

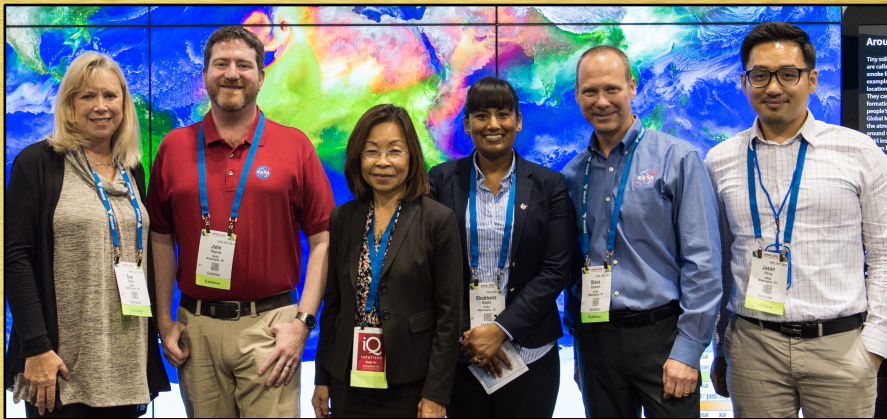
# NASA Health and Air Quality

remote sensing for public health

end of the year joint issue!

**volume 6&7**

november & december 2016



Photos by a kind APHA Attendee

**Earth Science Division shares examples of using NASA observations to address issues in public health at the 2016 American Public Health Association Annual Meeting and Expo in Denver, Colorado, October 29th - November 2nd, 2016.** NASA Hyperwall speakers shared stories on: 1) modeling of mosquitos and mapping diseases; 2) global transport of aerosol and trace gases, 3) air quality applications of NASA observations; and 4) the use of NASA Earth observations to address vector-borne diseases, and harmful algal blooms. The NASA booth was awarded first-prize at the APHA Expo. More photos on page 3.



Photos by Shobhana Gupta

**Health and Air Quality Applied Sciences Team holds inaugural meeting at Emory University in Atlanta, Georgia, November 3rd - 4th, 2016.** Investigators funded by NASA HAQAST discussed their research and identified opportunities for collaboration and impact. A public meeting introduced the HAQAST team to a broader audience, and engaged regional and national stakeholders to share their experiences using NASA data and products, and their information needs. More photos on page 4.

## upcoming:

### Meetings:

**American Meteorological Society**  
January 22-26, 2017  
Seattle, WA

**National Conference & Global Forum on Science, Policy, & the Environment**  
January 24-26, 2017  
Washington, DC

## Our Research in the News

- NASA satellite images capture crop fire smoke, which contributed to hazardous levels of air pollution in northern India. **New York Times.**
- San Marino, CA's Huntington Library hosts NASA Orbit Pavilion, a sound installation that tracks movements of the International Space Station and NASA's 19 satellites as they orbit Earth. **Los Angeles Times.**



Photo from NASA JPL

- Cyclone Global Navigation Satellite System (CYGNSS) of eight small satellites launched and set to measure ocean surface wind properties and help understand air-sea interactions at inner cores of storms. **CBS News.**
- GOES-R launches, primed to significantly improve monitoring of environmental phenomena and weather forecasting. **Forbes, CNN.**

## HEALTH AND AIR QUALITY APPLICATIONS APPLIED SCIENCES PROGRAM

**JOHN HAYNES**

PROGRAM MANAGER  
HEADQUARTERS

**SUE ESTES**

ASSOCIATE  
MARSHALL SPACE  
FLIGHT CENTER

**ALI OMAR**

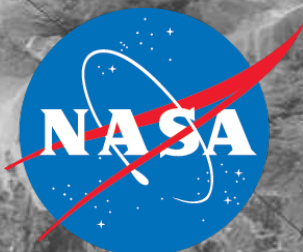
ASSOCIATE  
NASA-LANGLEY  
RESEARCH CENTER

**SHOBHANA GUPTA**

AAAS S&T POLICY FELLOW  
HEADQUARTERS

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haQ



SPOTLIGHT

## CLIMATE SCIENCE SPECIAL REPORT - ONGOING PUBLIC COMMENT PERIOD

USGCRP seeks public comment on third-order draft of Climate Science Special Report (CSSR). The report provides updated climate science findings and projections, and is an important input to the authors of the next quadrennial NCA (NCA4), expected in 2018. The comment period ends 3 Feb, 2017.

## publications

Hydroclimatic sustainability assessment of changing climate on cholera in the Ganges-Brahmaputra basin

*Nasr-Azadani F et al  
Advances in Water Resources*

## resources

for our community

### CLIMATE CHANGE AND HUMAN HEALTH LESSON PLANS

Educational materials from the National Institute of Environmental Health Sciences to engage students in discovery and learning about the interactions between climate change, the environment, and human health.

### PARTNERSHIP FOR RESILIENCE AND PREPAREDNESS

Public-private collaboration that provides collections of data, insights and tools to empower a data-driven approach to climate resilience.

### MAPPING BROADBAND HEALTH IN AMERICA

Visualize, overlay and analyze broadband connectivity and health data at national, state, county levels.

## WHAT'S NEW IN THE FIELD?

### HEATWAVES AND HOSPITAL ADMISSIONS FOR MENTAL DISORDERS IN NORTHERN VIETNAM

*Plos One*

**May 19, 2016**

Phan Minh Trang et. al. find positive associations between heat exposure and hospitalizations for mental illness in Northern Vietnam, with relative risks increasing with length of the heatwaves. Impacts were observed in both males and females, and in all ages studied.

### SOURCES OF VARIATION IN UNDER-5 MORTALITY ACROSS SUB-SAHARAN AFRICA: A SPATIAL ANALYSIS

*The Lancet Global Health*

**October 25, 2016**

Marshall Burke et. al. identify that sub-national mortality is a more accurate, and potentially more actionable determinant than country-level statistics. Within-country mortality levels are significantly related to local temperature, malaria burden, and recent history of conflict.

### THE COST OF AIR POLLUTION : STRENGTHENING THE ECONOMIC CASE FOR ACTION

*Report by The World Bank and  
Institute for Health Metrics and  
Evaluation, University of  
Washington, Seattle  
2016*

The report estimates \$225 billion in lost labor income, or \$5.11 trillion in welfare losses worldwide attributable to air pollution-related premature deaths in 2013. The Global Burden of Disease approach emphasizes the need ministries of environment and health to work together to deal with this issue.

Do you have an Earth  
science problem that can  
be addressed with NASA  
data and products?

Submit a Challenge Idea  
for NASA's International  
Space Apps Challenge!

Engage **15,000+** technologists, coders, and designers at **150+** locations around the world to use NASA Earth data and build innovative solutions for challenges YOU suggest, at the **World's Largest Global Hackathon!**

For more information, please contact [shobhana.gupta@nasa.gov](mailto:shobhana.gupta@nasa.gov)  
To participate in the Challenge, please visit [spaceappschallenge.org](http://spaceappschallenge.org)

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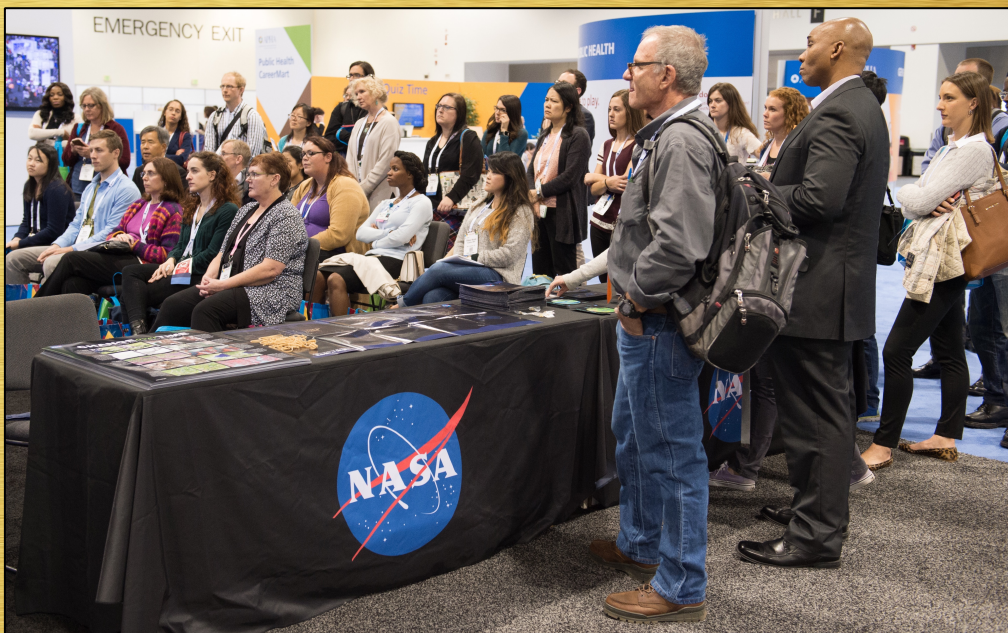
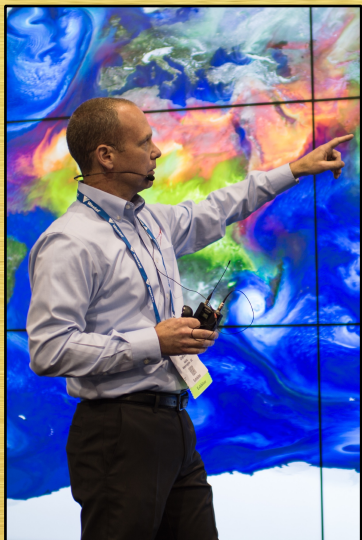
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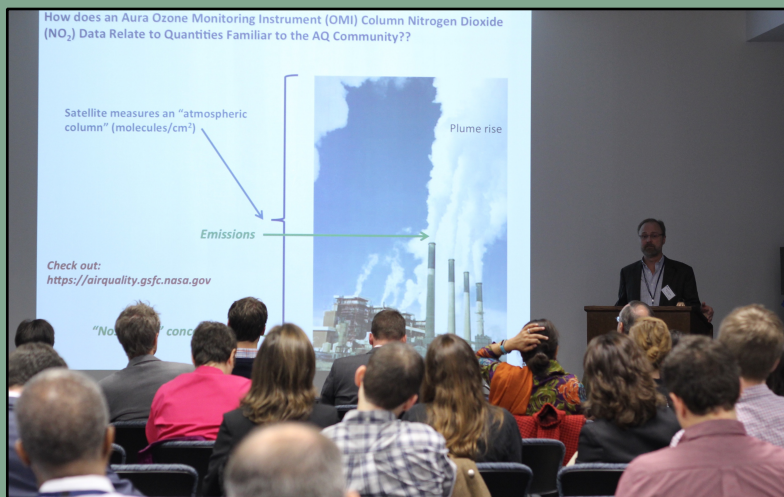
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## NASA EARTH SCIENCE DIVISION SHARES EARTH OBSERVATIONS DATA, PRODUCTS AND THEIR APPLICATIONS FOR PUBLIC HEALTH ISSUES AND ENGAGES ATTENDEES AT THE 2016 AMERICAN PUBLIC HEALTH ASSOCIATION ANNUAL MEETING EXPO



Photos by Jason Hong

## NASA GODDARD HOSTS AIR QUALITY AND HEALTH SHOWCASE



Photos by Shobhana Gupta

First-ever Air Quality and Health Showcase was held on November 17th, 2016, at NASA Goddard Space Flight Center. The event allowed scientists to share NASA air-quality related data products, training resources, and cases of successful use of these resources to support decision-making with air quality and health professionals in the Washington area.

## HAQAST TEAM HOLDS INAUGURAL MEETING



Photos by Shobhana Gupta