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Fractionating particulate matter

Policies on particulate matter are presently discriminating on size fractions. Different from gaseous pollutants fractionation of particles in terms of chemical identity has not been attempted in policy development so far. There are now signals that the EU is about to move.

The good news is that Commissioner Janez Potocnik publicly declared in June to be convinced that black carbon is to be addressed; this means that it is likely to be explicitly mentioned in the renewed Thematic Strategy on Air Pollution (TSAP) and that an EU policy may be developed. This may seem at odds with the approach for heavy vehicles for which the EUROVI Regulation now has set limits for emitted numbers of particles. It is, however, quite certain that most particles in vehicle exhaust are black. This means that the regulation to limit emissions of numbers of particles will also result in lower emissions of black carbon particles.

The question remains whether an approach tackling emissions of particle numbers and consequently black carbon has the potential to eliminate the contribution of traffic to adverse health effects. The bad news is that it may not have.

Swiss and Californian research, presented at recent conferences in Brussels and Zurich provided evidence that filtering particles from vehicle exhaust gases does not remove the organic fraction of polycyclic aromatics (PCAs) adequately. Experiments showed that at the elevated temperature of the exhaust gas they are predominantly emitted as gases. The working hypothesis is that during the day PCAs, or their derivatives formed in atmospheric reactions, condense at the surface of atmospheric nuclei at ambient temperature and so produce a toxic PM-fraction of secondary organic aerosol (SOA).

These findings may not have been fully available timely as input for the Commission's public consultation earlier this year on the revision of the TSAP. It is important, therefore, to signal their relevance and secure that they are taken into account in the coming years: this will improve the quality of assessments of policy directions on their effectiveness in the protection of public health.

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Developments in EU policy

Green Week 2013: Air

From 4 to 7 June DG Environment organised its “Green Week 2013”. It consists of a Conference and Exhibition on a specific theme. This year the theme was Air. The format of the Conference, apart from plenary Opening and Closing sessions, amounts to a considerable number of short sessions on specific topics and aspects of the theme, arranged in four parallel streams. The Exhibition provides an opportunity for clean technology industries and governmental and non-governmental organisations to present themselves to participants, among which many stakeholders with respect to the theme of that year. This year EFCA made use of this opportunity (see pages 5 and 9 for more information).

Closing speech by Commissioner Janez Potocnik

At the Closing session of the Green Week Commissioner for Environment Janez Potocnik was one of the speakers on behalf the European Commission. He made the general observation that the discussions during the Green Week were invaluable for the on-going air policy review which is now in its final phase. Interestingly, among his personal impressions of the Green Week was the need to address air pollution and climate change in parallel and to give priority to black carbon and methane.

He also stressed the key importance of public awareness for the implementation for existing legislation and the success of future air policy strategies. In this respect he referred to the huge potential of citizen science and social media and the need that scientists speak up in public debates. He announced that the theme for the Green Week in 2014 will be the Green Economy.

Emission trading in 2012

Emissions of greenhouse gases from installations participating in the EU Emissions Trading System (ETS) decreased by 2% in 2012. While emissions reductions are the primary aim of the ETS the news is not as good as wanted, because more than 25% of the reductions result from international credits outside the EU. In consequence, the supply-demand imbalance has worsened and amounts to a surplus of almost two billion allowances.

More information: http://europa.eu/rapid/press-release_IP-13-437_en.htm

ETS Agreement on back-loading with European Parliament

On 3 July the European Parliament voted in favour of an – amended – proposal to improve the functioning of the carbon market through back-loading. The proposal would imply that the auctioning of a new package of allowances is being postponed to a later year in the present auctioning period. In April of this year the EP voted against the original proposal.

In view of the serious supply-demand imbalance the decision is an important step as it will prevent more serious malfunctioning of the ETS. The Council has now to adopt the proposal to make the back-loading formally valid.

Climate and energy towards 2030

On 27 March the Commission adopted a Green Paper as a first step towards the development of a framework of the EU’s climate change and energy policies until 2030. In the Climate and Energy Package of 2008 the targets for 2020 have been defined among which a 20% reduction of the emissions of greenhouse gases and agreements on

energy conservation, renewable energy and Carbon Capture and Storage (CCS). In the *Roadmap for moving to a low-carbon economy*, published in 2011, a long term goal has been set to cut emissions of greenhouse gases by 80-95% in 2050. The implication, as indicated in the Roadmap, is that in 2030 the emissions reduction has to be in the order of 40% (compared with 1990 emissions). The Green Paper launched a consultation on the intermediate steps to be taken towards this target which was concluded in early July; results have not been published presently.

In parallel, the Commission also published a Consultative Communication on the future of CCS. CCS is meant to contribute in the reduction of CO₂-emissions; there is presently uncertainty about its timely availability and the Communication is meant to bring clarity here. It was followed on 3 April by a Call for proposals for innovative low-carbon technologies which, in addition to renewable energy projects, explicitly includes CCS demonstration projects. Projects are to be co-financed from the NER300 fund which is to result from the sale 300 million allowances to new entrants in the ETS.

The Commission also published an assessment of the progress Member States are making towards their targets of Renewable Energy Sources in 2020.

More information:

Green Paper:

http://ec.europa.eu/energy/green_paper_2030_en.htm

CCS communication:

http://ec.europa.eu/energy/coal/ccs_en.htm

RES report:

http://ec.europa.eu/energy/renewables/reports/reports_en.htm

CO₂ and sea ships

On 28 June the European Commission took a first step towards cutting greenhouse gas emissions from the shipping industry. It proposed a Regulation which will require owners of large ships using EU ports to monitor and report the ships' annual carbon dioxide emissions. The Commission also published a Communication setting out its strategy to address and reduce these emissions, preferably through measures at global level.

Emissions from the international maritime transport sector today account for 3% of global greenhouse gas (GHG) emissions and 4% of EU GHG emissions. The measure is expected to further efficient operation on board and result in reduced fuel costs.

More information: [Memo/13/626](#).

CAP Reform concluded

On 26 June the Commission concluded the process towards a new Common Agricultural Policy (CAP) after 2013. Apart from a more fair distribution between Member States and better position of farmers in the food chain also agreement had been made to have a more "green" CAP. Specific elements include:

- 30% of direct payments will be linked to environmentally-friendly farming practices, among which the conservation of areas of ecological interest.
- In the programmes for rural development 30% of the budget is to be allocated to environmentally friendly investment or innovation measures or to organic farming.

More information: [MEMO/13/621](#)

Short news

Environment and Climate projects funding

On 3 July the Commission reported that an amount of €281.4 million had been made available under LIFE+ program. The funding is meant for about 250 projects (from a total of 1150 submitted ones) and represents an average 50% of the total costs.

On 18 July it was made public that an agreement had been reached on a LIFE+ budget for the period 2014-2020 of €3.456 billion of which 25% is meant for projects tackling climate issues. The rate of co-financing will be increased; a call for proposals will be issued once a year. The budget and connected regulation is to be formally adopted by EP and Council later this year.

More information: http://europa.eu/rapid/press-release_IP-13-643_en.htm;

http://europa.eu/rapid/press-release_MEMO-13-701_en.htm

EFCA activities in 2013

The year 2013 shows an EFCA program with a relatively large number of activities. Though the EU's Year of Air is contributing to it, it is not the main reason for this busy agenda: the majority of activities is organised by EFCA's Members or amounts to a cooperation with external relations.

We are looking forward to three upcoming conferences each at the initiative of or in cooperation with an EFCA Member. The accumulation of three events within a short time span required to distribute representation tasks among several Assembly members. Registration for these events is still possible; details are given below

We also look back at three concluded activities.

Air Protection 2013 - Croatia

First in the list is the Eighth Croatian Scientific and Professional Conference Air Protection 2013, hosted by EFCA Member CAPPa and to be held in Sibenik, Croatia from 9-14 September.



CAPPa

Only a few months ago the Republic Croatia accessed the European Union as 28th Member State which makes this conference a very special one. EFCA's president, Thomas Reichert, therefore, was happy to find *John Murlis* prepared to represent EFCA in the Opening session and to chair and contribute in the EFCA session on particles with a talk on EFCA's recent activities with respect to this topic and on future opportunities. The four-day conference program is available at http://www.huzz.hr/skupovi_eng.html and is completed by a technical excursion on the final day. Registration is still open and all details can be found in the Second Announcement at CAPPa's website, <http://www.huzz.hr/>.

World Clean Air Congress - Capetown

At the end of September the 16th IUAPPA World Clean Air Congress opens in Capetown, South Africa. EFCA, as Associate Member of IUAPPA, is also contributing to the five-day conference program which is concluded on 4th October. Its special session runs under the title "*Co-benefits*

for Clean Air and Climate: Prominence of Black Carbon" (see page 8 for details). The session will be well placed, as it succeeds a special session arranged by the Climate and Clean Air Coalition, obviously dedicated as well to the need for integrated agenda's. EFCA's president, *Thomas Reichert*, will chair the EFCA session and present a paper on EFCA's related activities in the past few years. Registration for the congress is still open; information is available at: www.iuappa2013.com.

WeBIOPATR2013 - Belgrade

Also in the first week of October (and overlapping the World Congress) a third European conference on particulate matter will take place in Belgrade, Serbia. Its origin is a structural cooperation between the Norwegian institute NILU (Associate Member of EFCA) and two Serbian institutes: the present conference is the 4th in a series on air quality topics. In contacts with the organizers it was agreed that EFCA will sponsor the conference and contribute in the program. EFCA's secretary-general, *Joop van Ham*, will represent EFCA and present an overview of its recent activities on particles and the options for co-benefits through integrated policies. Registration for the conference on 3-4 October is still possible. Information on the conference, which is preceded by a workshop on joint projects of the organising institutes, is available at: <http://www.vin.bg.ac.rs/webiopatr/>.

4th Ultrafine Particles - Brussels

EFCA's year opened with its 4th symposium in the bi-annual series on Ultrafine Particles. It was held on 16 and 17 May and again hosted by its Member GUS, in cooperation with KIT. The venue was the Representation of the State Baden-Württemberg in Brussels.



The program, with interesting keynote speakers provided a state-of-the-art of several aspects of this complicated field and showed the progress in general. Part of the time was reserved for a workshop on the EU-supported AirMonTech project which assesses future needs with respect to monitoring of particulate matter.

A Conference report can be found on page 6 of this Newsletter. A CD-ROM with the proceedings has been published. Copies can be obtained at no charge by sending an e-mail to mathes@kit.edu.

EFCA at Green Week 2013

From 3-7 June EFCA was represented at the Green Week in Brussels. Because Air was the theme of this year's Green Week EFCA's sister federation ENEP (European Network of Environmental Professionals), which had participated in the Green Week a few times before, had invited EFCA for a joint stand at the Exhibition. Several EFCA delegates made use of the opportunity to visit the Green Week for one or two days and so represent EFCA in the stand and discuss the 'EFCA Messages' (see page 9) on



Commissioner Janez Potocnik (third from left) visited the ENEP-EFCA stand during the Green Week. Also at the picture: EFCA president, Thomas Reichert (completely left) and EFCA delegates Rudolph Neuroth and Tinus Pulles (4th and 5th from left)

display on behalf of the two federations with visitors.

ETH Conference on nanoparticles - Zurich

From 23-27 June this year the annual ETH Conference on Combustion Generated Nanoparticles was held. In contacts between the representatives of the two conference series an interaction with the organizers in Zurich, Switzerland was agreed. As a result their representative, *Andreas Mayer*, came to UFP-4. Also referring to the EU's regulation for vehicles, he presented an overview of the Swiss framework of legislation to limit emissions of Particle Numbers from (vehicle) engines. In exchange, EFCA's president, *Thomas Reichert*, was invited to take a seat in a panel discussion on the regulation of Nanoparticles. EFCA's secretary-general, *Joop van Ham*, presented an overview of EFCA's policy-oriented activities in recent years and the case of Black Carbon. For his paper click: <http://efca.net/>.

EFCA activities in 2014

Non-CO₂ Greenhouse Gases 7

VVM-CLAN is preparing for its 7th symposium on Non-CO₂ Greenhouse Gases under the motto “*Innovation for a sustainable future*”.

It will take place in Amsterdam, Netherlands from 5-7 November 2014. The Call for Papers is open now and proposals for contributions are welcome until 1 February 2014. All details can be found at the conference website www.ncgg.info.



Ultrafine Particles 4 – Conference report

The fourth symposium on ultrafine particles made again visible the considerable progress during recent years in unravelling the complex world of atmospheric particulate matter, in particular the fraction of ultrafines, and its implications for developing effective policies. The UFP-series, which started in 2007, is a joint initiative of the Karlsruhe Institute of Technology (KIT), EFCA and its Member GUS which hosts the symposia. Thomas Leisner (KIT) was the new Congress Chairman, succeeding Karl-Friedrich Ziegahn who had chaired the earlier symposia.

Flemming Cassee (RIVM, Netherlands) presented an overview of the health effects of UFP, referring to the recent assessment in WHO's REVIHAAP study. He pointed to the different behaviour of the <100 nm fraction upon inhalation in comparison to coarser particles, which may be due to a less effective clearance mechanism in the lung for the smaller fractions. UFP's will then penetrate the epithelial, enter the circulation and cause

inflammations. UFP have hardly been reported to cause airway inflammations; they do cause cardiovascular effects.



Congress chairman, Thomas Leisner (KIT, right) and EFCA's president, Thomas Reichert (left) with their guests Peter Friedrich, minister of the State of Baden-Württemberg and director Johannes Jung of its EU Representation

A second point of entry for UFP's is the olfactory epithelial in the nose. From there UFP's may reach the brain and cause neuro-inflammation: this could explain the observed association with Alzheimer incidence.

The conclusion of the REVIHAAP report is that experimental and epidemiological studies provide suggestive, but not consistent evidence of adverse effects of short-term exposures to ambient UFP. However, because the PM_{2.5} fraction includes the UFP's, in spite of the differences in comparison with coarser particles, the evidence that effects of short-term exposures to UFP are dramatically different from those of PM_{2.5} is not strong currently.

Roel Schins (IUF, Düsseldorf, Germany) presented an overview on UFP and neurodegenerative diseases. Studies in this relatively new field all date from the last decade.

With respect to exposure he explained that the olfactory route is a direct route to the central nervous system which could result in inflammation, oxidative stress and neurodegeneration. Its existence has been proven in experiments with nasal deposition of ¹³C marked carbon particles.

The entry through the lung epithelial, however, is likely to be complimentary. In this case two barriers have to be passed: to the blood circulation and again from there to the brain. Also this route, however, may produce systemic effects of UFP's. In support several studies in rodents as well as in humans exist which show effects of oxidative stress on biomarkers.

Constantinos Sioutas (University of Southern California, USA) provided enlightening detail on the atmospheric behaviour of fine particles and showed results of an operational approach on the notion of oxidative capacity of the atmosphere. Based on a dual approach of chemical and cellular assay of ambient air he showed that oxidative capacity increases during the day under conditions of summer smog. While primary particulates prevail during the morning traffic peak, in the afternoon concentrations of secondary organic aerosols (SOA) increase. The hypothesis is that organics in car exhausts, which are volatile when emitted and may remain upon dilution, are converted into a category of particles referred to as 'aged smog' with increased oxidative capacity. The reactive SOA- mixture of nanoparticles may

cause oxidative stress in humans. Measurements show an increase of the fraction of ultrafine particles during the day, ascribed to SOA formation.

Further progress on this topic was reported by *André Prévot* (PSI, Villigen, Switzerland) who showed results on organic aerosol composition, obtained by an advanced mass spectrometry technique, Time of Flight Aerosol Chemical Speciation Monitor (ToF-ACSM). Though the technique does not provide information on aerosol size it is suitable for monitoring at acceptable precision and time resolution at significantly lower cost in comparison with a conventional Aerosol Mass Spectrometer.

Because fractions of organic aerosols deliver their own fingerprint the technique is suitable for source apportionment.

A comparison between diesel and petrol aerosol emissions, after aging under simulated atmospheric conditions, shows that apart from dominance of Black Carbon (BC) also primary organic aerosol is higher for diesel. Emissions from petrol-fuelled cars, however, produce much higher secondary organic aerosol levels.

Field measurements show that secondary organics are dominating in organic aerosol at most places. Because sources like wood combustion and cooking may contribute substantially, consistent analysis by source apportionment studies is required to allow conclusions.

Metrics discussion

The programme demonstrated the considerable research activity on topics like instrumentation, monitoring studies, emissions sources and the atmospheric dynamics of ultrafine particles. Sessions on exposure and effects on human health completed the scope while there was one contribution on control technology.

With respect to the options for additional metrics of PM *Hugo Denier van der Gon* (TNO, Utrecht, Netherlands) reported progress on the feasibility to construct emission inventories for black carbon and particle numbers. The array of different types of combustion engines and devices in combination with fuel quality differences had caused initial estimates for Particle Number emissions which, upon further analysis had proved to be incorrect. The new information also allows recommendations for preferential fuel/technology combinations.

Mar Viana (CSIC, Barcelona, Spain) presented an interesting comparison of the state of monitoring of resp. BC and Particle Numbers Concentrations (PNC) in Europe. For both metrics the feasibility of their monitoring is presently imperfect.

Techniques and instruments for BC are robust and easy to run; calibration requires attention, however, because standardized methodology is missing.

Particle counters are, *in principle*, robust and easy to run; particle sizers are more complex instruments. Experts in various countries consider both types to be delicate instruments and not easy to run. Calibration is not a problem and standardized methodology is being worked on in CEN.

In conclusion, it may be feasible to deploy routine BC monitoring instrumentation in urban EU networks provided that monitoring data can be related to thermal-optical data for elemental carbon (EC). This Equivalent BC-monitoring which is an excellent proxy for traffic has been started since 2006 and is now being practiced in

urban networks in most countries in Western Europe.

PNC monitoring requires more specialist knowledge than is usual for network operation and needs a strong link to research environments presently. Since 2008 monitoring of PNC is in place in urban networks across Western Europe and in a few countries in Central Europe. PNC is a proxy for traffic and particle formation together.

André Zuber (DG Environment, Brussels) presented an air policy review, in which he included foreseen intentions for the Thematic Strategy on Air Pollution for the next period. With respect to emissions new ceilings will have to be in coherence with the revised Gothenburg Protocol. For beyond 2020 new ambitious PM_{2.5} ceilings are foreseen which may include action on Black Carbon as part of the intention to address the Short-lived Climate Pollutants. The intended increased coherence with other policies includes policies on climate and biodiversity.

Co-benefits for Clean Air and Climate: Prominence of Black Carbon
EFCA session at IUAPPA's 15th World Clean Air Congress
Capetown, South Africa, 1 October 2013, 14.00 - 17.00

14.00 Introduction (chairman)

14.10 The share of BC in interactions of particulate matter with climate and precipitation

Thomas Leisner, KIT, Germany

14.40 Maximising co-benefits for air quality and climate change through effective policy co-ordination

Andrew G. Taylor, Scottish Government, Directorate for Environment & Forestry

15.00 Opportunities for cost-effectiveness in atmospheric policies in the European Union

Thomas Reichert, president EFCA

15.20 Break

(Co)-chair: Thomas Reichert, ICT, Germany

15.40 Emissions of Black Carbon in Europe and implications in the Arctic

Kaarle Kupiainen, IIASA, Austria

16.00 The use of BC for urban AQ management planning

Sef van den Elshout, DCMR, Netherlands

16.20 Control of Ultrafine Particle Emissions from Small-Scale Wood Combustion Boilers by Optimized Combustion and Electrostatic Precipitation

Hanns-Rudolf Paur, KIT, Germany

16.40 Discussion



Green Week 2013

Atmospheric Messages

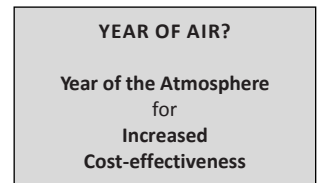


Year of Air?

The Earth has only one atmosphere. Its services to mankind and life in general are several. Due to emissions of greenhouse gases and air pollutants two of these services are being at risk in particular: the earth's radiation balance which regulates temperature and clean air.

The **Year of Air** addresses the latter problem only. It is not considering climate objectives explicitly and could even prove to be counterproductive, e.g. when measures to mitigate air pollution require additional energy, so increasing CO₂-emission.

A **Year of the Atmosphere** would suppose an integrated approach of clean air and climate change. It would result in policies which give priority to solutions which deliver to the objectives of each and try to avoid solutions which harm one of them and so further cost-effectiveness of environmental policies in Europe (EFCA Policy Initiative No. 2, 2010, www.efca.net).



Clean Air Legislation

Existing EU-legislation which is relevant for air quality hardly produces co-benefits for climate objectives. Four Directives present opportunities for improving this balance.

Environmental Impact Assessment Directive

The proposal for a revised EIA Directive, sent to European Parliament and Council in October last year, includes incentives to integrate impacts on climate change, resource efficiency with environmental effects of new projects. Various changes in the procedures for assessments may modify the net effect of the new legislation which is now subject to political decision.

Industrial Emissions Directive

The IE Directive, the successor of the IPPC Directive and adopted in November 2010, is the legal basis for emission limit values for the great majority of industrial activities. Stakeholders have always successfully blocked to include emission limit values for greenhouse gases and the present IE Directive does not refer to climate change. With the present attention for the short-lived climate pollutants (Black Carbon, Ozone and Methane; SLCPs) this position may have to be reconsidered.

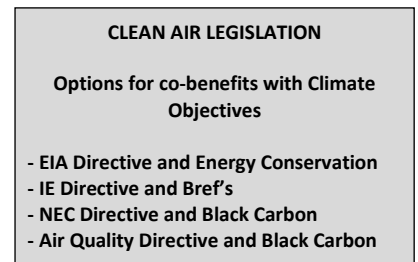
The IE Directive generally requires Best Available Techniques (BAT); the implementation is supported by issuing BREF's: BAT Reference documents. Considering energy efficiency as a criterion in BREF's seems a logical recommendation.

National Emissions Ceilings Directive

The Commission announced a proposal for a revised NEC Directive for September this year with new ceilings for SO₂, NO_x, VOC and NH₃; in addition, PM_{2.5} ceilings values are expected. Lower ceilings for NO_x and VOC will produce co-benefits for climate objectives. It is uncertain whether PM_{2.5} ceilings values will be productive in this respect, because this may not necessarily reduce emissions of its fraction of Black Carbon particles.

Ambient Air Quality Directive

The proposal for a revised AAQ Directive, also due for September this year, is expected to highlight the need to integrate climate objectives with its implementation. An effective approach would require to explicitly address the SLCPs, in particular Ozone and Black Carbon.



The Scottish approach

In 2009, the Scottish Parliament unanimously passed the most ambitious climate change legislation anywhere in the world. In addition, Scotland has established some demanding air quality standards, including objectives for PM₁₀ and PM_{2.5} which are more than twice as strict as the equivalent EU limit values. In order to reap maximum benefit from this pioneering approach, it is vital that climate change and air quality policies are co-ordinated to ensure positive outcomes for both greenhouse gas and air pollution reduction.

THE SCOTTISH APPROACH
Legislation requires a balanced approach between
Air Quality
And
Climate Objectives

The Scottish Government recognises that such an integrated approach is essential for the protection and improvement of ecosystem and human health. In January 2013 it published [Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027 - The Draft Second Report on Proposals and Policies](#). This document sets out how it intends to achieve its climate change targets, whilst at the same time delivering benefits for air quality and other aspects of our environment.

An example of how the Scottish Government is putting this into practice is through its policies on biomass. Significant reductions in fossil fuel use are at the heart of attempts to reduce greenhouse gas emissions and increased uptake of renewable energy, including biomass, has a key role to play. However biomass burning can potentially have a negative impact on air quality, particularly in urban areas. The Scottish Government therefore encourages installation of high quality, low emission plant in such areas, with an expectation that this generally takes place off the gas grid and avoids zones where poor air quality has been identified.

More information on Scottish air quality policies can be found on the [Air Quality in Scotland](#) website.

Addressing Black Carbon

Particulate matter (PM₁₀, PM_{2.5}) is one of the problematic pollutants, responsible for a major part of premature death by air pollution, estimated at 420,000 for the total EU in 2010. Unfortunately, PM metrics represent a complex mixture of particles with different toxicities and a variety of sources. Therefore, it is not possible to have certainty that a reduction in PM₁₀ or PM_{2.5} levels results in a proportional reduction of premature death. Recent findings have shown that the fraction of black carbon particles in PM is more toxic than PM_{2.5} as a whole for several health endpoints at short-term exposures (WHO, 2012).

ADDRESSING BLACK CARBON
serves
Clean Air Objectives
and
Climate Objectives

Black Carbon is also known as one of the short-live climate pollutants (WMO, 2011) and recently estimated to be the second most important human emission in terms of climate forcing (Bond, T.C. et al, 2013). Addressing Black Carbon is a logical top priority for European policymakers (EFCA Policy Initiative No. 3, 2012, [www.efca.net](#)).

Implementing the Air Quality Directive

In most Member States regional and local authorities have a key position with regards to successful national implementation of the Air Quality Directive (AQD). A major problem, however, is that they have little options to reduce atmospheric levels of the most critical pollutants, NO_x and particulate matter (PM₁₀, PM_{2.5}). In 'Plans and Programmes' for non-compliance areas costly traffic circulation approaches have often been selected as most viable option.

IMPLEMENTING
THE AIR QUALITY DIRECTIVE
Guidance on co-benefits
will improve success

Local authorities are equally committed to reduce emissions of CO₂ and other greenhouse gases. Traffic circulation plans, however, often result in more kilometres per vehicle and consequently in net increases of fuel consumption, so counteracting efforts to reduce global warming. This type of dilemma can only be solved through integrated policy approaches for clean air and climate. Because European regulation so far ignored to stimulate the search for integrated, more cost-effective solutions it missed an option for furthering successful implementation of legislation such as the AQ Directive (EFCA Policy Initiative No.3, 2012, [www.efca.net](#)).

Short news

Environment and Climate projects funding

On 3 July the Commission reported that an amount of €281.4 million had been made available under LIFE+ program. The funding is meant for about 250 projects (from a total of 1150 submitted ones) and represents an average 50% of the total costs.

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EEA reports

A selection of recent reports by the European Environment Agency; a complete list can be found at: www.eea.europa.eu/publications/

Air Implementation Pilot - Lessons learnt from the implementation of air quality legislation at urban level

This report describes a European pilot project to help identify and address the reasons underlying the 'gap' in implementation of air quality policy in 12 European cities, and thereby draw lessons of wider relevance.

EEA Report No 7/2013. Published: June 05, 2013
- ISBN: 978-92-9213-399-3

Reducing air pollution from electricity-generating large combustion plants in the European Union - An assessment of potential emission reductions of NO_x, SO₂ and dust

This report presents an assessment of the hypothetical emission reduction potential of NO_x, SO₂ and dust from more than 1 500 of Europe's large combustion plants that operated in 2009. Emissions of these air pollutants could be significantly lower if all plants were to meet the emission limit values as set out in European Union legislation.

EEA Technical report No 9/2013. Published:
June 13, 2013 - ISSN 1725-2237

*Towards a green economy in Europe
EU environmental policy targets and objectives
2010-2050*

European Union legislation has established more than 130 separate environmental targets and objectives to be met between 2010 and 2050. Together, these can provide useful milestones supporting Europe's transition towards a 'green economy'.

The EU has a non-binding objective to [cut energy use to levels 20 % below business-as-usual projections](#) by 2020. Although this implies that consumption must be a little lower than the level in the mid-1990s, the trend since then has moved upwards. So it appears likely that achieving the 2020 objectives will require stronger policy implementation and possibly additional policy impulses.

Regarding air pollution, the EU has generally made good progress towards its 2010 emissions targets set by the [Thematic Strategy on Air Pollution](#). Meeting 2020 targets will require continued efforts. Only in the case of fine particulate matter (PM_{2.5}) is there an obvious need to accelerate abatement efforts significantly. Modelling also suggests that achieving the targets is technically feasible for all pollutants except PM_{2.5}.

EEA Report No 8/2013, Published: July 25, 2013
- ISBN: 978-92-9213-401-3

News from EFCA and its Members

In May of this year the Assembly met in Brussels for its annual meeting. A major item on the agenda was the discussion of EFCA's Workplan. The Assembly was happy with the crowded program for this year and the mix of scientific conferences and policy-oriented activities. A new version of the document for the period 2013-2014 was approved.

The Assembly also concluded that the decision last year to invest in contacts with European sister federations CEEES and ENEP, was well timed; in particular, the cooperation with ENEP in this year's 'Green Week' was welcomed.

PIGE accepted as Full Member

At the meeting the president of the Polish association PIGE, *Krzysztof Zareba*, informed the Assembly that his association was ready to change its Observer status into Full EFCA membership. The Assembly welcomed the news and decided to accept PIGE as Full Member with immediate effect.

APPA elects new president

In June EFCA's French association APPA elected professor *Isabelle Roussel* as its new president. Preceding president *Jean-Marie Haguenoer* is now one of APPA's vice-presidents. EFCA wishes the new president much success with maintaining APPA's active role in France and with managing the association in this economically difficult time.

Mrs Roussel will combine her new office with her position as director of APPA's journal "*Pollution Atmosphérique*". In that capacity she edited earlier this year the publication of a Special Issue dedicated to Jean-Marie Rambaud, who served and represented APPA during more than ten years in several positions. Since 2005 he was APPA's delegate in EFCA of which he was president from 2009 till 2011. Copies of the special are still available; please contact the EFCA secretariat at info@efca.net.

Indoor climate and air quality

The EU's "Year of Air" inspired other organizations to select topics for their annual event with a relation to air quality this year. Our German Member GUS informed EFCA on a conference on "Air as a quality factor for buildings" (Munich, 20 November). The conference is an initiative of the Fraunhofer Building Innovation Alliance, a cooperation between the German Indoor

Climate Industry and the Fraunhofer-Gesellschaft with speakers from several of its institutes. The program includes topics like impact of materials and ventilation on indoor air quality as well as innovative systems for climate control in buildings. The conference language is German.

Further information:

http://www.bau.fraunhofer.de/content/dam/bau/de/documents/IBP_111_Flyer_Fachver_Bau_rz_web_es.pdf

Emission reduction 2014

EFCA's German Member, KRdL-VDI/DIN (Commission on Air Pollution Prevention VDI and DIN) issued, in close cooperation with VDI Wissensforum GmbH, a Call for papers for the conference on "Emissionsminderung" (Emission reduction), 20-21 May 2014 in Nürnberg.

The focus of the conference is on Process and production integrated emission reduction of pollutants like NO_x, NH₃, mercury, metals, greenhouse gases, particulate matter, VOCs, etc.; a second focus is on Energy and resource efficiency in applied emission control. The deadline for sending abstracts is 4 October 2013. Though the conference language is German the organizers also accept abstracts and presentations in English. Further details can be found at the conference website, www.vdi.de/emissionsminderung.

Green Week 2014: members of associations to be challenged

At the initiative of VVM-CLAN a plan is being developed to involve individual members of the

ENEP and EFCA associations in the Green Week next year around its theme Green Economy. The proposal is to have themes of members to contribute on selected aspects of the Green Economy, focussing in particular transport and

have the results presented during the Green Week. Interested scientists and professionals are invited to contact the EFCA secretariat (info@efca.net). Details of the plan will also be published at the EFCA website when available.

Calendar

CfP = Deadline Call for Papers

33rd NATO/SPS ITM on Air Pollution Modelling and its Application

26-30 August 2013, Miami, USA (www.int-tech-mtng.org)

8th Croatian Scientific and Professional Conference: Air Protection 2013

9-14 September 2013, Šibenik, Croatia
(http://www.huzz.hr/skupovi_eng.html)

21st International Conference on Environmental Indicators

23-26 September 2013, Trier, Germany
(<http://www.biogeographie.uni-trier.de>)

3rd International Congress of Environment-2013 (ICE-2013) Ecology and Sustainable Development

26-28 September 2013, Xi'an, China
(<http://www.bitcongress.com/ice2013/>)

3rd Low Carbon Earth Summit-2013
26-28 September 2013, Xi'an, China
(<http://www.lcesummit.com/>)

16th IUAPPA World Clean Air Congress
29 September-4 October 2013, Cape Town, South Africa, hosted by NACA (www.iuappa2013.com)

4th International WeBIOPATR Workshop and Conference, Particulate Matter: Research and Management

2-4 October 2013, Belgrade, Serbia
(<http://www.vin.bg.ac.rs/webiopatr/>)

IAQ 2013 – Environmental Health in Low Energy Buildings

15-18 October 2013, Vancouver, Canada
(<http://www.ashrae.org/membership--conferences/conferences/ashrae-conferences/iaq-2013>)

Plugging the Sustainability Gap: Boosting the European Electric Vehicle Market

29 October 2013, Brussels
(<http://www.publicpolicyexchange.co.uk/events/DJ29-PPE2.php>)

EVS27 – 29th Electric Vehicle Sector conference
17-20 November 2013, Barcelona
(<http://www.evs27.org/>)

Air as a quality factor for buildings
20 November 2013, Munich, Germany
(http://www.bau.fraunhofer.de/content/dam/bau/de/documents/IBP_111_Flyer_Fachver_Bau_rz_web_es.pdf)

Delivering Multiple Benefits from Our Land: Sustainable Development in Practice
15-16 April 2014, Edinburgh, UK
(www.sruc.ac.uk/srucsepaconf) CfP: 19-07-2013

Emissionsminderung (Emission reduction) 2014 - KRdL-conference
20-21 May 2014, Nürnberg, Germany
(www.vdi.de/emissionsminderung) CfP: 04-10-2013

9th International Conference “Environmental Engineering”
22–23 May 2014, Vilnius, Lithuania
(<http://enviro.vgtu.lt>) CfP 31-10-2013

7th symposium on Non-CO₂ Greenhouse Gases “Innovation for a sustainable future” (NCGG-7)
5-7 November 2014, Amsterdam, Netherlands
(www.ncgg.info) CfP: 1-2-2014

5th International Conference on Plants & Environmental Pollution (ICPEP- 5)
3-6 December 2014, Lucknow, India
(<http://isebindia.com>)

EFCA

President	Thomas Reichert (GUS e.V., Germany)
Vice-president	Vladimira Vadjic (CAPPa, Croatia)
Past-president	Giuseppe Fumarola (CSIA, Italy)
Secretary-general	Joop van Ham (VVM-CLAN, The Netherlands)

Newsletter

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