



# IUAPPA Newsletter

The International Union of Air Pollution Prevention  
and Environmental Protection Associations

November 2004

## Mario Molina to Lead International Advisory Board

We are delighted to announce that Professor Mario Molina has agreed to serve as Chairman of the Union's new International Advisory Board.

The Board, expected to include about a dozen leading figures from the fields of science, business, policy and governance,



Professor Mario Molina

was agreed at the last International Board meeting. The full membership will be announced shortly, after consultations with Professor Molina.

Professor Molina, and his wife Professor Luisa Molina, have proved good friends of IUAPPA. They gave addresses at both the last World Congresses, and hosted our most recent international urban air quality management seminar in Mexico City.

One of the World's most distinguished atmospheric scientists, Professor Molina will bring a wealth of experience to the role. A Nobel Laureate, his research interests cover many of the atmospheric science and policy issues preoccupying IUAPPA, including urban air quality management and the interaction of air pollution at urban, regional and global scales.

## Topfer Receives Barthel Award

At its meeting in August the International Board confirmed that Klaus Topfer, UNEP Executive Director, was to be the recipient of the 2004 Barthel Award, given every three years to the person who is considered to have made the most outstanding contribution to progressing the objectives of the Union during the previous three years.

The award was presented at the Opening Session of the 13<sup>th</sup> World Congress by the retiring IUAPPA President, Menachem Luria. In the citation he referred to Dr Topfer's outstanding contribution to environmental policy at three separate stages of his career: as Environment Minister of the German Federal Republic; as a leading architect of European Community environment policy in his time as a member of the EC's Environment Council; and currently as Executive Director of UNEP.

Thanking the Union for the Award, Dr Topfer looked forward to close future co-operation between UNEP and the International Union.



Klaus Topfer receiving the Barthel Award from Menachem Luria

## World Clean Air Congress

IUAPPA's 13<sup>th</sup> world congress, in August, jointly organised by the Union's British and Israeli member organisations, proved a major highlight in the international environmental meetings calendar, not least for playing host to a notable gathering of the world's leading atmospheric and environmental scientists and policymakers. The Congress and its side-events attracted more than 700 delegates drawn from the academic, regulatory, business and civil communities in over 50 countries. In five days the programme included more than 30 plenary presentations by leading international experts, over 300 oral papers and 100 posters, as well as important policy development workshops on Sustainable Transport, Regional Air Pollution Problems, Modern Regulation, and the future of Urban Air Quality Management. A high degree of consensus nevertheless emerged among delegates on the key contemporary challenges in the pursuit of a more sustainable environment.

Participants will also recall memorable social occasions in the Durbar Court of the Foreign Office, in the Guildhall in the City of London and in the evening cruise on the Thames to historic Greenwich.

On pages 2-4 we provide an overview by Lord Julian Hunt, joint chairman of the Organising Committee, of the highlights of the Congress; a preliminary summary of the key issues and conclusions is included as a separate insert.

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# 13<sup>TH</sup> WORLD CLEAN AIR AND ENVIRONMENTAL PROTECTION CONGRESS AND EXHIBITION

## Conclusions, Key Issues, Highlights

*Lord Julian Hunt, Joint Chairman of the Organising Committee, reviews the outcome of the Congress*

Even the most fervent advocates of the importance of reducing air pollution will have been surprised by the increasing evidence provided during the Congress that this goal is absolutely essential for human health, productive agriculture, environment and a benign climate. Lord Browne (chief executive of BP), Amory Lovins, the futurologist, and other business commentators have predicted that achieving this objective and the wider goal of dealing with climate change cannot be done by incremental steps. Rather it will require real paradigm shifts in every aspect of business, politics and how we lead our lives.

We had exciting contributions that point to how these great changes will emerge in many aspects of science and technology, but also in the wider domains of regulation, public engagement (from local environment to global environment), market/financial mechanisms, and even philosophy. Here the idea was presented that more progress might be achieved by people setting their own goals as much as by 'top-down' public campaigns and by enforcement of societal objectives.

Contributions to the improvement of the atmospheric environment are coming from all over the world and from all kinds of organisations; academic, governmental and non-governmental, ranging from technological to religious. The private sector is heavily involved with internet based companies disseminating data and best practice. Finally, individuals are enormously important in their roles as publicists, thinkers and consumers of products, which have such a large impact on the environment and also as activists, and voters. Organisations and individuals all need information to understand these complex issues. Providing this information is probably the most important task of all the societies belonging to IUAPPA!

### Topics and Conclusions

#### (i) *Direct Health Effects*

In many presentations, speakers emphasised the great value of continuing surveys of public health. On the positive side these surveys demonstrated several examples of improvements in air quality and health worldwide. Policy makers now have an indication that the timescale for improvements in public health, following the introduction of new regulations, is about 1-2 years. These regulations generally depend either on establishing thresholds or on continuous improvements. So it was significant to learn from a Swedish study that continually reducing the concentrations of particulates such as PM<sub>10</sub>, PM<sub>2.5</sub> has measurable health benefits, even when their concentrations are below the existing

standards. This result shows the need to keep driving down concentrations to the lowest possible values (bearing in mind natural levels). At the same time, high concentrations of pollution occur in many situations, where they have serious effects – notably near road ways where incidence of asthma has been measured in the USA and Europe. Particulate concentrations from the current generation of diesel engines are clearly above generally acceptable health standards. Another aspect emphasised was that people in the presence of local sources of pollution can experience high concentrations for short periods even though the average exposure might be tolerable. This could occur for people moving in street canyons or in emergencies when very high concentrations of smoke, or of even more toxic vapours, may be inhaled. Calculations were presented on how to estimate these effects, though none on the technology that is emerging of how to damp down these vapours in emergency situations. There is growing concern about varied types of indoor pollution. These were illustrated with remarkable 'stories' ranging from problems of the air quality breathed by Egyptologists in underground tombs to new buildings in Japan which could not be used for more than one year after their construction. The social dimension of vulnerability to air pollution is now being thoroughly researched. Public education is part of the solution. However, dealing with most aspects of air pollution requires long term research; a brilliant example was the research work over many years when Professor Lawther at the Medical Research Council Unit at Barts Hospital in London showed conclusively in the 1950s that the effects of smoking are much worse than the most polluted city streets in the world. Finally we learnt about the success of integrating different concepts about how air pollution affects human health through focusing on balance of free radicals in the body. The straightforward conclusion is that the effects of air pollution are minimised by eating more fruit.



*IUAPPA Director General Richard Mills with keynote speakers Peter Gammeltoft (left), Head of the Environment Directorate at the European Commission; and Sir Crispin Tickell, Director of the Green College Centre for Environmental Policy and Understanding, University of Oxford, and chairman of the International Council of Scientific Unions Advisory Committee on the Environment*

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## **(ii) Atmospheric environment and pollution**

The Congress opened with a special session on climate change and air pollution. The observed and predicted features of climate change are now well established, particularly the global effects such as the increase in the average surface temperature and the consequential rise in the level of the sea around the coasts. It is also known that there is considerable variability across the planet in these trends, especially in the temperate and polar regions.

Recent heatwaves with their serious health consequences have been exacerbated by the long term trend of rising temperatures. Recent developments in climate change research were highlighted here, notably the effects of aerosols and microscopic particles from industry, motor vehicles and forest fires which disperse in the troposphere over regional to continental distances. These particulates tend to reduce sunlight and average rainfall, but because they trap radiation at night over a 24 hour period their net effect is to accentuate temperature rise. The combination of processes in these 'atmospheric brown clouds' is likely to be particularly damaging to agriculture, especially when associated with high ozone levels. There has been a 15% decrease in crop production in China. Also as the particles are entrained into clouds they tend to reduce average rainfall. But at the same time they deepen the clouds so as to cause damaging increases in the intensity of sudden rainfall events. Together with the change in atmospheric structure, flooding over mountain areas is likely to be particularly exacerbated by these aerosol effects and climate change generally. As Baroness Young, Chief Executive of the Environment Agency reminded us in her speech at the Guildhall, as the climate changes, flooding will also be very severe in coastal areas.

The extent and the impacts of regional transport of air pollution is now much better understood. The policy implications are that no city or region can improve its air quality without collaborating with neighbouring regions on reducing pollution on a much wider scale. This may even involve

collaborating with upwind continental areas separated by substantial oceans, so that Europe now has to consider the effects of air pollution emissions in USA. New institutional arrangements or new responsibilities for existing bodies are necessary to implement all the scientific, technical, economic, and political aspects of these

wider and more complex types of environmental collaboration. A special workshop on this issue was held during the Congress involving many of the existing governmental, intergovernmental and non-governmental organisations. It was agreed to call for a task force and for urgent efforts by the *existing* international organisations involved, to produce a recommended plan of action in the next 12-18 months. Meanwhile everyone concerned with air pollution policies must keep this issue in front of policy makers at every level.

## **(iii) Regulating and planning improvements in air quality**

There continues to be a consensus that standards for air quality and for emissions from sources of pollution need to be demanding, both to improve the health of the environment and to stimulate manufacturers to keep improving their products, and 'emitters' to reduce the impacts of their operations. It was also recognised that if standards are to keep moving ahead, this cannot be done by seeking universal agreement on global standards. This is likely to slow progress, because standards would then only improve at the pace of the slower. What seems to be needed is first the continued efforts by countries and by regions to introduce new standards and secondly for the international community to adopt whichever of these are most appropriate at any given time. The leadership role of the USA and California, in particular, was recognised in the field of local air quality and vehicle emission standards. The EU is taking a stronger lead in climate change related standards through restricting greenhouse gas emissions.



*The Wilton Quartet – students from the Trinity College of Music at Greenwich – welcomed delegates to the opening plenary session*

However, here too, California also has ambitious targets.

One of the reasons for different standards is that they should depend on local meteorological or other conditions. The Californian regulations were influenced by the effects of the intensity of solar radiation, while those in Europe were more influenced by the presence of winds and frequent precipitation. Emission standards are clearly affected by technology and industrial interests. This may explain certain EU policies on diesel engine emissions – which Prof. Schwartz (Harvard Medical School) in the spirit of the international frankness of this Congress – robustly criticised as being likely to cause a public health disaster!

Another advantage of the local approach to regulatory standards is that it leads to an appropriate pace of incremental improvements – which is the defence of the EU to the charges raised by Prof. Schwartz. One way of regulating emissions is simply to reduce them. So there was much commendation of London's local initiative on congestion charges; the Deputy Mayor of London emphasised the role of pioneering initiatives by the smaller cities of Trondheim and Singapore which were an example for London. But political courage is always needed, good examples being the legal challenges by local groups as in Asia. These were very effective in changing policies and greatly improving air quality, as with the clean-up of bus exhausts in Delhi and other measures in Bangkok.

Those attending the Congress will have had the opportunity this week of looking at London's environment for themselves. It

*continued overleaf*

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might have been very different if London had decided in the 1960s to construct elevated superhighways like the USA, Toronto and Tokyo. There was huge popular and political protest which prevented such development here and in other cities, as I saw from my personal experiences of attending protest meetings at that time.

As to future measures and challenges, strong arguments and new evidence was given for the need to include shipping and aircraft in regulations on local air quality and climate impact. There have been encouraging developments in the EU and international bodies such as the IMO and shipping. Market mechanisms may also play a role, for example by including aviation emissions in the proposed international carbon trading scheme.

## *(iv) Technology*

Several industrial speakers emphasised how technological innovations have improved air quality and how such environmental improvements are driven both by regulations and by the market. Consumers have a significant effect on the environment when they purchase products and services, whether it is their house or car or holiday travel. Increasingly they are influenced by their understanding of the environmental effects of their decisions. Consumers generally want to contribute to a better environment, but the cost must be acceptable. They are also interested in taking advantage of new technologies. In reviewing future developments industrial technologists emphasise the remarkable changes that have taken place over the past 30 years, such as in the design and materials of catalytic filters. Although these 'older' technologies can still be made more efficient, new technologies now have the greatest possibilities for really substantial advances in efficiency. In some cases these



Lord Julian Hunt, Joint Chairman of the Congress Organising Committee and NSCA Vice-President

advances will arise in combination with old technology such as hybrid-electric internal combustion engines, or simply much higher and more efficient car bodies and aircraft. They may arise with the arrival into the mass market of completely new technologies, such as the fuel cell, or with the serious focus on renewable energy systems exploiting solar, wind and wave power. New materials will be, as they were with catalytic converters, probably the main way that 'disruptive' breakthroughs will occur.

However, a complementary scenario is the one outlined by Amory Lovins (Rocky Mountain Institute), in which new energy and transportation systems will emerge to make best use of new design and materials through a more holistic approach. One example might be wind power being applied to generate hydrogen which can power cars using fuel cells. Then the enormous reserve of energy that is always stored in the fuel tanks of parked vehicles could in future work interactively with the electrical power needs of the grid. Cars would be connected to the electrical supply during the time they are in office car parks, and then draw down power when they are about to be used.

However as several speakers emphasised we should recall that in many countries air pollution may not be the most serious environmental problem. Firstly there is the growing shortage of clean water and sewage systems in developing countries. These acute environmental and health problems can in part be dealt with through appropriate energy systems, for example to filter water and process sewage by using clean electricity from solar power and fuel cells. These can be installed where interconnected electrical grids and water, sewage systems are not available. Secondly to generate the substantial quantities of electricity needed by the world's growing population without greenhouse gas emissions, there is a growing body of opinion advocating the return of nuclear power. But the problem remains about what to do with nuclear waste lasting thousands of years. Here too there is new science and technology under development. It urgently needs to be applied.

This Congress addressed many of the central environmental issues for the whole world and, I think, we can be satisfied that there is the knowledge, the capacity and the experience to deal with them. Is there the will?

## AWARDS

On the front page we reported the award of the Union's highest honour, the Barthel Award, to Klaus Topfer. Since the last Newsletter, this triennium's recipients of the Congress Award have also been announced. These are Markus Amann, from the International Institute for Applied Systems Analysis in Laxenburg, Austria, and Professor George Kallos, from the University of Athens.

In making the award to Dr Amann the Union wanted in particular to help give due recognition to the importance of his work in the fields of integrated assessment modelling and cost-benefit analysis, as applied to atmospheric policy. Few people have made such an important contribution to air pollution policy both in Europe and beyond. His work on integrated assessment modelling has under-pinned much of the success of the UNECE Convention on Long Range Transport of Air Pollution, and his cost-benefit assessments are now making an equally critical contribution to the Development of the Clean Air for Europe Programme.

George Kallos is an atmospheric modeler who applies his models to a broad spectrum of atmospheric topics. These include air pollution and atmospheric chemistry, severe weather storm theory, wind energy, weather modification, atmospheric dispersion and micrometeorology. He is one of the leading atmospheric scientists involved in the meteorology of the Mediterranean Sea and has generated cooperation and led research in collaboration with scientists from most Mediterranean States. His scientific contribution to the understanding of air pollution transport over the Mediterranean Sea is second to none and his presentation on this topic was unanimously voted to be the most significant technical presentation at the World Congress.

# IUAPPA DEVELOPMENT

## The Next Three Years

*The Director-General reflects on opportunities and challenges for new President, Gavin Fisher, and the Board for the next few years.*

In recent years the range and depth of the atmospheric and environmental sciences has steadily widened. So too has the span of interest of the International Union. This makes the task of deciding our priorities and structuring our programmes ever more difficult.

One thing is clear, our triennial Congress remains a unique and important event. In an age of increasingly specialist meetings all of us have the need to stand back from the specialisms and absorb the big picture, the wider trends and the changing priorities. It will always be at the centre of our role.

While all aspects of the atmospheric sciences will therefore remain within our purview, we must still from year to year identify those key priorities where IUAPPA is best placed to make a contribution. The London Congress brought to a culmination much of the work of the past three years and set important new directions for the next.

The Regional Air Pollution Forum is now in place, and includes all the key networks and research programmes among its participants. Over the next few years the Forum will be able to make a significant contribution to debate about the science and the institutions for managing long range transport of air pollution at the regional and hemispheric scale.

On our other priority, transport and environment in mega-cities, the Congress also marked a turning-point. It was clear that, even though the number of vehicles on congested roads is set to multiply in the next few decades, the technical solutions are available. The challenge for IUAPPA, and other organisations like us, is now to help find the mix of policies and political institutions which can secure popular support for them and allow them to be implemented. This is the focus of our

programme of international seminars on urban air quality.

On these two priorities we can already see progress. By contrast the issue that was the over-arching theme of the Congress – the interaction of climate change and pollution – is only now becoming understood. The enormous issues this raises do not yet receive the attention they demand. IUAPPA is well placed to help raise their profile through the coming months.

There are also important challenges in the organisational field. Our national member organisations will continue to be at the heart of the Union, but as the world organisation on air pollution we have to be increasingly open, transparent and flexible. The London Congress showed us as having increasingly close links with other international and regional organisations and brought together large number of individuals who were not from our member national organisations but who nevertheless wished to play a part in our work. We need to find better ways of securing their continued participation. But the biggest challenge is to find wider ways to permit our national organisations and associated bodies to contribute to, and help lead, our work. The decision of the International Board to identify national organisations as lead centres for the Union on specific topics – much as our French colleagues have already become on indoor air pollution – provides an effective basis for this.

In developing our programme we shall need wise and experienced guidance. The establishment of the International Advisory Board to work with Gavin Fisher and his colleagues will make an important contribution to this. The decision of Mario Molina to accept the Chairmanship, and of other leading figures to become members, augurs well for the next three years.



IUAPPA Board 2004

## Developing IUAPPA's Structure: Board Decisions

At its 2004 meeting the International Board made a number of decisions designed to widen and strengthen the Union's international structure.

### Board and Officers

To ensure that the Union has representatives at its highest level from all quarters of the world, the number of Vice-Presidents was increased to five. One will be the Executive Vice-President, drawn from the country next hosting the world congress. The others would be appointed with the need for international representativeness much in mind. At the Board meeting, Randolpho Lobato, from Brazil, was re-elected a Vice-President, along with Professor Guisepppe Zerbo from Italy. They join newly-elected President Gavin Fisher (CASANZ), and Executive Vice-President, Neville Bofinger from Australia. There are therefore two vacancies, which are expected to be filled in due course by members from Asia, Africa or elsewhere.

### Sub-Committees

Ad hoc sub-committees of the Board will be established from time to time, but it was decided that the Awards Committee should be maintained as a standing committee. This would be responsible not only for the Barthel and Congress Awards but also for the Hopes for the Future Award Programme. Neville Bofinger was appointed chairman, and he will review the Committee's procedures. National member organisations have been invited to suggest the names of suitable members.

### Structure and Organisation

On the recommendation of the Director-General, the Board also agreed to his undertaking a review of a number of features of the Union's operations, focusing on options for streamlining and in some cases possibly tendering out aspects of the Union's operations, and reviewing links between headquarters and member organisations.

One immediate decision was to begin the process of identifying national member organisations that would oversee and steer the development of IUAPPA's work in specific policy areas. The aim is to have a network of member organisations around the world leading on specific topics – much as, in practice, our French colleagues do already on the broad topic of indoor air pollution.

# LONG RANGE TRANSPORT OF AIR POLLUTION

## New Forum established to strengthen efforts to tackle regional and hemispheric air pollution

For several years IUAPPA has been leading calls to strengthen the research, policy and institutional framework for tackling the long range transboundary transport of air pollution – at both regional and hemispheric scales.

With support from the UK Department for Environment and the Swedish International Co-operation Development Agency, the Union convened a special meeting, as part of the World Congress, to explore how this process should develop. Its origins and proceedings are summarised below.

Attended by participants from all the main regional treaty and research networks (see box), the meeting reached the following conclusions:

- The issues require a higher profile and stronger global leadership. As a first step UNEP should be encouraged to give greater prominence to the issues within its work programme;
- The International Union should encourage UNEP, or another appropriate body, to convene a meeting of representatives of global institutions (such as WMO, WHO and the World Bank) whose programmes are relevant to air pollution at the regional scale, with the aim of exploring how far there may be potential gaps and synergies between them;
- A Forum was needed to enhance discussion, exchange of information and technical collaboration among existing and emerging regional networks and research programmes. As a preparatory measure, the current meeting should constitute itself a standing forum, with a view to meeting on further occasions to progress wider consultation and carry through actions agreed at the meeting. Until such time as the Forum (which might for instance be termed the Global Atmospheric Forum) was more formally established a Secretariat would be provided by IUAPPA with the technical support of the Stockholm Environment Institute.

### Context

The regional dimension of air pollution and air pollution policy is becoming more significant as understanding of pollutant emission, transformation and transport and their impacts increases. SO<sub>x</sub>, NO<sub>x</sub>, ozone and aerosols lead to acidification, eutrophication, impacts on health, biodiversity, corrosion, visibility and agricultural productivity. It is now estimated that millions of people die prematurely each year, mainly in developing countries, and primarily as a result of particulate matter and ozone. Ozone is also the main phytotoxic pollutant responsible for crop yield losses, with a potential to significantly affect food security in many countries of the developing world. These impacts increasingly result from long-distance transport of pollutants, including transboundary fluxes, pointing to a need to address more fully the regional scale of air pollution.

In addition, increasing evidence and concern over ozone transport at hemispheric scales needs to be reflected in linkages between regions and / or hemispheric action. As the debate about interactions between climate issues and air pollution effects increases, much of this will inevitably have a hemispheric or regional dimension.

Knowledge of regional air pollution problems is not evenly spread and the capacity to carry out research and assess implications varies greatly. Far more is known in Europe and North America about air pollution science, and also methods to reduce pollution, compared to developing countries of Asia,

Africa and Latin America. Scientific advances are required to deliver the information for balanced decision making, which can then focus on action where consensus on the science already exists, and where the need is agreed to be greatest.

In sum, the regional scale of air pollution is already important, is becoming more important and leads to the need to tackle the problems at regional scales. The regional scale can form a bridge between local and national scales on the one hand and global scale issues on the other hand, promoting development of activities across regions using comparable approaches and advancing implementation of local interventions. South-South linkages will be as important as North-South linkages in developing a common understanding and approach to shared problems.

### Regional Air Pollution Networks

Networks have already been established, or are forming, in many different regions of the World in response to problems associated with regional transport of pollution in those regions, generally through the initiative of stakeholders from the regions themselves. Some of these are formal treaties, others are



*APINA meeting, Maputo, Mozambique, 2003, where the draft Maputo Declaration on regional air pollution in Southern Africa was agreed.*

science-to-policy networks agreed between governments and others are scientific networks.

The issues may be very different in different parts of the world where different sources, different impacts and different social and policy priorities exist. There are now, therefore, differentiated but regional approaches worldwide.

There is currently no formal or informal mechanism whereby these different initiatives can interact, share experience and learn from each other. The purpose of the London meeting was therefore to assemble initiatives that are either regional agreements or have regional interests to investigate the merits of bringing together the various initiatives around the world. It was recognised that each initiative has on-going activities, plans and needs; and that capacity building is crucial to

# LONG RANGE TRANSPORT OF AIR POLLUTION

more rapid development of the science required to underpin policymaking and the necessary strategies and policies.

## Need for a Global Forum

The desire of different regional networks to interact and collaborate more fully reflects a number of concerns. For the South the main driver is the extent of current impacts, especially related to health. The aerosol burden and ozone concentrations appear to be common, important issues for many developing countries. There is a commonly expressed need for awareness raising and capacity building in these countries which will allow them to understand and better address their problems and efficiently express concerns to decision makers. For the North the main drivers include both a desire to share information and experience with nations who have serious or emerging air pollution problems; and concerns that, for example, transport of air pollution between regions can lead to a situation where the emission reductions of ozone precursors in Europe and North America may be offset by the increase in overall hemispheric ozone concentrations.

It is essential that the air pollution problems be firmly placed in the social and economic contexts of each region. The linkages between poverty, economic development, food security, regional stability and air pollution need to be more clearly considered. Air pollution is now such an important issue with wide ranging ramifications that it needs to be included in national development plans.

Rapid action to eliminate air pollution impacts around the globe requires concerted, coordinated global efforts based on sharing knowledge of mistakes made and opportunities available. More effective sharing of expertise and knowledge in science, methodology and policy development should enhance the prospects for progress.

## Outcome of the First Meeting

At the initial meeting, held in conjunction with the 13<sup>th</sup> World Clean Air Congress,



Air pollution monitoring in Bhutan

representatives drawn from regional initiatives in five continents agreed that it was important to develop a Standing Forum on regional air pollution to link the different regions and their initiatives. It was proposed that a 'Global Atmospheric Forum' should be initiated by IUAPPA to provide an initial framework for further action to enhance international cooperation in air pollution abatement programmes.

It was recognised that it was very important to use existing structures relevant to the field of air pollution. It was also recognised that UNEP has a unique potential to be a politically visible actor for these issues in the global context: the meeting welcomed the fact that it had consistently encouraged discussion of a coordinating forum as a first step towards further, more formalised collaboration in the future.

Whilst proposals for the Global Atmospheric Forum have emerged mainly from consultation with treaty based initiatives, it is clear that there needs to be strong inclusion of purely scientific regional initiatives to ensure that the Forum adopts a broad perspective and facilitates the necessary linkage between research policy and treaty based agreements.

The core function should then be to develop a framework for mutual support and develop technical activities that would harmonise approaches being used in different subject areas.

## Next Steps

The meeting recommended:

- That approaches be made to a number of member countries with a view to raising the issue of enhanced collaboration between regions in air pollution abatement at the UNEP Governing Council and to explore prospects for including this more fully within UNEP'S work programme.
- To convene a meeting of global bodies (perhaps via UNEP) who are important players in air pollution issues at the regional scale. Such a meeting could allow these global bodies to share their knowledge and experience and examine their activities at the regional scale, with a view to exploring the scope for enhanced co-operation and synergy.
- To allow early progress, the International Union will establish the Standing Forum immediately, on a preparatory basis, with a secretariat located at IUAPPA and with technical support from SEI. There will then be a need to identify regional/sub-regional

focal points. There will need to be a considerable effort to network and link to key stakeholders (regional initiatives, public interest groups and industry) in order to further develop the forum.

There should be at least one further meeting within 12 months. In preparation for this, the secretariat will consult on preparation of a draft work programme and investigate options for financial support. The background document, produced by SEI for the Special Forum, would meanwhile be upgraded with help from the different participants representing the various regional initiatives and provide reference material for the Global Atmospheric Forum.

## Regional Initiatives Represented by Participants at the Global Atmospheric Special Forum

### Africa

- APINA (Air Pollution in Africa Network)

### Asia

- Malé Declaration on Control and Prevention of Air Pollution and its likely Transboundary Effects for South Asia
- Atmospheric Brown Cloud
- ASEAN Haze Protocol
- EANET
- Clean Air Initiative – Asia
- UN/ECE support for Central Asian Republics

### Europe

- UN/ECE Convention on LRTAP
- Clean Air For Europe (CAFE)
- Eastern Mediterranean dust and pollution transport

### Latin America

- IANABIS

### North America

- Canada/USA Air Quality Agreement

### Other Inter-governmental Bodies

- EU
- UN/ECE
- UNEP
- SACEP
- WHO

### Other Regional Scientific Initiatives

- RAPIDC
- AAPCEN
- CAD
- IGBP IGAC/DEBITS

## IUAPPA President Gavin Fisher Elected



The International Board unanimously elected Gavin Fisher (rt), President of CASANZ as President of IUAPPA for the next three years. Gavin is seen here with former President Professor Won Hoon Park (KOSAE), and Immediate Past President Menachem Luria (ISEEQS)

## International Board Meeting

The next meeting of the International Board is to be held in Tokyo in conjunction with the Regional Conference to be held from 2-4 August 2005. It is proposed that the Board meets immediately before the Conference, on Monday 1 August. Confirmation of this date will be sent to members in due course.

## IUAPPA

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Richard Mills

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November 2004

## FORTHCOMING EVENTS

### 13<sup>th</sup> IUAPPA Regional Conference – Clean Air and Environment in the Asian Pacific Area

2-4 August 2005, Tokyo, Japan

The programme for this conference has been designed to provide an opportunity for developed and developing countries to share knowledge and information on urban air quality control technologies. Specific topic areas to be covered include: emission control technologies, energy systems, advanced clean automobile technologies, urban heat island, as well as global warming and urban air pollution. The deadline for submission of abstracts is 31 March 2005.

This conference is organised by IUAPPA member, the Japanese Union of Air Pollution Prevention Associations, in cooperation with the Japan National Tourist Organisation.

Further details: [www.jemai.or.jp](http://www.jemai.or.jp) email: [cleanair2005@jemai.or.jp](mailto:cleanair2005@jemai.or.jp)

### 14<sup>th</sup> IUAPPA Regional Conference – 3<sup>rd</sup> International Symposium on Air Quality Management at Urban, Regional and Global Scales

26-30 September 2005, Istanbul, Turkey

The objective of this symposium is to bring together those working in the field of air quality management, including scientists from universities, research organisations, government and industry. The programme will cover all aspects of air quality management and air pollution control, with papers also invited on specific topics including: acid rain, ozone problems, industrial emissions, toxic and hazardous pollutants, risk management, indoor air pollution and dust-storm generation and transportation. For the full list see the symposium website. The deadline for submission of extracts is 1 March 2005.

This conference is organised jointly by IUAPPA member, the Turkish National Committee for Air Pollution Research and Control (TUNCAP), and the Korean Environmental Sciences Society.

Further details: <http://www.deu.edu.tr/tuncap/aqm2005> email: [incecik@itu.edu.tr](mailto:incecik@itu.edu.tr)

## FIRST ANNOUNCEMENT

### 14<sup>th</sup> World Clean Air and Environmental Protection Congress

9-13 September 2007, Brisbane, Australia

*Clean Air Partnerships: Coming Together for the Future*

The quality of life for humans depends on clean food, clean water and clean air, but this can only be provided in a world of increasing population and increasing resource consumption through the advancement of knowledge and the forging of effective partnerships between the diverse interest groups in human society. This congress will bring together specialists from science, industry and government to present insights into progress and challenges in the achievement of improved air quality, and to consider perspectives provided by representatives of the wider society. These exchanges are intended to examine local, national and international issues, particularly those that challenge the developing economies in Asia.

A call for abstracts will be issued in April 2006.

The 14<sup>th</sup> World Congress is hosted by the Clean Air Society of Australia and New Zealand, and incorporates the 18<sup>th</sup> CASANZ conference.

To register your expression of interest, and for further details, visit,

[www.icms.com.au/iuappa2007](http://www.icms.com.au/iuappa2007) email: [iuappa2007@icms.com.au](mailto:iuappa2007@icms.com.au)



# INTERNATIONAL UNION OF AIR POLLUTION PREVENTION AND ENVIRONMENTAL PROTECTION ASSOCIATIONS

## 13<sup>TH</sup> WORLD CLEAN AIR AND ENVIRONMENTAL PROTECTION CONGRESS AND EXHIBITION

More than 700 delegates, drawn from the academic, regulatory, business and civil communities in over 50 countries, attended the Congress. The programme included plenary presentations by some 30 leading international experts, more than 300 oral papers and 100 posters, and important policy development workshops on Sustainable Transport, Regional Air Pollution Problems, Modern Regulation, and the future of Urban Air Quality Management. A high degree of consensus nevertheless emerged among delegates on the key contemporary challenges in the pursuit of a more sustainable environment.

### SUMMARY OF CONCLUSIONS

- The touchstones for progress in the next decade must be **integration** and **partnerships** – above all integration between the twin challenges of climate change and pollution control, and more effective partnerships between governments, business and citizens in the way in which they are tackled.
- Climate Change is happening now but may in part be masked by the effect of aerosols and ground level pollution. If we are to mitigate the impact of Climate Change and continue to abate the heavy toll on health and the environment from air pollution, the only realistic course is to achieve a better integration of the two themes at both scientific and policy level.
- The process of integration now needs to be pursued vigorously, notably at national and local levels: available evidence makes clear that integrated policies at these levels can produce more cost-effective outcomes.
- Evidence increasingly indicates that the effects of pollution on health, even in the developed world, may be more severe than previously thought and occur at lower pollutant concentrations. Cardio-vascular impacts now appear as severe as respiratory effects. As emissions rise in the developing world the health burden must be expected to become even greater. In Europe the potential increase in emissions of diesel particulates may pose a formidable public health challenge.
- More effective policies depend on a better understanding of personal exposure – the cumulative effect of outdoor, indoor and in-car exposure: increasingly they too must be addressed in more integrated fashion.
- Addressing indoor air pollution is a major challenge for the developing world. Mean-while in the developed world, indoor air pollution – in markedly different form and from markedly different causes – also poses a significant challenge, but one that receives in most countries inadequate attention.
- It has long been recognised that air pollution crosses national boundaries and may travel long distances. Now the ABC Study in Asia, and research on transport of pollution from China to the USA and from the USA to Europe makes clear that hemispheric and even global transport can occur and that new policy systems are therefore required to link the pollution abatement policies and machinery that have been gradually emerging at the regional level.
- Managing air quality, particularly at the urban scale, requires an integrated approach which addresses all pollutant sources in an optimised way, balances technological and non-technological measures, and maintains continuing pressure for technical advances in emissions reduction. Sophisticated systems for air quality management have been introduced in the US, Europe and increasingly elsewhere. In the long-term their success depends on minimising bureaucracy and more effectively engaging planners, transportation engineers and other sections of local government, and critically, on increasing the commitment of the public at large. This requires more effective political leadership.
- Even allowing for the improvement in fuels and vehicle technologies which the oil and vehicle industries continue to achieve, increasing vehicle use represents a formidable global challenge: for instance in the next 20 years the expected increase in vehicles on China's roads alone may equal or outstrip the total number of vehicles currently on the planet.
- In cities throughout both the developed and developing world the issue of transport is therefore at the heart of the challenge of improving air quality and developing sustainable communities. However, the technical solutions to these problems are now available or are foreseeable: the issue is whether there is the political leadership and public commitment to implement them.

*continued overleaf*



# 13<sup>TH</sup> WORLD CLEAN AIR AND ENVIRONMENTAL PROTECTION CONGRESS AND EXHIBITION

- In different cities solutions can be found through a variable combination of Bus Rapid Transit systems, cleaner fuels and technologies, and some element of demand management – most probably, in the light of London experience, involving congestion charging or more general road pricing. Road space must however be recognised as a public resource and must be equitably allocated.
- In the developed world continuing reductions in transport-generated air pollution depend in part on the willingness of governments to incentivise the uptake of cleaner fuels

and technologies, such as bi-fuelled vehicles; and the willingness of the public to translate their environmental commitment into actual purchasing decisions.

- Not just in transport, but also in energy production generally, the capability now exists to move to a Low Carbon Economy. The stark, and still growing challenges of climate change and pollution makes it essential that this is pursued with greater urgency. Moving to a more resource efficient, hydrogen-based economy will require not just integrated assessment and strategies, but a more effective partnership

between government, business and the public at large. Industry can provide cleaner, alternatively powered vehicles and energy generation, but only government can provide and regulate the necessary infrastructure and transmission networks. These are ultimately however, political decisions, and require the public at large to recognise that protecting the global environment requires taking a long view and pursuing it with consistency. The role of organisations such as IUAPPA must be to help create the climate for this.

