The University of Texas Austin City Climate CoLab - Localizing Climate Decision using Data and Community Partnerships

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Cities such as Austin, Texas have in the last decade noted increase in severity and frequency of weather extremes, causing loss of life and millions in damaged property and critical infrastructure. Communities with the fewest resources often experience the greatest burden from these events and struggle to "bounce back." The City of Austin, as well as all other cities around the world, are currently scrambling to understand how to plan for an uncertain future.

The University of Texas (UT)-City Climate CoLab is a novel initiative that builds on the success of national climate assessments, the state and regional climate centers, and highlights and fills the void of creating a city climate office. The UT-City of Austin CoLab develops Austin and City-specific climate information, data products, tools, and assessments to drive innovation and investment in research, policy, governance, and education. This CoLab is the first City-academia climate collaboratory in the US through the city council.

City Council, planners, engineers, and other decision-makers are using the past to predict the future, and with climate change, that approach is no longer sufficient. This presentation will bring out the workings of this colab with the City staff and community group on extreme weather and climate projects. The City Colab has been working on different needs/problems to solve:

- Specific climate data and models needs that are often confusing for community and City project teams and staff, therefore not immediately useful for planning and policy purposes;
- Academic research can be made accessible to different City departments, agencies, and programs to improve decision-making -- but is not easily usable;
- Currently there is no entity that directly supports municipal climate data needs. Climate aligns with multiple departments' work but needs differ across teams. Need more coordination across departments and to connect data to city department decision making;
- Currently, academia / City climate research projects are selected per faculty interest and a much more strategic approach is needed.

Types of Projects: (a) City Climate Assessment (coinciding with global climate assessment from IPCC; (b) Data products: Provide data based on different department needs; Develop data products and downscale the needed climate model information so that it is useful at city scale i.e. 100 km uniform grid information to gridded neighborhood scale (target 1 km x 1 km data output

or even finer); (c) Communication: Collaborate with local news weather teams to share climate information; Connect through the City Public Information Office to share takeaways in official city press releases; (d) Policy and Governance: Map intra- and inter-agency climate governance networks to understand key relationships, programs, and community organizations for outreach; Research policy and governance frameworks; Connect climate modeling data products to social and policy science, including social vulnerability; Develop a stakeholder database and platform. (e) Outreach: Workshop and outreach for assessing media, community and stakeholder needs; Conduct public participation in scientific research by collecting and sharing data based on community feedback; Advance community science and volunteer monitoring efforts.

A number of research topics are underway and an outline of these activities, lessons learnt, and path ahead will be presented.