

*In this Issue*

From the president

**Ultrafine Particles:** Outcome from EFCA Conference

2

**European developments**

Consultation on EURO VI emission limits

Air quality directive on PM<sub>2.5</sub>

3

COST and PM

4

Short news

5

**Convention** on Long Range Transboundary Air Pollution

6

CAFE in Brussels-Pause-CAFE in Geneva?

6

**National developments**

Will France lead the way on PM<sub>2.5</sub>?

8

**News on EFCA and its members**

EFCA in the next five years

8

News from members

10

**Calendar**

10

**From the president**

It is with pleasure that I introduce to you the first issue of the EFCA Newsletter. It is aiming at presenting short, updated and workable information on what is going on in Europe in the field clean air and climate change, with an eye on scientific as well as policy developments.

Starting a new Newsletter asks for some explanation. It is connected with EFCA's own development. From a federation of associations which supported each other in conducting their international conferences successfully EFCA has evolved into an organisation with presence in Brussels (CAFE) en Geneva (Convention on LRTAP). Such activities, however, will be useful only, if we share our observations there with the members of EFCA associations. This year EFCA's Assembly decided that the time was ripe for an EFCA Newsletter as a means to further communication with and among members of the EFCA associations as well as with its relations outside the EFCA community.

News may provoke the wish to react and the opinion of our readers is highly valued. As the frequency of the Newsletter is confined to three issues per year, EFCA offers "EFCA Forums!" at [www.efca.net](http://www.efca.net) to that purpose. In this way EFCA trusts to give constructive contributions for the solution of environmental problems in Europe; we hope that readers will welcome the opportunity.

With personal regards and approaching seasons greetings,

Giuseppe Fumarola, president of EFCA

**From the Editor**

Of EFCA's priority topics: Air Quality, Climate Change and their interaction Particulate Matter (PM) presently seems to be in the centre and this first issue of our Newsletter is reflecting that.

EFCA's recent conference on Ultrafine particles confirmed the relevance of a separate approach of this smallest fraction of PM at some point in the future. At the political level PM<sub>10</sub> regulation is now to be extended with PM<sub>2.5</sub>; an update is presented of the ongoing discussions on both since the publication of the Thematic Strategy on Air Pollution and the recent French ambitions in this area. Andrzej Jagusiewicz explains the relevance of the Convention on Long Range Transboundary Air Pollution in this respect (and vice versa). Other topics in this issue are the EURO VI emissions limits for heavy vehicles, developments within EFCA or its members and a conference calendar.

Comments on the Newsletter are welcome and suggestions for topics in any category will be considered. Please send an e-mail to [info@efca.net](mailto:info@efca.net). For reactions at the contents EFCA offers the Forum page at its website ([www.efca.net](http://www.efca.net)).

# Ultrafine Particles: Outcome from EFCA Conference

In June of this year EFCA, in a productive cooperation with the Forschungszentrum Karlsruhe (FZK), its member GUS and the Confederation of European Environmental Engineering Societies (CEEES), conducted a conference on the topic: "Ultrafine particles: Key in the issue of Particulate Matter?" While the size of this developing field of research is still small UFP have the potential to become a big factor in our understanding of the health risks of particulate matter and are to be considered when discussing policies on particulate matter.

The relevance of Ultrafine particles (UFP), defined as the range 10 nanometer (nm) – 1 micrometer ( $\mu\text{m}$ ), may become apparent from simple logic. Assuming that biological effects of particulate matter are proportional to available surface area – and this seems to be a plausible hypothesis – the case of UFP is a strong one. A decrease in the aerodynamic diameter by a factor 10 corresponds to an increase by a factor 100 in available surface area for the same mass of PM. In addition, their behaviour upon inhalation with deep penetration and deposition into the lungs contributes to the present concern about this size-fraction.

## *Biological and health effects*

Research on dose-effect relations has traditionally focussed on impairment of the respiratory system and the lung function. Epidemiological studies, however, have revealed the relation between increased PM-levels and cardiovascular mortality. Since the end of last century hypotheses on biochemical mechanisms behind this effect were developed which inferred the UFP fraction in the atmosphere.

The papers presented in this session primarily addressed aspects which would follow from these hypotheses. One of these is that UFP, while possibly less effective in exerting pulmonary effects when compared with PM<sub>10</sub> or PM<sub>2.5</sub> fractions, because of their size, could penetrate in lung cells and enter the blood circulation. A further assumption is that they exert oxidative stress which triggers an interest to investigate particles with different chemical composition, such as soot particles or particles containing transition metals. To test such hypotheses systems for exposure to UFP have been installed for cell cultures as well as animals and human volunteers and a range of bio-assay methods has been developed to monitor the effects.

Short-term exposure studies presented at the conference do not seem to contradict the present hypotheses. Exposure of cultures of human lung cells to zinc oxide particles confirmed that the latter cause oxidative stress resulting in inflammatory reactions; this was apparent from biochemical changes which also continued to develop after exposure was stopped. Similar observations could be made upon exposures of lung cells to different size fractions of particulate matter sampled from ambient air in Paris; UFP-fractions exhibited the strongest response.

In an exposure study with mice to ultrafine carbon particles data were presented which showed mild responses in lungs; significant changes in blood parameters were observed, suggesting the possibility of inflammatory reactions in the heart. Similar results have been observed upon exposures of human volunteers.

## *Atmospheric aspects*

At the conference also papers on transformation, climatic effects and measurements of PM and UFP were presented. Data reported for Milan revealed that numbers strongly increase when the particle size falls below 1  $\mu\text{m}$ . The study required the combined use of optical methods and fractional sampling in combination with gravimetry; this type of information is still scarce. As reported at the conference the generation of nano size reference materials for calibration of equipment is now in progress.

## *Conclusions*

A Round Table discussion chaired by conference chairman Karl-Friedrich Ziegahn (FZK and president of GUS), considered the present knowledge and its consequences for public authorities. There was consensus that the results so far qualify UFP as a potential health hazard which deserves more attention. Further research in this area is urgently required, however, and it is too early for providing robust policy advice.

For more conclusive evidence on the risks of atmospheric UFP for human health information from epidemiological studies is highly wanted. Unfortunately, the scarcity of data on UFP abundance in the atmosphere makes it difficult to bring forward such results on short term. Investments in monitoring will be required.

While the scientific community is well aware of its responsibility to produce further evidence an early warning for governments and politicians could be

useful in view of the lengthy procedures in European policy development.

EFCA and its partners agreed to continue their cooperation to increase the awareness of the relevance of the UFP-fraction in the present discussions on legislation for particulate matter.

#### Further information

The EFCA website contains a **Summary report** by the Congress Chairman and the three session chairpersons<sup>1)</sup>. Also Conference programme, Greeting words and abstracts of papers are posted ([www.efca.net](http://www.efca.net)).

The **Proceedings** of the conference are presently in production as a CD-ROM and will appear in the series

of conference reports of FZK (FZKA Bericht 7374). Copies can be ordered from FZK, Mrs Mathes ([mathes@umwelt.fzk.de](mailto:mathes@umwelt.fzk.de)). They will not be published at the websites of EFCA and FZK as announced earlier.

For papers on UFP presented at the EFCA conference in Lille in 2006 see: <http://www.efca.net/Nanoparticles.htm>.

1. Ultrafine particles: Key in the Issue of Particulate Matter? Summary and conclusions by Karl-Friedrich Ziegahn, Ulrich Teipel, Silvia Diabaté, Klaus Grefen. Karlsruhe, November 2007, [www.efca.net](http://www.efca.net).

## European developments

### Consultation on EURO VI emission limits

This summer the European Commission organised a public hearing on future emission limits for heavy duty vehicles, the EURO VI stage. It is a clear signal that the Commission is aware of the need for an integrated approach in policies for clean air and climate change.

In an accompanying document four scenarios were presented which differed in strictness for key pollutants such as NO<sub>x</sub> and PM, as summarised in the table below. The most interesting differences between the scenarios are the CO<sub>2</sub>-penalties which result when applying the more stringent de-NO<sub>x</sub> technologies.

EURO VI scenarios for heavy duty diesel vehicles

	A	B	C	D
PM, g/kWh	0.01	0.02	0.015	0.015
NO <sub>x</sub> , g/kWh <sup>1)</sup>	0.4	0.2; 2.0	1.0; 2.0	0.5;1.0
THC, g/KWh <sup>1)</sup>	0.16;0.66	0.55;1.05	0.55;1.05	0.55;1.05
CO <sub>2</sub> increase	2-3%	5-6%	neutral	neutral

<sup>1)</sup> Different values refer to engines with compression ignition, resp. positive ignition; increased CO<sub>2</sub>-emission applies to compression ignition engines only

The Commission received 55 reactions, mainly from governmental organisations, industry and business and from NGO's. From a summary it appears that most respondents favour either the scenarios A or D; both are reported to be close to the limit values in US2010.

With climate change presently that high on the agenda the substantial support for scenario A is surprising. The motor industry (ACEA) may have technical reasons and industrial interests which explain their preference, but they are joined by governments which agree with the European ambitions for CO<sub>2</sub> reduction. Historically, the negotiations on vehicle emissions have always been focussed on air quality improvement indeed. But the more likely explanation must be the present and expected future constraints for governments to comply with the European air quality directive for NO<sub>2</sub> and PM and the fact that regulation on CO<sub>2</sub> can be on emissions only.

Stringent NO<sub>x</sub> reduction, apart from its direct effect on NO<sub>2</sub>-levels, is beneficial for reducing tropospheric ozone, which is a greenhouse gas itself; this might partly compensate the CO<sub>2</sub>-penalty. This effect has not been quantified; models suggest, however, that this may only succeed by stringent regulation of all NO<sub>x</sub>-sources.

The Commission must be complemented with their prudent approach in this early example of integrated environmental policy development but may not have heard what it wanted to hear. The question is whether Europe can afford any air quality measures which result in decreased fuel efficiency and increased CO<sub>2</sub>-emissions. It will be interesting to see the EC proposal to the Council.

Details on the scenarios, the responses and the results of the consultation are available at: [http://ec.europa.eu/enterprise/automotive/pagesbackground/pollutant\\_emission/heavy\\_duty\\_public\\_consultation/index.htm](http://ec.europa.eu/enterprise/automotive/pagesbackground/pollutant_emission/heavy_duty_public_consultation/index.htm)  
For background information on the present EU limit values and on technology for reduction of exhaust pollutants see: <http://www.greencarcongress.com/2007/07/eu-invites-comm.html>

## Air quality directive for PM2.5

It is now more than two years ago that the Commission sent the Thematic Strategy on Air Pollution (TSAP) to the Council and the European Parliament (1). The more substantial proposal in the TSAP was a 'cap' (read limit value) for PM<sub>2.5</sub> at 25 µg/m<sup>3</sup>. It was immediately attacked by a group of European experts on health effects (2) who explained that such a value ignores the scientific evidence for health effects in Europe and elsewhere at PM<sub>2.5</sub> levels between 12-20 µg/m<sup>3</sup>. They also contested the proposal for the PM<sub>10</sub> limit value to allow a correction for contributions of natural aerosols as these had been taken into account in exposure-response relationships on which the present PM<sub>10</sub> limit value has been based.

In their first reading of the TSAP the European Parliament took position against the proposals on PM<sub>2.5</sub> and PM<sub>10</sub> (3). For PM<sub>10</sub> it proposed to tighten the limit value by 2010 to 30 µg/m<sup>3</sup>, while enlarging derogation options; for PM<sub>2.5</sub> a less binding target value of 20 µg/m<sup>3</sup> was proposed for 2010. It was asked to investigate in the meantime whether health protection with a PM<sub>10</sub> limit value could be sufficient or that a separate limit value for PM<sub>2.5</sub> would be necessary; if so it could take effect by 2015 in a revised directive.

In response the Council, however, taking into account the concern of the Commission (4), stated that it did not want to follow the proposals of the Parliament for lower exposure levels.

Recently the EP Environment Committee concluded its second reading (5) with a number of amendments which confirmed their earlier position: a target value for PM<sub>2.5</sub> of 20 µg/m<sup>3</sup>, to become a limit value in 2015 and a compromise but still strict limit value for PM<sub>10</sub> of 33 µg/m<sup>3</sup> in 2010. The EP members compromised with the Council by withdrawing their earlier recommendation for a maximum of 55 instead of the present 35 days for exceeding the daily limit value of 50 µg/m<sup>3</sup> for PM<sub>10</sub>. On top of the present three year scheme two additional years for exemption are recommended for the PM species when constraints prevent a member state to comply. The EP members connect a list of source related regulation, such as EURO VI and Best Available Techniques in industry, to be proposed within two years after the directive has come into force.

The EP will vote on the draft in December 2007.

## Background

To inform themselves the EP members could make use of a Policy Brief from the Institute for European Environmental Policy (IEEP) in London (6). The IEEP in turn leaned heavily on a team of experts from the Netherlands Environmental Assessment Agency, MNP. In this briefing the three proposals of Commission, Council and EP have been assessed and compared.

In the main conclusions from the briefing it is stated that, even assuming full implementation of maximum technically feasible reductions, attainment of limit values as proposed by Council and Commission everywhere in Europe is unlikely before 2020. This means that non-technical measures, such as spatial planning or traffic management, will still be required.

Another conclusion is that in all three proposals PM<sub>10</sub> remains the dominant factor in densely populated and industrialised areas and cities where exceedances are expected to occur. This is due to the fact that the PM<sub>10</sub> limit values remain the strictest when compared to the limit/target values for PM<sub>2.5</sub>. This is called surprising by the authors because of the evidence that PM<sub>2.5</sub> is the most health-relevant particle size fraction of the two. The proposed subtraction of natural contributions in PM<sub>10</sub> in the TSAP is not likely to alter that. One could argue, however, that monitoring sites for PM<sub>2.5</sub> do not yet have a EU-wide coverage, which makes it difficult to check possible exceedances. It could be wise then to continue for some time the situation with PM<sub>10</sub> as the dominant fraction.

The assessment also called for a more simple system of limit values. All proposals contain a combination of limit and/or target values for both PM<sub>10</sub> and PM<sub>2.5</sub> for different averaging periods, with different margins of tolerance and approaches to derogation. The briefing provided information on the existing connections between annual and daily averages and the logic of selecting a set of equivalent values. This condition is presently not satisfied for the PM<sub>10</sub> limit values. In view of the present difficulty with the implementation of the Directive in plans and programmes, regulation which requires complex assessment and reporting strategies in member states does not seem wise. In this light it was suggested to confine the regulation to the annual average and to phase out the daily value.

The proposal to tighten the limit value for PM<sub>10</sub> in 2010 from 40 to 33 µg/m<sup>3</sup> for the annual average and to allow a maximum of 35 exceedances of the daily average of 50 µg/m<sup>3</sup> per year is near to equivalency; and from the specific viewpoint of protecting public health it is highly wanted. However, its implication



might mean more 'hot spots' from 2010 and constraints at locations where they did not exist so far.

This problem must primarily be solved by source related regulation which then should have the stringency which is equivalent to the air quality regulation. The EP members provide general recommendations here but leave this aspect to the Commission. But it is clear that the effects of even the most strict measures will come too late to be effective within the time frame of the proposed air quality regulation.

#### References

1. Communication from the Commission to the Council and the European Parliament. Thematic

- Strategy on air pollution. COM (2005 446 final. Brussels, 21-9-2005
2. Brunekreef et al, coordinator of EU-sponsored investigations PEACE, TRAPCA, AIRALLERGIC AND AIRNET. Letter to EP Environment Committee, Utrecht, 31-10-2005
3. [www.europarl.europa.eu](http://www.europarl.europa.eu), Brussels/Straatsburg, 26-9-2006
4. <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/1263&format=HTML>, 26-9-2006
5. [www.europarl.europa.eu](http://www.europarl.europa.eu), Brussels/Straatsburg, 9-10-2007
6. IEEP. Proposed air quality Directive: Assessment of the Environmental impact of Parliament's amended proposal; policy brief for the EP Environment Committee. IP/A/ENVI/FWC/2005-35. London, September 2006

## COST and PM

*COST is one of the mechanisms to coordinate European research. Peter Rombout reports on its efforts in the field of particulate matter.*

'Particulate Matter: Properties related to health effects' is the title of COST Action 633, started in 2001. Its so called Management Committee had its 8<sup>th</sup> and last meeting in Barcelona from 22-24 October. COST stands for 'European Cooperation in the field of Scientific and Technical research'. COST is one of the longest running instruments supporting cooperation among scientists and researchers across Europe. COST has now 35 member countries. DG Research facilitates the cooperation via its Framework Programmes. ([www.cost.esf.org](http://www.cost.esf.org))

The action (= project) in the Domain: 'Earth System Science and Environmental Management' (ESSEM) had the following objectives:

- 1) To increase the information on Particulate Matter (PM) characteristics throughout Europe.
- 2) To increase the information on health effects of PM throughout Europe.
- 3) To provide a basis for the setting of environmental standards in Europe and for defining measures to reduce particle and precursor emissions.

Scientists and institutions from 22 countries participate in the action.

The action has been successful in bringing together scientists from various disciplines. Integration of the results of research from these disciplines is key in unraveling the scientific and societal problems we have with PM in Europe.

The Management Committee decided to publish the final result of the action in March 2008. Results from the action will also be presented and discussed at a public workshop that will be held in Brussels in March 2008. Topics to be discussed at this workshop will be:

- Heterogeneity of PM across Europe
- Sampling artifacts and analytical techniques of measuring PM
- Heterogeneity in health effects of outdoor particles in Europe
- Source apportionment, modeling, and emission inventories of PM in Europe
- Integrated assessment modeling of PM in Europe
- Research needs for the changing PM situation in Europe.

Representatives of the Commission will be invited to the workshop. Information about results of the action and place and dates of the workshop will be available on the Action's website: <http://cost633.dmu.dk>

Peter Rombout

## Short news

### IPPC Directive

At the end of 2005 the Commission launched a review process of the IPPC Directive and related legislation on industrial emissions. The revision had the intention to integrate it with emerging issues and new Directives on different environmental aspects. Implementation of the Directive by Member states should have been complete by 30 October 2007. The IPPC Review will be concluded in 2007. Links below may assist to find recent documents on the subject.

<http://www.vito.be/erscp2005/documents/papers/PAPER150.PDF>

[http://circa.europa.eu/Public/irc/env/ippc\\_rev/library](http://circa.europa.eu/Public/irc/env/ippc_rev/library)

[http://projects-2007.jrc.ec.europa.eu/show.gx?Object.object\\_id=PROJETS0000000030011AF](http://projects-2007.jrc.ec.europa.eu/show.gx?Object.object_id=PROJETS0000000030011AF)

### Recent Reports

Annual European Community LRTAP Convention Emission Inventory Report 1990-2005

[http://reports.eea.europa.eu/technical\\_report\\_2007\\_14/en](http://reports.eea.europa.eu/technical_report_2007_14/en)

The pan-European region: environmental challenges: Europe's environment – The fourth assesment

<http://www.eea.europa.eu/pan-european/fourth-assessment>

### Research Projects and Opportunities for Researchers

<http://www.liaisonoffice.uva.nl/docs/OM/Nano.pdf>

<http://cordis.europa.eu/fp7/dc/index.cfm>

<http://ie.jrc.ec.europa.eu/> (see jobs)

## Convention on Long Range Transport of Air Pollution

### CAFE in Brussels-Pause-CAFE in Geneva?

*The battle against air pollution in Europe is being fought within two European gremia: the UN Economic Commission for Europe and the European Union. In spite of different approaches both are effective and each would be less effective without the other. Andrzej Jagusiewicz explains.*

Needless to write that the EU Thematic Strategy on Air Pollution (TSAP) has paved the way to cleaner air for Europe and has introduced the third generation air quality management\*. Its overall target is to eliminate as much as possible the presence in the air we breathe, particulate matter of diameter less than 2.5 micron (PM 2.5). The latter has been recognized by the World Health Organisation (WHO) as our main killer. Only in 2000 more than 350 thousands Europeans died prematurely breathing PM 2.5.

The TSAP, in order to manage this threat, stands on three pillars. The first consists in introducing the limit value (LV) for PM 2.5, probably from 2010. The second calls for reducing human exposure to PM

2.5 by 20 % (Exposure Reduction Target-ERT) in the decade 2010/2020 everywhere. And even there where the limit value to be is not exceeded. Both standards, LV and ERT will be introduced into the CAFE Directive, still under the negotiation between the European Council and the European Parliament. And finally the third pillar is related to the extension of the National Emission Ceilings Directive with a PM 2.5 ceiling and its revision meaning further and drastic emission reduction of the four basic pollutants. These are sulphur dioxide, nitrogen oxides, ammonia and volatile organic compounds. They are the precursors of the secondary PM 2.5 formed due to the air chemistry. The latter accounts for at least 50 % of the total PM 2.5 presence in the air.

There are clear linkages between the European cleaner air policy and the objectives of the UNECE Convention on Long-range Transboundary Air Pollution. Since the Convention's entry into force in 1983, its Parties have developed eight substantive Protocols: seven for controlling emissions and one, a very first for governing the financing of monitoring and the evaluation of long-range transmission of pollutants in Europe (EMEP). The latter has been the backbone of the Convention for the effective control of those major air pollutants that contribute most to

transboundary pollution and which have the worst health and environmental effects. Due to their implementation the reduction of emissions in the UNECE region in the past years was very impressive.

In this respect the emission ceilings of the Protocol to reduce acidification, eutrophication and tropospheric ozone, the so called Gothenburg Protocol (1999) relate to the same four main pollutants targeted by the TSAP and the NECD and had been agreed two years before the CAFE Programme started. Therefore, the Gothenburg Protocol as well as other sulphur-related and nitrogen-related Protocols under the Convention combat effectively the PM precursors. Moreover, the Protocol on Heavy Metals (HMs), almost entirely and the Protocol on Persistent Organic Pollutants (POPs), only partly, both signed in Aarhus in 1998, reduce the primary emissions of PM rich in metals and some POPs.

It is worthy to mention that more than half of the Parties to the Convention (27 of 51) are today the EU members, including all 12 newly (10 in 2004 and 2 in 2007) acceded countries. They are bound by a stricter environmental regime as stipulated in various EU directives and should for that reason improve more their performance and the cost-effectiveness of control action. This, in turn, will bring more equity in burden-sharing between the Parties to the Convention, including the (old?) EU members. Concerning the direct link between the Gothenburg Protocol and the NECD, the old EU-15 have stricter ceilings on average by 15 % under the Directive as compared to the Protocol, while the new members (still) have the ceilings agreed under the Protocol. To sum up they enjoy for the time being a “ceiling holiday”.

Another link between Brussels and Geneva, where the UNECE headquarters is located, is even more important. Because measures within the geographical scope of the EU also reduce the background concentrations outside the EU all parties of the Convention and even beyond its territory benefit from these. Inversely, measures which follow from the Protocols of the Convention contribute more to the reduction of background levels in the EU than when these measures were applied in the EU only. The net effect then is an increased cost-effectiveness.

In more general words the stake is to take on board of the Convention and its control Protocols in the first instance the 12 countries of Eastern Europe, Caucasus and Central Asia, called jointly EECCA countries. They have been formed from the split of the former Soviet Union. Without them the EU, in spite of its stricter and stricter environmental policy, will be the victim because transboundary pollution,

insufficiently controlled outside its jurisdiction, will prevent a proportional progress within its territory.

That's why the eyes of the international community responsible for cleaner air everywhere in the world looked recently on Geneva, where important decisions were expected to be taken on the revision of the three control Protocols during the 40<sup>th</sup> session of the Working Group on Strategy and Review under the CLRTAP, held in Geneva from 17-20 September 2007.

Concerning, the Gothenburg Protocol, the most crucial of the three, the Working Group clearly stated that its review had been completed what meant that the work towards its revision could start. The mandate to the Working Group to commence, in 2008, negotiations, may be given already at the incoming session of the Executive Body, the political decision-maker, to be held in Geneva in December 2007. If so then the mandate should take into account modelled optimized scenarios without excluding the development of differentiated approaches for different regions of UNECE e.g. EECCA countries. When revising the Protocol relevant ongoing discussion under other political processes (EU) should be also taken into account. And this simply means that due regard should be given to Brussels where the CAFE directive is still being negotiated and the revision of the NEC Directive is only at its beginning.

The Working Group also urged Parties to ensure the submission of all necessary data on energy and emissions projections for integrated assessment modelling work, prerequisite of the cost-efficiency optimisation, by the official date for data submission (15 February). Particularly important is energy data, whose insufficiency (to read the lack of a Common Energy Policy in the EU) hampers already the process of the revision of the NEC Directive in Brussels possibly pushing far away its end..

Relating to the POP Protocol the Working Group approved the management options for the seven substances accepted previously as POPs (meeting all criteria to be POP) by the Parties to the Protocol i.e. HCB, octa-BDE, PCN, PeCB, SCCP, pentaBDE and PFOS and recommended to the Executive Body, that it consider providing a negotiation mandate for amendments to the Protocol on POPs. Of course this mandate should cover inclusion of the seven “new” substances in the Protocol..

And finally with respect to the Protocol on HMs the Working Group invited the Parties to develop a work plan on further steps to reduce emissions into the atmosphere of the three heavy metals (Cd, Hg and Pb), based on the conclusion of the

review on sufficiency and effectiveness completed in 2006 and subsequent work; this was in spite of the fact that the delegations of the United States and Canada were quite critical and noted that the sufficiency and effectiveness review of the Protocol carried out previously did not provide sufficient technical basis for revising the Protocol.

A very interesting issue taken up by the Working Group was how to handle PM. The Working Group recognized the complexity of the problem related to its origin (primary and secondary), size and chemical composition, range of concentration (episodic, seasonal, geographical) and distribution of sources (from local to hemispheric). Then, following the technical work under the leadership of Germany and United Kingdom, it reviewed six options for addressing PM under the Convention. These are: more Parties to the Protocol on HMs, more Parties to the Gothenburg Protocol, technological measures, Emission Limit Values, Best Available Techniques and non-technical measures (economic, infrastructure and planning). It is clear that many of them could be combined and that some involve trade-offs. However, no views were expressed as to the appropriateness of any of the options presented.

The Working Group was quite prudent on the issue and only noted that any future emission ceilings should consider the reduction of primary and secondary PM; it invited the lead countries of the technical work to explore from a policy perspective options for addressing PM under the Convention, and to propose options that could be further explored and discussed at the next session of the Working Group in Spring 2008.

A lot of attention of the Working Group was given at the session to EECCA countries. The Convention's secretariat informed about the completion of the project on capacity-building for air quality management and the application of clean-coal combustion technologies in Central Asia (CAPACT). Next it introduced the revised Action Plan for EECCA in accordance with the recommendations of the "Saltsjöbaden 3" workshop, held in Gothenburg in March 2007. It aims at further capacity-building in the EECCA countries for air quality management, emission inventories improvement and reduction of emissions from all sources, including mobile ones. The latter account for 50 % of total emissions. Within it a

workshop to promote the implementation of the Convention in the EECCA region focusing on new and emerging abatement technologies for cement, petroleum and energy sectors will be organized. The Action Plan was adopted by the Working Group with strong support and hopefully will be of great help to reduce transboundary pollution..

The negotiation engines are therefore warming up in Geneva awaiting the political decision. However, from interventions of the EC representatives and to some extent from those of Germany representing the EU Presidency (for Portugal) it may be thought that the EU would like to delay the revision of the Gothenburg Protocol until the negotiations on the revision of the NEC Directive will have a clearer outcome. Differences between EU energy scenario and national energy scenarios of the Member States is presently delaying this process.

On the other side, the geographical scope of the Convention offers more cost-effective optimisation of the measures to be taken in view of the new obligations of the Parties to the Gothenburg Protocol. And this speaks in favour of starting the negotiations in Geneva without waiting for Brussels. In any case a quick harmonization of approaches among the two fora, Convention and TSAP/CAFE is needed for the sake of cost-efficiency in the use of resources, both human and financial. Another way out to overcome the differences between the Parties to the Convention with respect to revising not only the Gothenburg Protocol, but any of them, would be to introduce a differentiated regime with the revised Protocols to accommodate any subregion, including EU-27, North America and EECCA countries.

Let us hope that we will have both fora busy and working in parallel towards the same target: cleaner air everywhere. If not, a black scenario may happen, which I would call: **CAFE in Brussels-Pause-CAFE in Geneva!**

Andrzej Jagusiewicz, PhD  
EFCA representative to the UNECE Convention  
on Long-range Transboundary Air Pollution

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\*-The first generation of air management consisted on the compliance of the air quality standards, the second on the compliance of both, air quality standards and emission limit values and/or emission ceilings.



## National developments

### Will France lead the way on PM2.5?

At the end of October a high level national Environment Policy Conference was held in Paris, France which among other topics, addressed air quality, in particular PM2.5. French president Sarkozy when summarising the conclusions of this conference said that he will propose the French Parliament to regulate the PM2.5 ambient air concentration in France at a annual average limit value of 15  $\mu\text{g}/\text{m}^3$  to be applicable from 2010 and not to be exceeded by the year 2015. He also said that a further abatement would aim at the WHO 10  $\mu\text{g}/\text{m}^3$  target value.

In the middle of the discussion between Council, European Commission and European Parliament on having either a 'cap' at 25  $\mu\text{g}/\text{m}^3$  or a stricter limit value at 20  $\mu\text{g}/\text{m}^3$  as proposed by the EP, such a signal may make a difference.

We have to await whether the French Parliament will endorse a proposal without asking for modifications. Apart from requiring a combination of very rigorous technical and non-technical measures a convincing monitoring programme should be in place soon, in order to assess the effects of the measures. No doubt that many in Europe and Brussels will follow the policy process and action programmes in France which will be necessary to live up to such extraordinary ambitions.

## News on EFCA and its members

### EFCA in the next five years

Last year EFCA's Assembly concluded that it would be wise to prepare for a thorough discussion on its ambitions for the next five years. While the potential of an organisation of volunteers may be considerable it is of interest to agree on the challenges which are connected with having ambitions and create some balance between these.

This process, based on a draft for an EFCA strategy 2007-2011, is proceeding successfully and stimulates involvement of delegates. After a discussion at the Assembly meeting in June of this year in Karlsruhe, remaining issues are presently being discussed at the EFCA website in two more rounds; a final version is expected to be available by the end of 2007 at EFCA's website. During the process EFCA, as a science based as well as policy oriented federation, confirmed already its priority topics: the Clean Air For Europe (CAFE) Programme, its relation with the challenges

with respect to Climate Change policy and the connection with the Transport and Traffic field.



*EFCA's Assembly at its meeting in June in Karlsruhe*

Another outcome was the decision to start the present electronic Newsletter.

### *New plans*

For the short term a Task Force is now exploring the ground for a workshop next year on Integrating Clean Air and Climate Change science and policies. Acknowledging the global scope of this topic cooperation has been agreed with IUAPPA. This was confirmed during IUAPPA's 14<sup>th</sup> World Clean Air Congress in Brisbane, Australia, in September this year.

IUAPPA and EFCA will also continue their cooperation on the topic of particulate matter.

### News from members

#### **Polish sister association**

Our Polish colleagues have found a new home for their activities: the Polish Chamber of Commerce for Sustainable Development, known in Poland as PIGEKO. Dr Andrzej Jagusiewicz is a member of PIGEKO's Board and their International coordinator; as such he will continue to represent his association. PIGEKO has taken over the Polish representation in EFCA from OKOPiK.

PIGEKO's basic mandate is to promote sustainable development across the whole economy and in specific sectors. The Chamber, which is open to institutions, scientists, companies and individuals counts about 100 members.

#### **Mutations in APPA**

APPA's former director, Jean-Marie Rambaud, has been elected as vice-president of APPA. He is also the new director of the well known journal Pollution Atmosphérique. Jean-Marie Rambaud is one of EFCA's vice-presidents. Director of APPA is now Vincent Nedellec.

#### **New president for VVM-CLAN**

Peter Bultjes, after a period of five years stepped back as president of VVM's section on Clean Air and Climate Change. His successor is Sander Teeuwisse already a member of the Board of CLAN. Sander is a Senior consultant on air quality with DHV, one of the major consultancies in The Netherlands and an expert on 'hot spots' under the European Directive on Air Quality.

VVM will facilitate the 2d International Conference on Harbours, Air Quality and Climate Change as partner of EPA Rijnmond, TNO and Rotterdam Climate Initiative (May 2008). For details, see the Calendar in this Newsletter.

### Calendar

*CfP = Deadline Call for Papers*

3d European Ele-drive Transportation Conference (EET 2008)

11-13 March 2008, Geneva, ([www.ele-drive.com](http://www.ele-drive.com)); CfP: 30-11-07

Emissionsminderung: Stand, Konzepte, Fortschritte – VOC, Feinstaub, Klimarelevante Gase

9-10 April 2008, Neurenberg, Germany.

([www.vdi.de/Emissionsminderung2008](http://www.vdi.de/Emissionsminderung2008)); CfP 12-10-07

International workshop on Evaluating Climate Change and Development

10-13 May 2008, Alexandria, Egypt

([www.esdevaluation.org](http://www.esdevaluation.org)); CfP: 15-11-07

2d International Conference on Harbours, Air Quality and Climate Change

29-30 May 2008, Rotterdam ([www.haqcc.org](http://www.haqcc.org)); CfP: 01-03-08

11th International Conference on Indoor Air Quality and Climate,

17-22 August 2008, Copenhagen

(<http://www.indoorair2008.org/>); CfP: 01-11-07

Air Pollution 2008 - 16th International Conference on Modelling, Monitoring and Management of Air Pollution

22 - 24 September, 2008, Skiathos, Greece

(<http://www.wessex.ac.uk/conferences/2008/air08/index.html>); CfP: ?

5<sup>th</sup> International Symposium on Non-CO2 Greenhouse Gases (NCGG-5)

July 2009, Netherlands ([www.vvm.info](http://www.vvm.info)); CfP: early in 2008

15<sup>th</sup> IUAPPA World Congress: Back to Basics: Sharing solutions that work

11-16 September 2010, Vancouver, Canada

### EFCA

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Thomas Reichert (Germany)  
Vladimira Vadjic (Croatia)

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**Published by**

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