

The Asian Co-benefits Partnership (ACP) serves as an informal and interactive platform to improve information sharing and stakeholder coordination on co-benefits in Asia. The ACP was launched with the support of the Ministry of the Environment, Japan in 2010 to help mainstream climate and environmental co-benefits into decision-making processes in Asia. Learn more about us at our website. <http://www.cobenefit.org/>

 **Highlights**

Measuring the Health Impacts of Clean Air: Insights and Experiences from the Environmental Benefits Mapping and Analysis Program



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Environmental Benefits Mapping and Analysis Program–Community Edition (BenMAP-CE) is an open-source computer software program that estimates the health impacts and economic values of changes in air quality. The software incorporates a database that includes many of the concentration-response relationships, population files, and health and economic data needed to quantify these impacts. Most analysts have used the BenMAP-CE tool to answer the following questions: 1. What is the burden on human health from total air pollution? and/or 2. What are the benefits of policy reducing air pollution by a certain amount? The first question can be answered by conducting health burden analyses, which generally estimates the health impacts of air pollution from total air pollution levels. The second question can be answered by estimating the avoided health impacts for air pollution changes from recent pollution levels down to pollution levels after a policy intervention (Source:www.epa.gov/benmap).

The Asian Co-benefit Partnership (ACP) interviewed Mr. Neal Fann, Health and Environmental Impacts Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, who manages BenMAP-CE.

What brought you to do work on health impact analysis generally and BenMAP specifically?

Thanks to my undergraduate major, Environmental Economics, I was given a chance relatively early in my academic training to learn about cost-benefit analysis (CBA). My public policy graduate studies offered the opportunity to become more knowledgeable about the tools that policymakers can use to conduct CBA. Since receiving my graduate degree, I have become more skilled at CBA and its applications to decision-making processes. Those skills have become sharper after I

joined the U.S. Environmental Protection Agency (USEPA) in 2007. I began my work at the USEPA in the program for the toxic pollutant policy and management of environment in 2007; I now handle the benefits analysis of environment and health with much of many of my activities focused on the BenMAP tool (see description in the box above for more information about BenMAP).

My work with the USEPA on benefits analysis has coincided with a steadily growing awareness about the scope and magnitude of air pollution's adverse impacts on human health. BenMAP is helping to generate high-quality estimates of those impacts for decision makers.

Perhaps most importantly, it shows that economic growth and environment protection are complementary objectives. Showing that they are complementary in monetary terms can help inform policy options.

Can you share the BenMAP projects that are currently being or will be implemented in Asia?

We have worked in collaboration with a research team in Seoul, South Korea to access air quality monitoring data, especially particulate matter (PM) data. Our collaborative efforts in Korea focused on trends in air pollution; for example, we found that there has been a decline in PM during last decade with attendant positive impacts on public health in Korea. We also have collaborated with a research group in Bangkok, Thailand, quantifying emission reduction in transport sector and air quality modelling. Last but not least, we are also engaging with Chinese researchers in Shanghai region, studying the impacts of low emissions fuels. While I recognize that the Asian Co-benefits Partnership (ACP) is chiefly interested in the link between air pollution and climate, it is important to underline that many of our activities have a positive impact on the climate even if

their immediate target is better air quality.

Do you have any thoughts on how to get BenMAP (and health impact analysis more generally) integrated into policy making processes?

There have been several tangible demonstrations that BenMAP can help make a persuasive case for action to decision makers. In many of these more “successful” cases, we have seen that having a simple and easily communicable visualization of air pollution impacts can help decision makers weigh policy options. Also, some decision-makers express more interest in figures of the impacts on sensitive groups of the population—particularly children—than the entire pollution in aggregate. We are also learning that is important to present decision makers with uncertainties about the size of impacts. Presenting uncertainties can help to make the results more credible. One of the challenges for us is to consider the best way to balance the simple, easily accessible with less certain, nuanced presentations of our results. We are still working to find that optimal balance in different contexts.

Updates

During the 1st Asia-Pacific Ministerial Summit on the Environment Towards a Resource-efficient and Pollution-free Asia-Pacific held on 5-8 September in UN Conference Centre, Bangkok, the side-event entitled “Solutions towards an Air-Pollution Free Planet” focused on highlighting existing effective solutions in the form of regulations, policies, economic instruments, and technologies to improve air quality within a broader context of sustainable development. The Co-chair of the ACP offered keynote speech and several ACP members as the panellists, contributed to discuss concrete steps on how to scale up and increase uptake of existing solutions in the Asia-Pacific region. (http://apministerialenv.org/files/Air_Quality_Side-Event_concept_note_programme.pdf.)

Publications

Amy J. Pickering, Benjamin F. Arnold, Holly N. Dentz, John M. Colford Jr., and Clair Null. 2017. Climate and Health Co-Benefits in Low-Income Countries: A Case Study of Carbon Financed Water Filters in Kenya and a Call for Independent Monitoring. *Environmental Health Perspectives* 125(3): 278-283.

Caroline Shaw, Simon Hales, Richard Edwards, Philippa Howden-Chapman. 2017. Health Co-Benefits of Policies to Mitigate Climate Change in the Transport Sector: Systematic Review. *Journal of Transport & Health* 5 (Supplement): S107-S108.

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