Greece

Constantine Varelides and Michael Richards

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1. FOREST HISTORY IN GREECE

Greece is a predominantly mountainous country with a land area of some 13 m. ha, approximately half of which is forested. About half the forested area is classified as industrial forestry, with a total standing volume of 138 m. cubic metres, 56% of which is coniferous (31% fir, 10% black pine and 15% other conifers) and the remainder beech (20%), oak (17%) and other broadleaves (Ministry of Agriculture, 1992). The rest of the forest area is composed of evergreen broadleaves used mainly for grazing and fuelwood. Nearly two-thirds of the total forest area is owned by the State, the rest belonging to local communities, monasteries, private sector groups and individuals.

The Greek Forest Service was established in 1836. Initially it focused its efforts on identifying the productive forest areas, and bringing them under management. This involved the opening of virgin forests, and introducing silvicultural methods to restore forest areas degraded through over-cutting and grazing. The Forest Service has had to counter the problem of erosion in particular, much of the industrial forest area being located in the mountainous areas, as well as along the northern border. Another important activity was the reforestation of the bare hills (due again to over-cutting and over-grazing) in and around towns and cities. The wooded hills of Athens are a legacy of this period of activity.

In the 1950s, the emphasis was on the control of erosion resulting from the terrain, over-grazing and lack of forest cover. This involved engineering works (reducing gully slope, dams, jetties, etc.) to reduce the speed and damage from the torrents, and vegetation recovery in the catchment areas. For example, narrow hand-made terraces called '*gradoni*' were planted on steep eroded banks, pines were replanted in the catchment areas, and poplars and willows were planted in the gulleys. In order to tackle the over-grazing problem, the Forest Service developed mountain meadows to compensate for loss of grazing land. This required a considerable extension effort, as well as replanting with desirable fodder species.

At the same time poplar cultivation was promoted throughout the country. State and private plantations were created where there was sufficient underground water, using improved clones, vegetative propagation, mechanical site preparation and tending methods, and fertilisation, based on the work of the Forest Research Institute of Thessaloniki. Sand-dune stabilisation was another activity of the early 1960s, with a major project in the coastal dunes of the western Peloponnese. After preliminary work with fences and grasses, the area was planted with acacias, pines and eucalypts.

In the late 1960s and 1970s, the focus was on extensive reforestation through industrial plantations, particularly on the mountain slopes, involving the use of heavy machinery. The main species used for the upland plantations was black pine (*Pinus nigra*) and for the lowland areas, maritime pine (*P. pinaster*), brutia pine (*P. brutia*) and eucalypts on frost-free sites. Land reclamation on mining sites is another important recent forestry activity.

Fire prevention and suppression has been, and still is, an issue of great importance in Greek forestry. To reduce the danger, fire breaks and watering points are combined with extension work through the mass media; daily forecasts on fire risk are issued in the summer. The Forest Service is responsible for coordination of the suppression forces (fire brigade, air force, infantry and the general public) as well as having its own forest fire brigade.

Today, in response to international and domestic environmental pressures, the focus of the Forest Service has shifted to recreation forests, national parks and protected areas. Recreation forests have been created in the vicinity of the main towns, as well as in areas suitable for outdoor activities such as skiing, mountain walking, bird watching, river fishing, etc.

Forestry activities are supported by two Forest Research Institutes (in Athens and Thessaloniki). Professional forestry training takes place at Thessaloniki University and three Polytechnics (Drama, Karditsa and Karpenisi), while forest guards, fire fighters, and game-keepers are trained at Forest Service Schools.

2. EVOLUTION OF GREEK INVOLVEMENT IN TROPICAL FORESTRY

Arguably the main commonality between the domestic experience and tropical forestry lies in some of the silvicultural principles involved in maintaining the ecological relationships. The interaction of terrain, climate and ecology has been well-studied and practised in Greek forestry, providing a good basis for understanding some of the complexities in tropical areas, particularly in the drier savannah areas. The experience of afforestation of dryer sites, erosion and fire control, dune stabilisation, grazing management and grass-roots extension would appear to be particularly relevant, as reflected in the nature of the bilateral projects and consultancy missions described in section 5.

Lacking colonial links and only recently an aid donor, Greece has had little contact over time with the tropics, except as a result of importing tropical timber. Its interest in tropical forestry has come about mainly through membership of UN organisations like FAO and UNDP, and the more sectoral ITTO, IUFRO and Silva Mediterranea, and attendance at international fora such as UNCED and associated environmental Conventions like the Paris Convention on Desertification (Ministry of Foreign Affairs, 1991). Greece has also provided forestry experts on several FAO and EU project missions, as well as for longer-term assignments, including, for example, FAO missions to Jordan (forest genetics) and Djibouti (forest recreation), an EU mission to Nigeria (range management), and a long-term posting on a World Bank-supported afforestation project in Nigeria.

3. STRUCTURE OF AID DELIVERY

Development assistance has gradually increased in recent years, reaching US $189 m. or 0.15% of GNP in 1996, with a target to reach 0.2% of GNP in 1997 (Ministry of National Economy, 1997). However, this aid is primarily orientated to the Balkan States, the countries of the former USSR, and the Middle East, so

very little goes to tropical countries. Less than a quarter of Greek aid has been in the form of bilateral aid, 76% of the 1996 commitment being to the EU and other multilateral organisations. Bilateral official development assistance ($45 m. in 1996) can be broken down as follows:

- Financial assistance: $32.2 m.
- Technical co-operation (including forestry) and operational costs: $6.7 m.
- Food aid: $5.3 m.
- Emergency aid: $0.3 m.

The Ministry of National Economy is responsible for managing Greece's aid programme. It devolves the financial and management responsibility for technical co-operation projects to Ministries with the appropriate technical capacity; in the case of forestry this means the Ministry of Agriculture. There is no sectoral allocation for forestry.

It should be noted that the structure of technical co-operation aid delivery is largely based on food and emergency aid, and could prove inadequate for larger technical assistance projects which involve more than the payment of salaries, travel expenses and equipment bought in Greece and transported out. For example, there is no provision as yet for handling an independent aid project budget.

Project appraisal and evaluation of government-supported projects are normally carried out by experts in the appropriate Ministry. In terms of administration, forestry projects are normally handled by the EU and International Relations Development Assistance Department of the General Secretariat of Agricultural Policy in the Ministry of Agriculture. The Department consults the appropriate section of the General Secretariat of Forests (also in the Ministry of Agriculture) for appraisal and evaluation of a forestry aid proposal. The General Secretariat of Forests either carries out the task itself or asks for technical assistance from the Forestry Research Institutes or the universities. The final go-ahead is given by the Ministry of National Economy endorsing the recommendations of the Ministry of Agriculture.

Appraisal and evaluation of non-governmental projects follow the procedures set by the financial sponsor of these projects. Some consultancy firms have undertaken forestry tasks as part of other major projects (see section 5). Other small consultancy firms undertake the appraisal and implementation of forestry projects inside Greece and may gradually expand their overseas operations. Currently, however, there is no Greek forestry consultancy firm in the international market.

NGO aid, based on fund-raising and EU finance, is also limited to the provision of technical assistance and equipment, but on a much smaller scale. Most Greek NGOs are small charities focusing on emergency, food and medical aid. Although there have been some agricultural projects, such as work with livestock co-operatives in Kenya (by ELINAS) and the establishment of a model farm in Zaire (Greek Orthodox mission), there has been no forestry project to date.

Table 1. Greek official development assistance (oda) 1993–96 (US $ m.)

	1993	1994	1995	1996
Bilateral oda	15.1	32.5	26.9	44.5
Multilateral oda	75.4	89.6	125.4	144.2
Total oda	90.5	122.0	152.3	188.6
% of GNP	0.10	0.12	0.13	0.15

(Source: Ministry of National Economy)

4. STRATEGY

Greek experience in tropical forestry has so far been limited mainly to involvement with multilateral agencies and individual experts on project missions. In general, technical co-operation projects are identified on an *ad hoc* basis, mainly by Greek foresters participating in multilateral missions or working as in-country advisers. The decision to support a particular project is based on an assessment of the funds available (in competition with other sectors), the existence of appropriate Greek technical expertise, and the receptivity of the recipient country to the project idea.

The current general trend in Greek public opinion to reduce government involvement in favour of the private sector may promote a more flexible and efficient approach in the aid programme involving independent agencies. A second important influence is the rise in social and environmental awareness, which has shifted interest away from state-managed industrial forestry to NGO-based or grassroots agroforestry and community forestry programmes. The involvement of NGOs, which are mainly charities, tends to attract public sympathy.

As regards country selection, regional preference is for the Balkan countries, followed by countries of the former Soviet Union, the Middle East, and only then Africa, Asia, etc. However, the system is flexible enough for a well-presented project to be approved, whatever its geographical location. The kinds of projects favoured currently by Greece are those in which the country's forestry research and development experience can be used. Thus, afforestation, industrial plantations, range management, erosion control, combatting desertification and agroforestry are likely areas of focus in the future.

5. FORESTRY PROJECTS

Four main types of tropical forestry involvement can be identified: bilateral projects, long-term advisory posts, a number of consultancy missions for multilateral agencies, and private sector projects. Three bilateral projects involving technical assistance, training and equipment were identified, the latter two being still at the planning stage:

- a 1992 afforestation project in Inner Mongolia, China, involving the University of Joannina, Greece (see section 8);
- a 'Tropical Forest Protection' project in Benin, with a 1997 budget of $25,000;
- a 'Tropical Forest Ecosystems' project in Africa, with a 1997 budget of $62,500; this project, to be

implemented by the Forest Research Institute of Athens, aims to recover degraded savannah ecosystems in the Sahelian zone.

A private sector project involving forestry activities was a road construction and land stabilisation project in Libya, involving the EDOK-ETER Company (1980–83). The forestry component involved a 20 ha nursery with about 2–3 m. plants, sand dune stabilisation, erection of 500 km of windbreaks, and roadside planting.

6. RESEARCH AND TRAINING

The main research interests of the two Greek Forest Research Institutes in Greece (Athens and Thessaloniki) include forest management and economics, silviculture, forest genetics, forest protection, forest hydrology, forest ecology, land reclamation, forest recreation, wood technology and mountain meadows. The recent allocation of bilateral aid funds has facilitated some joint research projects with developing countries. Some research is also carried out at the forestry schools.

There is a university level forestry school in Thessaloniki. The forestry degree requires five years of study, including practice in the university and state forests. There are also three polytechnic-level forestry schools. Tropical forestry as such is not included in the curricula of Greek forestry schools, although elements of it, especially relating to dry savanna conditions, are found in such courses (within the forestry training) as ecology, silviculture and hydrology. Qualifications for lower cadres such as forest guards, forest fire fighters and game keepers are obtained in training, usually over a six month period, within the Forest Service.

7. PROJECT CYCLE MANAGEMENT

Project identification can occur in a number of ways:

- through individual professional contacts with the recipient country (this is the most common way in practice);
- in the form of a government-to-government request, as part of a general bilateral aid agreement which is channelled by a Greek representative in the country to the Ministry of Agriculture;
- from an international organisation;
- from an independent agency looking for partners.

Project ideas are normally submitted to the Ministry of Agriculture, which vets the project in terms of Greek technical and financial support capacity, the expected impact of the project, and whether it is environmentally sound. When the initial appraisal by the Ministry of Agriculture is positive, a preliminary costed proposal is worked out, and submitted to the recipient country for its response. It can then be finalised into an implementation plan, which is sent to the recipient country for final approval. Financing can then be approved. This procedure has proved adequate for the small technical assistance projects currently undertaken by Greece.

The Technical Adviser (usually from Greece, or recruited internationally), apart from advising the national project manager on technical matters, is responsible to the Greek government for the progress of the project, keeps the donor accounts, arranges (in collaboration with the project manager) consultancies, training and any other matter affecting the use of aid funds. In effect (s)he co-manages the project on Greece's behalf.

Constraints identified in the current system, in terms of its capacity to manage larger forestry projects, include the need for an independent project budget and accounting system, decentralisation and flexibility in project management, staff appraisal reports, and detailed monitoring and evaluation procedures. No evaluations by independent agents of Greek forestry projects have so far taken place.

8. PROJECT REVIEWS

The 'Use Rare Earths' project for the afforestation and prevention of desert expansion in Inner Mongolia, China

This project revolved around a particular method of planting developed at the Greek University of Joannina and called 'Kallidendron' after its inventor. It involves a planting medium consisting of soil, fertiliser and a water-absorbing compound that helps the plant survive water stress and grow satisfactorily in dry conditions. This technology had already been demonstrated in a number of African and Middle Eastern countries.

This 1992 project was included in the Sino-Greek Scientific and Technological Co-operation Agreement, and was implemented jointly by the Science and Technology Commission of Inner Mongolia and the University of Joannina. The Greek contribution included technical assistance, the provision of agrochemicals and training. The Chinese contribution included the trees and labour for planting. Some 15,000 fruit and forest trees were planted on seven experimental sites. Apart from the local training, a study tour in Greece was arranged for four people.

9. CONCLUSION

Greek involvement in tropical forestry has been limited mainly to participation in international organisations and fora, small technical assistance projects, and the contributions of Greek experts to multilateral missions. However, this involvement is gradually expanding. Greek technical assistance, based on the country's forestry background, has mainly concentrated on dryer tropical areas, and particularly on ecological and silvicultural aspects of reforestation. The present structure of aid delivery in the Ministry of Agriculture is adequate for small-scale forestry projects, but would need to be improved for larger projects. Most project requests come through individual professional links. Consultancy firms have yet to be used in forestry aid, but it seems likely they will be in the future, building on their considerable experience with domestic forestry projects.

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KEY CONTACTS

Forest Policy Department
General Secretariat of Forests
Ministry of Agriculture
Hippocratous 3–5
Athens
Tel: +30 1 3608042
Fax: +30 1 3608685.

EU & International Relations Development Assistance
General Secretariat of Forests
Ministry of Agriculture
Aharnon 5
Athens
Tel: +30 1 5244851

Forest Research Institute
Terma Alkmanos
Ilisia
Athens 115.28
Tel: +30 1 7784850
Fax: +30 1 7784602

Forest Research Institute of Thessaloniki
Vasilika
Thessaloniki 570 06
Tel: +30 31 461171
Fax +30 31 461341

ACRONYMS

DAC	Development Assistance Committee of the OECD
Dr	Drachma
ELINAS	Greek Institute of Solidarity and Development
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GNP	Gross National Product
ITTO	International Tropical Timber Organisation
IUFRO	International Union of Forestry Research Organizations
MFA	Ministry of Foreign Affairs
MNE	Ministry of National Economy
NGO	Non-Governmental Organisation
oda	official development assistance
OECD	Organization for Economic Cooperation and Development
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme

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