

ASK THE CLIMATE QUESTION

Adapting to Climate Change Impacts in Urban Regions

ADDRESSING A PRESSING NEED

The impacts of climate change will be felt acutely at the local level, posing varied risks ranging from decreasing water supplies to more frequent severe weather events and human health impacts. Climate impacts also disproportionately impact poor and vulnerable populations who have limited resources to adapt to changing hazards. While aggressive efforts to mitigate greenhouse gas (GHG) emissions will stave off the most severe impacts of climate change, a certain level of climate change and its associated impacts is inevitable. As the first responders to the social and economic impacts of climate change, local governments play a crucial role in anticipating the specific risks faced by their communities and implementing adaptation strategies to increase community resilience.

The Center for Clean Air Policy (CCAP) developed the **Urban Leaders Adaptation Initiative** to help local governments improve their communities' climate resiliency. With core funding from the Rockefeller Foundation and support from the Surdna Foundation, CCAP's Urban Leaders Adaptation Initiative connects and informs pioneering government leaders from ten major counties and cities as they make critical adaptation decisions. Partners are representatives from **Chicago, King County (WA), Los Angeles, Miami-Dade County (FL), Milwaukee, Nassau County (NY), New York City, Phoenix, San Francisco, and Toronto.**

CCAP encourages its partners to "**Ask the Climate Question**": How will planning, policy, funding, infrastructure and land development decisions affect GHG emissions and local vulnerability or resilience to the impacts of climate change?

A CCAP REPORT ON KEY LESSONS IN URBAN CLIMATE ADAPTATION

In June 2009, CCAP released "*Ask the Climate Question: Adapting to Climate Change Impacts in Urban Regions*", a report that highlights the most compelling and proactive efforts underway by partnering local governments around the U.S. and Canada to improve resilience against the impacts of climate change. To view the full report, please visit www.ccap.org.

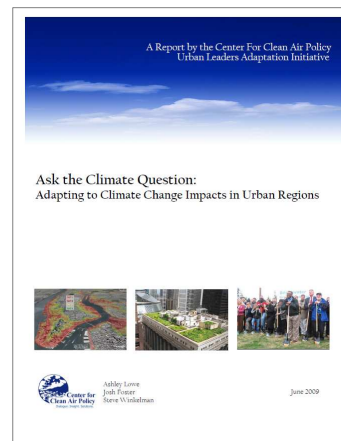
LESSONS LEARNED FROM THE URBAN LEADERS PARTNERS

CCAP's evaluation of Urban Leaders partner efforts has revealed a number of common challenges to adaptation efforts. By learning from each other and optimizing use of available resources, the partners have employed creative and successful strategies for overcoming these obstacles:

- Use **existing forms of funding**, such as FEMA Hazard Mitigation grants;
- **Downscale impact data to the local level**, utilizing Geographic Information Systems (GIS) and collaborating with university partners to pool resources;
- Create an **organizational structure** that identifies jurisdictional responsibilities across departments for all adaptation actions;
- **Ask the Climate Question** of existing planning frameworks (e.g., transportation and flood management);
- **Learn from other communities** through dialogue and information sharing.

CLIMATE ADAPTATION: "YOU'RE DOING IT ALREADY"

One of the first and often surprising answers to the Climate Question is "we're doing it already!" CCAP Urban Leaders partners are finding they already have much of the relevant experience and skills needed to plan for and respond to climate change impacts through their experience in hazard mitigation, flood management, water conservation and land use planning. Additionally, Urban Leaders partners are establishing best practices in climate change adaptation. Below is just a sample of the types of proactive activities taking place in Urban Leaders partner communities:



- Chicago conducted a detailed **evaluation of the potential economic impacts** of climate change to help identify the highest risks and prioritize adaptation measures.
- King County's **proactive investments in infrastructure** will help meet future water supply needs in light of decreasing snowpack, providing "climate insurance" against future costs.
- Los Angeles is "**Asking the Climate Question**" by incorporating a climate and sustainability-focused checklist into the City's project procurement process.
- Miami-Dade County utilized **FEMA pre-disaster hazard mitigation funds** to strengthen buildings against hurricanes, including university buildings and homeless shelters.
- Milwaukee's **investments in green infrastructure** improve flood water storage and protect water quality in the Great Lakes which will be impacted by more frequent high intensity storms.
- Nassau County created their first **Multi-Jurisdictional Hazard Mitigation Plan** to efficiently address the climate change hazards faced by the County's hundreds of local government agencies.
- New York City has conducted a **detailed climate change risk assessment** of its drinking water and wastewater systems and has developed a plan to reduce these impacts.
- Phoenix and Arizona State University are crafting **urban heat island adaptation solutions** that maintain human comfort and the local economy while balancing energy and water use.
- San Francisco is a leader in the Water Utility Climate Alliance, working to **improve research on climate impacts**, protect infrastructure and water supplies, and reduce emissions.
- Toronto is undertaking **short-term** adaptation strategies, such as neighborhood cooling centers and is developing a comprehensive **long-term** climate change adaptation strategy for the city.

POLICY RECOMMENDATIONS

While many "levers of change" exist for local governments to advance adaptation efforts, the CCAP Urban Leaders partners need support from the federal government on risk assessment, adaptation planning and implementation. The CCAP Urban Leaders Adaptation Initiative offers the following recommendations for advancing local climate adaptation efforts:

- Improve **climate science and modeling**, including regional downscaling;
- Support local adaptation by creating **climate extension service networks** to provide local governments with technical assistance on implementation of adaptation solutions;
- Expand programs that **encourage proactive, pre-disaster adaptation**, such as FEMA's Hazard Mitigation Grant program;
- **Facilitate dialogue** among cities, counties and states to share best practices in adaptation planning and implementation; and
- "**Ask the Climate Question**" by integrating adaptation concerns into local, state and national infrastructure and resource planning, policy and funding decisions.

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