



IUAPPA Newsletter

The International Union of Air Pollution Prevention
and Environmental Protection Associations

July 2006

Landmark IUAPPA Meeting in Paris

The first day of IUAPPA's 2006 regional meeting (5-8 September) will be a significant and novel occasion. Before the main conference begins in Lille, the Union and APPA are taking advantage of the first international Congress of Epidemiology and Exposure Analysis, to host a high profile symposium in Paris on Tuesday 5 September, on scientific and policy aspects of particulate air pollution.

Policies to tackle the health effects of particulates are at an important turning point. It seems clear that new approaches, which focus on assessment of personal exposure, can deliver more cost-effective abatement policies, and are coming increasingly to the fore. European members of IUAPPA, working through EFCA, were influential in pressing the case for a new approach in debates on the European Commission's Clean Air for Europe programme. The approach, outlined more fully on page 4, is now feeding through into national strategies and policy debates.

The Union's meeting will bring together some of the key players in this debate – most notably Markus Amann from IASSA, Austria,

whose pioneering work on cost-benefit analysis of pollution abatement strategies, helped demonstrate that strategies based on exposure assessment, rather than exclusively the identification of hot spots can offer more effective overall health protection.

IUAPPA members will remember Dr Amann from his distinguished presentations at both the Dubrovnik conference in 2003 and the London World Congress, the following year.

Other speakers include Michael Krynanowski from WHO, Bernd Siefert from the German Federal Environment Agency, Sylvia Medina from the French Institute of Public Health Surveillance and Roy Harrison from the University of Birmingham.

Many of the issues opened up in the Paris Symposium will then be pursued in detail at the main conference, beginning the following day in Lille.

The Lille Conference is previewed on page 3, and on page 4 is a background assessment of the key science-policy issues.

Brisbane Call for Abstracts Published



Preparations for next year's World Congress in Australia are now moving into top gear with the publication of the Sponsorship Brochure and the Call for Abstracts.

The Congress theme is *Clean Air Partnerships: Coming Together for the Future* – and the programme and organisation will take maximum advantage of Queensland's glorious environment and relaxed life-style.

Member organisations, friends and contacts of the Union can now help in the following ways:

- Circulate the call for abstracts as widely as possible among potential participants – the deadline for submission is Friday 29 September.
- Draw the wide range of sponsorship opportunities offered by the Congress to relevant companies and organisations and urge their support – or pass their details to ICMS Pty Ltd, the Congress and Exhibition Managers (iuappa2007@icms.com.au).
- Assist in all practicable ways with promotion and publicity.



Beaux-arts, Lille

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INTERNATIONAL SEMINAR PROGRAMME

Transport and Air Quality in Mega-Cities

2006 Seminar in Sao Paulo

In 2000, with support from CSIA-ATI Italy, NSCA and the British Council, the Union began its series of international seminars on reducing the impact of transport on air quality and the environment in mega-cities, in Sao Paulo. Since then, major sessions have been held in Mexico City and Tokyo, and a special joint meeting with the World Resources Institute EMBARQ programme was held in Istanbul.

This year, to mark the 40th anniversary of our Brazilian member organisation, ABEPOLAR, the programme returns to Sao Paulo. As one of the largest cities in the world, facing enormous challenges to its environment, transport and planning systems, it is a natural focus for the meeting. The Union is again indebted to Johnson Matthey for financial support to enable the meeting to be held.

The meeting is being jointly organised by ABEPOLAR and IUAPPA, with the support of two of the most distinguished figures in air pollution and transport science and policy in Latin America: Professor Paulo Artaxo, from the Institute of Physics at the University of Sao Paulo and Eduardo Vasconcellos, who heads Brazil's national association for public transport.

In addition IUAPPA has invited two members of its International Advisory Board to lead the meeting. Mario Molina, the Mexican Nobel laureate, is well known to IUAPPA members. Alan Lloyd, who also addressed the London World Congress, and was until recently Secretary of the California Environment Protection Agency, has played a leading role in introducing cleaner fuels and vehicle technologies in the US.

The programme for this meeting is designed both to take further some of the key issues which have emerged from the Mexico and Tokyo meetings, and to explore some of the more fundamental social and economic issues which inevitably drive the relationship between transport and the environment. One is the underlying issue of equity, and associated social pressures which, in Latin America in particular, increasingly drive transport policy. The other two are economic: lack of the financial resources required for the major investment programmes which are frequently needed significantly to bring the environmental

impact of transport under control; and the other is the assessment of costs and benefits which, in a period of resource constraint, are bound to dominate policy.

Other key issues grown naturally from the earlier discussions:

- Latin American experience, notably in Bogotá, emphasises the importance of strong political leadership to carry through transport-environment programmes which are inevitably controversial. Given the lengthy period required for many investment programmes, how can policy consensus be created which will endure beyond the often relatively short periods in office of key political leaders.
- 'Bus rapid transit' systems have played a key role in strategy in Bogotá and a number of other cities in Latin America, and are often seen as the essential focus for an effective strategy. Are they succeeding in delivering a significant improvement in air quality – and wider urban quality of life?
- Largely as a result of massive migration from surrounding rural areas, many mega-cities have been expanding at unprecedented rates – notably Istanbul the focus of our last meeting. This creates enormous pressures for urban planning and administration. How can complex transport and air quality programmes be effectively implemented in such conditions?
- In many cities traditional bus-based systems of public transport have been in

decline, often to be replaced by more flexible mini-bus systems which have come to fill a very important role. How can these be regulated to control their emissions and safety, without undermining the cheap and flexible service which makes them so attractive?

- In rapidly expanding cities planning and administration systems are inevitably under severe strain. Vehicle licensing and testing and emissions checks are fundamental to urban air quality improvement programmes but are inevitably complex to administer. How can one reconcile these pressures so that performance can be upgraded?

This year's meeting will be held from 19-21 November, and will be immediately followed by the inaugural meeting of the Global Forum in Latin America.

As previously, generous financial support from Johnson Matthey PLC will enable the Union to ensure the participation of a significant number of leading experts from other countries in South America, and indeed from elsewhere, including some major cities in Europe and Asia. Brazil itself now has more than 20 cities with populations of more than one million, and it is hoped that city officials from most of these will attend.

Although the seminar is by invitation, members of IUAPPA organisations are welcome to attend, and the Secretariat (lmurley@nsca.org.uk) will be very pleased to hear from anyone who would be interested to participate.



IUAPPA REGIONAL CONFERENCE

Lille and Paris, 5-8 September 2006

IUAPPA's 15th regional conference represents a significant departure from past practice.

Like our World Congresses, regional conferences usually cover a wide range of air pollutants and pollution issues. However, the International Board also sees a case to concentrate the meetings, from time to time, in more specific areas. Accordingly the Board particularly welcomed APPA's proposal that, for this year, the meeting should focus on particles.

But this more specific focus does not mean that the meeting will be narrow. It will in fact be very wide – partly because particles remain the broadest and most important aspect of air pollution science and policy. Even more important, APPA are using the subject to open up two very broad and critical issues of public policy which extend far beyond the issue of particles.

One is how to link science and policy in a sound and reliable way. The other is the relationship between air pollution and the developing programme of health action plans at international, national and regional scales. It is the special quality of particulates as an issue that it can reflect and clarify these big and topical issues.

Issues specifically related to the science and policy of particles will nevertheless be at the heart of the meeting and will occupy most time. Thus there are sessions on collective and personal exposure assessment; source

identification and apportionment; stationary sources; road traffic sources; measurement and analysis and characterisation; and regional variations.

However, the general relation between air pollution and public health – and health action plans – at international, national and regional levels will be the subject of a major plenary session, as well as of a parallel session on the multi-disciplinary approach to control and abatement policies.

The broadest issue of all – how to link science and policy in a sound and effective manner – is the subject both of a plenary session on Air Pollution in Environmental Health Policies and an important Round Table on 'Health Impact Assessment-based Policies: How to build consensus among scientists, economists, regulators, NGOs politicians and citizens'.

The meeting will thus focus on what are arguably the key air pollution science and policy issues of our day. Its relevance and importance will however be further increased by the fact that it is being held at a moment when scientific perception and the basis of policy have been significantly shifting. As explained in the Review Note on page 4, and on the front page, personal-exposure based approaches are likely – in many areas of the world at least – fundamentally to alter the basis on which policy is designed.

While the technical content of the meeting has important new features, other aspects of the conference will be familiar to IUAPPA members. In addition to an evening Gala Dinner, the extensive social programme will include tours of Lille's fine historic centre and museums, and a boat trip through the famous 'Dutch gin trail'.

Lille itself is very conveniently located – only one hour by train from Paris, and with easy access by rail and road to centres across Europe and the UK.

IUAPPA INTERNATIONAL BOARD

The 2006 meeting will be held on the afternoon of Wednesday 6 September 2006, in Lille, France, continuing on Thursday 7 September, if necessary. Papers for the meeting will be emailed to members towards the end of July. Please let Loveday Murley (lmurley@nsca.org.uk) know who will be attending from your organisation.

To assist the Organising Committee members are urged to register as soon as possible – www.iuappa-lille2006.org

Maximising Benefits from Investments in Air Quality Improvement: The Exposure Reduction Approach

Dr. John Murlis, University College London

Over the last fifty years Governments worldwide have developed strategies designed to protect health from the worst excesses of toxic emissions.

The backbone of these strategies has been development of targets for ambient levels of air pollutants. These have usually been expressed as a combination of limit values for ambient concentrations and timetables for achieving them. Once this backbone is in place it is possible to consider measures that will deliver the targets.

This broad approach has served us well. Levels of air pollutants in many parts of the world are falling, even where, as in the case of transport, there has been vigorous growth in the numbers of emission sources. Clearly, targets have been helpful in focussing on the measures required to improve air quality. However, two factors now make it necessary to reconsider the way in which targets are expressed and in particular the use of limit values.

Firstly, there is a trend towards greater stringency in targets. As knowledge about the effects of air pollutants has grown, it has becoming increasingly clear that some components of the pollution burden are more harmful to human health than others. Concern about the effects of small particles is a case in point. Particulate matter (PM) is now considered to do more damage to human health in Europe than any other regulated pollutant.

Secondly, the next steps will be costly. The most straight forward and cost effective measures for reducing air pollution have already been adopted. Achieving increasingly stringent targets in the context of continued growth, for example in vehicle fleets, will require new innovative solutions. These are expected to carry higher marginal costs.

It will be necessary in future, even more than in the past, to ensure that the investments made to improve air pollution produce the best possible outcome. In Europe and in the UK, an alternative to the

limit value approach to targets is under review as a possible new and more effective way of reducing impacts of PM.

This new approach is known as the “exposure reduction” approach. Instead of limit values based on ambient concentrations, the main driver for policy would be targets for reducing general exposure of populations to PM.

For many pollutants, there are levels below which it is not possible to detect effects on human health and, for these, limit values can be set, around this “no-effects” threshold. For some pollutants, including PM, there appears to be no such threshold. It appears, for example from the work done within the EU APHEIS programme (www.apheis.net), that there are measurable benefits of reducing levels of PM further, even where ambient levels are comparatively low. In such cases setting limit values is difficult.

The new exposure reduction approach would work by setting targets for reducing exposure of the general population, for example as a percentage reduction of current levels. This would create improvements in health outcomes for wider populations, including those living in areas which have PM levels below the current limit value. It would therefore affect many more people than a policy targeted simply on reducing the highest levels of exposure by lowering limit values.

In recent work under the EU CAFÉ (Clean Air For Europe) programme and for Defra, (the UK environment department), the health benefits of the limit value approach to targets for PM have been compared to those from the new approach. The work (<http://www.defra.gov.uk/corporate/consult/airqualstrat-review/consultation-vol1.pdf>) suggests that the overall health benefits from the exposure reduction approach could greatly exceed those from further reductions in limit values.

The Defra study considers scenarios designed to deliver overall compliance with a hypothetical 20 µg/m³ limit value,

comparing them with scenarios based on the kind of measures that would form part of an exposure reduction approach. The analysis suggests that, although the technical measures taken together do not deliver universal compliance with the hypothetical standard, they produce twice the overall health benefits of the “limit value” scenario. This is because more people benefit from the “exposure reduction” scenario. Although not all costs in the study could be monetized, it seems likely that the overall costs of achieving the hypothetical 20 µg/m³ limit value would far exceed those of the known technical measures required to deliver exposure reduction.

It would appear, therefore, that the exposure reduction approach would deliver greater benefits for a given level of investment than the limit value approach. However, concerns have been expressed about the social equity aspects of this new approach by itself. It has been argued that those people living in highly polluted areas are more in need of relief from the effects of air pollution than those living in less polluted areas.

The way forward proposed in the UK Strategy is to combine an exposure reduction approach with a “safety net” limit value. This, it is proposed, would ensure that there was a common basic air quality enjoyed by all and a progressive improvement in the health of the population as a whole.

Whether this approach is accepted remains to be seen. Other approaches may emerge from work in other EU member states. What is clear is that, as the costs of measures to achieve limit values in ‘hotspots’ rise disproportionately to benefits, and as our understanding of the science of personal exposure increases, the traditional systems of air quality management that have served us well in the past will seem steadily less relevant and effective, and new approaches will need to be found.

GLOBAL FORUM – NEW DEVELOPMENTS



GLOBAL ATMOSPHERIC POLLUTION FORUM

The first half of 2006 has been a period of both consolidation and expansion for IUAPPA's major initiative – the Global Atmospheric Pollution Forum, established jointly with the Stockholm Environment Institute following the London World Congress in 2004.

Newsletter Introduced

The first edition of the Forum's regular Newsletter was published in March. It highlighted reports from the major regional networks around the world now associated with the Forum. The Forum's new website (www.GAPforum.org) came online at the beginning of July. It will be regularly updated to carry reports of Forum meetings, news from participating bodies, news on developments in science and policy on regional and global air pollution, and policy discussion.

Side Event – CSD 14, New York

At the beginning of May, building upon last year's series of inter-regional dialogues, the Forum held a major side event in the UN Building in New York to coincide with the 14th session of the Sustainable Development Commission. Some 70 CSD participants attended the evening session which featured the work both of the Global Forum and of IUAPPA. Keynote speakers at the session included leading representatives from major regional networks around the world: Surendra Shrestha, UNEP Regional Director Asia, on behalf of the three Asian regional networks; Martin Williams, chairman of the UN (ECE) Convention on Long-Range Transboundary Air Pollution; and Paulo Artaxo and Stephen Simukanga for, respectively the Latin American and African networks.

With support from IUAPPA Vice-President, Professor Giuseppe Zerbo, the Forum also held the first meeting of regional advisors on its International Advisory Board. Aside from representatives from UNEP, the LRTAP Convention, and other regional air pollution networks, representatives also came from Asian, African and Latin American divisions of the World Bank Clean Air Initiative, the Swedish International Co-operative Development Agency and Environment Canada. The meeting was a valuable opportunity to take stock of the Forum's progress so far and to chart its programme for the next couple of years.

First Discussion Paper Published

The second development is the introduction of the Forum's Discussion Paper. This is planned as a series of relatively short papers intended to open up professional and wider public debate on the way forward in understanding and abating air pollution at regional, hemispheric and global scales. The first paper, circulated with this Newsletter, reviews the current state of understanding on the origins and extent of pollution at these scales. Its central proposition is the evident need to strengthen our capacity to tackle rising transboundary pollution levels, represented by such phenomena as 'atmospheric brown clouds', in Asia and elsewhere, and the so-called 'greying' of the northern hemisphere. The report ends by putting forward a range

of pathways by which our capacity to address these issues could be incrementally strengthened.

Next Steps

Further regional dialogues will be held this year in Cape Town, in association with the meeting of IGAC, and in Yok Jakarta, Indonesia, in association with this year's 'Better Air Quality' meeting of the Clean Air Initiative – Asia.' In November it is hoped to hold the inaugural meeting for the Forum in Latin America, with the support of UNEP and colleagues at the University of Sao Paulo.

Inevitably progress with the Forum's ambitious programme will depend on raising substantial funds. With the support of UNEP and the LRTAP Convention discussions are now in progress with a major funding body.



Pollution haze over Bengal, December 2004

IUAPPA

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Developments in Africa

Over the next few months Africa will play host to a number of important meetings, and other developments, on air pollution in Africa. Aside from the work of NACA, IUAPPA's member organisation in South Africa, activity elsewhere in the continent has been relatively limited, but there are now signs of a marked increase in activity. Three steps are particularly important.

The initiation a few years ago of the Air Pollution Information Network for Africa (APINA) which is led from Zambia but involves much of southern Africa. It is particularly concerned with the development of co-operation on air pollution in the region and is now an active member of the Global Atmospheric Pollution Forum.

The World Bank is supporting the Better Air Quality Initiative – Africa initiative, and its first international conference ('Solutions for Managing Increasing Air Pollution in Sub-Saharan African Cities') will be held in Nairobi 25-28 July. A number of IUAPPA's other partner bodies are supporting the meeting, including the Stockholm Environment Institute.

IGAC (International Global Atmospheric chemistry) will also be meeting for the first time in Africa, in Cape Town, from 17-23 September. This important meeting ('Atmospheric Chemistry at the interfaces') will be held jointly with WMO and will focus on the interactions between gases, aerosols and climate, between oceans and atmosphere, between land and atmosphere and between chemistry and meteorology. (www.atmosphericinterfaces2006.co.za)

IUAPPA hopes to hold one of its regional conferences in Africa within the next few years – looking forward to the time when the World congress can return there.

NACA's own 2006 conference on climate change and air quality management, will be held 18-20 October in East London. Participation by members of other IUAPPA organisations would be welcome - details <http://naca.org.za>

IUAPPA Welcomes EPS President



The Environmental Protection Society of Taiwan, IUAPPA's Taiwanese member organisation, has appointed a new president – Professor Long-Nan Chang, a long-standing friend of IUAPPA.

Professor Chang, who was formerly managing director of the Society and will be President until 2009, has served as Head of the Department of Atmospheric Physics and Director of the Center for Environmental Studies at the National Central University of Taiwan, and has been principal investigator on a number of major national studies of air pollution and global change.

During his term of office Professor Chang aims to encourage more participation from local scientists and societies in regional and international affairs, and, in particular, closer ties with other IUAPPA member organisations.

Asian Better Air Quality Conference Postponed

'Better Air Quality 2006', the biennial conference of the Clean Air Initiative – Asia, due to be held in September in Yok Jakarta, has now been postponed as a result of the catastrophic earthquake which recently hit the city. It will now be held December.

IUAPPA has increasingly strong links with CAI-Asia, in particular through the Global Atmospheric Pollution Forum on which the Initiative is represented. The Forum will take part in the Conference – probably through the Inter-governmental Meeting being held for the first time this year as part of the conference. Members of IUAPPA societies in the Asia-Pacific region who may be interested to attend, should consult the website – www.BAQ2006 – which now gives the new meeting dates and arrangements and details of the programme.

With our own 2007 World congress being held in Australia, and no BAQ meeting that year, there are important opportunities to promote links between the two meetings