

Climate Resilience Workshops – Community Conversations

Executive Summary

The Aquarium of the Pacific has implemented a broad-reaching education strategy to build awareness and momentum around climate resilience. Through a multi-level approach the strategy activates community leaders and provides direct outreach to citizens of Long Beach. Aquarium educators engage leaders from various communities in one- and two-day climate resilience workshops that provide a forum to learn about climate impacts and start discourse on adaptive solutions. These formative workshops have continued to evolve, with the goal of empowering leaders to participate in resilience-building with their home communities. This work will continue to evolve in the Fall of 2018, when work expands with support from a two-year, sub-award grant from the National Science Foundation.

Workshop Overview

The Aquarium of the Pacific has created two different versions of a climate resilience workshop directed to community leaders in Long Beach. Four total workshops have been conducted in the past 12 months. Two workshops were long-format, two-day workshops with a diverse group of leaders who opted to participate. Two workshops were short-format, two-hour workshops targeted for leaders from specific groups within the city. All workshops gave participants opportunities to discuss climate change impacts and to consider meaningful solutions to prepare their communities. Workshops evolved to include discussions on climate adaptation, time to reflect on specific impacts, and solutions that are actionable.

Key Messages

Workshops were designed to address a few key messages:

- Climate change is the result of human consumption of fossil fuels, and is observable and happening now.
- Immediate climate change related threats to Long Beach, CA, include drought (and freshwater shortages), extreme heat, sea level rise, and poor air quality.
- Mitigating and adapting to climate change must also happen now. The dialog on climate solutions has been dominated by mitigation strategies; identifying adaptation strategies is essential to making solutions accessible, practical, and actionable today.
- Building resilience- *or the capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption*- will be necessary to protect our communities from a variety of climate impacts.
- Climate change and extreme weather events will impact people differently even within a single city—not only because of where they live, but also because of who they are. Identifying specific climate change impacts on an individual's community is an important start to understanding how to adapt.

Long-Format Workshops

The earliest community resilience workshops hosted by the Aquarium of the Pacific were long-format workshops. The first was held here at the Aquarium in August 2016. Attendees registered for the workshop on an individual basis. Talks began with an introduction on climate principles ("Climate 101"), followed by talks by Dr. Jason Keller (Chapman University) on carbon sinks in marshlands, and Dr. Juliette Hart (United States Geological Survey) on sea level rise. Participants also examined data-driven tools in the NOAA's climate resilience toolkit before discussing solutions. In these discussions, participants disproportionately suggested mitigation-based solutions instead of adaptation solutions, even when prompted to consider specific adaptation ideas. Given that general public discourse on

climate solutions is mitigation-based, the tendency to prefer those solutions is not surprising. However, resilience building requires both mitigation and adaptation.

Based on facilitator reflection, the second long-form workshop hosted at the California State University, Long Beach focused on: best practices on communicating climate change and had a new emphasis on adaptation strategies from the start. The shift was intended to generate more discussion on climate resilience and community level solutions that can start today. Dr. Christine Whitcraft presented on her work in wetland ecosystems and local restoration. Participants were also asked to write themselves a postcard to remind them of something that resonated with them or a commitment they were willing to make to build resilience. These postcards were mailed self-addressed and mailed back to all participants a month later.

Some of these actions remained on the individual level:

“I will continue to share adaptive messages.”

“I will plant a mandarin tree in my garden.”

“Bucket in shower, 5 minute shower, cut plastic waste, public transport.”

Solutions were rarely community-oriented, though a few were offered:

“Develop a ‘sharing solar’ party in my neighborhood; develop a ‘sharing lawn to garden’ party in my neighborhood.”

“Expand our re-use campaign on campus, and partner with members of the greater LB community.”

And others were simple reminders about the workshop:

“Remember adaptation! Work on adaptation in condo community.”

“Commit to providing access.”

“Multiple exposure to simple messages from trusted sources.”

Facilitators also presented key tools for participants to use when communicating climate change. These strategies include using values like protection and responsible management to frame your conversations on climate. Another set of tools were the various well-tested metaphors for describing climate change. While these messages were well received as an explainer of mechanisms, it was clear that participants did not see themselves as a messenger of climate change information, even if they felt they were a leader in a community (or influential in any circle.) It was also clear that the leaders valued a variety of different things, and that future workshops could leverage the enthusiasm of leaders to help identify specific impacts and solutions.

Two Hour Workshops

Lessons learned from the long-form workshops were used to develop the short-form, 2- hour workshop on climate resilience. Two Long Beach organizations have participated thus far: Leadership Long Beach and the Long Beach Environmental Alliance. Workshops were reformatted to reinforce three fundamental ideas: building community, identifying specific impacts of climate change, and considering adaptive solutions. Review of science principles was scaled back and used only if necessary to build common language around climate science.

Leadership Long Beach (December 2016) was the first group served by the new, shorter climate resilience workshop. During their workshop, participants were encouraged to envision a Future Long

Beach impacted by climate change. In breakout groups, participants discussed how their own communities would be impacted from climate change, and propose solutions to address and adapt to those impacts. Discussion was rich with ideas. As an example, groups discussed various heat impacts on Long Beach, including increases in black outs and brown outs with more energy usage, as well as the inability to use and enjoy outdoor spaces. Solutions included using businesses in off-peak hours and creating cooling stations. The group proposed incentivizing and creating a night market, bringing together communities at night time to celebrate their neighborhoods. This group even proposed a social media campaign which they called #nocturnalLB.

Long Beach Environmental Alliance was the second group that attended the short-form climate resilience workshop. Because this is a young organization still building its own culture and membership, the workshop started with an exercise in community building. Discussion surrounded the things that groups loved about Long Beach, and highlighted their appreciation of Long Beach's diversity, neighborhoods, food, culture, businesses, beaches, and even the airport. Participants were then encouraged to think about how climate change may directly or indirectly impact the things that they love (more high heat could cause people to enjoy outdoor dining less, air quality issues could change how people use outdoor spaces, etc.) Groups also brainstormed adaptations to those impacts, and made personal commitments. We took a picture of each participant and encouraged them to use the hashtag #resilientLB in their social media posts. While discussion of impacts and communities was rich, when individuals were asked to make actionable commitments, people still fell back on climate mitigating, individual-level solutions: "I will use less energy," "I will minimize my driving." Some participants also admitted that some of the solutions they promised to commit to were things they already did.

One area of growth for climate resilience workshops is to help people identify solutions that are at the right scale (community level), and solutions that are accessible. One way to emphasize this is to discuss how individuals are important in their own spheres of influence. Time to reflect on influence and community action may be tested in future workshops.

Next Steps

Climate resilience workshops will continue to grow and change. Specific groups, including faith groups, ethnic community groups, and health professionals will be targeted. Additionally, this fall, facilitators will be joining an National Science Foundation funded project with the New England Aquarium called Changemakers: Communities Advancing Science Literacy. As a part of this project, the Aquarium of the Pacific will be coached on more engagement strategies through a Harwood Institute training. The Aquarium will invite three local organizations to participate in annual climate resilience retreats. On-going support will be provided for the groups to build their resilience activities. These "city teams" will be a part of a larger action research project that serves as a model for community building activities that advance climate resilience through the city. The project will provide the Aquarium of the Pacific with a little over \$86,000 of support over two years.

The Aquarium's climate resilience team also plans to expand the social media presence to feature our activities and resources on climate resilience. One such activity is the Aquarium's planned climate resilience booth, which will travel to community events all over the city. The booth is supported by funds from a Whale Tail Grant provided by the California Coastal Commission.