

A6850x Advanced Studio 5 / Urban Ecology Studio

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Pier 26, New York: The Climatorium of To-morrow



INTRODUCTION

CLIMATARIUM (n.). A public hall comprising devices for presenting global and localized interrelationships between climate and society; and for simulation of future effects on same; for purpose of furthering scientific understanding, public instruction, and measures for climate resilience.

NB: for New York City comprising variants on estuarium and urbanarium concepts as relates to climate change.

Analyzing the hard facts and conventions of science for its time, science fiction has always envisioned the role of society in relation to what could remain of what we know as Earth. In *The Drowned World* (1962), J.G. Ballard imagines a post-apocalyptic and unrecognizable London. *The Sea and the Summer* (1988) by George Turner seeks to understand the dynamic forces of climate change, unemployment due to exponential automation, the dissolution of Melbourne's monetary system and a division of society segregated by the rich and poor. More contemporarily, *The Day After Tomorrow* (2004) by Roland Emmerich depicts the global cooling and dawns on the era of a new ice age and, in certain depictions, New York City is covered in snow up to the torch-height of the Statue of Liberty. In short, many of these novels and cinematic films may be understood as a manifesto to the urgency for consideration towards social and environmental issues within the metropole. How can we design for a city that relies heavily on the foresight of what is to be expected in the future? For instance, in response to global warming, the melting of snow and ice has increased the global mean seal level, flagging cities to revisit their waterfront guidelines.

In October 2012, Hurricane Sandy reminded us of the impacts of climate related disasters, expedited the City's Special Initiative for Rebuilding and Recovery (SIRR) and resulted in fund allocation, both Federal and State agencies, to establish programs like *Rebuild By Design*, *New York Rising*, and the *Science and Resilience Institute* in Jamaica Bay.

The Climatarium studio framework encourages a critical investigation and re-interpretation of climatic forces in densely urban cities; and the increasing roles of data, mobility and access as facilitators of sustainable urban form and lifestyle. The studio offers flexibility in the various lenses through which participants can examine the challenges of sustainable urbanization. The specificities of the studio site will be used as a foundation for developing design proposals that can address climatic challenges faced world-over in post-traumatic urban typologies in need of improved resilience.

STUDIO PROGRAM

At a literary level, our programmatic query is already being explored by numerous writers from Bill McKibben with *The End of Nature* (1990) to Elizabeth Kolbert with *The Sixth Extinction* (2013). Thus, in a sense, the Climatarium reflects a present day merging of the worlds of science and science fiction around the challenge of visioning for a general public the mechanisms and consequences of our changing global ecosystem. In this task it will integrate on-going scientific research in the natural sciences with its counterpart in the social sciences. Particular emphasis will be on metropolitan ecological change within the context of our urbanizing planet; and specifically within the local context of New York City. Programmatic approaches to this challenge will be developed by each student and/or team. As designers we will be concerned with the spatial container, programmatic elements and sequence for this public explication, on Pier 26 in Tribeca.

STUDIO SITE

Context Situated on the Hudson River in New York City, Pier 26 is located at the far west end of North Moore Street in Tribeca and is accessible by foot, automobile, subway, bus or bicycle. The Tribeca section of Hudson River Park extends 1.5 miles from Canal Street to Chambers Street and includes Piers 25 and 26, as well as ten acres of open land and seven acres of recreational amenities to date. Currently nearing completion in this area is a new boathouse/restaurant building on the eastern end of Pier 26, expected to open in 2014. Within short walking distance is a hub of new public space development, most prominently related to the High Line, which has spun off new residential and cultural activity, as well as new business enterprise including the new headquarters for Google. The Climatarium can be considered a companion node to the nearby new Whitney Museum designed by Renzo Piano.

Notably, both the Hudson River Park and its urban hinterland suffered considerable damage from Hurricane Sandy. Remediative redesign of the Park and the design of the new Whitney had to be revised due to damage to the construction site. The Climatarium site itself will serve as learning laboratory relative to urban climate change impacts.

STUDIO PROJECT CONSIDERATIONS

Each student/team will be required to produce a detailed spatial and programmatic design for the Climatarium on Pier 26. Integral to this product will be consideration of its public space function within the context of Tribeca and Lower Manhattan. Apart normative **graphic representation**, a scale **physical model** of the Pier design will be integral to the project development and final presentation. Design considerations will include:

- Natural science and environmental policy topics focusing on the broader environment, such as how climate change, sustainability, renewable energy and nonpoint-source pollution impact the urban and estuarine systems and the boundary between.
- Integration of science and research activities with an education and outreach mission aimed at reaching a diverse audience including both the general public (including walk-in visitors) and organized school and other groups.
- An operationally self-sufficient spatial container that integrates an emerging national emphasis on the resilient built environment

Given the prominence of initiatives on the future of Pier 26, the studio will entail presentations with representatives of the various public interests involved; and your work will have a life beyond the end of the semester.

STUDIO ORGANIZATION

Urban Ecology Studio: This year's studio is the tenth in a series that explores collaboration between GSAPP Architecture students and students in the School of Engineering and Applied Science. This year, seven advanced students in engineering will work with seven M.Arch / AAD students on the Climatarium project. The Architecture students will have primary responsibility for a building scale proposal; and the engineering and planning students for advanced environmental research. Both come together in the programming assumptions. It is anticipated that multi-disciplinary exchanges will continue throughout the semester and that the work of both sides will come together in an exhibition and publication.

SUPPORTING RESOURCES

The Studio will be supported by resources provided by the Earth Institute at Columbia University via the Earth Institute's Urban Design Lab.

CLIENTS and COLLABORATORS

- Hudson River Park Trust
- New York Department of Environmental Conservation (NYSDEC)
- New York Department of State (NYSDOS)
- Earth Institute Lamont Doherty Earth Observatory

FIRST DAYS

Friday, Sept 5: 2pm, **First Meeting**, 300 Avery

Monday, Sept 8: Site Visit to **Pier 26, Whitney Museum, High Line**