

ANNUAL REPORT OF THE FORESTRY DEPARTMENT FOR THE YEAR 2003

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 through reforestation 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 £15.872.622 were approved in the Budget for the year 2003. The total amount spent out of the Budget was £14.148.786 (i.e. 89,14%).

3. REVENUE

The amount collected by the Department of Forests as revenue in 2003 was £ 1.248.795. The uncollected amount representing leases of forest land was £ 210.951. 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 180 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 Fire Look-Out Stations, and sixteen observation points located on high peaks in the forests, were manned in order to detect and report forest fires.
- c) About 42,79 km of new forest roads were constructed, out of which 1,04 km are main forest roads, 28,88 km vehicle tracks and 12,87 km extraction roads. In addition 29,91 km existing forest roads were widened or improved.
- d) About 5 km of fire traces were constructed and 889 km were maintained.
- e) Three water tanks, two at Pafos Division and one at Troodos Division were constructed and ten 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 early intervention.
- g) The "Save our Forests Week" which was initiated in 1985 was celebrated again in May 2003. 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, 31 fire patrolling vehicles and 106 fire pumps of various types.

j) In spite of the measures taken in 2003, 27 forest fires broke out and burnt a forest area of 11 ha. It is worth mentioning that the year under review was the fourth 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 Fasouri area (Limassol Forest) and burnt an area of 5 ha.

The Department of Forests has also participated in the fighting of 158 fires occurred in private and government lands adjacent to the state forest, which burnt an area of about 1 263 hectares.

The causes of these fires were as follows:

Agricultural operations 33%, Campers/visitors/travelers 19%, Houses 3%, Malicious 12%, Refuse burning 3%, Natural causes (lighting) 6%, Military operations 3%, Hunting 2%, 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 12%.

II. Fire Protection Plan for Rural Areas

The Department of Forests continued the implementation of the Fire Protection Plan for rural areas which started in 2001. During 2003, 20,34 km of vehicle tracks, 102,94 km of fire traces, one water tank and two helispots were constructed and eight hydrants were installed. In addition, 299,00 km of vehicle tracks and 224,70 km of fire traces were widened, improved or maintained.

The works in total carried out since the inception of the Plan were as follows : 58,19 km of new vehicle tracks, 367,04 km of fire traces, six water tanks, two observation points, three helispots and installation of 36 hydrants.

III. Protection against insects

Spraying from the air was continued during the year under review against the pine Processionary caterpillar, using *Bacillus thurigiensis* (Foray 48B), Tracer and Dimilin .

5. REFORESTATION

An area of 393 ha was reforested during the year under review. The new practice adopted in 2001, concerning the support of natural regeneration in burnt areas, was continued. With this practice, artificial reforestation using mechanical means, is not carried out before a time period of 5 to 7 years is elapsed.

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, Athalassa, Kato Lakkos, Agios Nikandros III, Rizoelia, Troulloi II, and V, Xylotymvou, Pente Petres, Megali Moutti, Akapnou, Strofiggas, Kato Moni, Alexigros, Xylofagou, Madari, Agrokippia, Agia Marina Xyliatou, Avdellero, Pipis, Zonias, Mazovounos and Skouriotissa Mine.

In addition the works concerning the reforestation/restoration of environment at Amiantos (Asbestos) Mine initiated in 1995 were continued. During 2003, the hydroseeding method was used with very good results.

Eight bulldozers were employed almost continuously for ground preparation, as well as one Menzi-Muck suitable for climbing and working on steep slopes. Furthermore 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 7 531 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 Department of Forests 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 £ 144.119.

In addition to the above, timber equivalent to 4 870 m³ R.O.B. was extracted as firewood from the state forests and an amount of £ 53.453 was collected.

During 2003, the Department of Forests issued 25 sawmill permits.

7. FOREST MANAGEMENT

a) The works for the various Projects and Activities included in the "National Forest Programme" of Cyprus were continued. The National Forest Programme was prepared by the Forestry Department with the assistance of FAO experts during 1999 and covers the ten year period, 2000-2009.

b) The data of the third consecutive continuous forest Inventory of *Pinus brutia* in the exploitable Main State Forests, which was initiated in 2001, were analysed in 2003 and the results obtained were as follows :

- The estimated Growing Stock is 3 089 000 m³ R.O.B. while the Periodic Increment of the last 10 years was 465 000 m³ R.O.B. (Annual Increment 46 500 m³ R.O.B.).

The Annual Yield for the next 10 years 2002-2011, was set to 8 000 m³ R.O.B.

c) During 2003, a total of 17 permanent sample plots in young plantations of *Pinus brutia* found in Pafos and Adelfoi Forests were re-measured for growth studies. Estimates for the various parameters such as volume, mean diameter, mean height, mean height of usable timber etc. will be calculated in 2004.

d) During the year under review, 1 159 ha of forest land was 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. FOREST COMPUTERISATION

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

9. SILVICULTURE

During the year under review, emphasis was given to the watering and other silvicultural treatments of young plantations, especially in the low lands. Silvicultural operations (thinning, cleanings, watering during the summer period, etc.) were carried out in a total area of about 1 084 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 1 822 kg of seed was collected. A small quantity of seed was exported.

The production of seedlings in the Departmental nurseries was adequate. A number of 368 815 seedlings were raised compared to 333 118 in 2002. The seedlings produced in 2003 plus the stock of 2002 amounted to 1 040 922. Out of the total quantity, 83 657 were used Departmentally, 214 733 were sold to the public or other Government Departments, and 61 883 were issued free of charge to schools, village authorities and other organizations and institutions for planting on public or communal lands. Also, 22 129 plants were issued free of charge to private individuals for the afforestation of privately owned land.

10. FORESTRY EDUCATION

The Cyprus Forestry College completed in 2003 its 52nd Academic year. Six Cypriot and three foreign students, obtained their Diploma in Forestry. One six-month Post-Diploma course was also organised and two candidates from abroad obtained the "Higher Diploma in Forestry".

The 53rd Academic year began on the 1st of October, 2003 with a complement of 17 students out of whom 9 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 its staff and a large number of officers participated. Furthermore eight Cypriot foresters under the European Union Programme "Leonardo da Vinci" participated in a two month study visit, six to U.K. and two to Finland.

11. 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.

12. NATURE CONSERVATION

The Department of Forests during 2003 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, both the construction work as well as the work concerning the purchase of the necessary equipment and the preparation of exhibits for the Athalassa Information Center were continued. This Center is expected to start functioning next year. The Troodos Environmental Information Center continued its operation successfully.

- 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 participated actively in the Project started in 2002, aiming at publishing the “Red Book of Cyprus Flora”.
- e) The efforts to spot protect and maintain Tree Monuments were intensified.
- f) During 2003, 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) During the year under review, the works for the establishment of the Troodos Arboretum at Amiantos area were initiated. The Project is financed by the Anastasios G. Leventis Foundation.
- h) The effective protection of the Cyprus moufflon (Ovis gmelini ophion) continued and the animal remains on the increase.

13. 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 under review, the works for the creation of a picnic place at Pyknopeftzieri (Adelphoi Forest) initiated in 2001, were continued and completed.

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.

The works related to Nature Trails and Paths include:

- a) Works financed from Departmental funds,
 - Construction of a path of a length of 0,45 km at Stavrovouni Forest, locality “Marmaras”.
- b) Works financed by the Cyprus Tourism Organisation,
 - Construction of a new Nature Trail of a length of 17,00 km at Medieval Bridges of Roudias – Tzielefos – Elia (Pafos forest), one of a length of 2,00 km at Agioi Anargyroi (Kavos Gkreko forest) and another two at Troodos forest, one at Loumata ton Aeton and one at Fylagra of a length of 2,50 and 2,00 km respectively.

- Construction of another three sections of the European Long Distance – Path No. 4 at Lazania-Fikardou area (Machairas forest) of a total length of 8,50 km.
- Maintenance of various sections of the European Long Distance – Path No. 4 of a total length of 25,00 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.

14. 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:

- 1,04 km of main forest roads,
- 28,88 km of vehicle tracks, and
- 12,87 km of extraction roads.

Furthermore 29,91 km of road widening or improvement was carried out and 14,50 km were asphalted.

In addition 1 431,25 km of main forest roads, 886,68 km of vehicle tracks and 1 170,72 km of extraction roads were maintained.

The total mileage of the forest road network by the end of 2003 was 1 432,29 km of main forest roads (including asphalted roads), 915,56 km of vehicle tracks and 1 183,59 km of extraction roads. The total length of the asphalted forest roads by the end of the year was 107,03 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 2003 included the following:

- 365,52 km of telephone lines
- 355 telephone instruments
- 8 cellular telephones
- 3 telephone switch-boards
- 1 V.H.F. control station
- 364 mobile radiotelephones
- 458 portable radiotelephones
- 4 radiotelephone repeaters.

c) Forest Buildings

During the year under review, a new store at Platania Forest Station was constructed and the extension of the restaurant at Stavros tis Psokas Forest Station started in 2002, was continued. Also, major improvements were carried out at the Head-quarters offices at Platania Forest Station, at one house for firefighters at Platres Forest Station as well as on Forestry College building.

Furthermore, major improvements were carried out at two houses of remarkable architectural character, found the one at Stavros tis Psokas and the other one at Amiantos.

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 2003, the operation of the workshop at Athalassa for the maintenance of motor vehicles and machinery was continued.

The vehicles and machinery received during the year under review include : six new fire patrolling vehicles, two lorries, one agricultural tractor and seven vehicles.

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

15. 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 112 060 work days against a total expenditure of £ 4.361.520.

Besides the labourers employed directly by the Department of Forests, 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 2 480 work days.

Furthermore a large number of technicians and labourers were self-employed through the policy to contract 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.

16. EUROPEAN UNION MATTERS

a) Harmonisation with Acquis Communautaire

During the year under review the progress made towards harmonisation with acquis communautaire was significant. The activities carried out and measures taken were the following :

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

Enactment by the House of Representatives the Regulation transposing Directive 99/105 on the marketing of forest reproductive material.

- Protection of forests against atmospheric pollution (Regulation 2152/03)

The collection and elaboration of data from the fifteen Level I plots were continued and the results for 2003 were made available to European Commission.

Also, during 2003 the collection of data from the Agia Marina Xyliatou Level II plot was initiated. All the relevant data will be forwarded to the European Commission in 2004.

Furthermore, the preparatory work to establish another three Level II plots, namely Prodromos, Amiantos and Stavros tis Psokas was continued. The collection of the relevant data from these plots will start in 2004.

- Protection of forests against fires

A draft of the forest-fire protection Plan based on the guidelines of Regulation 2158/92 was sent to European Commission for comments.

- 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)

The absence of the harmful organisms *Ips sexdentatus* and *Seiridium cardinale* was again verified through systematic measurements carried out during the year in the twenty two plots established in 2001, for this purpose. In 2002, Cyprus was preliminarily considered as protected zone for these harmful organisms.

b) Preaccession Assistance

The implementation of the Project entitled "Management of the Akamas forest" which is included in the 2001 National Program and cofinanced by the European Union was continued. The objective of the Project is the installation of an Automatic Fire Detection System at the Akamas Forest. The tender procedure was unsuccessful and a new one was re-launched.

c) Rural Development Plan 2004-2006

The preparation of the Rural Development Plan covering the time period 2004-2006 started in 2002, was completed and the process for approval by the European Commission was initiated. The Plan 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, the following two Measures cover subjects pertaining to forestry :

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

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.

18. FOREIGN AID

During the year under review, a new project entitled "Management of State Forests" financed by the United Nations Office for Project Services (UNOPS) was initiated. The project covers activities concerning the Reforestation of burned and bare land, Silvicultural treatment and Training. The total amount of assistance was £ 139.000 and its implementation was scheduled between 1.4.2003 to 31.1.2004. The amount spent during 2003 was £ 118.332 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.

Warm thanks are also expressed to the United Nations Office for Project Services (UNOPS) for its assistance in financing the new project entitled «Management of State Forests».

Also warm thanks are extended to the Government of the Federal Republic of Germany and the Commonwealth Secretariat for the scholarships awarded to overseas students to study at the Cyprus Forestry College. 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.