Challenges

Urban areas can be particularly vulnerable to the impacts of climate change as they represent high concentrations of people, buildings, and infrastructure. Cities also represent complex dynamic systems. When it comes to preparing for the impacts of climate change, cities require integrated and holistic approaches that can address a variety of issues in order to make lasting changes and build resilience.

Solution

Baltimore’s goal was to integrate climate adaptation, climate mitigation, and hazard mitigation into all sectors, plans, projects, and processes.

The city took an innovative approach to incorporating climate adaptation into their All Hazards Mitigation Plan by changing the structure of their plan to better mirror the city's structure. Instead of structuring the plan by hazard, Baltimore used four main categories: infrastructure, buildings, natural systems and public services for more efficient and effective implementation.

Extensive stakeholder engagement has been critical to integrating adaptation into the plan, as well as ensuring long-term success of the project. To that end, the City of Baltimore formed a 40-person advisory committee, which included a wide range of stakeholders such as climate scientists, local business owners, city agency directors, institutions, nonprofits, state and federal representatives, and community leaders. A series of stakeholder meetings provided the opportunity to communicate with, and solicit feedback from, attendees using innovative engagement techniques. Attendees were given limited resources to hypothetically allocate to areas they felt were most important and voted on those proposed actions. The meetings included interactive models and maps, and hands-on activities for both adults and children. This type of community and stakeholder engagement not only gained support for the project, but also helped identify additional stakeholders interested in implementation.
Results

The City of Baltimore:

• **Adopted a new floodplain code** that develops flood resilience areas, uses the 0.2% floodplain as the regulatory standard, increases the freeboard to two feet and integrates with ASCE-24 for critical facilities.

• **Rolled out the Make a Plan, Build a Kit, Help Each Other campaign** — Over 1200 emergency plans and kits have been made over the last 11 months increasing communities’ awareness and understanding of risks while also increasing their adaptive capacity.

• **Included Adaptation in Capital Improvement Processes (CIP)** — All departments applying for CIP funding must explain how their project takes climate change into account and makes the city more resilient.

• **Created the Growing Green Initiative**, which uses sustainable, innovative, and cost-effective practices for reusing vacant land to green neighborhoods, reduce stormwater runoff, grow food, sequester carbon, and create community spaces and natural habitat areas.

• **Planted Trees and Removed Impervious Surface** in neighborhoods most vulnerable to flooding and high heat.

• **Created a training program** for developers, contractors and architects working on floodplain, cool roofs, weatherization and energy efficiency. These hands-on training sessions and instructional manuals have been strategically designed to help citizens, developers, and other stakeholders understand the complexities of how climate change will impact various built and natural environments and the best way to prepare, adapt, and move forward while addressing these pressing issues.

Next Steps

The city is working on developing resiliency hubs in vulnerable neighborhoods; taking a whole-block approach to implementation by integrating stormwater, energy efficiency, cool roofs, solar with battery backup, and preparedness education into one collaborative implementation effort. If the city continues to be innovative, leverage existing planning processes, and involve a wide variety of community stakeholders, they will likely be successful in these efforts as well.