ARCH 4/584: Land Trust: Designing a community-owned and managed wetland and bird reserve in Koshi Tappu, Nepal

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Intermediate level studio
Portland, Fall 2019
M/W/F 1:00pm - 4:50pm
6 credits

Studio description:

The studio theme is connected to the instructor’s current project on biodiversity conservation called the ‘Vertical University’ Project initiated by KTK-BELT studio, a non-profit foundation working in rural Eastern Nepal. The ‘Vertical University’ project has been conceived as a framework to teach and conserve biodiversity, vital habitat, and indigenous knowledge found along an 8,000-meter vertical gradient in eastern Nepal spanning from the lowest plains, Koshi Tappu (229 ft), to the third tallest peak in the world, Mt. Kanchenjunga (28,000 ft).

The studio will focus on the lowest site of the Vertical University in Koshi Tappu adjacent to the Koshi Tappu Wildlife Reserve (KTWR), a Category IV protected area and first RAMSAR wetland site of 173 sq km of Nepal situated on the Sapta Koshi River floodplains. The Koshi region is considered an Important Bird and Biodiversity Area (IBAs) providing vital habitat for 536 bird species, 670 vascular plants, 32 mammal species, 45 herpetofauna species, 127 fish species, and 77 butterfly species. Currently, this region is undergoing major ecological problems with increasing urbanization pressures, the proliferation of invasive species, human-wildlife conflict, and annual flooding, causing habitat loss and degradation. The spread of invasive species destroying wetland bird habitats includes Water hyacinth (Eichhornia crassipes), Chinese Creeper (Mikania micrantha), and Lantana (Lantana camara).

The buffer zone, immediately surrounding the KTWR, is also home to over 84,423 people. About 13% (10,975 people) of the total population of the buffer zone belongs to an ethnic community such as Malaha, Majhi, Mushar, Jhangad, Bantar, Bardar, Sardar, Mukhiya, Sahani, and Urauthat, who depend on wetland resources for their livelihoods. And, approximately 70% of this population is ultra-poor. Historically, local people had open access to use the resources of Koshi River flood plains for fishing, hunting, grazing livestock, and collecting fodder, firewood which was limited after the establishment of the reserve under the National Park and Wildlife Conservation Act (1973). Additionally, during the creation of the park, more than 12,000 people were displaced, leading to the current park-people conflict.

Within this buffer zone, KTK-BELT is supporting the purchase of a 60-acre land parcel as a community land trust. Working in collaboration with residents from the local buffer zone, particularly the most marginalized community members, this parcel will be developed into a community-owned and managed wetland and bird reserve. Students will be tasked with developing materially-innovative structures and design strategies for a site facing complex ecological and social challenges.