



AQ Tech Talk: Developing City-Level Air Quality Forecasting, The Mexico City Experience

Many of the places with the highest level of pollution have the least information to work with to know their air quality and manage it accordingly. While there is a growing number of globally available, publicly funded, open resources for tracking, forecasting, and attributing pollution, these resources are often spatially coarse and rarely incorporate the full set of locally available information on emissions and/or ambient air. One solution for city air quality managers to prevent the city's exposure to high levels of pollution is to track their air quality through a locally driven forecasting tool. In this way, cities can more effectively implement response protocols and coordinate effective action. WRI's own Beatriz Cardenas and Armando Retama, will speak about the processes and challenges of developing city-level air quality forecasting using Mexico City as a case study. The speakers will lead a discussion about the challenges that air quality officers and forecast model developers faced and lessons learned in Mexico City, including advice for city air quality managers to effectively communicate air quality forecasts to their stakeholders. This webinar will also include brief commentaries from city representatives from Bogota, Quito, and Mexico City who have experience implementing air quality forecast models in their respective cities.

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The Air Quality Tech Talk series covers key topics around technology and science in air quality, with an emphasis on learning from experiences and projects happening around WRI's global offices.

Speakers:

- **Beatriz Cardenas - Director and Global Co-Lead, Air Quality, WRI Mexico**

- Beatriz Cardenas is the Co-Director of Air Quality at WRI Mexico. She is an expert in air pollution, with experience in both science and policy, from the study of biological processes to treat air pollutants, to the design and implementation of integrated policies to achieve clean air. She joined WRI to lead air quality work at WRI Mexico and works on developing strategies and programs to accelerate the path to a cleaner air. Prior to join WRI, she was the General Director of Air Quality Management, during 2017 and 2018, in Mexico City's Secretary of Environment. For more than a decade, she led the air pollution experimental research area at the National Institute of Ecology and Climate Change. She worked as air quality project leader at Centro Mario Molina in Mexico City and Director of Air Quality at the Megalopolis Environmental Commission for central region of Mexico. Beatriz was Fulbright-Garcia Robles scholar at the University of Massachusetts Amherst, where she got a MS and PhD in Environmental Engineering. She is a Biochemical Engineer from the Autonomous Metropolitan University, an alumni of the Lead Mexico (Cohort 10), and holds a degree in Advance Studies in Environmental Diplomacy from the University of Geneva.

- **Armando Retama - Former Air Quality Monitoring Director, Mexico City; Consultant, WRI Mexico**

- Armando Retama is the former Air Quality Monitoring Director of Mexico City and is now an air quality consultant at WRI. From 2000 to 2006, he was on charge of the operation of the Mexico City air quality monitoring network and from 2007 to 2016 he was the Director of the Air Quality Monitoring Program. In 2012, he and his team initiated the work towards a air quality forecast model. From 2015 to 2017 he led the research project in collaboration with the Barcelona Supercomputing Center, to implement the Air Quality Forecast System for Mexico City, which was launched publicly in February 2017. Since 2017, he has been alternating his fieldwork with scientific collaborations focused on understanding of the air quality problems in Mexico City - the results has been published in several peer-review papers.

- **Monica Jaimes-Palomera - Deputy Director of Modelling and Analysis, Mexico City Secretary of Environment**

- Monica Jaimes-Palomera is the Deputy Director of Modeling and Analysis for the Mexico City Secretary of Environment where she coordinates the analysis of data from air quality monitoring networks and their special air quality monitoring campaigns. She is responsible of the publication of the annual air quality monitoring report, technical air quality reports and the air quality index. Since its development 8 years ago, she has been involved in the development of the air quality modeling forecast for Mexico City which since February 2017, publish daily the 24 h air quality forecast for Mexico City Metropolitan Area. Monica has a B.S. in Biology and Applied Statistics and a MSc. and PhD in Environmental Engineering from the National Autonomous University of Mexico.

- **Valeria Diaz-Suarez - Coordinator, Metropolitan Atmospheric Monitoring Network of Quito**

- Valeria Diaz-Suarez is the Coordinator for the Metropolitan Atmospheric Monitoring Network of Quito since 2010. Valeria was responsible for the establishment of the Secretary of Environment's air quality laboratory, which conducts passive monitoring of PM10 and PM2.5. She leads the participation in various research networks on regional and global atmospheric issues such as C40, Arcal projects for the characterization of PM10 and PM2.5 particulate matter and identification of sources. Valeria holds a B.S. in Chemical Engineering and a MSc. in Analytical Chemistry.

- **Edison Yesid Ortiz Duran - Leader of Integrated Air Quality Modeling System, Bogota's District Secretary of Environment**

- Edison Ortiz is the Leader of Integrated Air Quality Modeling System at Bogota's District Secretary of Environment. He has a MSc. Chemical Engineer & MSc in Environmental Engineering from National University of Colombia and is an expert in atmospheric sciences and atmospheric forecast models.

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