

# EU SUBSIDIES FOR FORESTRY PRACTICES DURING THE 1990s.

How EU taxpayers money gets lost in subsidising the forestry sector



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## 1. INTRODUCTION

Since the early 1990's there has been a shift in priorities, at least on paper, within the forestry sector, away from timber production, and towards a greater focus on other forest values, such as landscape, recreation, ecology and biodiversity. This is reflected in forest policy, both within Europe and internationally, with the multifunctional nature of forests being increasingly highlighted. In particular, greater recognition has been given to the environmental and social dimensions of sustainable forest management.

Subsidies can be an important tool for influencing how forests are managed, and so, play a crucial role in either reinforcing or undermining policy objectives. Therefore, it is important to determine whether such funds are actually helping to achieve the stated goals, in other words, if they are being wisely spent.

This report examines the allocation of public funding to forestry programmes within Europe during the 1990s. This is based on the findings of the research project 'Evaluating Financing of Forestry in Europe' (EFFE)<sup>1</sup> which assessed forestry measures in 13 European countries. This report also draws on a report by the European Court of Auditors on forestry funding under the EU rural development funds<sup>2</sup> (referred to subsequently as the ECA report) and on an assessment of EC regulation 2080/92, undertaken by the Institute for Forestry Development, Auzeville, France (the IDF report).<sup>3</sup>

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<sup>1</sup> Details of the project, including the country reports and final project report, are available online at:

<http://www.efi.fi/projects/effe/>

<sup>2</sup> Court of Auditors, Special Report No. 9/2004. Forestry Measures within Rural Development Policy. Available online at:

[http://www.eca.eu.int/audit\\_reports/special\\_reports/docs/2004/rs09\\_04en.pdf](http://www.eca.eu.int/audit_reports/special_reports/docs/2004/rs09_04en.pdf)

<sup>3</sup> Evaluation of the Community aid scheme for forestry measures in agriculture of Regulation No 2080/92. Final Report. Institute for Forestry Development, 2001. Available online at:

[http://europa.eu.int/comm/agriculture/eval/reports/forest/text\\_en.pdf](http://europa.eu.int/comm/agriculture/eval/reports/forest/text_en.pdf)

## 2. FUNDING ALLOCATIONS

Europe's forests receive huge subsidies, both from national governments and the EU. In the thirteen countries assessed by the EFFE project, over 8.6 billion euros of public funds were spent on forestry programmes during the period 1990-1999 (1999 prices). In relation to the total area of forest<sup>4</sup> found in these countries, this is equivalent to an expenditure of 333 euros per hectare of forest during this decade.

The allocation of public funding in the 1990s varied widely between these countries, with Estonia spending just 1.8 million euros, and France some 2600 million euros. In relation to the area of forest found in each of the countries, financing ranged from 0.81 euros per hectare of forest in Estonia to 1874 euros per hectare in the Netherlands (see tables 1 and 2).

Public funding came from state budgets, EU and international funds. National funds accounted for the bulk of the funding assessed by this project, 95% of the total, but this figure certainly underestimates the contribution of EU funds. The EFFE study only accounted for 400 million euros of EU funding during this period. However, the ECA report estimated that some 1500 million euros of EU funds were spent between 1992-1999 just on the afforestation of agricultural land, i.e. nearly four times as much as accounted for in these studies. The discrepancy between these figures is partly because the EFFE study did not include all of the Member States of Europe. Furthermore, in some of the countries data on EU funds were not available or were very difficult to assess with any accuracy. This was partly due to the fact that EU funds are used for co-financing, which sometimes meant that they were not separately accounted for, as was the case in France for example. In Germany, there were no national figures available on EU funds, because these were received by the state governments and the figures had not been compiled for the country as a whole.

*Table 1: Public and EU funding for forestry during 1990-1999 (1999 prices, & excluding tax concessions). (Source: Figure 3.14, EFFE (2004))*

Country	Total public funding, 1990-99. Mill.€	EU funding, 1990-99 Mill.€
Belgium	74.5	1.2
Catalonia (Spain)	149.0	5.9
Czech Republic	321.3	n.d.
Estonia	1.8	n.d.
Finland	1188.5	44
France	2613.7	81.9
Germany	1715.4	n.d.
Netherlands	635.4	n.d.
Norway	587.1	n.d.
Poland	119.2	1.3
Portugal	327.5	287.5
Slovenia	81.6	n.d.
Switzerland	1925.2	n.d.
TOTAL	8670.2	421.8

<sup>4</sup> Note that the term "forest" in the studies on which this report is based also includes monoculture tree plantations due to the use of the FAO's broad definition of "forest". See also page XX

Table 2: Public funding per hectare of forest for 1990-1999 (1999 prices, & excluding tax concessions) (Source: Figure 3.12, EFFE (2004))

Country	Public funding / ha. (€)	EU funding / ha. (€)*
Belgium	110.87	2.2
Catalonia (Spain)	76.41	3.1
Czech Republic	122.16	-
Estonia	0.81	-
Finland	52.2	2.0
France	153.85	4.6
Germany	159.72	-
Netherlands	1874.39	-
Norway	48.93	-
Poland	13.33	0.1
Portugal	94.48	83.1
Slovenia	70.02	-
Switzerland	1560.13	-
AVERAGE	333.64	

\* Calculated on the basis of % of EU funds of total public funding.

All of these funds were allocated through a range of financial instruments. The most important were grant schemes, through which over half the programmes were financed. Other instruments were soft loans and loan guarantees, compensation payments, technical assistance and assistance in kind.

Another highly significant source of funds for the forestry sector of some countries was tax-related subsidies. These included a variety of tax concessions and exemptions for forest owners and industry, for example, inheritance tax concessions for forest lands, forest tax concessions for conservation areas and (in Germany) a special social insurance system for foresters.

The EFFE study also analysed data on tax concessions and exemptions for five countries. Their value is shown in table 3, and further details are given in the country sections below. However, no overall assessment of the significance and effectiveness of this form of government assistance to forestry throughout the 13 countries could be made because of the lack of data. Estonia did not have any tax incentives for forestry, but in all the other countries data on tax incentives were not complete and so could not be evaluated.

Table 3: The financial values of tax incentives in the period 1990-1999 (1999 prices). (Source: Table 3.42, EFFE (2004))

	Czech Republic*	Finland	Germany	Poland	Slovenia
Tax incentives (million €)	24.3	1079.8	14171.6	281.0	0.1
Tax incentives as % of total forest funding	7%	48%	89%	70%	0.2%

\* Data for the Czech Republic refer to the period 1993-1999

The vast majority of the public finances were spent on measures aimed primarily at forestry investments and the commercial sector. The five activities which received most support were:

- forest protection (16.7%)
- planning & forest inventory (16.3%)
- infrastructure (14.1%)
- afforestation and reforestation (12.6%)
- extension services (11.1%).<sup>5</sup>

Support was also provided for nurseries, stand improvement for timber production, harvesting activities, assistance after catastrophic events, and forestry associations and co-operatives.

Support for conservation and the recreational values of forests received just 28% of the total public funding, with 16.7% for forest protection, 9.8% for forest conservation and only 1.5% for recreation. This is in spite of the high priority given to these activities in forest policy.

Much of the EU funding was for the reforestation and afforestation of agricultural lands, and improvement of forest lands. These activities were funded under EC Reg. 2080/92, and its predecessors, 797/85 and 1609/89. As well as the actual planting of trees, this Regulation provided grants for the management of young stands, drainage improvement, fire prevention measures, building of forest roads and technical assistance. Other EU programmes provided funds for the support of traditional rural biotope management (Reg. 2078/92), the establishment of conservation areas and conservation management (PHARE & LIFE).

Recipients of public funding included private forest owners, including small-scale or non-industrial owners, farmers or other land-owners, and public forest owners. There was little data available on the numbers of recipients of funds within each of these groups.

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<sup>5</sup> Source: Fig. 3.15, EFFE, (2004). These figures exclude those for Portugal. Here, the majority of the funding went on afforestation and reforestation activities.

### 3. EVALUATING EU FUNDING

The EFFE project used three different criteria to evaluate the funding programmes:

- effectiveness (the extent to which programme goals have been achieved);
- efficiency (comparison of the resources put in with the goods and services produced, i.e. cost-benefit analysis); and
- implementation (analysis of the wider effects of a programme).

Difficulties were encountered in assessing all these elements. An assessment of the effectiveness of the programmes was difficult because of the absence of specific targets and objectives. Cost-benefit analysis also presented some problems, because of the difficulties of quantifying benefits such as environmental improvements. It also proved difficult to link an effect with a particular programme, making an analysis of implementation very hard. Consequently, some of the findings were somewhat tentative. In spite of this, some conclusions can be made, and these are considered at the end of this document. First, the findings for the 13 countries studied are presented.

#### 3.1 Belgium

In the 1990's, 74.5 million euros of public funding was spent on forestry measures within Belgium, or 111 euros per hectare of forest. 2% of this, 1.2 million euros, came from EU funds. The majority of public funds in Belgium were allocated to afforestation and reforestation activities, these accounting for 93% and 77% of financing in Flanders and Wallonia respectively. The afforestation and reforestation programmes were aimed at: extending the area of forest; stimulating the extension of large forest complexes; and afforestation with indigenous tree species.

All of the EU funds were for the afforestation of agricultural land, these being allocated under EC Reg. 2080/92. Other measures which were financed were the establishment of forest groupings, improvement of forest accessibility, forest management, and educational and extension activities.

#### *Evaluation*

It proved very difficult for the EFFE project to determine the success, or otherwise, of the forestry measures. For example, the contribution of the afforestation programmes to extending forest complexes or increasing the use of indigenous tree species could not be assessed because of the absence of data. Not only were there limited data on the results, but specific targets had not been established at the start of these programmes, making the monitoring and evaluation of activities highly problematic.

Furthermore, no link had been made between these programmes and wider policy objectives. Thus, although it was stated that these measures were aimed at extending the area of forest and increasing the proportion of indigenous species, the reasons for this had not been clearly delineated, for example, whether the goals were to increase forest resources, to meet recreational needs, for carbon sequestration or to enhance forest diversity. This made evaluation impossible – for example, it was noted that if afforestation activities were assessed on the basis of carbon sequestration, then planting with fast-growing species was far more effective than the use of indigenous, broad-leaved species, but this finding is reversed if biodiversity goals are a priority.<sup>6</sup>

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<sup>6</sup> It should be noted that the role of afforestation in carbon sequestration remains unproven (see also in 'Discussion' below).

### **3.2 Czech Republic**

In the Czech Republic, public funding for forestry was 321.3 million euros, equivalent to 122 euros per hectare of forest. The majority of the funds (54%) were allocated to forest protection, mainly for the management and recovery of forests damaged by air pollution. Other important activities were afforestation and reforestation activities (11.4%), infrastructure (6.4%) forest conservation activities (6.3%) and support for recreation (5.5%). 25% of the total funding was allocated to programmes for private forest owners, 24% to state forests, and the remainder for joint programmes, i.e. for private and public forest owners.

Grants were the most important financial instruments, and support was also provided through technical assistance and extension services. In addition, a number of tax concessions were available in forestry, including for land tax, income tax and value added tax. Only data on land tax concessions were available, for the period 1993-1999. Exemptions on land tax are available for “protective” and “special purpose” forests, and for those damaged by air pollution. The estimated value of these was over 24 million euros, representing about 7% of the total public funding for forestry during this period.

#### ***Evaluation***

The EFFE study made attempts to evaluate the effectiveness of a range of forestry measures. However, this proved difficult, because there were no quantitative objectives defined for the programmes in question, and the data on outputs were not complete.

The available data do suggest that the afforestation programmes had a limited impact, since these resulted in an increase in forest area of less than 0.2%. Similarly, the area reforested was just 0.8% of the country's total forest area. Forest management plans were thought to have been successfully implemented, these covering 28% of all forest lands during a period of 2 years.

Apparently, a system for collecting statistical data on programme outputs has been implemented since 1999, and so it is to be hoped that this would enable recent forestry measures to be more meaningfully evaluated.

### **3.3 Estonia**

Despite having the highest forest area per person of the 13 countries, public funding on forestry was the lowest. In total, 1.8 million euros were spent for the period 1994-1999, or less than one euro per hectare of forest. Nearly all of these funds (95%) were for the preparation of forest management plans. The remaining funds were allocated to training for forest owners and habitat protection in private forests. All these measures were directed at private forest owners.

#### ***Evaluation***

Forest management plans were developed for over 63% of the total area of private forests in Estonia. The success of this measure could not be determined, since no specific targets were established, although it is stated within the Estonian Forest Policy that management plans “ought” to be prepared by all forest owners. Similarly for the other measures, no objectives were defined, and information on the programme outputs was limited. Therefore, evaluation of these measures was not possible.

### 3.4 Finland

A total of 1,188.5 million euros of public funding were spent on forestry in Finland during 1990-1999. This is equivalent to 52 euros per hectare of forest, a relatively low amount because of the country's extensive forest resources. The EU share of this was 44 million euros, 4% of the total. A range of measures were supported by public funding, as indicated in table 4. Most funding was allocated to forestry investments, and in particular reforestation and afforestation, drainage improvement and road construction.

These funds were allocated through a variety of instruments, including grants and soft loans, technical assistance and environmental compensations. A number of tax concessions were also available. The value of these was estimated at 1,080 million euros, for direct forestry tax concessions and 15 million euros, for indirect concessions.

EU funding supported the afforestation of arable land (EC Reg. 2080/92), assistance for traditional rural biotopes management (EC Reg. 2078/92) and advisory services (co-financed by EU funds 5b and 6). Some funds were also received for the establishment of conservation areas (under LIFE).

Of the total public funding, 63% was allocated to non-industrial private forestry, 34% to state forestry, and the remaining 3% to joint programmes.

Table 4: Allocation of public funds for forestry activities within Finland.

Activity	Total public funding allocated (million €)	% of total public funding	EU funding allocated (million €)	% of total EU funding
<b>FORESTRY INVESTMENTS</b>				
Afforestation / reforestation	232.6	20	13.4	30
Regeneration	n.d.		4	9
Drainage improvement	107.8	9	5.4	12
Forest roads	102.1	9	5.1	12
Tending young stands	119.1	10	0.9	2
<b>TECHNICAL ASSISTANCE</b>				
Estate level planning	65.6	6	3	7
Advisory services	49.5	4		
<b>PRIVATE NATURE CONSERVATION</b>				
Traditional rural biotopes management	14.1	1	6.2	14
Establishment of conservation areas	49.2	4	0.6	1
Management of conservation areas	7	1		
<b>PUBLIC TASKS</b>				
Land acquisition	180	16	2.6	6
Conservation management	100	9	3	7
Employment	68	6	-	-
Recreation services	48	4		
<b>TOTAL</b>	<b>1143</b>	<b>99</b>	<b>44</b>	<b>100</b>

Not included in these figures are tax subsidies, which were considerable in Finland.<sup>7</sup> The value of these to the forest sector during the 1990's was nearly the same as the public funds received, totalling 1079.8 million euros. This was equivalent to some 40% of the total potential tax revenues. Twelve different tax concessions were available. By far the most important, accounting for over 50% of the total, was that available for revenue estimation in site-productivity taxation, while 29% of concessions related to inheritance taxes on family businesses and taxes on self-employment.

### ***Evaluation***

The EFFE study found that the effectiveness of the various programmes directed at non-industrial private forest owners was generally good, in relation to the achievement of the programme objectives. However, it was noted that in most cases these objectives were only vaguely formulated.

Within Finland, support for the afforestation of agricultural lands was aimed at improving farm viability and keeping the population in the countryside. However, there is no evidence on whether afforestation actually has a positive impact on this. In fact, the EFFE report suggests that afforestation may actually be detrimental for employment, landscape and amenity values in Finland, so undermining the assumption that afforestation would help in maintaining rural populations.

With the support for traditional rural biotopes (under Reg. 2078/92), management plans were developed for half the potential area. One of the aims of this measure was to maintain and increase biological diversity. However, the total remaining area of traditional rural biotopes is just 20,000 ha., and it has been suggested that this is not sufficient to maintain biodiversity, implying that this measure can not possibly succeed in meeting its conservation objectives.

This finding highlights the need for carefully formulated programme objectives – objectives which are achievable under the prescribed measures, and with clearly defined targets to enable meaningful evaluation. Indeed the targets for nearly all the forestry programmes were very vague, making assessment difficult. In addition, the Finnish State Audit Office apparently found that there was a lack of transparency in the implementation decisions made under Reg. 2080/92. The Audit Office also highlighted the lack of co-ordination between this funding measure and agricultural policy, since agricultural support was not reduced, making afforestation measures less attractive to farmers.

## **3.5 France**

In total, there were 2613.7 million euros of public funding for forestry during 1990-1999, equivalent to over 150 euros per hectare of forest. Of these, at least 81.9 million euros, 3% of the total, were from EU funds. Public funding supported a wide range of activities. These included financing for forest planning and management, afforestation, public recreation, infrastructure (roads and fire prevention measures), extension services, and rehabilitation of mountain land.

It was apparently very difficult to find accurate data on European funds, and so only estimates could be made. This was due to the fact that EU funds rarely appear in national accounts, because they are used as additional credits, and also because of the “intricacies and obscurities” of the French accounting system. Most of the EU funds were for afforestation and reforestation, 55.5 million euros being

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<sup>7</sup> There has been reform of the tax system since this period, reducing the concessions available.

allocated to these activities (under EC Regs. 1609/89 and 2080/92). 20.9 million euros was allocated for the prevention of, and response to, natural disasters (Reg. No. 2158/92 and 2078/92), and 4.6 million euros on the rehabilitation of mountain land.

Of the total public funding, most was allocated to public forests (76%), and the majority of these funds (86%) were spent on forest planning and management (58%). Within the private forests, important activities were fire prevention in Mediterranean regions (23%) and afforestation (18%). Tax incentives were also significant, with tax concessions available for private forest estates. However, the value of these was not known.

### ***Evaluation***

The effectiveness of those measures for which data was available was considered by the EFFE study to be high – for example, 86% of the policy target for afforestation was achieved, and the Mediterranean forest fire prevention programme resulted in a decline in forest fires of 50%. However, this was achieved at great financial cost, a number of the measures being very inefficient. In particular, support for the public forest regime was very expensive, partly because of high administrative costs. This contributed to a financial crisis within the forest sector, and forest reforms were instituted in 2000 of the sources of funds, financial instruments and their allocation.

## **3.6 Germany**

The total public funding for forestry in Germany was 1715.4 million euros, equivalent to 160 euros per hectare of forest. Funding of forestry is mainly the responsibility of the state governments, and it is through the states that EU funds are distributed. Since much of the data from the state governments was incomplete, it was not possible to gain a complete national picture of public financing, nor of the contribution of EU funds.

Public funding was allocated through both direct (e.g. grants) and indirect (e.g. extension services) instruments. The majority of direct funding was allocated to storm damage coverage, this receiving one third of the funds. Afforestation measures received 16% of funds and a programme for soil protection and fertilisation received 10%. Other supported measures were conversion to nature oriented forestry, establishment of protection plantings, silvicultural measures, and support for initial investments.

There were also many tax concessions and exemptions available to the forest sector, the estimated value of which was over 14,000 million euros. In addition there was a special social insurance system for agriculture and forestry, evaluated at over 34,000 million euros. Funded by the German government, this system supported pension funds and health and accident insurance for those employed in the agricultural and forestry sectors.

### ***Evaluation***

An evaluation of the afforestation programmes was attempted, but this proved impossible because of lack of data on their outputs. In part, this was because of the mix of responsibilities for this measure across the EC, Federal and the state governments. However, the main reason was that measurable goals and targets had not been defined, and so data for evaluating them had not been recorded. This was not only the case for these programmes, but was a wider issue within the forestry sector in Germany.

Assessment of the implementation of these programmes highlighted further problems with these programmes. Most notably, that there were high levels of bureaucracy and high administrative costs – these accounting for an astonishing 75% of total payments. The complex administrative procedures also served as a hindrance to smaller forest owners, and in general, there was a lack of extension services. In addition, the decision making process for the allocation of grants was found to be insufficiently transparent. The absence of clear guidelines meant that there was too much room for discretion. This was perhaps exacerbated by the fact that no clear strategy existed for forest management. In particular, the issue of how to balance market-oriented forestry with other values, such as conservation, had not been addressed.

### **3.7 Netherlands**

During the 1990's, some 635.4 million euros was paid into the Dutch forestry sector from public funds. Since there is relatively little forest in the Netherlands, this equates to the highest amount of public funding per hectare of forest of the countries considered in this report – over 1870 euros per hectare. The amount of funds which came from the EU was not specified.

The programme which received most funding, 195 million euros, was for the acquisition and management of nature areas by the national forest service. Also significant were programmes for afforestation and reforestation, to which 143 million euros were allocated.

There are four types of forest owner in the Netherlands – the state, local authorities and public bodies, private forest owners and non-governmental nature conservation bodies. The proportion of funds received by each of these was not stated, but some of the main sources of funding were described. Thus, private forest owners received funding for forest maintenance (60 million euros), reforestation and afforestation projects (36 million euros) as well as for other management measures and for forestry co-operatives. Non-governmental nature conservation bodies, which own 11% of the forest area in the Netherlands, received support for regular forest management (32 million euros), land acquisition for nature conservation (83 million euros) as well as specific management and planning activities (about 5 million euros).

The financial instruments used were either grants or self-financing. There were also some tax incentives for the forest sector, for example, for those landowners who undertake work to enhance the natural beauty of their estates and allow public access. However, it was not possible to estimate the value of these.

#### ***Evaluation***

Assessment of the various forestry programmes found that there had been mixed results in their achievement of policy targets. The forestry and landscape grant schemes and land acquisition by the forest service were both successful, the former reaching 100% of the target and the latter 159% (i.e. exceeding the target). However, afforestation activities achieved just 33% of the policy target, and land acquisition by NGOs was only 42% successful. No further analysis was undertaken to explain these findings. However, it was mentioned that many forest owners were opting out of forestry because they regarded the costs as too high, even with the funding offered.

No assessments were made of the efficiency of the forestry measures being implemented in the Netherlands. This would seem particularly important, given the large amounts of money which are being spent on this sector. Indeed, it was commented that there is debate within the country on this

issue, in particular, as to whether funding for land acquisition is an efficient means of achieving nature conservation objectives.

### **3.8 Norway**

In Norway, 587.1 million euros of public funding were allocated to forestry in the 1990's, equivalent to 49 euros per hectare of forest. The majority of these funds came from the national government. The other source of funds was the Forest Trust Fund, financed by compulsory payments from the timber industry. This Fund also functioned as one of the main instruments for direct public financing. During the 1990's it distributed about 40% of public funds, the remainder being distributed by the Ministry of Agriculture and Food.

Most of the funding was allocated through grants for silvicultural measures, mainly reforestation, this accounting for 300 million euros in total. Other significant measures were road construction (about 90 million euros), forest plans (15 million euros), extension services (9 million euros) and Forest Owners Associations (14 million euros). Funding for conservation and protection activities amounted to 70 million euros, mainly for the establishment of conservation areas on private land. Information on the proportion of funds allocated to private and public forest owners was not available.

#### ***Evaluation***

Although the outputs of these programmes were reported, no evaluation was undertaken for the forestry programmes in Norway. It was reported that 20,000 ha. of land were reforested, 2600 km of ditches made in 1991-92, and 18,000 km of roads constructed, but no targets for these measures were reported and so their effectiveness could not be assessed. However, it was noted that while these activities had benefited forest owners, they would have had negative impacts on biodiversity and on landscape values.

### **3.9 Poland**

In Poland, public expenditure on forestry totalled 119.2 million euros, representing 13 euros per hectare of forest. Just over 1% of these funds, 1.3 million euros, came from the EU. Financial assistance through grants were provided for the afforestation of marginal agricultural lands, tree stand conversion, land acquisition, nature reserves, species protection and ecological education. Technical assistance was offered for the preparation of management plans.

Just over half of the public funds, 51.6%, were spent on afforestation during 1992-99. The conversion of tree stands damaged by air pollution or fires also received substantial financing, 38.6% of the budget. The majority of the funded measures were implemented in public forests, these accounting for nearly 90% of the funds, the remainder being allocated to private forests.

Tax subsidies were also very important in Poland, these exceeding the value of the public funds allocated to forestry. The estimated value of these, from 1992-1999 was 281 million euros, 84% of which was for State forests. Exemptions and concessions from the forest tax, payable for forest conversion and timber sales, were available for forests with tree stands up to 40 years old, protective forests, forests within nature reserves and national parks, and also those listed by the register of antiquities.

## ***Evaluation***

Cost-benefit analysis of the afforestation programmes concluded that these were beneficial both for individual forest owners and for society as a whole. In light of this, it was concluded that public funding on afforestation could be justified.

These programmes were found to have been effectively implemented in public forests, where 135% of the target area was afforested (i.e. 35% more than the target area). However, these measures were less successful in private forests, where 74% of the target was reached. This difference was partly due to the lower availability of private land for afforestation, less interest from private forest owners, and the method used for financing. One further problem was that there was little planning of these efforts, resulting in poor spatial layout.

An assessment of the effectiveness of the measures for the establishment of nature reserves and the preparation of management plans was also attempted. However, given that no quantitative objectives were defined, and a lack of data on the impacts of these measures, this proved impossible.

### **3.10 Portugal**

Public funding in Portugal during the 1990's totalled 327.5 million euros, equivalent to 94 euros per hectare of forest. The main sources of this funding were the EU structural funds, which accounted for 287.5 million euros, or 88% of the total public expenditure. There were 3 overlapping EU programmes during this period:

- 1986-1997: Forest Action Programme (*Programa de Acção Florestal, PAF*)
- 1994-1999: Forest Development Plan (*Plano de Desenvolvimento Florestal, PDF*)
- 1994: Regulation (EEC) 2080/92

These programmes supported the afforestation of agricultural land and the improvement and protection of forest stands, with the aim of improving forest resources, enhancing multiple use forestry, and combating the greenhouse effect. In addition to afforestation, other activities funded included multiple use forestry, fire-break and road construction, and private forest nurseries.

Some funds were received under Regulation 797/85 for investment in private forestry, but these were of minor importance. A range of tax exemptions and concessions were also available for forest owners, including taxes on forest goods, property and corporate taxes. However, the extent of these was not assessed.

There was little data available on the beneficiaries of these funds, and so all that could be stated was that the main recipients were the non-industrial private forest owners. This reflects forest ownership in Portugal, where some 93.4% of the forests are under private ownership. Communal forests cover just 5.4% of the total area, and public forests 1.2%.

## ***Evaluation***

Assessment of these programmes was difficult, because, as in the other countries, there were no specific targets established for these programmes. However, a cost-benefit analysis for the afforestation and reforestation activities concluded that for society as a whole (rather than for an individual forest owner), they were "profitable and worth to have been undertaken". This analysis took into account benefits such as marketed goods (e.g. timber, cork and pine cones and other non-wood forest products), recreation, and the protection of soil, water and landscape.

Significant areas were forested under these programmes. An area of 343,009 ha. was afforested or reforested and 380,601ha. of stands were improved. This represented an increase of about 11% and 12% respectively in the forest area. However, in the same period, 620,717ha. of forest was burnt, double the area which was afforested or reforested. These figures suggest that efforts to improve fire prevention and extinction were insufficient. Another factor contributing to this was the lack of co-ordination between forest policy and other sectors. For example, the EFFE report suggested that the forestry measures would have been more effective if there had been better integration with rural development policy. This is needed to help slow the movement of people out of the countryside, a trend which has contributed to the increase in forest fires.

EU funds did contribute to diversifying the tree species composition, as greater support was given for broadleaf and indigenous species, rather than eucalyptus and maritime pine. These measures also increased production of NTFPs as well as carbon sequestration, protection of soil, water and landscape quality.

These funds were a major financial incentive scheme for agroforestry systems in the south of the country, based on cork oak and holm oak. The targeting of non-industrial private forest owners represented a major change within Portuguese forest policy, since previously, the main goal had been for afforestation to increase timber supply for the pulp and paper industry. However, larger forest owners benefited disproportionately under these programmes. This was due to the lack of financial and technical support provided for applicants to the funds, which was a hindrance to smaller forest owners. Indeed, one area in which these funds failed was in the provision of a public forest extension service.

Such implementation problems were partly a result of a poor understanding of the various types of forest owner, and their different needs and priorities. Consequently, the need for greater public participation in policy making was highlighted.

### **3.11 Slovenia**

Public financing for forestry in Slovenia during the 1990's amounted to about 81.6 million euros, or 70 euros per hectare of forest. The real figure is higher, since financial data were not available for all of the country's forestry programmes. Some tax concessions were available for forest owners, but these were of minor importance. The total value was estimated at 130,000 euros, less than 0.2% of the total financial support for forestry.

The measures which received the most funds were the construction and maintenance of roads (33% of funds), forest management and silvicultural planning (25%), marking trees for cutting (18%) and stand improvement (11%). Other measures funded included forest regeneration, forest protection, maintenance of wildlife habitat, restoration of forests damaged by storms and fires, nurseries and extension activities. The majority of funds, 65%, were allocated to private forests, and the remainder to public forests.

#### ***Evaluation***

The reforestation programme resulted in 8,828 ha. of forest being regenerated, 0.8% of the total area of forest in Slovenia. This was 31% of the original target for this programme. Stand improvement measures were also not very effective – these were implemented in 80,931 ha. of forest, equivalent to

38% of the target. These poor results were largely a result of major organisational changes in Slovenia's forestry sector during the 1990's, including the de-nationalisation of large areas of public forest.

Other programmes were more successful. For example, the programmes for extension activities and forest management plans met their objectives, and silvicultural planning met 79% of the targets. However, the effectiveness of other programmes, including that for infrastructure to which most funds were allocated, could not be assessed because of lack of data.

### **3.12 Spain – Catalonia**

The EFFE report only investigated forestry funding in Catalonia, and did not look at Spain as a whole. Therefore, these data are only briefly considered here.

A total of 149 million euros public funding was spent on forestry within Catalonia in the period 1990-99, equivalent to an expenditure of 76 euros per hectare of forest. 4% of this funding, 5.9 million euros, was from EU funds, mainly directed at reforestation and afforestation.

Spain was a major beneficiary of EU financing for these activities. According to the IDF report, over 500 million euros of EU aid was granted for afforestation. This resulted in 459,000 ha. of forest being planted throughout the country, 45% of the total area afforested in Europe under Regulation 2080/92.

#### ***Evaluation***

Only the afforestation activities funded under regulation 2080/92 in Catalonia were assessed in the EFFE report. Such an assessment proved difficult, since there was little available information quantifying the outputs of these programmes. However, it was commented that they had 'relatively low success', and the conclusion was drawn that afforestation was not an effective use of funds, and that these would have been better allocated elsewhere.

According to the IDF report, afforestation met with more success in the rest of Spain. Extensive areas were planted, and this was expected to have had a significant impact on the availability and quality of forest resources. In particular, cork supplies were expected to be improved, and the proportion of indigenous species increased. However, there were a number of implementation problems. These included: an absence of zoning and planning; the planting of high-value conservation areas; a lack of training and awareness raising; and the use of seeds and seedlings of unknown origin risking genetic pollution.

### **3.13 Switzerland**

Public expenditure on forestry in Switzerland totalled 1925.2 million euros during the 1990's, representing 1560 euros per hectare of forest. This represents one of the highest expenditures per hectare of forest out of these 13 countries, second only to the Netherlands. The main financial instruments were grants and compensations, with 95.4% of the Federal funds being allocated by these means. Other instruments were investment credits and tax concessions, but the value of the latter was not significant.

The largest share of the funds was allocated to silvicultural activities (31%), forest protection works and installations (24%), measures to prevent and repair forest damage (23%), and infrastructure (14%). No data was available on the proportion of funds allocated to private or public forest owners.

### ***Evaluation***

In Switzerland, as in many of the other countries examined here, it was not possible to assess whether the forestry programmes were either efficient or effective because of the absence of quantified goals and measurable outputs. The lack of clarity as to the objectives of these programmes perhaps contributed to concerns among conservationists within the country that too little attention had been paid to ecological issues.

#### 4. DISCUSSION & CONCLUSIONS

The main issue highlighted by the EFFE report was that there were insufficient systems for monitoring and evaluating forestry measures in all of the countries surveyed. In most programmes, there was a lack of clearly defined objectives and of quantitative targets, and in particular, few targets relating to the wider environmental and social impacts of forestry measures. Consequently, it proved very difficult to assess the effectiveness and implementation of the various measures.

A major source of EU funds during this period was EC Reg. 2080/92. In spite of this regulation requiring Member states to define provisions for evaluating and monitoring the effects of the regulation on the environment, there is little evidence of this having taken place. This was also a finding of the IDF report, which highlighted the absence of common tools for monitoring and evaluating activities funded by Regulation 2080/92, as well as the patchy nature of official data. This has been recognised by the European Commission. Regulation 1257/99 provided clearer guidelines for monitoring and evaluation, and a common set of monitoring indicators were drawn up in 2000.<sup>8</sup> It remains to be seen how widely these have been utilised, and whether they have resulted in improved monitoring and evaluation.

There are two wider problems with the evaluation of (re)afforestation programmes in particular. Firstly, although carbon sequestration is usually cited as one of the objectives of (re)afforestation, the scientific basis for this is questionable<sup>9</sup>. Secondly, data on the quality of forests is typically very poor. This is partly due to the use of flawed FAO definitions, for example, the term “forest” can include both plantations and naturally regenerated forest.<sup>10</sup> Consequently, assessments of (re)afforestation activities are often based just on the areas planted, and say nothing about forest quality or species used.

The EFFE report also highlighted the fact that it was often unclear how a particular forestry measure was to contribute towards achieving policy goals. Since no clear link had been made with wider strategic goals, it was not possible to evaluate these activities. For example, in Belgium, it was unclear as to whether the reforestation programmes were aimed at increasing forest resources, for carbon sequestration or to meet recreational needs, and the results of an evaluation would vary depending on this.

In some cases, this problem was due to the fact that a forest strategy had not been clearly defined. Without such a strategy, not only is it impossible to define the objectives of forestry measures in relation to this, but it also means that it is impossible to make informed decisions as to what measures should be prioritised and financed. For example, should public funds be used to support timber production, or should they be used to promote other forest values, such as environmental or recreational values, or alternatively, should the money be spent at all? This may seem obvious, but it had not always been implemented. For example, in Germany, it was found that no strategy had been devised outlining what the balance should be between nature conservation and productive forestry. This contributed to a lack of transparency in the decision-making process regarding the allocation of funds.

A clearly defined forest strategy is also important to ensure that this does not conflict with other policy areas. For example, the country studies highlighted a lack of co-ordination between forest and rural development policies in Portugal, and between agricultural and forestry measures in Finland. Policy co-

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<sup>8</sup> The final version of the indicators is outlined in document VI/43512/02.

<sup>9</sup> Carbon ‘offset’- no magic solution to ‘neutralise’ fossil fuel emissions -FERN briefing note; see more at [www.sinkwatch.org](http://www.sinkwatch.org)

<sup>10</sup> Hoare, A.L. (2005) Irrational Numbers: why the FAO’s forest assessments are misleading. Rainforest Foundation. November 2005.

ordination is also required at the European level, for example, one potential conflict is with Europe's free trade agenda. Thus, in Germany, the official aims of the tax concessions and taxation rules include safeguarding the competitiveness of forestry in the EU, as well as safeguarding and improving national market conditions.

Finally, the EFFE report highlighted the need for greater involvement of stakeholders in policy development. For example, in Belgium and Portugal, a lack of understanding of the needs of all stakeholders resulted in poor implementation of some of the forestry measures in these countries. Involvement of all parties in the process of developing forest policy is essential to ensure that sound policy is developed.

## 5. RECOMMENDATIONS

Europe's forests are being subsidised with billions of euros of public funds. How then is this money being allocated, and is it being spent effectively? This report shows that these questions could not be properly answered for Europe's forest sector in the 1990s. Consequently, the following recommendations are made.

To improve the current situation FERN proposes the following:

When forestry measures are funded through rural development funds, the rural development programme must be in line with the national forest programme and the national biodiversity strategy plan. EU Member States are required to develop national forest programmes and national biodiversity strategy plans in a process including all different stakeholder groups. These plans need to identify the national objectives and set the priorities for forest funding. In the absence of such agreed plans or equivalent plans, no forest funding should be given.

The implementation rules for the rural development programmes and the guidelines for forestry which are part of the state aid guidelines must clearly indicate that public funds should only be made available for forestry measures that have a clear positive environmental or social impact. Business as usual practices, and the planting of 'tree crops' should not be funded by public funds.

Finally, systems for monitoring and evaluation need to be established. This will help increase transparency and accountability, which should be central principles in the allocation of public funds. Only then can there be an informed debate as to how Europe's forests should be funded and which forestry measures should be supported.