CO_2 Urban Synthesis and Analysis ("CO_2-USA") Network

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Participants:

1) Scientists leading urban-scale CO_2 & CH_4 flux measurements using bottom-up and top-down methods;
2) Regulators and policymakers interested in integrating scientific observations into their greenhouse gas reporting systems;

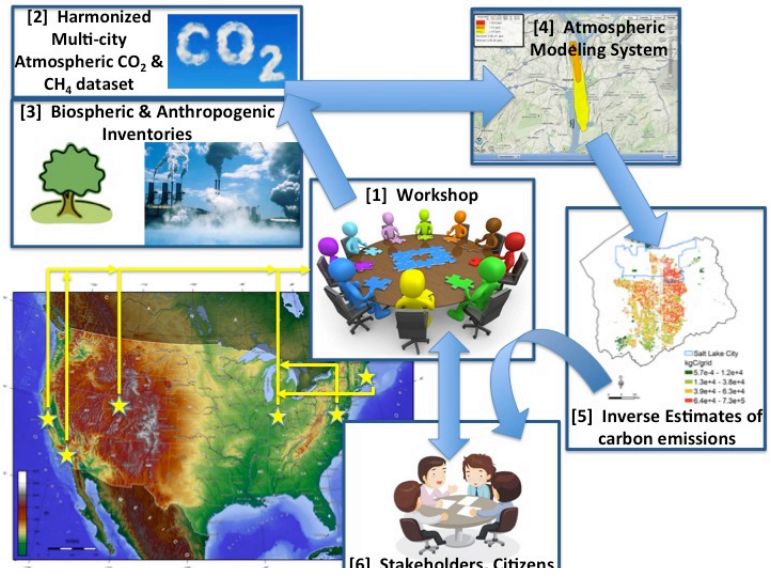
Dates: November 6-7, 2017

Location: NIST campus (Gaithersburg, MD)

Project Summary:

Cities have emerged as leaders in US efforts to reduce greenhouse gas emissions, but the scientific knowledge to quantitatively track emissions and assess the efficacy of mitigation is lacking. As the global population increasingly resides in urban regions, scientific knowledge about *how much*, *where*, and *why* a particular city emits carbon becomes increasingly important. This workshop launches a collaborative network to exchange information on community standards and common measurements, facilitate data sharing, and create analysis frameworks and cross-city syntheses to catalyze a new generation of researchers and enable new collaborations tackling important objectives that are difficult to address in isolation. Specifically, this synthesis effort seeks to:

- Quantify & understand similarities/differences in CO_2 and CH_4 fluxes across cities;
- Develop harmonized CO_2 and CH_4 mixing ratio datasets that are readily useable, traceable, and accessible by the research community and the public;
- Construct an atmospheric modeling system that is scalable and transferable between cities;
- Compare & understand similarities/differences between anthropogenic emission inventories;
- Improve estimates of biospheric fluxes across cities;
- Foster a community of urban carbon cycle researchers and generate collaborative studies;
- Engage stakeholders to link them with data, syntheses, and insights into urban emissions.



Objectives of CO_2-USA Workshop (November 2017):

1. Build bridges and collaborations with stakeholders
2. Exchange of information between researchers in different cities
3. Start building a cross-city merged GHG dataset
4. Understanding and quantifying uncertainties in atmospheric inversions
5. Build and share harmonized prior flux fields (biological and fossil)
6. Foster community of urban GHG researchers