

Newsletter

No.8 February 2010

GAP Forum set to realise key goals in 2010

n 2010 the GAP Forum will reach the end of an important phase of its development with the culmination of major initiatives in the following areas:

Promotion of inter-governmental cooperation

The Forum has now completed its planned programme of work to initiate three regional air pollution agreements at ministerial level for Sub-Saharan Africa, resulting in the Lusaka Agreement in Southern Africa and the Nairobi Agreement in Eastern Africa in 2008, and the Abidjan Agreement for West and Central Africa in 2009. The Forum will now consider how capacity building networks to underpin the agreements can be made sustainable, how links to climate change issues can be pursued, and the regional agreements harmonised.

In Asia the regional air pollution networks have agreed to establish a joint forum to work together in addressing air pollution issues. During 2010, countries will agree on an implementation plan for the Joint Forum for closer cooperation among regional air pollution networks in Asia-Pacific.

For 2010 two major steps remain, in North Africa and Latin America. Following the successful meeting of experts from North African states last November proposals for a framework agreement and inter-governmental network will be submitted to Ministers in October. In Latin America, the Regional Forum of Environment Ministers has already agreed in principal a proposal for a Network. Following detailed discussions at two meetings of officials this year final proposals will be submitted to Ministers in the late spring.

At the same time the Forum is contributing to the debates within the LRTAP Convention on its future strategy. The Forum welcomes the



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greater emphasis likely to be given to climate pollution interactions and co-benefits and to links with other conventions and with other regional air pollution organisations. Such a step would be a major step forward in progressing the Forum's goals.

Harmonisation of methodologies - the development of GAP Forum manuals

The Forum aims to promote convergence on the methods and guidelines used by the different regional initiatives around the world as the scientific basis for policy making, and to enhance capacity to use them..

Harmonized approaches are being developed for all technical aspects of the air pollution policy cycle. The GAP Forum emissions manual has already been successfully launched and this will be followed in 2010 by manuals on monitoring air pollution to assess impacts, on the assessment of crop and corrosion impacts, and on cost-effective epidemiological studies for assessing health impacts. All manuals are designed to be as compatible with best international practice as possible and targeted for implementation in developing countries.

Consensus building for collective policy action

The aims of this series of activities is to build cooperation at regional, hemispheric and global scales between the different regional groupings, and to promote consensus among them on key common issues through sharing information and undertaking joint policy assessments.

Two key strands of this programme are set to come to fruition this year. The Global Assessment of Black Carbon and Ozone sponsored and led by UNEP, which was stimulated by the Forum's work on Climate-Pollution interactions and co-benefits, is expected to be completed during the year

Meanwhile the Forum will publish a paper on the potential for enhanced global cooperation on air pollution, which builds on its experience over the last 6 years since its inception.

Reductions in deforestation rates in Amazonia

Continuing our series of occasional reports on significant new trends and issues, **Paulo Artaxo** (Institute of Physics, University of Sao Paulo, Brazil, artaxo@if.usp.bra) assesses developments in Amazonia.

A mazonia is an important component of the Earth System from several points of view. In terms of carbon storage, it is a huge reservoir, storing in the biomass and soil around 100-180 tons of carbon per hectare. It large area of 5.5 million km² and tropical location is one the reasons for the strategic importance of Amazonia to our planet. It is an important source of trace gases and aerosols to the global atmosphere. The water vapour emissions keep the engine of the hydrological cycle of South America in high gear. It is the largest biodiversity reservoir in our planet. However there are huge socio-economic pressures on the region's natural resources and land area.

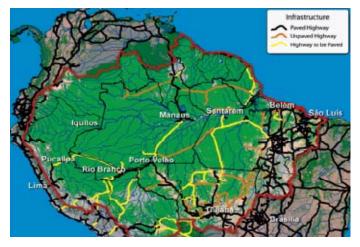


Figure 1: Proposed road development in Amazonia for the next decades. In yellow are roads that exist in 2009 but are not paved.

Deforestation of Amazonia started in the late 70's, with opening of important roads across the region. In 1995, about 30,000 km² of primary forest were cleared. At present, deforestation is largely illegal and driven by business opportunities for cattle ranchers and soy farmers. A smaller factor is wood extraction and small scale agriculture. Up to now, about 18% of the original forest has been lost to agricultural land, pastures and abandoned secondary forest. There are no natural fires in Amazonia, because the





water content does not allow easy ignition. Virtually all fires are anthropogenic. Large emissions of trace gases and aerosols are the result of biomass burning that follows deforestation.

It is possible to observe important health effects on the Amazonian population due to the very high concentrations of PM10 (100-400 ug/m³) and ozone (60-120 ppb). The associated emissions of black carbon and ozone precursors strongly influence atmospheric chemistry over large regions of South America. The radiative forcing associated with the aerosol emissions accounts for -30 watts/m² in an average of 7 years of continuous measurements. This strong reduction in solar flux has profound effects on the photosynthetic rates of the Amazonian forest, and in the carbon balance.

But there are signs that the trend in deforestation is going down significantly. The Brazilian government has a sophisticated

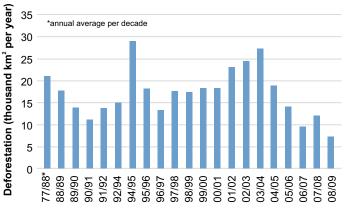
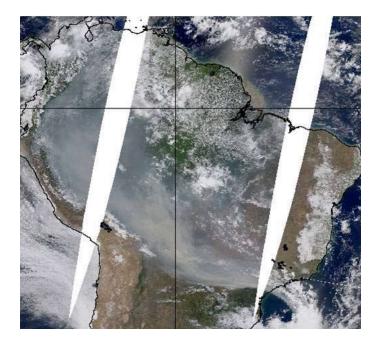


Figure 2: Annual deforestation rates in the Brazilian Amazonia from 1977-2009. Data from Landsat images provided by INPE, the Brazilian Space Agency Institute.



system of satellite observations for deforestation. Figure 2 shows a time series for the annual deforestation rate from 1977 to 2009. It is important to notice a strong reduction in deforestation from 2004 to 2009. In 2004, about 27,200 km² of forest were cleared and in 2008-2009, this figure was reduced to 7,200 km². These are high resolution Landsat analyses of land cover change over thousands of areas in Amazonia. This strong reduction should continue, because the Brazilian government made a commitment in Copenhagen to reduce deforestation by 80% in 2015 compared to 2004. This target reduction in also in a law being approved by the Brazilian Congress. However, critical public policies have to be implemented urgently in order to achieve this target.

One of the main problems is road development. Figure 1 shows the proposed road development in Amazonia for the next decades. In yellow are unpaved roads existing in 2009. Since road access,



especially when paved, is the first step to illegal deforestation, the proposed plans, if implemented, could make deforestation rates rise again, putting Brazil in a difficult situation in terms of international commitments to reduce global change.

If we want to minimize climate change, the environmental services that the Amazon forest provides to our planet are critically important. We have a responsibility to keep this ecosystem providing essential environmental services for future generations.



Focus on black carbon

Kevin Hicks and Ray Minjares report on two major initiatives since the Forum's 2008 Stockholm Conference on Co-Benefits highlighted the importance of short-term radiative forcers, notably Black Carbon.

UNEP assessment of black carbon and tropospheric ozone and its precursors

Kevin Hicks

The GAP Forum forms part of the Secretariat of this internationally peer-reviewed assessment that has been designed to complement other ongoing international activities in this area (see GAP Forum Newsletter VII) and will be completed in 2010.

There is growing scientific evidence that black carbon, tropospheric (ground-level) ozone and methane (which is also one of the precursors to the formation of ozone) may together be responsible for a considerable amount of anthropogenic radiative forcing, even in comparison with CO_2 . In contrast to CO_2 , their atmospheric lifetime can be measured in weeks to years rather than decades to centuries, allowing significant mitigation measures to have an effect in the short-term.

Black carbon and tropospheric ozone also have direct impacts on human health and ecosystems, including crop yields and food security. These effects make them of vital importance in developing countries where air pollution significantly affects achieving development goals. Addressing these agents can therefore be a means of integrating global policies on air pollution and climate change.

This assessment seeks to address the full impact of these substances on both global and regional scales and address uncertainties.

The focus of the assessment is on identifying the potential for practical measures that can be implemented in different regions of the world to optimise the release of air pollutants that are short-term radiative forcers (STRFs) so that climate change and air pollution impacts can be controlled in an integrated and costeffective way.



The Assessment will be authored by about 60 world experts and will be guided by an advisory group who represent all regions and stakeholder interests affected by black carbon and tropospheric ozone.

The assessment is chaired by Drew Shindell (NASA Goddard Institute for Space Studies (USA)) with vice-chairs Luis A. Cifuentes (Pontificia Universidad Católica (Chile)), Nguyen Thi Kim Oanh (Asian Institute of Technology (Thailand)), V Ramanathan (Scripps Institute (USA)) and Frank Raes (Joint Research Centre - European Commission.

For more information visit: www.gapforum.org.

International Council for Clean Transportation Ray Minjares

n 2009 the International Council on Clean Transportation made additional contributions to the ongoing debate over best practices and strategies for controlling non-CO₂ emissions from mobile sources. In October 2009, the ICCT held in Mexico City a one-day international workshop on black carbon in Latin America, attended by more than 70 individuals from 9 countries throughout North and South America. Special guest speakers speakers included Dr. Mario Molina, President of the Mario Molina Center, as well as Dr. Kirk Smith, Professor of Global Public Health at the University of California at Berkeley; and Dr. Tami Bond, Professor of Environmental and Civil Engineering at the University of Illinois-Urbana Champaign. The meeting underscored the latest climate science and global inventories for black carbon, reviewed strategies for controlling emissions from mobile sources and residential stoves in the region, and explored existing strategies in Mexico, Colombia, Ecuador and Chile for controlling particulate matter and black carbon emissions. The meeting was covered in the Mexican press, including La Jornada and La Reforma, and has generated particular interest in integrating black carbon emission controls into greenhouse emission and air quality standards.

The ICCT will continue to focus on black carbon in 2010. examining existing transportation policy in high growth regions and co-benefit strategies for reducing both particulate matter and black carbon emissions. This move is in response to the previous year's heavy focus on science, which generated a foundation for policy analysis. New work in 2010 will include an examination of methodologies for quantifying CO2-equivalent black carbon emissions from mobile sources, as well as analysis of existing transportation policy affecting black carbon in California, Mexico, China, and Europe. In March 2010, the ICCT will facilitate a break-out session on mobile source black carbon emissions control at a US EPA meeting on Short-Lived Forcing Agents in Raleigh, North Carolina. In May 2010, the ICCT will chair a panel session on Strategies for Black Carbon Control at the 2010 A&WMA International Specialty Conference on Leapfrogging in X'ian, China.

NEWS FROM THE NETWORKS

UNECE: the LRTAP Convention - determining future strategy

Last December's meeting of the Executive Body of the Convention, which celebrated the Convention's 30th Anniversary, was notable for a wide-ranging and important discussion of future strategy which may make it one of the most important in its history. The meeting had before it a paper by the Chairman which reviewed the Convention's current operations and explored the new challenges confronting it over the next few years. The meeting went into special session for the discussion, so that all Parties to the Convention were able to contribute, and the result was a debate of very high quality.

From the perspective of the Forum it was encouraging to note that the paper before the meeting included, among the new challenges facing the Convention, the need to take account of the close relationship between air pollution and climate change, and the scope for co-benefits from integrated strategies. These had emerged strongly from the Forum's Stockholm Conference and the Swedish Government's subsequent meeting in Gothenburg, both of which the Convention sponsored. The Paper also recognised the need for closer links with other regional networks, not least in the context of hemispheric pollution. Both these themes were well supported in the debate by national representatives

In his contribution to the discussion, the Forum's Joint Convener reminded delegates that the Convention was by far the most authoritative and influential international body dealing with regional and hemispheric air pollution. This meant that the strategy it adopted would be of great importance not just to parties to the Convention, but also to other air pollution networks and to the development of international air quality management generally. He emphasised that the partners in the Forum recognised that the Convention continued to have important priorities within its own region but urged that hemispheric and global issues, climate-pollution co-benefits and co-operation with other regional networks, should become higher priorities.

Summing up, the Chairman said that the discussion had pointed to a number of important issues. At the procedural level, major priorities should include securing increased ratification of protocols and considering how the implementation process and financing arrangements for the Convention could be strengthened. The current structure of the Convention and its subsidiary bodies – and whether the current number of Protocols was optimal – also needed consideration. In terms of the focus of the Convention's work, air quality would remain at its core, but work should be initiated on climate change and co-benefits. At the same time there were many Parties who felt that work on POPs and Heavy Metals should be given lower priority by the Convention given the work under way in other bodies.

The Meeting formally decided to establish an Expert Group to review climate-pollution interactions and co-benefits. *Richard Mills*

Sub-Saharan Africa

Over the past two years the Forum programme has included a series of three sub-regional workshops, for Southern, Eastern and Western/Central Africa. They have been developed on the basis of the recommendations of the Better Air Quality in Sub-Saharan African (SSA) Cities conference held in 2006 that identified regional air pollution concerns and developed initial strategies to address them. The Eastern and West and Central African Air Pollution Framework Agreements have been adopted by Ministers. The Southern Africa Framework Agreement has been taken up by the Southern Africa Development Community (SADC) for possible inclusion in the region's Environment Protocol. Here James Kagai from UNEP summarises progress in Eastern and in Western and Central Africa; and Sara Feresu (IES, Zimbabwe) charts the progress of the Southern African Agreement and the continuing role of the APINA Network, which originally developed and carried forward the process of regional air pollution management in Africa.

Eastern and West and Central Africa

Both the Eastern and West and Central African Air Pollution Framework Agreements have now been adopted by Ministers.

The Eastern Africa Regional Framework Agreement on Air Pollution (Nairobi Agreement-2008) brings together eleven countries - Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania, and Uganda, while the West and Central Africa Framework Agreement on Air Pollution (Abidjan Agreement) covers twenty one countries. The frameworks address air pollution in key sectors of the economy including transport, industry and mining, household pollution, waste disposal, bush fires, uncontrolled burning and deforestation. They also seek to improve urban planning and management, and national and regional environmental governance.

As well as identifying key environmental challenges and policy opportunities in the regions the agreements provide the basis for continuing regional co-operation and joint action. Establishing this on a firm and continuing basis will be key tasks for the Parties over the next few years.

Progress of Lusaka agreement in Southern Africa Development Community (SADC)

In March 2008 the Air Pollution Information Network for Africa (APINA) in partnership with UNEP's Partnership for Clean Fuels and Vehicles (PCFV), USEPA, World Bank and the GAP Forum convened the policy dialogue that resulted in four SADC Ministers of Environment adopting the Lusaka Agreement Policy Framework for Air Pollution in Southern Africa (see GAP Forum Newsletter V). Subsequently, in August 2008 the SADC Technical Committee on Environment and Sustainable Development recommended that the Lusaka Agreement be transformed into a Declaration that can be implemented immediately, and then feed into the proposed Protocol on Environment as a Chapter. The Committee also recommended that APINA should carry out air pollution assessments in all SADC Member States not covered by previous assessments and that the SADC Secretariat should support APINA in mobilizing resources for the assignment.

These recommendations have now been considered by the SADC Meeting of Ministers Responsible for Environment at Victoria Falls, Zimbabwe, in November 2009. The meeting noted that there were issues and targets mentioned in the framework that involved other ministries e.g. transport, communication, health, agriculture etc and thought that for countries to own the policy framework there was need for further national consultations. Ministers were further invited to urge Member States to complete their internal consultations on the draft regional policy framework by 30 April, 2010. Ministers were also invited to direct the SADC Secretariat to convene a regional workshop by 30 June 2010, in order to finalize the draft Regional Policy Framework on Air Pollution for submission to the Ministers of Environment at their meeting for approval. The Ministers are expected to have their next meeting in August 2010 by which time there should be regional consensus on the framework.

North Africa

To initiate work on regional air quality management in North Africa, a regional workshop was held on 23-25 November 2009 in Tunis, Tunisia. Organised by the Sahara and Sahel Observatory (OSS) in collaboration with the Ministry of Environmental and Sustainable Development, Tunisia and Forum partners, it drew together the six North African countries - Tunisia, Morocco, Algeria, Libya, Egypt, and Mauritania - and three observer countries from the Middle East (Jordan, Lebanon and Yemen).

It was the first time that top policy, government, academia and civil society experts from across the region had come together to discuss air pollution issues in the sub-region, long-range transport of air pollution in the Mediterranean Region, and links with the LRTAP Convention and other bodies.

The meeting developed concrete recommendations that will be presented to ministers for adoption as a North African Air Pollution Framework Agreement later this year.



Asia

EANET launches the second report for policy makers

The Intergovernmental Meeting (IG) of the Acid Deposition Monitoring Network in East Asia (EANET) held its Eleventh Session (IG11) in Bangkok, Thailand on 19th and 20th November 2009. Representatives of Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam participated in the Session. Experts from the following international organizations attended the Session: ScandEnvironment of Sweden, United Nations Economic Commission for Europe (UNECE), and United Nations Environmental Programme (UNEP).

The Second Report for Policy Makers on EANET (RPM2) was launched through the presentation by Mr. Mylvakanam lyngararasan of UNEP to His Excellency Pimuk Simaroj, Vice Minister for Natural Resources and Environment, Thailand. The report, which is integrated and structured to build linkages between the EANET community regarding the acid deposition problems and the relevant policy framework of participating countries, includes descriptions of the current and actual situation of air pollution and its adverse effects to the environment and ecosystem in East Asia.

The Session finalized the Revised Draft Text of the Instrument, "Instrument for Strengthening the Acid Deposition Monitoring Network in East Asia (EANET)" (Draft), for the purpose of national procedures. The Session also endorsed the Mid-Term Report on the Implementation of the Strategy on EANET Development (2006-2010). The Draft Second Report on Future Development of EANET and the Draft Medium Term Plan for EANET (2011-2015) were also considered and discussed.

Malé Declaration holds Eleventh Session of the Intergovernmental Meeting

The Eleventh Session of the Intergovernmental Meeting (IG11) on Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia (Malé Declaration) was held in Dhaka, Bangladesh on 20th-21st January 2010. The meeting was jointly organized by the Department of Environment in collaboration with the Ministry of Environment and Forest, Bangladesh and the United Nations Environment Programme Regional Resource Centre for Asia and the Pacific (AIT/UNEP RRC.AP). The meeting was attended by the Ministries of Environment National Focal Points (NFPs) and National Implementing Agencies (NIAs) of the participating countries, South Asian Cooperative Environment Programme (SACEP), Stockholm Environment Institute (SEI), UNEP, AIT/UNEP RRC. AP, resource persons and an independent facilitator.

The IG11 reviewed the progress of the Malé Declaration implementation during 2008/2009 and approved implementation plan for the next three years. IG11 agreed on the implementation arrangements for the Task Force on Future Development of Malé Declaration. The first meeting of Task Force is scheduled to be held in May 2010 to discuss the future develop-



ment of the Malé Declaration including the establishments of a sustainable financial mechanism for the Malé Declaration.

lyngara Mylvakanam (UNEP)

Latin America and the Caribbean

In 2008, Decision 7 of the XVI Forum of Ministers of the Environment of Latin America and the Caribbean secured support in principle from Ministers for the GAP Forum's proposal for the establishment of an Inter-Governmental Network on Air pollution in Latin America and the Caribbean.

In March 2009 a planning meeting was held in Panama of government representatives, scientists and civil society representatives to design the network and its programme. That meeting reached a number of key decisions, notably that a Framework Agreement should be prepared for approval by Ministers and that the Network should cover both air pollution and climate change.

Following bi-lateral consultations with leading governments an extended meeting was held in December 2009 in Mexico City to prepare detailed proposals on the framework agreement, priorities and work plan for the Network in time for submission to the next meeting of the Environment Ministers Forum, expected by mid 2010. This meeting was hosted by the Mexican Environment Agency and held at the same time as a meeting on climate-pollution co-benefits, in view of the importance of this issue to the long-term work plan of the Network. This meeting agreed recommendations for Ministers on:

- The structure and objectives of the Network;
- Priority Issues;
- Work plan.

It also agreed a number of key considerations which should guide the structure and programme of the Network:

- Importance of Sub-regions hence the desirability of working with, and in some cases through, sub-regional networks for Central America, the Caribbean, and South America;
- Variations between countries in the scale of problems and available resources hence the need for an early status report and regional assessment;
- The character of South America as a continent of mega-cities. Hence the importance of the Network working closely with the Clean Air Initiative – Latin America, another Forum Partner;
- Co-Benefits the need to promote integrated strategies for air pollution and climate at both national and regional scales;
- Health Impacts the need to quantify and highlight these for Ministers as they were at present largely unaware of their scale and significance;
- Holistic Approaches the importance of linking air and climate with other national and regional strategies – notably those addressing poverty, transport, waste and ecosystem.



After Copenhagen - provoking the debate A Personal View Richard Mills

t is arguably too soon after Copenhagen to reach a judgement on its success or failure, still less to draw lessons from it for how to approach strengthening hemispheric and global governance of air pollution. But a few years reflection and a few dozen historical monographs and participants' memoirs is a luxury for which we cannot wait.

There are already those who say that there was never any realistic chance that the UNFCCC COP process could succeed. And they have a strong case. Historically, successful international negotiations have usually required a small number of players, a substantial measure of secrecy, and months if not years of painstaking diplomacy by officials so that the deal is done, almost in its entirety, before politicians with prestige to lose and national power to protect are allowed on the scene. The COP process met none of these tests. It is difficult to agree with Yvo de Boer's judgement that Copenhagen came within an inch of success - that 'one last heave' could stave off an impending failure which those without the heavy burden of leadership could accept as no longer avoidable

So how should future climate agreements be pursued? What future for UNFCCC? And what lessons does all this hold for the process that is likely soon to be needed to bring hemispheric and global pollutants within a more effective international regulatory framework?

It is perhaps time to accept, albeit reluctantly, that the central negotiating task should pass to the G20 of leading industrial nations. They have the power. They are just about few enough for agreements to be brokered. They move in a suitably mysterious way, and are not bound by inflexible processes and procedures. They are arguably the appropriate forum when climate change must better recognise the legitimacy of other priorities and national economic imperatives: less high- minded, less visionary, but more robust and realistic, and proffering if not 'success' at least the chance of survival.

What future then for UNFCCC? Absurd as it has sometimes seemed, if it did not exist it would still have to be invented. The Maldives and Bangladesh, and the others most afflicted by climate change, are not in the G20 and without UNFCCC would have no voice. Climate change is not just a matter of esoteric diplomatic agreements; it is about far more fundamental aspects of human behaviour. If the world is 'saved', it will not be by a few diplomats, but by the thousands of millions in their everyday activity. They

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Newsletter layout/production: Richard Clay, Erik Willis, SEI need a forum, however chaotic it must inevitably be - a platform for expressing and moulding international public attitudes and values. The COP process is still needed, not as the Chorus to a Greek Tragedy, but as a voice expressing a common international vision against the inevitably brutish power-broking of the G20s of the future.

But whatever the vehicle important changes of perspective will be needed. Not the least of these is integrating climate and air pollution at policy and negotiating levels, a need amply demonstrated by the arguments for co-benefits which the GAP Forum has promoted. Furthermore, future climate policies need to look again at the appropriate balance between mitigation and adaptation priorities in different regions of the world.

Beyond that, perhaps a UN Law of the Atmosphere to parallel the existing Law of the Sea, as the European Federation for Clean Air and IUAPPA are advocating? It may be a labour of many years, but so must anything touching on climate change.

CitiesACT and the Clean Air Portal

Although a great deal of information has been generated on air quality management and sustainable urban transport, this has been available in various data formats and spread across different organizations. Data collection is therefore time consuming and inefficient, making it more difficult to use the data for effective policymaking.

To help address this problem, the Clean Air Initiative for Asian Cities (CAI-Asia), with support from the Global Atmospheric Pollution Forum (GAPF), developed the CitiesACT database (www.citiesact.org) last year.

The CitiesACT database features data and information on Air Quality, Climate Change & Energy, and Transport. It includes a growing list of country and city profiles; policy profiles; organization profiles; projects and programs; and training courses -- all related to air quality and/or sustainable transport in Asia. Since measures to address one problem may have positive benefits in other areas, the CitiesACT portal aims to provide a more integrated perspective for policymakers through this "cobenefits" approach. By engaging organizations to share their respective data sets, stakeholders will be able to access the data from a single location at their convenience. It also gives them a "big picture" perspective, especially when the data is organized and interpreted for reports and action plans.

However, while GAPF funds provided seed funding to conceptualize and develop the initial version of the database, additional funding was needed to take this to the next level. The Asian Development Bank, through its KnowledgeAir project, funded the creation of a more general Clean Air Portal (www.cleanairinitiative.org), which was recently launched on 15 February 2010.

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