

Health Effects of Air Pollution Associated with Energy Use

The course was moderated by Mr. Adrian Fernandez Bremauntz, President of the Instituto Nacional de Ecologia at SEMARNET, Mexico.

Ms. Susan Lyon Stone of the US EPA focused her first presentation on the major air pollutants (especially ozone and particles) associated with energy use and their health effects. She underscored the health effects of high ozone concentrations in children, e.g. on the prevalence of asthma. Based on health studies undertaken in the US, she also showed the strong linkage between long-term exposure to particle pollutants and mortality, lung and heart diseases, including such effects on healthy people. Some of the effects could also be traced back to traffic exposure.

Mr. Aaron J. Cohen of the Health Effects Institute in the USA brought the global perspective on air pollution and health to the ground, highlighting the fact that levels of exposure to air pollutants are many times higher and growing more rapidly in developing countries than in industrialized countries, particularly in urban areas and through indoor air pollution. Burning of biomass causes severe respiratory health problems in many densely populated areas in developing countries, also increasing the risk of other diseases and mortality rates. Mr. Cohen underscored the need for more research on long term effects of air pollution on health in developing countries, as he presented preliminary results from research from Asian cities. He also raised the question of prioritization of urban air pollution for policymakers in developing countries in light of other major issues in public health with higher measurable effects on the mortality rate.

Mr. Neal Fann of US EPA demonstrated the use and application of the Environmental Benefits Mapping and Analysis Program (BenMAP) to the course. He explained that human health benefits analysis is the process of estimating improvements in health outcomes that result from improvements in air quality. It is also designed to be able to apply a monetary value to those improvements and can help inform the selection of appropriate air regulations. Availability of the necessary data can be a challenge in applying BenMAP in some developing countries as it requires information on known health effects of air pollution/ the levels of air pollution and baseline mortality and disease levels.

Ms. Susan Lyon Stone's second presentation gave an overview of the Air Quality Index which is an index of daily reported air quality and a decision-making/information tool for the public, the media and policymakers. It provides real-time air quality mapping, air quality forecasting, which is being used by the US media, and educational material. Ms. Stone reported on the intention to expand the index to include more international air quality data in real time and gave one example of its application in Mexico City. She briefly also highlighted the air quality health index that was developed in Canada.