Hillary Clinton Launches Climate and Clean Air Coalition - Culmination of Eight Years Work by IUAPPA and Partner Organisations

In February Hillary Clinton, the US Secretary of State, announced the formation of the ‘Climate and Clean Air Coalition’, an international coalition committed to co-operative action to mitigate the impact of SLCPs. Joined now by UNEP, the World Bank, the EU, all the members of G7 and many individual countries, this represents one of the most important international environmental policy initiatives in many years. It also represents a major breakthrough for IUAPPA and the GAP Forum, which have helped pioneer work in this area since 2004.

The importance of SLCPs (particularly Black Carbon, Ozone and Methane) is well-known to IUAPPA members. They account for almost as much climate warming as CO2, but have a far shorter life-time in the atmosphere, so that mitigation can be effective much more quickly than in the case of CO2. This opens the prospects for an ‘intermediate’ climate policy which could slow climate change and buy time until measures to mitigate CO2 - which may show no effect until 2050 or beyond - can be effective. Equally important, mitigation of SLCPs could yield enormous benefits for human health and food security.

On pages 5 and 6 we reproduce - in slightly abbreviated form - what are now the two defining statements on the issue: the conclusions of the UNEP Global Assessment of SLCPs, which defines the new international scientific consensus on the issue; and the policy response to this - the statement of Secretary Clinton in launching the new coalition. A short introductory note reviews IUAPPA's past contribution and the contribution it may be able to make in the next few years.
ISTANBUL 10 - 13 September 2012

Istanbul this year hosts the IUAPPA Regional Conference/Fourth International Workshop on Air Quality Management at Urban, Regional and Global Scales.

In addition to wide-ranging technical sessions, the programme includes:

- Special sessions with invited contributors, on Air Pollution issues in the Mediterranean Region; Shipping Emissions; and the work of the new international Climate and Clean Air Coalition on Short-Lived Climate Forcers.
- Welcome Reception in the historic grounds of Istanbul Technical University.
- Conference Dinner at a restaurant overlooking the Bosphorus.

Nearly 200 abstracts from more than 30 countries

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There could be no more appropriate venue. The meeting ground of Europe and Asia and the fulcrum of East and West, Istanbul has a wonderful historic legacy of religion and culture and a rich scientific tradition.

Nearly 200 abstracts have been submitted from more than thirty countries.
Biofuels: A Sustainable Future

Biofuels will be a key topic at next year’s World Congress, and plans remain in place for an IUAPPA Workshop and Study Tour in Brazil. Here John Murlis reviews the state of the debate.

Action to tackle the causes of climate change remains urgent, despite the recent failure to agree internationally on what form it should take. One thing is clear though: a substantial reduction of greenhouse gases emissions from all forms of human activity is an essential component of any effective climate change strategy. For many who have studied the evidence closely, nothing short of decarbonisation of electricity production and transport will produce the level of reduction required. There are many routes towards this for electricity production, including the use of renewable energy, notably solar and wind energy and second and third generation nuclear power. Despite the scale of the challenge, progress is being made across continents in reducing the carbon footprint of power generation.

For transport systems, however, the position is more difficult. In the long term, there is general agreement that electricity will play a major role in supplying energy for the world’s transport fleets, at least for the light duty segments, and the prospect that renewables will play a major part in producing it. There have been some successes in bringing electrical traction into the light duty end of the fleet, including hybrids and, more recently plug-in hybrids but there is a long way to go before these can play a substantial role. For the short to medium term, the world’s fleets are locked into conventional gasoline and diesel engines.

The search for a low-carbon alternative to conventional road fuels is therefore priority for bridging the gap between today’s transport fleets and those of the future. Biofuels, liquid fuels derived from biomass, are emerging as front runners in the form of ethanol, for gasoline vehicles, and biodiesel. Administrations worldwide, including Brazil and the United States have taken measures to incentivise the introduction of biofuels and to provide market confidence for biofuel producers. At regional level, the European Union has set a mandatory 2020 target of 10% renewable energy in transport for its member states.

The principle behind the use of biofuels is that, as they are derived from plant matter, they simply recycle carbon from the atmosphere and displace the use of stocks buried in fossil resources. They should therefore be carbon neutral. However, energy is required for the production of biofuels from biomass and there is energy embedded in the biomass itself from the energy used in cultivation, water and inputs of fertilisers and pesticides. There is also the matter of emission of methane, a very powerful greenhouse gas, from agriculture. This is recognised and safeguards are in place to ensure that biofuels are fully energy efficient. For example the European Union requires that, to be counted against the 10% target, biofuels must show a greenhouse gas saving of at least 35% now, rising to 60% in 2018. This is assessed by means of a Life Cycle Analysis (LCA), taking account of emissions in cultivation and production. Results of LCA of current forms of biofuel, produced from the edible parts of plants, suggest that not all meet the emission reduction criterion. Given that the more advanced form of biofuel, produced from inedible, woody, parts of plants are unlikely to enter into widespread use until after 2020, this has led some to question the viability of the EU target. Furthermore, questions have been raised by a European Environment Agency Scientific Committee about the validity of the LCA. It is the opinion of the Scientific Committee that the LCA fails to take
full account of the changes in carbon stored in the ground due to the cultivation of biomass for biofuel and needs revision before it is fit for purpose.

It is clear that this is a controversial topic, and a more thorough method of accounting will be needed to create certainty that biofuels are actually creating significant greenhouse gas reductions.

There are also broader sustainability issues at stake. We live in a world where population is rising rapidly, and with it demand for food. Water resources in many parts of the world are under intense pressure and the use of artificial fertiliser is now a major factor in nitrogen pollution on a global scale. Biodiversity on all measures is declining according to UNEP.

In this world, biofuels compete with food production even now for land use, water and other precious inputs to agriculture. In future, with more people to feed, this competition will intensify. There is also the prospect of biodiversity loss, and the loss of ecosystem services, with the development of biodiverse land for the biofuel industries. One particular concern has been what is known as indirect landuse change (ILUC) which is when agricultural use is displaced by biofuel cultivation, with a range of impacts including loss of carbon stocks from clearance of unused land for the displaced agriculture. Policy makers and legislators are well aware of these issues and have suggested stringent assessment and sustainability requirements for biofuels. for example, [http://www.fao.org/bioenergy/20548-0e3bfa02bfb74ce060268a4bbe61efba3.pdf](http://www.fao.org/bioenergy/20548-0e3bfa02bfb74ce060268a4bbe61efba3.pdf) or at regional level [http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm](http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm)

There are reservations about the broad impacts of biofuels on the economies and peoples of emerging economies [http://www.odi.org.uk/resources/docs/100.pdf](http://www.odi.org.uk/resources/docs/100.pdf). Some commentators believe that it is impossible to consider the impacts of biofuels without thinking through all the pressures on land use as a whole [http://www.ieep.eu/assets/750/Policy_briefing_ILUC_21_01_2011_FINAL.pdf](http://www.ieep.eu/assets/750/Policy_briefing_ILUC_21_01_2011_FINAL.pdf).

There is now a vigorous debate on the general sustainability of biofuels.

Given the potential benefits of biofuel, it is well worth getting this right and the debate is one that we cannot ignore. This places the upcoming IUAPPA meeting on biofuels centre stage. It will be an opportunity to see what is happening in the real world of biofuel production and to explore what further measure are necessary to ensure that biofuels are sustainable and make a real contribution to the fight against climate change.

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IUAPPA’S Involvement - Past and Present

A number of significant events mark the progress of the Union’s contribution to the development of policy on short-lived climate forcers.

The Union’s London Congress in 2004 was the first major international meeting to highlight the critical relationship between climate and air pollution. Four years later a major International Conference in Stockholm, organised jointly by IUAPPA and the Stockholm Environment Institute, highlighted for the first time the opportunity for early action on SLCPs and the profound impact it could have on climate change, crop damage and human health.

Among the 30 recommendations from that Conference was initiation of a Global Assessment of SLCPs, a proposal subsequently adopted by UNEP. Led by SEI, with the engagement of IUAPPA and leading scientists from around the world, the report on the Assessment was published last year. It made a strong case for rapid international action and proved crucial in stimulating the establishment of the Climate and Clean Air Coalition in February this year. A summary of the Assessment’s conclusions and extracts from Mrs Clinton’s speech launching the CCAC initiative, are reproduced below.

For the Union and the partners with which it has worked on this issue throughout the last eight years, the Assessment and the Launch of the Coalition without doubt represent an important breakthrough. But what has been achieved is only a start: urgent action is now needed to encourage rapid implementation of the new policies on the ground. IUAPPA, SEI and Forum partners now have the opportunity to contribute to this through a major grant by the US State Department, to support work on the development of Action Plans for SLCP mitigation at national and regional scale in developing regions.

Conclusions from the UNEP Assessment

1. The climate is changing now, warming at the highest rate in polar and high altitude regions.

2. Black carbon and ozone in the lower atmosphere are harmful air pollutants that have substantial regional and global climate impacts. They disturb tropical rainfall and regional circulation patterns such as the Asian monsoon, affecting the livelihoods of millions of people.

3. Black carbon’s darkening of snow and ice surfaces increases their absorption of sunlight, which, along with atmospheric heating, exacerbates melting of snow and ice around the world, including in the Arctic, the Himalayas and other glaciated and snow-covered regions.

4. Black carbon, a component of particulate matter, and ozone both lead to adverse impacts on human health leading to premature deaths worldwide. Ozone is also the most important air pollutant responsible for reducing crop yields, and thus affects food security.

Reducing Emissions

5. Reducing black carbon and tropospheric ozone now will slow the rate of climate change within the first half of this century. Climate benefits from reduced ozone are achieved by reducing emissions of some of its precursors, especially methane which is also a powerful greenhouse gas.

6. A small number of emission reduction measures targeting black carbon and ozone precursors could immediately begin to protect climate, public health, water and food security, and ecosystems. Measures include the recovery of methane from coal, oil and gas extraction and transport, methane capture in waste management, use of clean-burning stoves for residential cooking, diesel particulate filters for vehicles and the banning of field burning of agricultural waste. Widespread implementation is achievable with existing technology but would require significant strategic investment and institutional arrangements.

7. The identified measures complement but do not replace anticipated carbon dioxide reduction measures.

Benefits of Emission Reductions

8. Full implementation of the identified measures would reduce future global warming by 0.5 °C (within a range of 0.2 - 0.7 °C). If the measures were to be implemented by 2030, they could halve the potential increase in global temperature projected for 2050 compared to the Assessment’s reference scenario based on current policies and energy and fuel projections. The rate of regional temperature increase would also be reduced.

9. Both near-term and long-term strategies are essential to protect climate. Reductions in near-term warming can be achieved by control of the short-lived climate forcers whereas carbon dioxide emission reductions, beginning now, are required to limit long-term climate change. Implementing both reduction strategies is needed to improve the chances of keeping the Earth’s global mean temperature increase to within the UNFCCC 2 °C target.
Full implementation of the identified measures would have substantial benefits in the Arctic, the Himalayas and other glaciated and snow-covered regions.

Full implementation of the identified measures could avoid 2.4 million premature deaths (within a range of 0.7 - 4.6 million) and the loss of 52 million tonnes (within a range of 30 - 140 million tonnes), 1 - 4 per cent, of the global production of maize, rice, soybean and wheat each year.

Responses

The identified measures are all currently in use in different regions around the world to achieve a variety of environment and development objectives. Much wider and more rapid implementation is required to achieve the full benefits identified in this Assessment.

Achieving widespread implementation of the identified measures would be most effective if it were country- and region-specific, and could be supported by the considerable existing body of knowledge and experience.

At national and sub-national scales many of the identified measures could be implemented under existing policies designed to address air quality and development concerns. Improved cooperation within and between regions would enhance widespread implementation and address transboundary climate and air quality issues.

The Assessment concludes that there is confidence that immediate and multiple benefits will be realised upon implementation of the identified measures.

The International Policy Response: A New Framework for International Action on SLCPs

Extracts from the statement on the announcement of the Climate and Clean Air Coalition, by U.S. Secretary of State, Hillary Clinton

U.S. Secretary of State Hillary Rodham Clinton today announced the formation of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, a new global initiative to combat climate change, improve air quality and protect public health.

Fast action to reduce short-lived climate pollutants can have a direct impact on climate change, with the potential to reduce the warming expected by 2050 by up to 0.5 degrees Celsius. At the same time, by 2030, such action can prevent millions of premature deaths, and avoid the annual loss of more than 30 million tons of crops. By capturing methane instead of venting it into the air, we can increase our energy security and contribute to the world’s low emission development. Moreover, many of these benefits can be achieved at low cost and high feasibility.

The new Coalition is the first effort to treat these pollutants together, as a collective challenge. It will catalyze new action and highlight and bolster the work of existing efforts such as the Global Alliance for Clean Cookstoves, the Arctic Council, the Global Methane Initiative (GMI), and the Montreal Protocol.

The Coalition will seek to reduce short-lived climate pollutants by driving the development of national action plans and the adoption of policy priorities, including in their own countries; building capacity among developing countries; mobilizing public and private funds for action; fostering regional and international cooperation; improving scientific understanding of the pollutant impacts and mitigation, and; raising awareness globally. It will aim to seize the opportunity of realizing concrete benefits on climate, health, food and energy. The Coalition’s work will complement and supplement, not replace, global action to reduce carbon dioxide, including under the United Nations Framework Convention on Climate Change.

The Coalition will move rapidly to bring in additional country partners and will also welcome the participation of both public institutions and private and civil society partners. UNEP will act as the Coalition’s day-to-day Secretariat.

The founding partners have committed USD$15 million to get the Coalition up and running. This is in addition to the funding that countries already contribute to existing initiatives such as the Global Alliance for Clean Cookstoves and GMI.

Introducing the statement, Mrs Clinton said:

“This Coalition - the first international effort of its kind - will conduct a targeted, practical, and highly energetic global campaign to spread solutions to short-lived pollution worldwide. It will mobilize resources; assemble political support; help countries develop and implement national action plan; raise public awareness; and reach out to other countries, companies, NGOs and foundations. Now, we have every hope that we will see results soon - both on the ground and in the atmosphere”.

Secretary of State Hillary Rodham Clinton, US
Developing Co-Operation on Air Pollution at the Regional Scale: IUAPPA Report Published

One of the Union’s main priorities in recent years has been to support development of action on air pollution at the regional scale. Its main focus has been to work with partners in the Global Atmospheric Pollution Forum to establish or strengthen Regional Inter-Governmental Air Pollution Networks in developing regions. But it has also been concerned to support the ‘outreach’ activities of the LRTAP Convention and to help develop co-operation and pooling of skills and experience between developed and developing regions.

Against this background the IUAPPA Secretariat was commissioned by the USEPA to examine how such co-operative action could be enhanced and how stronger links at the regional scale could contribute to enhanced global co-operation on air pollution.

The full report is available from the Secretariat, and will shortly be added to the Union’s website. Meanwhile, the key Conclusions are set out below:

General Considerations

1 International trends and development in scientific understanding will continue to increase the importance of regional and hemispheric air pollution and of co-operation among regional inter-governmental networks. But what can be achieved in practice will be limited by the constraints of wider international relations, from which atmospheric issues cannot be separated, and some profound differences in culture and values between regions.

2 The differences in attitude and values are likely to focus primarily on the relative value placed on economic development and environmental concerns; and the merits of co-ordinated international action.

3 However the most important factor is likely to be differences in the value placed on legal instruments, and particularly binding obligations, on these issues.

4 While LRTAP’s long experience may be useful and instructive there should be no expectation that developing countries will follow the same stages and processes in developing air quality management. In any co-operation and support programmes, developing countries should be left to define their own needs and wishes.

5 The priority should be to develop co-operation with other regional networks, but this should be within a framework that encourages co-operation with individual states and scientific organisations outside UNECE and draws the Convention’s work to the notice of economic development bodies in developing regions.

6 Programs can be implemented through formal agreements (treaties and conventions); formalised collaboration (Exchange of Letters, Memoranda of Understanding, etc); or contacts between Secretariats. Formal agreements are unlikely to be relevant in the foreseeable future.

7 Key features of the networks are elaborated in the Annex. Broadly, the networks fall into one of three categories: mature networks, with binding legislation; primarily science-based networks; and policy agreements/declarations.

8 Co-operation (or more often assistance programmes) can focus on specific components of the air quality management process or pollutants of shared concern, and the table of networks’ interests can assist option identification.

9 Co-operation with neighbouring countries should be considered along the lines of that attempted with the Central Asian Republics. A priority should be the extension of the monitoring network to North Africa, both to assist the Union in respect of Saharan Dust and Mediterranean concerns, and to support air quality management in those countries.

10 Co-operation should progress from technical and practical areas to policy development. Tentative approaches by the Bureau of the Executive Body to the Male Network in respect of crop damage and food security, and UNEP in respect of Black Carbon, could be taken up as soon as work on the Gothenburg Protocol is complete.

Assisting the Development of Hemispheric and Global Air Pollution Management Processes

11 The case for further action at the hemispheric scale is now well documented. At the global scale it may be more widely questioned, but the integral links between climate and air pollution suggest it is unavoidable.

12 To be effective new hemispheric and global arrangements should include a data/information system, machinery for scientific and policy assessment and a negotiation platform.

13 Broadly three approaches are open: negotiating a wholly new treaty; widening the scope of an existing instrument, most obviously UNFCCC or the LRTAP Convention; or initiating a process to develop and integrate existing regional networks.

14 A comprehensive global treaty currently appears unattainable, and any attempt to secure one counter-productive. Current negotiations within UNFCCC appear to make any attempt to widen its scope deeply unattractive to all parties. Parties to the LRTAP Convention are currently sceptical about widening it and concerned about the implications for current
members: any steps in that direction would also require
careful design and presentation to meet the interests
of developing regions. Prospects for progress in the
near/medium term therefore appear mainly focused
on developing and integrating the activities of existing
regional networks.

15 Under the ‘regional’ option, relatively limited
linkage of and extension to current data and information
systems could secure the necessary global system.
Assessment processes would be more difficult but
should be possible either through establishment of a
facility like IPPC for global air pollution issues, or possibly
by expanding and formalising the activities of the Task
Force on Hemispheric Transport of Air Pollution

16 A global negotiating platform might best be
developed by bringing regional air pollution networks
together to formulate a ‘Framework Agreement’ on
the lines of other environmental conventions. It might
typically provide for monitoring, information exchange,
public access to information and issue assessment
processes. In addition it would have provision for the
establishment of negotiating fora for specific issues as
required.

17 This approach would also assist integration of
climate and air pollution because the regional scale
is important for implementation of climate mitigation
measures.

18 A number of ways of progressing this option
are likely to be open. A first step might be for the
LRTAP Convention and UNEP to develop closer co-
operation processes on air pollution and develop a joint
secretariat.

A Catalyst for Early Action: SLCPs and the LRTAP
Convention

19 SLCPs could prove a catalyst for early progress
on these issues as they require action at global and
hemispheric scales; can mitigate climate, health and
crop damage cost-effectively and quickly; and above all
because the potential climate benefits from controlling
them demand urgent action.

20 In their assessments, UNEP emphasised the
importance of the regional scale, and the potential role
of Regional Intergovernmental Networks. Following the
establishment of the Coalition for Climate and Clean
Air, a response is now needed from the Networks, and
particularly the Convention.

21 Joining the Coalition would be one possible
course, but it would be difficult. Rather, a natural role for
the Convention would be to develop and lead an SLCF
strategy for the northern hemisphere.

22 Such a step could be a natural development
in the Convention’s recent evolution. By linking the
Convention’s traditional role in the development of
international legal instruments with the development of
a voluntary action-oriented program, it could also help
ensure convergence in the approaches of developed
and developing regions to global atmospheric issues.

Jean-Marie Rambaud: An Appreciation

On a bleak December morning, amid torrential rain
seldom seen in Paris, family, friends and colleagues of
Jean-Marie Rambaud gathered to honour his full and
generous life, and all too early death.

As Vice-president (and, until recently, Director) of APPA,
President of EFCA and Treasurer of IUAPPA, he played a major role
on air pollution within
the NGO community. His death deprives IUAPPA and our
partner organisations
of a valued and
influential leader at
an important stage in
their evolution.

For all those gathered on that winter morning, however,
it was the special personal qualities of the man that were
uppermost in mind.

He was, first of all, a civilised and cultured man. He had
a wide knowledge of art, particularly the works of Fra
Angelico, and, wandering around Rome and many other
European cities could be an education for his companions.
Allied to this was his love of music, and his own choral
activities. Many members will recall the Global Forum
Dinner in Vancouver in 2010 where he delighted fellow
guests with a spontaneous but perfectly judged rendition
of old French Canadian Folk songs.

He was also a man with an open and inquiring mind.
When he attended his first IUAPPA meeting his English
was shaky, but very quickly he had become fluent, and
always then delighted in discovering new colloquialisms.
When he joined APPA he had no significant knowledge
of the atmospheric sciences; by the end he had become
an expert in many aspects.

More important than this, he was for all who knew him
of one the nicest and kindest of men, qualities that were
combined with a courage and resourcefulness that
earned the respect of all those who knew of his years
of painful illness. His last contribution to IUAPPA was to
organise the Paris Conference in 2011. He completed
the task with distinction, leaving almost all the audience
unaware of his pain - his only concession to his condition
was shaky, but very quickly he had become fluent, and
always then delighted in discovering new colloquialisms.
When he joined APPA he had no significant knowledge
of the atmospheric sciences; by the end he had become
an expert in many aspects.

If these are the characteristics of Jean-Marie we remember
most vividly, it is right also to recall and honour his great
contribution to the Union - and to APPA and EFCA. For
his colleagues in these organisations, his was the wisest
of counsel, and he will be sorely missed.

Richard Mills
The 2012 meeting of the International Board will be held on Sunday 9 September at the Istanbul Technical University. Key issues are likely to include:

Final selection of the Host Country for the 2016 World Congress. The meeting that year will be held in Asia, and two excellent proposals have been received. The choice for the Board will not be easy. The Executive Committee will have reviewed the proposals in advance and is expected to put forward a recommendation to the International Board.

Non-governmental organisation concerned with air quality - both members and prospective members of the Union - are going through challenging times partly as a result of international financial difficulties, notably in Europe. This is significantly eroding the subscription income of the Union. Steps have been taken at previous meetings to allow for widening the membership base of the Union, bringing in a variety of other kinds of organisation, which share the Union’s objectives. Other priorities have taken precedence over this in recent months, but it is urgent now to build on this broader structure and increase membership.

As reported elsewhere in this issue 2011-2012 has been a year of notable achievement for the Union in the policy sphere. The Union’s work on the integration of climate and air pollution policy, and particularly the role of SLCPs first highlighted at our 2008 Conference in Stockholm, has come to fruition with the launch of the Climate and Clean Air Coalition. Thought now needs to be given as to how the Union best continue to make a contribution in this critical area.

There is now an urgent need for closer co-operation among international and regional groups concerned with air pollution. After consultation with other international associations the Union’s Secretariat is expected to come forward with proposals.