Health Impact Assessment: Experts' Expectations and Views in the Aphekom project

Hanns Moshammer* and **Manel Nebot** for the Aphekom team**

*Medical University Vienna, Austria; **Agència de Salut Pública Barcelona, Spain

Background and Aims: Aphekom is a public-health project funded by the European Commission that investigates new approaches to health impact assessments (HIAs) of air pollution and aims to improve both communication with stakeholders and their understanding of air quality and health science. Aphekom (Fig. 1) has explored models for evaluating the monetary costs of health impacts and proposed tools to facilitate broad, effective stakeholder participation in decision-making processes (Fig. 2).

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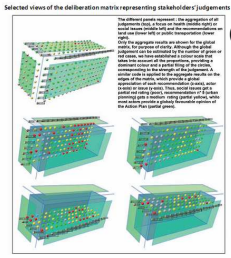

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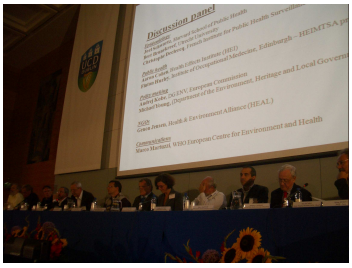


(3)

Aphekom has also explored HIA models on long-term causes and short-term triggers of disease (Fig. 4, 5 and 6). Full information on the project can be found at www.aphekom.org.

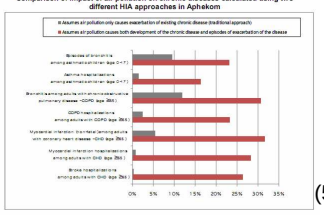
Figure 1 – The Aphekom network
Figure 2 – Decision-support tools
Figure 3 – Aphekom symposium at ISEE09

Methods: At the ISEE 2009 conference in Dublin (Fig. 3), Aphekom distributed a questionnaire to scientists in attendance requesting their views on HIAs on air pollution. After the meeting, we contacted other epidemiologists and public-health professionals by e-mail and posted the questionnaire on our Web site. We asked these groups about their expectations and needs regarding HIAs; what they considered to be the weakest parts of HIAs; how to improve HIAs; and how to communicate HIA findings to different stakeholder groups.

In their responses to a second questionnaire translated into most of the project's languages and posted on our Web site, local, national and European stakeholders described their expectations and views on the health risks of air pollution.

Figure 4 – Aphekom summary report
Figure 5 – Aphekom findings
Figure 6 – Aphekom findings

(4)



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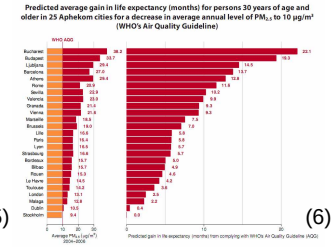

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Results I: Twenty-seven scientists answered the questionnaire. All had full understanding of HIAs, and most had conducted an HIA on air pollution. Comments on the weakest parts of HIAs included the underlying model assumptions regarding the exposure-response functions and the model's applicability to the specific setting under discussion; the general lack of taking appropriate account of lag effects, of the impact on susceptible subgroups and of combined effects and interactions; and a lack of transparency regarding the assumptions for the economic valuation. Respondents made suggestions for better assessing the underlying assumptions and their impact on the results using sensitivity analyses.

Respondents disagreed on the best metric for expressing health impacts: years of life lost (YOLL), disability adjusted life years (DALY), change in life expectancy or change in death counts. The Aphekom symposium at the ISEE 2009 conference addressed this issue, and we will submit a position paper on this latter topic.

Answers also differed on the use of HIAs for everyday policy making: some respondents saw HIAs as valuable tools for decision making; others felt that we ask too much of an HIA and claimed that HIAs are well suited for raising awareness and informing policy makers and the general public, but that policy decisions should be based on broader issues in society.

Concerning communication, many respondents called for a more visual presentation of HIA results using maps, graphs and tables. Main messages should be simple and clear. But an HIA should also provide detailed background on the epidemiological methods used to calculate the exposure-response functions, uncertainties and underlying assumptions, as well as a warning about the limitations of the HIA's conclusions. Decision makers and the general public should receive different presentations targeted to each group.

Results II: 321stakeholders answered the second questionnaire. Their geographical distribution reflects the cities participating in the project,(Fig. 7). Of the respondents 29% worked at policy-making institutions, 21% at NGOs and 2% at patients organisations, while 40% belonged to other categories.

More than 70% of stakeholders felt that information provided by scientists on air pollution and health information is sufficiently clear (Fig. 8).

The recommendations most frequently made by stakeholders to scientists included providing more information on health effects; making more policy recommendations; and providing more information on sources of air quality and pollution (Fig. 9).

Figure 7
Geographical distribution of stakeholders

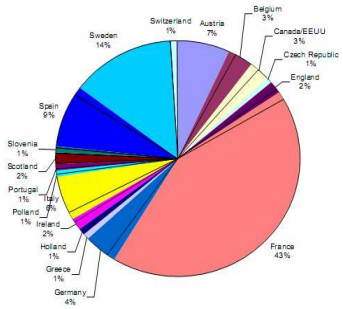


Fig 9
Stakholders recommendations to scientists

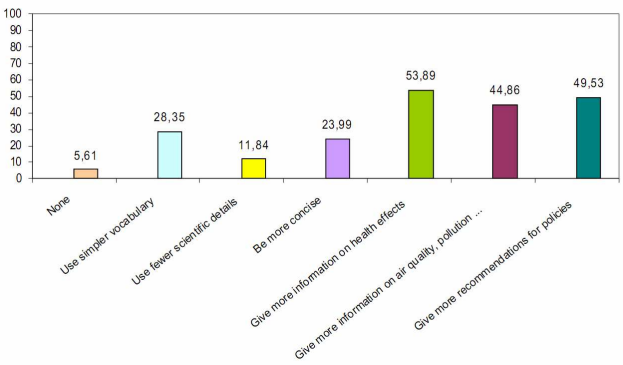
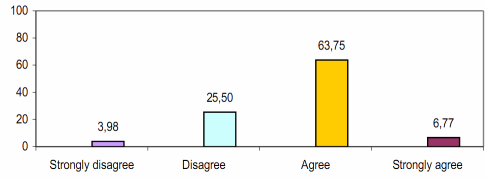


Figure 7 – Geographical distribution of stakeholders
Figure 8 – Stakeholders expectations
Figure 9 – Stakeholders recommendations

Figure 8
Regarding the information scientists provide on air pollution and health, provided information is clear



Conclusions: While scientists call for more detailed reporting of assumptions and uncertainties and propose novel methods for that purpose, for them the main features of a good HIA are its relevance for population health, its simplicity and its meaningfulness. Stakeholders expect more information on sources of air pollution and on health effects, as well as more policy recommendations.

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