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96/0186 (CNS)

**Proposal for a
A. COUNCIL REGULATION (EC)**

**amending Regulation (EEC) No 3528/86 on the protection of the Community's
forests against atmospheric pollution**

**Proposal for a
B. COUNCIL REGULATION (EC)**

**amending Regulation (EEC) No 2158/92 on protection of the Community's forests
against fire**

(presented by the Commission)

**Proposal for a
A. COUNCIL REGULATION (EC)**

**amending Regulation (EEC) No 3528/86 on the protection of the Community's
forests against atmospheric pollution**

EXPLANATORY MEMORANDUM

1. The concern about the deterioration of forest condition in Europe due to atmospheric pollution during the 1980s led to the Community scheme on the protection of forests against atmospheric pollution, established by the Council in 1986 (Regulation (EEC) No. 3528/86 of 17 November 1986; legal basis: Articles 43 and 130S, paragraph 1, of the Treaty) and extended by a second period of 5 years in 1992 (Regulation (EEC) No. 2157/92 of 23 July 1992). The Community scheme was established in order to protect the forests against atmospheric pollution and hereby to contribute, in particular, to safeguarding the productive potential of agriculture by monitoring the forest condition in Europe and by carrying out pilot and demonstration projects in the field. This scheme will end on 31 December 1996.

In order to continue the observations which have started on the Community networks, to allow the completion of the intensive forest ecosystems monitoring network and the full implementation of all agreed common monitoring activities on this network, to evaluate the monitoring results obtained and to derive the necessary conclusions and recommendations for the future protection and management of European forests, the Commission - according to its programme of work - proposes to the Parliament and to the Council the extension of the existing scheme for five additional years (1997 to 2001).

2. During the past 10 years an outstanding system of monitoring of forest condition has been established which provided comprehensive knowledge of the extent, dynamics and spatial distribution of forest damage in the Community. It also gave impetus for reductions of emissions of air pollutants. Following the Strasbourg Ministerial Conference on the protection of forests in Europe (1990) and the task given by the Council in 1992 (Regulation (EEC) No. 2157/92) a network of intensive monitoring plots has been established which will now in most regions of the Community enter its operational phase. From the intensive monitoring an improvement of the understanding of causal relationships between changes in forest ecosystems and the potential damaging factors is expected.

From 1987 to 1996 the Community supported Member States in implementing the scheme by co-financing more than 450 projects with a total financial support of 42 MECU.

3. The Community scheme respects the principles of subsidiarity and proportionality:

- Forest damage caused by transboundary air pollution is not a national problem. A Community intervention is necessary in order to allow a large-scale monitoring of forest condition and an efficient protection of European forests.
- Forest damage is caused by a number of complex factors. Apart from the continuing impact of transboundary air pollution, it is to be feared that future pressures on forests are likely such as for example climatic changes arising from global warming. The benefits of an efficient protection of forests against these transboundary damage factors must be considered as vital for environmental as well as for socio-economic reasons, with effects on the Community as a whole.

4. The Community scheme on the protection of forests against atmospheric pollution is coherent with the agricultural policy of the European Union, in particular, by contributing to safeguarding the productive potential of agriculture through the protective functions of forests in relation to soil and water resources. The scheme is as well coherent with the 5th Community Programme of Policy and Action in Relation to the Environment and Sustainable Development adopted by the Member States in 1993. In addition, the scheme is essential for the implementation of the Community's commitments at international level:

- the Community's participation in the International Cooperative Programme on the Assessment and Monitoring of Air Pollution Effects on Forests (Convention on Long-Range Transboundary Air Pollution of 1979, Geneva);

- the adoption of relevant resolutions by the Community at the 1st and 2nd Ministerial Conference on the Protection of Forests in Europe (Strasbourg 1990, Helsinki 1993);
- the Community's engagement at the United Nations Conference on Environment and Development (Rio De Janeiro, 1992).

Proposal for
Council Regulation (EC) No
of
amending Regulation (EEC) No 3528/86 on the protection of the Community's
forests against atmospheric pollution

96/0185 (CNS)

THE COUNCIL OF THE EUROPEAN UNION

Having regard to the treaty establishing the European Community, and in particular Articles 43, thereof;

Having regard to the proposal from the Commission¹;

Having regard to the opinion of the European Parliament²;

Having regard to the opinion of the Economic and Social Committee³;

Whereas the present period of application of Regulation (EEC) No 3528/86⁴ on the protection of Community's forests against atmospheric pollution, as last amended by Regulation (EEC) No 2157/92⁵, will expire on 31 December 1996;

Whereas forests play an essential part in maintaining fundamental ecological balances, particularly as regards the soil, water resources, climate, fauna and flora and whereas those ecological balances are indispensable for a sustainable agriculture and the management of rural areas;

Whereas the conservation of the forest ecosystems is important for its economic, ecological and social functions and contributes, in particular, to safeguard the social function for those people working in agriculture and rural areas;

Whereas the European Union has committed itself at international level (Ministerial Conference on the Protection of Forests in Europe, Strasbourg, 1990 and Helsinki, 1993), for a continuing forest damage survey;

Whereas results from the systematic network show obvious trends in spatial and temporary distribution of forests damage over the entire area of the European Union, whereas these measures need to be continued;

Whereas plots for the intensive and continuous monitoring of forest ecosystems have been set-up by the Member States; whereas only a continuation of these monitoring

¹ OJ No C xxx,x.xx.199x,p.x.

² OJ No C xxx.xx.x.199x,p.x.

³ OJ No C xxx.xx.x.199x,p.x.

⁴ OJ No L 326, 21.11.1986, p. 2.

⁵ OJ No L 217, 31.7.1992, p. 1.

activities over a longer period will improve the understanding of the causal relationship between changes in forest ecosystems and the factors influencing it;

Whereas forest damage due to various factors, notably atmospheric pollution and certain unfavourable meteorological events, are problematic for the development of a sustainable agriculture and the management of rural areas;

Whereas consequently the protection of forests against atmospheric pollution contributes directly to the achievement of the objectives laid down in article 39, paragraph 1, point b of the Treaty;

Whereas consequently the Community scheme on the protection of forests against atmospheric pollution should be continued and therefore an extension by 5 additional years should be made scheduling the scheme to run for 15 years from 1 January 1987;

Whereas an amount of ECU 40 million is deemed necessary for the implementation of that multi-annual programm;

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EEC) No 3528/86 is hereby amended as follows:

In Article 11 the paragraphs 1 and 2 are replaced by the following:

'Article 11

1. The scheme is scheduled to run for 15 years from 1 January 1987.
2. The amount of Community financial resources deemed necessary for implementation of the scheme is ECU 40 million for the period 1997 to 2001.

Article 2

This Regulation shall enter into force on the third day following that of its publication in the Official Journal of the European Communities.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Council

REPORT ON THE APPLICATION OF COUNCIL REGULATION (EEC) No. 3528/86 of 17 NOVEMBER 1986⁶

**(implementation of the Community scheme
on the protection of forests against atmospheric pollution)**

I. INTRODUCTION

At the end of the 1970s defoliation and discolouration of forest trees were observed on certain sites in Central Europe. During the 1980s the same symptoms were also observed in other parts of Europe. Taking into account the increasing deposition of air pollutants (sulphur dioxide, oxides of nitrogen, ozone) even in rural areas, this "new type of forest damage" was mainly attributed to atmospheric pollution.

The concern about a possible deterioration of forest condition in Europe led to the Community scheme on the protection of forests against atmospheric pollution, established by the Council in 1986 (Regulation (EEC) No. 3528/86 of 17 November 1986).

The aim of the scheme is to protect the forests in the Community against atmospheric pollution and hereby to contribute, in particular, to safeguarding the productive potential of agriculture. The Community scheme has been carried out in close cooperation with the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests of UN/ECE) and is consistent with Resolution No. 1 of the 1st Ministerial Conference on the Protection of Forests in Europe (Strasbourg 1990).

II. ACTIVITIES OF FOREST PROTECTION CARRIED OUT WITHIN THE COMMUNITY SCHEME

According to Article 2 of Regulation (EEC) No. 3528/86 (amended by Regulation (EEC) No. 2157/92 of 23 July 1992) an outstanding programme of monitoring of forest condition in Europe has been established which is composed of large-scale periodic inventories and an intensive monitoring of forest ecosystems.

The periodic inventories are carried out on a systematic Community-wide network (16 x 16 km) of forests sample points. Since 1987 annual forest damage surveys have been carried out. A forest soil condition survey has been implemented (1991-1995) and an optional analysis on the chemical content of needles and leaves is going on (1991-1996). The main benefits from the assessment on the large scale gridnet are an objective and accurate knowledge of the extent, dynamics and spatial distribution of the symptoms of forest damage in Europe, a database for future time series analyses of crown defoliation, information on forest soil conditions and on the nutrient balances in some forest areas. However, the large scale monitoring does not aim at cause-effect relationships. The results of the annual forest damage surveys are published on yearly basis in the series of the **Forest Condition in Europe**.

Following the task given by the Council (Regulation (EEC) No. 2157/92, Article 1) the large scale systematic sampling was extended by the intensive and continuous monitoring of forest

⁶ according to Regulation (EEC) No 2157/92 of 23 July 1992, Article 1 (OJ No L217, 23.7.92)

ecosystems in order to contribute to a better understanding of the impact of air pollution and other factors which may influence forest ecosystems. In this context approximately 450 permanent observation plots for the intensive monitoring of forest ecosystems have been selected and installed in the European Union (Commission Regulation (EC) N° 1091/94 of 29 April 1994). The intensive monitoring programme contains continuous and intensive surveys such as crown condition assessments, soil and foliar surveys, increment studies, deposition measurements and the observation of meteorological parameters over a period of at least 15 to 20 years. After an initial phase covering mainly the selection and installation of the intensive monitoring plots and the development of systematic collection and analysis of samples (1992 to 1995) this network is now entering its fully operational phase. The Commission played an important role in the development of this programme and will have to coordinate the common activities in this field. The Commission also undertakes the processing and evaluation of the data submitted, as well as the preparation of periodic reports.

According to Article 4 of Regulation (EEC) No. 3528/86 Member States are encouraged to undertake - in addition to the periodic inventories and the intensive monitoring - pilot projects and experiments in the field to improve the knowledge on the impacts of atmospheric pollution on forest ecosystems, to improve observation methods and to study possibilities for restoring damaged forests. The results of these projects have been used to improve observation and monitoring methods (including common methods for the intensive monitoring; e.g. remote sensing applications, soil solution analysis) and to devise restoration methods for damaged forests.

The above activities had not been possible without the financial support of the Community: During the past 10 years 452 projects have been carried out by the Member States in this field with a total cost of more than 85 MECU and a financial support of the Community of 42,3 MECU (see table below). Of these 452 projects, 233 projects were submitted under Article 2 of which 163 projects were inventory projects on the 16 x 16 km grid and 70 projects were intensive monitoring projects on permanent observation plots. The remaining 219 projects were submitted under Article 4 (experimental). Of the 42,3 MECU which have been allocated by the Community under Regulation (EEC) No 3528/86 in total 5,2 MECU were allocated for the execution of the inventory projects on the 16 x 16 km grid. 10,7 MECU were allocated for the projects of the intensive monitoring projects on permanent observation plots (from 1994 onwards) and 26,4 MECU to projects that were submitted under Article 4 (experimental).

A detailed technical report on these activities has been prepared by the Commission services and is now available in English language.

Projects co-financed by the European Community between 1987 and 1996

	monitoring on the systematic grid (Art. 2)	intensive monitoring (Art. 2)	pilot and demonstration projects (Art. 4)	total
number fo projects co-financed	163	70	219	452
financial support of the Community (in MECU)	5,2	10,7	26,4	42,3

III. FUTURE ACTIVITIES

The results of 10 years forest condition monitoring have shown that forest damage is a complex problem. Atmospheric pollution has been detected to have a negativ influence on forest condition in many parts of Europe. However, other damage factors, biotic or abiotic, will have to be taken into account in order to clarify the cause-effect relationships between atmospheric pollution, other

damage factors and the observed damage. An improvement of the understanding of causal relationships between changes in forest ecosystems and the potential damaging factors is especially expected from the intensive monitoring part of the Community scheme.

In addition to the periodic inventories and the pilot and demonstration projects the intensive monitoring of forest ecosystems will therefore become an important element of the Community scheme.

After an initial phase mainly covering the installation of the intensive monitoring plots (infrastructure) this part of the scheme will now in most regions of the Community enter its operational phase with the systematic collection of data, including important activities of sampling (soil, depositions, needles/leaves etc.), collection of meteorological data, chemical analysis of samples etc. In certain regions the network for intensive monitoring will still have to be completed by additional plots. The processing and evaluation of intensive monitoring data by the Commission will start in 1996. All these activities will mean a considerable increase of costs when compared with the initial phase when only little sampling and analysis was made on the intensive monitoring plots.

IV CONCLUSIONS AND RECOMMENDATIONS

Forest damage is caused by a number of complex factors. Apart from the continuing impact of transboundary air pollution, it is to be feared that future pressures on forests are likely such as for example climatic changes arising from global warming. The benefits of an efficient protection of forests against these transboundary damage factors must be considered as vital for environmental as well as for socio-economic reasons, with effects on the Community as a whole.

Due to the transboundary character a Community intervention is essential in order to help Member States to carry out the necessary monitoring activities and to allow the processing and evaluation of monitoring results at Community level.

In order to continue the observations which have started on the Community networks, to allow the completion of the intensive forest ecosystems monitoring network and the full implementation of all agreed common monitoring activities on this network, to evaluate the monitoring results obtained from the two networks and to derive the necessary conclusions and recommendations for the future protection and management of European forests, it is proposed to extend the existing scheme for five additional years (1997 to 2001).

FINANCIAL STATEMENT

1. TITLE OF OPERATION

Proposal for an extension of the Community scheme on the protection of Community's forests against atmospheric pollution

2. BUDGET HEADING INVOLVED

B2-5150, FORESTS

3. LEGAL BASIS

Articles 43 of the Treaty;

Council Regulation (EEC) N° 3528/86⁷ of 17 November 1986 on the protection of forests against atmospheric pollution, amended by the Council on 29 May 1989 with Council Regulation (EEC) N° 1613/89⁸ and extended by the Council on 23 July 1992 with Council Regulation (EEC) N° 2157/92⁹.

4. DESCRIPTION OF OPERATION

The scheme was established by the Council in 1986 in order to protect the forests in the Community against atmospheric pollution and hereby to contribute, in particular, to safeguarding the productive potential of agriculture.

In order to continue the observations which have started on the Community networks, to allow the completion of the intensive forest ecosystems monitoring network and the full implementation of all agreed common monitoring activities on this network, to evaluate the monitoring results obtained from the two networks and to derive the necessary conclusions and recommendations for the future protection and management of European forests, it is proposed to extend the existing scheme for five additional years (1997 to 2001).

Period covered

First period of 5 years (Council Regulation (EEC) No. 3528/86): 1987 - 1991;
second period of 5 years (Council Regulation (EEC) No. 2157/92): 1992-1996.
Proposed extension: 1997 - 2001.

5. CLASSIFICATION OF EXPENDITURE OR REVENUE

None mandatory expenses.

Differentiated appropriations.

Type of revenue aimed: none.

⁷OJ No L 326, 21.11.1986

⁸OJ No L 165, 15.6.1989

⁹OJ No L 217, 31.7.1992

6. TYPE OF EXPENDITURE

Reimbursement of 50% of effective expenditures made for the carrying out of projects previously approved by the Commission after consultation of the Standing Forestry Committee. Coordination and monitoring of the scheme: Expert meetings, technical and scientific assistance to the Commission for the processing and evaluation of data and the reporting (see also point 7).

7. FINANCIAL IMPACT

7.1 Calculation of the total cost of the scheme

A maximum financial contribution (co-financing) of 50% of the approved expenses is possible for projects submitted by the Members States to the Commission in the fields of

- periodic inventory,
- intensive and continuous monitoring of forest ecosystems,
- experimental and pilot projects.

The Commission is responsible for coordinating and monitoring the scheme. In this context activities such as expert meetings, the processing and evaluation of monitoring data and the reporting of monitoring results, including technical and scientific assistance to the Commission in this field are financed in full (100%).

Estimated Community costs per year during extension period (budget line: B2-5150, FORESTS):

- periodic inventory (Reg. No. 1696/87 ¹⁰)	1,0 MECU
- intensive monitoring (Reg. No. 1091/94 ¹¹)	5,0 MECU
- experimental and pilot projects (Reg. No. 3528/86)	1,5 MECU
- evaluation, coordination, etc.	0,5 MECU

Total costs (per year) 8,0 MECU

Total costs for the proposed extension period 40,0 MECU

This amount is estimated necessary for the continuation and the full implementation of the Community scheme taking into account the recent extension of the EU and the results obtained during the past 10 years period of the scheme.

The extension of the Union by Austria, Finland and Sweden lead to a doubling of the forest area. Consequently, the activities in the field of the protection of forests against atmospheric pollution including notably the extension of the monitoring networks (installation of plots), the efforts of data collection (observation and analysis) and the carrying out of pilot and demonstration projects have increased considerably, as well as the need for co-financing by the Community.

¹⁰OJ No L 161, 22.6.1987

¹¹OJ No L 125, 18.5.1994

7.2 Estimated breakdown of appropriations for commitment for the period 1997 to 2001 by typ of action (in MECU)

breakdown	1997	1998	1999	2000	2001	total
article 2 projects ¹²	6,0	6,0	6,0	6,0	6,0	30,0
article 4 projects ¹³	1,5	1,5	1,5	1,5	1,5	7,5
coordination evaluation etc.	0,5	0,5	0,5	0,5	0,5	2,5
total	8,0	8,0	8,0	8,0	8,0	40,0

7.3 Estimated breakdown of appropriations for commitment and payments for the period 1997 to 2004 (in MECU)¹⁴

	1997	1998	1999	2000	2001	total
approp. for commitments	8,0	8,0	8,0	8,0	8,0	40
approp. for payments						
1997	0,5					0,5
1998	2,5	0,5				3,0
1999	2,5	2,5	0,5			5,5
2000	2,5	2,5	2,5	0,5		8,0
2001		2,5	2,5	2,5	0,5	8,0
2002			2,5	2,5	2,5	7,5
2003				2,5	2,5	5,0
2004					2,5	2,5
total	8,0	8,0	8,0	8,0	8,0	40,0

8. FRAUD PREVENTION MEASURES

Field inspections are carried out on the execution of the accepted projects and financial aspects are verified in detail.

¹² Extensive and intensive monitoring projects according to art. 2 of Reg. No. 3528/86

¹³ pilot and demonstration projects according to art. 4 of Reg. No. 3528/86

¹⁴ rough estimate based on already available experience

9 ELEMENTS OF COST EFFECTIVENESS ANALYSIS

9.1 Specific objectives and target group

9.1.1 Specific objectives

Based on the general objectives (see chapter 4) the following specific objectives have been aimed and reached:

- *the establishment of a Community-wide network of observation points and the execution of periodic surveys of forest damage (including a soil and foliar survey) following common methodologies (Council Regulation (EEC) No. 3528/86 and Commission Regulation (EEC) No. 1696/87).*

This network is recognized as being of vital importance in terms of assessing the extent of forest damage and monitoring forest condition in Europe.

From more than 3000 plots covering the whole forest area of the Community information is collected and data are submitted to the Commission (annual forest damage survey, soil condition inventory, survey of the chemical content of needles and leaves). In most Member States a more intensive grid is applied, using the same methodology for the assessment of forest condition. The results of the surveys are published on yearly basis in the series of the **Forest Condition in Europe**.

- *the establishment of a network of intensive forest ecosystem monitoring plots; the execution of surveys on these plots following common methodologies for sampling and analysis and the evaluation and reporting of monitoring results (Council Regulation (EEC) No. 2157/92 and Commission Regulation (EC) No. 1091/94).*

In 1995 the installation phase of the intensive monitoring network was completed to a large extent. Throughout the EU approximately 450 plots have been installed. Additional plots are expected to be installed and monitored in certain parts of the EU which will lead to a more representative coverage of the Community's forest regions. After an initial phase covering mainly the selection and installation of the intensive monitoring plots and the development of systematic collection and analysis of samples (1992 to 1995) this network is now entering its fully operational phase. The Commission played an important role in the development of this programme and will have to coordinate the common activities in this field. The Commission also undertakes the processing and evaluation of the data submitted, as well as the preparation of periodic reports

- *co-financing of experiments in the field and pilot or demonstration projects (Council Regulation (EEC) No. 3528/86)*

Member States are encouraged to undertake projects to improve the knowledge on the impacts of atmospheric pollution on forest ecosystems, to improve observation methods and to study possibilities for restoring damaged forests. Between 1987 and 1996 more than 200 projects have been co-financed in this field. The results of these projects have been used to improve observation and monitoring methods (including common methods for the intensive monitoring; e.g. remote sensing applications, soil solution analysis) and to devise restoration methods for damaged forests.

9.1.2 Target group

The Community scheme aims at the protection of Community's forests against atmospheric pollution in order to maintain their economic, social and ecological functions for the whole Community population and also for future generations.

Protection of the economic value of forests: Forest owners as well as the forest and timber industry (including employment in the forestry and timber sector) depend on good forest condition

and sustained supply of timber. In addition several other sectors (e.g. transport, tourism) are to be mentioned in this context.

Protection of social value of forests: Directly or indirectly the whole population (and future generations) takes profit, inter alia, from the following "services" of forest ecosystems:

- protection of the recreational functions of forests,
- maintenance of rural employment.

Protection of ecological value of forests:

Directly or indirectly the whole population also takes profit from the following values of forests:

- protection of ground water,
- protection against avalanches, rockfalls etc. (population in mountainous regions),
- protection against climatic change (forest ecosystems are considerable sinks of carbon; forest damage and forest decline lead to emissions of CO₂ which is expected to increase the so called "greenhouse effect").

In addition forests are safeguarding a lot of varieties of plants and animals. This contribution to the conservation of biodiversity cannot be expressed in financial terms. Nevertheless this value is of vital importance.

9.2 Justification of the action

Forest damage is caused by a number of complex factors. Apart from the continuing impact of transboundary air pollution, it is to be feared that future pressures on forests are likely such as for example climatic changes arising from global warming. The benefits of an efficient protection of forests against these transboundary damage factors must be considered as vital for environmental as well as for socio-economic reasons, with effects on the Community as a whole.

At the beginning of the eighties forest damage caused by atmospheric pollution led to important international activities, including the establishment of the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests). In 1986, at the International Conference on Trees and Forests (SILVA, Paris), the European Heads of States and Governments insisted on the pressing need to act in union beyond national borders for the conservation of forests. The common responsibility for and the transboundary character of forest protection was also recognized in 1990 in Strasbourg by most European countries and the European Community at the 1st Ministerial Conference on the Protection of Forests in Europe. In the following years the general awareness of the fragility of many European forest ecosystems justified the continuation and the strengthening of the activities already undertaken.

At the Strasbourg Conference in 1990, the participating States and the European Community adopted a Resolution which, among others, recognized the necessity of identifying long term trends in the condition and health of forests and strengthening efforts in the forest ecosystem monitoring. Following this Resolution, such monitoring should rely simultaneously on two levels of permanent sample plots: sample plots for elementary systematic monitoring and sample plots for intensive monitoring.

In 1992 (Council Regulation (EEC) No. 2157/92) the Community action in this field was adapted by the Council in order to help Member States to implement forest monitoring as foreseen by the Strasbourg Resolution and to evaluate monitoring results at Community level.

As a conclusion it must be stressed that the role of the Community in this context is to contribute to the implementation of a transboundary programme for the protection of forests by helping

Member States to carry out the necessary monitoring activities and to implement projects aiming to improve the protection of forests against atmospheric pollution.

Due to the transboundary character of the efforts engaged, a Community intervention is essential for supplementing Member States efforts and allowing the processing and evaluation of monitoring data at Community level. In this context the role of the Commission is to coordinate the activities, to synthesize and evaluate the results obtained and to further develop the programme together with the Member States.

9.3 Follow-up and evaluation of the scheme

9.3.1 Indicators of performance

Output indicators

- General implementation/progress of the scheme (number of observation plots, number of projects, provision of monitoring data and results of pilot and demonstration projects etc.),
- evolution of requests from Member States for co-financing of new projects (number of projects submitted; financial aid requested/granted),
- relations and coherence with international programmes (follow-up of the Ministerial Conferences on the Protection of Forests in Europe, UNCED etc.),
- evolution of the relationships with other organizations working in the field of the protection of forests.

Impact indicators

- Progress in the knowledge on air pollution effects on forests,
- progress in the development of methods for the monitoring of air pollution effects on forests and the restoration of damaged forests,
- information on forest condition in Europe as published in the annual Forest Condition Report,
- provision of detailed information on air pollution effects on forest ecosystems (effects on soil chemistry, physiological conditions, cause-effect relationships, etc.).

9.3.2 Modalities and frequency of evaluation

The progress of work is analysed permanently by the Commission and its Standing Forestry Committee (Working Group on Atmospheric Pollution).

The requests of the Member States for co-financing of projects (number of projects, financial support requested, nature and aims of projects) are verified annually. The progress of co-financed projects is monitored systematically and field inspections including financial control are carried out.

The results of the different parts of the scheme are reviewed permanently and published in the annual Report on Forest Condition in Europe and additional technical reports. Possible improvements and further development of the scheme are discussed within the Standing Forestry Committee and its technical subgroups.

10 Administrative costs

- One national expert (full time),
- one official (category A; part time),
- one official (category B; part time),
- one official (category C, part time).

Proposal for a

B. COUNCIL REGULATION (EC)

**amending Regulation (EEC) No 2158/92 on protection of the Community's forests
against fire**

EXPLANATORY MEMORANDUM

1. Community measures to protect forests against fire, provided for by Regulation (EEC) No 2158/92 (on the basis of Articles 43 and 130s(1) of the Treaty) expire on 31 December 1996. The Commission, as provided for in its 1996 Programme (agriculture and fisheries), is to submit to Parliament and the Council a proposal for the extension of these measures for a new five-year period (1997-2001).
2. The aim of the Regulation is to contribute to the efforts of the Member States to prevent forest fires while at the same time ensuring that forestry measures financed by the Community in areas at risk from fire are consistent. It also provides for the development of close cooperation between the Member States and the Commission within the Standing Forestry Committee and for the creation of a Community system of information on forest fires to permit better evaluation of measures to protect forests against fire.
3. At the end of the five years of application, nearly one half of Community forests have been classified as areas at risk from fires. The Member States concerned have submitted their forest-fire protection plans for the areas at risk. Assistance of ECU 63 million has been granted for more than 480 fire-prevention projects provided for in the protection plans. Community-wide cooperation has been established to analyse the causes of fires and to improve protection systems. The results of the Community system of information on forest fires show that this is an excellent tool for the evaluation of measures.
4. Extension of the measures complies with the principles of *subsidiarity* and *proportionality*:
 - The measures have shown their effectiveness in helping to improve the protection systems of the Member States, which have been brought up to date, in particular, through the Community system of information on forest fires (see implementation report and financial statement).
 - A considerable problem still remains for the Union's forests and Community measures are *a necessity*. Fires continue to cause serious damage to ecosystems (erosion, desertification), cause considerable economic losses in agriculture and forestry and, of course, threaten the safety of people and property. Fires restrict the long-term development of 60 million hectares of Community forests and could also affect the European climate (loss of significant carbon-storage capacity, production of greenhouse gases), showing the cross-border nature of this problem.
 - An extension of the measures will permit continued financial support for national measures taken by the Member States to protect forests, while providing a suitable framework for the pursuit of *Community and inter-regional measures* to achieve a better evaluation of the origin of fires and of preventive measures.
5. The *consistency* of the measures and their extension with *Community agricultural and structural policies* is ensured by asking the Member States for guarantees that afforestation in areas at risk carried out through Community funding is protected against forest fires. Consistency with *environmental policy* is also ensured; the measures directly fulfil a number of the commitments made by the Community in Rio de Janeiro at the 1992 World Conference on Environment and Development and at the two pan-European ministerial conferences on the protection of European forests (Strasbourg in 1990 and Helsinki in 1993).

COUNCIL REGULATION (EC) No

96/0186 (CNS)

of

amending Regulation (EEC) No 2158/92 on protection of the Community's forests against fire

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 43 thereof,

Having regard to the proposal from the Commission¹,

Having regard to the opinion of the European Parliament²,

Having regard to the opinion of the Economic and Social Committee³,

Whereas the first period of application of Regulation (EEC) No 2158/92 of 23 July 1992 on protection of the Community's forests against fire⁴ expires on 31 December 1996;

Whereas forests play an essential part in maintaining fundamental balances, particularly as regards the soil, water resources, climate, flora and fauna; whereas those ecological balances are indispensable for sustainable agriculture and the management of rural areas;

Whereas the conservation of the forest ecosystems is important for its economic, ecological and social functions and contributes in particular to safeguard the social function for those people working in agriculture and in rural areas;

¹ OJ No C

² OJ No C

³ OJ No C

⁴ OJ No L 217, 31.7.1992, p. 3.

Whereas the European Union attaches particular importance to the protection of its forest resources; whereas it has undertaken international commitments on the sustainable development of forests and the protection of forest regions, in particular during the United Nations Conference on the Environment and Development in Rio de Janeiro in 1992 and at the two Pan-European Ministerial Conferences on the protection of European forests in Strasbourg in 1990 and in Helsinki in 1993; whereas the Community scheme for the protection of forests against fire as provided for by Regulation (EC) No 2158/92 helps to fulfil those undertakings;

Whereas, pursuant to that Regulation, 60 million hectares of forest, equivalent to about a half of European forests, have been classified as fire-risk zones;

Whereas fires continue to restrict the sustainable development of forests in fire-risk zones, thus reducing the contribution of forests to the development of sustainable agriculture and the management of rural areas;

Whereas protecting forests against fire therefore directly contributes to the achievement of the objectives laid down in Article 39 (1) (b) of the Treaty;

Whereas the Community system of information on forest fires established under Article 5 of Regulation (EC) No 2158/92 has permitted the development of Community cooperation on forest fires; whereas the development of that system will provide an effective instrument for better evaluating forest-fire protection measures and for better analysing the causes of fires;

Whereas, therefore, the Community scheme for the protection of forests against fire defined by Regulation (EEC) No 2158/92 should be continued, in particular to strengthen the consistency of forest measures financed in fire-risk zones, to reinforce the fight against the causes of fires and to improve prevention and monitoring systems; whereas, therefore, provision should be made for extending the scheme laid down in Regulation (EC) No 2158/92, as amended by this Regulation, for five years from 1 January 1997, thus bringing the duration of the programme to ten years from 1 January 1992;

Whereas it is estimated that ECU 70 million will be necessary to implement the programme during the second period,

HAS ADOPTED THIS REGULATION:

Article 1

Regulation (EEC) No 2158/92 is hereby amended as follows:

Article 10 (1) and (2) are replaced by the following:

- "1. The scheme shall run for five years from 1 January 1997.
2. The amount of Community financial resources deemed necessary for the implementation of the scheme is ECU 70 million for the period 1997-2001."

Article 2

This Regulation shall enter into force on the third day following its publication in the Official Journal of the European Communities.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Council

**REPORT ON THE IMPLEMENTATION OF REGULATION (EEC) No 2158/92 ON
PROTECTION OF THE COMMUNITY'S FORESTS AGAINST FIRE**

1. The aim of Council Regulation (EEC) No 2158/92⁵ was to help Member States improve the protection of their forests against fire by:

- concentrating Community preventive measures in areas at risk from fire,
- asking Member States to submit to the Commission their overall forest-fire protection plans,
- reserving Community financing for fire-prevention projects and projects to analyse causes provided for in the plans and varying the Community contribution on the basis of the degree of risk,
- making funding for *all Community forestry measures* in high- and medium-risk areas subject to the approval of the plans,
- creating a Community system of information on forest fires while improving national systems; the detailed rules of application were laid down by Commission Regulation (EC) No 804/94⁶.

There is close cooperation with the Standing Forestry Committee.

Results of implementation of the measure

2. Areas at risk from fire (Article 2 of the Regulation)

The Commission has approved the lists of areas of high and medium risk submitted by Portugal, Spain, France, Italy, Greece and Germany (figure 1 in the Annex), making a total of 60 million hectares at risk from fire (nearly one half of the Community's forests), of which 60% is privately owned and 40% publicly owned.

3. Forest-fire protection plans (Article 3 of the Regulation)

The Commission has issued favourable opinions on 79 of the forest-fire protection plans submitted by the Member States. These plans, covering almost all the areas of high and

⁵ OJ No L 217, 31.7.1992.

⁶ OJ No L 93, 12.4.1994.

medium risk, are particularly important tools, describing the measures taken by the Member States to protect their forests, thus giving improved guarantees of the success of forestry measures co-financed by the European Union.

4. *Preventive measures* (Article 4 of the Regulation)

For the period 1992-96, 480 projects submitted by the Member States were approved, involving a total of ECU 62.9 million. The following table gives a breakdown of the numbers of projects approved and the amounts involved for each Member State over the period concerned.

	<i>D</i>	<i>EL</i>	<i>E</i>	<i>F</i>	<i>IRL</i>	<i>I</i>	<i>P</i>	<i>TOTAL</i>
<i>Assistance granted (ECU million)</i>	3.8	12.8	11.7	11.5	0.1	12.7	10.3	62.9
<i>Number of projects</i>	38	54	57	199	3	40	89	480

Itemised breakdown of cost

Measures	Assistance granted (ECU million)	%
Projects to combat causes and information campaigns	8,0	13,0
Prevention projects	30,3	48,0
Monitoring projects	18,6	30,0
Information-system projects, etc	6,0	9,0
Total	62,9	100,0

A total of 31% of the demand from Member States was satisfied. During the first five years, 858 projects were submitted for which a total of ECU 201 million was requested.

Quantitative details of a number of measures funded:

- 254 information campaigns, 11 437 ha of fire-breaks, 13 534 ha of shrub -clearance, 12 005 km of tracks, 1 152 water supply points, 8 848 communication posts, 151 watch towers, 5 226 persons trained, etc,
- 97% of the assistance was granted in areas of high risk and 3% in areas of medium risk,
- 5% of the assistance was granted for publicly owned forests, 10% for privately owned forests and 85% in mixed areas (public/private).

Qualitative details of a number of measures funded, by way of examples:

- in Portugal, the measures meant that 20% of expenditure on prevention could be part-financed whereas the Structural Funds provide practically no assistance;

•in France, the Regulation has become an essential means of allowing professional organizations responsible for privately owned forests in western France to finance fire-prevention measures;

•in Spain, the measures have permitted the financing of major national information campaigns targeting the rural population to make them aware of risky agricultural practices (range fires);

•in Germany, in the new Länder, the measures have in particular allowed for the refurbishment of practically the whole forest-fire surveillance network, which had become completely outdated.

All the measures for which assistance was granted were included in the overall protection plans as provided for in Article 4(3) of Regulation (EEC) No 2158/92. There seems to have been a fairly even regional distribution and this reflected the applications made by the Member States. Several studies into the causes of fires were carried out in Portugal, Spain, Greece and France (13% of the appropriations allocated for the Regulation). The projects are high added-value projects. The cost is small but their potential multiplier effect is considerable. A total of 48% of the appropriations were allocated to prevention infrastructures and 30% to monitoring operations. These two types of measure are of vital importance for increasing the effectiveness of fire-fighting measures once a fire breaks out.

Giving consideration to the whole system of protection, i.e. studies of the causes, improving preventive measures, monitoring and measures to fight fires, is therefore essential to achieve more effective use of national and Community funding.

5. The Community information system on forest-fires (Article 5 of the Regulation)

The Community information system on forest-fires currently covers 211 provinces/departments of Portugal, Spain, France, Italy and Greece. It contains information on 400 000 fires recorded between 1 January 1985 and 31 December 1994 involving a total of five million hectares. The information on the provinces in those Member States not yet covered as well as for Germany will be processed shortly.

Analysis of this information first of all shows that forest fires are not a rarely occurring disaster but rather a daily problem for which the Member States must have appropriate protection strategies: in ten years, no more than twenty days have passed without a fire; on some days, a fire breaks out every two minutes.

Over the past ten years, there has been a steady improvement in the effectiveness of measures to combat fires implemented by the Member States and, therefore, by the European Union. The area burned appears to be on a downward trend (*figure 2*) and the area affected by each fire has shrunk sharply (*figure 3*). The time taken by fire-fighting teams to intervene has been reduced (*figure 4*), as has the duration of fires.

Nevertheless, the marked increase in the number of fires (*figure 5*) is worrying and shows the need to strengthen measures to combat the cause of fires, particularly as still more than 53% of fires are of unknown origin.

The information system can give useful clues to the types of Community and national measures to be developed in different regions, the situation obviously varying from one region to another (*figure 6*). Generally speaking, the summer is the period of highest risk of fires (67% of fires and 79% of the area affected) and during that period monitoring and fire-fighting systems must be at their most effective. However, in more than 10% of provinces, particularly in mountain areas, fires mainly break out in winter, showing that specific causes are at work which must be addressed with specific measures.

In those regions where the problem is the number of fires, more importance must be given to attacking the causes of fires. In others, where the average size of the areas affected by fires is large, protective measures must be strengthened.

The Community system of information on forest fires was taken as the basis for the creation of a Europe-wide network of databases on forest fires by the Strasbourg ministerial conference on the protection of European forests in 1990. The report of the preparatory study for the installation of the system was published by the Office for

Official Publications of the European Communities in April 1996. It reflects the following observations and prospects.

6. Contacts with agricultural organizations: although the origin of a large number of fires is to be found in the profound changes taking place in rural society, farmers have an essential roles to play in protecting rural society and forests. At the initiative of the Spanish Young Farmers' Association (ASAJA - Sevilla) and in cooperation with agricultural organizations, an important seminar (co-financed under Regulation (EEC) No 2158/92) was held in Seville in October 1993 with the aim of developing the important role played by farmers and reducing the negative effects of certain stockfarming practices. It brought together, for the first time, as well as farmers' unions, representatives from the Standing Forestry Committee, the Commission and the European Parliament and it is an initiative the participants would like to pursue.

Conclusions on the implementation of Regulation (EEC) No 2158/92

The Community measures, complementing those of Member States, have helped improve measures to prevent forest fires and provide better guarantees and better direct Community funding for forest areas at risk from fire.

Implemented in close cooperation with the Standing Forestry Committee, they have also led to a greater understanding of why fires break out, in particular through the creation of the system of information on forest fires, which is an effective tool for evaluating the measures implemented. The system also provides guidelines for the development of new forest-protection strategies.

FINANCIAL STATEMENT

1. TITLE OF OPERATION

Extension of Community measures to protect forests against fire.

2. BUDGET HEADING INVOLVED

B2-5150 Forests

3. LEGAL BASIS

Articles 43 of the Treaty.

Regulation (EEC) No 2158/92 of 23 July 1992 on protection of the Community's forests against fire⁷, which expires on 31 December 1996.

The proposal is to extend the Regulation for a further five years (1997-2001).

4. DESCRIPTION OF OPERATION

4.1. General objective

The aim of the measures is to improve the protection of European forests against fire. One third of European forests are threatened by fire, which each year destroys thousands of hectares, with serious economic, ecological and social damage.

⁷ OJ No L 217, 31.7.1992.

The extension of Regulation (EEC) No 2158/92 is intended to pursue the measures to improve forest-fire prevention and monitoring systems and better combat the causes of fire.

4.2 Period covered

1 January 1997 to 31 December 2001.

5. CLASSIFICATION OF EXPENDITURE

5.1 Non-compulsory expenditure (NCE)

5.2 Differentiated appropriations (DA)

6. TYPE OF EXPENDITURE

See point 7.

7. FINANCIAL IMPACT

7.1. Method of calculating total cost of operation

For projects and programmes submitted by the Member States (studies of the causes of fires and information campaigns, prevention of fires and monitoring), a maximum Community contribution of 30% or 50% depending on the degree of fire risk in the region concerned.

For projects submitted by the Member States for pursuing the creation of the information system on forest fires, a maximum Community contribution of 15%, 30% or 50% depending on the degree of fire risk in the region concerned.

For measures to coordinate, evaluate and monitor the measures, a Community contribution of 100%.

7.2. Itemised breakdown of cost

(ECU million/year for EC)

Measures	1997	1998	1999	2000	2001	Total
Projects to combat causes and information campaigns	2.0	2.0	2.0	2.0	2.0	10
Prevention projects	6.5	6.5	6.5	6.5	6.5	32.5
Monitoring projects	4.5	4.5	4.5	4.5	4.5	22.5
Information-system projects	0.3	0.3	0.3	0.3	0.3	1.5
Coordination, evaluation and monitoring	0.7	0.7	0.7	0.7	0.7	3.5
Total	14.0	14.0	14.0	14.0	14.0	70

Total for the period 1997-2001: ECU 70 million.

The proposed allocation between the different types of project reflects that in the applications submitted by the Member States during the five years of application of Regulation (EEC) No 2158/92.

7.3. Indicative schedule of appropriations

(ECU million/year for EC)

	year n 1997	n + 1 1998	n + 2 1999	n + 3 2000	n + 4 2001	TOTAL
Commitment appropriations	14	14	14	14	14	70
Payment appropriations						
year n		6	5	2	1	14
n + 1			6	5	3	14
n + 2				5	9	14
n + 3					14	14
n + 4					14	14
Subsequent financial years						
TOTAL		6	11	12	41	70

8. FRAUD PREVENTION MEASURES

On-site inspections to verify the implementation of projects co-financed by the Community and checks on financial aspects.

9. ELEMENTS OF COST-EFFECTIVENESS ANALYSIS

9.1. Specific and quantified objectives

The long-term aim of Community forest-protection measures is to help Member States reduce the number of fires (by attacking the causes) and the areas burned (by improving prevention, monitoring and fire-fighting).

Target population

Forest fires pose a serious danger to people and property, including the populations of areas at risk from forest fires and tourists from the northern regions of the Community. Private forest proprietors, local and regional authorities and those involved in the forestry industry are also seriously affected by the destruction of forests by fires.

9.2. Grounds for the operation

9.2.1 Need for Community financial aid

The adoption of Regulation (EEC) No 2158/92 permitted the implementation of a Community strategy to protect forests against fires, providing the Member States with Community assistance for preventive measures (a Community contribution of around 10% to national measures, giving protection to five million hectares of forest) and building Community-wide cooperation to improve protection systems via the creation of an information system.

Over the past ten years, the total area burned appears to have been on a downward trend, but the number of fires is increasing. The average size of fires has therefore been considerably reduced (see point 5 of the implementation report) The Community measures, which are now in their tenth year, have contributed to the efforts of the Member States to improve national protection systems. The number of fires remains worrying. The study of their causes and the means to combat them therefore remains a priority. The measures must consequently be continued.

The extension of the measures complies with the **principles of subsidiarity, solidarity and consistency**; it complements the preventive

measures taken by the Member States and should help introduce preventive measures in a further several million hectares.

Community-wide cooperation in this area will permit the achievement of **an inter-regional approach** to forest fires, particularly to the causes of fires, a high added-value measure. Cooperation with farmers' unions within the Community should also help improve the management and protection of rural areas.

The measures are **consistent** with:

- * *agricultural and structural policies*; the forest-fire protection plans should guarantee better protection for afforestation and reafforestation carried out as part of new, active afforestation measures financed by the European Union (approximately 1.5 million hectares planned over eight years in areas at risk from fires);
- * *environmental policy*, by contributing to the fulfilment of the Community's international commitments on the sustainable development and protection of forests.

The cross-border impact of forest fires for the whole of the European Union must not be forgotten. The production of CO₂ in forest fires plus the loss of capacity to absorb the gas and immobilize carbon as a result of the sudden disappearance of biomass and a change in land-use also contribute to the greenhouse effect.

9.2.2 Choice of ways and means

Preventive measures

In the opinion of all the experts, in areas at risk, prevention is the main priority. The Member States affected by this problem all apply, in varying degrees, preventive measures. The budgets allocated to such measures are often fairly small considering the size of the problem, due, in particular, to the low-level profitability of a large part of the forests at risk, especially that of privately owned forests, and the high cost of fire-fighting provision.

A number of Community structural programmes have included preventive measures but the areas covered by regional-development measures do not necessarily include all those areas at risk from fire. The amount of funding applied for by the Member States under Regulation (EEC) No 2158/92 clearly shows that the preventive measures covered by structural assistance do not cover all the needs.

The information system

National information systems on forest fires do exist. In the opinion of the experts, the value of the Community information system is incontestable, because of its Community-wide and inter-regional approach. Furthermore, the measure establishes a link with other Community policies (environment and agriculture).

Factors of uncertainty

Climatic problems (serious droughts and strong winds), *the pressure of tourism* and the *abandonment of farming* on increasingly large areas of land may also increase the areas vulnerable to fire.

9.3. Monitoring and evaluation of the operation

9.3.1 Performance indicators

*** Output indicators (measuring activities used)**

General progress made in implementing measures, annual change in applications from Member States, development of the international impact of the measures, development of relations with organizations involved in the protection of forests against fire.

*** Impact indicators (measuring performance against objectives)**

Development of the area of the Community at risk from fire, evaluation of protection plans submitted by the Member States and consistency with forestry measures funded by the EU, number of projects and amount of assistance granted to each Member State, assistance granted for each type of measure and degree of risk and the development thereof, analysis of the indicators provided by the information system itself and, in particular, changes in the number of fires and the area burned in each Member State, distribution of fires according to the type of surface, analysis of causes.

9.3.2 Details and frequency of planned evaluations

The system of information on forest fires, information supplied by the Member States, data gathered in the implementation of the Regulation in areas at risk from fire, the plans and the projects will permit annual monitoring of the factors of incertitude and the performance indicators.

10. ADMINISTRATIVE EXPENDITURE

The work will be carried out by the permanent staff currently responsible for the measures, i.e. one A- and one B-grade official.

Expenditure on the provision of services, in particular certain technical analyses, for the monitoring and evaluation of forest-fire protection plans and for the continuation of the work on the creation of the Community information system will come under Part B of the Budget, since they are planned as part of the coordination of the Regulation.

ANNEX

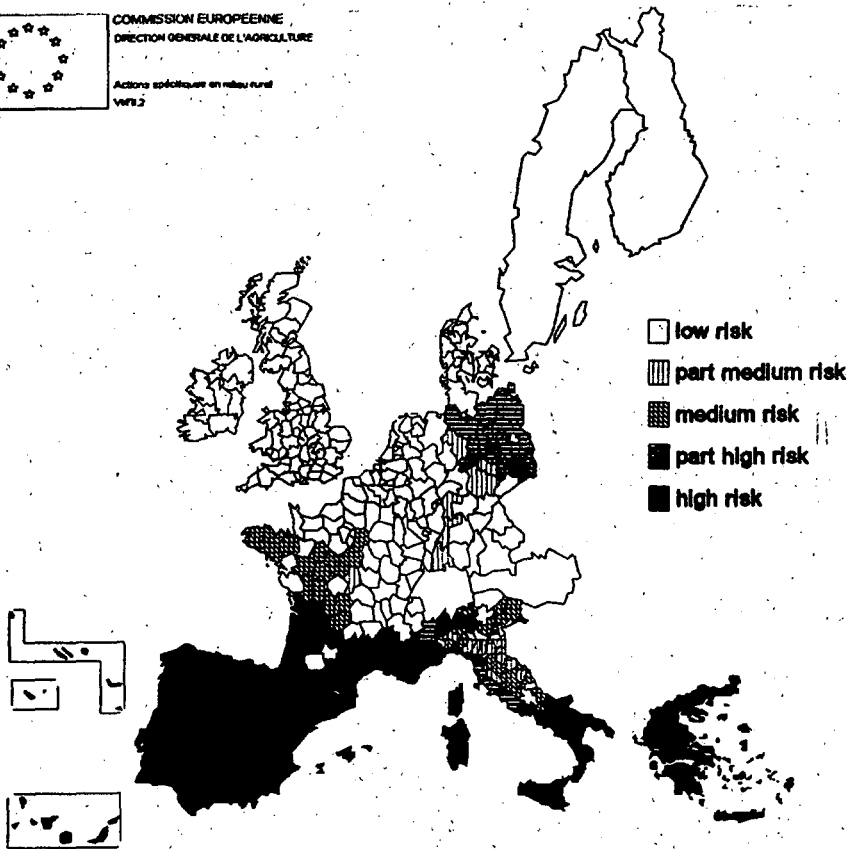


Figure 1 - Classification of the territories of the Member States according to the level of fire risk

Hectares

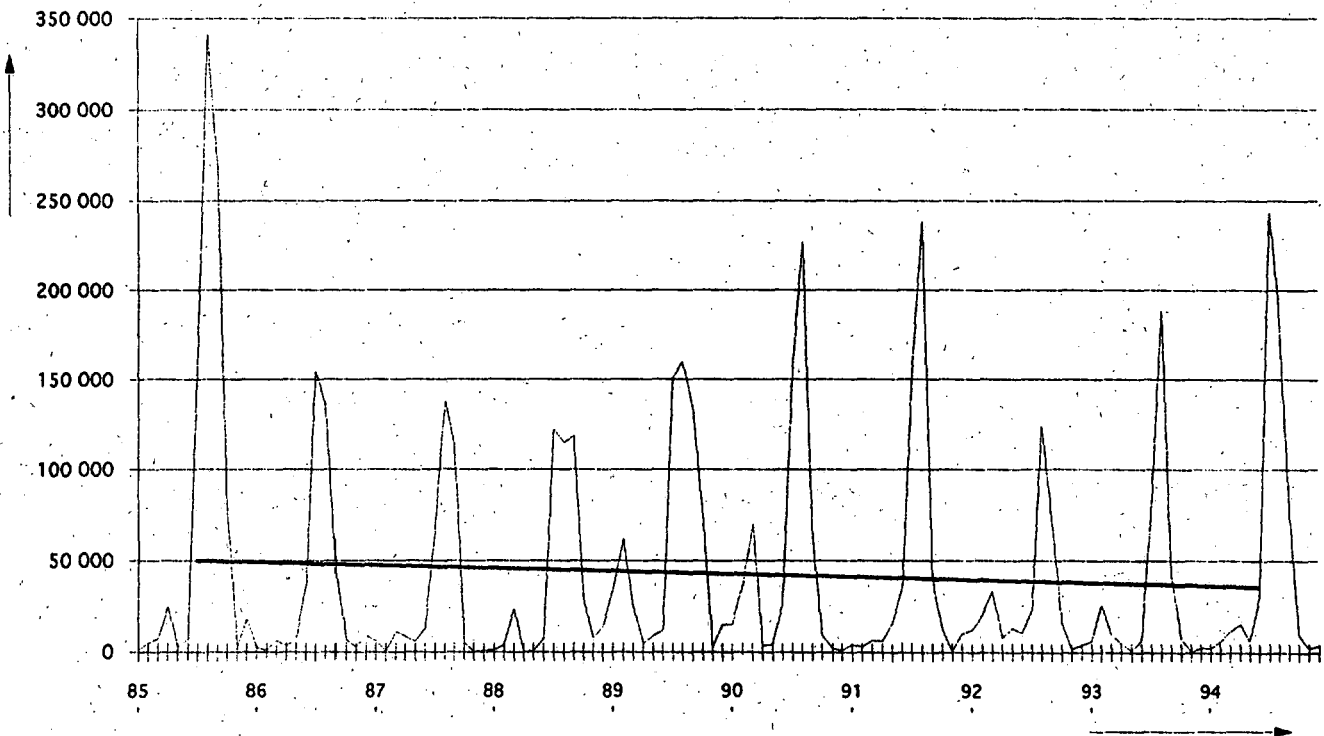


Figure 2 : 1985-1994, area in hectares affected by fire each month

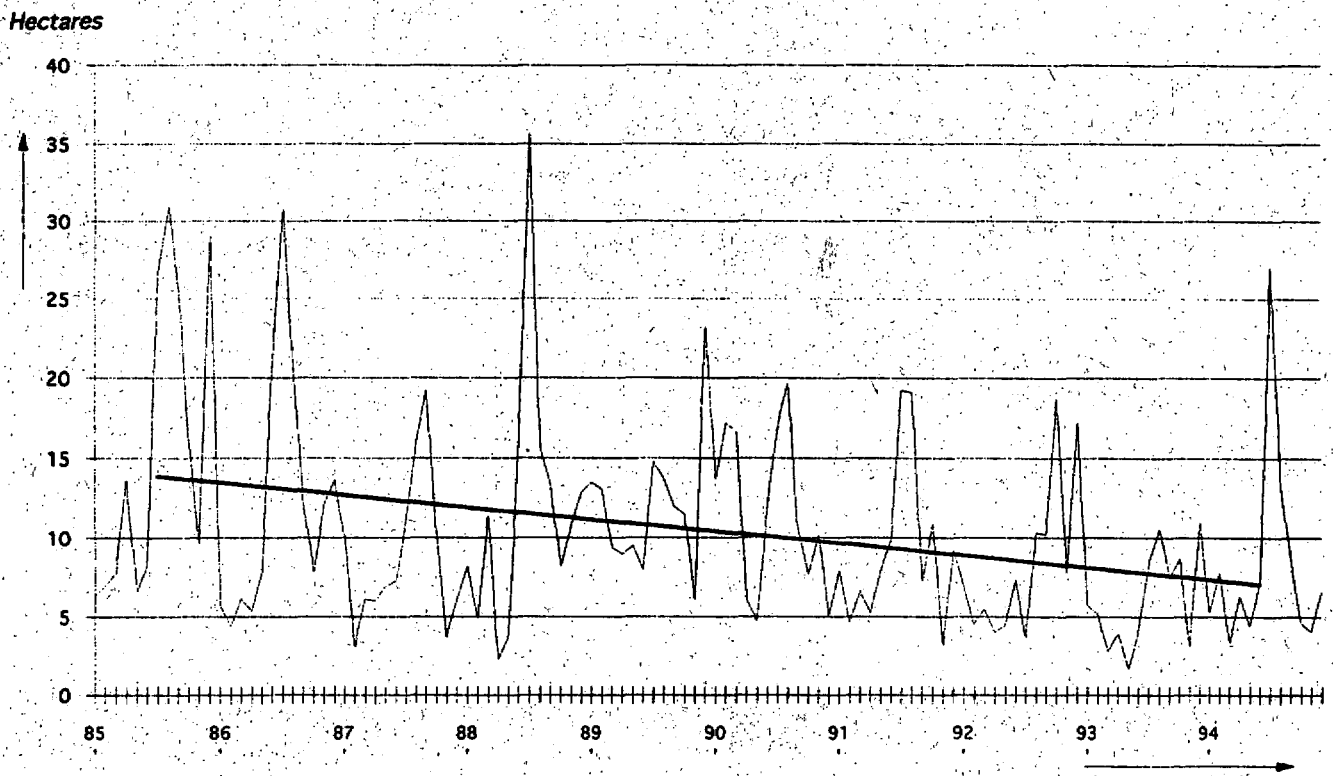


Figure 3: 1985-94, average size of fires each month

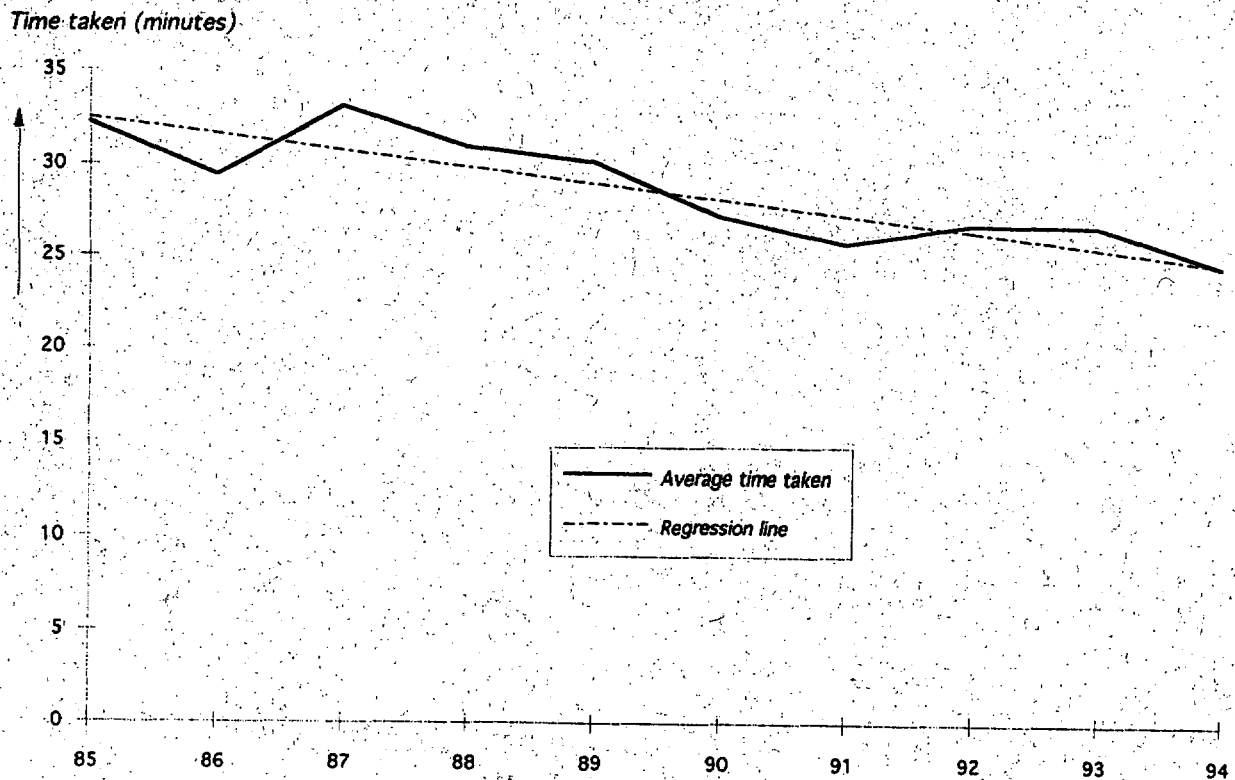


Figure 4: 1985-94, average time taken by fire-fighting services to reach the scene (in minutes)

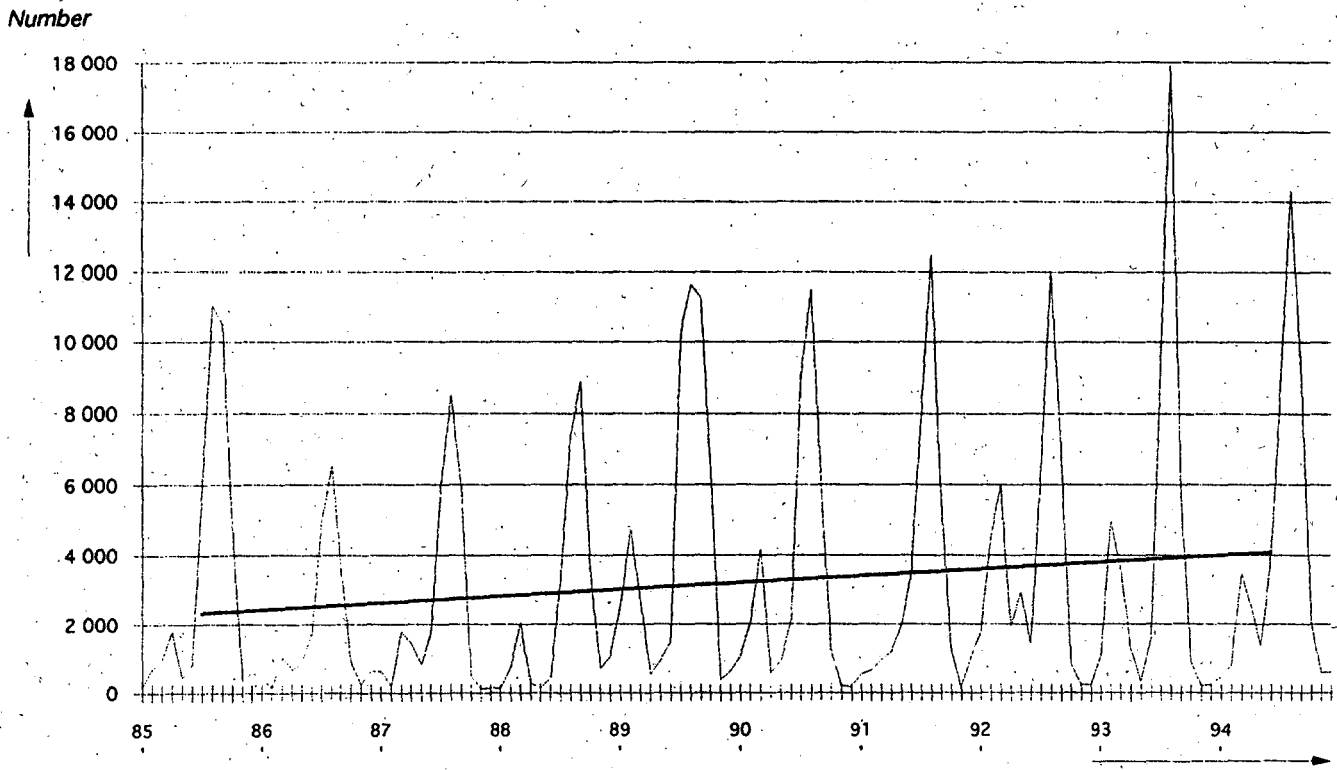


Figure 5 : 1985-1994, number of forest fires each month

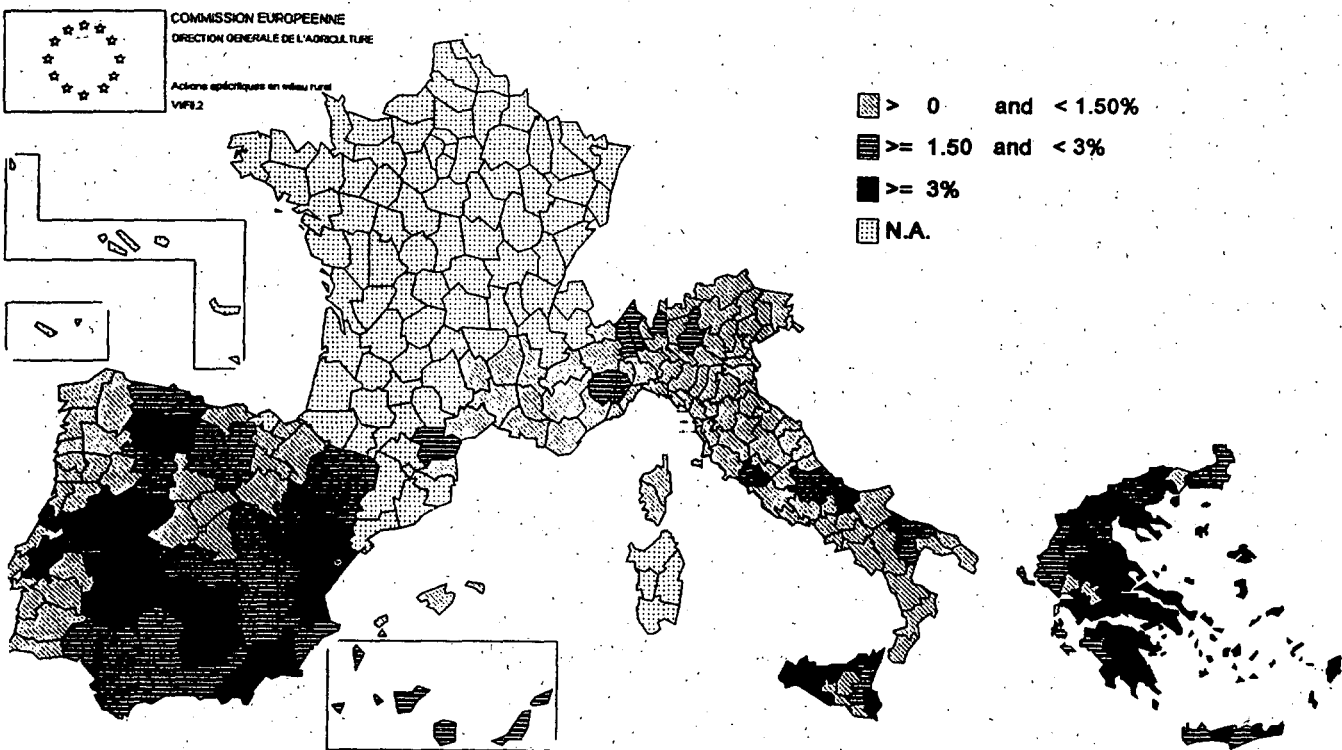


Figure 6 : 1985-1994, proportion of total forest area affected by fire each year (%)

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