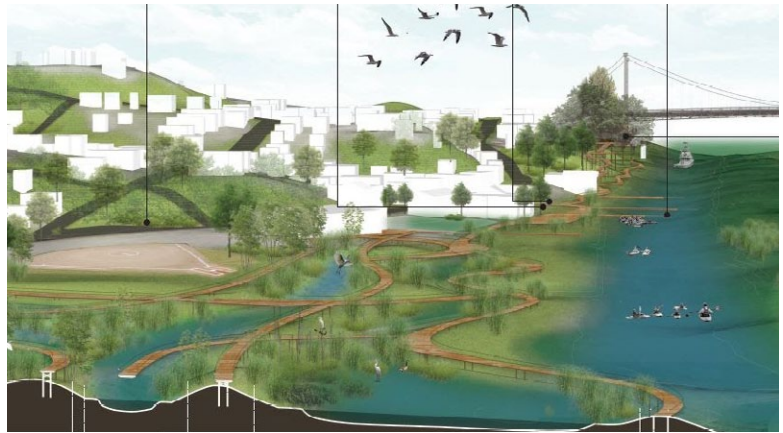


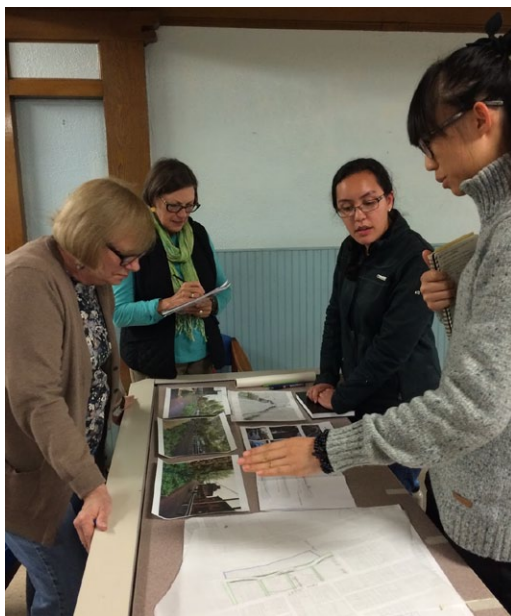
Climate-Adaptive Design

A studio research effort *using design to inspire climate adaptation*, in partnership with Cornell University Landscape Architecture, Cornell Water Resources Institute, and the NYS DEC Hudson River Estuary Program.

The Climate-Adaptive Design (CAD) Studio links Cornell Landscape Architecture students with Hudson Riverfront communities faced with flooding and sea-level rise to explore *design alternatives for more climate resilient, beautiful and connected waterfront areas*.



'Hydrophilic Kingston' C. Zhang and P. Chang
Kingston, NY Studio



Students present design ideas to stakeholders.
Photo: L. Zemaitis

Drivers

71% increase in intense precipitation since 1958.

Up to 60 inches of sea-level rise on the Hudson River from now until 2080.

In 2080, we expect today's 1% flood to occur as much as six times more frequently.

The Process

Students work with community stakeholders, non-profit partners, and technical experts in an interdisciplinary process of waterfront design. The project culminates with an open house to share student ideas with the community.

CAD designs show the community options for development and revitalization that also deal with expected sea-level rise and flooding.

By taking a comprehensive design approach, the student teams incorporate human and natural systems to inspire adaptation and innovation.



A Program of the New York State Department of Environmental Conservation



Cornell University
College of Agriculture and Life Sciences



New York State
Water Resources Institute
Cornell University



'Catwalk' J. Romualdez and X. Tang
Catskill, NY studio

Background

After historic flooding from Hurricanes Irene and Lee, and Superstorm Sandy, the Estuary Program and partners began working on innovative ways to adapt to climate change in the Hudson Valley. To provide inspiration, Cornell School of Landscape Architecture brings student design teams to local communities.

“Thank you so much for coming... the work that I saw has completely changed the way I think about waterfront development”

- Mayor Hamilton, City of Hudson, NY

Flood Adaptation Strategies

Fortify - Building bulkheads, flood gates, and other hard structures to keep water out.

Accommodate - Reducing the impact of flood waters by raising and wet floodproofing buildings, and fostering passive waterfront uses like floodable parks and walkways.

Relocate - Keep people safe by strategically relocating uses from the highest risk areas for repeated flooding and inundation.



'Time Refractor' M. Chi and X. Li
Hudson, NY studio

Partners

Hudson River Estuary Program, NYS DEC
Sustainable Shorelines, NYS DEC
Cornell University Department of Landscape Architecture Associate Professor Joshua Cerra
Scenic Hudson
New York State Water Resources Institute
New York Department of State
Cornell Cooperative Extension

Resources

CAD
<http://tinyurl.com/CornellCAD>
Cornell Water Resources Institute
<http://tinyurl.com/WRIresilience>
NYS DEC Hudson River Estuary Program
<http://www.dec.ny.gov/energy/82168.html>