REPUBLIC OF CYPRUS

MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT DEPARTMENT OF FORESTS

ANNUAL REPORT

OF THE

DEPARTMENT OF FORESTS

FOR THE YEAR

<u> 1993</u>

BY L. PEONIDES, DIRECTOR DEPARTMENT OF FORESTS.

ANNUAL REPORT OF THE FORESTRY DEPARTMENT FOR THE YEAR 1993.

1. GENERAL.

Progress in forestry 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 forests, especially against fires.
- ---Reforestation of burnt and other bare areas.
- —Conservation and protection of nature, especially in forest areas.
- —Production of timber and other forest products, seeds and seedlings.
- -Tending of forest stands.
- -- Rational management of the forests.
- -Forest education.
- -Forest research.
- —Improved and more effective management and protection of the forests through the following engineering activities:
 - Maintenance, improvement and expansion of forest roads, telecommunications and buildings
 - Purchase of new machinery and equipment and maintenance of the existing ones.
- —Expansion of computerised methods in data recording and processing.
- —Public recreation through the creation of National Forest Parks and the establishment, expansion and maintenance of picnic and camping sites.
- -Establishment and maintenance of Nature Trails.
- -Protection of flora and fauna.
- -Conservation of Nature Monuments.
- —Provision of employment to the inhabitants of forest villages.

2. EXPENDITURE

With a view to achieve the above targets £3.849.513 and £2.249.400 were approved in the Ordinary and Development Budgets respectively. The total amount spent out of both

Budgets was £5.794.067 (i.e. about 95,0%). In addition, through the Scheme of the United Nations High Commission for Refugees (U.N.H.C.R.) an amount of £180.816 was approved and spent for various development projects such as reforestation, silviculture, roads and fire traces, fire prevention measures, the purchase of vehicles/machinery as well as the organization of seminars.

3. REVENUE

Apart from the indirect benefits of the forests, which cannot be calculated in terms of money, an amount of £1.676.637 was collected by the Forestry Department as revenue in 1993. An additional amount of £172.618, out of which £62.633 represents forest products sold on credit, £21.599 the cost for the felling and transport of part of the timber delivered to the Cyprus Forest Industries Co. Ltd. and the rest (£88.386) lease of forest land, is still to be collected.

4. FOREST PROTECTION

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 100 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 fourteen Fire Look-Out Stations, found on high peaks in the forests, were manned in order to detect and report forest fires; thirteen of them were functioning on a 24-hour basis and the other one only during day time.
- c) About 6,00 km of forest roads were constructed and 3,60 km were widened. In addition 12,00 km of vehicle tracks and 44,75 km of extraction roads were constructed, which serve also as fire traces.
- d) Two water tanks, at Pafos Division were constructed and five new hydrants 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, especially along the delimitation line, were carried out throughout the summer months, warning and advising villagers and others against forest fires.

- f) The "Save our Forests Week" which was initiated in 1985 was celebrated again in May 1993. In addition a "Save the Forests Day" was celebrated in all schools of Cyprus, in co-operation with the Ministry of Education.
- g) 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.
- h) The mechanisation for the extinction of forest fires, was successfully continued. At present, the Department has at its disposal 24 fire engines, five fire patrolling vehicles and 69 fire pumps of various types.
- i) In spite of the measures taken in 1993, 16 forest fires broke out (one was caused from lightning) and burnt a forest area of 69 ha. All fires were put under control almost immediately after they broke out; the largest of them, which burnt an area of 23 ha at Anarita Communal Forest, started from private lands and due to favourable conditions expanded very rapidly.

Also the Department assisted in the control of fires in agricultural lands especially those endangering the state forests.

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

Spraying from the air was continued during the year under review against the pine Processionary caterpillar, using <u>Bacillus thurigiensis</u> and <u>Dimilin</u>.

5. REFORESTATION

An area of 396 ha was reforested, while an area of 69 ha which was cultivated will be sown or planted in 1994. The total amount spent on reforestation was £198.276. Reforestation was not only carried out in Pafos, Troodos, Adelfoi, Limassol and Machairas forests but also in other bare areas such as Oreites, Larnaka salt Lake, Xylotympou, Oroklini, Troulloi, Koronia, Agia Napa, Moutti tou Ziou, Frenaros, Athalassa, Xylofagou, Vounari tou Athkiou and Ormideia.

Nine bulldozers were employed almost continuously for ground preparation, two of which were Menzi-Muck suitable for climbing and working on steep slopes and a big number of labourers were also employed for planting and sowing.

6. TIMBER PRODUCTION AND DISPOSAL

During the year under review timber extraction and supply to local wood industries continued in a satisfactory way. A volume of 37 990 m³ R.O.B. of timber was extracted from various state forests and sold to the Cyprus Forest Industries Co. Ltd. (C.F.I.), and to private individuals, for the production of constructional timber, chipboard, box—shooks etc. Out of the above volume, an amount of 37 181 m³ R.O.B. was stemwood and 809 m³ R.O.B. was branchwood which was sold to the C.F.I. for the production of chipboard. The revenue of the Department from timber sales was about £579.208. In addition, timber valued at £62.633 was sold to the Cyprus Forest Industries Co. Ltd., on credit.

The Forestry Department issued 43 sawmill permits during 1993.

7. FOREST MANAGEMENT

- a) During 1993, a total of 17 permanent sample plots in young plantations of <u>Pinus brutia</u> found in Pafos and Adelfoi Forests were re-measured for growth studies. The various desired parameters such as volume, mean diameter, mean height, mean height of usable timber etc. will be determined in 1994 with the help of a computer.
- b) The Forestry Department received during the year under review another three computers from the Data Processing Services. The Department has at its disposal twenty-one computers as well as, a sufficient number of programs which are used very effectively.
- c) During the year, 1 192 ha of forest land were leased for Agricultural and Animal husbandry purposes. By the end of the year forty six quarry licences and three mining licences were in force in state forests; out of them twenty-one quarry licences were issued in 1993.

8. SILVICULTURE

During the year under review, among other silvicultural treatments, emphasis was given to the watering of plants (131 ha), especially in the plains. Most of the funds for silviculture were spent for this purpose. Additionally, an area of about 655 ha was treated silviculturally (thinnings, cleanings etc). The total amount spent was £82.723.

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 both the Departmental needs and requests for export. A quantity of about 1 197 kg of seed was collected at a total cost of £9.086. A quantity of 7,84 kg was exported at a revenue of £221.

The production of seedlings in the Departmental was adequate. A number of 493 150 seedlings were compared to 483 708 in 1992. The seedlings produced in 1993 the stock of 1992 amounted to 896 184. Out total quantity, 119 675 were used Departmentally, 217 194 were sold to the public or other Government Departments, and 60 211 issued free of were charge to schools, village authorities and other organizations institutions for planting on public or communal Also, 19 617 plants were issued free of charge to private individuals for forestation of privately owned properties.

9. FORESTRY EDUCATION

The Cyprus Forestry College completed in 1993 its 42nd Academic year. Twelve Cypriot and three foreign students, obtained their Diploma in Forestry. One six—month Post—Diploma course was also organised and one candidate from abroad obtained the Higher Diploma in Forestry. The 43rd Academic year began on the 2nd October, 1993 with a complement of 33 students out of whom 24 were Cypriots and 9 from other countries.

A number of officers of the Department participated in various international Conferences, Seminars etc. Also, a number of officers attended educational programmes both in Cyprus and abroad.

10. FORESTRY RESEARCH

Forest Research and Publicity were continued on the same lines as in past years, against an expenditure of £7.642.

Research mainly dealt with forest genetics for production of good quality seed through the establishment of Seed Orchards, with the establishment and maintenance of a Tree Bank and an Arboretum and with the control of insects and fungi.

11. NATURE CONSERVATION

The Department of Forests during 1993 contributed greatly towards the effort undertaken by the Ministry of Agriculture, Natural Resources and Environment 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 efforts for the study, protection and systematic recording of the Cyprus indigenous and endemic plant species which was initiated in 1987 was continued. The collection of specimens for the completion of the Botanical Collection in the Department was also continued.
- c) The efforts to spot and protect Tree Monuments were intensified. For the maintenance and protection of Tree Monuments an amount of £ 1.947 was spent.
- d) The Council of Ministers in February 1993 declared an area of 385 ha at Kavo Gkreko State Forest into a National Forest Park.
- e) The permanent sample plots which were established on the banks of the Achna Water Reservoir in 1990, with the aim to study the impact of changed water conditions on the development of flora and vegetation were re-measured during the year under review.
- f) The effective protection of the Cyprus moufflon (Ovis ammon orientalis cyprius) continued and the animal remains on the increase.

12. FOREST RECREATION

An amount of £59.035 was spent for the creation, improvement and extension of picnic and camping places. In addition £83.969 were spent for the maintenance and cleaning of the picnic and camping places within the forests.

In 1993, the works which started in 1991 for the implementation of the Development Plan for the entire Athalassa National Forest Park were continued. In the Plan it is provided the execution of various works the total cost of which is estimated to £1.928.000.

The works for the implementation of the Development Plan for the Kavo Gkreko National Forest Park, which also started in 1991, were continued and completed during the year under review.

Furthermore during 1993, the works for the implementation of the Development Plan for the Paedagogical Academy National Forest Park were started. The Plan was finalized through consultations with other interested Government Departments and Services, Local Authorities and other non Governmental Organizations.

Also during the year under review, the implementation of the Development Plan for the Troodos National Forest Park was started. The total amount spent for the establishment, development and maintenance of National Forest Parks during 1993 was £209.156.

The Forestry Department established in Troodos National Forest Park from Departmental Funds a Nature Trail of a length of 2,00 km and two Paths of a total length of 9,80 km. Another two paths of a total length of 5,25 km were established in Pafos Forest and a total amount of £29.175 was spent. Furthermore, another two new Nature Trails, one at Moutti tou Stavrou and one at Teisia tis Madaris of a length of 2,50 km and 2,31 km respectively were established. Also, the Nature Trail at Stavros tou Agiasmati was completed by creating another 0,60 km of Trail. The total cost of £18.504 was defrayed by the Cyprus Tourism Organisation.

The five Nature Trails at Troodos, the three at Akamas, the one at Kavo Gkreko, the two at Stavros tis Psokas, the two at Madari, the one at Kyparissia and the one at Stavros tou Agiasmati attracted many walkers from both Cyprus and abroad.

13. FOREST ENGINEERING

a) Forest Roads

The construction of new forest roads and the 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 new roads and tracks were constructed:

- 5,95 km of forest roads at a cost of £ 19.654.
- 12,00 km of vehicle tracks at a cost of £14.365.
- 44,75 km of extraction roads at a cost of £166.426.

Furthermore 3,60 km of road widening was carried out at a total cost of £19.603.

In addition 1 357 km of roads, 738 km of vehicle tracks and 764 km of extraction roads, were maintained at a cost of £ 120.325.

The total mileage of the forest road network by the end of 1993 was 1 362,91 km of forest roads, 750,01 km of vehicle tracks and 808,49 km of extraction roads.

b) Forest Telecommunications

The Forestry Department maintains a well—organised telecommunication network for proper forest protection and management. An amount of £46.000 was spent for its maintenance and an amount of £14.869 was spent for its extension and improvement. This telecommunication system at the end of 1993 included the following:—

- 408,48 km of telephone lines
- 401 telephone instruments
- 8 telephone switch-boards
- 20 V.H.F. radio links
- 4 V.H.F. control stations
- 298 mobile radio telephones
- 333 portable radiotelephones
- 4 radiotelephone repeaters.

c) Forest Buildings

During the year under review, an office was built at Athalassa and the new house at Gialia Forest Station was completed. Furthermore the building of new lecture rooms at the Cyprus Forestry College was started. Also, major improvements were carried out at Tripylos Fire Look-out Station (Pafos Division) against a total expenditure of £21.538.

Usual repairs and maintenance were carried out to various forest buildings, at a cost of £43.936. Equipment for various forest stations was purchased at a cost of £4.953.

d) Machinery and Plant

During 1993 minor machinery and equipment of a value of £14.194 was purchased. For the running and maintenance of all machinery and vehicle (including fuel and lubricants but excluding the wages of drivers) an amount of £134.926 was spent.

The Forestry Department received during the year four new fire brigade lorries and one vehicle.

14. PROVISION OF EMPLOYMENT TO FOREST VILLAGES

Under the socio—economic policy of the Government, which is implemented also through the activities of the Department of Forests, employment was provided to the inhabitants of forest villages. The total employment offered to both casual and regular employees was 63 700 work days. Besides the labourers employed directly by the Forestry Department, an additional number of woodcutters was self—employed through tenders or otherwise, in felling and transport of raw—material from the forests to various forest industries, at a total of about 12 964 work days.

15. AID FROM ABROAD

During 1993, through the Scheme of the United Nations High Commission for Refugees (U.N.H.C.R.) an amount of £180.816 was approved for various development projects such as reforestation, silviculture, roads and fire traces/fire prevention, the purchase of vehicles/machinery as well as the organization of seminars.

The work done, which is also included in the respective subjects, was the following:

- Reforestation

An area of one ha was reforested, while an area of one ha was beated—up. Also an area of nine ha was cultivated against a total expenditure of £8.332.

- Silviculture

An area of about 142 ha was treated silviculturally at a cost of £13.908.

-- Roads

About 152 km of forest roads were maintained at a total cost of £6.486.

- Fire Traces/Fire Prevention

About 16 km of fire traces were constructed and 157 km were maintained. A path of a total length of 1,25 km was established. Also for fire prevention purposes the new house at Gialia Forest Station was completed and major improvements were carried out at Tripylos Fire Look-out Station against a total expenditure of £43.452.

— Vehicles/Machinery and Other Equipment

Two new fire brigade lorries and fire-fighting equipment at a total cost of £107.519 were purchased.

— Seminars

For the organisation of seminars as well as for educational programmes an amount of £1.119 was spent.

16. ACKNOWLEDGEMENT

Warm thanks are expressed to all Ministries and Government Departments for their close co-operation and to the Police, the National Guard, the U.N. Force in Cyprus, the British Bases, the Cyprus Telecommunications Authority, Boy_Scouts, the Girl Guides, the Cyprus Forestry Association and to all other Organisations and individuals for their kind assistance to the Department of Forests. Warm thanks are also expressed to the United Nations High Commission for Refugees for its considerable assistance financing various development projects such reforestation, silviculture, roads and fire traces, purchase of vehicles/machinery for fire prevention purposes as well as the organization of seminars. Also warm thanks are extended to the Government of the Federal Republic of Germany and the Commonwealth Secretariat scholarships awarded to overseas students to study at the Cyprus Forestry College as well as to forest officials study abroad. Last but not least, warm thanks are expressed to all the Forestry Staff, for their hard-work, zeal and devotion to duty and for their close co-operation, without which none of the targets and objectives of the Department could have been achieved.

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