International Institute of Boundary Water

Reflection
Complex Projects Graduation Studio: Border Studio
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The relationship between research and design
My graduation project focuses on providing a better alternative for the unsustainable water management in twin cities Ciudad Juarez (MX) and El Paso (USA) which are divided by the Rio Grande, the main source of water for both twin cities and the rest of the region along the border.

My research shows that the current water management strategy for El Paso and Ciudad Juarez is unsustainable and that both cities are suffering from physical water scarcity. The large amount of withdrawal of water from the aquifer is resulting in a high water stress, underlining the physical water scarcity that the twin cities have. Since the cities also deal with flooding on a regular basis, there is the potential of catching stormwater and using it within a water management master plan. This would result in a less water stress on the aquifer, as well as preventing damages due to flooding.

This research was leading in the design of a new, more sustainable water management strategy and the creation of a conceptual water management masterplan. The building design is then designed in this new masterplan as well as in the contemporary situation of Ciudad Juarez and El Paso. Research on water management as well as the issues related to the border region and the chosen site eventually resulted in the chosen program and building.

The building itself is located on top of the Rio Grande, where the building filters stormwater and irrigates the Rio Grande. This junction of water is also the perfect place to promote and educate people on the subject of sustainable water management. Besides this, the institute also provides the infrastructure for people to safely swim in the river, adding a much needed form of recreation in the region.

the relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

The Complex Projects Border Studio focuses on the border region along the US/Mexican border and more specifically on twin cities El Paso and Ciudad Juarez. Many aspects of the border region have influenced design and research decisions, but in my case, the relationship is strongest when we look at the Rio Grande itself, which is the physical border between the US and Mexico for approximately 2000km of the 3000km long border. The project responds the border as the building is the building
that is basically managing this border, which physically divides but is also a lifeline of water for this region.

This means that the project will impact the US/Mexican border physically, but also on the scale of water management and recreation for twin cities El Paso and Ciudad Juarez which is the focus of the graduation studio.

The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework

The chair of Complex Projects targets all scales of architectural thinking and is focussed on expanding the knowledge of dense urban areas. In the case of twin cities El Paso and Ciudad Juarez, both cities have therefore been analyzed on all scales, resulting in hard and soft data in a group research. Further personal research then started with a solid basis of all complex economic, political and spatial issues in the interesting twin cities of El Paso and Ciudad Juarez. My research focuses on both macro scale water management of the Rio Grande which has a length of 3000km, life on the scale of the twin cities, as well as the scale of the chosen site. In the end, the project impacts water management for El Paso and Ciudad Juarez as well as providing amenities for inhabitants of both cities and neighbourhoods.

The relationship between the project and the wider social context

Without water, there is no life. Water scarcity is becoming a global issue. Sustainable water management is therefore a topic that is relevant on a global scale. My graduation projects consists out of an alternative and more sustainable form of water management for El Paso and Ciudad Juarez, resulting in the context for my final architectural design. The building itself is located on top of the Rio Grande, where the building collects and filters stormwater and manages the water. This junction of water is also the perfect place to promote and educate people on the subject of sustainable watermanagement. Besides this, the institute also provides the infrastructure for people to safely swim in the river, adding a much needed form of recreation in the region, as well as connection to the river.