

Earth Observations to Support Air Quality Management in Developing Countries: Opportunities for Latin American Countries and Researchers

Juan J. Castillo

jcastillo@cleanairinstitute.org

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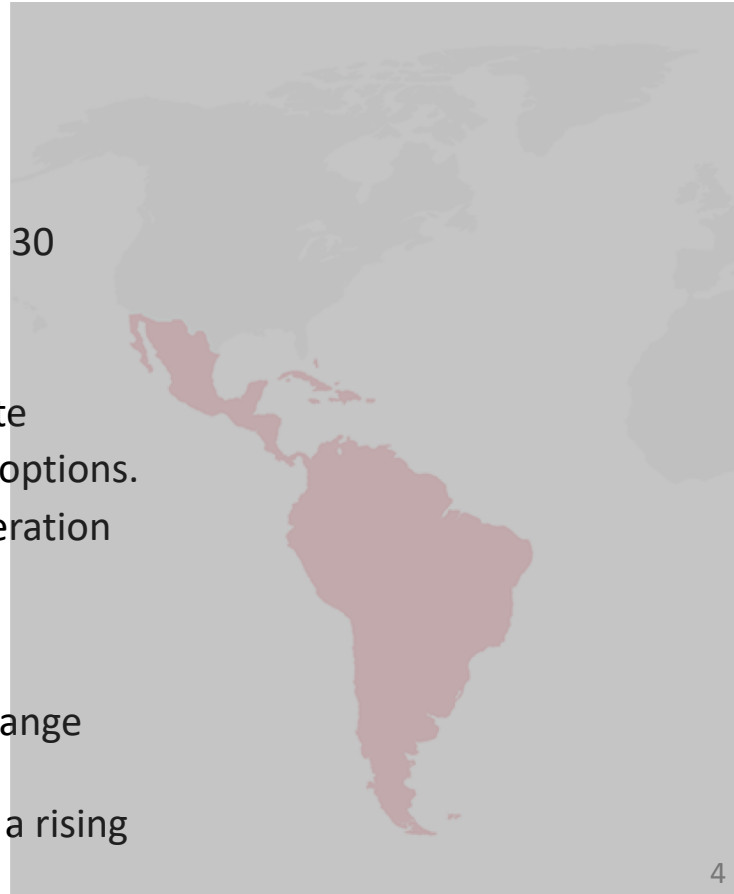


Clean Air Institute is international organization based in Washington DC and major focus in Latin America and the Caribbean

We catalyze processes to develop and implement effective large scale solutions to reduce air pollution, mitigate climate change and protect public health at local, national and regional scales

ABOUT LAC REGION

- Demographics
 - 33 countries
 - 80% people living in cities
 - 620 million inhabitants
 - ~35% of urban population live in 30 major metropolitan areas
- Air Quality Challenges
 - Rapidly growing motorization rate
 - Insufficient sustainable mobility options.
 - Industry, oil and gas, power generation and mining activities + poor land planning
 - Agricultural burning, forest fires, biomass cooking, erosion, long-range transport of pollutants
 - Ports and maritime emissions are a rising concern



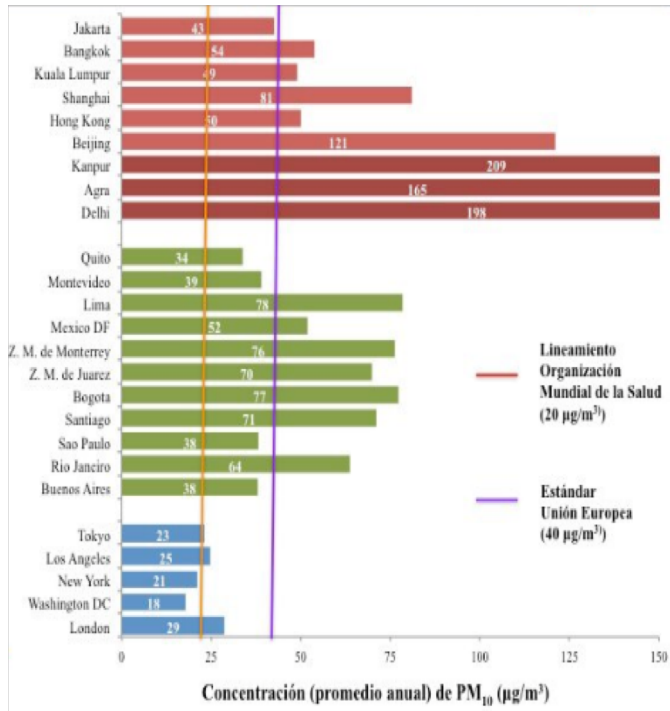
AIR QUALITY IN LAC REGION

+150 million

Latin Americans live in areas
where WHO air quality
guidelines are exceeded

Cochabamba, Bolivia

HOW BAD IS THE PROBLEM?



MEDELLIN LIVING

Pollution in Medellín: a Major Concern for Expats Living in the City



Multimedia > Galleries

Toxic Haze Blankets Chile's Capital with Thick Air Pollution

MEDIO AMBIENTE

Alerta por contaminación en México



RESPONSES TO AIR POLLUTION

- Air Quality Management
 - 21 countries have air quality standards. 13 have laws, policies, or regulations.
 - 20 countries have information on ground level outdoor air quality.
 - 9 countries implement QA/QC procedures.
 - Seven countries have AQMP at the national level or in at least one city.
 - Regional Action Plan on Air Pollution adopted by the Forum of Ministers of Environment of Latin American and the Caribbean in 2014 and ratified in 2016
- Stakeholder Engagement:
 - BreatheLife Campaign
 - Research Groups
 - National Conferences

"Historical Analysis of Population Health Benefits Associated with Air Quality in Mexico"



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Congreso Colombiano y Conferencia Internacional CASAP

Calidad del Aire y Salud Pública

Gestión de la calidad del Aire
Retos y Alternativas para la Salud Urbana

septiembre 6
septiembre 8 **2017**
Santiago de Cali
Colombia

A REGION OF OPPORTUNITIES



“Our Mission is to bring the power of NASA science down to earth and deliver it into your hands”

<https://haqast.org/>

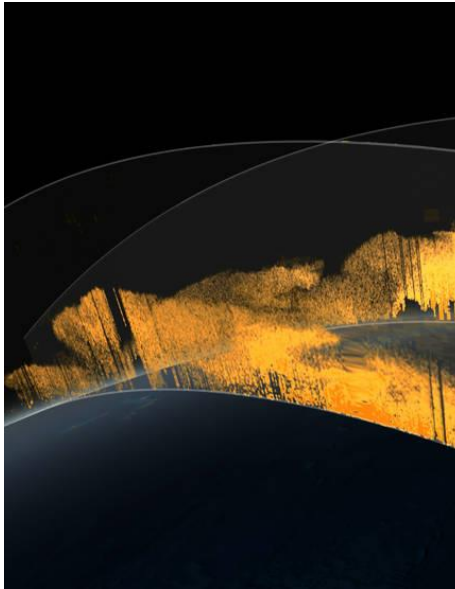
A REGION OF OPPORTUNITIES

Strengthen of Air Quality
Management Systems



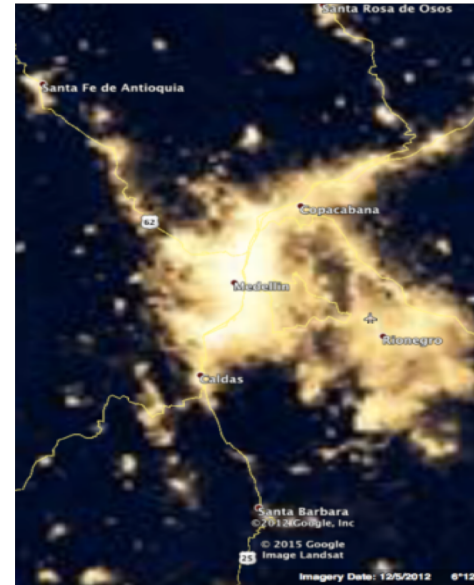
Fires in México's Yucatan
Province (NASA)

Comprehension of
Regional Phenomena



NASA Saharan Dust Transport
Simulations

Supporting Education and
Awareness Programs



Night Lights. Medellín
(Colombia), Google

A REGION OF OPPORTUNITIES

Key Opportunities

- Public health research and policies
- Improved forecasting capabilities/early warning systems
- Better characterization of air quality nationally and regionally

Requirements

- Ground Air Quality Monitoring
- Understanding of regional relationship between the real-time monitoring and satellite data to adapt the US model.
- Tools and skills for data presentation and correct usage/interpretation.

Fundamental Challenges

- Identify key stakeholders and champions
- Consolidation of Health Databases.
- QA/QC in air quality monitoring networks
- Incorporation of results and tools in policy making processes

KEY MESSAGES

- LAC Region has the potential, interest and capacity to become a region to foster the usage of earth observation to support air quality management and public health protection.
- Reliable air quality and health databases in still a challenge across the region.
- Major LAC capitals (Mexico City, Sao Paulo, Santiago, Medellin) with more advanced monitoring networks. Focus in those cities would allow to demonstrate application in LAC.
- Successful application of earth observations require stakeholder engagement from the academy and public sector.

Juan J. Castillo
Executive Director
Clean Air Institute
jcastillo@cleanairinstitute.org

Thank You