

## INTRODUCTION - SUMMARY

1984

### General

Progress in forest development continued at a high rate during the year under review. All the targets set for the year, the main of which were the following were achieved:

Protection of the forest, especially against fires; reforestation of burnt and other bare areas; production of timber and other forest products, seeds and seedlings; tending of forest crops; rational management of the forests; forest education; forest research; application of Forest Engineering with a view to maintain, improve and expand the forest roads, the forest telecommunications and forest buildings, to secure new machinery and equipment and to maintain the existing; conservation of nature in forest areas, establishment, expansion and maintenance of picnic sites; provision of employment to forest villages.

### Expenditure.

With a view to achieve the above targets £1,726,736.00 cents and £1,281,447.00 cents were approved in the Ordinary and Development Budgets respectively. The total amount spent out of both Budgets was £2,853,034.00 cents (i.e. about 95%)

### Revenue.

Apart from the indirect benefits of the forests, which cannot be calculated in terms of money, an amount of £977,795.00 cents was collected by the Forestry Department as revenue in 1984. An additional amount of £225,410.00 cents representing forest products sold on credit is still to be collected.

### Forest Protection.

As emphasised in the Annual Reports of recent years, the protection of existing forests against fires, especially during the prolonged dry and hot summers, is the principal concern of the Forestry Service. The following fire protection

measures were taken during the year under review:-

- (a) A Fire Fighting Task Force consisting of 58 members was in operation. Its members were employed on various forest operations at strategic points in the forest being at the same time on call at any time through radio telephone.
- (b) During the summer months ten Fire Look-Out Stations, found on high peaks in the Forest were manned on a 24-hour basis, in order to detect and report forest fires.
- (c) About 2,000 kms of forest roads were constructed and 0.200 kms were widened. In addition seven kms of vehicle tracks and 22.80 kms of extraction roads were constructed, which serve also as fire traces.
- (d) Two water tanks of 20,000 gallons each, one at Aftoullina (Paphos Forest) and one at Vrysia tou Palevrou (Adelphi Forest), as well as one water tank of 1,000 gallons at Xerargaka (College Forest) were constructed during the year under review. Five hydrants one at Kallinikos and one at Mavres Sykies (Kambos Division), one at Aftoullina (Stavros Division), one at Vrysia tou Palevrou (Adelphi Division), and one at Argaki tis Triantafilias (Nicosia Division) were installed on pipes which pass through the Forest and on Water tanks, to supply water in the event of a fire, to the Departmental fire engines.
- (e) Daily mobile patrols in the forest, but especially along the delimitation line, were carried out throughout the summer months, warning and advising villagers and others against forest fires.
- (f) Lectures on the prevention and suppression of forest fires were given to the National Guard, the Police and the public. Also extensive publicity was made through the various mass media.

(g) The mechanisation which was initiated in 1978 with the acquisition of fire fighting vehicles and fire pumps for the extinction of Forest fires, proved very successful. At present the Department has at its disposal six fire engines and 34 fire pumps of various types.

(h) The use of foam against forest fires, which was initiated in 1981, on a trial basis was continued during the year under review. The results were very satisfactory and foam will now be used on a bigger scale.

In spite of the measures taken in 1984, thirteen forest fires broke out and burnt a forest area of 160 ha (1,196 dons). The volume burnt was 2,134 m<sup>3</sup> R.O.B. It is worth mentioning that the year under review was worse as regards area burnt, compared with the last three years. The area burnt in 1981 was 15 Ha (113 donums), 1st best year since 1886. In 1982 30 Ha (224 donums) were burnt, 7th best year and in 1983 16 Ha (120 donums) 2nd best year. All fires were put under control almost immediately after they broke out; the largest of them, which burnt an area of 96.6 Ha (722 dons), started from private lands and due to favourable conditions expanded very rapidly.

The usual protection measures were taken against illicit grazing and other offences, which were limited.

Spraying from the air was used for the fifth year against the pine Processionary caterpillar, using Bacillus thurigiensis. The results were very successful, mortality being practically 100%. It is worth mentioning that with such biological control of the pest no environmental pollution is caused.

#### Reforestation,

An area of 622 Ha (4,653 donums) was reforested, while an area of 36 Ha (271 donums) which was cultivated will be

sown or planted in 1985. The total amount spent on reforestation was £342,292 and it was more than that of the previous year by £4,344.- Reforestation was not only carried out in Paphos, Troodos, Adelphi, Limassol and Macheras forests but also in other bare areas such as Randi, Corona I, II, III, IV, Sotira, Megali Moutti, Ay. Nikandros I, Ay. Napa, Xylophagou, Moutti tou Ziou, Karri XIV + XVII, Paedagogical Academy Forest, Kakoradjia A + B and Athalassa.

Fifteen bulldozers were employed almost continuously for ground preparation, three of which were Menzi-Muck suitable for climbing and working on steep slopes. A big number of labourers were also employed for planting and sowing. The Menzi Mucks are used to construct small catascips where the use of bulldozers was impossible or not indicated for environmental purposes.

#### Forest Expansion.

During 1984, the work of the Expansion Division was fruitfully continued. Thus an area of 477 Ha (3,566 donums) found at Koshi, Ayia Anna, Kalo Chorion, Pyla and Oroclini was declared as Main State Forest. Namely the following were declared as Main State Forests: Moutti tou Ziou and Aspromoutti.

At the same time the procedure of bringing under forestry more lands, covering an approximate area of 892 Ha (6,666 donums) in the village boundaries of Alambra, Pera Orinis, Politiko, Klirou, Louroutzina, Lymbia, Yeri, Tseri, Latsia, Dhali, Petrophani, Afdellero, Oroclini, Aradippou, Koshi, Larnaca, Tersephanou, Pyrga, Psevdas, Kofinou, Kornos and Ayia Napa is nearing completion. These areas are derelict and dry and will be afforested as soon as possible, for purposes inter alia of recreation, amenity and environmental amelioration. A further area of 66 Ha (493 donums) is under study for declaration into Main State Forests.

#### Timber Production and Disposal.

During the year under review timber extraction and supply to local wood-working industries continued in a satisfactory way.

A volume of 54,883 m<sup>3</sup> R.O.B. of green timber was extracted from various State Forests and sold to the Cyprus Forest Industries Co. Ltd., and to private individuals, for the production of constructional timber, chipboard, box-shooks etc. An amount of 5,840 m<sup>3</sup> R.O.B. of branchwood, delivered to C.F.I. for particle board is included in the above figure. The revenue of the Department from timber sales was about £604,456.- In addition timber valued at £225,410.- was sold to the Cyprus Forest Industries Co. Ltd., on credit.

During 1984 the operation of Platania Sawmill continued at intervals and 48m<sup>3</sup> of sawn timber were produced. Part of the sawn timber was used Departmentally for the construction and maintenance of Forest buildings and part was sold or given free of charge to various Departments.

The Forestry Department issued 56 sawmill permits during 1984.

During the same year the net value of imported timber and timber products amounted to £28,683,752.- as against £21,694,219.- in 1983 i.e. an increase of 32.22% was observed.

#### Silviculture.

During the year under review, among other silvicultural treatments, attention was given to the watering of plants especially in the plains and most of the funds for silviculture were spent for this purpose. An area of about 1,257 Ha (9,397 donums) was treated silviculturally at a cost of £58,403.-

Although the year under review was not a good seed year, the collection of the year with the stock of seed from last year, was adequate to cover the Departmental needs and requests for export. A quantity of about 1,106 kgs of seed was collected at a total cost of £6,725.- A quantity of 10.84 kgs as well as 475 cuttings were exported at a revenue of £352.58 cents.

The production of seedlings in the Departmental nurseries was adequate. A number of 420,796 seedlings were

raised compared to 394,928 in 1983. The seedlings produced in 1984 plus the stock of 1983 reached 872,488 including 390 seedlings taken over from the Agricultural Department. Out of the total quantity 163,229 were used Departmentally, 257,520 were sold to the public or other Government Departments and 60,772 were issued free of charge to schools, village authorities and other organizations and institutions for planting on public or communal lands.

#### Forest Management.

- (a) The inventory of Golden oak (Quercus alnifolia) which was initiated in 1983, was successfully completed in 1984. A total of 500 sample-plots of 0.2 Ha each were measured at Macheras, Adelphi, Troodos and Paphos forests. The results derived are the following: The mean volume per hectare was estimated to about  $10.97 \text{ m}^3$  R.O.B. The total volume on 21,110 Ha enumerated was estimated to about  $231,530 \text{ m}^3$  R.O.B. The error of sampling is  $\pm 9.25\%$ . Thus the true volume fluctuates between 210,120 and  $252,940 \text{ m}^3$  R.O.B. On the basis of the inventory results a management plan for the Golden oak forests is being prepared.
- (b) During 1984 another inventory that of Pinus nigra was initiated. This species is found exclusively at Troodos Forest with the exception of some scattered trees found at Madhari area of Adelphi forest. The total area covered with Pinus nigra both pure and mixed with Pinus brutia is estimated 4,976 Ha. Most of this area was classified as National Forest Park (4,375 Ha) and the rest as Nature Reserve (177 Ha) and Permanent Forest Reserve (424 Ha).

The inventory method used is the "Two Stage Sampling". A number of 207 sample plots of 0.2 Ha each, with a constant distance between them of 470 m was selected. The enumeration was started in October and 93 sample plots were completed upto the end of the year. The work will be continued and completed in 1985.

- (c) Another task undertaken in 1984 was the localization and the classification of the best site qualities within the Main

State Forests. The main object is the intensive exploitation of the best sites for the production of timber.

During the year, 1,224 Ha (9,150 dons) of forest land were leased for Agricultural and Animal husbandry purposes. Prospecting permits, quarry licences and mining licences were as usual issued or renewed in State Forests.

#### Forest Education.

The Cyprus Forestry College completed in 1984 its 33rd Academic year. Thirteen Cypriot students, two from Gambia and one from Seychelles, obtained their Diploma. Two six-month post-diploma courses were also organised and six candidates from abroad obtained the Higher Diploma in Forestry. The 34th Academic year began on the 2nd October, 1984 with a complement of 33 students out of whom 19 were Cypriots and 14 from other countries.

An educational tour to Greece was organized in June. Both the Senior and Junior Courses participated in the tour as well as the members of the instructional staff. Sixteen students with two professors from Bochum - Ruhr University (West Germany) visited the Cyprus forests and other natural resources of Cyprus from the 30th March to the 13th April 1984. They also had one day's visit at the Cyprus Forestry College where lectures on Forestry were delivered to them. A number of officers of the Department participated at various international Conferences, Seminars etc.

#### Forest Research.

Forest Research and Publicity were continued on the same lines as in past years, against an expenditure of £4,577.-

In summary, Research dealt with the enriching of the Cyprus flora through introduction and trial of exotics, with forest genetics for production of good quality seed through the establishment of Seed Orchards, with Tree Banks and Arboreta and with forest protection against insects and fungi.

## Forest Engineering.

### (a) Forest Roads.

The construction of new forest roads and improvement of existing ones, constitutes an important aspect of the work of the Department, as roads serve on the one hand forest protection, tending and exploitation and on the other hand tourism and communication between forest villages.

During the year under review the following work was carried out by the Forest Department:

- 2.000 kms of forest road at a cost of £5,895.-
- 7.050 kms of Vehicle tracks at a cost of £11,489.-
- 22.805 kms of extraction roads at a cost of £78,793.-
- 0.200 kms of road widening at a cost of £1,227.-
- Construction of two pipe culverts one at Potamos tis Roudhias and one at Ay. Theodoros - Asinou roads at a cost of £6,516.-

In addition the Department undertook the widening of 4.800 kms of the Polystippos - Ayiasmatitis public road and the construction of 12 culverts along the same road on behalf of the P.W.D. at a cost of £76,610.-

In addition 1,330 kms of roads, 611 kms of vehicle tracks and 492 kms of extraction roads, were maintained at a cost of £53,941.-

The total mileage of forest roads by the end of 1984 was 1,331.61 kms of forest roads, 618.32 kms of vehicle tracks and 514.69 kms of extraction roads.

### (b) Forest Telecommunications.

The Forestry Department maintains a well-organised telecommunication network for proper forest protection and management. An amount of £27,538.- was spent for its maintenance and an amount of £11,641.- was spent for its extension and improvement. This telecommunication system at the end of 1984 consisted of the following:-



- 406.16 kms of telephone lines
- 385 telephone instruments
- 9 telephone switch-boards
- 8 V.H.F. radio links (16 sets)
- 4 V.H.F. control stations
- 150 mobile radio telephones
- 123 portable radiotelephones
- 12 loudspeakers (fixed on vehicles)
- 7 loud hailer (portable)
- 3 radiotelephone repeaters

(c) Forest Buildings

A new Fire Look-out Forest Station was erected at Kakomallis against an expenditure of £6,000.-

One pit-lavine was built at Marathos picnic site, at a cost of £780.- Furthermore a shed was erected at Xerargaka picnic site against an expenditure of £360.- Both were financed by the Cyprus Tourist Organisation. Major improvements were carried out at Yialia, Platania and Platres forest stations as well as usual repairs to other forest buildings at a cost of £14,114.- Equipment for various forest stations was purchased at a cost of £2,900.-

(d) Machinery and Plant.

During 1984 minor machinery and equipment of a value of £2,977.- was purchased. For the running and maintenance of all Machinery and Vehicles (including fuel and lubricants but excluding the wages of drivers) an amount of £254,728.- was spent.

Nature Conservation and Forest Recreation.

The Department of Forest during 1984 contributed greatly towards the effort undertaken by the Ministry of Agriculture and Natural Resources for Nature Conservation, through various activities, the main ones being the following:

- (a) The Department intensified its efforts through the organisation of lectures, voluntary work, ceremonies and speeches through radio and T.V. for expansion of tree planting and protection of Nature.
- (b) The effective protection of the Cyprus moufflon (Ovis ammon orientalis Cyprius) continued and the animal is now on the increase. The couple of fallow deer (Dama-dama) introduced by the Department in 1981 and kept at Platania Forest Station have not so far given birth. However, the three fallow deer (two female and one male) which were donated to the Forestry Department by the Swiss Government in 1983 and are kept at Stavros Forest Station, next to the moufflon enclosure have given birth to one young male.
- (c) An amount of £5,592.- was spent for improvement and/or extension of the picnic places at Xerargaka, Marathos, Ayia Paraskevi, Pashia Livadhi, Platania and Kambi tou Kaloyirou. In addition £12,932.- were spent for the maintenance of Mandra tou Kambiou, Stavros tis Psokas, Ayia, Trooditissa, Cedar Valley, Kambin toy Kaloyirou, Prodromos dam, Marathos, Xerargaka, Platania, Pashia Livadhi, Mesapotamos, Kornos, Profitis Elias, Kionia and Xerokolymbos picnic places.
- (d) The Forestry Department established another Nature Trail at Troodos, round Chionistra of a length of 7.1 kms. The cost which was £9,902.- was defrayed by the Cyprus Tourist Organisation. The four Nature Trails at Troodos attract many walkers from both Cyprus and abroad.
- (e) The electricity supply of Ayia Napa camping site which was initiated in 1983 was completed the year under review at a total cost of £16,730.-
- (f) The Council of Ministers declared on 30.4.1984 the forest "Potamos tou Liopetriou" as a National Forest Park and on 18.5.1984 an area of 823 Ha (6,152 donums) at Trypilos in the Paphos Forest was declared a Nature Reserve.

Provision of employment to the inhabitants of forest villages.

Under the socio-economic policy of the Government, which is expressed also through the Department of Forests, employment was provided to the inhabitants of forest villages. The total employment offered to both casual and regular employees was 461,760 working hours, against an expenditure of £758,710.- Besides the labourers employed directly by the Forestry Department, an additional number of woodcutters was also self-employed through tenders or otherwise in felling and transport of raw-material from the forests to various forest industries.

Acknowledgement.

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