

REPUBLIC OF CYPRUS

**MINISTRY OF AGRICULTURE,
NATURAL RESOURCES AND ENVIRONMENT**

DEPARTMENT OF FORESTS

**ANNUAL REPORT
OF THE
DEPARTMENT OF FORESTS
FOR THE YEAR
2002**

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ANNUAL REPORT OF THE CYPRUS FORESTRY DEPARTMENT FOR THE YEAR 2002

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.
- Expansion of Forests by reforesting of new areas brought under Forestry especially in the lowlands.
- 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.
- Harmonisation with Acquis Communautaire.

2. EXPENDITURE

With a view to achieve the above targets £13.641.737 were approved in the Budget for the year 2002. The total amount spent out of the Budget was £12.354.721 (i.e. 90,57%).

3. REVENUE

The amount collected by the Department of Forests as revenue in 2002 was £ 1.129.288. The uncollected amount representing leases of forest land was £ 220.140. However, it should be noted that the value of indirect benefits by far exceeds the revenue value.

4. FOREST PROTECTION

I. Protection against fires

The protection of existing forests against fires, especially during the prolonged dry and hot summers, is the principal concern of the Department of Forests. For the prevention and control of forest fires the following measures were taken:

- a) Recruitment of the Fire Fighting Task Force consisting of 160 firefighters. Its members were employed on various forest operations at strategic points in the forest, being at the same time on call through radio telephone.
- b) During the summer months thirteen permanent and four temporary Fire Look-Out Stations, and eleven observation points found on high peaks in the forests, were manned in order to detect and report forest fires.
- c) About 3,39 km of forest roads were constructed and 25,94 km were widened or improved. In addition 24,02 km of vehicle tracks and 14,81 km of extraction roads were constructed, which serve also as fire traces.
- d) About 15 km of fire traces were constructed and 840 km were maintained.
- e) Two water tanks at Pafos Division were constructed and four new hydrants were installed on pipes passing through the forest and on water tanks, to supply water in the event of a fire, to the Departmental fire engines.
- f) Mobile patrols in the forest, especially along the delimitation line, were carried out throughout the summer months, for prevention, detection and rapid intervention.
- g) The "Save our Forests Week" which was initiated in 1985 was celebrated again in May 2002. In addition a "Save the Forests Day" was celebrated in all schools of Cyprus, in co-operation with the Ministry of Education and Culture.
- h) 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.

i) The mechanisation for the extinction of forest fires was successfully continued. At present, the Department has at its disposal 37 fire engines, 25 fire patrolling vehicles and 97 fire pumps of various types.

j) In spite of the measures taken in 2002, 28 forest fires broke out and burnt a forest area of 20 ha. It is worth mentioning that the year under review was the seventh best year with the smallest area burnt since records are kept, i.e. 1886. Most of the fires were put under control almost immediately after they broke out; the largest of them occurred at Pykni area (Akamas Forest) and burnt an area of 10 ha.

The Department of Forests has also participated in the fighting of 127 fires occurred in private and government lands adjacent to the state forest, which burnt an area of about 1 854 hectares.

The causes of these fires were as follows:

Agricultural operations 28%, Campers/visitors/travelers 11%, Houses 5%, Malicious 12%, Refuse burning 5%, Natural causes (lighting) 3%, Military operations 10%, Hunting 6%, Rekindling 1% and other causes such as use of electric equipment, electricity line, throwing of unextinguished cigarette-ends and matches, children etc. 6%. The percentage of unknown causes was reduced down to 13%.

Furthermore the Department of Forests continued the implementation of the Fire Protection Plan for rural areas which started in 2001. The Plan includes Prevention, Detection and Presuppression measures and its implementation is estimated to cost £ 2.500.000.

II. Protection against insects

Spraying from the air was continued during the year under review against the pine Processionary caterpillar, using Bacillus thuringiensis and Dimilin.

5. REFORESTATION

An area of 345 ha was reforested, while an additional area of 32 ha was cultivated to be reforested in 2003. Furthermore for the establishment of roadside plantations an area of 39 ha was planted along the new roads Limassol – Pafos and Dekeleia – Famagusta. The new practice adopted in 2001, concerning the support of natural regeneration in burnt areas, waiting for 5 to 7 years, before start the proceeding with artificial reforestation using mechanical means, was also continued.

Reforestation was carried out not only in Pafos, Troodos, Adelfoi, Limassol and Machairas forests but also in other bare areas such as Agia Napa, Sotira, Achna, Dali, Athalassa, Kato Vouno, Lythrodontas, Kellia, Rizoelia, Troulloi I, III and V, Xylyotymvou, Asbestos Mine, Larknona I, Profali II, Aspromoutti, Akapnou, Kremmos tou Afti, Kato Moni, Polemidia, Alexigros and Xylofagou.

Nine bulldozers were employed almost continuously for ground preparation, one of which was Menzi-Muck suitable for climbing and working on steep slopes and a large number of labourers was 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 10 115 m³ R.O.B. of timber was extracted from the state forests and sold to private individuals, for the production of constructional timber, box-shooks etc. It is worth mentioning that as from 2001, the Forestry Department stopped the sale of any timber to the Cyprus Forest Industries Co. Ltd., after a relevant decision of the Council of Ministers to close down the sawmilling and the particleboard manufacturing units. The revenue of the Department from timber sales was about £ 171.391.

In addition to the above, timber equivalent to 5 763 m³ R.O.B. was extracted as firewood from the state forests and an amount of £ 52.820 was collected.

During 2002, the Department of Forests issued 25 sawmill permits.

7. FOREST MANAGEMENT

a) The Council of Ministers approved in February 2002 the “National Forest Programme” of Cyprus. The National Forest Programme was prepared by the Forestry Department with the assistance of FAO experts and covers the ten year period, 2000-2009.

The main objectives of the Programme are:

- The forest development,
- The forest management on a sustainable basis,
- The rational and prudent multiple use of forests and
- The harmonization of Forest Policy with that of European Union.

The Programme consists of the following three parts:

- I. The Strategy.
- II. The Projects and Activities.
- III. The New National Forest Policy Statement which will replace the previous official policy statement.

b) The third consecutive continuous forest Inventory of Adelphoi, Machairas, Troodos, and Pafos Main State Forests to estimate *Pinus brutia*'s growing stock, increment and yield, started in 2001, was continued and by the end of 2002 the enumeration of permanent sample plots was completed.

Machairas, Troodos and Adelphoi forests were considered as one Management Unit and Pafos forest as another one. The number of permanent sample plots laid out was 810 and 1 040 respectively.

The collected data have been analysed simultaneously with the field work. However, the conclusions will be drawn early next year.

c) Twelve computers were received while one computer of old model was withdrawn. At the end of the year the Department had at its disposal eighty-six computers as well as a sufficient number of programs used effectively in a different number of applications.

d) During the year, 1 147 ha of forest land were leased for Agricultural and Animal husbandry purposes.

By the end of the year twenty-four quarry and two mining licenses were in force in state forests.

8. SILVICULTURE

During the year under review, emphasis was given to the watering and other silvicultural treatments of plants planted on an area of 202 ha, especially in the low lands, spending a significant amount from the funds available for silviculture. Silvicultural operations (thinning, cleanings, etc.) were carried out in an additional area of about 637 ha.

The seed collected during the year, together with the stock from last year, was adequate to cover both the Departmental needs and requests for export. A total quantity of about 3 394 kg of seed was collected. A quantity of 6,00 kg was exported at a revenue of £155.

The production of seedlings in the Departmental nurseries was adequate. A number of 333 118 seedlings were raised compared to 322 235 in 2001. The seedlings produced in 2002 plus the stock of 2001 amounted to 1 019 976. Out of the total quantity, 92 270 were used Departmentally, 176 963 were sold to the public or other Government Departments, and 60 209 were issued free of charge to schools, village authorities and other organizations and institutions for planting on public or communal lands. Also, 20 267 plants were issued free of charge to private individuals for the afforestation of privately owned land.

9. FORESTRY EDUCATION

The Cyprus Forestry College completed in 2002 its 51st Academic year. Five Cypriot students obtained their Diploma in Forestry. The six-month Post-Diploma course was not organised because there were no candidates from abroad.

The 52nd Academic year began on the 1st of October, 2002 with a complement of 18 students out of whom 10 were Cypriots and 8 from other countries.

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

Also the Department organized at the Cyprus Forestry College Refresher Courses on various topics for the training of the Forestry Department Staff and a large number of officers participated. Furthermore eight Cypriot foresters under the European Union Programme "Leonardo da Vinci" participated in a three month study visit, four to U.K. and four to Finland.

10. FORESTRY RESEARCH

Forest Research and Publicity were continued on the same lines as in past years.

In summary, research dealt with the production of genetically improved seed of Brutia pine, the maintenance and improvement of the Arboretum and Tree Bank, the conservation of Forest Genetic Resources, the monitoring of atmospheric pollution on forests and with protection of forests against insects and diseases.

11. NATURE CONSERVATION

The Department of Forests during 2002 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) During the year under review the various preparation works for the Troodos Environmental Information Center were completed and it's functioning was started. As regards the Athalassa Environmental Information Center, both the construction work as well as the work concerning the purchase of the necessary equipment and the preparation of exhibits were continued. This Center is expected to start functioning next year.

- c) The effort 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.
- d) The Department of Forests has also actively participated in a new Programme of a duration of three years, aiming to the issue of the “Red Book of Cyprus Flora”.
- e) The efforts to spot protect and maintain Tree Monuments were intensified.
- f) During 2002, the effort for the systematic recording of the Cyprus indigenous and endemic mushrooms as well as the collection of specimens for the creation of a mushroom herbarium in the Department initiated in 1998 was continued.
- g) The Department of Forests has actively participated in the “LIFE” project aiming at the harmonization with European Union Directive 92/43 and more specifically with the inventory/mapping of the areas that would be proposed to be included in the European Network of Protected Areas “Natura 2000”. The Program was completed in 2002.
- h) The effective protection of the Cyprus moufflon (Ovis gmelini ophion) continued and the animal remains on the increase.

12. FOREST RECREATION

The works for the creation, improvement, extension, maintenance, and cleaning of picnic and camping places within the forests were continued.

During the year the works for the creation of two picnic places, one at Pyknopeftzieri (Adelphoi Forest) and one at Agios Antonios (Sotira Forest) initiated in 2001 were continued.

Also, during the year under review, the works for the establishment, development and maintenance of all National Forest Parks namely Athalassa, Paedagogical Academy, Troodos, Polemidia, Rizoelia and Kavos Gkreko were continued.

As regards the Paedagogical Academy National Forest Park, the works for the implementation of its Development Plan, which started in 1993, were continued and completed during the year under review.

The works related to Nature Trails and Paths include:

- a) Works financed from Departmental funds,
- Construction of a path of a length of 0,80 km at Akamas Forest, locality “Agios Georgios”.
 - Completion of the path at Machairas Forest, locality “Kakotzefalos” by creating another 2,00 km.

b) Works financed by the Cyprus Tourism Organisation,

- Construction of a section of the European Long Distance – Path No. 4 of a length of 1,80 km at Asprokremmos (Troodos forest), a section of a length of 2,00 km at Aetomoutti (Machairas forest) and another one section of a length of 1,30 km at Agia Varvara (Stavrovouni forest).
- Maintenance of a section of Prodromos Nature Trail of a length of 2,60 km, and
- Maintenance of various sections of the European Long Distance – Path No. 4 of a total length of 4,60 km.

Furthermore, the works for the maintenance and improvement of Nature Trails and Paths constructed in state forests were continued.

All the Nature Trails and paths constructed by the Department of Forests within and outside the State Forests attracted the interest of many walkers from Cyprus and overseas.

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:

- 3,39 km of forest roads,
- 24,02 km of vehicle tracks, and
- 14,81 km of extraction roads.

Furthermore 25,94 km of road widening or improvement was carried out and 22,95 km were asphalted.

In addition 1 427,86 km of roads, 862,66 km of vehicle tracks and 1 155,91 km of extraction roads were maintained.

The total mileage of the forest road network by the end of 2002 was 1 431,25 km of forest roads (including asphalted roads), 886,68 km of vehicle tracks and 1 170,72 km of extraction roads. The total length of the asphalted forest roads by the end of the year was 92,53 km.

b) Forest Telecommunications

The Forestry Department maintains a well-organised telecommunication network for proper forest protection and management. This telecommunication system at the end of 2002 included the following:

- 365,74 km of telephone lines
- 356 telephone instruments
- 8 cellular telephones
- 3 telephone switch-boards
- 6 V.H.F. radio links
- 1 V.H.F. control station
- 392 mobile radiotelephones
- 457 portable radiotelephones
- 4 radiotelephone repeaters.

c) Forest Buildings

During the year under review, a new house for firefighters at Agia Marina Forest Station and two stores, one at Orkontas and one at Liopetri Forest Stations were built and two latrines, one at Rizoelia National Forest Park and one at Agios Antonios picnic place were constructed. Furthermore, the extension of the restaurant at Stavros tis Psokas Forest Station was started and five houses at Dekeleia were received from the Electricity Authority of Cyprus. Also, major improvements were carried out at Lythrodontas Forest Station, at two houses at Platania Forest Station, at one house for firefighters at Gefyri tis Panagias Forest Station as well as on Moni fire look-out station.

In addition, usual repairs and maintenance were carried out to various forest buildings and the necessary equipment for various forest stations was purchased.

d) Machinery and Plant

During 2002, the operation of the workshop at Athalassa for the maintenance of motor vehicles and machinery was continued.

The Forestry Department received during the year a new bulldozer, two fire engines, five fire patrolling vehicles, three lorries, two busses, two agricultural tractors and thirty-eight vehicles.

Also, various minor machinery, equipment, tools and instruments were purchased including one mechanical air sprayer, twenty five power chainsaws and twenty grass mowers.

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 103 220 work days against a total expenditure of £ 3.955.099.

Besides the labourers employed directly by the Forestry Department, an additional number of labourers were 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 3 176 work days.

Furthermore a large number of technicians and labourers were self-employed through the policy for tenders for the execution of various forest works such as, construction of forest roads, maintenance of forest buildings, establishment and maintenance of roadside plantations, maintenance and cleaning of picnic and camping places, etc.

15. EUROPEAN UNION MATTERS

a) Harmonisation with Acquis Communautaire

During the year under review the progress made towards harmonisation with acquis communautaire was significant particularly as regards preparatory work. The most important measures were:

- Classification of the wood in the rough (Directive 68/89)

The Law on the "Classification of the wood in the rough" was enacted on 1.11.2002.

- Marketing of forest reproductive material (Directive 99/105)

The Office of the Attorney General completed the legal vetting of a Regulation to transpose Directive 99/105 on the marketing of forest reproductive material and the Regulation was forwarded to the House of Representatives for voting at the beginning of 2003.

- Protection of forests against atmospheric pollution (Regulation 3528/86)

The collection and elaboration of data from the fifteen Level I plots were continued and the results for 2002 were made available to European Commission.

Furthermore, the preparatory work to establish the four Level II plots was continued. The necessary meteorological equipment was installed at Agia Marina Xyliatou Level II plot. The collection of the relevant data will start as from 1.1.2003.

- Protection of forests against fires (Regulation 2158/92)

The work to prepare the forest-fire protection Plan in accordance with the requirements of Regulation 2158/92 was continued.

- Protective measures against the introduction into the Community of organisms harmful to plants or plants products and against their spread within the Community (Directive 2000/29/EC)

Cyprus was preliminarily considered as protected zone for the harmful organisms of *Ips sexdentatus* and *Seiridium cardinale*. The absence of these harmful organisms was verified through systematic measurements carried out in the twenty two plots established in 2001, for this purpose.

b) Preaccession Assistance

The implementation of the Project entitled "Management of the Akamas forest" which is included in the 2001 National Program and co-financed by the European Union was continued. The objective of the Project is the installation of an Automatic Fire Detection System at the Akamas Forest.

c) Rural Development Plan 2004-2006

The preparation of the Rural Development Plan covering the time period 2004-2006 started in 2002. This Plan will be co-financed by European Union. It includes the following Forestry Measures:

- Afforestation of agricultural land.
- Protection of forests against fires and other natural disasters and reforestation of burnt areas.
- Afforestation of non agricultural land and investments for the conservation and improvement of economic, ecological and social function of forests.
- Investments to improve the harvesting, processing and marketing of forest products.

In addition, there are two common Measures with the Department of Agriculture:

- Vocational training of farmers.
- Encouragement of small scale handicraft activities related with the tradition and the production of special character products.

16. NATIONAL DEVELOPMENT PLAN 2004-2006

During the year under review, the National Development Plan was prepared covering the time period 2004-2006, i.e. it covers the remaining Programming Period of the European Union 2000-2006. This Plan replaced the known series of "Five Years Strategic Development Plans" the last of which covered the period 1999-2003. The Plan covers also the needs of the various "Programming Documents" which will be submitted for the Forestry Sector to the European Union for co-financing. The proposed Plan was based on the "National Forest Programme of Cyprus" and it includes the following measures:

- Protection of forests and other rural areas.
- Expansion of forests and silviculture.
- Afforestation of agricultural land.
- Protection of Nature and development of National Forest Parks.
- Sustainable forest management.
- Improvement of the processing and marketing of forest products.
- Vocational training.

17. COOPERATION WITH OTHER COUNTRIES BASED ON BILATERAL AGREEMENTS

Under the Bilateral Agreement on Agricultural Sector between Cyprus and Greece the two Countries exchanged a number of visits on various forest matters.

Furthermore, under the Bilateral Agreement on Agricultural Sector between Cyprus and Israel, a mission from Israel visited Cyprus. The visit covered various forest matters.

18. FOREIGN AID

During the year under review, the project entitled "Reforestation and Silviculture" financed by the United Nations Office for Project Services (UNOPS) was continued and completed. The total amount of assistance was £ 97.650 and its implementation was scheduled between 1.10.2001 to 31.10.2002. The amount spent during 2002 was £ 19.999 and the executed works have been included in the relevant chapters.

19. ACKNOWLEDGEMENT

Warm thanks are expressed to all Ministries and Government Departments for their close co-operation and to the Fire Service, the Police, the National Guard, the U.N. Force in Cyprus, the British Military Bases, the Cyprus Telecommunications Authority, the 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.

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