Forestry in Sri Lanka a voyage through time

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ABSTRACT

Since ancient times, the people of Sri Lanka have recognized the importance of forests for their environmental and cultural values and, as a source of supply of their basic material needs. In colonial times, however, forests began to be cleared for shifting cultivation, paddy cultivation, the raising of plantation crops, and human settlement; and where forests were left intact, they were selectively and heavily exploited for supplying timber. With the passage of time, the pace of deforestation increased, and by the year 2000, the forest cover had reduced to 22.3 per cent of the land area, from 84 per cent in 1881. To reduce the pressure on the natural forests for timber and to rehabilitate degraded land, the Forest Department carried out forestation projects in both the dry and wet zones. These plantations serve as a source of timber for wood-based industries and for supplying the needs of the local people, while also contributing to environmental protection. In this paper many aspects of forestry development in Sri Lanka over time are described in detail.

Key words : Forests, timber, deforestation, biodiversity, fuelwood, chena cultivation

Sri Lanka's forest culture

The people of Sri Lanka, since ancient times, have depended on the natural forests to satisfy a variety of needs; these included food, medicines, wood for house construction and for turning out household goods, fuel for domestic cooking, fibre for cordage, leaves for roof thatching, and so on. But satisfying material needs alone did not define the link between the people and the forest. As early as the third century BC, Arahat Mahinda is said to have exhorted King Devanampiyatissa as he was about to go hunting, in the following words, " O Great King, the birds of the air and the beasts of the earth have an equal right to live and move in any part of this land as thou; the land belongs to the people and all other beings and thou art the guardian of it". Heeding the words of Arahat Mahinda, the king renounced hunting and declared the forest at Mihintale, where he had intended to go hunting, as a sanctuary perhaps the first of its kind in the world. Since then the cultural value of forests has been recognized by the rulers and the people alike. The forests with their quietude were also the preferred location for meditation by Buddhist monks, and this remains so to this day.

Sri Lanka's society has from early times been agrarian, with paddy being the main crop cultivated. This would obviously mean that forest land, mostly low-lying areas, had to be opened up for cultivation. This was in fact the basis of Sri Lanka's remarkable hydraulic civilization that lasted till the 12th century AD. What is important here is that, although many thousands of small tanks were constructed throughout the dry zone, forests were retained in the micro-catchments of these tanks, no doubt in recognition of their value in protecting the environment. Chena cultivation (i.e. slash and burn agriculture or shifting cultivation) was also carried out, but it took an environmentally benign form compared to what it had developed into many centuries later. The chena land was only lightly cleared, and after the chena crop was harvested re-growth of the forest species was prolific (Abeywickrama 1970).

The natural forests as a timber resource and land repository

By the 12th century AD, owing to invasions from India and also the spread of diseases, the dry zone, which had been the seat of Sri Lanka's hydraulic civilization for many centuries, was abandoned by the major part of the population. The people moved south, into the hill country and the southwest, wet zone. In the dry zone, which was thereafter left virtually undisturbed for several centuries, the natural vegetation had recovered, and a high forest of the tropical monsoon type had got re-established. At the start of the colonial era and well into it, the dry zone forests were well stocked with important and valuable timber species such as *Chloroxylon swietenia* DC. (E: satinwood, S: burutha), *Berrya cordifolia* (Willd.) Burret (E: Trincomalee wood, S: halmilla), *Diospyros ebenum* Koenig (E: ebony S: kaluwara), *Vitex altissima* Moon (S: milla) and *Manilkara hexandra* (Roxb.) Dubard (S: palu).

During the Portuguese and Dutch occupation of the maritime regions of Sri Lanka (1505-1796),

felling of the valuable timber trees in the dry zone for local use and, more importantly, for export took place. This intensified and extended into the hinterland during the British period that followed.

The first appointment of a professional forester to Sri Lanka during colonial times was made in 1882 when F D' A Vincent, a British forest officer, was posted to Sri Lanka. By that time the natural forests of the uplands were being cleared at a growing pace, first for the planting of coffee and later for tea. Fortunately this trend in the high elevation forests was arrested when, consequent to a recommendation made by the eminent botanist Joseph Hooker, all forest clearing in areas above the elevation of 5000 ft (1540 m) was banned. This policy was followed right up to the middle of the 20th century.

Today, the term "sustainable development" has come into common parlance when referring to economic development activities in relation to environmental protection. A slight variant of this term, "sustained production," was, however, used since well over a century ago to describe the central concept of forest management as it was practised in Europe. This same concept was inculcated into foresters who received their training in England or India, but when back at home and faced with the realties of meeting an increasing demand for timber, principles of sustained production went overboard. The natural forests were seen as a ready and seemingly inexhaustible source of timber, and no doubt succumbing to political pressure, felling for timber went on apace. The dry zone forests continued to be relentlessly exploited. One of the demands was for railway sleepers, and the demand was virtually insatiable; some of the best timbers like satinwood were indiscriminately sawn for this purpose.

Since the early 1900s, the tempo of chena cultivation, particularly in the dry zone, increased rapidly. The forest within a chena lot was cut over completely and the debris burnt, after which the agricultural crop was sown. Chena cropping was done both legally, with permits being issued by the government agent, as well as illegally. With the population growing sharply, the demand increased and forest land suitable for chena cultivation became scarce. The result was that land once cultivated was not allowed sufficient time to recover before being used again by the chena farmer. All the so-called Village Forests and a good part of the "Other Crown Forests" (i.e. the state forests that were not Village Forests or Reserved Forests) were subjected to this type of cultivation and the land was eventually left desolate with a worthless cover of scrub vegetation. The forest inventory of 1956-1959 records that the total area of land subjected to chena cultivation was an astonishing one million hectares, or 15 % of the island's land area (Andrews 1961).

With the restoration of irrigation works from the mid-1900s onwards, deforestation in the dry zone accelerated when land had to be provided for irrigation and settlement. Between 1983 and 1992, around 37 % of the deforestation was attributed to the Mahaweli, Kirindi Oya, Inginimitiya, Sevanagala Sugar Company and Pelawatta Sugar Company projects (MALF 1995).

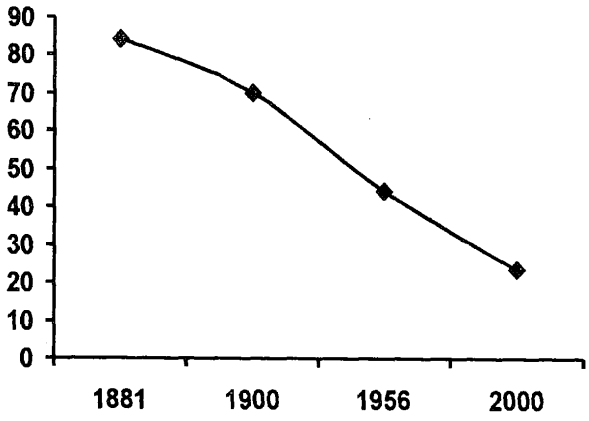
The natural forests of the wet, southwest quarter of the island, ranging from tropical lowland rainforest to submontane rainforest, were far more limited in extent than the monsoon forests of the dry zone. The lowland and mid-elevation rainforests, however, carried a much higher timber stocking per unit area than the dry zone forests. During colonial times, the wet zone forests were subjected to a certain degree of exploitation where selected species were logged. The valuable endemic *Diospyros quaesita* Thw. (E. calamander, S. kalu-mediriya) was exploited almost to extinction, mainly for export. *Pericopsis mooniana* (Thw.) Thw., a high quality cabinet wood, was also heavily logged. With these exceptions, however, the wet zone forests that had escaped clearing for tea cultivation maintained their integrity and high stocking throughout the colonial period.

Systematic logging in the wet zone forests commenced in the mid-1940s. The timber extracted from these forests found a variety of uses: for building construction, railway sleepers, transmission poles, and veneer, among others. The environmental dangers that would result from clearing these forests was recognized and this, together with an appreciation of the need to apply the principles of sustained production, led to the forests that were to be logged being inventoried and a selective system of logging applied. On this system, no more than three or four trees would be felled in a hectare on an average. Of course the extraction of the timber would lead to some damage to the residual forest. In practice, contractors did the logging, and as there was very little proper supervision of their work, over-felling invariably occurred. Added to this, there was illicit timber extraction and a great deal of forest encroachment by the communities living in the areas bordering the forests.

The first record of the extent of forest cover in the island is that of 1881, when it was estimated that 84 % of the island was under forest (Nanayakkara 1987). How authentic was this estimate is uncertain, but it could be taken as an approximate benchmark. The first scientific survey was done between 1956

and 1959, using aerial photographs (taken in 1956), supported by ground verification and inventorying. The forest cover in the island was found to be 44 % of the land area. The survey data also revealed that, of the total forest area in the dry zone, 44 per cent was categorized as unproductive and 50 % as low yield, with only six per cent in the most productive category for this zone medium yield. The commonest tree species was *Drypetes sepiaria* (Wight &Arn.) Pax &Hoffm. (S. wira), where the tree cannot be used for timber because of its extremely poor form. It alone accounted for 25 % of the standing volume of wood in the dry zone. The next (*Manilkara hexandra*) was far behind at 10.3 % (Andrews 1959). A sample inventory carried out in 1983-1985 revealed that by that time there were no medium-yield forests left in the dry zone. The impoverished state to which the dry zone forests had fallen was the result of many decades of shifting cultivation and the relentless exploitation for timber of the forests that had escaped the axe of the chena cultivator.

The latest forest survey, done in 2000 using satellite imagery supported by ground inspection, has revealed that "dense forest" occupied 22.3 % of the land area (MENR 2003). For trend in loss of forest cover, see Figure.



Forest cover as a percentage of the land area 1881-2000

Forest plantations

The Forest Department as such was established in 1887 with the assumption of duties of the first Conservator of Forests. Since then some forest plantations were raised, albeit on a very small scale at first. The early plantations mainly consisted of teak (*Tectona grandis* Linn. f.) in the dry zone, mahogany (*Swietenia macrophylla* King) and jak (*Artocarpus heterophyllus* Lam.) in the intermediate zone, and species of eucalyptus, pine and cypress in the montane zone. By the late 1950s it became increasingly clear that we were fast reaching a point when our natural forest capital would be completely exhausted, and a sharp increase in the forestation programme was called for. Teak planting in the dry zone was stepped up, and it was carried out according to a system that had originated in Burma, called the *taungya* system. Natural forest which had already been exploited for timber were allocated in small parcels of about a hectare each to villagers who undertook to cut the residual trees and undergrowth, burn the debris and replant the area with teak at a spacing of 10 feet (3 m). They were allowed to interplant the area with cash crops. They were given a modest reward if the teak was well tended. After two or three seasons they left the area, and by this time the teak would have grown to pole size. In addition to teak, a species of eucalyptus thought to be suitable for the dry zone *Eucalyptus camaldulensis* Dehnh. was planted for a few years and on a limited scale. The trees, however, turned out to be whippy and of poor form, and can now be seen in certain areas occurring cheek by jowl with the teak. The taungya method of reforestation was discontinued in 1975.

In the grasslands (patana) of the montane zone, planting of eucalyptus continued. These plantations at first served a dual purpose: providing a useful source of fuelwood for domestic cooking and tea processing and serving as shelter-belts in these areas which were subject to severe winds (Wijesinghe 1962). Later, the timbers of some species (*Eucalyptus microcorys* F. Muell. and *E. pilularis* Sm. in particular) were found to be very suitable for use as a cabinet wood. From the 1960s, following successful trials with *Pinus caribaea* Morelet, this species was added to the afforestation programme in the patana grasslands.

Forest plantations were not at first raised in the wet zone. The only areas available for forestation were those under scrub, grass, or the fern *Dicranopteris linearis* (Burm. f.) Underwood (S: kekilla). These areas which were originally in high forest had been cleared for shifting cultivation by villagers and subsequently abandoned when the soil turned unproductive due to the intense leaching of nutrients that occurs when the soil is exposed. Trials to reforest these areas with local species failed, but in the 1960s a variety of pine *Pinus caribaea* var. *hondurensis* was tested and it proved successful. This species was then used to rehabilitate degraded areas in the wet zone. Recently attempts have been made to thin the pine plantations and under-plant with local species. So far the results are promising. The Table below gives the extents of plantations of

the main species as at 1999.

Species	Area (ha)
Teak	31,700
Pine (mainly *Pinus caribaea*)	16,500
Eucalyptus in the montane zone (mainly *E. microcorys* and *E. Grandis* Hill ex Maid.)	9,175
Jak (*Artocarpus heterophyllus*) and Mahogany (*Swietenia macrophylla*) in mixture	2,800
Eucalyptus camaldulensis, *E. tereticornis* Sm., *Acacia mangium*	19,100
Other species	12,225
Total	91,500

Source: Wijesinghe (2000)

With the expansion of the forestation programme and the consequent increased workload on the Forest Department's limited staff, standard silvicultural and management operations so essential for maintaining the plantations in a productive condition were neglected. This led to many plantations being rendered unproductive. Adding to the problem, illicit fellings and fires caused significant losses.

Timber and fuelwood - supply and demand

Roundwood. Wood is considered to be the main product obtained from the forest, and forest management practices are designed to provide wood to meet the demands on a sustained basis while safeguarding environmental values. Following standard forestry practice, working plans had been in operation for the management of some forest plantations and a few natural forests in the wet zone, but they fell into disuse by the 1980s. By this time there emerged an ambitious proposal to prepare a Forestry Master Plan. This was finally accomplished in 1986 (Jaakko Poyry 1986). Although enjoying the unreserved support of the Ministry in charge of forestry at the time, the Plan was a disappointment to many. Its one objective seemed to have been to make proposals as to how the demand for timber can be met from local sources by whatever means. Some of the proposals were surprisingly naïve. The Plan made two alternative proposals for the dry zone forests: either clearfell 10,000 ha each year until 2020, and supplement supplies by selective felling in the remaining areas, or clear fell 30,000 ha per year during the same period. Had either of these proposals been pursued, it would have totally devastated the remaining forests in the dry zone (Baldwin 1991).

As for the wet zone forests, out of a total of 278,000 ha of natural forest in the lowland, mid-country and montane zone, the Plan proposed leaving 159,000 ha as protection forest and taking 119,000 ha for timber supply. This proposal deceptively looked like a concession towards conservation, but in fact the areas proposed for protection were in the montane zone where the forests should in any case never have been logged. Of the 119,000 ha earmarked for logging, 47,500 ha were said to have sufficient stocking of timber for immediate logging, while the balance was to be kept for 2020 till they recover from earlier logging before being exploited once more. These forests, with a total area of 119,000 ha, are fragmented rainforests scattered across the low- and mid-country. At that time there was growing evidence of the unique nature of these forests in terms of biodiversity and endemism. Non-government organizations as well as the Man and Biosphere National Committee (through the Natural Resources, Energy and Science Authority) appealed to the government to suspend this proposal and carry out a conservation review of the rainforests earmarked for logging. Despite the protests the government was determined to go ahead with the project with a loan from the World Bank. The Yale Law Journal gives a graphic description of how Environmental Foundation Ltd, represented by its Chairman, succeeded in stalling the project until a proper evaluation of it was made (Wirth 1991). What followed was a vindication of the position taken by the organisations. Conservation Reviews of the designated forests were undertaken, later to be followed by a National Conservation Review of all the forests in the island over 200 ha in extent. A moratorium was imposed on logging in natural forests of the wet zone, and this is still in force at the time of writing.

A second Forestry Master Plan was prepared in 1995. According to this Plan, the roundwood consumption in Sri Lanka in the year 1993 was 1.3 million m^3. The sources were: home gardens 41%, natural forest 22%, rubber plantations 18%, coconut plantations 11%, forest plantations 4%, imports 1%, other 4%. What is remarkable is the huge share coming from non-forest sources, and the highly significant contribution from home gardens.

Kandyan home gardens (though so called, they are found well beyond the bounds of the Kandy District) are a traditional and well-established form of agroforestry that has been practised for centuries. They contain a variety of multi-purpose trees interplanted with banana, coffee, spices, etc., and a variety of herbs used as vegetables and medicines. A typical home garden mimics a tropical rainforest in its multistoried structure and great mix of species (Carter, Connelly & Wilson 1994; MALF 1995).

Home gardens are to be encouraged, but unfortunately in recent times, with tea fetching a high price in the market, there has been a tendency in some areas to convert the typical home gardens into tea lots.

Fuelwood. The highest contribution of energy used in Sri Lanka comes from fuelwood and other types of biomass. The relative proportions of the three types of energy hydropower, biomass and petroleum in the year 2000 were 12 %, 50 % and 38 %, respectively (MENR 2003). Nearly 90 % per cent of the biomass fuel is used for cooking by households. The first, and still the most authentic, scientific study of biomass fuel used by households in Sri Lanka was carried out in 1986, (Wijesinghe 1984). This study revealed that rubber wood accounted for 18 % of the biomass fuel consumed, crop wastes 28 % and other fuelwood 53.2 %. The last mentioned included fuelwood from scrub and forest trees and from home gardens and saw dust and off-cuts from saw mills.

According to the 1995 Forestry Master Plan, there was no overall fuelwood shortage in the country, and neither was there likely to be in the future. There were, however, local shortages in some districts. There was no intention of raising special fuelwood plantations, but various other strategies were proposed e.g. increasing biomass fuel supplies from agroforestry systems and increasing the efficiency in the use of bio-energy.

In the context of the sharply growing demand for electricity, the very limited scope for expanding supplies through hydro-generation, and the absence of oil or natural gas in the country, the possibility of dendro-thermal generation should be given serious consideration. In view of the technical and logistical considerations that are involved, such a project should first be pilot tested before launching on even a modest scale operation.

Focus on forest conservation

The forest policy statements that have been made in the past, from time to time over the years, have always included as one of the objectives of forest management the protection of indigenous fauna and flora (De Silva 1954). This generally meant nothing more than setting apart certain forests as reserves, not to be released for alternative uses, while accepting that the forests can continue to be logged, selectively or otherwise. Latterly, however, the Forestry Master Plan of 1995 emphasized the need for establishing a comprehensive protected area network that would include many of the biodiversity-rich forests under the Forest Department (MALF 1995). It must be noted that the forest areas under the control of the Department of Wildlife Conservation are all protected areas and will form a part of the network, but the biodiversity rich forests which are in particular need of protection are predominantly under the control of the Forest Department.

The decision to selectively log the Sinharaja forest, the only sizeable low- and mid-country rainforest that had still remained in its pristine condition, to provide logs to the wood-working complex that was being set up near Avissawela drew protests from scientists, environmental organizations and the public. Logging started in the early 1970s, with the use of heavy machinery. After a time, the President, taking note of the growing volume of protests, ordered an immediate halt to the logging operations in 1978. By this time 2025 ha, out of a total extent of 11,331 ha, had been selectively logged. In 1990, on a proposal made by the government, the whole of Sinharaja forest was declared a World Heritage Site by UNESCO (IUCN 1993).

The events following the much-criticized Forestry Master Plan of 1986, briefly recounted above, led to salutary results in as far as forest conservation was concerned. An additional Forest Division was created in the Forest Department to oversee environmental matters and an accelerated conservation review was carried out of the forests earmarked for logging under the Master Plan. This was followed by a National Conservation Review (NCR) covering aspects of biodiversity and hydrology of all the forests in the island over 200 ha in area, carried out with technical support from the World Conservation Monitoring Centre in Cambridge (WCMC) and IUCN The World Conservation Union (IUCN & WCMC 1997). Already, by then, several separate studies in Sinharaja and other forests in the wet zone, carried out by scientists from the universities, were revealing the high levels of endemism and the biodiversity richness of these forests (e.g. Crusz 1984; Ashton and Gunatilleke 1987a and 1987b; Gunatilleke, Gunatilleke & Sumithraarachchi 1987; Gunatilleke and Gunatilleke 1990; Myers 1990).

Although the NCR was extensive in its coverage, the sampling intensity was low and the flora and fauna recorded were restricted to woody plants over 10 cm in diameter at breast height and vertebrates, molluscs and butterflies. Moreover, many collections could not be identified, some to the species others to the genus level. Despite these limitations, the data were sufficiently convincing to indicate that a network of 36 contiguous forests for

endemic woody plants, complemented by an additional 12 for endemic fauna, should be considered an absolute minimum for conserving Sri Lanka's endemic forest species. The large majority of these identified forests are situated in the wet zone.

The hydrological component of the NCR where 281 forests were assessed indicated that 85 forests were of the highest importance in relation to their soil and water conservation value. The vast majority was in the wet zone. All of the forests in the Nuwara Eliya district were among the 85, while many of the forests in the the Kegalle, Colombo, Kalutara, Galle, Matara and Ratnapura were also included (IUCN & WCMC 1997).

Research

Forestry research was started in 1937 with the setting up of a silvicultural research unit in the Forest Department. In a country with such a wide array of forest ecosystems, each with an abundance of tree species, the challenges and the scope for research were enormous. The silvicultural research work that was put in hand covered many areas seed viability, types of planting material to be used for reforestation, natural and artificial regeneration, growth increment, nursery practice, phenology, ecology of the rainforest, and so on. Some of the investigations covered over a hundred species. Forestry research, since we are dealing with trees that take many years to grow and mature, generally takes time. But as results started coming in they were regularly published in the Ceylon Forester (Holmes 1954; Koelmeyer 1960). Early studies on increment showed the remarkably slow growth of some of our dry zone species e.g. satinwood takes 150 years to reach a girth at breast height of 5.5 ft (1.68 m) (Koelmeyer 1954) and palu (*Malilkara hexandra*) may take 200 years or longer to reach the same girth (Wijesinghe 1959). Research on timber utilization started in 1947 and it focused its attention on assessing the durability and wood working properties of the local species of timber.

Sadly forestry research suffered a serious setback in the late1950s when the field research units were disbanded and the staff assigned to reforestation and other routine forest activities. It coincided with the appointment of an administrative officer with no appreciation of forest science as the Conservator of Forests. With the limited head office research staff, and the enthusiastic support of a few field officers, some research continued, but many silvicultural research programmes had to be abandoned. A large amount of data collected over the years continues to lie in the archives of the Department.

Among some of the research activities that went on during this period which yielded positive results are the development of a technology for the treatment of rubber wood to prevent attack by wood borers, a method devised by the Senior Assistant Conservator in charge of research at the time (Tisseverasinghe 1969). The financial benefits from this technology that turned rubber wood, which had been used only as a household cooking fuel or for temporary purposes as concrete shuttering, into a cabinet wood for local use as well as export would be quite staggering. Another success was the trials carried out in different degraded sites in the wet zone with a number of exotic species and the emergence of *Pinus caribaea* var. *hondurensis*, which established well and showed rapid growth despite the impoverished nature of the soil. An investigation on pre-sowing seed treatment for teak which was being planted on a large scale was carried out successfully (Wijesinghe 1963).

Some research and development activities that started were not carried through e.g. the establishment of seed orchards for producing superior seed of teak and the preparation of yield tables for the same species.

From the 1970s efforts were made to revive the flagging research arm of the Forest Department. The renewed efforts focused on selecting fast growing species for the impoverished sites in the dry zone, which were unsuitable for teak, as well as species to diversify the reforestation programme in the wet zone which was overly dominated by *Pinus caribaea*. Two species, *Acacia auriculiformis* A. Cun. Ex Benth. for the dry zone and *A. mangium* Willd. for the wet zone, showed much promise.

Currently the main focus of the research programme is on aspects of reforestation (nursery techniques, pest control, species selection), silviculture of natural forests (manipulative and other techniques for promoting regeneration and establishment of preferred species), species selection for forestation, tree improvement, and forest plantation management (studies on yields and thinning regimes and preparation of volume tables) (FD 2003a). The research and development effort, however, needs considerable strengthening if it is to make a significant impact on forestry development.

Looking into the future

Wood is considered to be the primary product from the forest, and the current thinking is that commercial production of this commodity is better

handled by the private sector. In agriculture, private enterprise plays the dominant role. There are, however, some significant differences between the two sectors that have to be recognized and addressed if the private sector is to be brought in on a big scale for raising and managing forest plantations for timber production. One is that the land that can be used for forestation is almost entirely owned by the state. Another is that yields come several years after planting, at intervals when the plantation is thinned and at the final felling at maturity. For the enterprise to be profitable, the financial yields should exceed the investments (that are mostly made in the initial stages of a plantation) together with the accumulated compound interest on the investments. A third factor to be considered is that the areas available for forestation are generally impoverished sites. Recent developments have shown that, notwithstanding these constraints, the private sector is prepared to take the initiative in embarking on forestation projects.

The Forest Department has a distinct role to play in this changing scenario. It should be in a position to provide the technical know-how and also supply superior seed and other planting material. It should focus its efforts on building up its capacity in research and development to carry out these tasks.

As regards the natural forests, the Department has drafted legislation (FD 2003b) that, *inter alia*, will make provision for reclassifying the forests into three categories: Strict Conservation Forests, Conservation Forests and Multiple-use Reserved Forests. The majority of the 33 wet zone forests (including Sinharaja) that have so far been selected for special protection because of their high biodiversity value, based on NCR data, may be placed in the first category. The current trend in management of Conservation Forests is to provide some benefits to the local community and to involve them in managing the forests (participatory management). Applying this concept in the wet zone is beset with problems because of the highly fragmented nature of the rainforest system with many of the forest patches being only a few hundred hectares in size, and the forests being surrounded by built up areas and agricultural holdings. Community dependence on forest products is generally low in the wet zone. There are also other social factors that have to be considered when attempting to introduce participatory forestry into Sri Lanka (Carter et al. 1994).

The Multiple-use Reserved Forests, when they come to be established, would mostly be in the dry zone. These forests have been heavily exploited in the past, and in their present condition could not provide benefits to the local community on any significant scale without causing further destruction. Many of the protected areas under the Department of Wildlife Conservation are in the more arid areas of the dry zone. Hence it would be necessary for the Forest Department to identify adequate extents of forest in other parts of the dry zone and place them in the categories of Conservation Forest or Strict Conservation Forest where species that have acquired a national character, such as burutha, palu, kaluwara and milla could regenerate and survive, or they would in time pass into oblivion.

Forestry has been practised in Sri Lanka for well over a century. Yet some aspects of forest management, silviculture and research have not progressed beyond the basics. Can this situation be improved? We have often heard it said that more investments are needed in terms of manpower and finances. But these alone would not bring about any significant improvement unless there is a change in the political culture a change that will motivate the professional staff to give their undivided and sustained attention to the task of advancing forestry development.

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