



WRI MÉXICO

UNECE AIR CONVENTION (LRTAP)
3RD EXPERT PANEL ON CLEAN AIR IN CITIES (EPCAC)

PART 5 ACTIONS AT THE CITY LEVEL, EXPERIENCES LINKING AIR AND CLIMATE
ACTIONS

AIR QUALITY IN CITIES FROM THE GLOBAL SOUTH

November 29th
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AIR QUALITY AND CLIMATE IN CITIES

- Air quality and Climate change are usually disconnected areas in the ministries
- Air quality areas may have or build **tools** that could be useful to ease the integration or to identify links
 - Emissions inventories: Cities generally do not have integrated emissions inventories. Over the years cities have built GHG emissions inventories but not air pollutants EI (maybe because there is more funding in Climate change?)
 - Air quality forecast: In addition to communicate in advance to protect health impact (particularly the most vulnerable), cities need to have tools to predict high pollution events (forest and agricultural fires, stability events, dust intrusion)
 - Health impacts (air quality) due to interventions (i.e. electromobility, transportation improvements, active mobility, low emission zones): Sometimes confusion about what indicators could be built to evaluate better (air quality changes (ambient), emissions changes, personal exposure).

SOME IDEAS TO INCREASE LINKAGES OF AIR QUALITY AND CLIMATE IN CITIES

- Tools:
 - Air Quality and Met monitoring
 - Integrated Emissions inventories
 - Air Quality forecast
 - Health Impacts assesment tools

SOME EXAMPLES OF TOOLS FOR CITIES

- Adjusted air quality forecast
- Integrated emissions inventories in Guadalajara Metro

SOURCE AWARENESS: DATA & TOOLS

Cities around the world struggle to find the financial and human capital resources to understand the levels, sources and impacts of air pollution.

Many of the places with the highest levels of pollution have the least information on their air quality, preventing them from managing it accordingly.

However, there are a growing number of globally available, publicly funded, open resources for tracking, forecasting and attributing pollution.

This information can be used to improve local ambient air monitoring, allowing for changes in air pollution that improve lives and protect the environment.

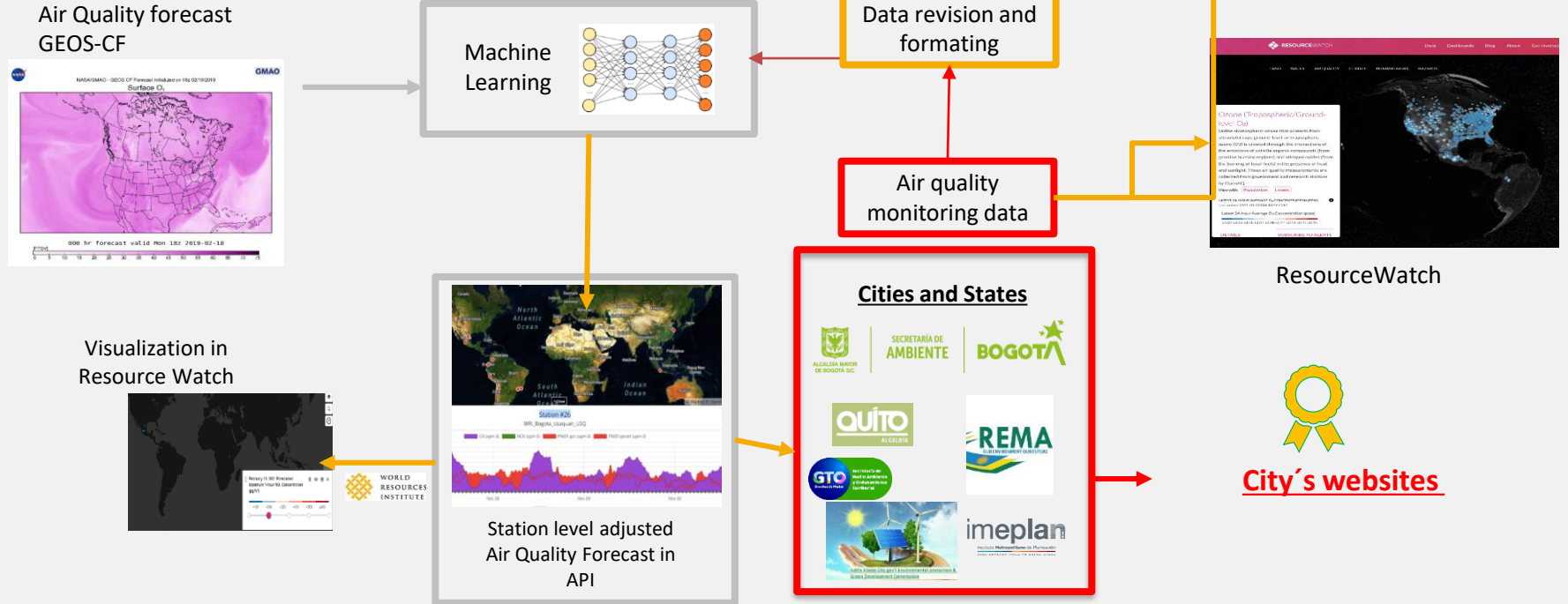
CityAQ is a partnership with WRI, NASA Global Modeling and Assimilation Office (NASA-GMAO) and eight cities to develop a global air quality monitoring system that provides cost-effective, reliable and timely data to air quality and health professionals.

- Produce forecasts for participating cities
- Design user interface
- Design workflow to enable scale
- Specialized capacity building

Participating Cities: Kigali, Rwanda; Guanajuato State & City of Leon, Mexico; Bogota, Colombia; Jalisco State & Guadalajara metro area, Mexico; Rio de Janeiro, Brazil*; Quito, Ecuador*; Mexico City**, Mexico; Jakarta metro area, Indonesia; Addis Ababa, Ethiopia

* Prior work w/ NASA
** observer

STATION LEVEL AIR QUALITY FORECAST

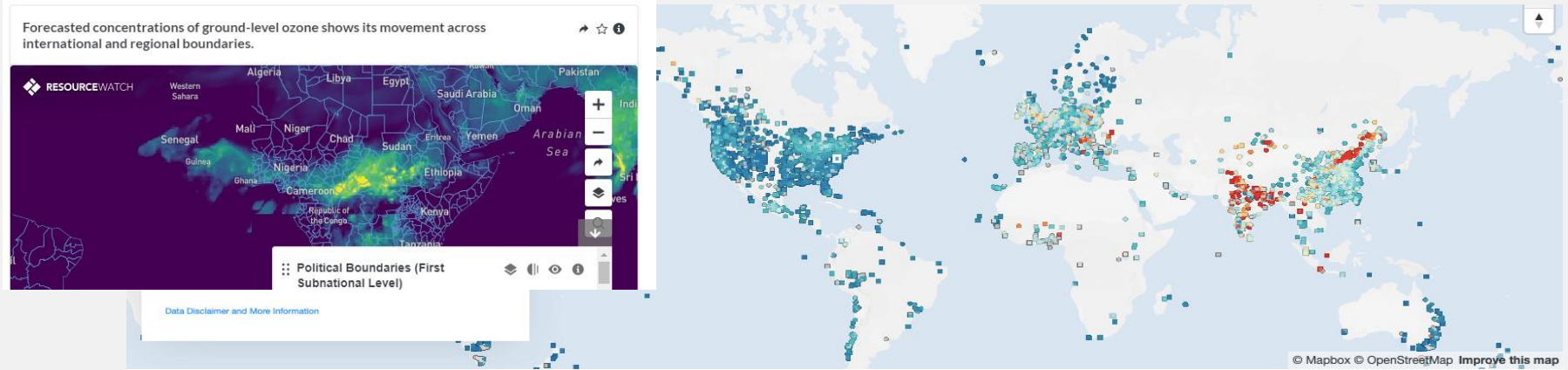


SOURCE AWARENESS: DATA & TOOLS

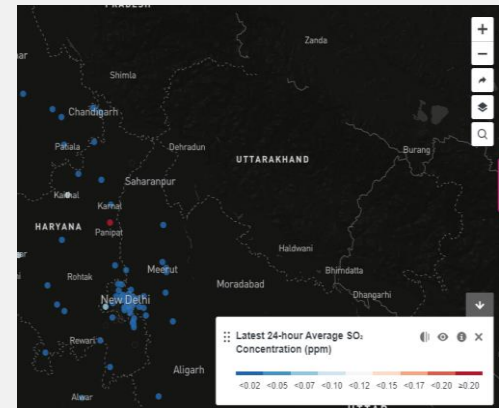
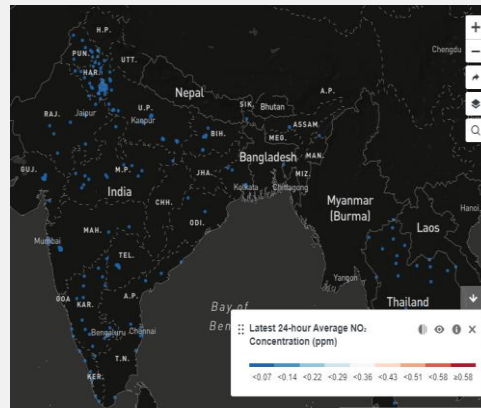
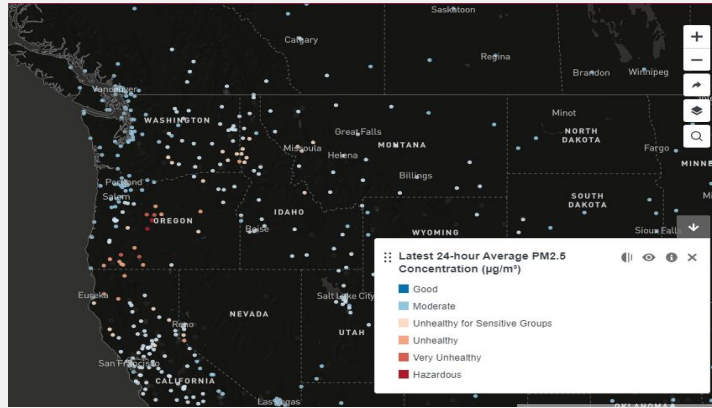
Air Quality Dashboard on Resource Watch

One Atmosphere

Atmospheric circulation drives the distribution of air pollutants beyond the immediate boundaries of the source. In the process, chemical reactions and physical processes can reconfigure the mixture of air pollutants. The result is a "cocktail" of air pollutants that influences air quality across local, regional, and international boundaries.

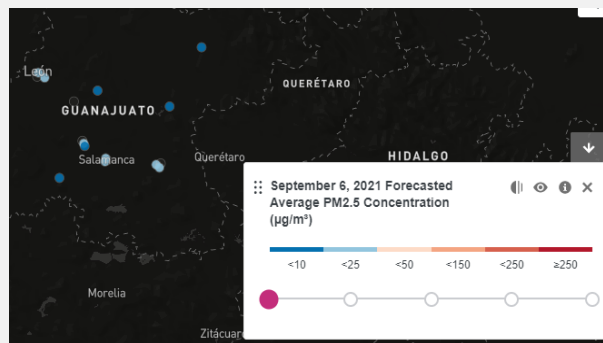
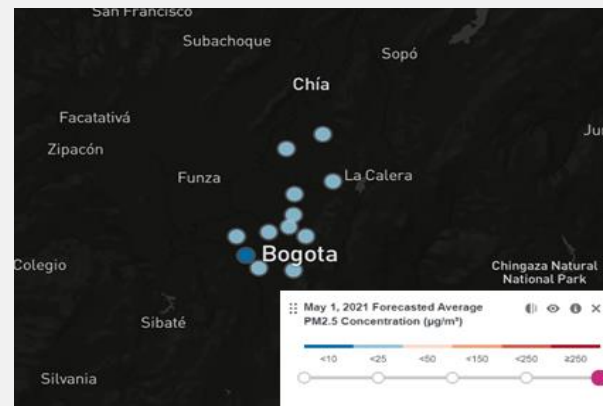
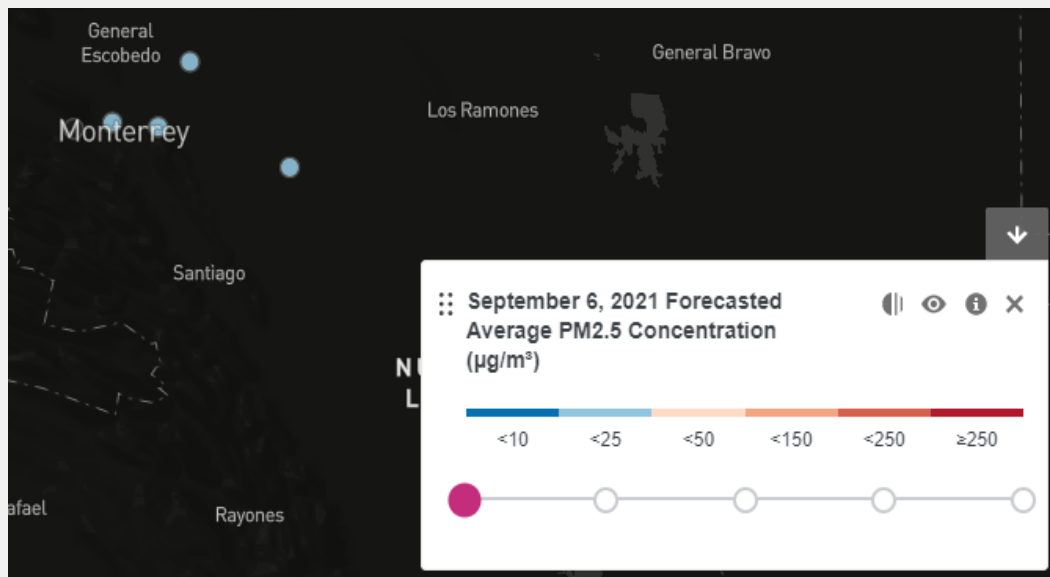


SEMI-REAL AIR QUALITY DATA IN RESOURCE WATCH



Fuente: Resource Watch nota de Open Aq. Importante incluir una imagen de América latina

Station Level Air Quality forecast



LOCALIZED AIR QUALITY FORECAST

RESOURCEWATCH

Data Dashboards Blog About Get Involved



< Blog

AUGUST 9, 2021

CityAQ: Reliable Localized Air Quality Forecasts For More Cities

<https://blog.resourcewatch.org/2021/09/07/expanding-mexico-citys-air-quality-forecast-to-help-citizens-lead-more-healthy-lives/>



<https://thecityfixlearn.org/webinar/findings-and-lessons-learned-cityaq-project-air-quality-forecasts>

VISUALIZATION OF AIR QUALITY FORECAST



Today, air quality awareness is common among Mexico City's residents. People with respiratory conditions are consulting the [official reports of the Atmospheric Monitoring System](#) (SIMAT, for its Spanish acronym) before engaging in outdoor activities more frequently. Education authorities are aware of pollution levels and inform thousands of public and private schools in the megalopolis when they are a risk to children's health. The activation of environmental emergency events,

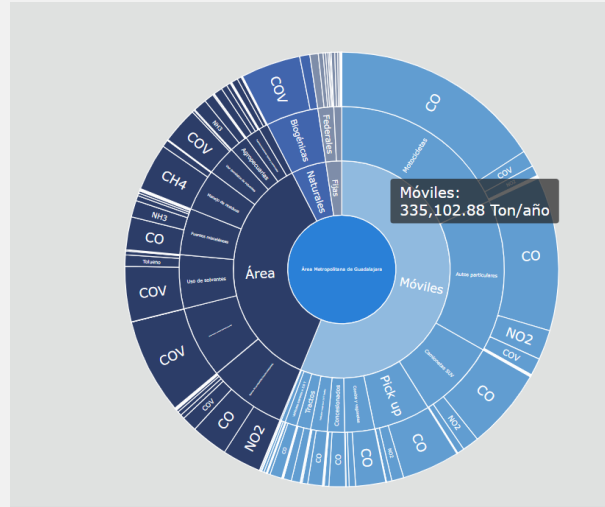
PARTICIPATORY INTEGRATED EMISSIONS INVENTORY IN GUADALAJARA METRO



Municipal level resolution, included 9 municipalities

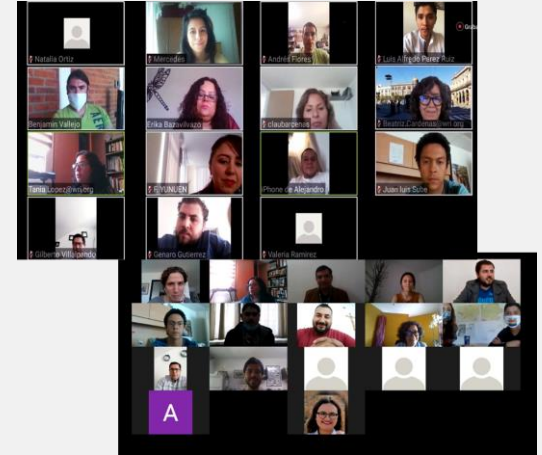
Bottom-up approach

First integrated EI for Guadalajara Metro



Active participation of subnational and national authorities

2018 year base Criteria pollutants, GHG and Black Carbon



Building capacities to subnational officials in emission inventories and AQ

VISUALIZATION OF INTEGRATED EMISSIONS INVENTORY GUADALAJARA METRO

VIIE
DEL ÁREA METROPOLITANA DE GUADALAJARA

ALCANCE
CONTAMINANTES Y GASES
FUENTES DE EMISIÓN
RESULTADOS
PREGUNTAS FRECUENTES
VIIE DEL AMG

Visualizador del Inventario Integrado de Emisiones del AMG

Conoce los resultados del primer inventario integrado de emisiones de Contaminantes Criterio y de Gases y Compuestos de Efecto invernadero, año base 2018.

Una herramienta de diagnóstico para la gestión integral de la calidad del aire, que permitirá el diseño e implementación de acciones para mejorar la calidad del aire y reducir la contribución al cambio climático en el Área Metropolitana de Guadalajara.

[Accesa al VIIE del AMG](#)

El Salto
Guadalajara
Juanequillo
Tlajomulco
Tlaquepaque
TONALÁ
Zapopan
Zapotlán

Medio Ambiente y Desarrollo Territorial
imeplan
WORLD RESOURCES INSTITUTE

INTEGRATED EMISSIONS INVENTORY GUADALAJARA METRO

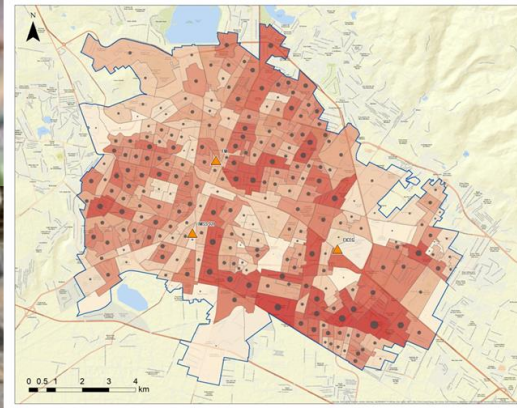
- Was used to validate GHG emissions estimates in Guadalajara Climate action plan
- Being used by C40 to estimate health impacts of Guadalajara Climate action plan
- Is being used to build Guadalajara Metro Air quality model
- Will be used to evaluate health impacts/air quality/GHG of the new BRT system(mimacroperiferico)

PARTICIPATORY CLEAN AIR ACTION PLAN IN SURAT

- WRI India team
- Participatory process decision making involving different stake holder
 - Construction
 - Waste management....
- Emissions inventory at city scale

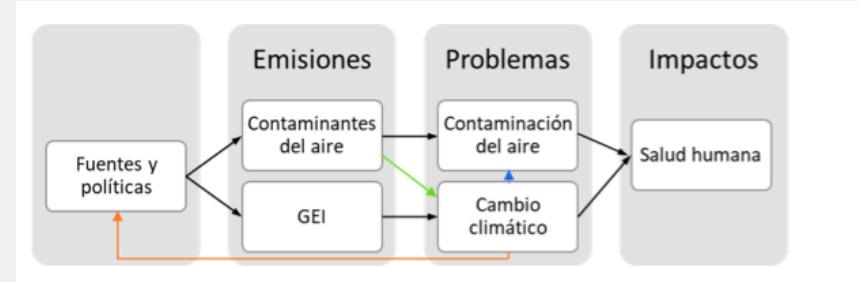


CITY ENGAGEMENT: LEON, MEXICO



Spatial exposure chronic to PM2.5 in León

Personal exposure base line for a LEZ



Preliminary design of an integrated Climate and air quality action plan for León



Building capacities to subnational officials to use the Air Quality Forecast

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