

MANUFACTURING LANDSCAPES

ECOLOGY | CLIMATE | ECONOMY | INFRASTRUCTURE | PUBLIC SPACE

Tuna Auction at Tsukiji Market



STUDIO BRIEF

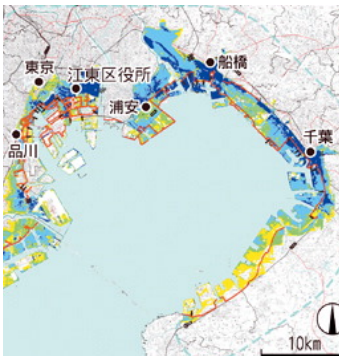
With over 50% of the world population living in cities and two thirds in cities vulnerable to climate change, as architects it is fundamental that we leverage infrastructural and ecological concerns for new architectural prototypes that can reshape the focus of our discourse.



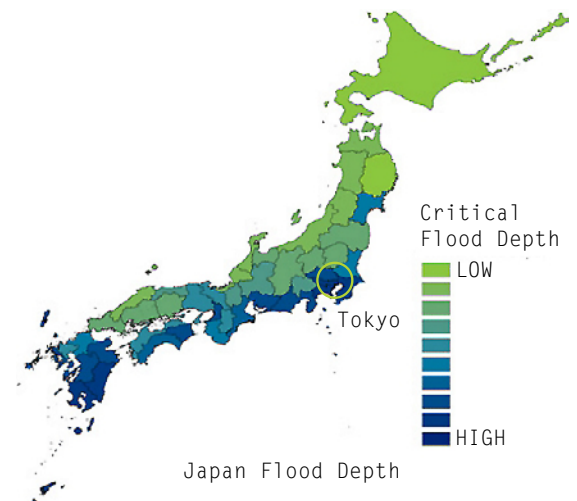
Japan Self Defence Forces troops rescue people from flooded areas

Tokyo is one of the largest populations in the world and one of the top 20 port cities most susceptible to flood damage due to high storm surges. It is also one of the leading cities to combat its critical water crisis with the extraordinary G-Cans Project. How can port cities like Tokyo redevelop outdated systems by fusing infrastructure and environmental strategies to formulate new architectural solutions?

The studio will use Tokyo as a test bed to examine three key issues at the Tsukiji Market Tokyo Bay Site: 1. How to understand the ecology of Tokyo and utilize the flooding system as a *Manufactured Landscape* for the city, 2. Generate new qualities of public space and architectural devices for the waterfront, and 3. Utilize Tsukiji Market as a spatial and programmatic vessel that needs to adapt to dynamics and fluctuations within the city.



27,000 hectares Tokyo Bay Coast to be flooded: sea level rise may bring unprecedented flooding



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Tsukiji Market on Tokyo Bay



PROJECT STATEMENT



"inner market" (jonai shijo) of Tsukiji Market



"outer market" (jogai shijo) of Tsukiji Market

Background: Each year, many coastal cities face the realities of high flood factors taxing not only our infrastructure but urban quality of life. As Japan is surrounded by water, 'how to cope with problems related to sea level rise caused by global warming is one of the significant issues in Japan's adaptation strategies for global warming' (climaticanalysis.org). Since 1979, Tokyo faced more than six major floods and is highly susceptible to flood damage. To protect the city, the government designed a flood sewer system – The Metropolitan Area Outer Discharge Channel (G-Cans Project) – or also known as the underground temple, that was built to prevent overflow and minimize at least 80% of the damage caused by heavy rainfall. But as recently as August 2011, Tokyo encountered a flash flood with a record rainfall rate of 3.7 inches per hour. Not unlike hurricane Katrina in New Orleans, the flooding turned roads into rivers and many residents were forced to evacuate. The city is progressive in flood mitigation yet one system is not resilient enough to remedy the entire problem.

Dilemma #1: Tokyo is home to the largest, most well known wholesale fish and seafood market in the world – the Tsukiji Market. The Market resides in prime urban real estate along the waterfront of Tokyo Bay and is near major hubs, the CBD, and adjacent to the well known Ginza district. With continuous economic growth, there is significant pressure on the market to rethink its location and make way for more lucrative, commercial development. The location and proximity of the Market to the water is still extremely beneficial but also a permanent threat. The opportunity to utilize new ecological strategies for the Market, and the city at large, would signify it as a viable prototype for more public development. The Market as a new, manufactured landscape for the city, could combat ecological realities and offer new possibilities for much needed public space.

Dilemma #2: The public markets lining the complex establish the Tsukiji Market as a lively, vibrant place to buy seafood – for wholesalers, city residents and tourists. The Market also struggles with increasing tourists and the unfortunate result of sanitation concerns, temperature control, and food safety. As a result, the Market slowly retreats from being a tourist destination. The studio will research its cultural influence and significance within the city and study the impact of the Market as a destination. They will also take tours of the Market to study daily routines and fluctuations and research how it can adapt to new developments, re-programming, and ecological necessities. To stay viable as an operation, students will map the daily operations so as to not lose focus of it as a working, private entity while establishing a new public face along the waterfront.

Funding Needed for 1 week of travel:

Air Travel	
[12 students + 1 Faculty]:	\$14,000
Accommodations:	\$ 3,000
Public Transportation:	\$ 500
Exhibition + Production:	\$ 2,500
TOTAL REQUEST:	\$ 20,000

Procedure and Production: The funds will offset costs for students to travel to Tokyo for site research and documentation as well as for exhibition costs. The student research and analysis will be exhibited at the Figure One Gallery at the University of Illinois with a small publication of the research and final student proposals. Funding will also facilitate a trip to the underground sewer system, the G-Cans Project, while visiting Tokyo. It is important for the students to understand how engineers, architects, and planners are finding ways to combat global climatic phenomenon. The visit to G-Cans will be a valuable asset to understanding how engineering can influence architectural thinking and the urban environment. We also anticipate visiting our contact, Yoshiharu Tsukamoto, who is a Professor at Tokyo Institute of Technology and Principal of the office of Atelier Bow-Wow who will help situate the students within the Japanese culture.

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G-Cans Project

The underground waterway is the largest in the world with 6.4 kilometers of tunnels sitting 50 meters beneath the surface.



FACULTY BACKGROUND

The applicant teaches in the areas of architecture, infrastructure and ecology in the graduate studio level. She and her students have won numerous awards and recognitions for their work on leveraging infrastructure and ecology for new architectural interventions within the public realm. Most recently, she received the MacDowell Colony Fellowship in which her research focused on new public programs resulting from post-industrial sites and existing infrastructural systems affected by water and climate.

She and her office have won numerous prizes in recent competitions, all of which tackle infrastructural scale issues with an ecological, architectural, and public response. Most notably her firm received 2nd place for the Gowanus Lowline Competition and the Chicago Network Reset Competition. The former asked to rethink the Superfund site – the Gowanus Canal in Brooklyn. The project - ‘[f]lowline’ - proposed a responsive and adaptive approach to the environmental and social reclamation of the canal through the design of a synthetic infrastructural surface. The second entry for the Chicago Network Reset Competition was entitled “(in) voluntary prisoners of climate change”, and proposed to increase the city’s resilience to climate change while restoring the formal legibility of the infrastructural tree canopy system and opportunistically tackling the frequent flood surges to offer newly programmed public space.

Recently, one of her students was a semi-finalist in the *One Prize - Water as the 6th Borough* Competition in which notable architects on the jury were James Corner and Bjarke Ingels. The competition brief asked for a rethinking of ‘New York’s waterways and public transportation, local industry and native environment’. Her student used the brief to advance his project on existing barges becoming new, ecologically enhanced modes of water transportation and programmatic public space for New York City.

Studio Goals: The *Manufacturing Landscapes* studio goals are to bring similar scaled responses that create an interface and dialogue between infrastructure, ecology, and architecture that will generate new formal and spatial relationships within the public realm. The complexities of merging infrastructural and ecological constraints, along side political and economic realities, to form new architectural space will be the challenge of the studio. The architectural discourse will revolve around the analysis of Tokyo as a testing bed to grapple with global, climatic uncertainties yet be a way of thinking opportunistically about future architectural prototypes and urban development in similar port cities.

She also has extensive experience taking graduate and undergraduate architecture students on 4-6 week summer study abroad trips. For three years in a row, she traveled and held studios in various cities in Europe. Upon each return, she and the students successfully prepared and exhibited the work from the trip.