for pepper and for ginger its called *meahali disease* or decaying) and the disease to the crop also comes to light only at the last stage. Due to this, local villagers are said to go to Coorg and Shimoga in of Karnataka to cultivate ginger. This option is also currently not viable as the price of ginger and rubber have come down. Paddy cultivation which used to be the traditional crop is currently very costly as the water has to be brought from the river.

Some crops are severely damaged by wild animals (Gopinathan, 1990) particularly pigs and elephants. The elephant problem reported is in Marakadavu, Chamapara Kolavalli, Channothkolli and Vandikadavu. The damage done to crops by elephants (Figure 40) is very severe; some times even during a single visit 30-40 coconut tree saplings are damaged. Formerly, elephants used to come by only during summer (dry) season. But now, they are reported during rainy season too. To manage the elephant problem, there is a proposal to erect an electric fence from Kolavalli to Vandikadavu, for 50 km. The lands are cultivated only once, during monsoon and many people in this region are looking for an opportunity to sell their lands Villagers used to cultivate tapioca but it has been stopped due to the wild pig problem. Cattle and dog lifting by panthers is also reported. At least three cattle are lifted in a month. Villagers do not keep dogs as they are regularly lifted by the panthers.



Figure 40: Damage to cultivated crops by elephants is very common in this landscape

Villagers suggest that when land was encroached upon initially, agriculture was a viable option with generated resources being optimally used, but currently it is not a viable option. Habitat fragmentation, through encroachment, loss of prime habitats such as swampy grass lands and moist deciduous forest patches, have lead to severe human animal conflict, particularly elephant conflicts in this region. This conflict has resulted in a negative approach to conservation by the people living here who thus directly or indirectly supports poachers.

In some places, people feel only rare and endangered wildlife have to be preserved, and not elephants and other animals that cause problems. The approach of the forest department towards the people is

very important in solving the problem. Local people feel that the forest department has a very negative approach towards villagers living close to the forest. If an elephant dies due to poaching, electrocution or crop damage, every one in the village is treated like a poacher or a person responsible for the elephant's death and arrested. In 1997, one female elephant died in Kollavalli in a local villager's land. The farmer along with the villagers tried unsuccessfully to save the elephant. When locals reported the death of the elephant, the Karnataka FD tried to file a case against the landowner and the villagers.

Sultan Bathery Centre: Muthanga, Noolpuzha, Kallur, Thottamoola, Kallumukku, Naikatty of this centre have the same pattern, as observed for Pulpally center of settlers, which is encroachment, crop cultivation, severe human animal conflict, and illegal activities. This centre is located close to Wayand Wildlife Sanctuary. All the villages coming under this centre are very close to or within the sanctuary (Easa and Sankar, 1997). There are 1, 20,000 people living in and around Wayanad Wildlife Sanctuary within a radius of 4 km. Around 2800 households (15, 000 to 16000 people) live inside the sanctuary (Gopinathan, 1990a and 1990b). The households in the revenue enclosures do not come under the control of the Forest Department. The sanctuary and adjoining forests were known for their large extent



Figure 41 Paddy field (transformed from swamy grass land) sourrounding forest cover

of moist deciduous forest and swampy grasslands were common features in the small valleys between the hills, around the streams draining the hills (Easa and Sankar, 1997). Both moist forests and grassland used to act as prime resources for elephants during the dry season. Currently, the moist deciduous forests are converted to plantations and more than one-third of the sanctuary is under plantations. The swampy grasslands have been converted for paddy cultivation (Figure 41). There are no agricultural based industries located in the district.

unemployed youth. Unemployment is due to two reasons: land being tilled by people other than land-owners and secondly, lack of land to cultivate for those interested in doing so. Thus, unemployed youth, to pass time, initially enter the forests due to a sense of excitement of being in a forest, and also due to the need for a job, they become accomplices of trained poaching groups. Later, they begin hunting on their own to meet the demand of wild animal meat (sambar, gaur and wild boar particularly) for the villagers, and eventually become elephant poachers.

It's noticed that the adjoining forests of these villages act as an entertainment base for

Ex-poachers and poachers revealed that poaching is done mainly for its entertainment value, as it brings a sense of excitement of being in the forest, in this process, elephants and other animals are killed. The money generated through these activities (selling meat which is supported by the local people) is used lavishly in spending on alcohol, visiting brothels and other activities. It was also found that constructive activity is practiced by women by gathering fuelwood/ other forest products for family use while men indulged in consuming alcohol. It appears people with reasonable land resources and fear of police or the law do not get involved in these illegal activities. However, in general, settlers who

have no land of their own, labourers, people habituated to hunting and those who are indolent get involved in these activities.

Hediyala and Naganapura Centres: There are 70 villages located in the Hediyala sub division of Bandipur Tiger Reserve, of which 40 villages and cultivated lands (Figure 42) are very close to the forest, within 2 to 3 km (Kantharaju, 1999).

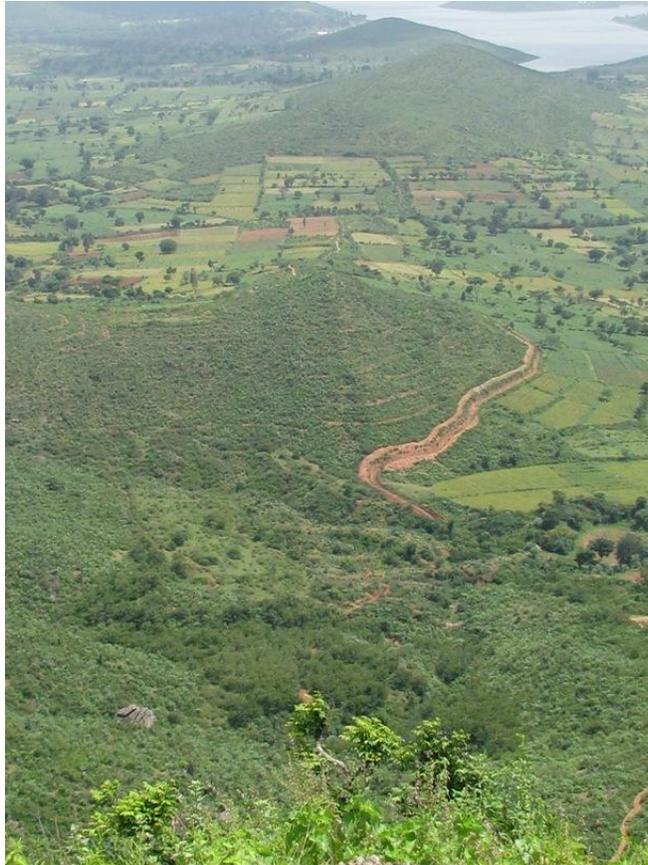


Figure 42: Similar land use patterns in Hediyala, Naganapura, Sargur regions adjoining Bandipur TR; note forest status and agricultural activities close to forested regions

Human - elephant conflict (Figure 43) is severe (Appayya, 1992). A number of cases of elephant deaths due to electrocution are reported from this region. Close to human habitation (Figure 36), the forest is degraded, due to cattle grazing (Figure 44a, b and c) and illegal logging. The



Figure 43 Human-elephant conflict in Karnataka region; note farmers chasing elephant encountered close to their villages

land in this region is unsuitable for agriculture; however, dry crop cultivation is practiced here. There are many small-scale smugglers who may become full time poachers, operating here. There are a number of tribal colonies or settlements within this centre; some tribals work for poachers.



a



b



c

Figure 44a, b and c: Cattle grazing is one of the main sources of income and also a major cause for forest degradation in Hediyala, Sargur, Naganapur and Moyar regions

Moyar Centre: Villages such as Melakammanahalli and Hangala, and areas close to Gopalaswamy Betta have similar land use pattern (Figure 45) and is similar to the Hedyala and Naganapura centres. Human - elephant conflict is reported. There are many private establishments and holiday resorts coming up here. This centre is located close to the Ooty - Mysore highway. Sultan Bathery and Mysore, the poaching and trading centres respectively, are nearby.

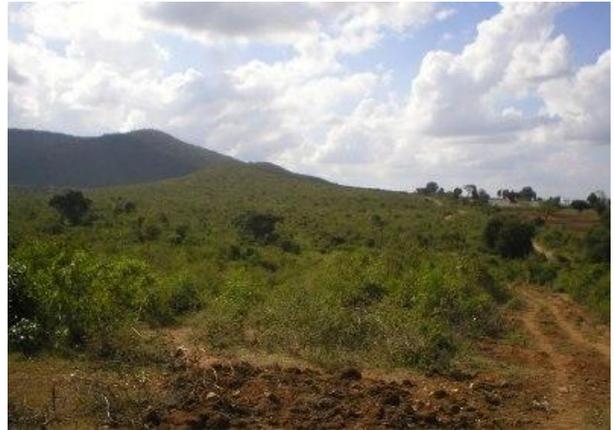


Figure 45: Land use patterns in Moyar regions

Some of the causes for poaching of elephants in

Bandipur: Kerala groups are very active and they will continue to be actively involved till very effective anti-poaching strategies are adopted. Kerala poachers are close to the forest and could cut across the border into Karnataka. The administrative units of Bandipur TR are very far from the actual place of incidence of poaching. Regular poaching incidents suggest that with the current number of anti-poaching camps, their location, staff strength, motivation, infrastructure facilities, it will be very difficult for the forest personnel to contain this problem.

Once the Kerala forest department arrests poachers and the case is transferred to other states, the case is not followed up. Poaching of elephants or other animals in Bandipur or its adjoining regions can be eliminated only by Kerala forest department as most of the poachers are from Kerala. However, currently not much of co-operation is seen between the two states sharing common forest boundaries. In addition, some of the staff disclose information to the poachers before they are encountered.

Another reason could be unsuitable staff in these sensitive areas. During 1985-90, the morale of the staff was high under an able officer. According to a poacher, the forest officials posted in Wayanad Wildlife Sanctuary used to be very firm and committed, and poachers from this centre used to operate only in Karnataka (Bandipur) and Tamil Nadu (Mudumalai). Following the transfer of the official and some ground staff, morale seems to have gone down, as suggested by a forest department staff member. For instance, some range forest officers in Wayanad forest division have no previous wildlife experience having worked in urban areas/ social forestry division. Also, some staff feel non-cooperation exists among the staff themselves.

The basic needs are inadequately distributed and staff are poorly paid. Insufficient funds and lack of reliable communication systems are major problems. Sensitive ranges are very remote, staffers show less interest and motivation in working in these remote and poorly equipped regions. The problems are also due to the unequal distribution of resources among the forest staff. The number of vehicles or other facilities given for the higher officials is more than that available for the local staff.

Forest Department has little power to handle the poaching cases. If the case is registered in a police station, the progress of the case and identification of the culprits depends on the interest of the investigating officer who is from the police department. Poaching cases take more time and effort, as the poachers are often from other states. Visiting these places and identifying the people are time

consuming. The police department personnel have many duties to carry out, such as VIP visits, maintenance of law and order, investigations, etc.

The Forest Department (FD) blames the police for corruption and the police in turn blame the FD for functioning more as a revenue department than protecting the forest. The interaction between these two departments depends on the officers posted. For instance, the inspector posted in Gundlupet gives more support to the forest department; hence, the forest department is interested in registering the poaching cases in Gundlupet police station. For a case (poaching or missing tusk case) of Naganapura, the RFO approached the Gundlupet inspector to register the case in his station, though the case had to be registered in Nanjangud police station limits.

Fear of the law is minimal and the removal of tusks still continues. The poachers and middlemen come out after posting bail when arrested. The money they make out of the materials (tusks) helps them engage a lawyer to get them out of jail. Even when a poaching incident is reported to the police, it is done after a gap of several days (as the carcass is found only after sometime). This delays the identification of the poachers and gathering of related information. In the overall scenario, ineffective enforcement of law, slow judicial process and pending of cases have increased the deaths of the elephants.

The human-animal conflict is a severe problem in most of the places in this region (in almost all the Poachers' centres) and people have a very negative approach towards wildlife conservation. A reason put forward by the villagers for the severity of the human-elephant conflict is the absence of fear of man due to reduced incidence of poaching. When elephants were poached, it was this fear which kept elephants away from human habitation

The knowledge of the terrain and village from where the poachers come, elephant movement and other associated issues was very poor among the forest staff we met. This ignorance was due to lack of motivation and training given to the officers or staff posted here. The problem like poaching or other associated issues can be mapped and understood with a little effort over a short duration of time. It is very clear from this study that even such small amounts of time is not spent on the issue, and the problem becomes unsolvable.

Control Measures.

- Begur, Gundre, Kalkere and Moolehole, ranges have a common boundary with Kerala. Inter-state cooperation is essential to prevent the elephant poaching menace from continuing along the state boundaries.
- There are totally 19 anti-poaching camps at present to counter poaching. Other sensitive areas also should have camps. Places such as Purathakoli (Chowdalli section, N. Begur range), Honnamana Kollachi (Bannur section, Gundre range) and Nayahalla (Hosahalli section, Gundre range) should have permanent anti-poaching camps as poachers from Sultan Bathery taluk, Vandikadavu, Sasimala, Seethamound, Chamapara and Kolavalli enter Bandipur through these places.
- Kurchiat, Muthanga, Sultan Bathery (Wayanad Wildlife Sanctuary), Chedulayam (Wayand south Forest division), N. Begur, Gundre, Mulehole, Kalkere, Hediya (Bandipur National Reserve), Mudumalai, and Kargudi (Mudumalai Wildlife Sanctuary) are the sensitive ranges for elephant

poaching in this region. Selection of personnel, from the Range Officer to the ground staff, should be based on ground knowledge, intelligence gathering, using of fire arms and other related skills.

- More manpower is required to prevent the poaching problem. The patrolling area should be very small for each party. It could be one guard and 2 watchers for every 5 km² and every 4 beats should be treated as one section and a forester posted there.
- Understanding the location of existing anti-poaching camps, poachers' entry points and undertaking patrolling operations is important. It's known from experienced people that the poachers operate from 8am to 5 pm, and any patrolling operation should start early in the morning and the party should walk slowly looking for signs and other evidence. Regular vehicular movement along the game roads and visits to the camps by vehicle would help in monitoring the movement of people and the staff operating from the camps. Listing out efficient people and placing them in very sensitive areas or camps, and understanding the problem of a given area should be done from a larger perspective.
- Manpower resource available within the department is low, but there are very few knowledgeable people within the system. If they were used efficiently, that would control all illegal activities. Selection of the staff for sensitive areas, starting from the Deputy conservator of Forests to the watchers, is a more important issue. The administrative officer should have a thorough knowledge on the system, and should be research and administration oriented.
- The forest personnel, who are undergoing watcher and watchguard training and those who have undergone it should be compulsorily posted in Tiger Project and other sensitive areas. Fresh candidates, during training period, should be posted in these sensitive areas instead of Squads and Check-posts.
- The activities taking place in Bairayakuppa should be studied and monitored regularly. This is the place where a regular supply of poaching weapons is reported. Regular visit by forest and police staff and officers, with the coordination of an NGO, may help in understanding and preventing illegal activities here.
- New establishments in very sensitive areas of Bandipur and adjoining areas have been monitored. For example, between Kaniyar RF and Lokkare RF, newly started farming activities can be noticed. A part of the 300 acres of land purchased near Mangala village could have been encroached land. These activities take place in very sensitive areas. It can be approached from Mangala, to Bachalli and Bachalli to Gundlupet road. There is no forest check-post in this place. These places can be approached from another road coming from Jaggahalli. The road goes to a temple, from where it is not motorable. However, bullock-carts can be used on that stretch.
- Local people and the ex-poachers feel that, anti poaching operations are ineffective and if a check list of ex poachers is made and the same money is spent for hiring these ex poachers as honorary forest guards for patrolling, that would control most of the poaching incidents. The efficiency and economy of running the anti poaching camps, and giving job opportunities to ex poachers should be studied well. Depending on the situation or the out come either one of these or combination of these two approaches should be engaged.

- The poachers have the opinion that, at no time the forest dept would arrest a poacher or other departments involved in anti poaching measures, and all the arrests are by chance or because of the rivalry between different groups. If such an opinion continues, this would motivate the poachers to operate without any fear
- Failure to catch poachers/ stop this activity could stem from:
 - a. failure in recovering the tusks of many of the poached elephants and identifying the poachers
 - b. When a poaching case is registered, no further investigation is carried out
 - c. Little co-ordination exists between the forest department and other government agencies within/ across states
 - d. Investigation processes are very complicated or the registered cases are not monitored regularly
- The people directly or indirectly involved in poaching and associated activities, particularly, Vellutha Abubakkar, Podiyan, Chazhipara Babu and Elias of Sultan Bathery Center, should be monitored and as there are a number of cases registered against them, should be made to appear in the police station regularly. Through this approach, their involvement in any new poaching incident can be identified and confirmed. It's also possible that there are many poachers operating there, but they are not brought under the list of poachers.
- Elias, who was arrested by Kerala Forest Department (see Appendix 7 for newspaper article), appeared to be a notorious person once as poacher and currently as dealer. Along with tusks, other materials confiscated from his house confirm his activities. Proper investigation, intelligence gathering, and monitoring of his movement (as he has been released from jail) through a special squad is the need of the hour.
- More details and distinct group of poachers from Sultan Bathery Centre is available, but the same is lacking, for a deeper study and understanding of the poachers of Pulpally region is needed. Apart from these distinct offenders from Sultan Bathery Centre, the movement of Prasanna, Pulikal Sukumaran, Bonni, Sunil of Pulpally Centre, and wild animal meat sellers Joe and Baby of Marakadavu and Amarakuuni regions should be monitored.
- Most of the poachers operating in these areas are economically rich, and poaching continues because of its entertainment value. Any strategy to stop poachers and their activities should take this point into account.
- Positive and negative interaction between different poaching groups, particularly Pulpally and Sultan Bathery, can be noticed, Puducheri Mohanan, who was arrested by Kerala forest department for his involvement in elephant poaching with a group of 9 persons, has helped Prasanna of Pulpally region get introduced to a tusk dealer Adimali Thomas. According to a very reliable source, Sudhakar of Sultan Bathery Centre helped Kerala forest department to arrest Prasanna. Understanding more such interactions may help in understanding the group involvement and rivalry between these groups, and can eventually lead to arrests and control of the problem.

- Tusk dealing from Sultan Bathery to Cochin in Kerala has been regularly reported. It can be expected that tusks regularly could have been taken to Junaid Sait of Mattanjery in Cochin. Mattanjery could be a place where all the tusks are sold. Adimali of Iuddki District Kerala is also another important tusk trading center. Adimali Thomas could be a main man in this deal. Like Cochin and Adimali of Kerala, Jaipur of North India could be an important ivory trade and carving center. Reports from Hedyala and Naganapur suggest that poachers are regularly selling tusks to Jaipur through Mysore (Karnataka). Monitoring all these centers and former and current tusk dealers is very important.
- The poachers who are currently in a bad state need to be identified and it's high time to start a dialogue with these people and help them reduce their burden related to the case, with the option of them not poaching or getting involved in any other illegal activities.
- Our dialogue with poachers to understand the problem and to bring some of these poachers to the normal stream was reasonably successful. The approach was possible through a locally respected person. Identifying such persons to meet some of the other poachers in these regions will give a new approach to solve this problem.
- Legally empowering wildlife law enforcers, allowing the Reserve staff to use fire arms, increasing the penalty for poachers, legally controlling the possession of fire arms and ammunition by the local people should be given priority. The poaching offence should be made non-bailable, even in the High Court. Till the case is disposed, the party should be kept in jail. The monitoring of the cases should be done through regular meetings.
- According to the police department, local poachers unlike regular poachers do not stay in the forest for long. They make daily trips to the forest from the village. By monitoring the movement of people, poachers can be identified. For the police however, the incidents take place very far from their station limits. Establishing a police outpost or Head Quarters close to the forest may help prevent these] incidents.
- From identifying the place where the death has taken place, the poachers can be identified. The poacher has very little time to remove the tusk and reach his destination. The poachers use lot of materials and some time leave many important clues. Going for finger print identification may help the department catch the culprits.
- Coordination between the forest and police departments is very essential. Regular meetings between Superintendents of Police and Deputy Conservators of forests, circle inspectors of police and range officers, counterparts in neighboring divisions, circles and ranges, particularly in the interstate border areas, would improve the efficiency of the enforcement. More importantly, the meetings alone would not solve the problem, the follow-up is also equally important.
- At the official level, a special cell comprising of police, forest department and NGOs should be formed to monitor the poaching cases. This cell should have a complete understanding of the people involved, the villages located within and close to the forest, the economic status of the people living in and around the Reserve, expected age class of unemployed youth who could be

involved in these illegal activities and other related information. This cell can also be used to establish intelligence gathering networks and undercover investigations.

- More informal level of operations by NGOs operating in this region is crucial, and service of small band of volunteers from NGO's of different states can be utilized. Training of these volunteers by experts to monitor the elephant death records, poaching incidents, intelligence gathering, and periodically exchanging the information with forest, police and other personnel is needed immediately. Volunteers from Nilgiri Wildlife and Environment Association - Nilgiris, Wayanad Prakrithi Samrakshana Samithi of Muthanga, Namma Sanga, Bandipur of Karnataka should take up these responsibilities and work in consultation with the concerned departments.
- Service provided on various issue by some of the police officers of Karnataka needs to be greatly acknowledged. If their service is fully utilized and no interference from political or influential people is allowed, many more arrests and ivory seizures can be made. During one of ivory seizures and arrests of culprits in some part of Karnataka, the police officials were pressurized by a popular TV company to release the culprits. NGOs can play a major roll in identifying such people and exposing them to the public.
- The welfare of the ground staff needs to be given high priority. Frequent interaction between the higher level forest officer and the lower level staff is very important, as it would help in understanding the problems of the ground staff and the facilities given to them. Most of the forest areas are very remote. Considering their children's education and looking at the facilities provided to them, the staff are not motivated to work in these areas. Facilities including children's education should be provided to the ground staff who are away from their families. It would be worth establishing a Central School for forest staff children. These facilities may motivate the staff to work in such areas.
- It was noticed that the Reserve has a very effective and knowledgeable ground staff and more motivation and incentives should be given for detecting poaching, poachers and other illegal activities, for working in remote areas and anti-poaching camps, and for risking their lives.
- In some regions without local, particularly, tribal support, illegal activities are not possible. If these tribal or local people get involved in illegal activity, they get very little money out of it. To prevent these tribals and locals from entering the forest, more job opportunities should be given to them, and their life style improved. The tribals who live here have to be educated and their movement monitored. The socio-economic conditions of the people living around the Reserve should be taken into consideration.
- There is a trend or suggestion of relocating the tribals from the forest areas. But they can be used as a resource base, and their relocation would not solve the problem. The extent of disturbance due to these tribal communities should be studied. Money spent on relocating them could be put into a fixed deposit and regular income generated for their welfare. Regular employment and income through fixed deposits may stop the illegal activities of the people.
- In Pulpally and Sultan Bathery Centers, agricultural activity is becoming non viable and severe human-animal conflict has resulted in severe socio-economic problems in these regions. During

the day, the elephants use the habitat close to human habitation extensively and later in the nights, they visit agricultural lands. How many of these issues are directly relevant to the poaching problem is not known, however, a negative feeling towards wild animals is seen. Thus, understanding both human-animal conflict and socio-economics is very important. A specific study on habitat viability with reference to food and other resource availability may help in understanding the habitat quality and behavior of elephants.

- A good estimation of elephant density and population structure is available only for few areas and little and only very vague information on the population structure, sex ratios, birth and death rates have no meaning and cannot help in understanding the problem. The elephant populations in sensitive areas like Bandipur and adjoining forests have to be monitored on a long-term basis.

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Appendix 1:

Name, addresses and other associated details of poachers who operate in Karnataka, Kerala and Tamil Nadu; the list is based on the arrests made by Karnataka and Kerala Forest Departments

Group size	Name and Address of the Offender
1	Jose S/O Thomas, Pallichankudy, Ondayathady Muthira Moola, Vemam
2	Pathrose S/O Joseph, Ayithkudy, Ondayangady, Vemam
3	Thomas Kutty S/O Joseph, Vadakkethottathil, Payyampally
4	Kariya.J.Gowder, S/O Pachapuka Gowder, Andrasandra Hobly, Katagadha, Vairakuppa
5	Devesa Gowder S/O Nanja Gowder, Andrasandra Hobly, Katagadha, Vairakuppa
6	Thimma Gowder S/O Matchina Vara, Gowder, Andrasandra Hobly, Katagadha, Vairakuppa
7	Motty Puttanna S/O Huchayya Gowder, Andrasandra Hobly, Katagadha, Vairakuppa
8	Thakkidi S/O Bodhidevesa Gowder, Andrasandra Hobly, Katagadha, Vairakuppa
1	Prassannan P.K. S/O Kesavan, Vendassery, Seethamount
2	Appu S/O Narayanan, Muttathil, Chavappara, Seenamount
3	Thomachan S/O Thomas, Nallamthadathil, Chelur, Padichira
4	James C.J. S/O Joseph, Perikkallur, Preikkallur
5	Sivan S/O Velayudhan, Madal, Mullankolly, Mullankolly
6	Mani S/O Thomas, Padychira, Pulpally
7	Kunjan S/O Joseph, Chelur, Padychira
8	Raju S/O Mathai, Parathotta, Pulpally, Perikallur
1	Soman S/O Kandan, Cherpukallunkal, Kappiset, Chettapalam
2	Kunjappan S/O Kesavan, Vaniyedathu, Amarakuni, Cheeyambam
3	Suku S/O Kutty, Pulikkal, Amarakuni, Cheeyambam
4	Sateesan S/O Kutty, Pulikkal, Amarakuni, Cheeyambam
1	Jose S/O George, Narakakolly, Kuppady, Moolankavu
2	Joy S/O Pappachan, Vengathadathil, Kuppady Village, Xoolankavu (Odappallam)
3	Paul S/O Joseph, Kuzhikandathil, Odappallam, Moolankavu
4	Govindan S/O Kullan, Kottnottu, Valluvady, Moolankavu
5	Damodaran S/O Paithal, Kottnottu, Valluvady, Moolankavu
1	Appukuttan S/O Velukutty, Chenadu, Kidanganadu Village, Chethalayam
2	Radhakrishnan S/O Atchuthan Chetty, Puthannoor, Kidanganadu Village, Chethalayam
1	Gopinath E.R. S/O Raman, Eranikkal, Amarakuni, Cheeyambam
2	Peethambaran, Puthenkandathil Veedu, Amarakuni, Cheeyambam
1	Saidu S/O Hamza, Pallithottiyil, Thazheyangady, Mananthavady
2	Latheef S/O Soopi, Chettappalam, Edavaka, Mananthavady
3	Muhammed S/O Mammy, Kadavathu, Thazheyangady, Mananthavady
4	Aboobacker, Chathampath, Thazheyangady, Mananthavady

5	Appachan S/O Kochu, Chennippai, Thazheyangady, Mananthavady
6	Johny, Mananthavady
7	Ahammed Koroth, Mananthavady
1	Krishnan S/O Narayanan, Kottanad, Noolpuzha
1	Chellappan S/O Padmanabhan, Nedyakalayil, Choorimala, Pazhupathur
2	Padmanabhan S/O Mukundan, Nedyakalayil, Arivayal, Pazhupathur
3	Raman Kutty S/O Patchan, Ketcheri Methel, Choorimala, Pazhupathur
1	Arjunan S/O Andichetty, Aranji Forest Lees, Reampur Rf, Noolpuzha
2	Mathai S/O Markose, Kallumukku, Noolpuzha Village, Noolpuzha
3	Achuthan Chetty, S/O Gopalan Chetty, Kallumukkil, Noolpuzha, Noolpuzha
4	Suma A/O Markose, Kallumukku, Noolpuzha, Noolpuzha
5	Elias P.P, Ksrtc Conductor, Kallumukku, Noolpuzha
6	Uthuppu, Kadampakkadu, Kallumukku, Noolpuzha
7	Mathai Kunju, Kadampakkattil, Kallumukku, Noolpuzha
8	Mathai S/O Onachettan, Kallumukku, Noolpuzha, Noolpuzha
9	Johy, Mankunnel, Kallumukku, Noolpuzha
10	Suran S/O Krishnan Chetty, Arakunji, Noolpuzha P.O
1	Jose S/O George, Kakkanatu Parambil, Odapallam , Valluvady
2	Karunakarn S/O Soman, Vellakkottu, Noolpuzha
3	Sudhakaran S/O Somn, Vellakkottu, Noolpuzha,
4	Damodaran S/O Besavan, Kottaanadu, Noolpuzha
5	Joy S/O George, Kakkanattu Parambil, Noolpuzha, Valluvady
6	Saji S/O George, Kakkanatu Parambil, Noolpuzha, Valluvady
1	Pathrose, Thannikkode, Karadimadu, Noolpuzha
2	Govindan S/O Onakkan, Karadimadu, Kallumukku Kunnu, Noolpuzha
3	Krishnan S/O Chippayyan Chetty, Sarakuniyil, Meppady
1	Kurian S/O Varkey, Thekkancheri, Poomala, Battery
2	Prabhakaran S/O Vasu Nair, Kidangil, Kaipancheri, Meppadi
3	Rasheed S/O Noordheen, Thayyil, Kaipancheri, Meppadi
1	Krishnan C.K S/O Kunhan, Chankarothu Veedu, Vakery, Moodakolly
2	Raghavan S/O Valanchi, Anikathadathil, Vakery, Moodakolly
3	Sunil S/O Krishnan, Mavathu, Vakery, Moodakolly\
4	Babu S/O Raman, Anikathadathil, Vakery, Moodakolly
5	Zavior S/O Chacko, Arachaparambil, Vakery, Moodakolly
6	Ponnappan S/O Narayanan, Karikkulthu, Vakery, Moodakolly
7	Sivan S/O Narayanan, Mavuthu, Vakery, Moodakolly
1	Mathai /So Thomman, Marangattinkara, Kallor Kunnu, Valluvady
2	Joseph S/O Vargheese, Mathalikunnel, Kallor Kunnu, Valluvady
3	Lazer S/O Ittira, Mandroth, Kallor Kunnu, Valluvady
1	Ramu S/O Appu, Koddallur, Irulam, Moodakolly
2	Velu S/O Perumal, Koddallur, Irulam, Moodakolly
3	Kuzhavamackan Narayanan, Moodakolly, Irulam Village, Moodakolly

4	Narayanan S/O Appu, Koodallur, Irulam Village, Moodakolly
5	Pavithran S/O Chimban, Manthamkolly, Irulam Village, Moodakolly
1	Chandran S/O Bhaskaran, Murikkan Veetil, Purakkady Village, Vakery
2	Muhammed Kutty S/O Ali Kutty Haji, Puttelthadathil, S.Bathery Village, Beenachi'
1	Krishan Kutty S/O Neelakandan, Thariode, Noolpuzha, Nenmeni
2	Lalu S/O Kesavan, Kariyakulathu, Karivallikunnu, Kuppady
3	Sukumaran S/O Kesavan, Malayil Veedu, Kuppady Village
1	Abbas S/O Muhammed Haji, Kunnathu, Kattayadu, Bathery
2	Abdullah Kutty S/O Ahammed, Kalarikandy, Jottappankulam, Bathery Village
4	Ramakrishnan S/O Manjan, Plackal, Kulakunnu, Noolpuzha Village
5	Gopalakrishnan S/O Mundan, Plackal, Mundakolly, Mukkuthi Kunnu P.O
1	Abdulla.V.K S/O Kunjammad, Vazhayil, Pilakkavu, Mananthavady
2	Ibrahim S/O Veeran, Nelliikkattu, Edava Village, Mananthavady
3	Shihabudeen S/O Kunjallevi, Padukuthu, Mananthavady
1	Ganesh S/O Kunkunny Chetty, Chenad Desam, Kidanganad Amsam, Chethalayam
2	Gangadharan S/O Ramayyan, Padyppura, Chethalayam
1	Kuttappan S/O Kappu, Vadakkenadu Desam, Kidanganadu, Kidanganadu
1	Shibu S/O Vargheese, Pattupalayil, Padichira Village, Sasimala
2	George S/O Vergheese, Karingulathil, Padichira Village, Sasimala
1	Mathai K.E. S/O Ettira, Kuttichirakudy, Kidanganadu Village, Chethalayam
2	Purushothaman S/O Kunhimon, Malamukalil, Kidanganadu Village, Chethalayam
3	Sukumaran S/O Kunhan, Kunnumpurathu, Pulpally Village, Kalnadakolly
4	Shaji S/O Simon, Pottananickal, Pulpally Village, Kalanadikolly
1	Chakliyan S/O Pittan, Muthanga Lees No. 24, Kadankolly, Nenmeni Kunnu
1	Vijayan S/O Narayanan, Vayangatty, Thottamdola, Nenmeni Kunnu
2	Sivaraman S/O Narayanan, Vayangattu, Thottamoodla, Nenmeni Kunnu
3	Sivadasan S/O Madhavan, Kalathil, Thottamoola, Nenmeni Kunnu
4	Ramachandran S/O Karappa, Puthanpurakkal, Thottamoola, Nenmeni Kunnu
1	Velayudhan S/O Karimban Chetty, Kalankandy, Muthanga
2	Balakrishnan S/O Appu Chetty, Kalankandy House, P.O Muthanga
3	Shanmugan S/O Velayudhan Chetty, Kalankandy House, Muthanga
1	Vasu S/O Kalan, Vendoor Colony, Krishnagiri P.O, Krishnagiri Village, Sby
2	Gopi S/O Monuva, Vendoor Colony, Krishnagiri P.O, Krishnagiri Village, Sby
3	Kannan S/O Choman, Vendoor Colony, Krishnagiri P.O, Krishnagiri Village, Sby
1	Mangalathu Chacko S/O Joseph, Pazhery, Kuppady Village, S. Bathery
2	Mangalathu Wilson S/O Chacko, Pazhery, Kuppady Village, S.Bathery
3	C.O.George S/O Ouseph, Cheerakathottathil Veedu, Pazhery, Kuppady.S.Bathery
4	A.C.Scarya S/O Cheriyan, Kottarakunnel Veedu, Pazhery, Kuppady, S.Bathery
5	V.K.Padmanabhan S/O Kunku Chetty, Vendoor Veedu, Pazhery, Kuppady, S.Bathery
6	Kunkan Uydiad S/O Kalan, Vendoor Kunnu, Kuppady, S.Bathery

1	Soman S/O Kandan, Cherpukallunkal House, Devagadda, Padichira Village, Bathery
2	Mathaxhan Vandikkadavu
3	Josai S/O Vargheese, Panikalayil House, Kappiset, Sasimala
4	Sukumaran S/O Krishnan Kutty, Kannassery House, Devarghadda, Padichira Village, Bathery
1	S.Sethumadhavan S/O Sankunny, Ayyankolly, Moonnanadu P.O, Cherambady Village, Gudallur Taluk, Tamil Nadu
2	Sivan S/O Madhavan (Karutha Kunhu), Kalathil House, Thottamula, Noolpuzha Village, Nenmenikunnu.P.O
3	Kuttan, Thottamoola
4	Rajan, Thottamoola
5	Narayanan Bathery
6	Wilson Vakery
1	Subramaniyan S/O Madhavan, Kolakachira, Lease No. 102 Of Bathery Range, Marode, Noolpuzha Village, Bathery
2	K.E.Mathai, S/O Kuttichirakuzhy Ittira, Bathery Taluk, Kidanganadu Village
1	Baby S/O Anthony, Chundattu House, Kidanganadu Village, Bathery Taluk, P.O. Kidanganadu
2	Stanly S/O George, Thekkekkara, Vadakkanadu, Kidanganadu Village, Bathery Taluk, P.O Kidanganadu
3	Mohanan S/O Pambanal Narayanan, Pachadi, Kidanganadu Village, Bathery Taluk, P.O Kidanganadu
4	Sivasankaran (Kuttappan), S/O Kilayanaparambil Balakrishnan, Pachadi, Kidanganadu Village, Bathery Taluk, P.O. Kidanganadu
1	K.V. Jose S.O Verghese, Emballi House, Sasimala
2	O.K.Kunju S/O Kumaran, Orappura Veedu, Sasimala P.O Pulapally
3	K.T.Bader S/O Thomas, Kethyattu Veedu, Sesimala P.O.Wynad
1	Abdull, S/O Pockar, Mannar Thddukayal,Mathamangalam, Naikatty
2	George, S/O David,Kottukara,Nambikolly, Puthankunnu
3	Joy,S/O David, Kottukara,Nambikolly, Puthankunnu
4	Rajappan, S/O Narayanan,Madathil,Thottamoola,Nenkeni Kunnu
5	Joy Kotchupurakkal,Nambikollyputhankunnu
6	Chandra,B/O Annan,Mottammel,Padinharethara,
7	Appuni, S/O Raman,Cheramoola,Eddakkadu,Kartikulam
8	Boku, S/O Moochan,Thottamoola Naikavady,Noolpuzha Village,Nenkeni Kunnu
1	Bhaskaran, S/O Veliyan,Kumbarakara,Kuppady Village,Sultan Battery
2	Sukumaran ,S/O Velu,Kumbarakara,Kuppady Village,Sultan Battery
3	Babu Chazhippara,Thazhathoor,Noolpuzha Village
4	Sanny, S/O Vargheese, Thazhathoor,Noolpuzha Village
5	Pothayan, S/O Nanu Muthan,Punduchira,Noolpuzha Village,Sultan Battery
6	Abdull, S/O Pockar, Mannar Thddukayal,Mathamangalam, Naikatty
7	Govindan,S/O Kelu,Kathangottu,Panniyankara Village,Kozhikode
1	Sasidharan, S/O Damodharan Pillai,Placherivilayil,Padychira Village,Sasimala
2	Benny,S/O Devessia,Vettukallumpurathu,Padychira Village,

3	Jose Imbalil, Padychira Village, Sasimala
4	Soman, Vettamalacheruvil, Padychira Village, Sasimala
5	Asokan, Chamappa Colony, Padychira Village, Sasimala
6	Ramachandra, Chamappa, Padychira Village, Sasimala
7	Raju, S/O Pappachan, Ellikkal, Melemuriyil, Mannarkadu Taluk, Tenkara
1	Babu Chazhippara, S/O Markose, Thazhathoor, Cheeral P.O
2	Devessery Soman, S/O Velu Asan, Amarakuni P.O
3	Thazhathuveetil Mathachan, S/O Varghese, Fair Land Colony, Sultan Bathery P.O
4	Puthussery Mohanan, S/O Raghavan, Kuppady P.O
5	N.V. Suuny, S/O Varghese, Mamala Veedu, Vaduvanchal, Padivayal P.O
6	Suresh, S/O Ananthan, Odapallam Veedu, Valluvady P.O
7	Preman, S/O Kochu Krishnan, T.C/3/2618, Kurungandoor Veedu, Pattom P.O, Tvm, Kerala
1	Kuttai S/O Balakrishnan, Kapinicheri
2	Josephan S/O Panayaliyil, Chamappura
3	Kollirajan S/O Shivaramankoli, Seethamount P.O
4	Prasanna (Ameathur), Koppisetchutupalam
5	Prabha S/O Shivaraman Kollyil, Seethamount P.O
6	Himbali Joseph S/O Verghees, Sesimala P.O
1	Prasanna, Padicheri Village, Kerala
2	Bomma - Karalu Village - Kerala
3	Kulla, Sulthanbathery
4	Chikka, Sulthanbathery

Appendix 2:

A day and a dialogue with poachers: Contacts were established with some of the ex-poachers and the poachers suspected to be continuing their operations in Kerala and Karnataka. A dialogue was opened with these people to understand the problem, their mode of operation, strategies to be followed to control the problem and the reasons for their becoming poachers or getting involved in other illegal activities. Attempts were also made to understand the socio-economic conditions of these people. Names of these persons are withheld for a variety of reasons and they are reported as poacher A, B and so on.

Persons from Pulpally centre

Poacher A: Contact was established with “A” through a locally respected person. He agreed to meet us, and invited us to have lunch with him, promising he would feed us with wild animal meat. However, it was unavailable that day though he was a known source of meat in the village. He took us to the forest close to his house, wanting to show wildlife, particularly elephants. We walked through agricultural lands, a government-owned coffee plantation and the Amarkoni tribal colony. We reached the forest in 14 minutes.

In the coffee plantation three wild elephants, an adult female of 20 to 30 years, a juvenile female of 1 to 2 years and a male of 10 to 12 years, were seen. It appeared that, there was no need for poachers to go to the forest to kill elephants; they come to human habitation themselves. Elephants were feeding on the grass growing among the coffee bushes. When “A” saw the elephants he became excited and approached them. The adult females, on being disturbed, began chasing us; we ran away from that place. We moved into the core region of the forest, which was of moist deciduous type. We followed a mud road, going to Vandikadavu (one of the main villages of Pulpally Poachers Centre). The road was connected to Chedulayam, and to Mysore (from both these locations poachers are arrested and elephant tusks are seized).

“A” was operating as a poacher for 8 years, 3 years as an elephant poacher, along with his friends. He came from a very respectable family; his ancestral family was well off and lived nearby. He studied up to 9th standard; both he and his wife studied in the same school, and had two children (girls). He started this activity as a hobby. He knew regions, say 40 km inside the forest boundary. While crossing a stream with us, he knew exactly where the depth was more. He was not afraid of elephants, had joined a poachers’ gang a number of times for hunting elephants, but had not shot any elephant. He had accompanied poachers for entertainment and money, mainly for meat. According to him, the gang was usually comprised of less than 10 (5-8) members; smaller the gang, the better. They had 2-3 guns. The longest he had stayed in the forest was for 16 days.

Poacher “A’s” hunting experience and opinions: When they go hunting, they carry provisions, and look for animals, with an experienced person or a tribal. The group is very careful while in the forest. When they are on the move, no leaves are stepped on, no tree cut, no walking in the main path, and no talking; the communication is only through signs, any information is exchanged only during the night, when they halt. On their 16 days trip, no elephant was shot, as they did not encounter any tusker. Sometimes, within a day or two, an animal would be found. When found, they shot it, with only 30 minutes being needed to remove the tusks from the dead elephant.

The tribals who assist a poacher's group know the forest very well, and also know the person who is patrolling the forest, as the patrol party (watcher or guard) could be their relatives or belonging to the same place from where the tribal, accompanying the poachers, stays. At least one tribal who knows the forest will be with them. According to him, many tribals are directly involved in poaching. Tribals from Devergadde, tribal colony (located between Amarkonni and Vandikadavu, at a distance of 3 to 4 km) are involved in these activities. Now some tribals also have started hunting on their own. They are approached by people in towns who have licensed guns. These people lend their guns for somewhat regular supply of meat. Most of the poaching is done not for money. It starts as a hobby. Illegal money could be spent for anything. If its for money, only the person who shoots the animal knows the money involved in the operation.

He said wild animal meat is openly sold; kill is made based on the demand, at least twice a month. If outsiders are involved, some of the kill is given to the local, which he may sell. Sometimes people see how much is needed and hunt. Usually, sambar deer and gaur are hunted. Most marksmen are from Idukki and Kottayam side. Local people are accomplices. On many occasions, the group has seen the forest staff at a very close distance, say a few meters away from them. The forest staff never noticed the group. Poachers are very careful not to leave any clue. At no time has a poacher been caught or arrested inside the forest by the department. The arrests are purely made by chance, or due to rivalry between the groups of poachers. He was 100 % sure that no hunter is going to be caught by the forest officials, while in the forest.

When poachers are arrested, they are very badly treated by the forest staff. Once caught, the money is needed by poachers for the court case. To compensate for this expenditure, poaching is continued. Revenge or frustration is also part of the reason poachers continue to poach. If a group goes hunting and does not find anything, they kill whatever they see on their way back. In his opinion, most people who are caught go back to the forest with renewed vigour to recover the money they have spent on fighting their case. According to him, most people say they would stop once they get a big catch, but that never seems to happen.

He felt more than poachers, forest department staff was involved in killing of animals. He had seen forest department personnel carrying dead animals after their night patrol. He also mentioned that sometimes, forest staff asks some of the poachers to shoot some animals, for their officers or VIPs if they are camping in the forest.

After poacher "A" was arrested by the forest department, trouble started in his life. He was treated badly by the villagers, and isolated by everyone, including his parents, wife and daughters. According to the poacher's wife, he wasted lot of money lavishly. His interest in the forests around him since his childhood acted as a motivation when friends, who went hunting, called him to accompany them. It started thus and continued till he was arrested. Many people ask him to continue his activities. He feels, the other poacher (B) we tried to meet, who was arrested last year, still continues poaching animals.

His personal problems were heightened after his arrest: his daughter's health issues with a weak heart valve, his unfinished house and the court case for his act of poaching. There was no recourse to earn money. He feels a poacher has to be given a job for him to come back to normal living. According to him, only advice will not fill the stomach; it needs something else. He had approached the forest officials, after he was caught, for a job in the department as he knew the forest well. He was asked

not to come anywhere near the forest. When asked whether a meeting or class, convened for the poachers, would improve the situation, his opinion was that some may drop out of the job. He was willing to co-operate in whatever way he could.

Poacher B: He was arrested by the Kerala forest department on New Year's Day. His parent's, father-in-law and his own house are located in the same village. They live in medium size houses surrounded by agricultural crops, pepper, banana and coconut, very close to forest. He has two children, 1 daughter who was studying in 10th standard is now staying in her relatives' place. His daughter studies in a school in Pulpally. After he was arrested, she stopped going to school for sometime, as she was treated badly by her friends and colleagues.

His wife described the incident and the arrest. The gun used to kill the elephant was from an advocate. Following his arrest, the family sold their 30-cent land to fight the case and also bail the tribals out, who were arrested with him. According to her, the case would take another 4 years to complete. They had hired an advocate from Karnataka. Another person, from Irulam (5 km from Pulpally, located on the way to Sultan Bathery), also involved in this case, was not arrested.

Poacher "B" was the third son in the family, His mother felt she was not lucky enough to have good children as she was not happy about her first son also, who did not make a name for himself in the society, and "B" too had begun getting involved in illegal activities. He had spent all his money in fighting court cases and did not own any land now.

"B" planned to go out of the village and seek employment as a driver. His mother also mentioned that the other poachers, Ponni and Sunil (whose names were in the list of the forest department, along with his) from Parapanakadi village, located close to Irulam, got her son involved in the poaching case. After his arrest, they never made any attempt to help him. Referring to the incident and the arrest, his mother was very happy as her son had come back alive. He had promised her that, he would not get involved in these activities again. But according to poacher A, poacher B still continues hunting (both are from the same place and may know who does what and when).

According to Poacher A, "B" recently had bought 15 cents of land, which was justified by the family as he had a daughter who needed land in her name to help find a suitable alliance for her. There was a possibility of "B" continuing his activities for a variety of reasons. These reasons could be to raise money for his court case, to recover from his economic loss, for his personal growth, for his daughter or for revenge/ against the system (forest department and the society for the treatment meted out to him and his family).

It should be noted that, the family was aware and were directly or indirectly supporting his activities. When Forest Department arrested him, two guns and a pair of tusks were confiscated from his house. If the family was not aware of his activities, how would they allow the tusks and guns to be buried in his house? The activities were known to the family, but refer to the poachers as innocent and spoiling the poacher by the support they give them. It is also possible that the family was helpless, as the sons were grown up, and would not listen to their parents.

Its clear the family was undergoing a big financial crisis which he did not seem to understand. However the question remained, where did the money come from to buy the land? Was this part of the loan that

he obtained from people? Or was he still continuing as a poacher and making money to secure a better future? His movements need to be monitored.

Poacher C: lived in a house close to a place called Kappiset. All the three poachers' (A, B and C) lived close to each other, within a radius of 5 km. The forest begins from the opposite bank of a river named Kananrampuzha. Paddy is cultivated on the side of the bank between the houses and the river. The houses are surrounded by agricultural crops, mainly banana and coconut trees. "C"'s house was made out of bamboo and was very small. When we visited him, he was not there. We met his wife and his daughter. Recalling the incident of his arrest, his wife said most of the forest staff in the region knew him very well. During Onam festival (a harvest festival of the state of Kerala, celebrated in the month of August-September), there was an elephant creating a problem near his land. According to her, to chase the elephant, he took the gun bought from Bairakuppa. The forest department staff, who was returning from a patrol saw him with the gun and arrested him and his son. The arrest, court case and subsequent failure in crop yield had made him very poor. For cultivating ginger, he had spent Rs. 1 lakh (Rs. 1,00,000), but could get only 16,000 rupees in return. He was planning to construct a house, but lost the money in ginger cultivation and court case. The construction of the house stopped. He now lived in a bamboo hut.

Poacher "C's" hunting experience and opinions: We were told he would return home anytime. When he came, he took us towards the forest and river. A number of elephant pad marks were seen along the river bed and the crop lands. There was a long electric fence, which was not broken and functional. According to him, no elephant case had been registered against him; though there was some other case registered against him. He admitted to have gone hunting regularly. There is an opinion among forest department staff and other poachers that he goes with his family to sell the harvested tusks.

He told us the stretch of forest from Kerala to Karnataka was 1km. Most of the people living there were hunters. He and his son were arrested recently. He was arrested and taken to Chedulayam (Waynad, Kerala), kept there for 2 days and then taken to Vythiri (Waynad, Kerala). He was very badly treated; his arrest was known to his family and others only the next day. He begged the forest staff not to arrest his son, who was studying in 10th standard. After he was arrested, he stopped going to school. The gun he had when he was arrested, was from Bairapura. However, according to him, hand made guns were available close to Pulpally also and the hunters were mainly from Vandikadavu. One Thankan (who is a panchayat member) was also involved in poaching, but at no time was he arrested. Another poacher C.K. Soman was arrested once. Another was Vazhayil Baby, a regular poacher, who had killed many elephants in this region. In his opinion, if a poacher is arrested, he continues poaching to make money to pay for his court case. The poacher gets less money from his activities, but pays more once caught.

Everyone in this region, particularly Kappiset, Amarkonni and Asramakolli, had only a 2 acre land each. Men spent a lot of time drinking alcohol while women went to work and collected wood from the forest. "B" had begun facing problems from the forest department ever since he had informed a local journalist about a proposal to cut a karumarthu (*Terminelia Spp*) tree by one of the forest staff. After the incident and the journalist's visit to the spot, the tree was not cut.

He felt that the elephant problem was severe, reported up to Chamapara village. During night time, it was very difficult to walk. Electric fence was not effective as the materials were stolen. In his village, the fence was erected as a local effort, after a group of farmers joined together. They spent 80,000 rupees. It was effective for only 2 years. According to him, if maintained, the electric fence was good

for a long time; otherwise, it's not. The fence was not functional as there was no stored power (battery supply). Elephants did not fear anyone. Along the river for 8 km, the problem was severe with elephants eating most of the paddy cultivated. The problem was increasing every year; there was no solution to it. Those days, the elephants were captured in Mysore forest. As there was no capture now, the problem had increased.

Villagers also encountered Wild boar problems which was very severe. These animals bred well. In his opinion, they had to be shot. But he felt, if licenses were given to shoot the boars, it would be misused for elephant poaching. The other side of the poacher's personality was visible. As he was referring to the animals and the way they were killed, he pointed out that, if animals were extensively hunted, some rare animals could not be shown to the younger generation.

According to him, people have no respect for the forest department. They do not participate in people's welfare. When an elephant dies they come, but when a person dies due to an elephant, no person from the department visits. He felt the forest department wasted lots of money. If fifty people worked on fire lines, it would be written as 500 people. The other problem was that the fire line was made close to the river, which was a waste of money. He said that if 1 % of the money spent by the forest department was used for local welfare, it would help a lot.

When we walked back and reached his house, he gave us nice, simple food. It also showed his economic status. If he was making lot of money through hunting or other illegal means, he would not be leading such a bad life. Or was he a person who spent his money lavishly and always had money problems? Or was he a poacher? Or had he been wrongly identified and troubled by the forest department?

Persons from Sultan Bathery Centre: We tried to meet two poachers from this centre. The person whom we were planning to meet was arrested a day before our meeting. Our information on him suggested that he had given up poaching a long time back. But another source of information pointed towards him continuing as a poacher, albeit as a tusk dealer. It was true that he was arrested for possessing a pair of tusks in his house. The second suspected poacher was not available. However, we collected some information from the local people on the person who had been arrested, about the problem of poaching and other associated issues.

Poacher D: (observations on poacher D and other poachers by two local persons): According to one of the locals, "D" might have undertaken such activities as a way of making money. He was known to be rich. He may have possessed a gun as he had a gun license. People living close to the forest were licensed to hold a gun to keep away animals and also for self defence. He was a member of one of the main political parties of Kerala. People had a feeling that he had given up poaching. But all these days, he had been operating as a dealer or middle man, organising poaching groups.

According to one of the local persons, almost every one in the Nulpuzha panchayat was involved in illegal activities: poaching, distilling arrack and sandal wood smuggling. The problem was severe and there was no proper patrolling. In Karnataka and Tamil Nadu, no forest patrolling was done due to Veerappan's problem. If 100 elephants were shot, only one would be from Kerala. There should be a concerted effort by the Tamil Nadu, Karnataka and Kerala forest departments. If a case was registered, it would give an opportunity to know more about the gang, poacher, middle man, and others involved. The police department was not known for its good deeds. If the forest department efficiently caught a

poacher, the police collected money from him and released him. The forest department could not get involved in the matter as it became a local issue. Forest officials were not efficient because someone from the top always interfered when a case was registered or was being investigated. But the police either had no interest and did not directly get involved or were corrupt.

According to one of the local persons, poacher Velutha Abubakkar of this region, who escaped from a recent encounter with the Tamil Nadu forest department staff, was moving around, having even come to one of the local persons who was interacting with us. He also said V. Abubakkar was still active. The poachers, when they camped in the forest, always slept away from the fire. When a patrolling party came, they initially shoot at the fire. In the recent Mudumalai Forest shoot out, poacher Ummer was killed as he was sleeping close to the fire with his head covered. When a forest guard was killed, the department staff was afraid to proceed further. The poaching gang escaped. He also said that there were 3 Sajis in the region, directly or indirectly involved in poaching activities. The Saji who brought the tusk to "D", was from Kallumukku village. Kunju Agasthy, old time poacher of this region, was currently in very bad health. Kunnathkal Raju, who 20 years ago was a skin merchant. known to have printed fake currencies and made money through poaching and arrack distilling was also under Raju's control. Through these illegal activities, he had become a rich man now.

While interacting with the local person, one more person joined; this person knew poacher "D." . According to him, Poacher "D" was initially a poor man, involved in illicit arrack dealing. But he had become a millionaire now and had amassed money up to several crores. He had spent several thousands on ginger cultivation. He had 3 wives, but no children; did not drink. When one of the main parties of Kerala was in power, through the local MLA, "poacher D" was given a gun license. He was a notorious poacher, having killed elephants in almost all the places in Western Ghats. Arrest of the group with "D", is very important in terms of intelligence gathering. Once, "D" was arrested by the Karnataka Forest staff (1970s) near Maddur (Karnataka). "D's" gang had shot an elephant. When they approached the elephant to remove the tusks, the elephant charged at them as it had not died still. The gang was waiting for the elephant to die when the forest staff came and arrested them.

Both the local people suggested;

- a) Leave a region between forest and habitation for grazing and such other activities.
- b) Build strong barriers at the forest boundary, such that no animal can get to the cultivated land.
- c) Strengthen the forest protection force in number, weapons and transportation, and empower them to shoot inside the forest boundary.
- d) Forest and police force in all the states concerned should act together.
- e) If a case is booked, the main offender should be traced and punished.
- f) When a case is taken up, nobody from the top should be allowed to interfere.

Appendix 3

Arrests and encounters with poachers from Kerala: The information presented here is based on forest department records and interviews with forest staff.

Arrests of poachers from Pulpally Center:

Incident 1: In January 1998, the FD party raided Prasanna's house on a tip-off in the early hours of the morning. Prasanna and three tribals were arrested by Kurichiat and Kalpetta Flying Squad for possessing a pair of tusks and an unlicensed gun. Prasanna is out on bail. When the Flying Squad and Kurichiat RFO arrested Prasanna and four other persons, they confessed that eight other persons were also involved in that incident of poaching.

Appendix 3a: Names and other details of the offenders

S.No	Name	S/o	Age	Address
1	Prasanna	Sridharan	35	Mullathra House, Amarakunni, Padichira village.
2	Bomman	Maran,	38	Anapandi colony, Chettipampara, Irulam village.
3	Kullan	Maran,	30	Ashrama colony, Padichira village.
4	Ponni alias Anilkumar,			Prappangajadi Vellanecheri, Irulam village.
5	Sunil Kumar	B/o Anilkumar		Prappangajadi Vellanecheri, Irulam village.
6	Chikkan	Bokki,		Kurumamala colony, Irulam village, Cheyambam.
7	Enchikuli Shibu			Vallancheri, Enchikuli, Irulam village.
8	Subash,			Manalvayal, Irulam village.
9	Kallumukku Saji			Noolpuzha.
10	Adimali Thomas (dealer)			
11	Emabali Jose			Sasimala.
12	apara Prasanna.			Chamapara

Prasanna in his statement given to the Kerala FD mentioned that 10 days before he was arrested, he along with Anil, Sunil, Bomman, Chiken and Kullan entered Kurichiat range near Gallur (Karnataka-Kerala border). They searched for elephants the whole day and at 5 in the evening they saw a tusker. Ponni shot the animal and along with Prasanna chopped the tusks off with a saw. They then stayed in the forest for 2 days looking for another elephant and finally reached the village. A day before Christmas (24 Dec), Ponni suggested that Prasanna take the tusk and bury it in his house. Bomman and Chekken were paid Rs. 400 for their assistance. Adimali Thomas was telephoned to sell the tusk.

The arrest also revealed the regular involvement of Prasanna and his gang. Two months before the incident, Prasanna, Bomman, Ponni, Shibu and Subash entered the Karnataka forest and killed an elephant. The tusk was then sold. A month prior to that incident, Prasanna, Kullan, Ponni and Sunil killed one tusker in Karnataka and sold the tusk. Prasanna also mentioned that two years ago, he, Embali Jose, Chamapara Prasanna, Shibu and Shaji killed an elephant in the Tamil Nadu forests. 2 guns were confiscated from them. The big one was bought from Kallur Santhosh by Ponni's brother Sunil. The other gun belonged to Ponni. Both had no license.

Prasanna sold tusks to Adimali Thomas twice, first 9 kg and then 11 kg of tusks. He did not know the address of Adimali, but kept contact through phone-0486422590. According to him, many people visited Prasanna to buy the tusks. Once Thomas, Johnson and 2 more people visited him in an Ambassador KL 7H 6707. Adimali Thomas was introduced by Rasheed and Paduchery Mohanan. Rasheed and Mohanan stay near St. Marry's College, Sultan. Bathery. Every time the tusks were sold, the money was shared equally by the gang.

The arrest of Prasanna was possible due to a gang fight / rivalry between different poachers operating in this region. The information about Prasanna and the tusks was given by Sudhakar (who was recently arrested by the Cochin police) to the Flying Squad. It was also said that Sudhakar accompanied the Flying Squad during the raid. Initially, Prasanna refused to disclose any material with him. After several hours of search, 2 guns and the tusk was found. As the elephants were poached in Karnataka, the case was transferred to Karnataka FD. After that no efforts were made to investigate the case.

Incident 2: For poaching and stealing of tusks, 2 persons were arrested in 1996. They confessed to poaching a tusker in Karnataka forest, two persons were arrested and the following are the details about them.

Appendix 3b: Names and other details of the offenders

S.No	Name	S/o	Address
1	K.S. Mohanan	Sekharan	Kurukkan Parambil, Thrissilery. Amarakkuni, Devassery Veettil, Cheeyambam,
2	D.V. Soman	Velu Assari	Pulpally.

Incident 3: One Rajan of Seetha mount was arrested for killing an elephant and stealing ivory. He was arrested by Kerala Police with the help of Kerala forest department. The elephant poaching took place on 14th August 1998 in Begur Range of Chowdahalli section and Purathakoli beat. The animal killed was 20 years old.

Arrests from Sultan Bathery Centre:

Incident 1: In September 1996, in Kuppady section, near Thenkali, one male was poached. The trunk was cut and the head chopped. The tusks were missing. (The body measurement of the animal: shoulder height 224 cm, body length-298 cm, circumference-110 and 104 cm. The animal was about 15-20 yrs old). It was found that the tusk was sold to a dealer in Cochin. In this connection, 9 persons were arrested.

According to the statement of the poachers, Mohanan (S/o Unneeri), along with Puducheri Mohanan, Shaji, Chazhipara Babu, Bhaskaran, 8 feet Hamzha and Kollan Thangappan, killed one tusker in Kuppadi RF two weeks prior to their arrest. Mohanan and Chazhipara Babu shot the animal and the tusk was sold to a Sait in Ernakulam. According to the Sait, K.V. Bhaskaran and Puducheri Mohanan gave the tusk to him. He has no licence for selling or keeping the material. The dealer confessed to having sold about 100 pairs of tusks within 4 to 5 years. The accused, Sudhakar, who was taken to the court to identify the dealer, was from Vazhavatte near Mananthavadi.

Appendix 3c: Names and other details of the offenders

S.No	Name	S/o	Age	Address
1	Mohanan alias Surendran	Unneeri		Mavullakandiyal House, Vageri P.O., Sultan Bathery. Puducheeri Veedu, Cheeral village, Sultan Bathery.
2	Shaji	Ragavan		Chazhipara, Cheeral
3	Babu	Markose		Puducheeri Veedu, Kuppady.
4	Mohanan			Kumbarakara, Noolpuzha village.
5	K.V. Bhaskaran	Veliyan		Cheruparambil, Madakolli.
6	Thangappan	Govindan		Kavangal Krishnagiri PO, Vageri.
7	Abu Bakkar	Hamzha		
8	K. Hamzha (8 feet hamzha- Auaserradi hamzha)	Shaid Ali Salah		Sultan Bathery. Sulamath House, No. 7/729, Kochi
9	Junaid Sait	Mohammed Sait	48	Corporation, Mattancheri P.O. Cochin.

Incident 2: Cochin Police on 26th September, 1996 arrested Saji with 26 kg of tusk. Saji and Vazhvetta Sudukar traveled from Maandavadi to Cochin, to meet a tusk dealer near Cochin. When Saji was arrested, Sudhakar was inside a comfort station (rest room). Seeing his accomplice being interrogated by police, Sudukar escaped (see news report).

Incident 3: In March 1997, in Nallathani (Bathery range, Waynad Wildlife Sanctuary), after getting information on a gun-shot from a wireless operator, the forest department staff travelling by jeep in the night reached the spot. The FD party found the poachers sleeping with a fire on. The fire helped identify the poachers who were caught eventually, but two tribals assisting them ran and escaped. The group had killed a tusker and the location was between the state boundaries and there were two anti-poaching camps between 2.5 km distance. One was three km from Nallathani, towards the Karnataka boundary, where Moolehole range of Bandipur NP is located. The two poachers, Vellutha Abubakar and Mathukutty, were arrested. Vellutha Abubakar is from Kallur, Muthanga. The other person is from Idukki. The tribals who assisted them are from Chandakera. It appears, tribals are involved in every poaching case in the region. They are able to lead the gang into the forest anytime, be it day or night. In this case no one was convicted.

Incident 4: In a June 1998 encounter with Tamil Nadu forest staff, poacher Ummer of Muthanga died, Vellutha Abubakar, Mathukutti and Joe (from Idukki) who were also part of the gang, escaped during the shoot out.

Appendix 4

Poachers Profile

1. Kumerical Elias, S/o Paulose, 50 yr old planter from Naikatty, Waynad, married 3 women, and has no children. He is a settler; could have come from southern Kerala. He is an agriculturist currently. He has a relatively large holding of agricultural land, growing coffee and pepper in his field and is also known to cultivate ginger in Coorg of Karnataka. He and his associates would have killed above 100 elephants in Idukki, Nelliampathy, Bandipur, Nagarhole and Coorg, throughout the Western Ghats. He was known to be a good marksman. He was arrested by the Karnataka FD in 1975, . The subsequent trauma related to the arrest court case made the the Forest Department and locals feel he did no poaching for almost 10 years, but there is a very high chance of him becoming a dealer.
2. Vellutha Abubakkar. 55 yrs old, lives with his wife and children near Kallur high school, Waynad. Now he has only a small land holding and he was known to have squandered his money on drinking. He used to be known as a very prominent sandalwood head loader and smuggler for 10 yrs. After the sandalwood factory was closed down, he switched over to elephant poaching. He operates from Noolpuzha. He would have killed 10-25 elephants. He is not a marksman; but depends on tribals for shooting. He was one among the gang with Ummer, in the encounter with Tamilnadu FD. Their movements were noticed by a tribal watcher, who informed the FD. The poachers were operating in the Benne area of Mudumalai. During the encounter, a poacher and a forest official were killed.
3. Podiyan. 45 yrs old tribal from Kallur, Waynad, lives in Chundapadi, a tribal colony. Smuggling of sandalwood, arrack distilling and elephant poaching are his activities and he was involved very actively in all these illegal activities for the last 20-25 yrs. Was arrested by the Kerala FD once. A very good marksman, he knows the terrain well. Anybody who comes here newly to poach animals takes his help.
4. Chalipura Babu. 45 yrs old. Since 15 yrs has been operating in Mudumalai and Karnataka. 2-3 cases registered against him. He was arrested by both the Kerala and Karnataka forest departments.
5. Mattachan. He is 40-45 yrs old and hails from Sultan Bathery, he has 1 acre land, lends money and runs an arrack retail shop. Once he was a full time poacher, and has been operating as a dealer for the last 5 yrs.
6. Kunhagasthy. Lives with his wife and son. Old time poacher, used to be active in the 70s. FD feels his illegal activities have helped him acquire 5 acres of land, in which he cultivates pepper, coffee and rubber. It appears he stopped his activities after 1985, when he was arrested and went through the trauma of arrest and court cases.
7. Vattakannu Jose. 50-55 yrs old and local leader of one of the main political parties of Kerala, He lives with his wife and 4 children and has 5 acres of dry and 3 acres of wet land, in which he cultivates coffee, pepper and ginger. He has been operating as a poacher in Nagarhole, Kolavalli, Vandikadavu, Nallathani (Kerala) and Sargur region (Karnataka).for the last 10 yrs in He was arrested once, after which it appears that he has stopped poaching.

8. Jose Chundatta. 50 yr old agriculturist. Arrested by the Karnataka FD once 15 yrs back. Has stopped poaching ever since.
9. Naxalite Ravi. 40 yrs old, lives with his wife and 2 children in Sultan Bathery. Well educated, rich and very adventurous. He was a poacher for 10 yrs. At no time was he caught. However, he could not withstand the tough official posted in Wayanad during his operations. He used to take the help of tribals for hunting animals, and was known to deal directly with the marketing centre regarding the tusks.
10. Karunakaran. Known to be associated with one of popular political parties of Kerala. He was arrested only once and he has not been operating for the last 10 yrs.
11. Ummer. 22 yrs, S/o Kullur Hamza, who was a sandalwood and tusk dealer from Muthanga, Waynad. Ummer was developing as a gang leader, but died during an encounter with the Tamilnadu FD.
12. Pulickal Sukumaran. Has three acres of land with paddy and pepper; could be encroached land. He was rich; gets his revenue from land, cattle, cattle dung and milk. Though he would have made a lot of money from his killings, he is spending it lavishly on drinks. He is known to have poached animals including elephants, since 1980 and is also known to smuggle wood. His leg was injured by an elephant. Even after the injury caused by the elephant; he has not given up his killing habit. Pulickal Sukumaran with son Praveen (18 yrs old) of Pavakadde area, were arrested near Vandikadavu on 3rd September 1998 with a country made muzzle loader.
13. Kunnathakal Raju, originally from north of Perikallur, Waynad. Currently working as a building contractor in Kalpetta, Waynad of Kerala. He was a poacher and also a sandalwood and other timber smuggler. He is known more for dealing with ivory items. The Karnataka forest department recently approached him for his suspected involvement in ivory deals.
14. Kunjumon: Primarily from Kerala, Sultan Bathery region, used to be very active, but he has settled in Shimoga (Karnataka) now.

Appendix 5:

Names and associated details of people who are reported to be the main poachers from Police records (see appendix 6 for photographs of the individuals)

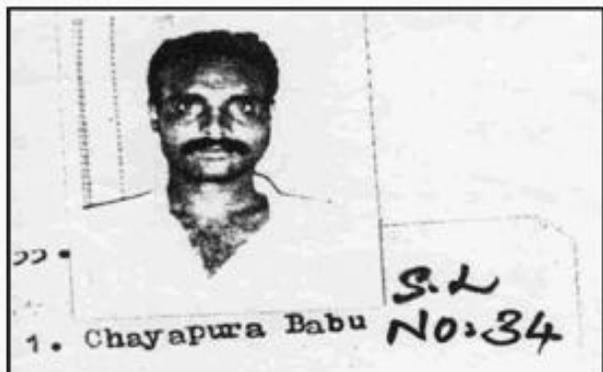
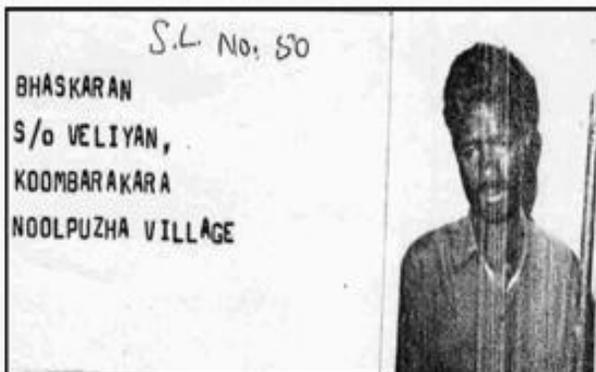
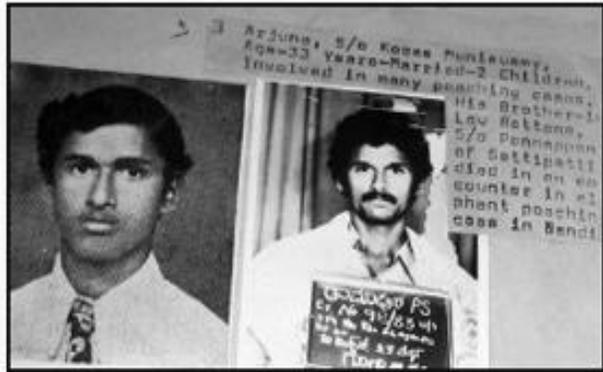
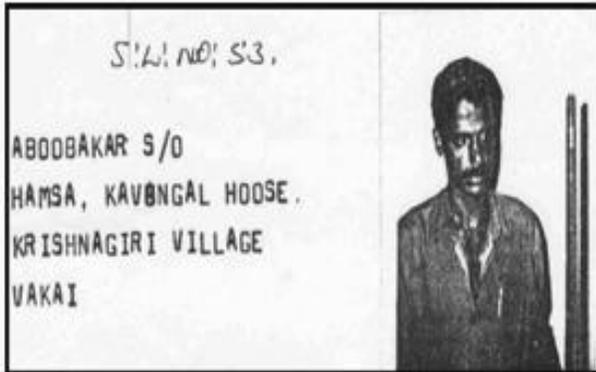
Sl. No	Name	Father's Name	Age (in yrs)	Address		
1	Aboobakar	Hamsa		Kavangal House	Krishnagiri Village	Vakai
2	Arjun	Muniswamy	33	Gopinatham	Kollegala Taluk	
3	Arjuna	Chatriyanaika		Gopinatham	Kollegala Taluk	
4	Arunachalam		30	Kaveri pur	Karangalur	
5*	Babu Payajulla	Adam Shab	40	No. 48	KEB Colony	Jyothinagar, Mysore
6	BallilliMara	Kokka	27	Maddur	Muthaga Kerala	
7	Basava	Premal	27	Ponnagaram	Dharamaouri District	
8	Bhaskaran	Veliyan		Koombarakara	Noolpuzha Village	
9	Chayapura Babu					
10	Chinaraju	Subbanvedyar	25	Kandayyanapalya	Kollegala Taluk	
11	Chinnatambi		28	Gopinatham	Kollegala Taluk	
12	Chinnaraju	Amani Govidapadi		Mattur Taluk	Selam District	
13	Dhevuraiah Naika	Kaliyanaika Lambni	32	Penagappadi	Topinatnam	Kollegala Taluk
14	katayur Madaiah	Inayyan Ayyan Parumil	32	Gopinathan	Kollegala Taluk	
15	Ghnana Prakash	Joseph	25	Krinchiyn	Voddaradoddi	Kollegala Taluk
16	Gopala	Chitharnaika		Gopinathan	Kollegala Taluk	
17	Gopal	S.P.Subramanian	28			
18	Jayaram	Kariya Boyi	22	Mudukanamule Village	Muthigehundi Post	H.D.Kote Taluk
19	K.D.Malh alias Malegowda	Ramagowda vokkaligagowda	50	Kandayyanapalya	Kollegala Taluk	
20	K.Hamza	Auaser Radi Hamssa		S.Batheri	NBAK Guest House	
21	Kala	Veeraiya	20	Kuruba near lakkipura	Beerambidi Kerala	Bardar Karnataka

						Gundlapet Taluk
22*	Karibedda alias Basuva	Karinaika	32	Hangala Village	Gundlupet Taluk	
23	Kolandappaiah	Amaai Sethokulian	35	Padichigownder		
24	Kolanda	Porakiyarama	30	Padichi Gownder	Kottayur near Gopinatham Gudlur Taluk	
25	Krishna	Jawara	35	Masinigudi		
26	Kunhagunty	Thotamoola		Batheri Taluk	Kerala	
27	Kunhappan	Varighese	35	Batheri Taluk	Kerala	
28	Kusse Madhiah	Kusse Muniswamy	50	No. 234	Padiachi Gowender Sanguppadi	Kolegala Taluk'
29	Madaiah	Nallura		Aathur	Near gopinatham	Kollegala Taluk
30	Madeva alias Pulagi madeva	Kuttaiah	35	Melukamanahalli	Gundlupet Taluk	
31	Mahadeva	Madaiah	30	Mudukana Moolevil	H.D.Kote Taluk	Saragur P.S Limits
32	Mohanan Alias Surendran	Unneeri		Mavullakandiye House		
33	Mubarak	Mazeed	30	Yediyala Village	Nanjangud Taluk	
34	Mudalamuthu alias Uda	Kaeuda	35	Vodkkehalla	Kollegala Taluk	
35	Muthu Charan					
36	Mutthudevan					
37*	Nataraj Modiyar		50	Gopinatham	Kollegala Taluk	
38	Pannamoinuddin	Maimadk		Kosikodi Taluk	Kerala	
39	Papa	Chikkamadaiah	35	Gundlupet	Mysore District	
40	Periyanna					
41	Perumal	Guruswamy alias Podaku	40	Gopinatham	Kollegala Taluk	
42	Ponnaswamy	Marimuthu Voddaradoddil	35	Padichi Gownder	Kollegala Taluk	
43	Rajan		76	Mettur	Selam District	
44	Raju	Cheluvaiah	35	Dakayithipura Village	H.D.Kote Taluk	Saragur P.S Limits
45	Ravana	Ramaswamy	25	Voddaradoddi	Kollegala Taluk	
46	Sannamadeva	Siddaiah	26	Hagadahalla	Gundlupet Taluk	

47	Saviangownder	Tantapillal	60	Padichi Gownder	Karangalur	
48	Sesha		32	Banlanapalya	Kollegala Taluk	
49	Sethukuli Govida	Sethukulian	26	Kottalu	Mettur Taluk	
50	Shaji	Raghavan		Puthusseri	Thavani	Thazhthur
51	Shivamalu	Javvery Gowda	28	Kallipura	Gundlupet Taluk	
52	Somnlianaika	Mappalianaika	35	Sathygala	Kollegala Taluk	
53	Subban	Kuliyappan	29	Beedipur	Lokknabetta	Tamil Nadu
54	Suresh					
55	Sveriappan	Thgya	30	Padichi Gownder	Kirpatti	Kollegala Taluk
56	Thankappan	Govindan		Cheruparambu	TRVCAM Village	Moobakkolli
57	Thimmaraiya Chettiyar		48	Gopinatham	Kollegala Taluk	
58	Thirupathy	Venkatanaika	26	Matakere Post	H.D.Kote Taluk	Saragur P.S Limits
59	Veerappan	Kusse Muniswamy	35	Gopinatham	Kollegala Taluk	

* Photographs are included in appendix 6

**Appendix 6:
Photographs and other details of wildlife poachers reported in police records**





33 Chinnareju,
S/o Subban Vadyar,
Age-25 years-Married,
Kandayyanapalya,
Kollegal Taluk,
Involved in many
poaching cases.



43 Chinnatambi,
Age-28 years.
Married,
Gopinatham,
Veerappan's Group



41 Chinnareju,
S/o Anasi,
Sethukulian-Married,
Brother of Kolandappa-
iahn, Resident of
Govindenpadi of Pettur
Taluk, Salem District.



8 Dhavuriah Naika,
S/o Kaliya Naika,
Caste-Lambani,
Age-32 Years -
Married - Belongs
to the group of
Veerappan,
Sengappadi or
Gopinatham.



12 Katsayur Madiah,
S/o Ayyan Perumal,
Age-32 Years, Married,
3 Children-Belongs to
Ayyan Dorai, Bhopala's
group. He was killed
by Veerappa's group
for a fight over
family fuada & poach-
ings. His brother
Thangavelu was also
killed in the same
incident on 21.5.86
in Gopinatham.



32 Inanaprakash,
S/o Joseph,
Age-25 Years,
Christian,
Oddaradoddi,
Kollegal Taluk.



18 Gopala, Age 30 years,
S/o Chetriya Naika,
Caste-Lambani-Married,
Brother of Arjuna
(Deceased)-Resident of
Gopinatham, Now lives
in Erkad talata,
Salem District.



29 Gopala,
Age-28 years,
Associate of Pattu
alias Albert & Dorai
Chettiar, S/o S.P.
Subramanian-Deals in
scrap iron, Pettur-
Pattu alias Albert &
S.P.Dorai Chettiar,
being important tusk
receivers.

SL. NO. 57.

JAYARAM

S/o KARIYA BOYI.

22 years. Boyi By Caste,

MUDUKANAMULE, VILAGE.

MUTHIGE-HUNDI POST.

H.D. KOTE TALUK

VARAGUR RS. Lat



7

Kedi Malle alias

Malle Gowda,

S/o Ram Gowda,

Vokkaliga Gowda by

caste, Age 50 years,

Kandeyyanapalya.



S.L. NO. 52

K. HAMZA

AUASER RADI HANSA

PO. S. BATHERI

NBAKGUBST HOUSE



37

Kala,

S/o Veerayya,

Age-20 Years,

Caste - Kuruba.

Lakkipura-near

Beerembadi, Kerala

border, Gundlupet

Taluk, Karnataka.



6

Kolandappalahari, S/o Anni

Sethukulian-Arind-35 Years,

Padiachi Gounder, Sengappadi

or Gopinathan.



11

Kolanda,

S/o Porakiya Rana,

Age-30 years,

Padiachi Gounder,

Married.

Koteyur near

Gopinathan.



SL. NO. 44

Krishna S/o Jawara

Age 35 Years

Police by caste

Manindradi

Gudalur Taluk.



35

Kunhagusty, S/o Thomas Thotnool

P.O. Kullur, Sulthan Battery Taluk.

Involved

in many

poaching

cases.



SL.No: 35
MUTHU CHANRAN



SL.No: 38
MUTHUDEVAN



39 Panna Moineuddin or
Karippur Moineuddin,
S/o Mainacka,
Receiver,
Koduvelli,
Kozhikode Taluk,
Kerala.



45
Pappa S/O Chikkanadiah
Age 35 Years
Soliga by caste Hangala
Maravuzhi
Koduvelli Taluk Gundlupet
Kannur District.



SL.No: 37
PERIYAN



9 Perumal, S/o Gurusamy alias
Todaku, Age 40 Years, Padiachi
Gounder,
Coppinathan
Belongs to
the group
Sl.No.2.




10 Ponnusamy,
S/o Marimuthu,
Resident of
Voddaradoddi,
Age 35 years,
Padiachi Gounder,
Kollegal Taluk.



30 Rajan,
Aged-26 Years,
Associate of Pattu
alias Albert and
Dorei Chettiar-
Resident of Nattur,
Salem District.



Sl. NO. 58.

RAJU
S/o CHELUNNAH.
35 years, SOLIGA BY.
CASTE, COOLY,
DAKAYITHIPURA VILLAGE
H.D. KOTE TALUK
SARA GUR P.S. Lmt



24 Ravana,
S/o Ramaswamy,
Age-25 years-Married,
Caste-Padichchi Gounder,
Oddaradoddi Village,
Kollegal Taluk,
Belongs to Salarej,
Savariappan's group.



S.L. NO: 43
Sannanadeva S/o Siddiah
Age 26 Years
Soliga by caste
Hagedahalla, Gundlupet Taluk.



5 Sevan Gounder,
50 Years,
S/o Tentapillai
Gounder, caste
Padichchi Gounder,
two sons - One a
Lawyer and another
a Poacher - Committed
suicide in 1986
Kerangalur.



27 Senha,
Age-32 years,
Sandanapalya,
Kollegal Taluk,
Mysore District.



Se thukuligovida S/o Se thukuliat
Age 26 Years
Kolu, Kottalu, Mettm Taluk.
S.L. NO. 40



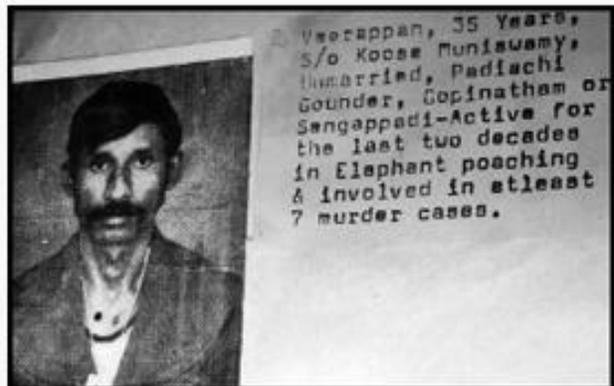
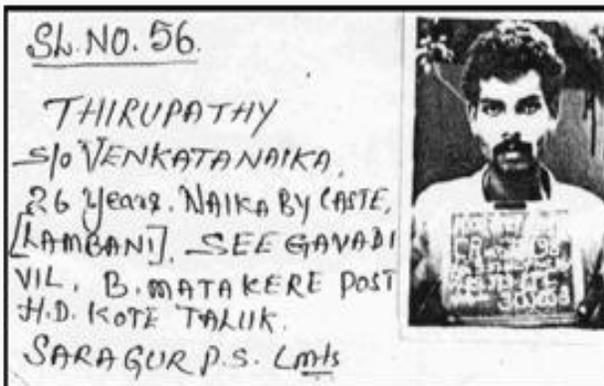
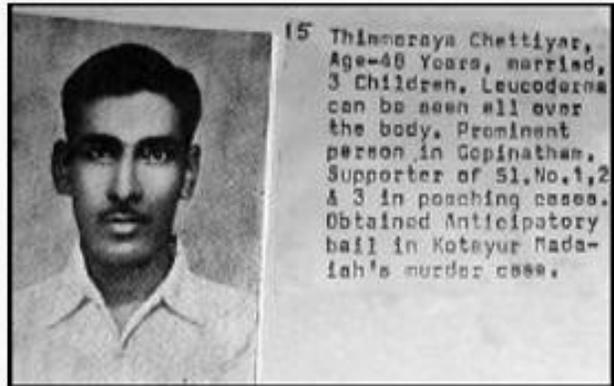
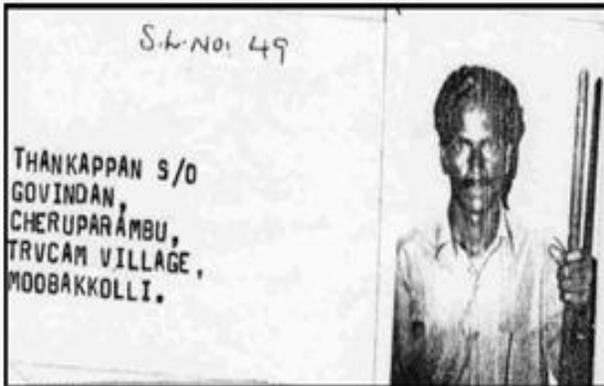
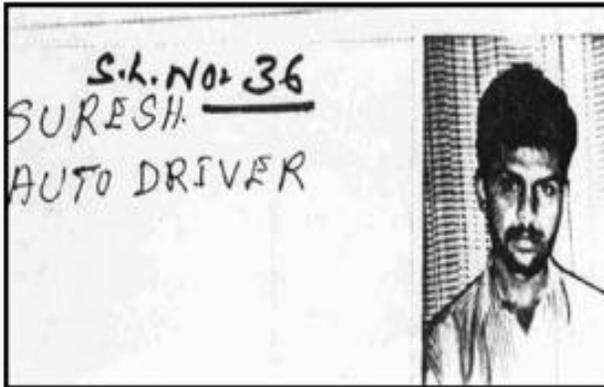
Sl. No. 48

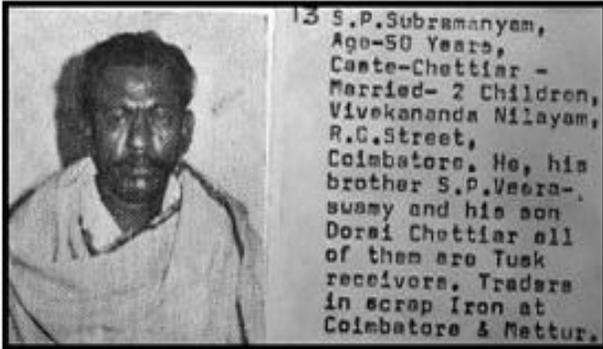
SHAJI S/o RAGHAVAN
PUTHUSSERI, THAVANI (PO)
THAZHTUR



Sl No: 43
Shiyasulu S/o Javadry Gowda alias
Choveragowda, Age 28 Years
Halusaatha, Kalliyura
Gundlupet Taluk.



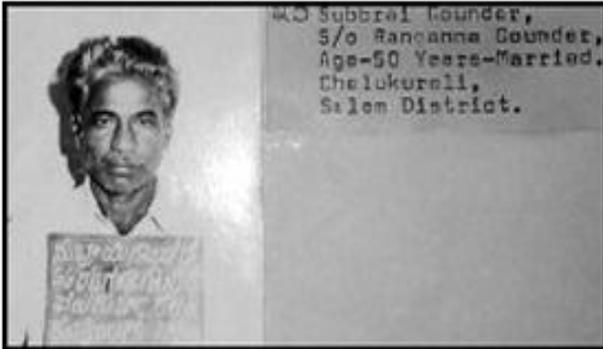




13 S.P. Subramanyam, Age-50 Years, Caste-Chettiar - Married- 2 Children, Vivekananda Nilayam, R.C. Street, Coimbatore. He, his brother S.P. Veeraswamy and his son Dorai Chettiar all of them are Tusk receivers. Traders in scrap Iron at Coimbatore & Nattur.



19 Aravugan, S/o Curunathan, Age-30 Years-Married, Vadaleshalla, Kollegal Taluk.



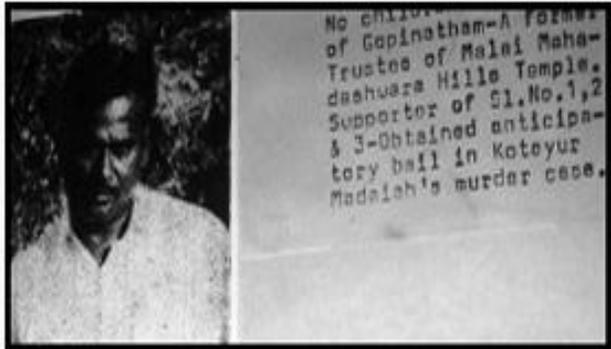
20 Subbair Gounder, S/o Ranganatha Gounder, Age-50 Years-Married, Chalukuruli, Salem District.



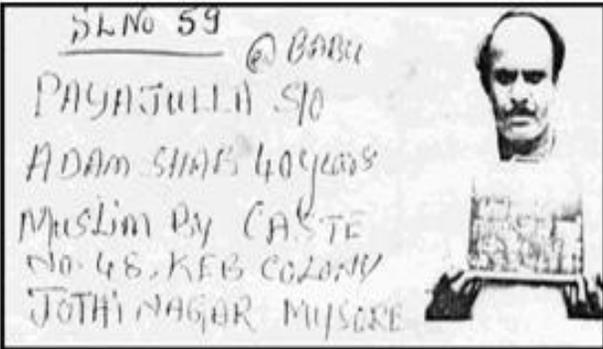
31 Thomas, Age-35 Years, Christian, Sandanapalya, Kollegal Taluk, Mysore District.



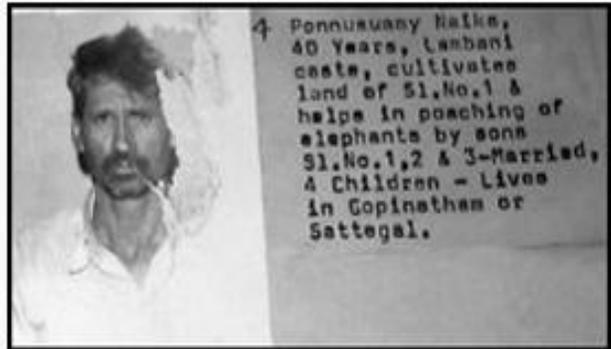
22 Sankaratharaju, S/o Arava Gounder, Age - 22 Years, Pedichchi Gounder, Sandanapalya, Kottahalli, Kollegal Taluk.



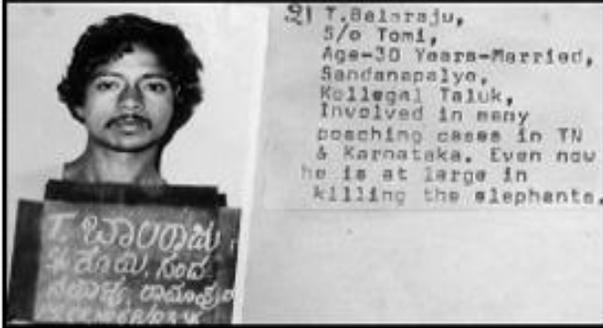
No children. Gopinatham-A former of Gopinatham-A former Trustee of Malai Mahadeshwara Hills Temple. Supporter of Sl.No.1,2 & 3-Obtained anticipatory bail in Koteyur Madalish's murder case.



SL No 59 @ Barar
PAGAJULLA SO
ADAM SHARIF 40 years
MUSLIM BY CASTE
NO. 48, KEB COLONY
JOTHINAGAR MYSORE



4 Ponnusamy Naik, 40 Years, Lambani caste, cultivates land of Sl.No.1 & helps in poaching of elephants by sons Sl.No.1,2 & 3-Married, 4 Children - Lives in Gopinatham or Sattegal.



21 T. Belaraju, S/o Tomi, Age-30 Years-Married, Sandanapalya, Kollegal Taluk, Involved in many poaching cases in TN & Karnataka. Even now he is at large in killing the elephants.



22 Kencha, S/o Dhanraj, 30 years, Lingayat by caste-Married, Bidarshalli, Kollegal Taluk

Appendix 8:
News paper article: Poaching and poachers.

Strategy ready to save elephants from poachers

By S. Rajendran

BANGALORE, Sept. 20.

The Government has worked out a new strategy to tackle the poaching of elephants in the Nilgiri Biosphere.

The new strategy will yield results only if Tamil Nadu, Karnataka and Kerala get together at every level and work out a foolproof scheme of coordination and motivate the field staff. The Nilgiri Biosphere comprises parts of the Wynad and Thekkady, Bandipur, Nagarhole, Mudumalai, Dimbun, Bannari and other adjoining forests, particularly in Chamarajanagar district of Karnataka. The status of the Asian elephants in the Nilgiri Biosphere is reported to have worsened with poachers killing the juvenile elephants with developing tusks, known in wildlife parlance as "radish tuskers".

What has put the "fear of God" in the minds of poachers and the ivory smugglers has been the recent raid by the Forest Cell of the Karnataka Police, led by Mr. S. T. Ramesh, Inspector-General. A record recovery of about 100 ivory articles worth over Rs. 1.5 crores in under a year has forced the "carriers" to go underground. Ivory trade was reported to be much more brisk in Kerala than in other southern States. While the cost of raw ivory was about Rs. 10,000 a kg, carved ivory articles were priced at about Rs. 1 lakh a kg. A pair of tusks of a fully grown elephant weighed about 30 kg and poaching a tusker yielded the killers not less than Rs. 5 lakhs.

Asked about the new strategy evolved by the Government, Mr. Ramesh told *The Hindu* that positioning men at vantage points along the poaching zones was one of the steps. This called for a good rapport between the forest and police personnel not merely within the State but also from the neighbouring States. Thus, border meetings with the personnel from across the State's borders in the Western Ghats would be made a routine affair. The Superintendents of Police had been directed to coordinate with the Deputy Conservators of Forests of the jurisdiction concerned. Even circle inspectors of police

serving in the border areas would hold regular meetings with their counterparts in neighbouring States.

A recent study by the police had brought to focus the use of more or less the same tracks by the poachers and the killing of tuskers from certain vantage points in the forests, which could even be earmarked. The waterholes, in particular the river banks, were crowded with elephant herds in the twilight hours and this was the "appointed hour" when the poachers would make their kill. The poachers (largely hailing from the border areas of Kerala) had taken "care" of local people (both in the Forest Department and among the tribal people), who helped them in their nefarious activities.

In Mr. Ramesh's view, intelligence collection on the movements of the poachers was another matter which was now being looked into with all seriousness. The tribal people and the local people living on the periphery of the forests were one of the most important sources of information, and the intelligence network was being strengthened. Sharing information with the enforcement personnel across the borders would be ensured as part of the fresh agreement being worked out.

Despite the sad plight of elephants, what stood out in the case of Karnataka compared to Kerala and Tamil Nadu was reportedly the sighting of more tuskers along the Bandipur forests in recent months. While the male-female ratio among the elephants was 1:10 about 20 years ago, it had touched 1:20 in Kerala and was only marginally better in Tamil Nadu. The ideal ratio should be 1:5 or 1:8.

The juvenile elephants developed tusks generally around the age of 12 and the tusks fully developed in about 12 to 15 years. It was around this time that the juvenile tusker left the herd (to stay alone for life) and this was the period now being picked by the poachers. While the enforcement personnel were still equipped with bore guns, poachers not only had the powerful AK-47 assault rifles but good communication equipment.

Poacher, 5 others held for trading in ivory

BANGALORE, Aug 1.

The Forest Cell Superintendent of Police and the Nanjangud rural police have nabbed six persons including a poacher who had shot down a tusker in the Bandipur and Naganapur forests in Mysore district some time ago.

According to Mr. K. S. N. Chikerur, Deputy Inspector General of Police, Forest Cell, two persons have been released by the court on conditional bail and the others are in custody. A team of police officers from Mysore has been sent to Jaipur to nab an ivory trader who used to purchase ivory from poachers in Karnataka.



Kulla, who is said to have killed a tusker in Bandipur forests.

The arrested are Kulla (27) and Masthi alias Bora (20) of Dashiपुर, Siddashetty (60) of Alathur in Gundlupet taluk, Krishna (26) of Kothanahalli in Nanjangud taluk, Ahmed alias Ahmedulla (38) of Hanumantha Nagar, Bannimantapa Extension, and B. Jayan alias Mani

(49) of Naidunagar in Mysore City.

Mr. Chikerur said that with the arrest of Kulla, who killed the tusker, the police were able to stop poaching in the Naganapur forests for some time.

It is said that Kulla was acclaimed as a sharp

shooter by the villagers of Naganapur Ballurhundi and other areas and that they sought his services for killing boars and other wild animals.

The interrogation revealed that Krishna encouraged Kulla to track down a tusker and gave him a muzzle loader obtained from Siddashetty. After killing the elephant, Kulla removed the tusk weighing 12.5 kg and cut it into six pieces for easy transportation. He then handed over the pieces to Jayan alias Mani. The ivory is said to be worth nearly Rs. 70,000. Mani sold the ivory to an ivory trader in Jaipur, through Ahmed alias Ahmedulla in Mysore City, for Rs. 70,000 and collected a commission of Rs. 6,000. The trader had come down to the city for collecting the tusk.

Sources said that Kulla and his associates, Krishna and Masthi, got Rs. 2,000 each. Two other traders in Jaipur are said to be involved in the ivory trade and they have been collecting ivory from Mysore through Mani and Ahmed for the last 10 years.

* The sources said that details of the involvement of the gang of poachers in other cases and whether a bigger gang of middlemen and traders were involved would be known when Mr. R.G.Soni, Chief Wildlife Warden of the Rajasthan Government gave the background of the three ivory traders of Jaipur.

Mr. Chikerur, who visited the place where the carcass of the elephant was found in Bandipur forests, and Mr. P.Kannan, Deputy Director, Wildlife Preservation, Southern Zone, Chennai, Ministry of Environment, have commended Mr. Eswarchand Vidyasagar, Superintendent of Police, CID, Forest Cell, Madikeri, for his investigation into the case.

Some months back, a search was done in Elias's house for tusks under the leadership of late Wildlife Warden at Wayanad, B. Krishnan. But no tusks were obtained. Forest protection people say that Elias had admitted that the tusks were in his house during the search. From Elias's house, they also confiscated a 5 1/2 ft load gun used for shooting elephants. Another gun of 5 ft length, 15 bullets, 197 small bullets, 1160 balls, American binoculars and headlights were also confiscated. There used to be a group in Wayanad who used to face poachers. The present forest protection activities are very dull. Even though the department got the secret information, they had to wait till the forest flying squad came forward to confiscate the tusks and other things. Wayanad forest range has no night patrol. Higher officials go to the forest only to watch over construction activities.

**Malayala Manorama
3rd August 1998.**

Three lakh worth of Ivory (21 kg) was confiscated. One person is under arrest. one Manandavadi Kaniyaram Muthacheri Saji was arrested by Palluruthy (Cochin) Police. A person called Sudhakaran escaped. Meenagadi Vazhavatta Kunnathedadhu Sudhakar and Saji were waiting near a comfort station (20 km from Cochin main bus stand) in Thopumpadi (located close to air port) with 2 big bags for an ivory dealer who was suppose to meet them. The Circle inspector R. Saji arrested Saji, suspecting the bag he carried contained illicit liquor. When the bag was opened, the ivory was cut into 6 pieces and was covered by Banana chips. When Saji was caught, Sudhakar who had gone to the comfort station escaped. Though they had come to sell the ivory to someone in Kochi Saji does not know to whom it was meant for. Unless Sudhakar is caught the information will not be known.

More information of the incident: According to Saji, he met Sudhakar in Wayand Vazhvatta, black smith, Sivaraman's workshop, when Sudakar had come to repair his gun. Subsequently, both visited the Karnataka forest, noticed an elephant and that created some interest in poaching elephant. On 24th

മൂന്നുലക്ഷം രൂപയുടെ ആനക്കൊമ്പു പിടിച്ചു; ഒരാൾ അറസ്റ്റിൽ

20 നൂറു 38 1998

കൊച്ചി: മൂന്നുലക്ഷം രൂപ വിലമതിക്കുന്ന 21 കിലോഗ്രാം ആനക്കൊമ്പായി മാന്ദവദി കണിയാരും സാദാശി മുത്തശശി ഷാജിയും (27) പള്ളുരുത്തി പൊലീസ് അറസ്റ്റുചെയ്തു. കൂടെ ഉണ്ടായിരുന്ന മിനങ്ങാടി വാഴവറ്റ കുന്നത്തേക്കു സുധാകരൻ മാടി രക്ഷപ്പെട്ടു.

തൊപ്പുപടി അക്ഷണിയിലെ കഫർട്ട് സ്റ്റേഷനു സമീപം വലിയ രണ്ടുസഞ്ചികളുമായി നിന്നിരുന്ന ഷാജിയുടെ കൈവശം വ്യാജമദ്യം ആയിക്കരുതുന്ന കരുതിയാണ് സി. ഐ. ആർ. ഷാജിയും സംഘവും പ്രതിയെ കസ്റ്റഡിയിൽ എടുത്തത്. ബാഗിനുള്ളിൽ ആറുലക്ഷത്തോളം സൂക്ഷിച്ചിരുന്ന ആനക്കൊമ്പു പുറത്തു കാണാതിരിക്കാൻ മുകളിൽ ഏത്തക്കായ നിറത്തിയിരുന്നു. ഷാജിയെ പൊലീസ് പിടിക്കപ്പെട്ടപ്പോൾ കഫർട്ട് സ്റ്റേഷനിൽ ആയിരുന്ന കുട്ടാളി സുധാകരൻ സുഗ്രത്തിൽ കടന്നുകളയുകയായിരുന്നു.

കൊച്ചിയിലുള്ള ആർക്കോ ആനക്കൊമ്പു വിൽക്കാനാണ് ഇവർ തോപ്പുപടിയിൽ ബസ് ഇറങ്ങിയതെങ്കിലും കൊമ്പുമാങ്ങാമന്ത് ഏറ്റിരുന്നത് ആരാണ് ഷാജിക്ക് അറിയില്ലത്രെ സുരഭി



മൂന്നു ലക്ഷം രൂപ വിലമതിക്കുന്ന ആനക്കൊമ്പുമായി തോപ്പുപടിയിൽ പൊലീസ് പിടിയ്ക്കിയ മാന്ദവദി കണിയാരും സാദാശി മുത്തശശി ഷാജി.

ധാകരൻ പിടിയ്ക്കിയതായെ ആനക്കൊമ്പു കള്ളക്കടത്തിലെ പ്രധാന കണ്ണിയായതായെന്ന കൊച്ചി സാദാശിയെ തിരിച്ചറിയാനാവൂ എന്നു പൊലീസ് പറഞ്ഞു.

വന്ദനാട്ടു വാഴവറ്റയിൽ കൊല്ലപ്പണിയെടുക്കുന്ന ശിവരാജന്റെ ആലയിൽ കള്ള നാടൻതൊക്കു നന്നാക്കുന്നതിനു ചെന്നപ്പോളാണ് സുധാകരൻ അവിടെ ഉണ്ടായിരുന്ന ഷാജിയെ പരിചയപ്പെടുന്നത്. പിന്നീടു കർണാടക അതിർത്തിയിൽ മാന്ദവദി കർണാടക പേരായ സ്റ്റാൾ അവിടെ ആനകളെ കണ്ടതാണ് ഇവരെ ആനവെട്ടിക്കു പ്രേരിപ്പിച്ചത്. അന്നു മാന്ദവദി കർണാടകയിൽ പോകണമെന്നും കഴിഞ്ഞമാസം 24 ന് ആനവെട്ടിക്കുള്ള തോക്ക്, കോടലി, വാൾ എന്നിവയുമായി വീണ്ടും കാട്ടിൽ പോയതായി ഷാജി പൊലീസിനോടു പറഞ്ഞു.

നാലുദിവസം കാട്ടിൽ ചെലവഴിച്ച ഇവർ 28 നൂറാവിടെ ഒരു കൊമ്പനായെ വെടിവെച്ചു വീഴ്ത്തി. കോടലി കോണു ആനയുടെ തലവെട്ടിപ്പെടുത്തിച്ചശേഷം കൊമ്പുമുറിച്ചു ചാക്കിൽകെട്ടി സുധാകരന്റെ വീട്ടിൽ രണ്ടുദിവസം സൂക്ഷിച്ചു.

ആനക്കൊമ്പുമായി മാന്ദവദി കണിയാരും ബസ് മാർഗ്ഗം ഇന്നലെ തോപ്പുപടിയിൽ എത്തിയപ്പോൾ സ്റ്റാപ്പിൽ കാത്തു നിൽക്കുമെന്നു പറഞ്ഞിരുന്ന ആളെ കാണാതായപ്പോളാണ് സുധാകരൻ മുത്തശശിക്കാനായി കഫർട്ട് സ്റ്റേഷനിലേക്കു പോയത്. പിടിയ്ക്കിയതായെ ചോദ്യം ചെയ്തിട്ടും കൊച്ചി സാദാശിയെക്കുറിച്ചു പൊലീസിനു വിവരം കിട്ടിയിട്ടില്ല.

വന്ദനാട്ടു സർക്കിളി നിയമപ്രകാരം കേസ് രജിസ്റ്റർ ചെയ്തിട്ടുണ്ട്. തൊണ്ടിമുതലും പ്രതിയെയും കോടതിയിൽ ഹാജരാക്കിയശേഷം കുടുതൽ അന്വേഷണത്തിനായി കേസ് ഫയൽ വന്നുവെങ്കിലും കൈമാറുമെന്നു സിറ്റി പൊലീസ് കമ്മീഷണർ മുഹമ്മദ് യാസീൻ അറിയിച്ചു.

September (1998), both went to forest, spent 4 days and on 28th (September 1998) they killed a tusker.

The tusk was removed using axe, and was covered by a bag and it was kept in Sudhakar's house. Both traveled from Manandavadi by bus to Cochin as a dealer had agreed to come to the bus stop. When Sudhakar went to a rest room, Saji was caught. Even after the arrest of Saji, no details of the dealer were obtained. A case has been registered as per Wildlife Protection Act. The culprit and the tusk were presented in the court. According to said Police commissioner Mohamed Yashin, the case will be transferred to the forest department.



ELEPHANT TUSK STEALING: ONE CAUGHT.
Pulpally, 22 August 1998.

A poacher Rajan, a native of Seetamount, was arrested by the Karnataka forest department with the help of the Kerala police. He was arrested in connection with poaching and possession of tusks of the poached elephant in the forests of Karnataka.

A 20 yr old elephant was killed and the tusks stolen on August 14 at Purathakolli, belonging to Chowdahalli section of Begur range in Bandipur Tiger Reserve. The investigation led by Range Officer Subramanian gave some hint that the poachers were Malayalees.

There are seven members in the elephant poaching gang. Kerala and Karnataka forest departments have conducted raids in different parts of the forest to catch the poachers.

Appendix 9: Observations by a volunteer

Why is Gundre probably as important as Kargil?

I huddled uncomfortably in the back of the Sumo, while, Varma who has been an avid wildlifer and a specialist on the Asian elephant, gazed contentedly at the huge elephant cow standing twenty feet away. It was an awesome sight and I was decidedly nervous. She had just trumpeted from the depths of her lungs, a sound calculated to freeze the bone marrow. Varma assured me that she was actually scared of us and would come no closer, all of which was apparently evident in her body language. I reassured myself by thinking of my friend's track record - over ten years of dedicated wildlife research, numerous encounters with animals and a passion for understanding animal behaviour.

The experience that evening was awesome. But then, we were in the Gundre forest range, part of the Bandipur wildlife sanctuary, which itself is part of the largest sanctuary in South India, spread over Karnataka (where it is called Bandipur and, to its West, Nagarahole), Tamil Nadu (Mudumalai) and Kerala (Wynad), covering a total area of 2000 square kilometres. This is one of India's greatest living heritages and South India's lung. And we were on our way to meet some of the simple, yet remarkable people who protect this heritage - the forest guards of Gundre.

The Gundre range has three anti-poaching camps, one of which is about fourteen kilometres inside the forest, by the banks of the Kabini. We spent the night on the camp machan, with five forest guards and a herd of noisy elephants for immediate company. Whenever the elephants came too close to us (defined as twenty feet), the guards would shout and clap their hands or pick up a stick from the small bonfire and whirl it around, while walking towards the herd, a sure deterrent to any animal. I found the process exhausting, though the thrill of spending a night on the machan was overwhelming.

Yet these forest guards do it everyday. They are a part of the ecosystem there, like the kingfisher and the giant squirrel, as important to its survival as the rockbee that pollinates the flowers of the forest. They keep their constant companions, the elephants, at a respectful distance, yet protect them with their lives and with the antiquated guns supplied to them by a bankrupt forest department. They live in the worst of possible conditions, without light (except for a small torch), with basic provisions, no communication facilities of any kind and a daily allowance of twelve rupees.

Why do the guards work to protect the fauna of the forest from the ravages of other men? For the animals and birds of the jungle and the millions of insects that inhabit it are the propagators of the forest ecosystem as we understand it. They are the living, breathing indicators of the health of our forests. A large forest tract without a tiger or other predator is a clear indicator of a degrading forest. When the guard works to save the elephant or any other animal, by protecting the animal's habitat from degradation, he is, in fact, working to save the forest. The forest gives us all our *real* treasures - the air we breathe, the water we drink and the variety of food we may choose to live on. Therefore, by the selfless act of working for the jungle, the guard is, in a direct sense, being scrupulously selfish. He is working towards securing the lives of our children and is the custodian of our future.

Are these forest guards lauded for their role? Hardly ever, for do we hear anything, except those accounts of plunder of the forests that are deemed newsworthy? There is substance in such news, of course - our forests are at the receiving end of inadequate and corrupt policy implementation. Do you

expect a demotivated team to believe in a superordinate goal set by an absent leadership? Yet, amazingly, most forest guards do - they understand the importance of their role, a role that they play out quietly day after day. Do the leaders of our country realise the importance of the thousand Gundres that give India the natural diversity that other nations can only dream about? A natural diversity that will determine world leadership in the next hundred years, as the ecology bank depletes in the process of man's pursuit of material gain? They do not understand and are unwilling to do so. India's forests, they believe, exist to serve them and their fellow travelers, a dubious class to which we all belong. We receive their litter, when we seek in ever-expanding greed, to buy furniture made out of forest wood, curios in ivory from senselessly butchered elephants and venison from the deer that has entrusted us with its future.

I could not really care if we have an Italian or a penguin for a Prime Minister. We need the leadership that understands the value of the resources bequeathed to us and seeks to zealously protect them. To such a leadership, the guards in our forests would be the protectors of India's repository of wealth, *our true heroes*. They would be given all material needs to provide superiority in battle with poachers and the honour and respect commanded by the braves of the Indian Army. To such a leadership, a guard killed on duty would be worthy a twenty-one gun salute, and his family of a lifelong handsome pension.

While Kargil is important, while our territorial sanctity must be revered, our conflict there is but an intake of breath in the long recital of the story of territorial evolution. Gundre is not. Gundre is Prakriti - immutable, undefined, and indisputable. Gundre is our neglected future.

Appendix 10: Examples of Forest officials and experts inputs on the draft report

No. DCF/PT/PER/ GL /99-2000

Office of the
Dy. Conservator of Forests
Project Tiger Division,
Gundlupet, Dt. 6-9-99

To

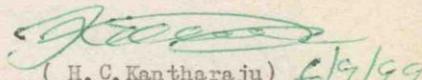
Mr. Surendra Varma,
Research Officer,
Asian Elephant Research and Conservation Centre,
Centre for Ecological Sciences,
Indian Institute of Science,
Bangalore-560 012

Dear Sri. Surendra Varma

I had gone through your survey report regarding Elephant deaths due to various reasons in Bandipur Tiger Reserve. The report is very much exhaustive and the suggestions given in the report are very much useful to us. I am enclosing some information regarding Bandipur National Park for your consideration. Kindly send a copy of final report for our action.

Thanking you

Yours sincerely


(H. C. Kantharaju) 6/9/99
Dy. Conservator of Forests
Project Tiger Division,
Gundlupet.



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

Registered Post

DR. A.J.T. JOHNSINGH

NO WII/WB/ELEPHANT POACHING/99

Dated February 6, 1999

To,

Mr. S. Varman,
Asian Elephant Research & Conservation Center
Centre for Ecological Sciences
Indian Institute of Science
Bangalore -560 012, India

Dear Varman,

I appreciate your courage and hard work which has resulted in a very useful document which can be strengthened by little more field work, data analysis and way of presentation. I will discuss with you when I am in Bangalore from the 25th May to 9th June. Keep up the good work.

With kind regards,

Yours sincerely,

(A.J.T. Johnsingh)

Enclosed: Your report 36+2 pages

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<wii@wii.gov.in>



Bandipur Tiger Reserve is one of the least fragmented habitats in south India. However, reported death of elephants due to poaching and human - elephant conflict is very high. This survey aims to investigate elephant deaths due to poaching, human-elephant conflict, natural and other causes and more emphasis is laid on understanding the problem of poaching, identifying the causes and providing suitable management-oriented recommendations.