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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

**on the implementation of the Forest Focus scheme according to Regulation (EC) No  
2152/2003 of the European Parliament and of the Council of 17 November 2003  
concerning monitoring of forests and environmental interactions in the Community  
(Forest Focus) – Final report**

SEC(2010) 978

# REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

## on the implementation of the Forest Focus scheme according to Regulation (EC) No 2152/2003 of the European Parliament and of the Council of 17 November 2003 concerning monitoring of forests and environmental interactions in the Community (Forest Focus) – Final report

### 1. INTRODUCTION AND MAIN ACHIEVEMENTS

Regulation (EC) No 2152/2003 of the European Parliament and of the Council (the Forest Focus Regulation<sup>1</sup>) aimed to establish a scheme for long term monitoring of the condition and of the environmental interactions on forests in the European Union.

The scheme included the continuation of the existing monitoring networks on air pollution and its impacts on forests, forest fires, their causes and effects and the co-financing of forest fire prevention activities. It also broadened the scope of EU forest monitoring through the gathering of information on soils, biodiversity, carbon sequestration, climate change effects and protective functions of forests.

Articles 18 and 19 of the Regulation require the Commission to submit a report on the implementation of the scheme to the European Parliament and to the Council, reviewing the effectiveness of the scheme in order to provide a basis for any future decision on the continuation of these activities. Now that the national programmes are all implemented and the financial files are closed, this report replies to that requirement and complements the previous "interim" implementation report of 22 January 2008<sup>2</sup>. Both of the reports aim at understanding how the entire Forest Focus scheme was implemented between 2003 and 2010. They will serve as a basis for reflecting on future monitoring needs and help the consultation process opened in the context of the Green Paper on forest protection and information in the EU as regards how to address forest information in the future.

As already mentioned in the January 2008 report, the implementation of the Forest Focus Regulation took more time than the foreseen four years. The present report complements the previous one and mainly aims at reporting on the use of the Forest Focus budget. The accompanying Commission staff working document gives the details on how the budget has been used by the national competent bodies.

In general, the objectives have been reached and in particular the high implementation rate can be considered as a success. Former forest monitoring and forest fire prevention legislation has been given an integrated approach by Forest Focus. Under the scheme, the Forest Focus database has been created and contains aggregated data and information on the state of EU forests.

The delay in setting up the scheme has caused problems for the national competent bodies in charge of the implementation of the activities foreseen in the national programmes. However, only in exceptional cases were part of the activities withdrawn from what was initially planned.

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<sup>1</sup> OJ L 324, 11.12.2003, p.1.

<sup>2</sup> SEC(2008) 30; COM(2008)6 final

Forest-related information has been gathered, notably on soil and biodiversity, broadening the scope of forest monitoring for the first time. The information on soils and above ground biodiversity form part of the Biosoil database established under the scheme.

A significant percentage of the funding was foreseen for the development of research studies and demonstration projects on biodiversity, carbon stocks, forest soil biodiversity, forest fires, ozone, climate change, genetic diversity, fungi, lichens and other forest related issues.

As regards forest fires, the European Forest Fire Information System, EFFIS, has been established and further developed under the scheme. Especially noteworthy are the modules on Natura 2000 and forests, estimated atmospheric emissions or post fire soil erosion that have been created. EFFIS is therefore now a core element of European forest fire monitoring and its maintenance is assured till end 2010 by means of a pilot project requested by the European Parliament.

## 2. OVERVIEW OF THE FOREST FOCUS REGULATION

After the expiration of Regulation (EEC) No 3528/86 on the protection of the Community's forests against atmospheric pollution<sup>3</sup> and Regulation (EC) No 2158/92 on the protection of the Community's forests against fire<sup>4</sup> at the end of 2002, the Forest Focus Regulation was set up for a four year period. It aimed to ensure long term continuation and further development of this common monitoring.

The overall budget foreseen for the implementation of the Forest Focus scheme over this period was 65 M€

123 agreements were established between 41 competent authorities<sup>5</sup> designated by the Member States and the European Commission, as explained in Section 3.

The national authorities drew up two-year national programmes for 2003/2004 and 2005/2006<sup>6</sup> containing the description of the activities and studies to be developed.

The scheme allowed EU funding up to 50% in the case of monitoring activities, the development of the EFFIS, for studies on fires, for awareness raising campaigns, special trainings and for fire prevention measures. The review of the scheme and the studies on identifying new monitoring activities were also co-funded up to 50 %.

Studies, experiments and demonstration projects to further develop the scheme, to promote harmonised data collection and delivery and to improve data evaluation and data quality were co-funded up to 75% of the costs.

Besides the national programmes, 16% of the budget covered the following Forest Focus activities:

- The Commission's Joint Research Centre (JRC) provided overall scientific and technical support, the creation and management of the Forest Focus data base, the coordination of the European Forest Data Centre (EFDAC), the

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<sup>3</sup> OJ L 326, 21.11.1986, p.2. Regulation as last amended by Regulation (EC) No 804/2002 (OJ L 132, 17.5.2002, p.1).

<sup>4</sup> OJ L 217, 31.7.1992, p.3. Regulation as last amended by Regulation (EC) No 805/2002 (OJ L 132, 17.5.2002, p.3).

<sup>5</sup> SEC (2010) 978

<sup>6</sup> see the interim implementation report under '2.2 Operation' of COM (2008) 6 final and SEC (2008) 30

- maintenance and improvement developing of the EFFIS and the coordination of studies, experiments and demonstration projects;
- The agreement with UN-ECE International Co-operative programme on Assessment and Monitoring of Air pollution effects and forests, ICP-Forests,<sup>7</sup> that aimed to gather the data collected on the Level I network.
- The agreement with the United Nations Economic Commission for Europe to write the report "State of forests and sustainable forest management in Europe 2007".<sup>8</sup>
- The execution of the mid-term report "Development and review of the Forest Focus scheme"<sup>9</sup>.
- The organisation of meetings and conferences for the dissemination of the results of activities funded under the scheme.<sup>10</sup>

### 3. RESULTS

#### 3.1. Forest Focus database

One of the main results of the Forest Focus scheme has been the Forest Focus database containing information on air pollution effects of forests. It consists on data on crown condition (discolouration and defoliation) on the **6000 plots** of the Level I network and on the **800 plots** of the intensive Level II network. In the intensive survey growth data, soil solution, deposition, ground vegetation foliar chemistry and soil solution were also gathered and are part of the database.

For reasons of data protection, validated plot data can only be disclosed to the competent authorities. Information on the aggregated data is available and accessible in the EFDAC and several reports on forest health and forest monitoring have been produced and are available to the general public e.g. JRC reports and ICP forest yearly reports.

A first assessment of the data on the extensive monitoring "Level I" provides information on the crown defoliation and discolouration and the trends on those parameters over time as an indicator of forest health.

Measurements and observations conducted on the intensive Level II plots have provided knowledge on:

- The mean defoliation of the main coniferous and broadleaf species showing a general EU wide stable trend with local variations related to drought periods, extreme high temperatures, etc
- The pH levels in the upper mineral layer of the plots with different values depending on the location of the plots.

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<sup>7</sup> ICP Forests (the International Co-operative Programme on assessment and monitoring of air pollution effects on forests) was launched in 1985 under the Convention on Long-range Transboundary Air Pollution of the United Nations Economic Commission for Europe (UNECE) due to the growing public awareness of possible adverse effects of air pollution on forests. The Level I and II plots are common with the Forest Focus programme. Currently 40 countries participate in the ICP Forests. See also:

<sup>8</sup> [http://www.mcpfe.org/filestore/mcpfe/publications/pdf/state\\_of\\_europes\\_forests\\_2007.pdf](http://www.mcpfe.org/filestore/mcpfe/publications/pdf/state_of_europes_forests_2007.pdf)

<sup>9</sup> [http://ec.europa.eu/environment/forests/pdf/final\\_report.pdf](http://ec.europa.eu/environment/forests/pdf/final_report.pdf)

<sup>10</sup> [http://ec.europa.eu/environment/forests/pdf/biosoil\\_brochure2010.pdf](http://ec.europa.eu/environment/forests/pdf/biosoil_brochure2010.pdf)

- The mean concentrations of sulphur depositions which show a general decrease by 25% from 2000 to 2005, meanwhile the average nitrogen inputs remained rather unchanged in the same period<sup>11</sup>.
- Tree dimensions and forest growth per plot measured with a 5 year periodicity.
- Meteorology data (mean temperature and total annual precipitation) pursued to give information on their influence on forest condition and to explain punctual local variations when extreme episodes happened.
- Ground vegetation, plant species richness (measured through the number of species reported by layer: tree, shrubs, herbs and mosses) and the changes on richness over time.

The results of the period 2003-2006 together with the previous information from forest monitoring in the period 1986 -2002 permit to assess the current status and the evolution of forest health through crown condition observations. The crown condition indicator showed a deterioration of forest condition in 2003, when extremely dry and warm conditions affected Europe and a slight recovery of the defoliation level in the following years depending on the species considered and on the regions.

The original ambition of the intensive network was to extrapolate results to produce EU-wide representative information. This objective could not be reached because of the lack of statistical precision of the Level II system. Deriving results from intensive monitoring at the EU level still requires further research.

The Forest Focus database has already been used for modelling habitat suitability of dominant tree species and vegetation shift under future climate scenarios<sup>12</sup>. As climatic conditions change over time, this helps to understand how forest species could be displaced across the EU. Data from the database could also feed into international policy processes such as the UN Convention on Biological Diversity, Forest Europe or the UN Framework Convention on Climate Change.

### **3.2. Forest fire prevention activities and European Forest Fire Information System**

The forest fires prevention activities co-funded under the Forest Focus scheme included the construction of forest paths, tracks, water supply points, fire breaks, clearance and felling of areas exposed to fire risk, monitoring facilities, communication equipment, awareness raising campaigns and special trainings.

As described in the interim implementation report in 2008, the Commission developed the European Forest Fire Information System (EFFIS) in collaboration with the Member States in order to provide a platform for comprehensive and intensive data and information exchange as regards monitoring and mapping of forest fires and their effects on the environment.

Yearly fire reports drafted with the help of the most affected Member States, newsletters, damage assessment in Natura 2000 and storm damage assessment reports related to forests are published within the EFFIS activities<sup>13</sup>. EFFIS is also used by the Commission's Monitoring and Information Centre for coordinating civil protection operations.

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<sup>11</sup> The condition of forest in Europe. 2008 Executive Report.

<sup>12</sup> <http://forest.jrc.ec.europa.eu/climate-change>

<sup>13</sup> <http://effis.jrc.ec.europa.eu/reports>

### 3.3. Studies

143 studies and demonstration projects have been co-financed under the Forest Focus scheme as foreseen in the national programmes<sup>14</sup>. They aimed at increasing knowledge on forest fires, the impacts of climate change on biodiversity, climate change and its relation with carbon sequestration, forest soils, biodiversity indicators, fungi, lichens genetic diversity, integrated pest management, and other forest related issues.

The Biosoil project aiming to develop the monitoring of forest soils and biodiversity<sup>15</sup> brought together 59 demonstration projects co-funded by 75%. The project was divided into two modules, one on soil and one on biodiversity.

The result of Biosoil is that **forest biodiversity** information has been collected on 3.379 Level 1 plots. It is the first time that an inventory of forest biodiversity components is conducted at EU level. Harmonised information has been gathered on tree species diameter, high, deadwood, stand and canopy and ground vegetation, as well as a description of the forest type classification. The **soil** chemical and physical parameters (i.e. pH, nitrogen, carbon stock, etc) together with the biodiversity indicators collected are included in the Biosoil database managed by the JRC.

In addition to the studies developed under the national programmes, 8 studies were launched and coordinated by the JRC. They focused on climate change, forest fires, harmonisation of national forest inventories, protective functions of forests, as well as part of the Biosoil demonstration study.

## 4. FINANCIAL IMPLEMENTATION

### 4.1. Break down of funds by activities for the period 2003-2006

From the total budget of the scheme (€65 million), a total amount of €56,468,222 was allocated to perform the national programmes. A total of €7,587,586 were allocated for the agreement with the Joint Research Centre, the execution of the mid term review of the scheme, the agreement with ICP-Forest, and for the different expert meetings and conferences.

From the total budget committed for the implementation of the scheme the biggest amount was foreseen for the intensive monitoring plots (more than €21 million) followed by the studies and demonstration projects (€17 million) and then for the forest fire prevention activities together with the development of the EFFIS (more than €9 million)<sup>16</sup>.

Studies and demonstration projects on forest biodiversity, soil, carbon, climate change, genetics etc accounted for 30% of the budget<sup>17</sup>. This reflects the importance that the Forest Focus scheme has given since the beginning to broaden the scope of the traditional forest monitoring on atmospheric pollution and forest fires. The Biosoil project on forest soil and biodiversity had an allocation of €10 million: €9 million devoted to the soil part and approximately €1 million for biodiversity.

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<sup>14</sup> See Annex I on forest focus C studies

<sup>15</sup> <http://biosoil.jrc.it/>

<sup>16</sup> SEC (2010) 978

<sup>17</sup> SEC (2010) 978

## 4.2. Expenditure and consumption of the Forest focus scheme

The scheme is foreseen to be technically and financially closed by mid 2010.

The average consumption rate of the Forest Focus national programmes is over 86% what can be considered a success in the implementation of the scheme. Only three competent bodies had a low consumption rate of below 50%. Due to the delay in starting the programme and the administrative burden that this created, some competent bodies found difficulties in implementing the scheme and the consequence was that some of the activities were finally not performed.

A total amount of **€3,342,555.09** was spent on the scheme. The activities foreseen in the national programmes accounted for €45,772,306.10 and the other use of the Forest Focus budget for €7,570,248.99.

An analysis of the expenditure per activity<sup>18</sup> shows that the larger part of the funding, 43% has gone to the intensive air pollution monitoring (Level II network). Following in magnitude, 32% has gone to the studies and demonstration projects. 11% was spent in forest fire related activities. The systematic Level I monitoring network used only 9% of the total budget and 5% of the budget went to coordination and management activities.

The assessment of the expenditure by Member State and activity shows that most of the financial resources were devoted to the intensive monitoring of forest health, followed by the development of studies and demonstration projects and in the third place by the fire monitoring activities.

## 5. CONCLUSIONS

A number of conclusions can be drawn from on the implementation of the scheme:

- Firstly that forest monitoring in the EU has devoted the majority of its financing resources to the intensive monitoring network (Level II). This network does not provide enough representative information on the state of EU forests and the resources and funds deployed in such a network are very high.
- Traditional crown condition monitoring has been gathered already for 20 years since EU forests started showing symptoms of acid rain damage. Latest results have shown that forest condition is more stable nowadays and that sulphur content levels have decreased meanwhile nitrogen levels remain stable. Crown condition can still be considered as a representative and cost effective indicator for the state of forests. Nevertheless, it gives rough information on forest health and it should be complemented with other information on the visible damages.
- Other indicators should be included in future forest monitoring systems, using networks that provide consistent information at EU level.
- Forest soil and biodiversity monitoring should be continued in the future, as they deliver crucial information for EU policy making, but also for contributing to international conventions, such as the UNCCC or the CBD.

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<sup>18</sup> With final figures taken on the 15<sup>th</sup> March 2010 considering all the final payments executed until the date, subject to eventual future audits, and estimations for the last pending payments.



With regard to forest fires and in the absence of a legal basis, the question of how to assure continuation of EFFIS and the Commission's expert group on forest fires will need to be addressed in the context of the new financial perspectives and on the Green Paper on forest protection and information<sup>19</sup>. The referring Council conclusions of 11 June 2010<sup>20</sup>, as well as those of 26 April 2010<sup>21</sup> give the Commission further support and guidance on the continuation of forest related data management under the EFFIS system.

The Forest Focus Regulation was repealed in 2006 by the Life+ Regulation (EC) No 614/2007<sup>22</sup>. So far, there is one forest monitoring project ongoing under the Life+ Regulation, conceived for a two-year period only (2009 and 2010) and unlike the Forest Focus scheme, it is based on a voluntary approach.

In order to start a debate on EU policy needs, the European Commission adopted on 1 March 2010 the mentioned Green Paper on forest protection and information. It presents the current state of play of EU forests and sets out the main challenges they face as regards climate change, as part of the follow-up to the White Paper on adapting to climate change<sup>23</sup>. It also refers to existing forest information systems and the tools to protect forests, and raises a series of questions relevant to the development of future policy options. A public consultation, to which this report may contribute as an important information tool, is open until end of July 2010 to feed the debate on forest protection and information

The follow up to the Forest Focus Regulation, the more recent actions under Life+ and the wider issue of forest monitoring will be taken into consideration in the context of the next steps after the Green Paper.

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<sup>19</sup> COM (2010) 66

<sup>20</sup> Council conclusions on forest protection and information in the EU, Council document 11037/10

<sup>21</sup> Council conclusions on prevention of forest fires within the European Union, Council document 7788/10

<sup>22</sup> OJ L 149, 9.6.2007, p.1.

<sup>23</sup> COM(2009)147