Research Structure

**Problem Field**
- Sensitive, dynamic, and fragile landscape
- Challenging water resource management

**Theoretical Framework**
- Landscape urbanism
- Landscape as infrastructure

**Diagnostic Analysis**
- Landscape context
- Historical pattern
- Socio-economic background
- Activities and resources

**Research Questions**
- How does it work?
- What can we do?
- How do we apply them?
- What can we learn from this?

**Test & Research by Design**
- Planning system
- Existing strategies
- Scientific calculation

**Technical Inquiry**
- Through-scale integration
- Up-mid-down stream synergy

**Institutional Inquiry**
- Planning system
- Existing strategies

**Research by Design**
- Study case testing site
- Constraints / potentials

**Vision + Strategy**
- Landscape as infrastructure
- Mountain / river
- Living environment

**Taiwan**

**DaJia River Basin**
- Sensitive, dynamic, and fragile landscape
- Challenging water resource management

**External Threats**
- Climate changes
- Socio-economic shifts

**Problem**
- River + Mountain = Obstacle

**Hypothesis**
- River + Mountain = Opportunity

**Test & Research by Design**
- River + Mountain = Opportunity
Graduation Document

European Post-Master of Urbanism (EMU)

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<th>General Information</th>
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<tr>
<td><strong>Student Number</strong></td>
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<td><strong>Student Name</strong></td>
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## Project Description

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<th>Graduation Project</th>
<th>This project explores the landscape potential of Taiwan in terms of integrating water and river management with urbanism within the context of a compact environmental diversity. Taking one of the most illustrative river basin, Dajia River, which is the steepest river with the most water resource, as an example, the project intends to develop a landscape-based strategic plan which will provide a showcase with toolkits, methodology, as well as propose a framework with possible intervention projects dealing with different cases of interaction between human activities and water condition. Furthermore, the project argues that by enhancing water sensitivity in living environment within river scape, the characteristic of landscape can help building a stronger identity for the territory and its inhabitants. It is expected that the result of the project can contribute to the field of landscape urbanism in terms of spatial planning and urban design with water in mountainous river scape.</th>
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<tr>
<td>Project Title</td>
<td>The sensitive river scape, the sinuous landscape --- Towards a better integration of mountainous river landscape and living environment</td>
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<td>Location</td>
<td>Dajia River Basin, Taichung, Taiwan.</td>
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<td>Contents</td>
<td>The project will be based within the discourse of landscape urbanism and design with nature, using them as the body of knowledge, focusing on the topics of water urbanism. The project will take the basin territory of Dajia river in Taiwan as the study case, The project takes the basin of Dajia river as the study area, for it is one of the most illustrative river scape in Taiwan, flowing through drastic elevation changes with diverse kinds of human activities, patterns of developments, and habitation contexts along the river. Starting with 3-layer mapping, literature studies as well as technological inquiries, the project will conclude the analysis with feasible, probable, and possible imaginations and proposals that integrates the artificial infrastructure or facility elements with nature, dealing with water-related issues. Through the analysis, the territory will be categorized into several different morphological types that talks about different environmental contexts and the different issues they will be facing while dealing with water. Last but not least, the whole framework will be constructed taking the river as a carrying structure, maintaining the connection between the different sites in the territory.</td>
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<td><strong>Problem statement</strong></td>
<td>Water was the origin of all things, while mountains are the origin of water. The paradigm of water management has changed from soft and delicate indigenous wisdoms to hard hydrological engineering, and in recent decades moved back to a softer approach again which integrates landscape as urbanism such as infrastructure or spatial structure for an area. In general, the topic of water urbanism has been discussed broadly and in-depth at the alluvial plain areas, with several projects successfully achieved. However, in the mountainous context, it stays still more at the engineering and hydrological approach. There is a lack of integration between human-modified world and natural landscape, which has accumulated into many natural disasters and environmental, economical and social problems for both the territory and local communities. With also the impact of climate change which brings more intense and irregular rainfalls, the traditional way of infrastructuralizing rivers could not be the answer for future mountainous river scapes. This is especially essential while the dynamic fragility adds another layer of complexity to the issue, which is in the case for most of Taiwanese rivers. Therefore, a new spatial strategy and framework need to be developed in order to achieve a better integration between artificial and natural environment in living with water in the mountainous territory.</td>
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<td><strong>Research question</strong></td>
<td>How to rethink the river landscape and living environment to achieve a more sustainable integration between artifact and nature? Further on, how to build a stronger identity for the territory through the process of integrating river landscape with the living spaces of communities in the cities and villages?</td>
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<td><strong>Design assignment</strong></td>
<td>The project will develop a landscape- based strategic plan for a water-sensitive and mountainous territory. The intention is to construct a spatial framework for which the mountainous river landscape with its highly dynamic, sensitive and vulnerable landscape characteristic, as well as the complexity of its cultural and historical patterns of human activities will be taken into consideration, and thus better integration of landscape and living environment can be achieved not only in ecological, but also economical and social points of view. It is expected that the project for the territory can act as a showcase providing portable methodology, toolkits, and intervention proposals for different cases of interaction between human activities and water of the mountainous rivers.</td>
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