The Aphekom Project

Improving knowledge and communication for decision making on air pollution and health in Europe

Much has been done in recent years to reduce air pollution and its harmful effects on the health of Europeans. Yet pressing gaps remain in stakeholders' knowledge and understanding of this continuing threat, thus impeding progress in the planning and implementation of measures that protect public health.

To address the problem, the Aphekom project develops and delivers new, reliable and actionable information and tools so decision makers can set more effective local and European policies; health professionals can better advise vulnerable groups; and individuals can make better-informed decisions.

In specific, during the project's two and a half years, starting in June 2008, the tasks of Aphekom's more than 40 scientists working in 25 cities across Europe include: developing new health-impact indicators with a special focus on traffic and reporting on health impacts and related costs. Evaluating strategies designed to reduce air pollution. Stimulating dialogue between stakeholders. And providing guidance to health professionals on helping patients reduce their exposure to air pollution.

In all these ways the project aims to contribute to the development and evolution of local and European Union policies aimed at reducing both air pollution and its impact on respiratory and cardiovascular morbidity and mortality across Europe.

Aphekom is a multi-country project whose cities extend from Stockholm in the north of Europe to Athens in the south, and from Dublin in the west to Bucharest in the east. Aphekom builds on the firm foundation of the earlier Apheis HIA (health impact assessment) project by adding new research, interaction with stakeholders, and more effective communication on HIAs to those who need to know in Europe.

What our scientists are saying

"You can't tell people not to breathe on high-pollution days."
– Brian Miller, Institute of Occupational Medicine, Edinburgh

"Clean-air policies are far cheaper than the costs of the impact of air pollution on health."
– Nino Künzli, Centre for Research in Environmental Epidemiology, CREAL

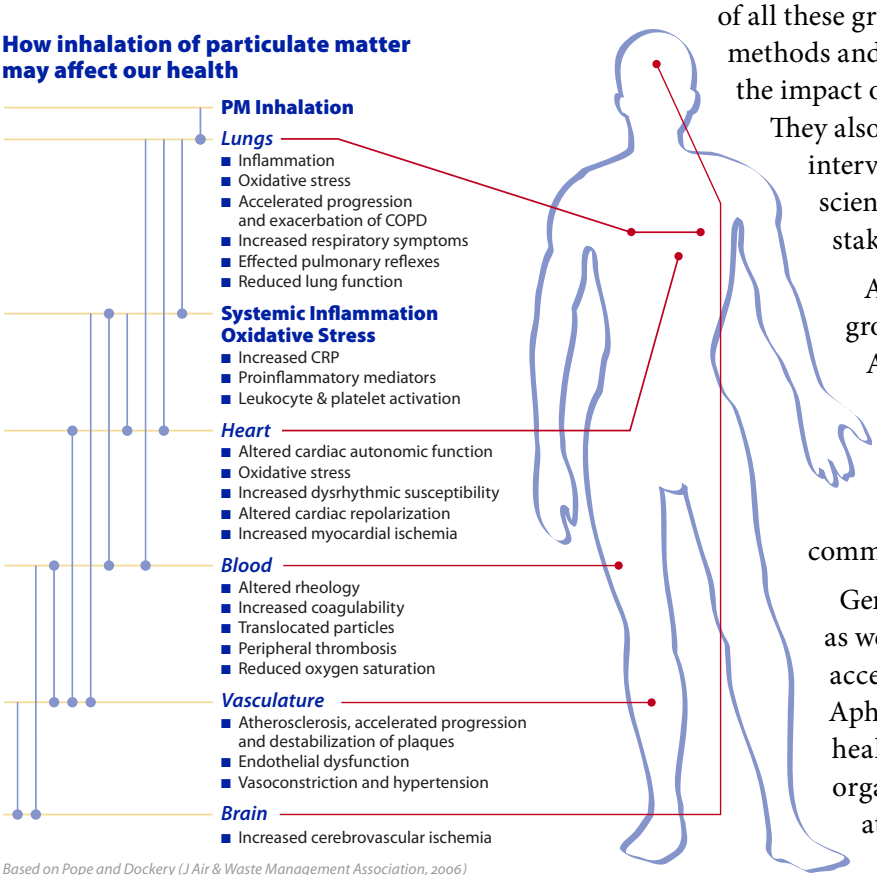
"Because the general population is more concerned than ever about health issues, it is demanding better information from scientists and stronger mitigation measures from politicians."
– Hanns Moshammer, Medical University of Vienna

Source: Airparif

The needs Aphekom plans to meet

To set its objectives, the Aphekom project identified pressing gaps in stakeholders' knowledge and understanding of the impact of air pollution on the health of urban populations that Aphekom can meet.

How inhalation of particulate matter may affect our health



Based on Pope and Dockery (J Air & Waste Management Association, 2006)

These gaps include:

- Policy makers, health professionals, patients organisations and NGOs (non-governmental organisations) need information better tailored to their needs.

In particular, policy makers have trouble getting the synthetic information they need when considering time frames, geographical units and the diversity of pollutant emissions. They also need concrete indicators of the health effects of AP, a monetary valuation of these effects, and evaluations of implemented policies.

Separately, health professionals, patients organisations and NGOs need to better understand the role of AP in the development of both chronic pathologies and acute exacerbations and how they interact. And they need HIA results that take these important factors into account.

- Vulnerable groups and urban populations need clear guidance on changing their behaviour to reduce their exposure to AP and its impact on their health.
- Public-health professionals who produce the information that ultimately serves the needs of all these groups require standardised methods and tools to assess more accurately the impact of AP on health and its costs. They also need guidelines to evaluate intervention policies and to improve scientific communication with stakeholders.

Aphekom will reach all these groups through our local network. And we will post specific reports and presentations on our Web site and disseminate them through EU Commission and local communication channels.

General and vulnerable populations, as well as other groups, will have access to the information Aphekom produces through health professionals, patients organisations and NGOs at the EU and local levels.

"There is a need to integrate knowledge about the impact of air pollution on health in the professional curricula and continuous training of health professionals." – Francesco Forastiere, Rome E Health Authority

"Individuals need to know that behaviours such as travel by private car and excessive energy consumption increase air pollution in their cities." – Koldo Cambra, Basque Foundation for Health Innovation and Research

"Policy makers need to know the impact of air pollution in terms of lives lost, illnesses and monetary costs, and how they compare with other health risks in their cities, countries and across Europe." – Ferran Ballester, Valencia School for Health Studies, EVES

The information Aphekom will produce

The Aphekom project is organised into WPs (work packages) designed to meet the information needs of its audiences. Their separate but related tasks are grouped as follows:

Health Impacts and Policy: Novel Approaches (WP4)

Coordinated by Nino Künzli, Centre for Research in Environmental Health, CREAL, Barcelona, Spain

- Estimate how many people live next to traffic pollution in different European cities
- Evaluate how many cases of chronic and acute cardio-pulmonary disease could be prevented among Europeans if fewer people were living near traffic pollution, and determine which factors would contribute to maximizing these benefits
- Evaluate how recent findings on the health effects of air pollution allow us to express these benefits in a manner more relevant for policy makers and the general public
- Apply these findings to case studies to understand how they vary across different cities in Europe

Health Impacts and Monetary Costs of Air Pollution: Using the Latest Scientific Evidence (WP5)

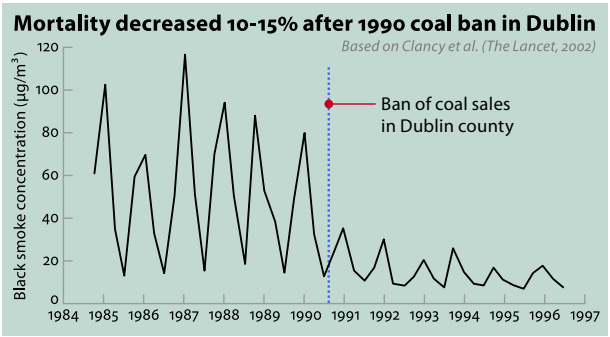
Coordinated by Christophe Declercq, French Institute for Public Health Surveillance, InVS, Saint Maurice, France

- Perform standardised health-impact assessments of urban air pollution using latest scientific evidence (exposure-response functions)
- Deliver new guidelines for defining study areas applicable to the varied topographic, climatic and air-pollution situations across Europe
- Analyse the sensitivity of HIA results to particle-correction factors and to differences in health-care and health-information systems across Europe
- Develop methods and tools and identify data needs for evaluating monetary costs of health impacts of air pollution

Health Impacts of Implemented Policies in Air Pollution (WP6)

Coordinated by Patrick Goodman, Dublin Institute of Technology, Dublin, Ireland

- Develop innovative methods to analyse the decrease in air pollution levels following implementation of a European regulation
- Follow the evolution of health risks over time
- Track related effect modifiers
- Quantify monetary costs of health impacts of the implemented regulation



Sharing Knowledge and Uncertainties with Stakeholders (WP7)

Coordinated by Yorghos Remvikos, Versailles Saint Quentin-en-Yvelines University, Versailles, France

- Identify and prioritise uncertainties in the assessment of health impacts of air pollution. Determine how these uncertainties interfere with the many steps in the decision-making process
- Investigate with stakeholders ways to promote on-going dialogue between producers and users of the information provided

Communication and Dissemination (WP2)

Coordinated by Hanns Moshammer, Medical University of Vienna, Vienna, Austria

- Communicate focused information to all those who need to know using diverse local and European media, organisations and events

Evaluation (WP3)

Coordinated by Manuel Nebot, Agencia de Salut Publica de Barcelona, ASPB, Spain

- Conduct ongoing, internal evaluation of the project to ensure it achieves its objectives and has the desired impact on its target groups

Coordination (WP1)

Coordinated by Sylvia Medina,
InVS, the French Institute for Public Health Surveillance, Saint-Maurice, France,
and Bertil Forsberg, UMU, Umeå University, Umeå, Sweden

■ InVS and UMU, two European institutions that have proven their ability to manage large, international projects over the years, coordinate the Aphekom project.

The Aphekom management team includes professionals experienced in scientific and administrative issues, advised by a steering committee whose members are drawn from each WP team. An external scientific committee advises on the project's different areas.

The Aphekom project comprises experienced WP leaders and participating institutions from 25 cities in 12 EU member states that have already demonstrated their skills in previous projects. This firmly established, multi-disciplinary network of professionals will provide a wide range of exposure, health and social characteristics for the Aphekom case studies.

"Health impact assessment studies have proven to be effective tools for informing policy makers."
– Marina Lacasaña, Escuela Andaluza de Salud Publica

"It is our duty to address the limits of science and its uncertainties among decision makers, but these limits should not be used as an excuse for inaction." – Yorghos Remvikos, Versailles Saint-Quentin-en-Yvelines University

"There are twin benefits from decreasing air pollution: reducing health impacts and mitigating climate change." – Mathilde Pascal, InVS

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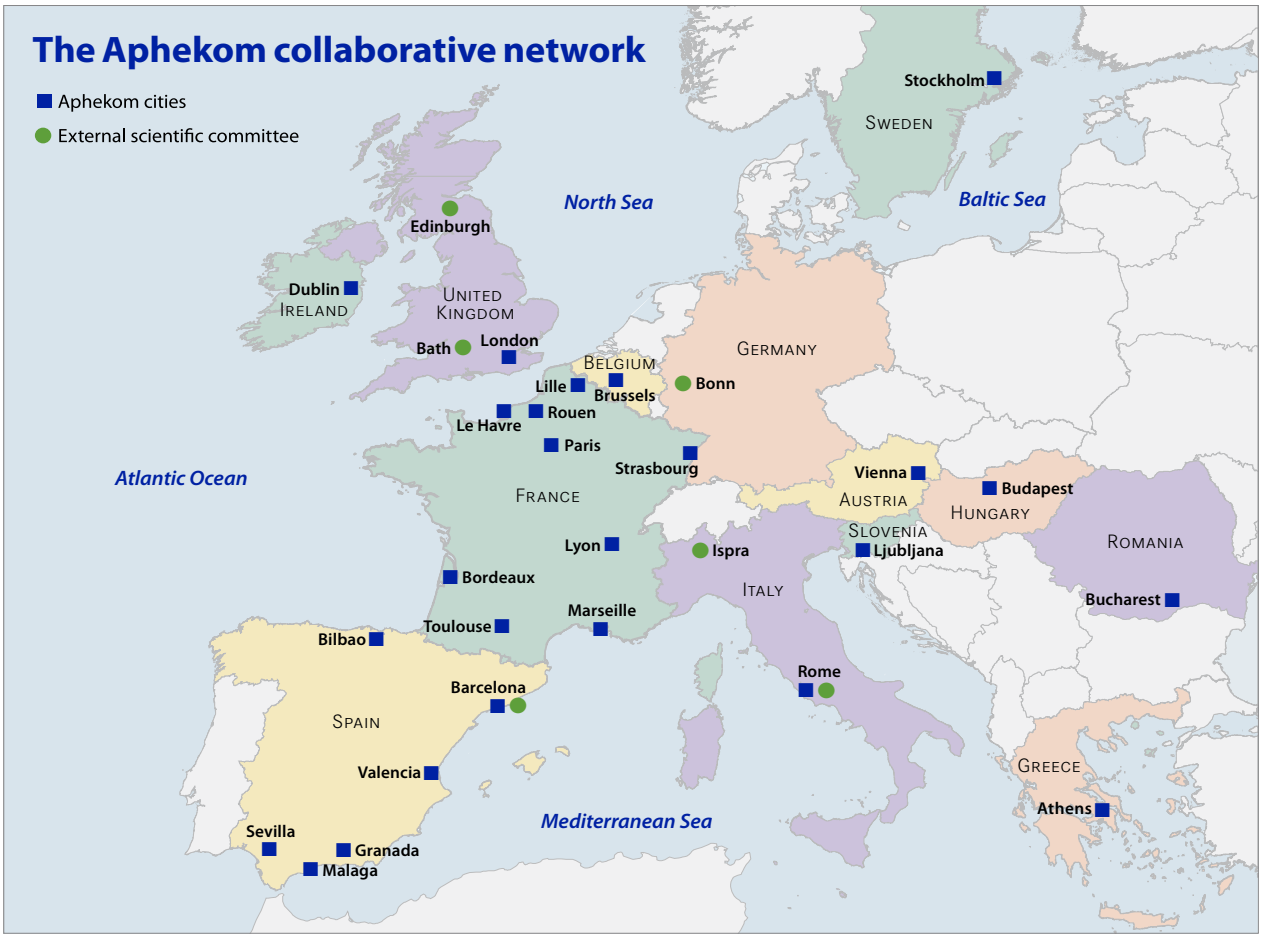

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