

Territorial imaginaries | geopolitics, infrastructure, and ecology

Carla Aramouny, Assistant Professor, Architecture

Sandra Frem, Assistant Professor of Practice, Architecture

Territorial Imaginaries is a research teaching lab developed through a design studio and dedicated seminar course, centralizing the urgency of the climate crisis through readings and speculations linking geopolitics, ecology, and infrastructure to the shaping of territorial conditions. It triggers investigations in the MENA region (Middle East & North Africa), from Lebanon to the Arabian Gulf, looking at specific contemporary situations where politics created economies of resource extraction, with infrastructures that had direct and indirect ecological repercussions on their expanded environments and territorial configurations. The lab highlights the role of visualization and mapping as investigative tools that help construct and narrate otherwise abstract and disconnected situations. By visualizing the ecological footprint of infrastructure and the geopolitics behind them, the course places agency in the design field to help expose the eco-realities of our world and speculate on alternative potentials for the built environment. The lab also crosses scales of impact, looking at both macro manifestations to micro interventions that can help reverse or critique the eco-political situation through applied design methods.

Design Studio: ARCH 305/407 Vertical Studio (Thematic option studio for 3rd/4th year architecture students)

Seminar / Elective: ARCH 015 Visualizing Infrastructure (advanced representation elective for 3rd / 4th/ 5th year architecture students)

The question of the territory is inherently connected to politics. Territory, in distinction from terrain or landscape, designates the socio-political construct of a geographical field. The natural environment, in contradiction, is the intact field comprising natural ecosystems, outside of human intervention. Historically, the understanding of nature has shifted from a wild system that needs to be controlled to that of a rich surface disposed for resource extraction and production. With that, the territory itself has shifted from a manifestation of boundaries and governance to that of embedded resource and economic power, and accordingly geopolitics often prioritizes extraction over the ecological and socio-cultural dimension of the territory. In mainstream media, the impact of geopolitics is often removed from the realities of the terrain, seen as distinct decisions related to economic development, power systems, and infrastructural necessities. In cartography, the map has evidently been a powerful visualization tool for actualizing systems of governance and political boundaries on the physical environment. Through this proposal, representing geopolitical narratives is centered a necessary tool to territorialize the ecological footprint of main political events, and to visualize the outcomes of resource extraction and infrastructural production on the natural environment as a tool for design agency, advocacy, and action. Through critical readings of political events and visual methods from mapping to time-based diagrams, the studio / seminar lab will yearly present specific topics of geopolitical narratives and their ecological and climatic repercussions, while offering scalar architecture, landscape, and infrastructural proposals.

>PROPOSAL WORK PLAN

The proposed studio / seminar lab will run in conjunction for three years, each year tackling one topical episode, where the design studio will focus on territorial scale investigations and urban implications moving towards macro design projects that interlink architecture with landscape and ecology. The seminar on the other hand focuses on visualization, design advocacy, and applied research methods through descaled infrastructural proposals. The intersection between the two will happen through common shared lectures and readings, particularly to situate the framework of the courses within the discourse, and through common visualization workshops.

Year 1 - First Episode:

The politics of maritime boundaries for natural gas extraction has reached a momentum with the new agreement on maritime borders between Lebanon and Israel, underlying a desperate search for economic salvation through natural gas extraction while abandoning simultaneously another mismanaged resource- water - around which geopolitical conflict still stands. The Lebanese Ministry of Energy and Environment has clearly prioritized the economic lucrativeness of gas

extraction over investments in sustainable and ecologically conscious water infrastructures. The lab is particularly interested in the offsite ecological implications of the political dissonances in regard to these two essential resources, energy and water, while framing this within climate urgency and the global need for long-term visions that prioritize long-term environment stewardship over lucrative - and finite- economic development.

Year 2 - Second Episode:

The resulting impact of corruption in the Lebanese energy and water fields can be evidently seen in the conditions of Lebanon's longest river, The Litani, in the Bekaa Valley. The Litani has been dammed since the 60s, forming the Qaraoun lake, and producing hydropower that contributes minimally to the national energy grid. However, due to corruption and political affluence, some villages around the hydropower stations have been inequitably benefiting from 24 hours of grid electricity, while the rest of the country dwindles in darkness. The resulting availability of electricity has created a spontaneous emergence of a new economic landscape in these towns through cryptocurrency mining. The lab will thus focus on investigating the shifting dynamics of economy and politics in the area, afforded by a disrupted energy / water cycle of extraction and production, and its repercussions on the natural and built environments.

Year 3 - Third Episode:

The lab will investigate the wider ecological and climatic implications of nation building and mega-scale eco-projects when considered from a territorial perspective. It will focus specifically on the case of the Neom area in the Kingdom of Saudi Arabia, through The Line project, a 170 km long megastructure with net-zero footprint. It will examine how climate-aware futuristic visions with ambitions to offset energy footprint of an oil-producing kingdom, could clash with larger ecosystems and desert dynamics through its territorial scale footprint.

>DESIGN STUDIO: ARCH 305/407 VERTICAL STUDIO

The newly offered design studio combines the exploration of political, ecological, economic, and spatial dynamics to speculate on scenarios of transformation for territories affected by a conundrum of larger geopolitical decisions, resource extraction, and climatic change. At the backdrop of large-scale externalities, how can a new set of urbanistic practices emerge from the shifting processes and the material realities of such sites? How can we represent the complexity of territory - ecological, economic, and political - with new forms of mapping and design strategies to inform climate-aware at multiple scales? Topics to be considered include water systems and infrastructures, politics of extraction and exploitation, water dependence and scarcity, water contamination / depletion, ecosystems and biodiversity, sediments and erosion, biodiversity, extraction landscapes, local processes under geopolitical forces, oil /gas/material mining, privatization, clientelism, dispossession, fossil fuel dependence, infrastructure, conflict, borders, modes of living/ livelihoods relative to resource monopolization, migration and climate change, collective resources, spatial inequality/inequity, border issues, new ecologies and economies. The transformative scenarios will delve into three main scopes: Systems, Scale, and Time. The studio will develop a system-based approach that links the shifting patterns of human-natural ecosystems with their socio-economic and environmental prerogatives in order to project scenario-based transformations that will be the base for alternative futures, new economies and ecologies.

>SEMINAR / ELECTIVE: ARCH 015 VISUALIZING INFRASTRUCTURE

The seminar, which is a revised version of an existing course, focuses on crossing visualization and mapping as methods for research and design advocacy, with narratives of local infrastructure and design potentials. Students work throughout the semester on a select yearly infrastructural theme in Lebanon and the region and develop a pamphlet that consolidates their visual research and speculative proposals. The course's structure integrates three main learning objectives: Methods of mapping and visualization, applied research methods in design and architecture, and the agency of design for advocacy. Through lectures, readings, case study analysis, and mapping exercises, the course centralizes the role of visualization as a tool that has historically shaped architecture practice, and is crucial today as a method for investigation, articulation, and design. The course

further pushes students to understand their role as architects as central to bigger questions of the environment and infrastructure and places a focus on research and investigation through drawing as necessary methods for today's architect. In its revised version, the course will focus more inherently on applied research methods, integrating critical readings on territory, ecology, and design advocacy while investigating regional scales of infrastructural implications. It will also shift towards a hybrid format, integrating digital collaborative mapping exercises, international guest talks, and asynchronous lectures and discussion forums. It aims to create an online accessible visual archive of research and proposals on infrastructure in the region.

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