

URBDP 508A, Autumn 2016
FALL STUDIO

Community Design, Planning, and Development in the Bajo Lempa, El Salvador
University of Washington, Dept. of Urban Design & Planning

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- TA:** Chungho Kim, PhD Candidate, Interdisciplinary Program in Urban Design and Planning, charisut@uw.edu
- Mtg. time:** MW 1:30– 5:20
- Mtg. place:** 416 Gould
- Credits:** 5
- Format:** Graduate multi-disciplinary studio open to MARCH, MLA, and MUP students
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STUDIO FOCUS

The urban built environment is responsible for over 70% of all greenhouse gas (GHG) emissions worldwide. How we design buildings and cities today will determine if the effects of climate change will be manageable or catastrophic.

– Architecture 2030 Curriculum Project Brief

Along with our client and stakeholders, this studio will study possibilities for creative design and planning solutions that serve as vehicles for social, environmental, and physical betterment at the regional and community levels in El Salvador. In particular, we will be guided by a deep connection between health, education and environmental protection, involving a truly multi-disciplinary approach to community design and development. We will approach the Bajo Lempa as a unique, water-based landscape, one that frequently overwhelms existing infrastructure and is a trans-bordered, and continually shifting landscape. The Lempa River is a living entity and those who fish, shrimp, and farm in this system are a part of this ecology. This studio is meant to generate questions and

responses, including: How do we create the conditions to transform attitudes, create buy-in, and long-lasting attachment to sustainable place making? What new words, concepts, language can we evolve in relationship to place (for example around scale, process, thresholds, ecotones, buildings)? And, what are the best means to deliver empowering design and policy projects.

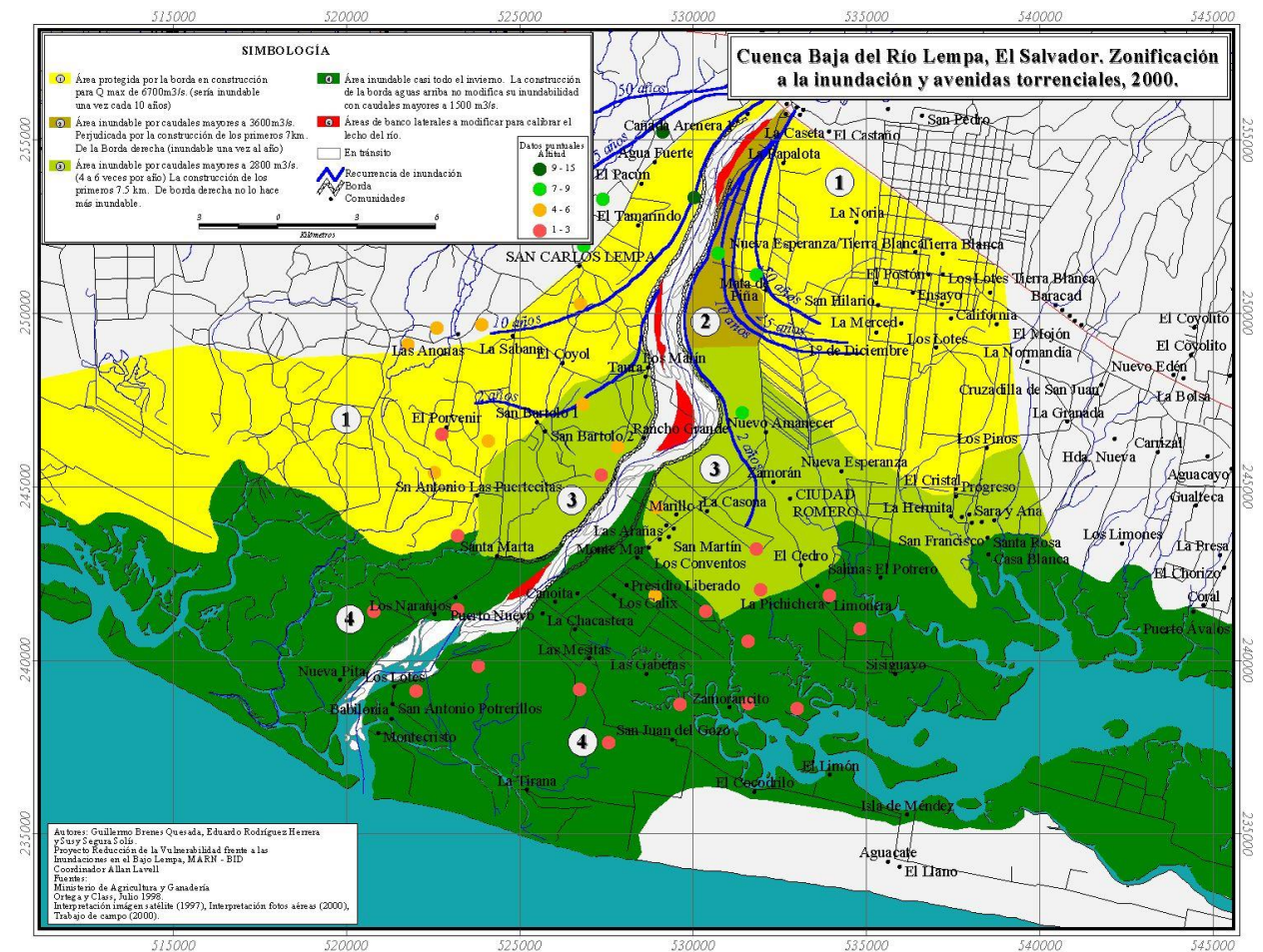
To accomplish the work of this studio, we will bring together a focus on low-carbon design and policy proposals along with ongoing work and research in El Salvador's Bajo Lempa region. Low-carbon design is a quantifiable approach to good design; it is a crucial and creative way to define resilient communities. It is also an approach that government entities in El Salvador concerned with territorial development are specifically interested in. In 2015, El Salvador's Minister of Foreign Affairs, Hugo Roger Martinez Bonilla, became the 82nd signatory to the Paris Agreement on climate change (known as COP21) that especially focuses on the reduction of carbon worldwide.

Regarding new approaches to sustainable and resilient approaches to community development and empowerment, in this studio we will create a unique palette of design and policy interventions that are integrated across multiple scales and geared to the Salvadoran context as well as to international community design and development efforts generally. This framework will allow us to highlight and develop new concepts and vocabulary. For more specifics, please see the Architecture 2030 Palette information in the Methodology section below.

COUNTRY & REGIONAL CONTEXT

El Salvador is the smallest and densest country in Central America, with a population of around six million and area of 21,000 square kilometers (8,108 square miles). Because of its location on the tropical Pacific coastline it has a history of volcanic- and hurricane-related disasters that have marked and hindered its economic development. The studio will draw upon previous work done by policy and international studies students from the Monterey Institute of International Studies (MIIS) in California who have been working in the region for nine years studying alternatives for the improvement of the living conditions in communities in the south-central part of the country. This area, called the Bajo Lempa, is rich in both agricultural and marine based natural resources. It comprises the mouth of El Salvador's main river, the Lempa, and as a low-lying area, it is vulnerable to flooding and hurricanes during the rainy season (June–October) and also to drought, which directly affects the residents who rely on producing agricultural and aquaculture products for their income and for feeding their families. In addition to these difficulties, the Salvadoran government placed a moratorium on the extraction of endangered sea turtle eggs in 2009, cutting off another source of income on which people near the Bay of Jiquilisco--site of a

RAMSAR¹ wetland and UNESCO biosphere reserve--relied. The bay is home to one of the most important remaining Mangle (mangrove) habitats in the Americas, an ecosystem that is in constant risk of destruction due to development pressures, invasive fishing methods and contamination due to agriculture. To mitigate these problems, much of the work being conducted by local institutions and NGOs such as EcoVivia, La Coordinadora, and Asociación Mangle, who are key stakeholders for the studio, along with residents, focus on finding income generating options as well as alternative possibilities of community organization which foster democratic and sustainable models of pooling resources and collaborating for the advancement of their constituents. Communities in the region would like assistance in developing resource-management strategies that allow them to feed and support their families; opportunities to develop eco-tourism models focused on low-carbon design, especially those that could successfully counter larger-scale developers invading the area; as well as design and policies that support community public space networks, local market development, and fishing cooperatives.



¹ RAMSAR refers to the International Treaty for the Conservation and Sustainable Utilization of Wetlands; it is a classification that includes the largest and most sensitive wetland areas of the world.

Communities and flood zones in the area of the Lempa River and the Bay of Jiquilisco.
(Source: <http://luterano.blogspot.com/2011/10/flooding-of-lower-lempa-region.html>)

SITES

In the studio we will work with two communities in particular, **Ciudad Romero** and **Puerto Parada**. Situated between the Lempa River and the Bay of Jiquilisco, **Ciudad Romero** was established on March 24, 1991, by Salvadoran refugees on the 11th anniversary of the assassination of Archbishop Oscar Romero, for whom the community is named. In the early 1980s, they left their village of Nueva Esparta in the easternmost department of La Union to escape fighting between the Farabundo Martí National Liberation Front and government forces.² They first went to Honduras, but the United Nations, along with the Salvadoran and Panamanian governments, relocated them to a remote area of jungle in Panama. After ten difficult and isolated years, which forged their deepened spirit of community, the refugees finally negotiated their return and settled in the Bajo Lempa.

Approximately 200 families live in Ciudad Romero. Local organizations include a parents' association, a youth group, a women's committee, a Catholic pastoral team, and an ALGES chapter for the war-wounded. The community is served by one school that offers grades K-8, a child development center, a restaurant run by the women's committee, a chapel and pastoral center, a youth center, a community center housing offices, meeting rooms, and a youth-run radio station that is administered and maintained by La Coordinadora. With the help of the Salvadoran Red Cross, residents in 2008 erected a newer Casa Comunal (community center) that also serves as an emergency shelter. Ciudad Romero also boasts the first comprehensive kidney disease treatment clinic in the Bajo Lempa area, which brings a lot of visitors to the community.

Ciudad Romero is working to develop public space strategies that help unite the community around inclusive models of economic development, including creating public gathering spaces that support a new cooperative farmer's market (*mercado local*), refurbished recreational space especially for the youth, as well as the local church and women's center. By creating and supporting new socioeconomic strategies such as these, the community hopes to expand local enterprise and build entrepreneurial capacity; strengthen resource conservation through viable community ecotourism networks; connect severely disenfranchised rural producers, unable to compete in urban markets, with urban consumers; and foster the growth of vibrant communities where people can remain in place and prosper.

² El Salvador's civil war was waged from 1980 to 1992.



Girls walking in Ciudad Romero.

Source: Rachel Berney.

The four community fishing cooperatives of **Puerto Parada**, on the northern eastern edge of the Bay of Jiquilisco, under the leadership of their more recently formed local Coordinadora de Puerto Parada and its NGO, Sinkahuite, are dedicated to developing sustainable economic livelihoods through *pesca limpia*, particularly in order to counteract the destructive human and environmental consequences of blast fishing, the highly unsustainable practice of dynamiting or blasting fishing waters to raise large numbers of fish to the surface for easy collection. In the area now known as Puerto Parada, salt production was a principal activity at the beginning of the twentieth century, a cooking process requiring the use of firewood, which was conveniently and excessively extracted from the surrounding mangroves. Later, the large family landholdings were planted with corn, cotton and rice, and served also for extensive cattle raising. Animal waste and the run-off from the heavy application of agrochemicals, particularly in the cotton plantations, began to contaminate the bay, causing the death of numerous wildlife species. Aggravating this situation in the 1960s and 70s was the increasing use of trammel or gillnets for fishing in the bay's bio-rich channels and estuaries, leading to severe over-exploitation and habitat degradation.



Pesca limpia fishermen's boats on the Bay of Jiquilisco, at Isla de Méndez.

Source: Adele Negro.

The intensification of the civil war in the 1980s signified further destruction of the area, but also brought in new populations of families fleeing the bombings and raids in nearby towns. These refugees began to inhabit and restore, through more ecologically sound cultivation practices, the hacienda plantations abandoned by their landowners. It is in this context that the small fishing communities and cooperatives of Puerto Parada, comprising approximately 200 families, emerged and took shape as they sought to provide a viable, sustainable living for their members and reverse decades-long damage to the fragile ecosystem that serves as their source of sustenance. Since 2009, these cooperatives and their leadership have converted well over 200 fishermen, who formerly employed blast fishing, to *pesca limpia* practices. This illegal and mostly unregulated practice was historically used by many hundreds of fishermen along El Salvador's Pacific coastline, but sites are now being increasingly identified and monitored, thanks to the efforts of various international organizations. Currently the cooperatives are dedicated to strengthening *pesca limpia* both scientifically and economically, in order to see it replicated in other fishing communities of the Bay of Jiquilisco. This endeavor is supported by the scientists of the Instituto de Ciencias del Mar y Limnología (ICMARES, the marine research institute of the University of El Salvador), as well as the Ministry of the Environment and Natural Resources (MARN) and the collaborative project work carried out by TES 2015 to help formulate policy, strengthen the regulatory framework and establish viable market outlets. Public space design and infrastructure development—such as spaces for storing and selling fish, holding community meetings, planting kitchen gardens, organizing children's outdoor activities, attracting tourists to the bay with small-scale, environmentally conscious eco-tourism—are seen as essential and urgently needed components of integrated socio-economic viability and cultural preservation for this community.

STUDIO OBJECTIVES AND OUTCOMES

The overarching objectives of the studio are two-fold. First, during the group analysis and strategic design approach to the studio, to imagine visionary design and policy futures that enable communities within the Bajo Lempa as a whole to transform and sustain themselves. Second, during the individual (or small-group) design or policy-development phase, to solve select design and planning issues in the two communities that we are partnered with. We will, with great sensitivity and substantial preparation, envision design and planning visions and solutions that address the following studio objectives and enable student learning around (we can also potentially accommodate new directions that arise out of research and interest):

1. Improve environmental management of the watershed and its mangrove habitat through proposals that address climate change, seasonal flooding and vulnerabilities to natural disasters.
2. Propose strategies for locally controlled ecological tourism, including areas of conservation, carbon neutral design strategies for mobility infrastructure, open spaces, and buildings.
3. Propose closed-system, sustainable strategies for waste management that help to end the practice of burning waste material in streets and yards.
4. Enable the strengthening and development of sustainable food production.
5. Examine historical ecologies as well as ancestral values to propose solutions to culturally appropriate, economically viable models of managing resources and designing space (built and landscape).
6. Develop shared community-space plans that help knit together the communities.
6. Actively engage with the communities through a participatory planning process by engaging in conversation with the studio client (ECOPA) and community stakeholders (local government and NGOs) and residents.

The studio will explore how design and policy alternatives can tackle these infrastructure, architecture, landscape and planning related issues, and how existing conditions might be adapted to function better in several senses—spatially, ecologically, socially, and economically. There will be an in-depth analysis of the sites complemented by the data produced by previous MIIS efforts; this will allow for our responses to be informed by an understanding of survival strategies already in evidence in the region's population. We will build upon previous work done in the region and generate viable projects that may eventually be built and/or implemented through governmental and institutional funding; the likelihood of projects being implemented is high given the work developed over the

last nine years by MIIS in collaboration with regional government and NGOs and coupled with the urgency of the issues and interest from those in many levels of government.

Brief/possible projects for Ciudad Romero:

Develop public space strategies that help unite the community around inclusive models of economic development, including:

- Create community gathering spaces that support a new cooperative farmer's market (*mercado local*)
- Locate and design farmer's market; being sensitive to the desired visitor-shed
- Develop community public space design plan for implementation that
 - Includes refurbished recreational space, especially for the youth
 - Takes particular account of the church and women's center
 - Takes particular account of the N-S/E-W axes at southern edge of community
- Develop opportunities to expand local enterprise and build entrepreneurial capacity
- Strengthen resource conversation efforts and opportunities
- Develop ecotourism opportunities/constraints > develop
- Foster a sense of community that will allow people to stay in place and prosper

Brief/possible projects for Puerto Parada:

- Public space design and infrastructure development (to support storing and selling fish, holding community meetings, etc.)
- Plant kitchen gardens?
- Design areas for children's outdoor activities
- Develop ecotourism opportunities/constraints > attract tourists to the bay with small-scale, environmentally conscious eco-tourism
- Strengthen integrated socio-economic viability and cultural preservation for this community.

STUDENT LEARNING OBJECTIVES

After taking this studio, students will display the provided competencies, or continued growth in them, or mastery of and modeling for others, in each of the following areas:

Professional practice

- Understand the quality standards expected in practice
- Understand the expectations for professional behavior and practice
- Create an ethical foundation for future practice
- Recognize accountability/responsibility to client
- Recognize accountability/responsibility to underserved groups

Team Skills

- Work more effectively in teams
- Understand basic group dynamics
- Understand how to provide and receive constructive feedback
- Manage projects more effectively

Planning and design knowledge

- Apply general planning and design concepts to a specific context
- Recognize the diversity of the public interest
- Create space for voice in planning outreach efforts
- Structure a formal assessment of a planning document
- Assess studio outcomes on a set of values (e.g. justice, sustainability)
- Apply planning and design research in a real world context
- Learn how to synthesize skills, knowledge, and values within a planning and/or design process and integrate these elements into planning processes and documents.

METHODOLOGY

Participants are expected to develop familiarity with the studio themes and their project areas through readings, research, data analysis, and the interactions with the client, stakeholders, and studio guests. This studio is set up to function as an Architecture 2030 Curriculum Project model. We will use the framework of the “2030 Palette”, an interactive and integrated system of low-carbon design and planning solutions, in three ways. The first is as an investigative tool within the studio to enable multi-disciplinary conversation and questioning around common ideas. Second, we will build a palette specifically for the studio that serves as a framework to create and develop our own multi-scalar and linked design and policy proposals in written and graphic form. We will then use our unique palette (developed out of a series of “swatches”) as a communication vehicle and teaching tool to share with our studio client and stakeholders and to serve as a model for low-carbon international community development and design approaches. In support of this, we do have some assistance from AutoDesk.

While much of the focus of carbon reduction is on cities, rural and suburban areas in El Salvador are also key, especially for the following reasons:

1. A focus on the Global South is important – Latin America has the fastest growing urban population in the world and is expected to be 90% urban by 2050 according to the United Nations.
2. In El Salvador, as in other countries, rural populations are directly tied to urban centers through the forced migration that takes place when communities lack work and education opportunities. Appropriate design and policy interventions can help people,

especially young adults, remain in place in their communities, which lessens the burden of cities to provide food, shelter, and employment that can have high carbon tolls, especially when dealing with precarious livability in the Global South.

3. Development done right, i.e. carbon neutral, is one less thing to worry about in terms of reducing carbon and working towards resilient communities.

The work methodology for the studio is composed of two stages:

Research Stage

a–physical/environmental reality assessment.

b–social reality assessment.

c–analysis of existing national and international mechanisms of action in regions suffering extreme social and environmental problems.

d–analysis of the work of other disciplines on these problems.

Project Stage

a–Integral Group Proposal:

The research material collected in the first stage is used to produce an integral group proposal for the area of study. The proposal is mainly based on the studio intro session, discussions between students, as well as criticism from instructors and guests that will allow for interdisciplinary verifications. The general proposal will define the areas of intervention allowing for the coordination and relation between the individual projects.

b–Specific Individual Proposals:

The final stage consists of the development of individual proposals, that will affect specific areas chosen by each student, and will be contained within the parameters predetermined in the general proposal. This stage tends to resolve problems pertaining to a determined sector of the area of study, allowing for the reinforcement or reformulation of some of the pre-established general concepts. These projects will yield policy and/or design recommendations that can be taken forward and implemented.

ASSIGNMENTS AND GRADES

Deadlines: Late submissions cannot be accepted for assignments that have a pin-up review. Standard exceptions for major emergency situations apply; such situations should be discussed with the instructor.

In Groups:

Research and Analysis at Regional/Habitation Scale, 20%

- 1) Draft regional context and analysis swatches (10%)
- 2) Revised regional context and analysis swatches (10%)

Design Strategies and Vision at Regional/Habitation Scale, 25%

- 3) Draft design strategy swatches (10%)
- 4) Revised design strategy swatches (10%) & **Mid Review** presentation (5%)

Individual Work (or in small group, with instructor permission):

Design Development Scale, 30%

- 5) Draft design development swatches (at site/building/community level) (10%)
- 6) Revised design development swatches (at site/building/community level) (10%) & **Final Presentation** (10%)

Final Project Submittal:

- 7) **Final Swatch Submittal, 25%**

BACKGROUND MATERIALS/READINGS (to get you started)

Papers/Reports

Negro, Adele, Rachel Berney, and Max Rohm. (2016). *The Bajo Lempa, El Salvador, A Landscape of Change Agents and the Makings of Culturally-based Communities*.

9th International Forum of Urbanism, Buenos Aires, 26–28 October.

Team El Salvador. 2014. *Public Spaces Report*. Monterey: Middlebury Institute of International Studies.

Team El Salvador. 2015. *Ciudad Romero: Advancing Community Empowerment through Public Spaces*. Monterey: Middlebury Institute of International Studies.

Team El Salvador. 2015. *Pesca Limpia in the Bajo Lempa*. Monterey: Middlebury Institute of International Studies.

Online Articles/Plans/Websites

El Salvador's National Security Plan – <http://www.presidencia.gob.sv/wp-content/uploads/2015/01/El-Salvador-Seguro.pdf>

<http://ecoviva.org/statistics-about-blast-fishing-in-the-bay-mis-quoted/>

http://cdkn.org/2016/05/paris-climate-agreement-cop21-el-salvador/?loclang=en_gb

Architecture 2030 Resources

<http://architecture2030.org/programs/2030-palette/>

All students must watch the following tutorials:

<http://2030palette.org/tutorials>

SCHEDULE

Week	Activity	Goals-Results	Seminar-Reading Themes
1 9.28	Intro, Adele Negro, ED, ECOPA in studio	Familiarity with area, sites + stakeholder context	Site + Sources Orientation
2 10.3- 10.5	Site Inventories + Base Maps; Stakeholder, Policy + Issue Diagrams	Creation of base maps for key concerns	Layout, flooding, envi resources, etc. Key sites, policies + plans
3 10.10- 10.12	Inventory and Analysis; group presentations to instructor	Site analysis draft swatches presented and redlined	Regional, settlement, natural resource patterns
4 10.17- 10.19	Finalize analysis; begin to develop Large-scale Design and Policy Responses	Larger-scale design strategies developed	Regional/settlement scale design strategies
5 10.24- 10.26	Large-scale Design and Policy Responses	Larger-scale design strategies developed	Regional/settlement scale design strategies
6 10.31- 11.2	Midterm Review, including studio consultants & guests	Refined analysis swatches presented (100%), proposed larger-scale design swatches (85%) presented and redlined during review	Social, demographic, and environmental needs; strategic linkages between scales
7 11.7- 11.9	Large-scale Design and Policy Responses + Preliminary Programming and Design/Policy Development	Complete refined large-scale swatches, Begin development of sub-regional design elements, including site, building, community areas	Social, demographic, and environmental needs; strategic linkages between scales
8 11.14- 11.16	Design Criteria + Schematic Iterations	Begin development of sub-regional design elements, including site, building, community areas	Social, demographic, and environmental needs; strategic linkages between scales, Community design and development
9 11.21- 11.23	Design Development	Continue development	Community design and development
10	Design Development	Pin up review of revised	Community design and

11.28- 11.30		design swatches below the regional scale	development
11 12.5- 12.7	Presentation + Swatch Refinements	In studio work, final pin ups to aid in completing work	Community design and development
12 12.5- 12.7	Final Review, including studio consultants & guests , final swatches due	Presentation and submission of final swatches (team and individual)	