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Atmospheric measurement of GHG : an user centric approach for city managers

Fouzi Benkhelifa and Sarah Dubreil
Suez - Origins.earth, France (fouzi.benkhelifa@suez.com)

The fight against climate change has become a de facto responsibility of local authorities, putting cities at the heart of the combat. However, cities struggle to set up and fund GHG mitigation projects, and they often face the challenge of building support amongst local residents. Furthermore, even after defining a climate roadmap, municipalities lack tools to identify high-impact projects and the financial levers to execute them. There is a gap between resources and an ambition to achieve carbon neutrality that does not exist in other funded municipal activities, such as water and mobility.

The Kyoto Protocol created impact-based climate finance mechanisms to fund projects to reduce carbon emissions (CDM, JI, etc). However, urban GHG mitigation projects are often scattered and lack scale. This makes impact difficult to measure and the funds themselves too expensive for cities to request. As a result, less than 1% of carbon credits have gone to cities, even though urban areas account for 70% of total GHG emissions.
New climate schemes are being defined under the Paris Agreement: cities must be able to access these funds this time. To ensure that cities access new climate funds, they need new monitoring solutions to measure GHG emissions at the city level, and mapping tools to identify and aggregate opportunities to build scale.

Several cities, including Paris, Indianapolis, and Los Angeles, have tested GHG monitoring solutions. They deliver more accurate data on CO_2 concentrations and emissions through inverse atmospheric modeling and the use of sensors. However, such are mostly used for scientific purposes.

The challenge now is how to make these data deliver more value and become more useable for city managers, to make decisions in line with their climate roadmaps. Origins.earth was launched in 2017 to create better GHG monitoring and deliver clearer insights to help cities overcome this barrier. Origins.earth is a user-centric service based on atmospheric measurement. It is a unique partnership bringing together an urban services operator (Suez group), scientists (LSCE/CEA-CNRS France), a pioneer municipality (City of Paris), innovation actors (Climate-KIC), and an international initiative to standardize CO_2 measurement (WMO-IG3IS). The presentation will focus on the value-added services we will be deploying during the pilot program in Paris (Information/awareness system for citizens, Carbon Mapping tool for the City Depts and Climate finance service for local actors). This experience shall be considered as a contribution towards an universal user centric standard on GHG measurement at local level.