CONCLUSION

The study makes it clear that the forests constitute one of the most important renewable natural resources and play a vital role in the economy and welfare of the people. For centuries, the forests are supplying the essential requirements of the people. More importantly the following services are provided by the forests, viz soil conservation, protection and regulation of water supplies, amelioration of climate, shelter from hot and cold winds, absorption of dust and noise, habitat for wildlife, recreation such as picnic resorts, trekking, wildlife watching and bird watching, maintenance of carbon dioxide balance in the atmosphere and so on. In other words, forests produce not only material goods which are tangible but also provide environmental services which are intangible. Needless to add that environmental services provided by forests are required in perpetuity for future generations too. The target beneficiaries for the environmental services are not only the citizens of the abutting villages and the citizens of the district of Tirunelveli but also the society at large.

In ancient times, there had been a dim conception of the important role of forests in a nation’s economy. Ramayana, Mahabharata and Kautilya’s political writings emphasised the need for the protection of forests. Yet the forests suffered for centuries from the effects of continued misuse of woodlands, unchecked exploitation of accessible areas through shifting cultivation, over-grazing by cattle, burning and removal of forest produce. The British were unacquainted with the principles of forestry and they considered that the forest wealth was “inexhaustible”. It was, therefore, natural that the early British rule witnessed no check but rather an increased tempo of the destruction of the forests for the expansion of agriculture and for obtaining large quantities of timber for the defence requirements. It was only when doubts began to arise, whether the timber requirements of the empire would continue to be available without interruption, the
British began to realise the need for conservation. In the incipient stages, forest conservation in Tirunelveli, as elsewhere in India, was unpopular because the people living in the surrounding villages of the forest, depended on forests for all their basic needs: the fuel to cook their food, small timber for building and agricultural implements, fodder for their cattle, green leaf manure for their fields and other resources for a dozen different purposes. They had neither the education nor the intelligence to realise that their forests were fast disappearing and that if the process continued, the land would become uninhabitable.

The urgency of forest conservation in Tirunelveli division was keenly felt only in the 1870s. Puckle, Fullerton, Colonel Beddome, Pennington and the other pioneers by their foresight and initiative laid the foundation for the sound management of the forests of Tirunelveli by enunciating the basic principles of forest conservancy. However, owing to the efforts of Brandis, the Madras Forest Act of 1882 was enacted for the scientific and effective management of forests. Then came the arduous task of demarcation of the forests. These tasks were obviously carried out by the early forest officers under conditions of great hardship, inadequate equipment and poor means of communication. Even then by the close of the nineteenth century, most of the forest areas of Tirunelveli district were constituted either into reserved forests or protected forests.

To check the regression due to haphazard felling, heavy grazing and fire, there arose the need for regulating the felling of valuable timber trees. This was indeed the first approach towards proper management. In 1891, the preparation of working plans commenced and were brought into operation in Tirunelveli division. By the early 1990s, the total area of the division, that is 1451.48 square kilometers, was covered under working plans and management plans.

A fundamental principle of management is that the forest must be developed, used, improved and worked for the maximum sustained yield. The capital represented by
the standing forest and the soil it grows on, must not be encroached upon by felling too much or felling in such a way as to endanger the soil’s fertility. Only the interest, that is the annual increment in growth should be harvested each year. A mistake in farming is not long in making itself evident and at the cost of some expense it can be rectified but in forestry a mistake in management may not become manifest for a generation and the damage once done is often irreparable. All these matters are dealt with in the working plan, a scheme governing the activities of a forest area for a period of ten years. The working plan discusses and lays down the object of management of the forest. It also lays down the quantities of forest produce that may be removed, where they may be cut, where and how new crops are to be grown, where thinning and other tending operations are to be carried out. No doubt, the forests of Tirunelveli district were worked for the maximum sustained yield without endangering the forest capital during the study period. It should be noted here that there is no adequate supply of timber from the Tirunelveli division except occasional drawing of a little quantity of timber while thinning teak plantations. Moreover, the operation of Tamil Nadu Preservation of Private Forest Act and the Tamil Nadu Hill Preservation Act with latest ban on felling of natural forests without prior permission had virtually put an end to timber harvest even in the private forests.

Whatever quantity of timber extracted is consumed in the local market. Based on the prescriptions of the working plans, this division had launched on a programme of raising large-scale plantations of teak, tamarind, sandalwood, bamboo, eucalyptus, casuarina, odai, cashew, palmyra, babul and softwood plantations. The plantation schemes augment the supplies of timber and other forest produce to meet the local demands of firewood and other minor forest produce. They also fulfil the requirements of raw material for wood-based and cottage industries.

Eta reeds occur in good concentration in Shencottah and Kuttalam ranges. Eta reed coupes were allotted to Sun Paper Mills, Shermadevi, for manufacture of
newsprint paper. When the Government imposed a ban on the allotment of the eta reed to the mills, it largely depended on the raw material supplied from the pulpwood plantations raised by the forest department. The Madras Chip Boards Limited, Rajapalayam, extracted Thanakku, a softwood species from the worked fuel coupes of Sankarankoil range for making chip boards. The Government had also shelved the allotment of Thanakku wood to user industries from 1990. Extraction of rattan canes was allotted to the Shencottah Viswanathapuram Cane and Bamboo Workers Cooperative Society Limited, for furniture making. The harvest in allotted farms in this division accounted only for fifty per cent of the total annual requirement and the deficiency was made up by import from Assam. Tirunelveli district is noted for match industry. Numerous small match factories are dispersed all over the district giving spare time employment to a number of women and children. This industry received its raw material from the softwood plantations raised by the forest department. It has been estimated that roughly five per cent of the population depend for their livelihood upon palmyra trees. There are over ten millions of them scattered over the whole of the plains of the division and a large number in the Kudiraimozhi teri reserve. Fibre for brushes and rope making is extracted from the leaf stalk. The leaf is used for thatching and basket making. The inflorescence on both male and female trees is tapped for the sap which exudes from it. Only a small proportion of the sap produced in the division is utilised for consumption either as a sweet drink (pathanir) or as fermented liquor (toddy). The rest is boiled to produce jaggery or palm candy sugar. The boiling of palmyra sap is thus an important industry. Mats of varying degree of coarseness are made from palmyra leaves in large quantities both for export and for local consumption. The toy making industry in Ambasamudram produces attractive toys which are in great demand in other States and in neighbouring Ceylon. It thrives on the wood obtained from fuel coupes and illicitly removed from Aladiyur beat.
The tremendous increase in population, the resultant poverty and the heavy dependence on agriculture have resulted in the use of wood as the main fuel. It was customary from the very inception of the working plan, to allot separate areas to cater to the firewood needs of people. Generally, the dry deciduous, dry scrub and dry thorn types of forests used to be brought under the fuel working circle. Fuel from the forest goes mostly to the towns either through the fuel coupe contractors or through small illicit removals. Very little of forest fuel finds its way to the villages. Wood from the numerous patta lands in Puliyara reserved forest and Kuttalam reserved forest also feed the local markets, especially in Tenkasi taluk. From the more accessible coupes women take head loads of fuel on payment of seigniorage fees to the lessee. In contrast to this, illicit removal of head load of fuel by a large number of people of Sivagiri and other areas was not uncommon in the area. In 1979, the Government banned cutting of fuel in natural forests. So the main source of fuel to the population was abruptly cut off bringing almost a fuel famine. However, giving assistance to villagers, the forest department had taken up a ‘great venture’ in implementing farm forestry and social forestry schemes in order to meet the requirements of the rural people. The gains of social forestry were quite impressive. Increased supply of firewood was considered to be an important contribution of social forestry. Yet the forest department meets only a very small proportion of fuelwood requirements. To meet the supply gap, alternative avenues such as encouraging private farmers to take up tree planting in a large way needs to be desired. After examining tree growing activities already taking place in various agro-climatic regions in the district, suitable mechanism would be employed to improve these activities in a sustainable manner in larger areas.

The forest management in Tirunelveli division took special care of wildlife conservation. The ghat forests of Tirunelveli are justifiably famous for the richness of wildlife particularly carnivores, herbivores, ungulates, primates and other animals.
The folly of waging a war of extermination on the wildlife was gradually recognised and the forest administration began to manage it in such a manner as to ensure the continued survival of the manifold beautiful and interesting wealth of wild animals. For this purpose two separate wildlife divisions in the ghat forests were formed for the preservation of lion-tailed macaque, tiger and other endangered species. They are managed according to the prescriptions in the management plans. It is rightly observed that legislative measures alone could not stop the excessive and indiscriminate killing of wild animals. A strong and enlightened public opinion could be developed in order to create the right atmosphere for the execution of the plans for the preservation, systematic management and perpetuation of wildlife. For the promotion of public awareness among the public, the services of non-governmental organisations are quite useful. For the better future of wildlife it is highly imperative that the younger generation should be properly educated of the value and importance of wildlife to mankind. Youth clubs should be organised for school and college students.

The Government of India had formulated three successive forest policies and the Government of Tamil Nadu, based on the national policies, set forth various policy objectives through five-year plans for the administration and scientific development of forests. To put the policies into practice, the Government enacted forest laws. Breaches of Forest Acts were a common feature in Tirunelveli district. Before 1947, the penal provisions of the Madras Forests Acts were sufficient deterrents to the commission of forest offences on any large scale. This was because magistrates ‘dealt firmly and severely’ with forest offences in consonance with the then prevailing Government policy. However, in the 1950s, the punishments awarded by the magistrates were often not adequate. In the 1980s and 1990s, the department realised that the punitive measures were no longer adequate for ensuring the protection of forests. The department realised that the security of the forests should rest not on the fear of possible consequences of
infractions of the forest laws, but on the willing consent of the people, based on an appreciation of the direct and indirect benefits conferred by the forests.

The forest administration is the organisation charged with the implementation of the national forest policies through the application of forest laws. The District Forest Officer is the administrative head of the Tirunelveli forest division who has to protect the forests. In order to carry out his work, he is invested with enormous powers. He is assisted by the trained non-gazetted officers and staff, namely, Rangers, Foresters, Forest Guards and a host of office assistants.

Protection of forests from fire is one of the major functions of the forest department. In the earlier days, the ghat forests had suffered more from annual fire than from excessive felling. Due to the efforts of the forest officers, the fire was controlled and the fire reports of the division show that fire occurred only in 19.7 hectares in 1994-95. Yet, fire protection remains largely an unsolved problem. The ultimate solution of the fire problem depends upon the spread of education and the development of a sense of civic responsibility in forest matters.

A very large part of the forest officer’s time is taken up in protecting the forests against the various dangers which threaten their very existence. Protection of forests against deliberate theft for profit such as illicit felling, smuggling of sandalwood, poaching, encroachments and innumerable petty offences such as the pilfering of small timber, fuel and bamboos and loppings for cattle fodder and green manure is a major functions of the forest department in Tirunelveli district as elsewhere in Tamil Nadu.

Controlling grazing is yet another function of the officials of the forest department. An overgrazed forest can only degenerate. On level ground, the tread of cattle hardens the surface to the semblance of a beaten track on which no seedling can get a footing. On slope the soil is disturbed, to be washed downhill by rain. Tender seedlings
are eaten with the grass so that no young trees grow up to replace the old ones. The goats are browsers and if they graze, the situation becomes ten times worse when compared to the other animals. Forests and goats cannot live together. The officials of the forest department realised that the concessions in grazing have gone even beyond the safety point and restricted the entry of cattle inside the forest. At present, the officials do not allow cattle inside the forest for grazing. The Government should, therefore, arrange suitable lands as pasture in order to avoid degradation of forests.

The forest department provided departmental works such as regeneration, afforestation, fire line clearing, coupe line clearing, road repairs and for nursery works on a large scale to people living in and near forest areas. The contractors of fuel, bamboo, cardamon and minor forest produce leases also provided work for the people. Employment generation was the main aim of farm forestry and social forestry and employment was given to local people for raising nursery, planting operations and the upkeep of the plantations. The facilities for Kumri cultivation in planted areas were also availed of by the local people. In the 1980s, when drought conditions prevailed in the district, the forest department undertook drought relief works and generated 3,24,000 man-days of work.

The forest department of Tirunelveli district looked after the welfare of the hill tribes living in the forests. In turn, they provided a valuable contribution to the labour supply in the interior ghat forests in the early days. Labour from the plains was less able to bear the feverishness, inclemency of the weather and the loneliness prevalent in the ghat forests. Besides, the labourers in the plains had to be paid at higher rates than the tribes and was much less efficient in planting operations. They were of great use to the working plan party because they were expert in identifying the evergreen species.

The National Forest Policy of 1952 and 1988 drew the attention of the people to the need for maintaining the existing forests in a productive stage, reclothing barren lands...
and hill slopes and increasing the forest area of the country to a third of the land surface so as to serve effectively the two-fold rules of protection and production. Against the norm of thirty three per cent, Tamil Nadu had only about 17.5 per cent of its area under forest cover during the Ninth Five-year plan period (1997-2002). In 1995-96, the forest lands covered 17.62 per cent of the total geographical area of Tirunelveli district. In the year 2006, forest in the district was eighteen per cent of the total geographical area. The recommended forest cover does not take into account the population and soil, terrain and climatic conditions of the region. Yet, to achieve the target of thirty three per cent of forest cover, the forest department launched special programmes which in turn would reconcile the competing claims of conservation and production.

Until the 1950s, the management of the forest was mainly through a policy of policing and the local people were afraid of the forest officials. There were a lot of frictions and confrontations between the forest staff and the local people. The policy then was to keep the people away from the management of the forests. From 1960, people’s involvement in raising community woodlots was confined mostly to securing the concurrence of the panchayats concerned, providing of employment to local people in plantation operations and sharing of the revenue with the panchayats. In 1981 with the advent of the social forestry project, an effort was made to involve the local people in the management of community woodlots. Even though village level social forestry committees were constituted in the selected villages by electing members from the local communities and providing representation to women and scheduled castes, their participation in the implementation was nominal. No doubt, some village social forest committees participated in all aspects right from the demarcation of area, choice of species, raising of nurseries, provision of labour force and protection. But a number of committees did not cooperate with the officials of the forest department. The late 1980s saw the beginning of a new approach to the management of forest resources. When the
legal ownership and management rights of forests remained vested in the Government, there were not enough goods coming from the forests to fulfill community needs and the forests degraded at a very rapid pace. The Forest Policy of 1988 brought about a radical change by shifting the focus from revenue generation to conservation with a view to answering the subsistence needs of the local people. It recognised the need to involve the people in the development, protection and management of forests. The implementation of the Joint Forest Management programme in June 1990 paved the way for active participation of the people in the management of forests. No doubt, the Government of Tamil Nadu stand committed to involve local people in reforestation and protection of degraded forests and to share with them the sustainable benefits from these forests. Due to the Joint Forest Management programme, degraded reserve forests have gradually developed forest cover. Overgrazing and illicit felling of trees were also reduced. The villages have now begun to realise the importance of the forests in Tirunelveli district.

An analysis of the study reveals the fact that the forest department is badly in need of more staff with ability, skill, courage and real interest and rich knowledge in forestry. They might be well trained to pursue their work not as a profession but as a vocation. Offences against the forest law should be severely dealt with, so as to deter the offenders. In addition public awareness should be created on a wider scale about the dire necessity for the protection as well as the development of the forest. The masses should be made to realise that exploitation of forests will be suicidal and their life and the nation’s welfare depend considerably on the sustenance of the forest. Thus, the forest administration may be toned up to serve with greater missionary zeal not only to preserve the existing forest but also to develop the forest to cater the needs of the future generation.