

**Archive of the Population-Environment Research Network (PERN)
Cyberseminar Discussions on Air Pollution and Health Linkages¹
1-15 December 2003**

Date: Mon, 1 Dec 2003 09:02:06 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
**Subject: [PERNSeminar_AirPollution] Welcome to the Air Pollution and Health
Cyberseminar**

Subject: Welcome to the Air Pollution and Health Cyberseminar

Dear Participant,

Welcome to the Air Pollution and Health Cyberseminar, hosted by the Population-Environment Research Network from December 1-15, 2003. The purpose of this Cyberseminar is to foster a discussion that will lead to identification of the most pressing issues and topics for research and policy in linking air pollution (both indoor and outdoor) and human health.

For a background reading, please read a brief paper on this subject that can be downloaded from the following URL:
<http://www.populationenvironmentresearch.org:9080/papers/Mishra.pdf>. The paper will also be sent to you shortly as an email attachment.

The Cyberseminar will also feature short statements from the following distinguished researchers during the course of the seminar to stimulate discussion:

Aaron Cohen, Health Effects Institute, Boston
Majid Ezzati, Harvard University, Boston
Adrin Fernandez, Instituto Nacional de Ecologia, Mexico
Bart Ostro, California Office of Environmental Health Hazard Assessment,
Oakland
Jitendra Pande, Independent Researcher, New Delhi
Leonora Rojas, Instituto Nacional de Ecologia, Mexico
Sumeet Saksena, East-West Center, Honolulu
Kirk Smith, University of California, Berkeley
Hamdou-Rabby Wane, Independent Re¹searcher, Dakar

PERN is extremely thankful to these researchers for agreeing to serve on

¹ See <http://www.populationenvironmentresearch.org/seminars.jsp>.

the expert panel and we look forward to their contributions. PERN will produce a summary of the discussion and recommendations for dissemination via its website and more widely within research and policy communities.

Already, there are more than 300 participants registered for PERN Cyberseminars, from all over the world, and from a wide range of scientific disciplines. More are likely to join for this Cyberseminar in coming days. Together, I believe, we will have some useful discussion about knowledge gaps, methodological shortcomings, and other major issues related to this vital area of public health concern.

As with our past Cyberseminars, I would like to remind you of PERN guidelines for participation. Please remember:

- * Respectful disagreement is fine; impoliteness is not acceptable.
- * Opinions are welcome, but we request that you refrain from using this forum for any advocacy purposes.
- * Respect other's email space; do not repeat something you have already said and limit yourself to a reasonable number of postings.
- * If your message is in response to an earlier posting, please refer to the author of the posting and the date of posting so that others can follow the discussion.

With these guidelines in mind, I look forward to your active participation and a successful seminar!

Sincerely,

Vinod Mishra, PhD, MPH
Chair, PERN Steering Committee and
Fellow, Population and Health Studies
East-West Center, Honolulu, Hawaii, USA

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Date: Mon, 1 Dec 2003 09:53:59 -0500 (EST)

Subject: [PERNSeminar_AirPollution] Air Pollution and Health in Urban China !!

To: pernseminars@ciesin.columbia.edu

From: sguttikunda@worldbank.org

Sender: owner-pern@listhost.ciesin.org

Dear Dr. Mishra,

Thank you for giving me this opportunity to participate in Air Pollution and Health discussin series. Attached is the report published by the World Bank Energy Sector Management Assistance Program on Air Pollution and Health in Urban China (follow the link at the bottom for full report). I would like to forward this report to the participants to highlight some of the on-going projects.

Look forward to hearing from the rest of the expert group.
with regards,
Sarath Guttikunda

China : air pollution and acid rain control
The case of Shijiazhuang and the Changsha triangle area

Abstract:

This study, and the associated technical assistance project, has three main objectives. The first is to help localities in China address several questions related to the planning, and implementation of SO₂ emissions, and acid rain control: What are the environmental consequences, specifically for localities of different pollution control strategies, in terms of the impacts on human health, agricultural productivity, and other sectors and activities? What are the relative costs of different sulfur emission reduction plans? Will the proposed strategies enable localities to meet the environmental targets set by the central government? The second objective is to assist with capacity building, and training in China. to enable cities and regions to carry out environmental, and economic analyses of sulfur emission impacts, and control programs. The third objective is to provide a forum for discussion with the central government, primarily the State Environmental Protection Administration (SEPA), on the results of the case studies, and the implications for national policy with respect to sulfur control. This study analyzes China ' s national sulfur pollution control program, looking at local implementation plans, and actions for reducing sulfur emissions in two municipalities- Shijiazhuang and Changsha. The city of Shijiazhuang in Hebei Province was chosen for a case study on ambient SO₂ pollution control, representing a northern Chinese city, while the

tri-city region of Changsha, Zhuzhou, and Xiangtan in Hunan Province, was chosen to represent a southern area experiencing serious levels of acid rain. The clear divide between northern and southern cities and regions, indicate that emission control efforts in the north will benefit from access to significant quantities of low sulfur coal, the lack of which in the south, will significantly increase the cost of sulfur emission control. Other findings suggest that gaining a better scientific understanding of the impacts of sulfur emissions, and improving estimates of the relative benefits of different control options, are two important pieces of information for leveraging local implementation efforts. While promoting policies with multiple benefits, is an effective way of cutting sulfur pollution without reliance on regulatory policies, or institutions.

Full report can be accessed at www.esmap.org under "Latest Publications"

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From: "Puttanna S. Honaganahalli" <psh@isec.ac.in>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] Regional environmental health discussion groups
Date: Tue, 2 Dec 2003 10:36:28 +0530

Hi Sarath,

I have recently moved to India and am in the process of building my reasearch work here. I would like to know if there is some kind of a discussion group on health issues for the Asia or Southeast Asia region from whose experience my research can benefit. I am currently actively following the CAI, but, for whatever reason, I did not find much going on there on health effects.

Thanks

Puttanna

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From: "Puttanna S. Honaganahalli" <psh@isec.ac.in>
To: <pernseminars@ciesin.columbia.edu>
**Subject: Re: [PERNSeminar_AirPollution] Air Pollution and Health in Urban
China !!**
Date: Tue, 2 Dec 2003 10:43:48 +0530

Dear PERN member,

Please accept my apology for inadvertently posting a mail on the listserv.

Thanks
Puttanna.

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To: pernseminars@ciesin.columbia.edu
**Subject: Re: [PERNSeminar_AirPollution] Regional environmental health
discussion groups**
From: gbathan@adb.org
Date: Tue, 2 Dec 2003 14:46:24 +0800

Dear Puttana,

Although there may not have been a lot of email discussion on the CAI-Asia
listserv particularly on the health effects of air pollution, several
updates were released to the listserv on the status of the health study
being undertaken by CAI-Asia.

The Clean Air Initiative for Asian Cities is undertaking a study on the

health impact of air pollution in Asia. This study is called the PAPA project, which is being implemented by the Health Effects Institute. Some information on the study is available on the CAI-Asia website <http://www.worldbank.org/cleanair/caiasia/baq2003> An update on the PAPA project will be provided during the Better Air Quality 2003 workshop in Manila from 17-19 December 2003

The website is undergoing improvement and we plan to have "discussion rooms" on the new website which can deal with specific issues such as health effects of air pollution.

Best,
Glynda

Glynda E. Bathan
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worldbank.org/cleanair/caiasia
adb.org/vehicle-emissions

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Date: Tue, 2 Dec 2003 09:49:53 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Air pollution and health: some issues in need of further study

Statement from: Aaron J Cohen, Health Effects Institute, Charlestown, MA

Recently, I co-chaired a group that estimated the global burden of disease due to urban outdoor air pollution as part of the World Health Organization's Global Burden of Disease Comparative Risk Assessment. We estimated that outdoor air pollution, characterized as fine particulate matter, PM_{2.5}, is currently responsible for about 0.80 million (1.2% of

world total) premature deaths and 6.4 million (0.5% of world total) Years of Life Lost (YLL) in the populations of the world's large cities (>100,000). This burden occurs predominantly in developing countries, with 30% of attributable YLLs occurring in the Western Pacific Region, including China, and 19% in Southeast Asian Region, including India (WHO 2002, Cohen et al. 2003).

Our estimates were subject to considerable uncertainty contributed largely by the lack of both air pollution measurements and information about the shape of concentration-response functions in developing country populations exposed to ambient air pollution levels that greatly exceed those in Europe and North America. We identified several areas where there is a critical need for better information in order to reduce uncertainties in future estimates of the burden of disease due to outdoor air pollution in developing countries. Among those we noted were:

- * Better estimates not only of ambient concentrations (missing or woefully inadequate for quantitative epidemiology in most developing countries) but also of the characteristics of outdoor air pollution, including the contribution of various sources and the size distribution of PM.

- * Epidemiologic studies of the effects of long-term exposure to air pollution and mortality from chronic cardio-vascular and respiratory disease. These should be designed to provide age- and disease-specific estimates of air pollution effects.

- * Epidemiologic studies of the effect of air pollution on the incidence of acute and chronic cardiovascular and respiratory disease in adults and children (e.g., acute respiratory infections).

Another important issue in need of further study is the role played by poverty in the relationship between air pollution and health (O'Neill MS et al 2003). Initial evidence, largely from studies in Europe and North America, suggests that economic deprivation increases the magnitude of air pollution-related morbidity and mortality. One reason may be the higher air pollution exposures which those of lower socioeconomic status frequently experience. There are as well good reasons to suggest increased susceptibility to the effects of air pollution exposure due to lower health and nutritional status that can accompany reduced socioeconomic status. There have not been similar studies of the effect of lower socioeconomic status on exacerbating the health effects of air pollution conducted in developing countries in general, and in Asia in particular. These are areas where the impacts of exposure and the influence of economic deprivation on those impacts may be greater, but where the results of the available western studies cannot be simply

extrapolated. For example, air pollution may increase morbidity and mortality among those already suffering from diseases of poverty, such as malaria, TB, and ARI (and possibly diarrheal disease) in children. The huge contribution of these diseases to the global burden of disease is well-known (WHO 2002).

References

Cohen AJ, Anderson HR, Ostro B, Pandey KD, Krzyzanowski M, Kuenzli N, Gutschmidt K, Pope CA, Romieu I, Samet JM, Smith K. Mortality Impacts of Urban Air Pollution. In: Ezzati M, Lopez AD, Rodgers A, Murray CJL (Eds). Comparative Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors. Geneva: World Health Organization, 2003 (In Press)

O'Neill MS, Jerrett M, Kawachi I, Levy JI, Cohen AJ, Gouveia N, Wilkinson P, Fletcher T, Cifuentes L, Schwartz J. Health wealth and air pollution: Advancing theory and methods. *Env Hlth Perspect* 2003;111(16):1861-1870.

WHO (2002). World Health Report: Reducing Risks, Promoting Healthy Life. Geneva, World Health Organization.

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Date: Mon, 01 Dec 2003 18:15:57 -0500

From: Global Forum for Clean Air and Public Health <forum@climate.org>

To: PERN Lists Manager <pern-m@ciesin.columbia.edu>

Subject: [PERNSeminar_AirPollution] Global Forum for Air Pollution and Public Health

Hello! I am also thankful for this opportunity to participate in the PERN cyberseminar on air pollution.

I am moderator for the Global Forum for Air Pollution and Public Health, a project of the Climate Institute.

The Global Forum for Air Pollution and Public Health can be visited at <http://climate.org/topics/air/globalforum.shtml>.

The Forum is an ongoing project set up mainly for the purpose of dissemination of information. On the website there are links to many

studies pertaining to air pollution and public health, as well as a number of links to sites providing real-time data on air quality. The Forum is especially useful because it highlights the differences between approaches to these issues from place to place around the globe. I hope this is of interest to participants and can in some way facilitate discussion of this immense and fascinating topic.

I am looking forward to further discussion with this seminar. Thanks again!
~The Global Forum for Air Pollution and Public Health~
<http://climate.org/topics/air/globalforum.shtml>

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From: "David Pepper" <drpepper@ucsfresno.edu>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] The third world and Fresno
Date: Tue, 2 Dec 2003 10:13:02 -0800

PERN Cyberseminar Note

I'm an Asthma/Family Doc here in Fresno California - the central valley of California - where we had over 100 days last year of PM exceedances and over 100 days of Ozone exceedances. In many ways it feels like the third world - huge underserved, huge ethnic population, huge poverty - and of course horrible air quality.

My question is does anyone know comparative figures for say Mexico City? Thailand? Shanghai? - in other words the top ten worst cities in the world, and how they compare?

We also have huge (3rd highest rate) Asthma problems - and the "link" between the two isn't solidly established - for example, parts of Los Angeles have equally bad air days, but only half as much asthma (we are over 11% of our population, and over 16% of our children and rising 0.5% per year).....

So - in that "worst air" list, it would also be ideal to have a asthma rate associated with each city - and then see what lines up, and what doesn't. I certainly suspect Pesticides here (huge agriculture area) and diesel, and

smoke, but comparisons with other third world like cities could help "clear things up a bit".

Thanks

David R. Pepper MD MS
UCSF - Fresno
Asthma Education and Management Program

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From: Roger-Mark De Souza <rdesouza@prb.org>
To: pernseminars@ciesin.columbia.edu
Subject: RE: [PERNSEminar_AirPollution] The third world and Fresno
Date: Tue, 2 Dec 2003 13:41:17 -0500

David and others:

The Population Reference Bureau has a report that compiles the results from some case studies a few years ago. The report, called, Household Transportation Use and Urban Air Pollution, presents the results of comparative analyses of the impact of household transportation use on urban air pollution. The case studies were conducted in three cities that are known to have severe transportation-related problems: Bangkok, Mexico City, and Washington, DC. Even though the report is a few years old, it gives some good sources of information and provides some interesting ways of examining air pollution problems taking into account demographic factors. The report can be accessed at
<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=2838>

Other articles at the PRB website also discuss children's environmental health issues. See:
Children's Environmental Health:
<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8043>

<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8442>

Childhood Asthma:

<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=6230>

Tackling Asthma In West Harlem

<http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=8443>

Best,

Roger-Mark

Roger-Mark De Souza
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Date: Tue, 2 Dec 2003 13:12:41 -0600 (CST)
From: <barbaromoya@yahoo.com>
Subject: Re: [PERNSeminar_AirPollution] Regional environmental health
discussion groups
To: pernseminars@ciesin.columbia.edu

Dear Putana:

I think it is possible you can find useful information in SEI York. you can access in
www.sei.se

Regards
Barbaro

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Date: Tue, 2 Dec 2003 14:15:09 -0500
Subject: [PERNSeminar_AirPollution] Re:
From: Kai Lee <klee@williams.edu>
To: pernseminars@ciesin.columbia.edu

Query inspired by Aaron J. Cohen's post on global burden of disease due to outdoor air pollution: do these estimates take into account indoor air quality? there are places where fuel use for cooking exposes people to much higher levels of pollutants indoors, I know.

Cheers,
Kai

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Date: Tue, 02 Dec 2003 11:21:31 -0800
From: "Bart Ostro" <BOSTRO@oehha.ca.gov>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] The third world and Fresno

There are many studies indicating that short-term exposure to particulate matter (PM) or ozone will exacerbate asthma. There are only a few studies, however, suggesting that these common air pollutants will actually initiate asthma, although clearly this is a difficult problem to study. I've conducted several air pollution studies in Bangkok and Mexico City and I am unaware of any good asthma prevalence data that would be representative of the entire city. Regardless, since asthma is such a multi-factoral disease, it is not likely that air pollution concentrations in these cities would be good predictors of asthma prevalence. There are many other factors that could explain differential rates in these cities

and outdoor air pollution believed to be a major predictor.

Dr. Bart Ostro, Ph.D., Chief
Air Pollution Epidemiology Unit
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Date: Tue, 02 Dec 2003 10:24:18 -1000
From: Vinod Mishra <mishra@hawaii.edu>
Subject: Re: [PERNSeminar_AirPollution] Re:
To: pernseminars@ciesin.columbia.edu

The calculations of disease burden due to outdoor air pollution do not account for indoor air quality. Disease burden due to indoor smoke from household use of biomass and coal for cooking and space heating is estimated separately. According to the 2002 World Health Report, it is estimated to account for 2.7% of the global disease burden and some 1.6 million premature deaths annually. The disease burden of indoor smoke is much greater in poor developing countries, as one would expect.

The problem with these estimates, however, is that they are based on limited epidemiologic evidence. For instance, in the case of indoor smoke several important health outcomes, such as asthma, tuberculosis, and adverse pregnancy outcomes, are not considered in the estimates due to lack of conclusive evidence.

Vinod Mishra

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From: "john olsen" <cree@dowco.com>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] smoke pollution
Date: Tue, 2 Dec 2003 12:33:31 -0800

copy from ;
<http://www.itdg.org>
Smoke - the killer in the kitchen
Smoke in the home from cooking on wood, dung and crop waste kills nearly one million children a year.
The total annual death toll is 1.6 million - a life lost every 20 seconds.
It is a larger killer than malaria and is the fourth greatest risk to death and disease in the world's poorest countries.

John Olsen
Heatlog Industries Inc
www.heatloginc.com

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Date: Tue, 02 Dec 2003 17:35:53 -0600
From: Leonora Rojas Bracho <lrojas@ine.gob.mx>
To: pernseminars@ciesin.columbia.edu
Subject: Re: [PERNSeminar_AirPollution] Air pollution and health: some issues

in need of further study

A recently released report on air pollution and health effects conducted in Ciudad Juárez (one of the Mexico-US largest border cities) showed some indication on the relationship of PM10 exposures and mortality. Findings showed that ambient PM10 could increase the risk of mortality for respiratory causes on children over 1 month of age to one year old, belonging to the lowest SES group. The authors reported a 62% increase in mortality in this age and SES group for a 20µg/m³ PM10 increase. There is some discussion on the number of deaths that were reported during the duration of the study (power issue?), as well as some potential for exposure misclassification. Nonetheless, the results seem quite shocking.

No doubt that more research on this area is badly needed.

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**Subject: RE: [PERNSeminar_AirPollution] Air pollution and health: some issues in
need of further study**

Date: Tue, 2 Dec 2003 18:56:24 -0500

From: "ACohen" <ACohen@healtheffects.org>

To: <pernseminars@ciesin.columbia.edu>

Hi Leonora.

How can one obtain that report?

Aaron

Aaron J Cohen MPH, DSc
Principal Scientist
Health Effects Institute
Charlestown Navy Yard
120 Second Avenue
Boston, MA 02129-4533
Telephone: 617-886-9330 ext 335
FAX: 617-886-9335
email: acohen@healtheffects.org

Website: <http://www.healtheffects.org/index.html>

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Date: Tue, 02 Dec 2003 15:51:55 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
**Subject: [PERNSeminar_AirPollution] Comparative Risk Assessment for Indoor
and Outdoor Air Pollution**

The Comparative Risk Assessment Project, organized by WHO, examined the burden of disease from some two dozen major risk factors including, separately, indoor and outdoor air pollution. This effort is unique in that for the first time the groups doing the risk assessments for the different risk factors had to meet together to hammer out common methods and criteria for using evidence. In addition, they all used the same database for population statistics and background disease and death rates. This makes the results far more coherent, systematic, disciplined, and comparable than any previous risk assessment.

The full reports of how the burden from each risk factor was calculated are being published in early 2004 as

--Ezzati M, Rodgers AD, Lopez AD, Murray CJL (eds) Comparative Quantification of Health Risks: Global and Regional Burden of Disease due to Selected Major Risk Factors, Geneva: World Health Organization, 3 volumes, in press 2003/4.

The air pollution chapters are

--Smith KR, Mehta S, Feuz M, Indoor smoke from household solid fuels, *ibid.*, vol 2.

--Cohen AJ, Anderson HR, Ostro B, Pandey KD, Krzyzanowski M, Kuenzli N, Gutschmidt K, Pope CA, Romieu I, Samet JM, Smith KR, Mortality Impacts of Urban Air Pollution, *ibid.*, vol 2

There is a technical summary of the methods and results in

--Ezzati M, Lopez AD, Rodgers A, Vander Hoorn S, Murray CJL, and many others, Selected major risk factors and global and regional burden of

disease, Lancet Oct 30, 360:1347-1360, 2002.

http://pdf.thelancet.com/pdfdownload?uid=llan.360.9343.original_research.22978.1&x=x.pdf

A longer, but less technical, summary is found as Chapter 4 in the

--World Health Report - 2002. See <http://www.who.int/whr/2002/chapter4/en/>

Fairly detailed tables comparing risk factor burdens by disease, gender, age, region, etc. are found in the

--WHR-2002 annexes <http://www.who.int/whr/2002/annex/en/>

A semi-technical comparison of the different methods used to calculate the burden of disease from indoor air pollution is found in

--Smith KR, Mehta S, The burden of disease from indoor air pollution in developing countries: comparison of estimates, Intern'l J of Hygiene and Environ. Health, 20(4/5): 279-289, 2003. <http://ehs.sph.berkeley.edu/krsmith/publications/default.htm>

Best/k

Prof. Kirk R. Smith
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Senior Research Fellow
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Date: Tue, 02 Dec 2003 18:04:31 -0600
From: Leonora Rojas Bracho <lrojas@ine.gob.mx>
To: pernseminars@ciesin.columbia.edu
Subject: Re: [PERNSeminar_AirPollution] Air pollution and health: some issues in need of further study

CEC sponsored it and can be found on their webpage:

http://www.cec.org/pubs_docs

Let me know what your thoughts are...

Leonora

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From: Duc Hiep <duch@epa.nsw.gov.au>
To: <pernseminars@ciesin.columbia.edu>
Subject: RE: [PERNSeminar_AirPollution] Air pollution and health: some issues in need of further study
Date: Wed, 3 Dec 2003 11:12:13 +1100

>Statement from: Aaron J Cohen, Health Effects Institute, Charlestown, MA

>Our estimates were subject to considerable uncertainty contributed largely
>by the lack of both air pollution measurements and information about the
>shape of concentration-response functions in developing country
>populations exposed to ambient air pollution levels that greatly exceed
>those in Europe and North America. We identified several areas where there
>is a critical need for better information in order to reduce uncertainties
>in future estimates of the burden of disease due to outdoor air pollution
>in developing counties. Among those we noted were:

> * Better estimates not only of ambient concentrations (missing or
>woefully inadequate for quantitative epidemiology in most developing
>countries) but also of the characteristics of outdoor air pollution,
>including the contribution of various sources and the size distribution of

>PM.

I agree with A. Cohen assessment about the inadequacy of PM data (PM10 and PM2.5) in health effect studies of air pollution in various countries. In majority of cases, combustible sources (such as motor vehicles, industries..) are the main sources of PM. Particle size is important but so is the composition of volatile organic compounds and soot in particles (especially PM2.5). The quality of fuels (including diesel) are different in different countries. So a particular health effect of PM study in a particular city may not give comparative results to other study in a different city or country. Furthermore the different methods, protocols and quality assurances of measuring PM10 and PM2.5 are contributing to the uncertainty in comparative studies.

Hiep N Duc
Atmospheric Scientist
Department of Environment and Conservation, NSW

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Date: Tue, 02 Dec 2003 18:58:04 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: [PERNSeminar_AirPollution] Deaths from IAP

These estimates are from the WHO CRA project as described in the previous email/k

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Date: Fri, 05 Dec 2003 10:40:12 +0600
To: pernseminars@ciesin.columbia.edu
From: sharifa@sdnbd.org
**Subject: Re: [PERNSeminar_AirPollution] Regional environmental health
discussion groups**

Yes, along with Dr Puttanna I am also interested to know if there is anything on the discussion agenda on Asia particularly on Southasia which would help our research in these areas. I think in connection with this particular topic of the seminar i.e. air pollution and its health effect' southasia should receive some specific focus as it houses few highly air polluted areas like Dhaka city etc. Thanks every body.

Sharifa Begum

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Date: Wed, 3 Dec 2003 11:57:30 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
**Subject: [PERNSeminar_AirPollution] Panel Statement-Kirk R. Smith, Univ. of
California, Berkeley and East-West Center, Honolulu**

Exposure-based Regulation: Potential to Protect Health Faster at Lower Cost
Kirk R. Smith
University of California at Berkeley and East-West Center at Honolulu

From a health standpoint, it is not air quality but exposure quality that drives human dose and negative outcomes. Ambient (outdoor) air quality is relatively convenient and inexpensive to measure compared to exposure itself, but a price is paid in accuracy. The question is when

the decided advantages of ambient air quality measures are overcome by their inherent disadvantage in being less tightly linked to health effects than exposure. Ambient air quality (AAQ) is attractive as the starting point for an air pollution index because it lies along the environmental pathway between sources/emissions, which are the points of control, and people's breathing zones, which are the locations to be protected. Thus AAQ both responds to change in control for a particular source and, as shown in many epidemiologic studies, differences in AAQ are often good indicators of changes in ill-health, seemingly ideal characteristics. Like many complex systems, however, what works fine for a single part breaks down when the whole system is considered. In this case the system consists of many dozens of different particle source categories, some large - some small, some near - some far, some stationary - some mobile, some indoors - some outdoors, some nighttime - some daytime, etc. The inherent assumption of using AAQ as the indicator, however, is that all source categories are linked to AAQ and human ill-health through exposure in the same way, in other words that dose administered anywhere in the environment produces changes to AAQ and the doses to people to the same extent.

This is demonstrably not the case, however, which can be seen in studies of intake fraction (IF), which can be defined as the fraction of material released that actually goes down someone's throat. IF varies by many orders of magnitude for different sources. In other words, the fraction of released pollutant reaching the breathing zone (or actually inhaled) greatly depends on the location/timing of the source emissions with respect to the places people spend time. The range of IF for common air pollution sources is six orders of magnitude, from active smoking where the IF is, by definition, 1.0, i.e., 100% of the released material is inhaled, to the average US coal-fired power plant at 10^{-6} , where only 1.0 gram per tonne released is inhaled. Since environmental health regulations do not usually extend to sources inside the mouth, the range of practical interest is 3-4 orders of magnitude, i.e., between releases from large stationary outdoor sources and those located in residences. Neighborhood and mobile sources lie between.

Such differences in IF can overwhelm differences in the hazard of a source based purely on toxicity. In the case of particles, for example, they would seem to be much larger than the range in toxicity that may come about because of different particle characteristics. For illustration, although diesel particles because of their chemical nature may well be more dangerous per unit mass or other parameter than other urban particles, they are clearly not 1,000 times more so. Neither is PM_{2.5} 1,000 times more dangerous than PM₁₀. The range of IF among typical locations of particle sources can easily be this large, however. Thus, the "rule of one thousand" sometimes applied to the differences between

indoor and outdoor emissions.

Thus, in setting control priorities among source categories, there is a clear need to understand their relative IF, i.e., the differential potential for different sources to create exposure. The potential for increased economic efficiency through substituting "exposure trading" for "emissions trading" and more effective regulation in general are significant. The basic approach would be to weight the emissions of a class of sources by their relative IF. Thus, just as more toxic emission sources would obtain higher priorities, so would source categories close to people. In this way, exposures, doses, and health effects would be more effectively targeted.

In detail, such determinations for particles would have to consider size distribution and chemical composition that affect lifetimes and other behavior as well as the potential for secondary particle formation from co-emitted gases, along with population distribution and other parameters going into IF. The result would likely be greater attention to indoor and neighborhood sources of primary pollutants, however, because their IFs are so much greater than general outdoor sources.

--Bennett DH, TE McKone, JS Evans, WW Nazaroff, MD Margni, O Joliet, KR Smith, Defining intake fraction, *Environ Sci and Technol.*36:207A-211A, 2002.

--Evans J, S Wolff, K Phonboon, J Levy, KR Smith, Exposure efficiency: an idea whose time has come?, *Chemosphere*, 49(9): 1075-1091, 2002.

--Roumasset, J.A. & K.R. Smith, "Exposure Trading: An Approach to More Efficient Air Pollution Control," *Journal of Environmental Economics and Management* 18: 276-291, 1990.

--Smith, K.R., "Fuel Combustion, Air Pollution Exposure, and Health: the Situation in Developing Countries," *Annual Review of Energy and Environment* 18: 529-566, 1993.

--Smith, K.R., *The Potential of Human Exposure Assessment for Air Pollution Regulation*, WHO/EHG/95.09, Office of Global and Integrated Environmental Health, WHO, Geneva. 1995.

--Smith KR, Place makes the poison, *J Exposure Anal and Environ Epidemiol.* 12: 167-171, 2002.

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Date: Wed, 3 Dec 2003 14:29:10 +0000 (GMT)
From: ramky2020@yahoo.co.uk
Subject: [PERNSeminar_AirPollution] Indoor Air Pollution
To: pernseminars@ciesin.columbia.edu

In the case of impact of indoor air pollution in developing countries, there are certain specific aspects that need to be considered:

1. The type of fuel used. Mainly fire-wood, charcoal, cow dung, etc are use up by the households but the intensity of smoke emitted depends on the type of fuel used. For instance, a particular variety of fuel wood used in the rural areas in Tamil Nadu, India does not normally emit smoke;
2. The impact of indoor air pollution on health, again, depends on the season. During summer season, most of the cooking activities take place outside the households;
3. In many of the households in Indian cities as well as in rural areas, the common practice nowadays is burning mosquito coils that emit a large amount of particulate matters. This adds more fuel to the existing problem.

Therefore I wonder whether the studies on Indoor air pollution do take into these specific , important aspects into account.

N. Ramkrishnan,
Pondichery University
India.

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From: "Kerr, Austin" <AKerr@esassoc.com>
To: <pernseminars@ciesin.columbia.edu>
Subject: RE: [PERNSeminar_AirPollution] Regional environmental health
discussion groups - Sensitive Receptors
Date: Wed, 3 Dec 2003 09:29:05 -0800

I would like to hear other's thoughts about the types of land uses or

facilities that shall be considered sensitive receptors to air quality.

As part of my job, I review potential impacts to air quality in Environmental Impact Reports (EIR) pursuant to the California Environmental Quality Act (CEQA). An EIR is written for almost every development project in California (examples include the development of a new elementary school, permitting a new power plant, or opening a new recreational park). Most Air Quality sections of EIRs discuss the location of "sensitive receptors" that could be affected by adverse changes in air quality resulting from the project being reviewed. The following text is typically used to define sensitive receptors:

****Land uses such as schools, hospitals, and convalescent homes are considered relatively sensitive to poor air quality because infants and children, the elderly, and people with health afflictions, especially respiratory ailments, are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential areas are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Industrial and commercial districts are less sensitive to poor air quality because exposure periods are shorter and workers in these districts are, in general, the healthier segment of the public.****

You'll notice that the above paragraph is written in very simple language because EIRs are intended to be read and understood by the general public.

I am curious to hear how others think "sensitive receptors" should be defined. In particular, I would like to know your thoughts about whether recreational land uses should be considered sensitive receptors to air pollutants. Consider, for example, a municipal park where people jog and play soccer (football) and tennis. These individuals tend to be part of the healthier segment of the population, I know. However what if an adjacent road carries an exceptionally high volume of diesel vehicles? Generally, the practice by air quality analysts who review potential air quality impacts for EIRs in California - and for EISs nationwide (Environmental Impact Statements pursuant to the National Environmental Policy Act[NEPA]) - is not to identify recreational facilities as sensitive receptors to air quality.

Any thoughts on this question would be greatly appreciated?

-Austin Kerr

J. Austin Kerr

Environmental Science Associates
Ph. 415/896-5900
Fx. 415/896-0332

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From: "David Pepper" <drpepper@ucsfresno.edu>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] RE: Most Bang for the Peso?
Date: Wed, 3 Dec 2003 09:57:40 -0800

It seems we are not always able to equate "apples to apples..."

A certain measure of "equality" is needed in Air pollution and health discussions. Perhaps there is already a standard or proposal to actually qualify this, but my sense is the important factors include (at least):

Proximity (distance from breather to source)- great submission earlier
Noxicity (how bad is the stuff you are breathing)
Chronicity (how long is someone breathing it - eg a few minutes or 24 hrs/day)
Suceptibility (how sensitive is a person to a particular "noxigen")

As many have said, all asthma (probably only 50%) isn't "caused" by pollution, but clearly there are links and the alarming rise in Asthma should have us questioning - the precautionary principle mandates that in the interest of Public Health we not cower behind the "we need more science" while people are harmed and die. In that vein I would ask:

What do people think are the worst offenders?
Diesel? (and how much better is low sulfur/scrubbed diesel)
Indoor Coal?
All non gaseous low temperature fired fuel sources?
All Sulfur containing sources? (the more sulfur the nastier?)
All Nitrogen containing compounds?
Airborne pesticides? Fumigants? Aromatic hydrocarbons?

And what would people "remove" first? (in a imperfect world...eg where is

the "most bang for the buck" - recognizing that the buck/yen/peso varies,
and the amount various cultures have to spend on these problems vary too)
Bricking in all Fireplaces?
Converting all Diesel buses? (or at least high sulfur diesel/dirty diesel)
Promoting better mile per gallon cars? Mass transportation? Bicycling?

David R. Pepper MD MS
UCSF-Fresno

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Date: Tue, 2 Dec 2003 10:38:56 -0500 (EST)
From: "Anil Namdeo" <anamdeo@its.leeds.ac.uk>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Disease burden of alternative traffic scenarios

Dear All,

Please find attached a paper on estimating disease burden relating to air quality. (The paper will be sent to the list shortly as an email attachment. Thank you, PERN Lists Manager)

Regards,

Anil Namdeo

This paper describes the development of a modelling package for estimating disease burden of alternative traffic scenarios. The package includes TEMMS (Traffic Emissions Modelling and Mapping Suite), which provides detailed estimates of vehicle emissions on urban road networks, together with a stationary source emissions database and an atmospheric dispersion model that collectively permit a detailed spatial assessment of urban air quality in response to road traffic and meteorology. The model package provides the basis upon which the health impacts of alternative traffic scenarios can be compared.

The health impacts are expressed as the 'disease burden' (DB), the proportion of a population contracting an illness through exposure to an environmental contaminant. The DB is calculated as the product of a pollutants frequency

distribution and its associated dose-response relationship. This DB approach was developed with reference to the microbiological quality of recreational waters, and is the basis on which health related bathing water quality standards are being defined by the World Health Organisation. The first application of the DB method to air quality is described, using two applications. The first illustrates the DB method applied to air quality (as PM10), monitored at a single site in each of five UK cities. The second applies the DB technique to Leeds, UK, using a spatially detailed representation of air quality derived using the model package described above, facilitating a comparison of the health impacts of alternative road traffic scenarios.

~~~~~  
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Date: Wed, 03 Dec 2003 12:10:17 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: Re: [PERNSeminar_AirPollution] Indoor Air Pollution

The answer is yes, and no.

Yes, in the sense that when measurements are made in households the pollution levels reflect these parameters, which in turn are usually noted by the researchers.

No, in the sense that we do not yet understand the overall impact on pollution levels of these kinds of factors in all the different household conditions in the third world during the year. Thus, risk estimates are based on broad indicators of exposure, such as use or non-use of solid fuels, or use or non-use of stoves with chimneys/k

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Date: Wed, 03 Dec 2003 15:23:53 -0500
From: Kai Lee <Kai.N.Lee@williams.edu>
Subject: Re: [PERNSEminar_AirPollution] Panel Statement-Kirk R. Smith,
Univ. of California, Berkeley and East-West Center, Honolulu
To: pernseminars@ciesin.columbia.edu

With apologies for venturing outside the scope of this discussion...

I noticed Kirk Smith's interesting discussion of Intake Factor and the way it modifies variations in exposure — sometimes more than variations in ambient air quality.

This morning's news carries coverage of the controversy provoked by the Bush EPA's (gestating) proposal for emissions trading in Hg. I realize that Hg exposure is primarily via aquatic media, with bioconcentration complicating IF. But I wondered how exposure trading (that is, emissions modified by IF) might affect the debate. A) Is there a basis for estimating exposures to anthropogenic mercury and thus IF? B) Is there reason to think that exposure trading might lead to a better focus of limited resources in decreasing mercury pollution? — the electric power industry seems to think prompt reductions are too costly.

These questions take us afield, of course, because the route of exposure is not directly airborne.

Cheers,
Kai

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Date: Thu, 4 Dec 2003 02:27:45 +0530 (IST)
Subject: [PERNSeminar_AirPollution] International Conference
From: "Ramesh P. Singh" <ramesh@iitk.ac.in>
To: <pernseminars@ciesin.columbia.edu>

Dear All,

We are organising International Conference on Aerosols, Clouds and Monsoon at IIT Kanpur during November 15-17, 2003. Please visit following web site for detailed information

http://home.iitk.ac.in/~ramesh/IASTA_aerosol/iastamain1.html

I hope you will try to participate in the Conference and present your results. If you need any information or interested in organising a session or panel discussion during the Conference, please feel free to contact me.

Ramesh

Dr. Ramesh P. Singh
Professor
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Indian Institute of Technology
Kanpur - 208 016, India
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Date: Wed, 03 Dec 2003 21:43:39 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: [PERNSeminar_AirPollution] Intake fraction

The IF idea can be applied to non-airborne exposures as well. An important issue with a longlived toxin like Hg, however, would be the time period of the IF analysis and consequent comparisons. This gets complicated by discounting in economic decision frameworks, of course. For more discussion you might be interested in the article by Bennet et al. cited in my one-pager./k

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Date: Thu, 4 Dec 2003 09:23:47 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
**Subject: [PERNSeminar_AirPollution] Panel Statement - Adrian Fernandez, et al.,
National Institute of Ecology-Mexico**

Discussion Note for PERN Cyberseminar on Air Pollution and Health
Adrian Fernandez, Leonora Rojas-Bracho, Miriam Zuk
National Institute of Ecology-Mexico

The evaluation of health impacts from exposure to air pollution is necessary in informing decisions on air pollution regulation. The practice of such analyses, however, is limited in Mexico and other developing countries, by such factors as the lack of data, local information and capacity, in addition to unclear environmental goals. Here we present some of the common uncertainties faced when evaluating the mortality effect of exposure to ozone and particulates in Mexico, and applicable to other cities.

* Since no cohort mortality study has been conducted in Mexico, we must rely on studies conducted in the United States. Given population and social differences, such as age structure, poverty, SES, nutrition, health status etc. between the study population and that of Mexico, as well as differences in PM and other pollutants dynamic ranges between Mexico City and cities where cohort studies have been conducted, is it legitimate to apply these C-R coefficients to Mexico? How different would the effect from long term exposures be for Mexico City inhabitants? What would main limitations be for assuming that relative risks are transferable between

countries?

* Although several time series studies have been conducted here in Mexico, there are differences -in the magnitude of the RR and in the CI-- between Mexican results and results from other countries. What does study variance reflect? Does it reflect regional variance in the impacts? Should only in-country results be used when conducting risk assessments?

* Can we assume that mortality due to short term exposures is captured in cohort studies as well? As such, when evaluating mortality due to exposure to air pollution, should we estimate mortality using only the coefficients from cohort studies and not include time series results?

* Typically when using the cohort dose response values, we assume that the relative risk is constant across age groups and applies to the study population (of 30+). How much bias are we introducing with these two assumptions? Similarly, when evaluating mortality from time series studies for the general population, is a single C-R function applicable for all age groups? How much of infant mortality is captured in these coefficients? How different would the C-R function be for infant mortality?

* Traditional risk assessment methods evaluate the risks from different pollutants separately. How strong is the assumption that effects from pollutants are additive? What kind of risk assessment techniques are available to evaluate the effects of air pollution mixtures?

* A recent study in Mexico City (Castillejos et al., 2000) as well as one in Detroit (Lippman, 2000) indicated that the coarse fraction of particles had a greater association to mortality than the fine fraction, contrary to findings elsewhere. What can we relate these findings to? Could they be associated with a difference in (a) particle composition and/or (b) higher coarse PM levels found in these cities?

* Although some studies have associated particle composition with mortality effects, much uncertainty remains as to the mechanism of the effect and the types of particles and sources that are responsible for the observed health impacts.

* While it is commonly assumed that the dose response curves for air pollutants show no thresholds, we are basically assuming such with the setting of standards. Due to such standards, citizens and policy makers alike assume that any exposure to levels below the norm is 'safe', even for long term exposure. What is the correct message to send, and how can we achieve this with regulations?

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Date: Thu, 4 Dec 2003 20:02:11 -0800 (PST)
From: Wisa Supanpaiboon <supanpaiboon@yahoo.com>
Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Adrian Fernandez, et al., National Institute of Ecology-Mexico
To: pernseminars@ciesin.columbia.edu

I am interested in the long term effects of air pollutants in South East Asia that have few studies have been conducted for the consequences. I am now in Thailand where the research in this area is not well developed. As I have known that there are a lot of leukemia cases reported each year.

I would like this issue to be discussed.

Wisa Supanpaiboon, Ph.D
Lecturer in Biochemical Toxicology
Department of Biochemistry, Faculty of Medical Science,
Naresuan University, Phitsanulok 65000 THAILAND
Tel +66-(0)-55261000 to 4 ext 4608, 4704
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From: "Puttanna S. Honaganahalli" <psh@isec.ac.in>
To: <pernseminars@ciesin.columbia.edu>
Subject: Re: [PERNSeminar_AirPollution] Indoor Air Pollution
Date: Sat, 6 Dec 2003 10:46:16 +0530

I would like to respond to this posting in detail, but I am afraid my

answer is more in the air quality domain which is out of the scope of this health impact discussion. I have transgressed the boundaries once before and hate to do it again.

At the risk of being inconsiderate to my fellow health nuts in this seminar I will refrain my urge to answer your question whether LPG is a clean fuel to a one liner. Yes, ideally speaking, but in practice, because of cheaper alternate technology and implementational deficiencies, no, it is not, in fact it is probably worse..

Puttanna

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Date: Sat, 06 Dec 2003 04:21:39 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: Re: [PERNSeminar_AirPollution] Indoor Air Pollution

In terms of combustion, LPG is much cleaner than kerosene used in typical stoves and far far cleaner than solid fuels used in simple stoves. There may be some explosion and fire hazard, of course/k

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Date: Sat, 06 Dec 2003 04:56:24 -0800
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: Re: [PERNSeminar_AirPollution] Benefits of air pollution!

Studies in Africa show that mosquito biting frequency is reduced somewhat by biomass smoke, but malaria prevalence is not. (mosquito coils are another question) In other words, biting is not reduced enough to make a

difference for mosquito-borne disease (although comfort is clearly an issue as well). In general, however, broadscale use of biomass smoke as vector control is likely to be inefficient, unreliable, and unnecessarily unhealthy. (How many developed or even middle-income countries continue to employ such means to control these diseases -- there are far more effective targeted approaches, starting with bednets and household screening)

As to smoking the thatch in the roof, this can actually be done at times when cooking is not being done and people are not heavily exposed (for example by taking the pot off the pothole of an improved stove). I have seen this in Sri Lanka, for example. Improved housing, including roofs, ought to be a goal as well in the long run, however.

Obviously, however, such considerations might well play a role in the choice of which areas to target first for smoke reduction/k

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Date: Sat, 6 Dec 2003 09:14:44 -0500 (EST)
From: akinyemi akanni <akakanni@yahoo.ca>
Subject: Re: [PERNSEminar_AirPollution] Benefits of air pollution!
To: pernseminars@ciesin.columbia.edu

Dear Colleagues,

This issue of discourse had been raised in a conference we had in IJEBU ODE Nigeria in 2001. The central issue is to appraise indigenous knowledge and make a critical empirical appraisal of it to know which is viable and those not. For instance, mosquitoes are part of natural habitat in some developing countries especially, the Sub-Saharan African countries. People have been interacting with it as well as the consequent effects of its bite. In what ways can we document the general behaviour of people to issues that constitute health threats due to interaction with the natural habitat. I think this demands serious research efforts.

Akanni
Obafemi Awolowo University
Ile Ife
Nigeria.

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Date: Mon, 8 Dec 2003 09:32:13 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
**Subject: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro, California
Office of Environmental Health Hazard Assessment, Oakland, CA**

Cardiovascular Effects of Long-Term Exposure to Air Pollution
Bart Ostro
California Office of Environmental Health Hazard Assessment, Oakland, CA

Scores of studies conducted on five continents have documented consistent associations between short-term (i.e., 24-hour) exposures to ambient particulate matter measured as PM10 and PM2.5 (particulate matter less than 10 and 2.5 microns, respectively) and daily counts of mortality and hospitalization (CARB, 2002). These fairly consistent associations suggest that exposure to ambient air pollution is a risk factor for exacerbation of pre-existing cardiac and respiratory illnesses, though pathophysiological mechanisms are not well understood.

In contrast, much less is known about: (1) the health impacts of longer-term (i.e., one year or more) exposure, particularly on the development of cardiac or respiratory diseases; and (2) the roles of specific sources, especially traffic-associated emissions, with respect to the pathogenesis of chronic illness. Only four studies have examined associations between long-term exposure to air pollution and mortality: the Harvard Six-Cities Study, the American Cancer Society II cohort, the Adventist Health Study and the Netherlands Cohort Study on Diet and Cancer (Dockery et al. 1993; Pope et al. 1995, 2002; Abbey et al. 1999; Hoek et al. 2002). All four have found associations between at least one pollutant metric and one mortality category, but the results are not entirely consistent. For example, Pope et al. (2002) examined the mortality experience of over 500,000 adults in 151 U.S. cities who participated in the American Cancer Society II cohort. After controlling for individual risk factors such as smoking, occupational exposures, body mass index, and alcohol consumption, long-term exposure to PM2.5 was found to be associated with small, but significant, increases in risks for

all-cause, cardiopulmonary, and lung cancer mortality. In contrast, in a study of 6,400 Seventh Day Adventists, Abbey et al. (1999) found associations of long-term-exposure to particulate matter and ozone with deaths related to diseases of the lung, but not with those involving the cardiovascular system. These study disparities may reflect differences in the lifestyles and health habits in the populations, pollutant mixes, or measurement error. In a Dutch study, Hoek et al. (2002) reported that cardiopulmonary mortality was associated with traffic density near the study subjects' residences.

These studies play an extremely important role in air pollution policy. For example, both the federal and California air quality standards for PM_{2.5} are based largely on them. In addition, many estimates of the economic benefits of outdoor air pollution control are dominated by the effects of long-term exposure to particulate matter. Recently, in a report on the Global Burden of Disease, the World Health Organization reported that worldwide exposure to PM_{2.5} is responsible for over 750,000 deaths per year and some estimates are as high as 1.1 million per year (Ezzati et al., 2002). Therefore, the examination of the long-term effects of air pollution needs to be an important area of continued research.

References

Abbey DE, Nishino N, McDonnell WF, Burchette RJ, Knutsen SF, Beeson WL, Yang JX. Long-term inhalable particles and other air pollutants related to mortality in nonsmokers. *Am J Respir Crit Care Med* 1999; 159:373-382.

California Air Resources Board. Staff report: Public hearing to consider amendments to the ambient air quality standards for particulate matter and sulfates, California Air Resources Board and Office of Environmental Health Hazard Assessment, Sacramento, 2002

Dockery DW, Pope CA III, XU X, Spengler JD, Ware JH, Fay ME, Ferris BG, Speizer FE. An association between air pollution and mortality in six U.S. cities. *N Engl J Med* 1993;329:1753-1759.

Ezzati M, Lopez AD, Rodgers A, et al. Selected major risk factors and global and regional burden of disease. *Lancet* 2002; 360:1347-60.

Hoek G, Brunekreef B, Goldbohm S, Fischer P, van den Brandt PA. Association between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study. *Lancet* 2002; 360:1203-9.

Pope CA III, Thun MJ, Namboodiri MM, Dockery DW, Evans JS, Speizer FE, Heath CW. Particulate air pollution as a predictor of mortality in a

prospective study of U.S. adults. Am J Respir Crit Care Med
1995;151:669-674.

Pope CA III, Burnett RT, Thun MJ, Calle EE, Krewski D, Ito K, Thurston GD.
Lung cancer, cardiopulmonary mortality, and long-term exposure to fine
particulate air pollution. JAMA 2002; 287:1132-1141.

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Date: Mon, 8 Dec 2003 17:30:39 -0800 (PST)
From: Wisa Supanpaiboon <supanpaiboon@yahoo.com>
**Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro, California
Office of Environmental Health Hazard Assessment, Oakland, CA**
To: pernseminars@ciesin.columbia.edu

Many cities in south east asia have been facing seriously from air pollution whereas there
is a few studies focusing health effect in long term exposure. The research were mainly
focus in monitoring of air quality.

Also in the rural area in Thailand, after cropping the rice farm, the farmer burn the hay and
the large area are covered by smoke.

PERN Lists Manager <pern-m@ciesin.columbia.edu> wrote:
Cardiovascular Effects of Long-Term Exposure to Air Pollution
Bart Ostro
California Office of Environmental Health Hazard Assessment, Oakland, CA

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associations between short-term (i.e., 24-hour) exposures to ambient
particulate matter measured as PM10 and PM2.5 (particulate matter less
than 10 and 2.5 microns, respectively) and daily counts of mortality and
hospitalization (CARB, 2002). These fairly consistent associations
suggest that exposure to ambient air pollution is a risk factor for
exacerbation of pre-existing cardiac and respiratory illnesses, though
pathophysiological mechanisms are not well understood.

In contrast, much less is known about: (1) the health impacts of
longer-term (i.e., one year or more) exposure, particularly on the
development of cardiac or respiratory diseases; and (2) the roles of

specific sources, especially traffic-associated emissions, with respect to the pathogenesis of chronic illness. Only four studies have examined associations between long-term exposure to air pollution and mortality: the Harvard Six-Cities Study, the American Cancer Society II cohort, the Adventist Health Study and the Netherlands Cohort Study on Diet and Cancer (Dockery et al. 1993; Pope et al. 1995, 2002; Abbey et al. 1999; Hoek et al. 2002). All four have found associations between at least one pollutant metric and one mortality category, but the results are not entirely consistent. For example, Pope et al. (2002) examined the mortality experience of over 500,000 adults in 151 U.S. cities who participated in the American Cancer Society II cohort. After controlling for individual risk factors such as smoking, occupational exposures, body mass index, and alcohol consumption, long-term exposure to PM_{2.5} was found to be associated with small, but significant, increases in risks for all-cause, cardiopulmonary, and lung cancer mortality. In contrast, in a study of 6,400 Seventh Day Adventists, Abbey et al. (1999) found associations of long-term-exposure to particulate matter and ozone with deaths related to diseases of the lung, but not with those involving the cardiovascular system. These study disparities may reflect differences in the lifestyles and health habits in the populations, pollutant mixes, or measurement error. In a Dutch study, Hoek et al. (2002) reported that cardiopulmonary mortality was associated with traffic density near the study subjects' residences.

These studies play an extremely important role in air pollution policy. For example, both the federal and California air quality standards for PM_{2.5} are based largely on them. In addition, many estimates of the economic benefits of outdoor air pollution control are dominated by the effects of long-term exposure to particulate matter. Recently, in a report on the Global Burden of Disease, the World Health Organization reported that worldwide exposure to PM_{2.5} is responsible for over 750,000 deaths per year and some estimates are as high as 1.1 million per year (Ezzati et al., 2002). Therefore, the examination of the long-term effects of air pollution needs to be an important area of continued research.

References

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Ezzati M, Lopez AD, Rodgers A, et al. Selected major risk factors and global and regional burden of disease. Lancet 2002; 360:1347-60.

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Pope CA III, Burnett RT, Thun MJ, Calle EE, Krewski D, Ito K, Thurston GD. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. JAMA 2002; 287:1132-1141.

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Date: Tue, 9 Dec 2003 01:56:37 -0800 (PST)
From: brad bartholomew <brad_bartholomew@yahoo.com>
Subject: [PERNSeminar_AirPollution] So what can be done about it!
To: pernseminars@ciesin.columbia.edu

EIGHT SOCIO-ECONOMIC THEOREMS FOR SUSTAINABLE CONTRACTION

1. All European and New World developed nations have a

female fertility rate at or below replacement level, and they currently rely on immigration for population increase.

2. A policy of zero permanent immigration would allow the population to decrease naturally, but full intercourse between the people of other nations can be retained through temporary visas for work, education, tourist, cultural exchange, family connections and sport.

3. A free enterprise economy relies on the tension between supply and demand of the means of production to remain prosperous. Currently free enterprise economies rely on population increase to maintain this tension (particularly in relation to real estate).

4. In an economy with a declining population it is possible to maintain the tension between supply and demand by affirmative recycling policy. That is to say real estate (both agricultural and suburban) is taken out of the market and reverted to wilderness. This causes the value of properties that remain in the market to rise.

5. With an affirmative recycling policy the owners of property that is reclaimed are compensated at more than market value, which gives them the capital to buy a property or business elsewhere, thus contributing to maintain the tension between supply and demand.

6. In an economy with declining population the labour supply also decreases which increases the demand for labour, and causes wages to rise. This coupled with increased profitability of farms, due to affirmative recycling policy, will cause GNI (gross national income) to rise.

7. Affirmative recycling policy is an effective means of artificially stimulating the economy. It causes the price of real estate (including farming properties) to continually rise. This coupled with a static or decreasing population means that the demand for labour will push wages up. Thus the ratio of wealth per capita of population will also rise - which is the classic definition of true economic progress.

8. When the ratio of wealth per capita of population is continually improving, this has the inevitable effect of improving the general living conditions and health of the community, which in turn increases the average individual life expectancy of the population and causes a broad spectrum of social problems to decrease. That is to say the society comes ever closer to achieving a state of Utopia.

SUSTAINABLE CONTRACTION - THE DEEP FUTURE

Sustainable contraction causes the labour supply to diminish which increases the demand for labour, which causes wages to rise. In this scenario there is literally no unemployment. Market forces dictate that the only people who won't be employed are those who are self-sufficient financially (that is to say wealthy enough to retire) and those who are physically or mentally incapable of holding down a job (that is to say the aged and the physically or mentally infirm).

This scenario has several ramifications for society and for the concept of social welfare in particular (when reading these scenarios you must always bear in mind that our notions of social welfare have arisen via Marxism and Socialism and presuppose a large proportion of the community that are too poor, or illiterate or infirm to provide for themselves - this is NOT a factor in sustainable contraction):

1. There will be no need for old aged pensions. People will work until they have sufficient means to provide for themselves. The 'greying' problem quite simply does not exist. It is only at the point where a person is too old to work that he/she will receive financial support from the State (which will be generous). For the same reasons there will be no unemployment benefit.

2. There will be no need for free education. No 'state' schools. All families who have children will be sufficiently well-off to pay for the private education of their children.

3. There will be no need for state subsidised or free medical care. The whole population will be able to pay for their own medical care or at least will be able to pay for their own private health insurance.

4. Because of the above, the functions of the State will shrink dramatically. Income tax will be very minimal because virtually all the funds that are now required to provide social welfare will simply no longer be required. This will cause a dramatic reduction in the size of the Public Service as well.

5. The discipline of robotics is in its infancy but is already very significant in our society. In sustainable contraction where there is a high demand for labour and wages are very high across the board, market forces will drive progress in robotics to make up for the labour shortage. Literally all menial jobs will be performed by robots. (Bus and train drivers, waitresses, secretaries, receptionists, cleaners, multifarious factory jobs in industry etc etc). In sustainable contraction the entire human workforce is engaged in professional, service industry, managerial, technical innovation and scientific type jobs. That is to say jobs that can not be performed by robots.

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From: "Salonius, Peter" <psaloni@nrcan.gc.ca>
To: <pernseminars@ciesin.columbia.edu>
Cc: "Salonius, Peter" <psaloni@nrcan.gc.ca>
Subject: RE: [PERNSeminar_AirPollution] So what can be done about it!
Date: Tue, 9 Dec 2003 08:47:14 -0500

Bartholomew's treatise (below), while interesting, makes little or no connection with the subject at being discussed in this web forum (Air Pollution). The utopian scenario that is presented "Literally all menial jobs will be performed by robots." presupposes an unlimited supply of energy to

produce the wherewithal to keep the robots operating. Unfortunately (IF scientists do not soon come up with Nuclear Fusion or some other energy producing magic) the winding down of the 'Geological (fossil and fissile nuclear) Energy Interval' and the inevitable exhaustion of non renewable fuels -- that have made the exponential population and economic GROWTH possible in the last 200 years (resulting in global AIR POLLUTION) -- will INCREASE the number of "menial jobs" that will have to be performed by people.

We are facing the ultimate return to the energy availability (from the sun) that existed in 1800, before the excesses (and AIR POLLUTION), allowed by the short lived geological energy subsidy, began to be perpetrated on the Earth by a rapidly expanding human population and its EVEN MORE RAPIDLY EXPANDING GLOBALIZED ECONOMY.

This limited solar energy -- shared by 1 billion humans in 1800, will have to be shared by 6 billion humans (and counting) -- will ultimately curb the excesses (and AIR POLLUTION) of the last 200 years as we move toward an era of vastly diminished global trade, vastly diminished industrialization, shrinking populations, and a SUBSISTENCE life style that resembles the way humans lived during the entirety of history until the replacement of biomass energy by coal, then oil, then gas, then fissile nuclear energy, whose supplies are finite.

Let us maintain the draft animals so that we have the stock to begin the transition back to our agrarian roots.

Peter Saloni

Scientist for Population Reduction
<http://www.scientists4pr.org>

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Date: Tue, 9 Dec 2003 09:22:27 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Panel Statement - Majid Ezzati, Harvard University, Boston

Discussion Note for PERN Cyberseminar on Air Pollution and Health
Majid Ezzati
Harvard University, Boston

Because of measurement cost and difficulties, most studies of the health risks associated with indoor smoke from solid fuels have used single, more distal exposure indicators (e.g. fuel type or whether a child is regularly near the cooking area). Recent analysis of multiple determinants of exposure including continuous data on pollutant concentrations throughout the day, spatial dispersion of smoke inside the house, and quantitative and qualitative data on time-activity budgets of individual household members have shown a complex environmental-behavioral exposure mechanism. The pollutant concentrations and dispersion themselves largely depend on energy technology (stove-fuel combination), house design (e.g. the size and construction materials of the house, the arrangement of rooms, and the number of windows), and stove-use behavior (e.g. whether fuel is dried before using). In addition to cooking, whether energy is used for heating is also a crucial determinant of exposure because heating, by definition, involves longer hours of energy use and closer distance of people to the location of combustion. This may be further complicated by the fact that different pollutants may affect different end points. A fundamental question for the research and surveillance community is therefore is the type of data that allow design of better interventions according to locally-specific circumstances, and yet be affordable for large scale monitoring.

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Date: Tue, 09 Dec 2003 13:02:56 -0800
From: "Bart Ostro" <BOSTRO@oehha.ca.gov>
To: <pernseminars@ciesin.columbia.edu>
**Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro,
California Office of Environmental Heal**

We are attempting to conduct several news studies in Thailand taking these factors into account. Regarding agricultural burning, we are proposing to examine the association between daily exposures to particulate matter (PM), including particles from tobacco leaf burning, and mortality in

Chiangmai. As part of this study, we hope to identify the share of PM that is from traffic versus agricultural sources. For longer term exposures, we are proposing to study the effect of several months exposure to particles on birth outcomes in Bangkok and other cities, and the effects of several years of exposure on the prevalence of wheeze and asthma among Thai children. Both studies, if approved, would be funded under a new program (PAPA) established by the Health Effects Institute (<http://healtheffects.org/International/Papa-update2.htm>).

Dr. Bart Ostro, Ph.D., Chief
Air Pollution Epidemiology Unit
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From: "Puttanna S. Honaganahalli" <psh@isec.ac.in>
To: <pernseminars@ciesin.columbia.edu>
Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro, California Office of Environmental Heal
Date: Wed, 10 Dec 2003 15:15:18 +0530

Do agricultural burns happen every day in that part of the world? Is tobacco leaf burning happening in open farm lands or in a barn or processing unit?

My understanding based on farm activities in southern India is that agricultural burns are episodic/seasonal events that last from a fortnight to a month, and depending on water resources, once or twice a year. Of course, the crops grown here are rice, sugarcane and ragi/jowhar/maize/someother dry crop. Farmers are exposed to coarse particulates of geological origin i.e., airborne fine soil particles due to farm activity, and fine particulates due to smoke from indoor

cooking.=20

Curiously enough, the life expectancy for India and the four southern states (data provided by, Prof. KNM Raju) is:

State	Males	Females	Persons	Year
India	62.8	64.2	63.5	1996-2001
India	64.1	65.6	64.9	2001
Andhra Pradesh	63.4	65.93		1996-2001
Karnataka	65.55	66.55		1996-2001
Kerala	68.23	73.62		1996-2001
Tamil Nadu	64.85	64.85		1996-2001

This data has been taken from the YEAR BOOK 1993-94, Published by the Department of Family Welfare, Ministry of Health and Family Welfare, Govt. of India.

In India, despite women inhaling more smoke in the kitchen while cooking are living longer than their male counterparts, and particularly so in the southwestern coastal state of Kerala.

Puttanna

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Date: Wed, 10 Dec 2003 16:09:55 +0000 (GMT)
From: <msrmurthy2001@yahoo.co.in>
Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro, California
Office of Environmental Heal
To: pernseminars@ciesin.columbia.edu

Dear Sir

As a resident of southern part of India, I find that many people are suffering from dust allergy owing to excessive heat throughout the year which bakes the soil particles. Soil is further pulverised by vehicular movements which leads to accumulation finest dust particles in the air. Storing rice and other millets in graneries causes respiratory problems

to people. Burning of remains of sugar cane stalks and tobacco stalks also increases particulate matter. We find unused books in University libraries gathering finest dust particles which also cause allergic conditions to people. This leads to palpitation and breathing problems. A weed by name Parthenium is causing skin allergy several people.

These are some of my experiences.

Yours sincerely
Prof. M.S.R.MURTHY
Department of Population Studies
Sri Venkateswara University
TIRUPATI-512502, INDIA

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Date: Wed, 10 Dec 2003 09:57:53 -0800
From: "Bart Ostro" <bostro@oehha.ca.gov>
To: <pernseminars@ciesin.columbia.edu>
**Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart
Ostro, California Office of Environmental Health**

The burning is at open farm land, for the most part, and is seasonal. These particles will be both fine and coarse (i.e., some will be below 2.5 microns and inhalable). The survival data you show indicates that air pollution is only one of many factors affecting longevity.

Dr. Bart Ostro, Ph.D., Chief
Air Pollution Epidemiology Unit
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Date: Wed, 10 Dec 2003 08:29:51 -1000
From: Vinod Mishra <mishra@hawaii.edu>
Subject: Re: [PERNSeminar_AirPollution] Panel Statement - Bart Ostro,California
Office of Environmental Heal
To: pernseminars@ciesin.columbia.edu, pernseminars@ciesin.columbia.edu

Higher life expectancy for females despite having higher exposures to indoor smoke is not surprising, because males tend to have much higher exposures to various other risk factors, such as tobacco smoking, industrial and occupational hazards, traffic accidents, and military service. The net effect is lower life expectancy for males.

Moreover, even in settings where women typically do much of the cooking, men can also have substantial exposures to indoor smoke if the cooking area is part of the living area or not properly ventilated. Also, in societies where there is strong preference for sons, such as in India, young boys may be more likely to be carried or kept around kitchen area by their mothers while cooking, thereby inadvertently exposing boys to higher levels of air pollution than young girls. Ironically, in such situations, discrimination against girls may work to their advantage. In our analysis of effects of biomass fuel use on ARI in young children in India, we find the effects stronger for boys than for girls.

Vinod Mishra

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Date: Wed, 10 Dec 2003 10:26:51 -0800 (PST)
From: bola okuneye <b_okuneye@yahoo.com>
Subject: Re: [PERNSeminar_AirPollution] IndigenousKnowledge in Biodiversity
Conservation
To: pernseminars@ciesin.columbia.edu

Dear Dr. Akinyemi,
I am a member of the team and currently doing some
work on Environment and population.

I am a Prof. of Agric/Environmental Economics at the Univ. of Agriculture, Abeokuta Nigeria.

Cheers.

Bola Okuneye

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Date: Wed, 10 Dec 2003 10:47:55 -0800 (PST)
From: bola okuneye <b_okuneye@yahoo.com>
Subject: Re: [PERNSeminar_AirPollution] Disease burden of alternative traffic scenarios
To: pernseminars@ciesin.columbia.edu

Dear Anil,

I am interested in your work not necessarily bcos I am a Leeds PhD graduate in 1982 in the School of Economic Studies where Transport Economics was based then, but the methodology of your work which I think could be adopted to the case of developeping countries. In Nigeria where I am currently based a no. of old cars are imported to the country and they pose as a source of danger to the people.

Could you therefore avail me the oppotunity of getting the full paper either electronicall or the hard copy.

Thanks a lot.

Prof P. A. Okuneye PhD Leeds (1982)
Prof. of Agricultural/Environmental Economics
Univ. of Agriculture,
PMB 2240, Abeokuta,
Nigeria

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Date: Wed, 10 Dec 2003 11:39:43 -1000
From: Vinod Mishra <mishra@hawaii.edu>
Subject: [PERNSeminar_AirPollution] New technologies, new opportunities
To: pernseminars@ciesin.columbia.edu

Dear colleagues,

Availability of cheaper, more portable, and more reliable technologies for measuring both air pollution exposures and health outcomes provide new opportunities to study health effects of air pollution. For example, Kirk Smith and team have developed a low-cost device to measure indoor air pollution levels, which seems to work well in developing-country settings; high resolution remote-sensing data are becoming increasingly available at affordable prices to allow certain measurements of ambient air pollution levels; and devices to measure lung function abnormalities, certain biomarkers, and ill health in field situations are also becoming more affordable and more portable.

I am interested in learning more about such new, cutting-edge technologies, creative usage of existing technology, and any innovative approaches to measuring exposure levels and health outcomes, especially in developing countries.

Also, it might be useful if participants could share any methodological and practical challenges they faced in designing their studies, obtaining the equipment, obtaining necessary approvals, and data gathering, as well as any lessons learned.

Vinod Mishra

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From: "David Pepper" <drpepper@ucsfresno.edu>
To: <pernseminars@ciesin.columbia.edu>
**Subject: [PERNSeminar_AirPollution] New technologies, new opportunities for
sampling**
Date: Wed, 10 Dec 2003 17:05:53 -0800

I recently saw a paper on the use of scanning electronic microscope for
passive aerosol sampling.

It is from American Industrial Hygiene Association (Sept/Oct 2003) and
related to passive aerosol sampler
with the "Wagner-Leith sampler"...don't know much about it (apart from what
I read) but it seems like it could have some value and cheap in the field
(no pumps, etc) - though it seems expensive to run the analysis. Has anyone
used/seen this?

Also, Dr. Susan Kegley at Pesticide Action Network developed the Drift
Catcher -for measuring pesticide drift - a pump attached to dual tubes with
collection tubes containing a collection/filter apparatus. Simple and
relatively cheap (a few hundred per drift catcher I believe) Its good for
detecting pesticides and uses GC-Mass spec for the analysis I believe.
Commercially about \$200 a run to look for up to 100 chemicals often found
(pesticide type).

David Pepper MD MS
UCSF@Fresno, CA
Asthma Education Program

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Date: Wed, 10 Dec 2003 20:48:50 -0500

From: Global Forum for Clean Air and Public Health <forum@climate.org>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Goddard Study

Hello!

I recently saw a study on asthma done by Goddard Space Center which showed weekly asthma attack rates over the course of a year. The data reflect many years worth of research in areas as distant as Maine and Barbados. One similarity was shown in all of the graphs - a lull over the summer months, and then a peak (the highest peak in the year) around week 38 in early september. First of all, I think the lull seen during summer is surprising since summer is typically when highest levels of ozone occur. Also, the high peak seen in many different places over many different years of observation is fascinating. I'm wondering what air pollution experts have to say about these observations. Would anyone contribute the trends to anything cultural, or is it clearly an environmental effect on health? Thank you.

Global Forum for Clean Air and Public Health
<http://climate.org/topics/air/globalforum.shtml>

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From: "Kerr, Austin" <AKerr@esassoc.com>
To: <pernseminars@ciesin.columbia.edu>
Subject: RE: [PERNSeminar_AirPollution] Goddard Study
Date: Wed, 10 Dec 2003 17:54:07 -0800

In some places, California for instance, late September marks the end of the dry season and the beginning of the rain season. I believe the returning rains result is increased levels of pollen and other allergens.

J. Austin Kerr
Environmental Science Associates

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Fx. 415/896-0332

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Date: Thu, 11 Dec 2003 04:34:53 +0000 (GMT)
From: <ramky2020@yahoo.co.uk>
Subject: Re: [PERNSeminar_AirPollution] Developing country issues.
To: pernseminars@ciesin.columbia.edu

The story does not end there. There are innumerable day to day activities in developing countries that cause increased level of air pollution and resulting health impact. Take for instance, the brick kilns, manual mixing of cement and sand in the building construction sector, rice mills, cotton and textiles mills, silk weaving, burning of mosquito coils, etc are some of known aspects that cause air pollution in developing countries.
Ramky.

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From: rehfuesse@who.int
To: pernseminars@ciesin.columbia.edu
Subject: RE: [PERNSeminar_AirPollution] Sharing questionnaires and measurement tools
Date: Fri, 12 Dec 2003 14:24:58 +0100

Dear colleagues,

WHO would certainly be happy to act as a focal point for the exchange of questionnaires and measurement tools in relation to indoor air pollution from solid fuel use, if such a mechanism does not already exist elsewhere.

The idea of sharing measurement methods also fits well with one of the

activities under the Partnership for Clean Indoor Air (launched at last year's World Summit on Sustainable Development and led by the United States Environmental Protection Agency), i.e. the development of a harmonized methodology to evaluate intervention projects that aim to reduce indoor air pollution from solid fuel use.

Eva Rehfuss
Eva Rehfuss
Protection of the Human Environment
World Health Organization
1211 Geneva 27
Switzerland

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Date: Fri, 12 Dec 2003 10:10:47 -1000
From: Vinod Mishra <mishra@hawaii.edu>
**Subject: [PERNSeminar_AirPollution] Can changing lifestyles, diets,
and obesity make middle class more susceptible to air pollution effects?**
To: pernseminars@ciesin.columbia.edu

Dear colleagues,

Aaron Cohen's statement and my background paper raised the issue that poor tend to have higher exposure levels and may be more susceptible to adverse effects of air pollution due to undernutrition, higher prevalence of diseases, and less access to health care. Moreover, there is general recognition that women, elderly, and young children also tend to have both higher exposures and greater susceptibility per unit of exposure. However, it is generally NOT recognized that certain sections of middle class may also be more susceptible to ill effects of air pollution. For instance, in many developing countries, overweight and obesity are rising rapidly as a result of changing lifestyles, physical activity patterns, and diets, particularly among the urban middle class. Recent research has suggested that obesity is a risk factor for onset asthma both in adults and children, and it causes increased frequency and severity of attacks among the asthmatics. In our analysis of a large national health survey in India, we find that obese women are about twice as likely to suffer from asthma as women with a normal BMI, independent of effects of tobacco smoke, cooking smoke, age, education, living standard, and many other factors. Obesity has

also been linked with impaired pulmonary function and airway hyperresponsiveness, and it is a known risk factor for a host chronic health problems, such as diabetes, hypertension, cardiovascular disease, and certain types of cancer. These effects of obesity may make many urban well-to-do people in developing countries more susceptible to adverse health effects of air pollution. Clearly more research is needed to understand not only the role of poverty and associated undernutrition, ill health, and access to health care, but also the role of rapidly changing lifestyles, diets, and overnutrition among the middle class, in mediating the relationship between air pollution and health.

Vinod Mishra

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Date: Sun, 14 Dec 2003 06:09:16 -0800 (PST)
From: brad bartholomew <brad_bartholomew@yahoo.com>
Subject: [PERNSeminar_AirPollution] New pollution study
To: pernseminars@ciesin.columbia.edu

If this doesn't prove that population is directly affecting environment, then nothing will. This network has to start talking POPULATION REDUCTION. If you don't like my model for SUSTAINABLE CONTRACTION, then you should come up with a better one.

Heat, Pollution Changing Precipitation

Sat Dec 13, 6:49 AM ET

By ANDREW BRIDGES, AP Science Writer

SAN FRANCISCO - The massive amounts of heat and pollution that rise from the world's cities both delay and stimulate the fall of precipitation, cheating some areas of much-needed rain and snow while dousing others, scientists said.

The findings support growing evidence that urbanization has a sharp and alarming effect on the climate, and those changes can wreak havoc with precipitation patterns that supply life's most precious resource: water.

"These are going to become big issues," said Steve Burian of the University of Utah.

Details were presented Thursday and Friday at the fall meeting of the American Geophysical Union.

In California, eastward-blowing pollution induces a precipitation deficit across the Sierra Nevada mountain range equal to about 1 trillion gallons of water a year, said Daniel Rosenfeld of Hebrew University in Jerusalem.

The Sierra Nevada is a major source of water for much of California, which relies on it to supply its cities and farms.

"It amounts to significantly less amounts of water," said Rosenfeld, who has noted similar pollution-linked deficits in Israel.

The warmth and grit generated in urban areas can have the opposite effect on local precipitation and actually boost rainfall levels in large cities like Atlanta and Houston.

During the past 60 years, while Houston has grown to become the nation's fourth-largest city, scientists have measured increased amounts of rain in areas downwind of the urban core during hot, humid summer months, Burian said.

"The majority of evidence is pointing to some sort of urban modification," he said, adding that more research is needed.

Cities produce large amounts of a class of pollutants called aerosols, which include tiny particles of dust and the byproducts of the combustion of diesel and other fossil fuels.

Atmospheric levels of the pollutant are closely tied to levels of human activity. In New York City, measurements made between June and September 2001 showed that aerosol levels regularly grew during the work week, with a noticeable spike on Wednesdays, then decreased on the weekend, said Menglin Jin of the University of Maryland at College Park. She attributes the midweek spike to a sharp increase in diesel truck traffic.

When hoisted skyward, the microscopic pollutants act as multiple surfaces on which the moisture in clouds can condense to form tiny droplets. That can prevent or delay the formation of larger raindrops that more readily fall from the sky as rain.

In Southern California, a 24 percent decrease in the amount of rainfall measured since 1890 in the town of Cuyamaca appears linked to aerosol pollution wafting from San Diego, roughly 40 miles to the southwest, Rosenfeld said.

Cities also generate and trap tremendous amounts of heat and are on average one to 10 degrees warmer than surrounding undeveloped areas. That heat also changes the dynamics of clouds.

In more humid cities, urbanization appears to invigorate summer storm activity by allowing clouds to build higher and larger before unleashing torrential rains, Burian said. That appears to be the case in Houston.

The relative contributions that urban heat and pollution make to altering the climate remains unclear, scientists said. It's also unclear what, if

any, effect smaller cities might have.

"How big does a city need to be? We don't know. The answer is still out there," said Marshall Shepherd, a NASA research meteorologist.

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Date: Sun, 14 Dec 2003 19:17:25 -0600
To: pernseminars@ciesin.columbia.edu
From: "Kirk R. Smith" <krksmith@uclink.berkeley.edu>
Subject: [PERNSeminar_AirPollution] Research position in indoor air pollution available

Preliminary announcement: Please contact me in early January for a copy of the final announcement/k

A two-year research position with possible extension is available at the School of Public Health, University of California Berkeley, to work on health and environmental aspects of indoor and outdoor air pollution in developing countries. Working with colleagues at UCB and in Guatemala, India, China, and elsewhere, the researcher will conduct analyses of exposure, health, and other field data being gathered in rural areas of developing countries. In addition, the researcher will assist in the design, funding, and implementation of new field studies and policy analyses. Information about some of the ongoing research in the group can be found at the website below.

Requirements:

-
- A Ph.D. or equivalent in a relevant field. Strength in at least two of the following topics as demonstrated through training and/or research:
-
- Exposure assessment for indoor air pollution
- Health impacts of air pollution
- Small-scale combustion technology
- Environmental epidemiology
- Statistical analysis of large datasets

Air pollution monitoring technology

A speaking and reading knowledge of Spanish is highly desirable, but not required. Developing-country research experience is desirable. Required is the ability to undertake international travel and to live for short periods in simple conditions in rural areas.

Specific tasks:

-
Conduct analysis of epidemiologic, exposure, and laboratory data; develop ongoing quality control measures for field data collection; assist in developing systematic documentation of study procedures and documentation of databases; deploy and evaluate new pollution and exposure monitoring technologies. Play an active role in data analysis, report writing, development of manuscripts, and preparation of grant applications. Participate as a member of study management teams. Assist graduate students with data analysis.

To apply

-
Please send a complete resume, two examples of writing (no more than 30 pages total), and the names and contact information for 3 references. Included should be a detailed cover letter explaining how you meet the requirements of the position and how the position fits into your career plans.

Send at latest by January 31, 2004 to

Prof. Kirk R. Smith
Maxwell Endowed Chair in Public Health
Division Head, Environmental Health Sciences
SPH, 140 Warren
University of California
Berkeley CA 94720-7360
Phone: 510-643-0793 Fax: 510-642-5815
<http://ehs.sph.berkeley.edu/krsmith/>
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From: "Patrick Gubry" <patgub@hotmail.com>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Household surveys
Date: Mon, 15 Dec 2003 16:10:51 +0100

Population and environment problems can be studied through several ways: physical and chemical analyses of air, water, soil...; household surveys; other specific surveys (for example, health surveys in health centres, surveys on transportation and traffic jam; measurement of noise, etc.).

We undertook a household survey in Hanoi (Vietnam) in 1994 about population and environment problems in general, funded by UNFPA: Ministry of Construction: National Institute for Urban and Rural Planning, 1996, Population and urban living environment in Hanoi City. Hanoi: National Political Publishing House, 77 p. (VIE/93/P02 project). However, five pages only were written on air pollution.

Household surveys may comprehend the very living conditions of population, the household equipments, the daily environmental problems, the living habits related to environment, the awareness of environmental problems, etc.

Besides, environment in the biggest cities in Vietnam appears as the main concern of population in most of our other surveys on urbanization, migration and mobilities.

I would thus like to know if other household surveys have been undertaken in Southeast Asia about the topic population and environment during the last 10 years.

Patrick Gubry.

Patrick Gubry
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Date: Mon, 15 Dec 2003 08:53:43 -0800 (PST)
From: tilt@u.washington.edu
To: pernseminars@ciesin.columbia.edu
Subject: Re: [PERNSeminar_AirPollution] Household surveys

This is in response to Patrick Gubry's message of 12/15.

I've been working on community assessments of air pollution in southwest China (Sichuan province) for the last couple years. Recently, I returned from six months of fieldwork where I did household surveys on PERCEPTIONS of the local pollution problem (health effects, ecological effects, economic effects) in a small rural township. This was also coupled with systematic monitoring of ambient PM10 and SO2.

The main pollution sources in this community, as in many rural communities in China, are small-scale industrial factories that burn coal. The innovative part of our study, which was funded by the U.S. National Science Foundation, was that we built a "risk perception index" based on feedback from the community itself. We conducted qualitative interviews within the community for several months, finding out what effects of pollution were particularly acute for local residents. Then we constructed the survey questionnaire based on the content of these interviews.

I'm an anthropologist, so air quality issues are frankly a bit off the beaten path for me. But I'm sure the folks on this list can appreciate that environmental problems are also social problems. If anyone else participating in the seminar is working on similar issues, please do post something to the list.

I've enjoyed these discussions immensely.

Bryan

.....

Bryan D. Tilt
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University of Washington
Box 353100
Seattle, WA 98195-3100
USA

.....

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From: "Alex de Sherbinin" <adesherbinin@ciesin.columbia.edu>
To: <pernseminars@ciesin.columbia.edu>
Subject: [PERNSeminar_AirPollution] reminder - last day of the seminar
Date: Mon, 15 Dec 2003 12:21:26 -0500

Dear Colleagues,

This is to remind you that today (December 15) is the last day of the Air
Pollution and Health cyberseminar. We have had some excellent contributions,
and encourage you to post final comments today.

Over the coming days Vinod Mishra and myself will compile a summary which
will be posted to the website. When that is ready, we will send around an
announcement via this discussion list.

Best wishes,
Alex

Alexander de Sherbinin
Coordinator, Population-Environment Research Network (PERN)
www.populationenvironmentresearch.org

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Date: Mon, 15 Dec 2003 11:28:33 -0600
From: "Joseph Schirmer" <SCHIRJM@dhfs.state.wi.us>
To: <pernseminars@ciesin.columbia.edu>
Subject: Re: [PERNSeminar_AirPollution] reminder - last day of the seminar

Attached is a brief summary of an excellent article published in 2002 that some may have missed.

* * * * *

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Joseph Schirmer
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From: Liz Bates <lizb@itdg.org.uk>
To: <pernseminars@ciesin.columbia.edu>
Subject: RE: [PERNSeminar_AirPollution] Household surveys
Date: Mon, 15 Dec 2003 17:36:56 -0000

I'm really interested to learn of a study which measures people's own perceptions of the local pollution problem. In our work, we ask people through questionnaires what health problems they identify as being related to smoke, and then what non-health benefits of reduced smoke will be. At another point we asked for the main problems with fuel collection. (I was surprised that the major problem identified by our Nepali community in fuel gathering is 'hunger' - it is only when we ask that we get the real answers). These questionnaires can be found on the HEDON household energy website. Are the Sichuan results posted anywhere?

I would also like to know whether household pollution was included in

the possible 'main pollutant' sources - and whether the 'community' that was interviewed showed any difference in perception of the pollution problem for men and women.

Liz Bates

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Date: Mon, 15 Dec 2003 12:26:15 -0600
From: Haydea Izazola <haydea@avantel.net>
Subject: Re: [PERNSeminar_AirPollution] Household surveys
To: pernseminars@ciesin.columbia.edu

Dear Bryan!

I think in light of the limited scientific knowledge on the effect of air pollution on health, the population perceptions of the issue are in fact an extraordinary way to shed light on this complex phenomenon. Although a little different in scope, Catherine Marquette and I researched some years ago on the influence that environmental perceptions had in the migration responses of middle class families that out migrated from Mexico City after 1985. I agree that environmental problems are primarily social problems, and the knowledge developed by anthropologists and other social scientists is as important as that developed by the natural scientist. Qualitative research, although not statistically representative, is an excellent methodology to explore such complex relationships.

Very best regards to all who shared the seminar!

Haydea Izazola
Universidad Autónoma Metropolitana-Xochimilco
Mexico City

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Date: Mon, 15 Dec 2003 12:20:11 -0700

To: pernseminars@ciesin.columbia.edu

From: Lori Hunter <Lori.Hunter@colorado.edu>

Subject: Re: [PERNSeminar_AirPollution] Public risk perception

There is a substantial amount of research on environmental perception undertaken by Environmental Sociologists as well as Environmental Psychologists. Check out these disciplinary-specific bibliographic databases and you'll likely find much of interest!

Regarding public environmental perception, analytically, it's important to not equate public risk assessment and expert risk assessment; of course, this is not to say that public risk assessment is unimportant! Indeed, in many cases it is the public's perception that defines appropriate programs and/or policies as the public's perception will ultimately define a program/policy's acceptability!

An interesting way to link "lay" and "expert" knowledge is through, as mentioned earlier in this discussion, the notion of risk perception; As noted, the ways in which the general public perceive health threats is often quite different than expert judgments of risk posed. Classic and ongoing work by Paul Slovic may be useful here, where he classifies public risk perception as related to knowledge of risk, voluntariness of risk exposure, and perceived "dread." Also of interest is work by Phil Brown and Edwin Mikkelsen published in the book *No Safe Place* in which they develop the concept of "popular epidemiology" whereby laypersons engage in the gathering and interpretation of epidemiological data.

I am working on a project relating public environmental perception to development priorities in Ghana with Michael White from Brown University. Some results will be presented at the PAA in April and I'd be happy to share that paper with anyone interested.

Lori

Lori M. Hunter, Ph.D.
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Date: Mon, 15 Dec 2003 14:10:28 -0800 (PST)
From: tilt@u.washington.edu
To: "'pernseminars@ciesin.columbia.edu '" <pernseminars@ciesin.columbia.edu>
Subject: RE: [PERNSeminar_AirPollution] Household surveys

This is in response to postings on 12/15 by Liz Bates, Patrick Gubry, Haydea Izazola, and Lori Hunter.

Thank you all for your useful comments.

In response to Liz Bates, yes, I should definitely point out that indoor air pollution is an important component of the health effects of air pollution in our study community in general. In Sichuan, most people burn coal stoves indoors, though ventilation is usually pretty good. We did have some questions on our survey that we're now using to control for these effects.

Liz Bates' message also points to a serious problem with social science research in general: validity. That is, how do we know that we're testing what we think we're testing, particularly in cultures other than our own, when language and other barriers exist. In our study community, the category "pollution" turned out to encompass much more than the industrial air pollution that we were trying to assess.

Lori Hunter brings up an important distinction between lay perceptions of risk and expert assessments of risk. Establishing reliable monitoring techniques and estimating health and other effects of pollution is, I agree, the fundamental core of risk analysis. It is often the case, however, that those people most affected by a given pollution source react,

make decisions, and (sometimes) formulate policy relying primarily on their own assessments or the assessments of others around them. (Of course, this speaks to the importance of the field of risk communication, which seeks to give reliable information about risks to those involved.)

I too have found Slovic's work (among others) very valuable. I've got a rather hefty bibliography on risk perception, lay vs. expert assessment, risk communication, etc. If others are interested, I could compile a list of references on these topics to be shared. Interested parties could e-mail me individually with a few references of your own. I will add these to mine, and distribute the bibliography.

Finally, just to encapsulate briefly the results of the Sichuan research. We've found significant relationships between risk perception and the following variables: personal or family involvement in industry, length of residence in the community, health status, and ethnicity (our community was of mixed ethnicity). This last factor is certainly the most difficult to explain. I'm now working on a model (the last part of my Ph.D. dissertation) that incorporates all of these variables.

Again, thank you all for your valuable exchanges, and let me know if you're interested in the bibliography.

Best,
Bryan

.....
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USA
.....

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Date: Wed, 17 Dec 2003 13:31:08 -1000 (HST)
Subject: Re: [PERNSeminar_AirPollution] Public risk perception
From: <saksenas@EastWestCenter.org>
To: <pernseminars@ciesin.columbia.edu>

Lori and others:

I was delighted to see the topic of perceptions crop up in this seminar. This surely is an area where not much work has been done in developing countries.

In February 2003, the East-West Center, Honolulu, organized a workshop on needs assessment related to air pollution risk analysis. The workshop participants included researchers and government officials from Thailand, Vietnam, India and Mexico. A better understanding of risk perceptions was one of the two proposals identified by the participants (the other proposal relates to human exposure assessment). The East West Center and its partners from these countries are currently working on a specific proposal on threats to livelihoods and their influence on perceptions. In the near future we will also be proposing work related to understanding the differences between public perceptions about air quality levels and inferences based on data from actual monitoring. This will help in designing risk communication strategies. Finally, we are interested in studying perceptions related to indoor air quality. We are especially keen on doing this work in a multi-cultural context and in a multi-disciplinary way.

We look forward to hearing from people who would like to work with us. We are also looking for suggestions about agencies that fund such work.

By the way Lori, thanks for introducing us to the concept of 'popular epidemiology'. I will explore that territory.

Sumeet

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Date: Tue, 23 Dec 2003 14:55:47 -0500 (EST)
From: PERN Lists Manager <pern-m@ciesin.columbia.edu>
To: pernseminars@ciesin.columbia.edu
Subject: [PERNSeminar_AirPollution] Seminar Summary

Dear Colleagues,

Thanks to all of you for participating in PERN's Air Pollution and Health Linkages cyberseminar. I believe the seminar succeeded in its goal, which was to identify the most pressing issues and topics for research and policy in linking air pollution and human health. More than 340 researchers were subscribed to the seminar's discussion list, and there were approximately 77 postings, including six panel statements by invited experts. A summary of the discussions, which includes a list of resources and citations referred to by participants, is now online at <http://www.populationenvironmentresearch.org/seminars.jsp>

Discussions addressed a wide range of issues, including the contribution of air pollution to the global burden of disease, connections between particulate matter/ozone and asthma, indoor air pollution, household survey techniques, and new technologies for air pollution and health monitoring. Many of the postings focused on issues of relevance to developing countries, and especially developing country urban areas, though there was acknowledgement that much of the health research has been conducted in developed countries and that therefore the findings could not necessarily be generalized. Nevertheless, participants made reference to some recent studies in Mexico, China, India and Vietnam, which demonstrate that there is a growing body of research in developing countries as well.

PERN wishes you a very happy holiday season.

Alex de Sherbinin
Coordinator, Population-Environment Research Network
<http://www.populationenvironmentresearch.org/>

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