

FRI-A05

Landscape Architecture in Global Health: Case Studies with Informal “Slum” Communities

Friday October 19, 8:30 – 10:00 am

Session Overview

Landscape architects join forces with global health professionals to tackle poverty, ecosystem degradation, and health inequities in developing countries through participatory landscape interventions. Three case studies of interdisciplinary design/build research projects working with informal “slum” communities in Lima and Iquitos, Peru, and Kathmandu, Nepal, show measured improvements in human and environmental health.

Learning Objectives

- Learn how landscape architects are teaming with health and science professionals to address critical health and environmental issues
- Gain knowledge of current participatory design and impact assessment methodologies and the unique challenges of deep collaborations with informal communities
- Learn different funding structures of working with underserved communities in developing countries, including paid and service professional, academic credits, and research driven models
- Receive first-hand insight and analysis of impact from community stakeholder alongside health research outcomes

Presenters



Jorge (Coco) Alarcón, Arq., MLA, Assoc. ASLA

Coco is a Director at Traction (formerly known as the Informal Urban Communities Initiative) a design activism, research, and education program established in 2011. He has over 10 years of experience leading architecture, landscape architecture, and public health projects across Peru. His most recent projects focus on measuring the impact of landscape architectural interventions in neglected floating communities in the Peruvian Amazon Rainforest on human, ecological and environmental health.



Leann Andrews, PhD, RLA, Assoc. ASLA

Leann is a registered landscape architect trained in global health with 10 years experience leading design-build-research projects for human and ecological health. Leann holds a PhD in the Built Environment from the University of Washington, and degrees in landscape architecture and global health at UW and The Ohio State University. As a Director at Traction, Leann leads transdisciplinary action research projects in Peru and Seattle examining landscape interventions and their impacts on human and ecological health, in particular for vulnerable communities and ecosystems. She was named a 2016 NIH Fogarty Global Health Scholar, and 2013 LAF National Olmsted Scholar.



Brian Gerich, AIA

With a background in architecture and landscape architecture, Brian has been collaborating on interdisciplinary design projects as a project architect, designer and installation artist for 15 years. As a Director at Traction, he has led diverse projects in both Nepal and Peru, working with underserved communities to identify and bridge gaps between existing complex social, economic and ecological systems using a deeply collaborative and participatory methodology. Brian served as a past Chairman and Vice-President as a board member with Architects Without Borders and is currently a part time Lecturer in the UW Department of Landscape Architecture, a Project Architect at Mahlum in Seattle.



Ben Spencer, ASLA

Ben Spencer is an Associate Professor in the University of Washington Department of Landscape Architecture and a Director at Traction. Ben's work integrates design, research and teaching and explores the relationship between technology, the built environment and human wellbeing in developing communities. His recent publications include, "Whole-Systems Public Interest Design Education" and "Engaging the Field Experience: Integrated, Interdisciplinary, On-Site, Enduring" in the Public Interest Design Education Guidebook (Albendroth and Bell eds, Routledge 2018). His recent projects include small-scale public space interventions in Kathmandu, Nepal and the development of an innovative wick irrigation system.



Joseph Zunt, MD, MPH

Joseph Zunt, MD, MPH Dr. Zunt is a neurologist at the Harborview Medical Center and Professor in the Departments of Global Health and Neurology at the University of Washington. He has been working in global health research in Peru for over 20 years, including collaborating with landscape architects in Traction in both Lima and Iquitos Peru on understanding the ways in which the built environment is a determinant of health. Joe leads the NIH Fogarty Northern Pacific Global Health Fellows Consortium, and is Co-Director of the Center for AIDS Research International Core, and the Program for Education and Research in Latin America.

Introduction to Global Health and Slums

- Social Determinants of Health are physical conditions and circumstances in which people are born, grow up, live, work and age that affect a wide range of health, function and quality of life outcomes and risks (CDC)
- Global Health is the area of study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide
- Approximately one billion, or one in eight, people in all parts of the world now live in slum conditions. In the past 15 years the population living in slum conditions grew an average of 6 million a year, or 16,500 people a day (United Nations 2016).
- Slum conditions are defined by a lack of access to improved water and sanitation, overcrowded living area, non-durable housing and/or tenure insecurity. These built environment conditions often go hand-in-hand with food insecurity, high risks of infection and injury, and exposure to environmental contaminants, hazards and extreme weather events

Philosophical Approach

- Our teams utilize community participatory design and implementation techniques in which residents work in close partnership with the Team to design, build, maintain and evaluate the project
- We nurture long term partnerships with communities, support innovation and design technologies, and operate in a transdisciplinary action research framework
- Introduction to 3 case studies in Lima, Iquitos and Kathmandu with partnerships between Traction, the University of Washington, and Architects Without Borders

Case Study 1: Fog Water Farm Park and Gardens Community of Eliseo Collazos, Lima, Peru



- 10 million people live in Lima, Peru, with 3 million of those living in slums that comprise 60% of the land area in Lima
- The Community of Eliseo Collazos has 90 families who migrated between 1-20 years ago, with 87% of households earning less than \$220 per month.
- The community identified food and water insecurity and lack of greenspace as top priorities
- The Fog Water Farm Park and Gardens Project respond to these priorities by installing: 8 fog nets collecting up to 1,650 liters per day; 35,000 liters of fog water storage; a sports court, stairway and three planted farm terraces with over 1,800 medicinal plants and herbs; and 50 household gardens
- Project evaluation (design performance, food and water security, mental and social health changes) and lessons learned

FUNDING:

Architects Without Borders
Robert Rauschenberg Foundation
University of Washington Royalty Research Fund
UW Global Health and Environment Fellows
EPA P3
University of Washington Design Activism Studios

RESOURCES:

[New York Times Daily 360](#), “The Fog Catchers”
[BBC Health Check](#), “Health Gardens”
[White Noise Productions](#), “Collazos Garden Project” video

Case Study 2: Garden Technologies for Health Community of Claverito, Iquitos, Peru



- Over 0.5 million people live in Iquitos, Peru, with 70% of the population living in poverty and 90% identifying as indigenous immigrants from the Amazon Rainforest
- The Community of Claverito has 50 families, who migrated between 1-45 years ago, with 89% of households making less than \$93 per person per month
- The community identified food security, greenspace, mental health, gastrointestinal illnesses, safety, and biodiversity as top priorities
- The Garden Technologies for Health Project responds to these priorities and consists of: 50 household floating gardens; 3000 square meters of community entrance gardens with stairs and paths and 1,300 native edible and medicinal plants; household green walls and window planters
- Project evaluation (design performance, mental and social health, food insecurity, biodiversity, land and water quality, injuries, biometrics, microbiome) and lessons learned

FUNDING:

NIH Fogarty Global Health Program
UW Population Health Initiative
Center for Biomedical, Environmental and Technological Research
LAF Olmsted Scholars Program
100,000 Strong in the Americas Fund

RESOURCES:

[UW article](#), “Staying Afloat” June 2018
[LAM](#), “Where the Least Matters Most” May 2018

Case Study 3: Kolcha Pahka Park and Park Pods Community of Hyumat, Kathmandu, Nepal



- More than 2.5 million people live in the Kathmandu Valley, one of the fastest growing metropolitan areas in South Asia.
- Hyumat is a low income urban community on the banks of the Bishnumati River, composed of butcher, farmer caste Newari as well as renters from outside the Kathmandu Valley
- Traction began working with Hyumat in August of 2017. Community members identified public green / play space and solid waste generation as top priorities.
- Initial projects completed in the community as part of a UW exploration seminar, an MLA capstone studio and a winter / spring quarter study abroad program include Kolcha Pahka Park and the Park Pods project
- Preliminary evaluation (design performance) and lessons learned

FUNDING

UW Global Innovation Fund
UW Study Abroad programs

RESOURCES

2018 MLA Capstone Studio Book

Synthesis and Conclusion

- Commonalities and lessons learned between case studies
- Funding structures and models to working with global (and local) communities living in slum conditions

Further Resources

[UN-Habitat Slum Almanac](#)

[United Nations Sustainable Development Goals](#)

Hou, Spencer, Way & Yocom (eds). [NOW Urbanism: The Future City is Here](#), Routledge, 2015.