Steering Committee


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AIIMS New Delhi


Dr. Kalpana Balakrishnan
SRIHER, Chennai


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IIT Bombay

Secretariat


Dr. Harshal Ramesh Salve
AIIMS New Delhi


Dr. Sagnik Dey
IIT Delhi


Dr. Huma Nawaz
AIIMS New Delhi

CAPHER-India network members:

A total of 160 members such as academicians, research scholars and program managers from various government, non government and international organizations are currently a part of CAPHER network.

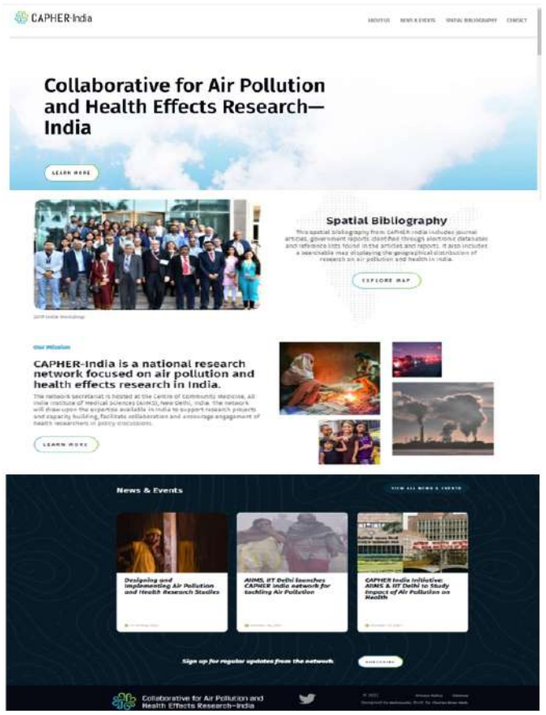
Inter disciplinary research working groups:

The five working groups on the following themes have submitted the proposals to different calls.
Group-1: Air Pollution and Child Health
Group-2: Air Pollution and Maternal Health
Group-3: Air Pollution and Communicable Diseases
Group-4: Development of exposure models/exposure and chronic diseases
Group-5: Effectiveness of interventions for improving Air Quality

CONTACT US

CAPHER-India Website

Learn more about CAPHER-India -
https://www.capherindia.org



Join us on twitter

Find us on twitter for updates on CAPHER activities and upcoming events.

How to Join CAPHER-India network:

- Write to the CAPHER Secretariat - capherindia@gmail.com
- To join the network, please complete the form- https://tinyurl.com/CAPHERIndia

CAPHER Secretariat
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CAPHER-India AHB/2021-22

CAPHER-India
Collaborative for Air Pollution and Health Effects Research-India

Air Health Bulletin

Launch of CAPHER-India

BACKGROUND:

Air pollution has been identified as an important risk factor for deaths and disability in India. A multi-sectoral approach with coordinated efforts is necessary to mitigate an impact of air pollution on human health. Continued research efforts are essential to identify gaps in current knowledge, effectiveness of existing interventions, mitigation measures and identification and validation of newer technologies to suggest effective strategy for combating air pollution to the policy makers.

What is CAPHER-India :

CAPHER-India is a dedicated network focused on air pollution and health effects research in India. It brings together teams of Indian researchers from various scientific disciplines including atmospheric chemistry, air pollution measurement and modeling, epidemiology, biostatistics, medicine, basic sciences and health policy with the following objectives-

- To build partnerships among research institutions to develop and implement research studies on health effects of air pollution
- To facilitate development of collaborative research proposals to fill critical evidence gaps
- To conduct capacity building exercises/programs targeted at early career researchers

CAPHER News Release:

CAPHER-India was officially launched on October 21,2021 by Prof. Randeep Guleria, Director, AIIMS, New Delhi and Prof. V. Ramgopal Rao, Director, IIT, Delhi. The launch of network was covered both in English and Hindi by different news outlet.

CAPHER-INDIA ACTIVITIES DURING 2021-2022

Virtual Workshop on Air Pollution and Health Effects Research in India :

A three day virtual workshop was organized jointly by AIIMS, New Delhi and IIT Delhi from 21st October to 23rd October, 2021. The workshop was attended by more than 300 researchers and experts in the field from air pollution and health from India and globally.

Workshop on Designing and Implementing Air Pollution and Health Research studies:

An in person three day hands on workshop was held from 17th May to 19th May,2022 at AIIMS ,New Delhi. About 30 participants were shortlisted from both exposure and health side to attend the workshop. Goals of the workshop were to augment knowledge and skills of early career researchers for designing research ,hands on experience of research proposal development and identification of opportunities for collaborations and funding of research

CAPHER-India Webinar Series :

As a part of training and capacity building for early career researchers the network launched a webinar series in February 2022.

- **WEBINAR-1: "Making a health case for clean household energy: The framing and conduct of the multi-country Household Air Pollution Intervention (HAPIN) Trial"** was conducted on February 16,2022. The speakers for the webinar were Dr. Kalpana Balakrishnan (Professor and Dean, SRIHER, Chennai), Dr. Naveen Puttaswamy (Assistant Professor, SRIHER, Chennai) and Dr. Gurusamy Thangavel (Senior Lecturer, SRIHER, Chennai). Speakers provided an overview of **HAPIN Trial** and lessons learnt from conducting large scale measurements and analysis.

- **WEBINAR 2: "Statistical approaches on Air pollution and health outcomes :Effect estimation in Environmental Epidemiology"** was conducted on 21st March,2022. Dr. Santu Ghosh (Assistant Professor, St. John's Medical College, Bangalore) and Dr. Tinku Thomas (Professor, St. John's Medical College, Bangalore) were speakers for the webinar. Speakers presented an overview of different statistical techniques related to estimation of effect of Air Pollution on relevant health end points and their interpretation.

SCIENCE NEWS

ABSTRACTS PRESENTED DURING CAPHER-INDIA WORKSHOP ON "AIR POLLUTION AND HEALTH EFEFCTS RESEARCH"

Quantifying long-term exposures to fine particulate matter (PM2.5) using real-time low-cost sensors among pregnant women in the Tamil Nadu Air Pollution and Health Effects (TAPHE-II) cohort, India

Background: Low-cost sensors (LCS) offer spatially and temporally resolved real-time PM monitoring capabilities that can capture long-term exposures to household air pollution and a better estimate of pregnancy period exposures to PM2.5.

Methods: Indigenously built real-time PM sensors were used to monitor living room PM2.5 concentrations in a sub-set (n=50) of the TAPHE-II cohort households (n=300) from rural (n=23) and urban (n=27) locations of the Tamil Nadu. The LCS recorded PM, T and Rh at 1-minute time interval and transmitted data in real-time to cloud. Pump and filter (37mm PTFE, 0.2µm) set-up was collocated for 24-h in 16 rural and urban households. In addition, the LCS were collocated with reference grade BAM monitor to derive calibration co-efficient.

Results: Continuous PM data was monitored on average (s.d.) for 26 (11) and 74 (43) days in rural and urban households, respectively. Correlation between 24-h gravimetric and uncalibrated real-time PM2.5 levels were 0.62 (p=0.000) and 0.36 (p=0.014) among rural and urban households, respectively. Typical daily average PM2.5 levels were high during evening cooking especially in exclusive biomass fuel users followed by mixed fuel and liquefied petroleum gas (LPG) users.

Authors:Naveen Puttaswamy, Sreekanth Vackacherla , Adithi Upadhyay , Sudhakar Saidam , Ashwini Reddy , Kokila Armugam, Mangalam Sundaram , Rengaraj Ramasamy , Ronak Sutaria , Manoj Sahukar , Sankar Sambandam , Kalpana Balakrishnan

Impact of Pradhan Mantri Ujjwala Yojana (PMUY) on household cooking fuel use and respiratory morbidity among women and under five children and challenges implementation of PMUY scheme

Rationale: Despite an increased impetus on promoting clean cooking fuels for household usage, clean fuels adoption is sub-optimal.

Methodology: A community-based cross-sectional study was conducted in a random sample of 450 rural households of Ballabgarh. Patterns and determinants of clean cooking fuel usage was studied among rural households. Women participants and their under-five children were assessed for their respiratory health status using semi-structured questionnaires. Enablers and barriers to adoption of PMUY scheme were explored using qualitative research techniques.

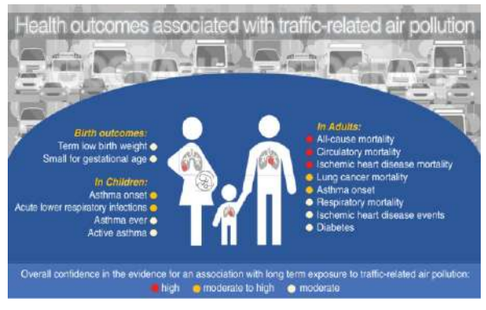
Results: The use of unclean cooking fuel, mixed cooking fuel and exclusive use of LPG was found to be 59.6%, 71.8%, 11.3% respectively. Overall, 12% of the households were utilizing PMUY, scheme. PMUY enrolled households were found to be associated with usage of unclean fuel (OR= 3.63; 95% C. I.= 1.3-9.6, p= 0.01). A statistically significant difference was present in peak expiratory flow rates among PMUY and non-PMUY study mothers. The key facilitators were convenience and reduced need to collect biomass fuel whereas the main barriers were high initial cost LPG gas connection, difficulties in LPG cylinder refilling and gastric related concerns of gas cooked food.

Conclusion: The implementation of PMUY scheme is marred by significant barriers leading to continued mixed fuel use.

Authors: Preety, K Anand, Rakesh Kumar, Harshal R. Salve

NEW GLOBAL REPORT : LONG TERM EXPOSURE TO TRAFFIC RELATED AIR POLLUTION

Health Effects Institute, Boston, USA released a comprehensive new scientific review that finds growing confidence in the links between several adverse health effects and traffic related air pollution (TRAP). The review, conducted by a panel of thirteen renowned experts found a high level of confidence that strong connections exist between TRAP and early death due to cardiovascular diseases. Moreover, a strong link was also found between TRAP and lung cancer mortality, asthma onset in children and adults, and acute lower respiratory infections in children



Institute HE. Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution [Internet]. Health Effects Institute. 2022