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**The Clean Air for Europe (CAFE) Programme:
Towards a Thematic Strategy for Air Quality**

1. INTRODUCTION: THE EFFECTS OF AIR POLLUTION

In most cities of Western Europe, air quality has improved dramatically since the days when smog conditions sometimes made life unbearable. At that time, increased pollution had been taken to be the necessary consequence of economic development - it was simply the price we had to pay for prosperity and industrialisation.

The history of urban air quality in recent decades has shown that this does not have to be the case. Improving air quality has been one of the great success stories of environmental policy, showing that it is really possible to de-couple economic growth from environmental degradation.

However, persistent problems do remain. In particular, the results of the recent Auto-Oil II programme¹ have revealed two specific remaining air quality problems which will need to be major priorities for the next phase of the EU's air quality policy. These relate in particular to particulate matter and ozone.

1.1. Particulate Matter

There is ever increasing evidence that tiny dust particles, measured in microns or even nanometres, have deleterious effects on human health, causing premature deaths and reducing quality of life by aggravating respiratory conditions such as asthma.² Although particulate matter has up to now been considered primarily as an urban health problem, recent studies have shown that it is more widespread in developed countries.

One reason why particulate matter is of such concern is that there does not appear to be any concentration threshold below which there are no effects. New studies are constantly providing fresh evidence, but there are still many uncertainties and complexities. The precise mechanism of damage is still not known. Since particulate matter with a diameter of less than 10 microns (μm) penetrates into the human thorax, air quality objectives have up to now been set in relation to the total mass concentration of such particles. Recent evidence suggests that it may be the fine particulates with a diameter less than 2.5 μm or even smaller that do most damage to human health, and that the effects depend further on the chemical composition or physical characteristics of the particle.

Particulate matter is emitted directly into the atmosphere from a variety of (mostly combustion-related) stationary and mobile sources, but particles also form in the atmosphere from gaseous pollutants such as VOCs, NO_x , SO_x and NH_3 . This means that a very large range of sources is responsible for particulate matter and that, since secondary particle formation can occur a long way from the source, it represents a significant transboundary problem, which is linked to the problems of acidification, eutrophication and ground-level ozone. Complexities are thus involved both in determining the health effects and suitable indicators for the particle mix and in

¹ Commission Communication COM(2000)626 of 5 October 2000: "A review of the Auto Oil II Programme".

² Much of the following information on the health effects of particulate matter and ozone is taken from the World Health Organisation 1999 Air Quality Guidelines. Note has also been taken of work which has emerged since the guidelines were developed.

modelling the transport of particulates so as to determine the relationship between emissions and ambient concentrations. A large amount of technical work is therefore necessary before public health in relation to particulate matter can be guaranteed.

1.2. Ozone

While ozone in the upper atmosphere provides an essential screen against the sun's most harmful rays, at ground level it is another lung irritant causing many of the same health effects as particulate matter, as well as attacking vegetation, forests and buildings. Observed effects on human health inflammation and morphological, biochemical, and functional changes in the respiratory tract; as well as decreases in host defence functions. Clearly established effects on vegetation at levels found in Europe can cause a range of effects including visible leaf injury, growth and yield reductions, and altered sensitivity to biotic and abiotic stresses. Furthermore, because ozone is a secondary pollutant with a regional distribution, these effects may occur over large areas of rural Europe. Ozone also acts both directly and indirectly—as part of a pollution “cocktail”—to accelerate the degradation of materials.

Ground-level ozone is formed in the atmosphere by the reaction of pollutants such as nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. The severity of its effect on human health depends on the concentration, the duration of exposure, and the level of activity during exposure. As with particulate matter, recent evidence suggests that there is no threshold concentration below which there are no effects on health. WHO therefore provides dose response relationships for ozone in their most recent guidelines. However, short-term, acute health effects in healthy, exercising adults have been found to be statistically significant at a concentration of 160 µg/m³, while field studies in children, adolescents and young adults indicate that ozone can decrease lung function at 120 µg/m³. For this reason, the World Health Organisation (WHO) has also set 120 µg/m³ (eight-hour average) as its guideline in respect of the human health effects of ozone pollution, along with further thresholds related to its effects on vegetation.

On the basis of currently known technology, it is not possible to respect this guideline at all times, everywhere in Europe, nor is it possible to predict when it might be respected in the future. Ozone pollution is related with the problem of acid rain since the emission of nitrogen oxides (NO_x) leads to both. In its Proposals for Directives on ozone and national emission ceilings, referred to in the following section, the Commission has set interim objectives related to ozone and acidification, and has based its proposed national emission ceilings on those interim objectives. Since the Council and Parliament have so far not been able to agree on these ceilings it is questionable whether even these interim targets will be achieved without further action.

1.3. Other priorities

Tackling pollution by particulate matter and ozone will thus need to be a major priority for the next phase of the Community's air quality policy. In addition, it will need to address remaining problems relating to acidification, eutrophication and other problems of deposition generally, including cultural heritage. It will also need to keep a watchful eye for emerging problems relating to atmospheric pollutants that are not currently regulated and on any remaining problems with other pollutants, such as hotspots where emission densities are especially high.

2. THE POLICY RESPONSE SO FAR

Community action to improve air quality has so far included the following strands:

- developing limit or target values for ambient air quality;
- developing integrated strategies to combat the effects of transboundary pollution (in particular acidification, ozone and eutrophication) through the adoption of national emission ceilings;
- identifying cost-effective reductions in targeted areas through integrated programmes such as Auto-Oil I and II;
- introducing specific measures to limit emissions or raise product standards (or otherwise promoting national or local action to reduce emissions).

Following the adoption of the air quality framework directive³ the European Commission has come forward with proposals for a series of new air quality objectives to protect human health and ecosystems. New limit values for SO₂, NO_x, particulate matter and lead were adopted in 1999⁴. Limit values for carbon monoxide (CO) and benzene were agreed in 2000.⁵ As a result of these so-called “air quality daughter directives” Member States and their local authorities will need to monitor air quality, provide information to the public, and introduce improvement plans and programmes where air quality fails to meet the specified criteria. A third directive setting target values for levels of ozone pollution is still under negotiation between the Institutions⁶. Finally, discussions are ongoing concerning the desirability of adopting similar legislation to cover some or all of the remaining pollutants mentioned in Directive 96/62/EC: polyaromatic hydrocarbons (PAHs), nickel, cadmium, arsenic and mercury. A Proposal will be forthcoming later this year.

The Commission has also come forward with new strategies to combat acidification, ozone and eutrophication for which the principal policy instrument is a proposed “national emission ceilings” (NEC) directive also under negotiation between the Institutions.⁷ The technical work carried out in preparation of the NEC proposal was done in close collaboration with the UN-ECE/CLRTAP, which adopted an analogous Multi-pollutant Multi-effects Protocol, the so-called “Gothenburg Protocol”. Unfortunately the ceilings agreed by Parties to CLRTAP did not correspond to the level of ambition on which the technical work was based. For this reason the

³ Council Directive 96/62/EC on ambient air quality assessment and management.

⁴ Council Directive 1999/30/EC; OJ L 63, 29.6.1999, p. 41.

⁵ Directive 2000/69/EC; OJ L 313, 13.12.2000, p. 12.

⁶ Proposal for a Directive of the European Parliament and of the Council relating to ozone in ambient air; OJ C 56 E, 29.02.2000, p. 41.

Common Position (EC) of 8 March 2001 adopted by the Council, acting in accordance with the procedure referred to in Article 251 of the Treaty establishing the European Community, with a view to adopting a Directive of the European Parliament and of the Council relating to ozone in ambient air; to be published.

⁷ Proposal for a Directive of the European Parliament and of the Council on national emission ceilings for certain atmospheric pollutants; OJ C 56 E, 29.02.2000, p. 34.

Common Position (EC) No 51/2000 of 7 November 2000 adopted by the Council, acting in accordance with the procedure referred to in Article 251 of the Treaty establishing the European Community, with a view to adopting a Directive of the European Parliament and of the Council on national emission ceilings for certain atmospheric pollutants; OJ C 375, 28.12.2000, p. 1.

Community declined to sign the Protocol pending agreement between Council and Parliament on a more stringent set of ceilings in the context of the NEC Directive. Since then a more stringent set of ceilings have been included in the Common Position currently under discussion in the European Parliament, although they still fall short of the level of environmental ambition reflected in the original Commission Proposal. Nevertheless, taken together with the air quality framework and daughter directives referred to above, these initiatives will form a comprehensive set of objectives for 2005/2010 not only for Community action but also for Member States and their regional and local authorities. Achievement of these objectives will serve to raise the overall quality of life for everyone in Europe.⁸

Auto-Oil I led to the adoption of a series of directives regulating emissions of certain pollutants from light-duty vehicles and the quality of petrol and diesel. These were joined subsequently by further proposals concerning emissions from other types of vehicles and improved procedures for inspection and maintenance. Auto-Oil II involved the estimation of future emissions from road transport and other sources and future air quality and led to a series of conclusions and recommendations on emission reduction measures to be taken in the road transport sector.

Auto-Oil II has shown that emissions from road transport of the main regulated pollutants can be expected to fall to less than 20% of their 1995 levels by 2020 although the results for particulate matter cover only diesel emissions. By contrast, CO₂ emissions are expected to continue rising until 2005, before stabilising on the assumption that the voluntary commitments of the car manufacturers are met. These emission reductions are expected in spite of the forecast growth in transport demand.

The process of setting mandatory, quantitative limits on emissions in the road transport sector has not really been paralleled by similar developments in other sectors. However, emission limit values also exist for individual source categories such as large combustion plants and waste incinerators, and other instruments such as the IPPC Directive⁹ based on the application of best available techniques (BAT) can be expected to lead to further improvements, even though they are difficult to quantify. In addition, a proposal to revise the Directive on Large Combustion Plants is currently under negotiation in the institutions. Despite these developments, it is reasonable to assume on the basis of the Auto-Oil II results that the projected emission reductions for road transport are generally unlikely to be matched by similar reductions in other sectors. There is a need both to improve emission forecasting and to take appropriate action to achieve further reductions from these sources.

3. PROTECTION OF VULNERABLE GROUPS

Of particular concern is the need to protect the most vulnerable citizens from the effects of air pollution. Effects on vulnerable groups is explicitly taken into account in the development of the WHO guidelines on which EU air quality objectives are based. For example,

⁸ Following the agreement on Common Position, the Commission is preparing a proposal for a mandate for the Community to accede to the Gothenburg Protocol.

⁹ Council Directive 96/61/EC on integrated pollution prevention and control.

- the WHO guidelines for ozone referred to in the opening section are largely based on the effects of ozone pollution on asthmatic children;
- the guidelines for lead are designed specifically to protect children and developing foetuses;
- the carbon monoxide (CO) guideline protects people with a certain form of heart diseases.

Furthermore, the air quality daughter directives explicitly require up-to-date information on ambient concentrations to be made available to the public as well as to appropriate organisations, including those representing the interests of sensitive populations and other relevant health-care bodies.

Much of the ongoing research into the health effects of particulate matter concerns vulnerable groups, and will therefore feed into the review of legislation in this area. One area where more research is needed is whether vulnerable groups may be subjected to higher (or more prolonged) exposure to pollution, for example due to the location of schools or other lifestyle factors. As discussed below, an important priority for the “Clean Air for Europe” (CAFE) programme will be to strengthen links between research and policy. This will help to ensure that such issues are high on the research agenda, and that new scientific information is fed promptly into air quality policy.

4. THE CLEAN AIR FOR EUROPE (CAFE) PROGRAMME

The priority problems described in section 1 can best be addressed in the context of a coherent, thematic strategy to combat air pollution and its effects. For this reason, the Proposal for a Sixth Environmental Action Programme (6EAP) recently adopted by the Commission¹⁰ refers to the development of a thematic strategy on air pollution under the title “Clean Air for Europe”. This strategy should involve:

- a review of the implementation of air quality directives and effectiveness of air quality programmes in the Member States;
- improving the monitoring of air quality and the provision of information to the public, including by indicators;
- priorities for further actions, the review and updating of air quality thresholds and national emission ceilings and the development of better systems for gathering information, modelling and forecasting.

The two air quality daughter directives mentioned in section 2 are due to be reviewed in 2003 and 2004 respectively. The proposed national emission ceilings (NEC) and ozone directives will also need to be reviewed in 2004, along with the UN-ECE/CLRTAP Gothenburg Protocol once it enters into force. The proposed revision of the large combustion plants (LCP) directive 88/609/EEC also foresees a further review in 2004. There are numerous linkages between these pieces of legislation and

¹⁰ COM(2001)31, 24.1.2001.

it is essential that all of the reviews should be brought together as an integral part of CAFE.

2004 is therefore the key target date for the development of a thematic strategy as outlined above. In order to achieve this, the Commission is now embarking on a programme of technical analysis and policy development, the "Clean Air for Europe" (CAFE) programme.

CAFE will have the general aim of developing a long-term, strategic and integrated policy to protect against the effects of air pollution on human health and the environment. As required by the Treaty, the policy will aim at a high level of environmental protection based on the precautionary principle, taking account of the best available scientific and technical data and the costs of benefits of action or lack of action.

Its specific objectives will be:

- (1) to develop, collect and validate scientific information relating to the effects of ambient, i.e. outdoor air pollution, emission inventories, air quality assessment, emission and air quality projections, cost-effectiveness studies and integrated assessment modelling, leading to the development and updating of air quality and deposition objectives and indicators and identification of the measures required to reduce emissions;
- (2) to support the implementation and review the effectiveness of existing legislation, in particular the air quality daughter directives, the decision on exchange of information, and national emission ceilings as set out in recent legislation, to contribute to the review of international protocols, and to develop new proposals as and when necessary;
- (3) to ensure that the measures that will be needed to achieve air quality and deposition objectives cost-effectively are taken at the relevant level through the development of effective structural links with the relevant policy areas;
- (4) to determine an overall, integrated strategy at regular intervals which defines appropriate air quality objectives for the future and cost-effective measures for meeting those objectives;
- (5) to disseminate widely the technical and policy information arising from implementation of the programme.

The idea to gather air quality policy within a single, integrated programme emerged in October 1998 when the Commission services distributed an informal discussion paper to a wide range of technical experts, national and stakeholder representatives and MEPs. Responses to this consultation exercise clearly demonstrated that a more integrated approach to air quality policy would be welcomed by a large majority of stakeholders.

Since then, plans for CAFE have been further developed. During 2000 a study was undertaken to investigate the feasibility of setting up such a programme and to recommend ways in which it might be organised. The consultants undertaking the feasibility study presented their recommendations at a meeting of national experts and other stakeholders on 14 November 2000. The plans were welcomed by the meeting, which also provided several constructive comments, especially concerning the need to ensure adequate financing of the programme, to co-operate closely with the work of the United Nations Economic Commission for Europe Convention on Long-Range Transboundary Air Pollution (UN-ECE/CLRTAP), and to ensure that the programme would lead not only to the setting of targets and objectives for air quality but would also foresee the development of the measures necessary to achieve them.

5. IMPLEMENTATION OF THE PROGRAMME

The following sections contain a brief description of the Commission's plans for implementing the programme. They cover the five specific objectives mentioned above as well as other critical issues, namely scientific input, transparency and stakeholder involvement, enlargement and co-operation with international organisations. Further details are contained in a Commission staff working paper accompanying this Communication.

5.1. Technical Analysis

The first objective refers to the major technical analysis work that is needed to develop air quality policy. The mechanisms for gathering information will need to be as flexible and comprehensive as possible. The objectives and indicators developed on the basis of scientific evidence will not only serve to set binding air quality thresholds but will also provide targets for sectoral and source-specific strategies and provide tools for informing the public and policy-makers at all levels of government. In order to do so they will need to be supplemented by the development and validation of harmonised emission inventories, air quality assessment, emission and air quality projections, cost-effectiveness studies and integrated assessment modelling. An important part of this will be to help streamline and rationalise the reporting of data and information by Member States by avoiding unnecessary duplication—a priority already identified in the Proposal for a Sixth Environmental Action Programme.

Further remarks concerning the mechanisms for obtaining scientific input are made in section 5.6 below, where the need for strong links between CAFE and the EC Framework Programmes for Research and Technological Development is emphasised. The participation of DG Research and Technological Development in the Technical Analysis Group described in the staff working paper should help to ensure this.

5.2. Implementation and Review

The second objective springs partly from the need to comply with specific obligations in relation to Community legislation and the position of the Community as Party to UN-ECE/CLRTAP. As well as corresponding to legal obligations, this objective represents the essential “next step” in addressing the key remaining air quality concerns mentioned at the beginning of this Communication. Sound implementation of existing legislation by the Member States is a basic requirement for the effectiveness of EU policy in this area, and the Commission intends to play an important role in supporting this.

As mentioned in section 4, 2004 is the target date for many of the review clauses contained in the existing legislation, and these will therefore provide a focus for the development of the first CAFE thematic strategy. The Commission intends that development of this strategy should advance sufficiently for it to make an initial report on the first air quality daughter Directive in 2003, as planned. However, because of the linkages between this Directive, other EU legislation and the UN-ECE/CLRTAP Gothenburg protocol the first CAFE thematic strategy will include further evaluation. Legislative review should not, however, be focused solely on fulfilling the requirements of review clauses in the existing legislation. A fully integrated, result-oriented air quality strategy will also need to look beyond established priorities and instruments, and will need to include a critical evaluation of the success of existing policy in reducing air pollution and its effects.

5.3. Linking with Sectoral and Source-Specific Strategies

Various ongoing or envisaged programmes and policies within the Commission will lead to the development of further measures aimed at reducing emissions from individual sources. There is already a corpus of technical regulation setting emission limit values for specific source categories, which is continuously being reviewed and updated. Some of the most relevant are the following.

- Directive 88/609/EEC regulates emissions from large combustion plants (LCPs), which have been estimated to contribute around 50% of total SO₂ emissions and around 20% of total NO_x emissions in the Community.¹¹ Subject to resolution of a number of outstanding issues between Council and Parliament, an amendment to this directive will set stricter emission limit values (ELVs) for new installations and require the application of the current ELVs (or equivalent emission reductions) to all existing installations. A further review is foreseen in 2004.¹²

¹¹ See, for example, the European Environment Agency’s topic report No 9/2000, “Emissions of atmospheric pollutants in Europe, 1980-1996”.

¹² Proposal for a Council Directive amending Directive 88/609/EEC on the limitation of emissions of certain pollutants into the air from large combustion plants; OJ C 300, 29.09.1998, p. 1. Common Position (EC) No 52/2000 of 9 November 2000 adopted by the Council, acting in accordance with the procedure referred to in Article 251 of the Treaty establishing the European Community, with a view to adopting a Directive of the European Parliament and of the on the limitation of emissions of certain pollutants into the air from large combustion plants; OJ C 375, 28.12.2000, p. 12.

- The Auto-Oil II Communication provides a status report on the development of legislation concerning vehicle emissions and fuel quality, in particular Directives 98/69/EC, 98/70/EC and 99/96/EC.¹³ A number of proposals in this area are currently under negotiation or envisaged, and the Council has recently made a number of requests to the Commission in line with the conclusions of the Communication. In this context the Council also invited the Commission to assess the feasibility of a new phase in the reduction of limit values for emissions which could come into force by 2010 in line with the provisions of Directive 98/69/EC and in connection with fuel specifications.¹⁴
- Although Directive 96/61/EC on integrated pollution prevention and control (IPPC) does not itself set emission limit values, it specifies general rules for permitting of the (mostly large, industrial) installations covered, based on the application of best available techniques (BAT). Ensuring effective implementation of this Directive is therefore a high priority. Daughter Directives setting quantitative ELVs for particular categories of installations will be proposed in cases where a clear need can be identified.
- Directive 1999/13/EC regulates the emission of volatile organic compounds (VOCs) from solvent-using industries, and is expected to lead to a 60% reduction in such emissions. The priority now is to develop effective instruments to reduce emissions resulting from domestic solvent use.

The further development of these instruments will make a significant contribution to improving air quality and will therefore need to be closely integrated with the CAFE programme. Indeed, since the only way to reduce air pollution is to reduce polluting emissions from their source, it is clear that thematic programmes such as CAFE need to provide a strong steer for the development of sectoral, source-based measures to reduce emissions. At the same time, the development of such specific sectoral measures should always be based on the consideration of a range of environmental, economic and social issues, and should therefore link with other relevant thematic programmes as appropriate (relating, for example, to climate change or water quality).

Effective structural links between CAFE and the sectoral and source-specific measures will therefore be developed in order to ensure that the necessary measures (whether technical or non-technical) are taken and that scenarios used within CAFE and other policy areas are consistent. On the one hand, knowledge concerning emission reduction measures in the pipeline, including future emission limit values applicable to specific source categories, work to identify best available techniques (BAT) and related cost-benefit studies will feed into the more global scenario development and cost-effectiveness analysis carried out within CAFE. On the other hand, evidence on effects, air quality objectives, inventories and comparative cost-effectiveness studies carried out within CAFE will help to drive and prioritise the development of sectoral and source-specific measures.

¹³ Commission Communication COM(2000)626 of 5 October 2000: "A review of the Auto Oil II Programme".

¹⁴ Council Conclusions adopted on 19 December 2000.

In addition to the development of technical regulation, the Treaty requires that environmental protection requirements are integrated into the Community's sectoral policies. This process is of crucial importance for the achievement of environmental policy objectives, and it will be equally important for CAFE to interface with the integration process in order to ensure that the development of air quality objectives and indicators within CAFE has a real effect on sectoral and source-specific measures. Establishing strong links with the sectoral integration programmes will thus be a high priority for CAFE.

The co-ordination group described in the staff working paper will provide the main vehicle for ensuring that the necessary links are maintained. In addition to sectoral and source-specific strategies at Community level, CAFE will seek to develop links with initiatives such as networks of city authorities with a view to promoting and prioritising measures taken at local level to improve air quality.

5.4. Strategy development

The fourth objective refers to the need for clear deliverables and milestones, and covers the specific goal of developing a thematic strategy by 2004. After 2004, it is expected that further integrated air quality strategies will be developed, ideally at five-year intervals, defining appropriate air quality objectives for the future and cost-effective means for meeting those objectives.

As mentioned in the introduction, the major priorities for the first "cycle" of CAFE (until 2004) relate to particulate matter and ozone, along with remaining concerns regarding deposition leading, *inter alia*, to acidification, eutrophication and damage to cultural heritage. The adoption of sectoral measures at Community level that are necessary for the achievement of air quality objectives and national emission ceilings will be essential. While particulate matter and ozone are priority pollutants, other pollutants addressed by current legislation such as NO₂ merit due attention since exceedances of limit values are still occurring and are expected to continue occurring in the next decade. At a more technical level there is a need to improve the consistency of assessments at global, European, national, urban and local geographical scales and to improve the modelling interface between these scales. These priorities will change over time, however, and an important aspect of integrated strategy development will therefore be to review priorities on the basis of the technical analysis and legislative reviews carried out within CAFE. Emissions of greenhouse gases and the presence in the air of man-made chemicals will not be addressed within CAFE since other programmes and strategies are focusing on these problems. It will nevertheless be important to maintain close strategic and technical links between CAFE and these programmes so that CAFE becomes a fully integrated multi-pollutant, multi-effect strategy.

5.5. Dissemination

Keeping the public informed about the development of policy is necessary for several reasons. The need to increase transparency and bring Community policy closer to the citizens is well recognised. Regular, accurate information on Community policy is essential in order to increase public trust. As well as helping citizens to feel more involved, such information also allows the public to influence policy being made in their name. Such participation is particularly important for environmental policy where the public, as opposed to economic interests, provides

the key driver. Thirdly, all of us have a role to play in protecting the environment by changing our behaviour as consumers. Again, regular and accurate information on the progress and priorities of environmental policy will help to motivate and guide such change. Compared to the other objectives, informing the public is a relatively simple matter but it must not be forgotten. Internet, press policy and other forms of publicity are among the tools that need to be used.

5.6. Strengthening the scientific input to policy

CAFE will benefit from an organisational structure ensuring that the policy is science-based and involves stakeholders at all levels of policy-making. It will be based on the precautionary principle and will take full account of the latest and best available scientific and technical information.

The existing mechanisms for obtaining scientific input will be continued and developed further. At the same time it will be assessed whether there is an adequate degree of scientific scrutiny and peer review in the existing mechanisms, how this may be improved without incurring unacceptable expense or delay, and how to widen the involvement of the scientific community in the policy-making process.

Strengthening links with scientific research will be an important priority for CAFE. Policy needs to feed back more efficiently into research planning. Policy developers also need to have a clearer view of what they can expect from science: what is known, what is not known and where uncertainty cannot be reduced in the near future. Establishment of the European Research Area (ERA)¹⁵, in particular its support to policy-making and provision of scientific reference, is seen as the key development with which CAFE should link. Strong links between CAFE and the EC Framework Programmes for Research and Technological Development will be crucial in order to ensure that policy-relevant research is funded and translated into a form that is directly useful for policy development. The Joint Research Centre could play a role here.

Given that scientific advice inevitably contains several elements of uncertainty, a balance will need to be drawn within CAFE, as in all policy areas, between a strict precautionary approach and the need to compile a convincing scientific case before taking action. Commission Communication COM(2000)1 provides the necessary guidelines for applying the precautionary principle. The level of robustness of the evidence required will depend upon the seriousness of the suspected effects as well as on the costs of the action envisaged. Scientific uncertainty must not be used as an argument against taking due precaution against possible long-term damaging effects. Moreover, endless discussions on the science can suffer from a law of diminishing returns: after a certain level of scientific debate, policy conclusions must be drawn and policy made on the base of the best available evidence.

¹⁵ COM(2000)6 of 18.01.2000.

5.7. Transparency and stakeholder involvement

CAFE will be characterised by a high level of transparency both in the day-to-day proceedings and in the way research data and technical analysis are used for policy development. This will mean, for example, that reports and summaries of discussions will generally be made available on the internet soon after the meeting taken place. Similarly, technical analysis including data and modelling used within CAFE will be fully accessible on the internet as far as logistically feasible.

Stakeholder involvement will be crucial for the success of CAFE and of the instruments developed as a consequence, since this depends on the degree of acceptance by those involved in their implementation. Stakeholders will systematically be provided the opportunity to present evidence and comment at several stages of technical analysis and policy development.

In addition to providing an opportunity for comment and criticism, it is hoped that stakeholders will actively participate in CAFE by contributing technical work. Where such technical contributions are forthcoming, their input into CAFE will be ensured through participation in working groups or by other means.

5.8. Enlargement

With the enlargement of the European Union approaching, it is clear that CAFE needs include the Candidate Countries within its geographical scope from the beginning.

Steps have already been taken to ensure that this will be the case. Contracts issued with a view to supporting the review of existing legislation include Candidate Countries within its technical scope. Further technical work motivated by the accession negotiations is already being undertaken, such as calculation of national emission ceilings for the Candidate Countries.

Enhanced co-operation with UN-ECE/CLRTAP will also provide a mechanism for involving accession candidate countries in CAFE, since they are all Parties to the Convention. Clearly, the geographical overlap between the two programmes will increase as the EU enlarges. In addition, a number of these countries have recently become full members of the European Environment Agency, as the first EU body having Candidate Countries as its members.

Finally, the Commission is committed to involving representatives from the Candidate Countries in the meetings set up under CAFE. To do this, it will be necessary to clarify the precise modalities in terms of status (although no groups set up under CAFE will have formal voting procedures) and funding of participation, and to take the necessary measures to ensure that the various groups remain manageable and effective in the context of increasing participation.

5.9. Co-operation with International Organisations

5.9.1. The UN/ECE Convention on Long-Range Transboundary Air Pollution (CLRTAP)

The need to enhance co-operation with UN/ECE Convention on Long-Range Transboundary Air Pollution (CLRTAP) has been one of the strongest messages arising from discussions with national and stakeholder representatives. Clearly, such co-operation must not lead to any dilution of Community competence or control over EU policy in this area. Nevertheless, there is an increasingly large overlap in both policy and geographical terms between CLRTAP and EU air quality policy, and enhanced co-operation with CLRTAP will therefore be essential if CAFE is to add real value to policy-making and avoid wastage of resources.

In particular, it will be essential to create and maintain strong structural links to ensure good co-operation and co-ordination between the technical analysis work carried out by the two programmes. Co-operation and co-ordination at the technical level will thus be the key to exploiting synergies and avoiding duplication.

At a political level, it will be essential to achieve the best possible co-ordination of Member States positions in CLRTAP negotiations. The Commission will make every effort to ensure that positions being taken by Member States in Geneva are always fully compatible with evolving Community policy in the area.

5.9.2. Co-operation with the World Health Organisation

In developing the current generation of air quality directives the Commission has taken World Health Organisation (WHO) guidelines as its fundamental input on risk. The current set of air quality guidelines, adopted in 1996, was developed following an agreement between the Commission and the European Regional Centre of the WHO. The working groups set up by the Commission to prepare position papers on each of the pollutants under consideration have used these guidelines, together with assessments of more recent results or risk assessments, as the basis for proposed limit values. Where these limit values, based solely on assessment of risk, have been shown to be unachievable, interim targets have been set taking into account costs and other factors.

During the consultation process leading to the launch of CAFE it became clear that a large majority of national representatives and stakeholders supported the use of WHO guidelines as the fundamental advice on risk. For this reason the Commission will welcome the review and, where necessary, revision of those guidelines, together with other necessary inputs concerning human health effects, in time to feed into the review of the air quality daughter directives.

6. CONCLUSION: TOWARDS A THEMATIC STRATEGY

The Commission intends to communicate a thematic strategy satisfying these requirements in 2004, accompanied and/or followed by legislative proposals as appropriate. 2004 is considered a realistic deadline for the development of the strategy, and also coincides with several review deadlines contained in existing legislation.

Specifically, the strategy will contain:

- an in-depth review of the adequacy and effectiveness of existing Community legislation and national programmes in addressing the remaining air pollution problems, taking into account the need to protect vulnerable groups, including the revision or completion of air quality and deposition objectives where necessary;
- detailed description of and reference to available air quality and deposition data and indicators for public information;
- the results of a detailed analysis on what further measures may be required in order to achieve air quality and deposition objectives;
- proposals concerning new or revised directives on air quality and national emission ceilings;
- a status report on relevant policy in related areas, including the development of the emission reduction measures listed at the beginning of section 5.3.