

# **AIPS Final Report – Air Quality**

## **Grantee Information**

Name: Gabriel Filippelli

U.S. Institution: Indiana University-Purdue University Indianapolis (IUPUI)

Research Field: Air Quality and Health

## **Summary**

A greater awareness of the negative impacts of air pollution on public health has made this a prime issue in many countries. Pakistan currently has almost no air quality monitoring capabilities, thus it is difficult to assess the true impacts of air quality on health and nearly impossible to determine and eradicate the sources of air pollution. In line with a continued USG policy of constructing air quality monitoring facilities on Embassies and Posts in vulnerable countries, the posts in Pakistan are bringing a number of testing facilities on line. Dr. Filippelli, an Air Quality Fellow for Embassy Islamabad and an expert in air quality and health, delivered a series of lectures, workshops, and demonstrations to raise awareness of these issues and to build dialogs among university researchers, students, governmental, and non-governmental entities on this issue.

## **Scholar Bios**

Dr. Gabriel Filippelli is a Professor of Earth Sciences and Directs the Center for Urban Health at Indiana University. Filippelli is a biogeochemist with broad training in marine and terrestrial systems, as well as pollutant exposure and human health studies. Filippelli has published broadly, including publications in *Science*, *Nature* and *Geology* as well as in specialty journals and in popular press as a science blogger. He has personally directed over \$5M of research funding over his career, and is currently a co-PI on a \$55M award for Indiana University Prepared for Environmental Change Grand Challenge initiative. He has served as Associate Editor and Guest Editor of multiple journals, and is currently the Editor-in-Chief for the journal *GeoHealth*, published by the American Geophysical Union.

Filippelli is a Fellow of the International Association of Geochemistry, is an Air Quality Fellow for the Pakistan Embassy for the U.S. Department of State, and is a former National Academy of Sciences Jefferson Fellow, where he served as a Senior Science Advisor for the State Department, with a policy portfolio including Science Cooperation in the Arctic, Antarctic climate change, and Marine Debris and Plastics. The latter activity included being the State Department's chief contact for the Interagency Working Group on this topic, as well as serving as a delegate to several Marine Debris Meetings of the United Nations Environment Program and conducting an Education and Outreach mission to U.S. Embassies in South Africa and Namibia.

## **Workshops**

Please see appendix.

## **Lectures and Other Engagements**

Please see appendix.

## **Deliverables and Outcomes**

### **“Deliverables”**

- Two videos were created that highlight air quality and health in Pakistan. These videos were produced and released by the US Consulate in Lahore and the US Embassy in Islamabad, and were released during Air Quality Awareness week (April 29-May 3).
- Three workshops on air quality measurement and analysis were conducted—one each in Karachi, Lahore, and Islamabad (all noted in appendix section).
- Lectures were given at six universities, the NIH, the Parliamentary Services Office, an NGO group, and the EPA (all noted in appendix section).
- Several meetings occurred with EPA staff, US Embassy staff, NIH Director, and NGO representatives (all noted in appendix section).
- AIPS collected a PowerPoint on “Air Quality and Public Health” for a materials repository.

### **“Key Outcomes”**

- Dr. Filippelli developed a collaboration with Dr. Abida Farooqi of Quaid-i-Azam University in Islamabad to develop a research proposal on environmental health.
- Dr. Filippelli initiated a collaboration with Mr. Abid Omar of the Pakistan Air Quality Initiative to better measure and report air quality parameters in Pakistan.
- Dr. Filippelli shared approaches to building air quality networks with N.E.D. University and with Dadabhoy University.
- Diplomatic Impact below

## **Diplomatic Impact**

By interacting continually with individuals from a number of different sectors, including universities, governmental, NGOs, and US Embassy staff, Dr. Filippelli was able to understand the common interests and to promote open dialog on the important issue of identifying and combatting air pollution. Dr. Filippelli provided a series of examples from the US and abroad about different approaches that have been used to build air quality awareness and science, all of which bridged multiple sectors. Some of the open discussions included participants with very different views of how successful, or not, Pakistan has been at understanding and controlling air pollution. But even these frank and sometimes contentious discussions were approached with civility and mutual respect, if not agreement. Many of these important conversations occurred only because the platform was available and suitable for conversations about air quality, and proceeded in such a way as to clarify a simple path forward. Now, with the US posts bringing live air quality data online and open to the people of Pakistan, we may be seeing a key first step to dealing with this issue in a constructive and positive way.

## Appendix—schedule listing lectures and workshops



**VISIT OF DR. GABRIEL FILIPPELLI**  
PROFESSOR, DIRECTOR FOR URBAN HEALTH  
DEPARTMENT OF EARTH SCIENCES,  
INDIANA UNIVERSITY-PURDUE UNIVERSITY  
April 15-25, 2019

### **Monday, April 15 - KARACHI**

0220 Arrive in Karachi at 2:20am on Qatar Airways flight QR 604 from Doha.  
Overnight in Avari Hotel (Airport Pick Up by AVARI SHUTTLE)

1400-1600 **Meetings at Karachi Consulate**  
*Status:* Confirmed  
*Participants:* Jean Foster, Jason Green, local staff (c/o Ali, Umair)  
*Venue:* U.S. Consulate

Rest Overnight at Avari Hotel, Karachi

### **Tuesday, April 16 - KARACHI**

1000-1200 **Talk on “Air Quality in Pakistan: Interpreting Data and Improving Public Health Communication”**  
*Status:* confirmed  
*Participants:* 50-70 Students from relative departments  
*Venue:* Dadabhoy Institute of Higher Education  
DIHE Contact: **Capt. (Rtd.) Ahmed Zaheer**

1215-1345 **Lunch with Faculty and Administration and campus visit**  
*Status:* confirmed  
*Participants:* Selected faculty and researchers of institute (10-15)  
*Venue:* Dadabhoy Institute of Higher Education

1400-1600 **Workshop on “Air Quality Monitoring”, hands-on session in a mobile lab**  
*Status:* Confirmed  
*Participants:* 15-20 Selected academics and practitioners from around Sindh  
*Venue:* Dadabhoy Institute of Higher Education in association with EPA

1900-2100     **Dinner and Reception**  
*Status:* confirmed  
*Participants:* 50 guests (including workshop participants/ local officials)  
                  *And embassy colleagues:* Jean Foster, Jason Green, Saif Jiskani  
                  local staff  
*Venue:* Gymkhana (Main Dining Hall)  
Reception Contact: Capt. (Rtd.) Ahmed Zaheer

**Wednesday, April 17 – KARACHI AND LAHORE**

1000-1100     **Talk on “Air Quality in Pakistan Title: “Air Quality in Pakistan: Interpreting Data and Improving Public Health Communication”**  
*Status:* Confirmed  
*Participants:* 200 civil and environmental engineering students  
*Venue:* N.E.D. University  
Coordinator: Ali Chauhan, / Umair, U.S. Consulate, Karachi  
NED Contact: Engr. Danish ur Rehman Khan

1200           **Possible Lunch meeting -- Open**  
1900           **Evening travel to Lahore** (Departing 7 pm via Serene Air Flight ER 524)  
AIPS Colleague ‘Shahzad Iqbal will accompany on the flight to Lahore

**Rest overnight at AIPS—Lahore Guest House in DHA**

**Thursday, April 18 – LAHORE**

1100-1230     **Key Note Address by Dr. Gabriel Filippelli on “Air Quality and its Impact on Urban Health”** along with other panelist Ms. Romina Khursheed Alam (Member National Assembly & member SDGs task Force) at Student Convention hosted by Pakistan Inter-University Consortium.  
*Status:* Confirmed  
*Participants:* 300 + students, faculty and researchers from across Pakistan  
*Venue:* Royal Palm Club, Canal Road  
Convention Coordinator Contact: Mr. Murtaza  
*Consulate Participant:* Political Specialist Sadaf Saad

1230-1330     **Lunch with hosts**

1400-1600     **Meetings with U.S. Consulate Officials**  
                  1400-1430     Meeting with Consul General Colleen Crenwelge and  
  Political-Economic Chief Ann Mason  
                  1430-1500     Air quality video shoot with Public Affairs Section  
                  1500-1600     Air quality discussion with American staff

1900-2100     **Dinner and Reception**  
*Status:* Confirmed  
*Participants:* 50 Guests (VCs, Deans & officials including Consulate Officials)

*Venue:* Gymkhana (Banquet Hall):

*Jymkhana Coordination:*

*Consulate Participant:* Political-Economic Chief Ann Mason

**Friday, April 19 – LAHORE**

0930-1030 **Meeting with Air Quality Asia Representatives**

*Status:* **Confirmed**

*Participants:* Political-Economic Chief Ann Mason and Consulate staff

*Venue:* US Consulate-General Residence

*Consulate Coordinator:* Political-Economic Chief Ann Mason

1100-1230 **Workshop on “Air Quality Monitoring”, with portable equipment on hand**

*Status:* **Confirmed**

*Participants:* 15-20 Selected academics and practitioners from around Punjab

*Venue:* Comsats Univ, Lahore campus, Raiwind Road, Lahore

*Comsat-Lahore--* Dr. Robina Farooq, Professor, Head ORIC / Head, Chemistry

*Area of Interest:* Waste Remediation Technologies

*Consulate Participant:* Facility Manager Naeem Ibrahim

1230-1315 **Campus Visit / Refreshments**

1400-1600 **Meeting / Discussion with CEO, Lahore Waste Management Company & Lahore Smog Cell Officials**

*Status:* Confirmed

*Participants:* Mr. Khalid Nazeer Wattoo (CEO) and Smog Cell officials

*Venue:* Lahore Waste Management Company (Shimla Pahari), Lahore

*Contact person:* Mr. Khalid Pervaiz

*Consulate Participant:* Political Specialist Sadaf Saad

**Saturday, April 20 – Rest in LAHORE**

**Sunday, April 21 – Travel to ISLAMABAD via AIPS car with accompanying staff (Shahzad Iqbal + M Sabir)**

1400 Depart Lahore

1800 Arrival in Islamabad

Rest overnight at Ramada Hotel, Islamabad

**Monday, April 22 – ISLAMABAD**

0930-1200 **Round Table Discussion on Air Quality & Air Pollution**

*Status:* Confirmed

*Participants:* 20-25 young researchers and junior faculty with Federal Secretary

Climate Change (Mr. Hassan Nasir Jami) also attending  
*Venue:* COMSATS Headquarters, G-5  
COMSATS (HQ) Contact: Mr. Nisar Ahmad

1200 – 1300 **Lunch at venue**

1400-1530 **Earth Day Seminar on “Air Quality in Pakistan: Interpreting data and improving public health communication”**

*Status:* Confirmed

*Participants:* 150 Students, faculty and officials from across Islamabad

*Venue:* Center for Climate Change, Research, and Development, Comsats

University

Comsats CCRD Contact: Mr. Saghir Ahmad

1630-1715 **Meet-Up with Michael Sullivan, ECON Counselor**

*Status:* Confirmed

*Participants:* Michael Sullivan, Matt Williger

*Venue:* Islamabad Club, Main Hall

1730-1900 **Earth Day Reception**

*Status:* Confirmed (AIPS to send invites)

*Participants:* 50 guests (AIPS 20, Embassy 30 Guests)

*Venue:* Islamabad Club (Saddle Lounge – Outside Area)

## **Tuesday, April 23 – ISLAMABAD**

1015-1200 **“PUAN Talks” Panel Discussion as arranged by U.S. Embassy**

*Status:* Confirmed

*Participants:* Panelists include Government of Pakistan representative, U.S. government representative, Pakistan academic or civil society representative, Dr. Gabe Filippelli. Participants include 20-30 professionals, alumni, and EPA staff.

*Venue:* EPA

*Embassy Coordinator:* Yoon

1230-1330 **Brownbag Lunch with Larger Embassy Community Concerned about Air Quality Issues (Consulates via DVC)**

*Status:* Confirmed

*Participants:* Approximately 20 Embassy staff and Consulates will join via DVC

*Venue:* U.S. Embassy American Center

*Embassy Coordinator:* Monica

1330-1400 **Lunch in Embassy Cafeteria**

*Status:* Confirmed

*Participants:* Monica, Matt, others

*Venue:* U.S. Embassy

*Embassy Coordinator:* Monica

- 1400-1500     **“Tea Time” Radio Interview Recording and Studio Recording for the Embassy’s Social Media Platforms**  
*Status:* Confirmed  
*Participants:* Monica, Matt, Will, Courtney  
*Venue:* U.S. Embassy  
*Embassy Coordinator:* Monica
- 1500-1600     **Meeting with Embassy Staff, including Air Quality Working Group Members, Facilities**  
*Status:* Not Confirmed  
*Participants:* Monica, Matt, other members of the Embassy  
*Venue:* U.S. Embassy Conference Room 1210 (booked)  
*Embassy Coordinator:* Monica

**Wednesday, April 24 – ISLAMABAD**

- 0900-1030     **Lecture at the National Institute of Health as coordinated by CDC**  
*Status:* Confirmed  
*Participants:* 30-40 NIH Staff  
*Venue:* NIH  
*NIH Contact person:* Mr. Jamil Ansari, Senior Scientific Officer, National Institute of Health
- 1130-1300     **Roundtable Session on “Air Quality and Air Pollution in Pakistan”**  
*Status:* Confirmed  
*Participants:* 20-25 Parliamentarians, senators serving on Climate Change and Health committees along with PIS researchers and analysts  
*Venue:* Pakistan Institute of Parliamentary Services (F-5, Islamabad)  
*PIPS Contact:* Mr. Muhammad Rizwan Manzoor
- 1300-1400     **Lunch at Venue (PIPS)**
- 1430-1600     **Interactive Meeting with NGOs representatives**  
*Status:* Confirmed  
*Participants:* 20-25 Representatives of HRDN, IRM, AHKRC, NRSPs  
*Venue:* HRDN (IRM Building, Park Road, Islamabad)  
*HRDN/IRM Contact:* Ms. Maria Qibtia, HRDN/IRM

**Thursday, April 25 – ISLAMABAD**

- 0305            Depart from Islamabad at 3:05am on Qatar Airways flight QR 633 to Doha, then onwards to Chicago and Indianapolis