

The Sustainable South

The debate of what is sustainable development is on-going and open to interpretations. However, the investigation of sustainable development at various scales is an important educational exercise for architects as it provides an awareness of the possibilities and implications of development beyond the immediate scope of intervention. Through looking at the various aspects of development, be it the user, the materials, the natural environment, the economy etc, as interdependent systems, gives a better understanding of the complexities involved.

The studio's aim is the investigation of sustainable development and architecture in the context of South Lebanon. There is no doubt that there is an urgent need in the South for development; however, the situation is unique in that the region is rich in natural resources and especially water, and the natural landscape is still largely intact and fragile.

The studio will begin by giving the students a holistic understanding of the implications of development on a region. Readings on sustainable development, its aims and objectives, and its positive aspects and short comings will be given to the students who will be expected to submit questions for the visiting interdisciplinary professionals for active participation during the discussion panels. Visitors will deal with concepts of Urban Development: the planning strategy of the government (representative of the Directorate General d'Urbanisme in the south), the role of the NGOs (Association d'Aide au Development Rural & Mercy Corps), the role of International Agencies (ESCWA & UNDP); Ecology: looking at a context as a fragile system of interrelated parts (ecological landscape designer); Environmental Management: strategic environmental assessment and land use planning (environmental manager); Environmental Engineering (water resources and the potential of the environment of the South (environmental engineer).

As such, pertinent issues to our context will be investigated so that the students can ground their readings of sustainability within a real and complex setting, hence building an understanding of their intervention as part of an overall strategy and system.

The studio will then focus on the Caza of Marjeyoun. During our overnight visit to the area, we will be accompanied by the local stakeholders from the municipalities, local developers and government representatives. The students will thus get the chance to experience the site and investigate the area and its environment in detail.

Students will then propose group development scenarios that will deal with providing the community with appropriate and feasible opportunities for economic development projects (such as sustainable agriculture, eco-tourism, sustainable industry, educational/vocational facilities) within the givens of the larger system of the physical environment and social settings. The scenarios, it is hoped, will be presented to a group of local stakeholders. The students' presentations, therefore, must take that communication challenge with the community and various stakeholders into account.

Based on their sustainability framework, the students will then present individual architectural programs within appropriate sites. At this stage, the students will revisit the area to investigate their sites in further detail.

The students will be encouraged to look at their work as a series of overlapping systems.

- The environmental system:

The use of renewable and non renewable resources for energy and building materials. Extraction from the environment and emissions of green house gases in the production and transport of building materials. The energy cost of building materials in their production, assembly, use, demolition and recycling.

- The social/ economic system:

The role of the proposed intervention in the economic system of the context. From the design and building of the proposal, to the activities and program it proposes; available skills, opportunities for learning new ones, income generation and for whom and at what social/ environmental cost. Hence, the objective of achieving efficiency of use through flexibility and multi-use. The issue of identity and cultural sustainability, the role of the intervention in the social system are vital points to assess.

- The building as systems:

Issues of energy efficiency: international standards, regulations and statistics. How meaningful are they across various locations? Is it just a question of following equations and rules? How does the present Lebanese building law fit into the notions of sustainability and energy efficiency?

- The intervention as an energy system.

Starting with programming the use within the building to the interaction with the landscape to the building components; the structure, the façade, the window, etc...all living environments working together towards efficiency and sustainability.

Interjected in this phase will be a short design exercise that will deal with a design item using specific materials. The students will be expected to build a scaled model and to investigate sustainability at a tangible scale.

The architectural production phase will be supported by rigorous feedback from disciplines such as energy efficiency technology, environment, management, and ecology. Emphasis will be placed on detailed site / landscape plans, on detailed sections that show how components and various materials are put together and what are their implications.

"This is potentially one of the most challenging periods of architectural innovation in history. While many of the established architects today seem intimidated by the accelerating momentum of change there is no reason why the environmental revolution cannot be welcomed as the threshold of a great creative era."

James Wines, Head of the Department of Architecture at Pennsylvania State University.

