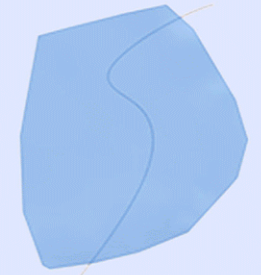
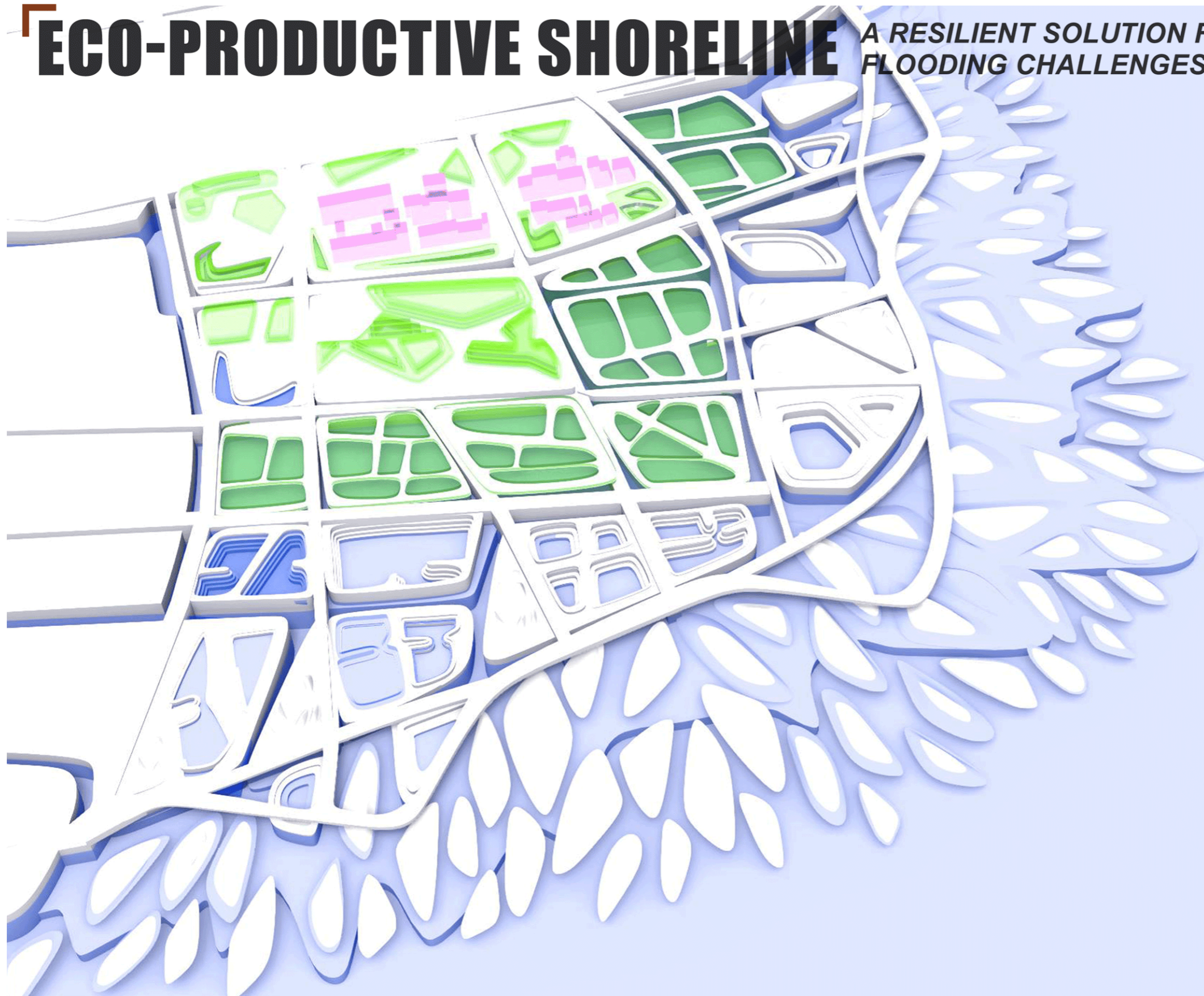
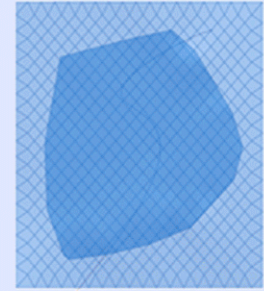


ECO-PRODUCTIVE SHORELINE

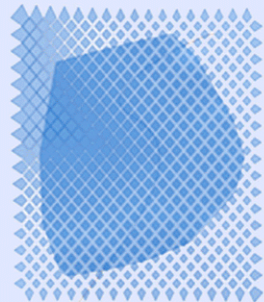
A RESILIENT SOLUTION FOR WATERFRONT FLOODING CHALLENGES



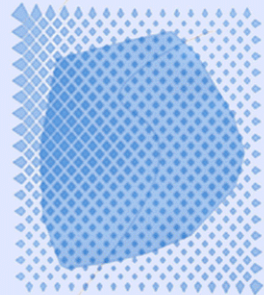
STEP 1
Set two interfering rivers (designed inland river and Huangpu River)



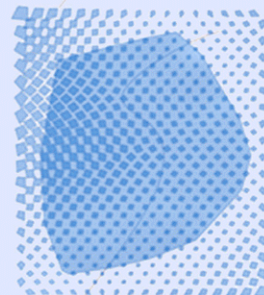
STEP 2
Establishing a diamond grid



STEP 3
According to the Huangpu River, the first interference of magnitude



STEP 4
Conduct a second interference of the same magnitude based on the inland river



STEP 5
Change the angle of the prototype and increase density

Country /City China

University / School Shanghai Jiao Tong University

Academic year 2022/2023

Title of the project Eco-Productive Shoreline: A Resilient Solution for Waterfront Flooding Challenges

Authors Xuanqi Wang, Yinglan Zhou, Chang Ye , Jiamin Sun

TECHNICAL DOSSIER

Title of the project Eco-Productive Shoreline: A Resilient Solution for Waterfront Flooding Challenges
Authors Xuanqi Wang, Yinglan Zhou, Chang Ye , Jiamin Sun
Title of the course Landscape Engineering and Digital Landscape
Academic year 2022/2023
Teaching Staff Liqing Zhu, Kai Fu
Department / Section / Program of belonging Landscape Architecture

University / School Shanghai Jiao Tong University



Written statement, short description of the project in English, no more than 250 words

In the face of accelerating urbanization and global warming, the water-land interface of waterfront cities is facing tremendous challenges from extreme weather events. Rigid vertical embankments cannot withstand flooding and also lead to loss of biodiversity due to the separation of water and land. Our proposal aims to adjust the water-land interface and create a buffer zone that integrates agricultural production and daily life. The design incorporates water into the river, with areas that are designed to be inundated and greened, creating a flexible shoreline that can accommodate floods and promote biodiversity.

The project is located at the intersection of the Huangpu River and the Dazhi River in Shanghai, in a typical grey water-land interface area. We studied the evolution of orderly cities to natural disorder through five indicators: grey space density, impact effect, interference deformation, construction height, and construction density. This research led to the development of the design prototype. In this design, the process of the city gradually extending towards nature is demonstrated in aspects such as land use and road selection. Based on the preliminary site analysis, the design incorporates different functional modules to form a shoreline coupling system that combines ecological, production, and human activity efficiency. The importance of cooperation and interaction between different elements is emphasized.

We aim to adjust the water-land interface of the waterfront cities, creating a buffer zone that integrates agricultural production, ecological environment, and daily life, establishing a flood-resilient park area, and promoting biodiversity.

For further information

Máster d'Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal.paisatge@upc.edu

Máster d'Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edificio Omega 1-3
08034 Barcelona - Spain

COAC - Colegi oficial d'Arquitectes de Catalunya

Carrer Arcs, 1-3
08002 Barcelona - Spain

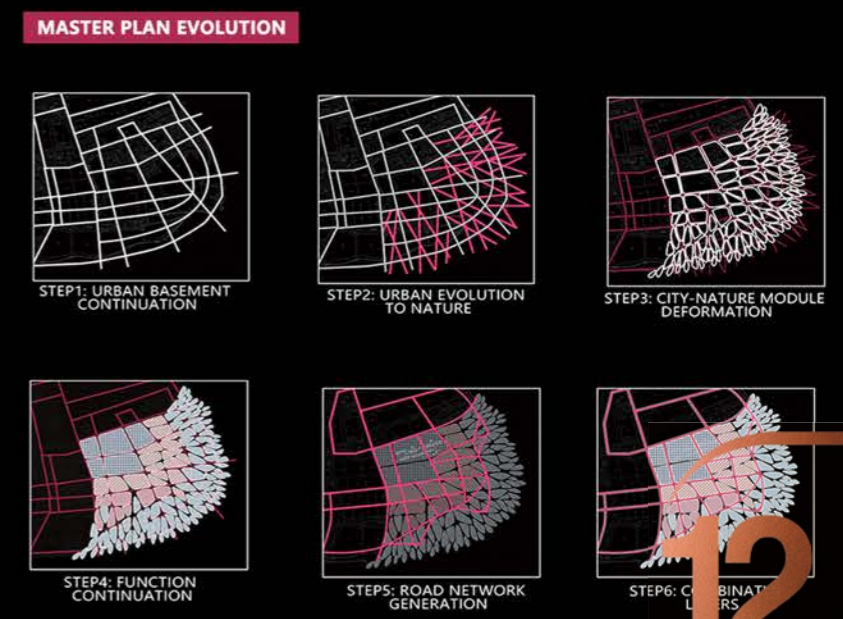
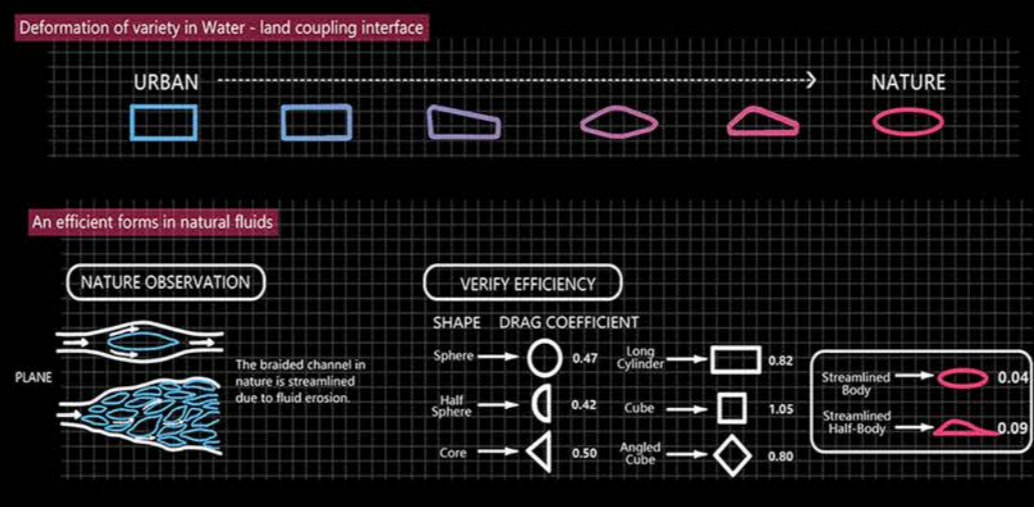
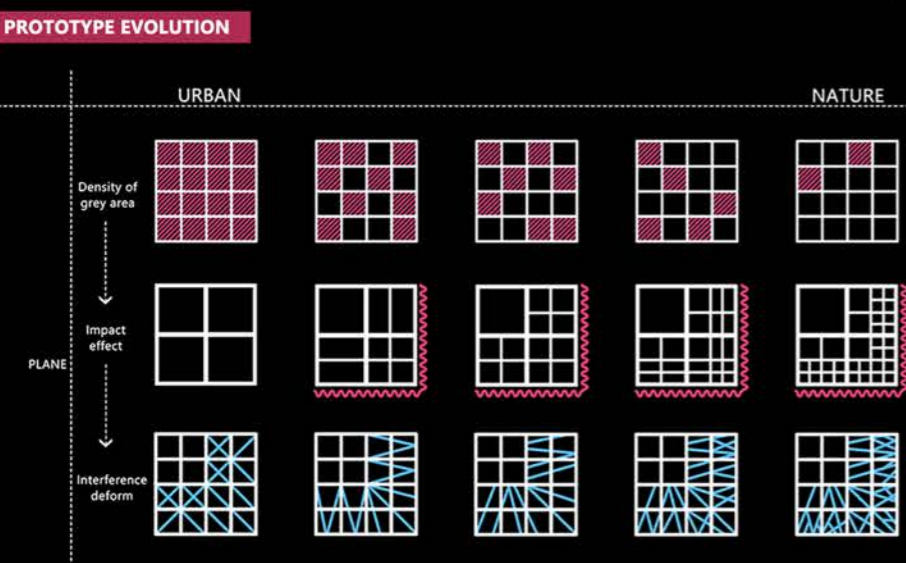
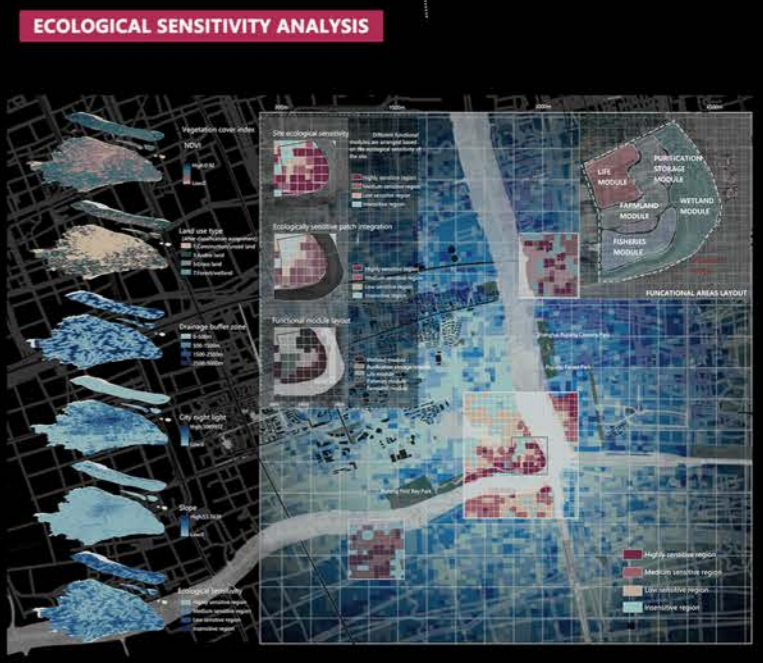
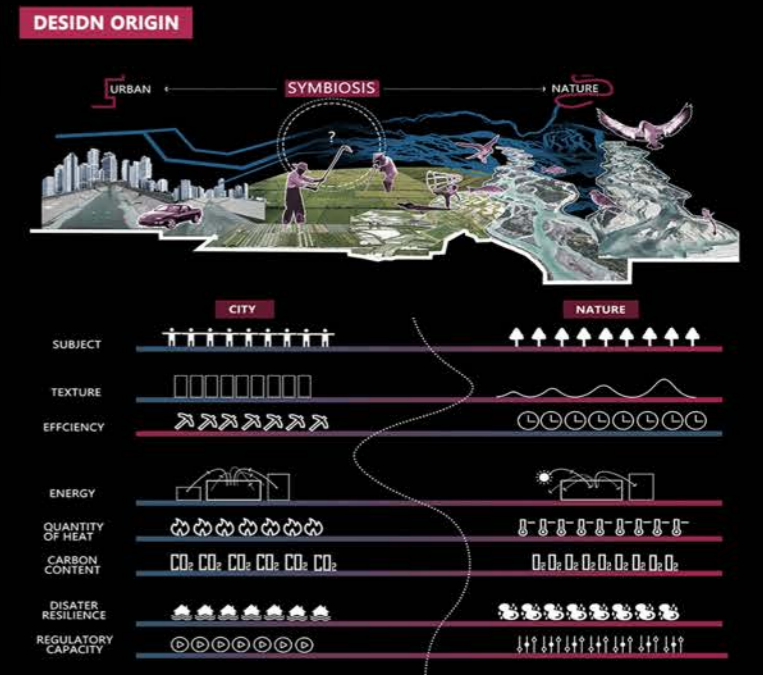
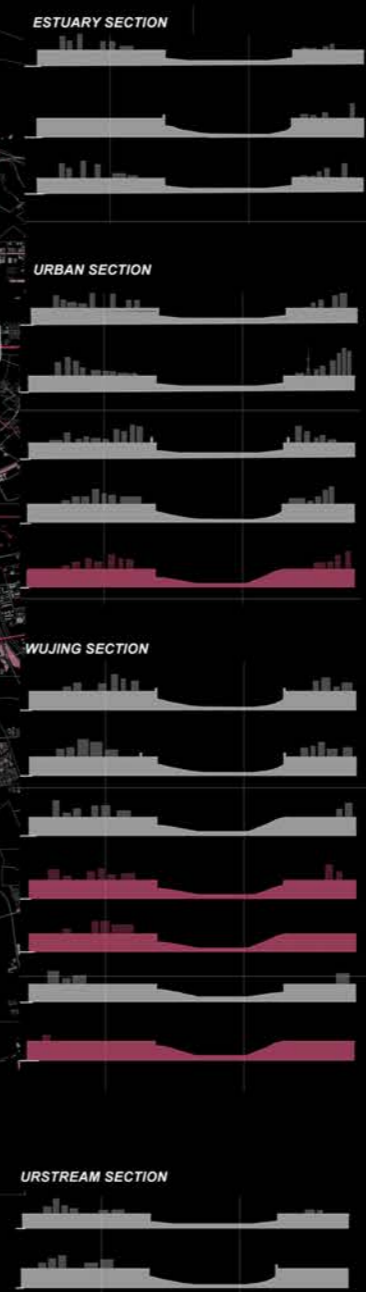
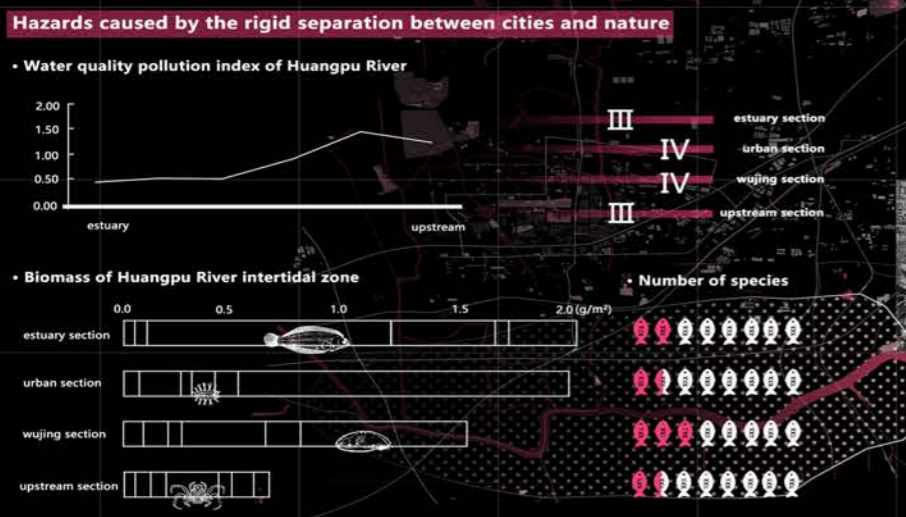
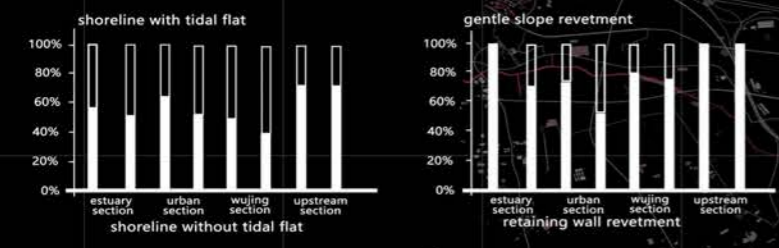
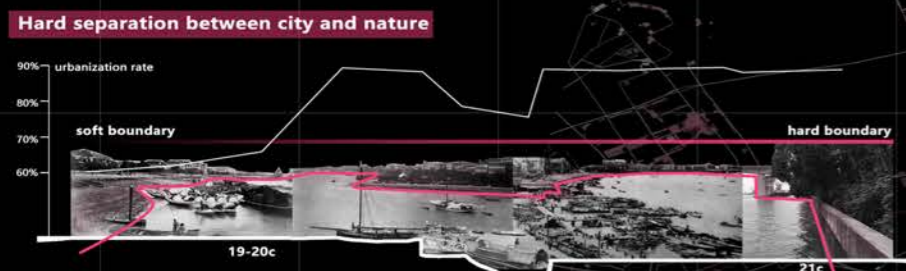
12th International Biennial Landscape Barcelona

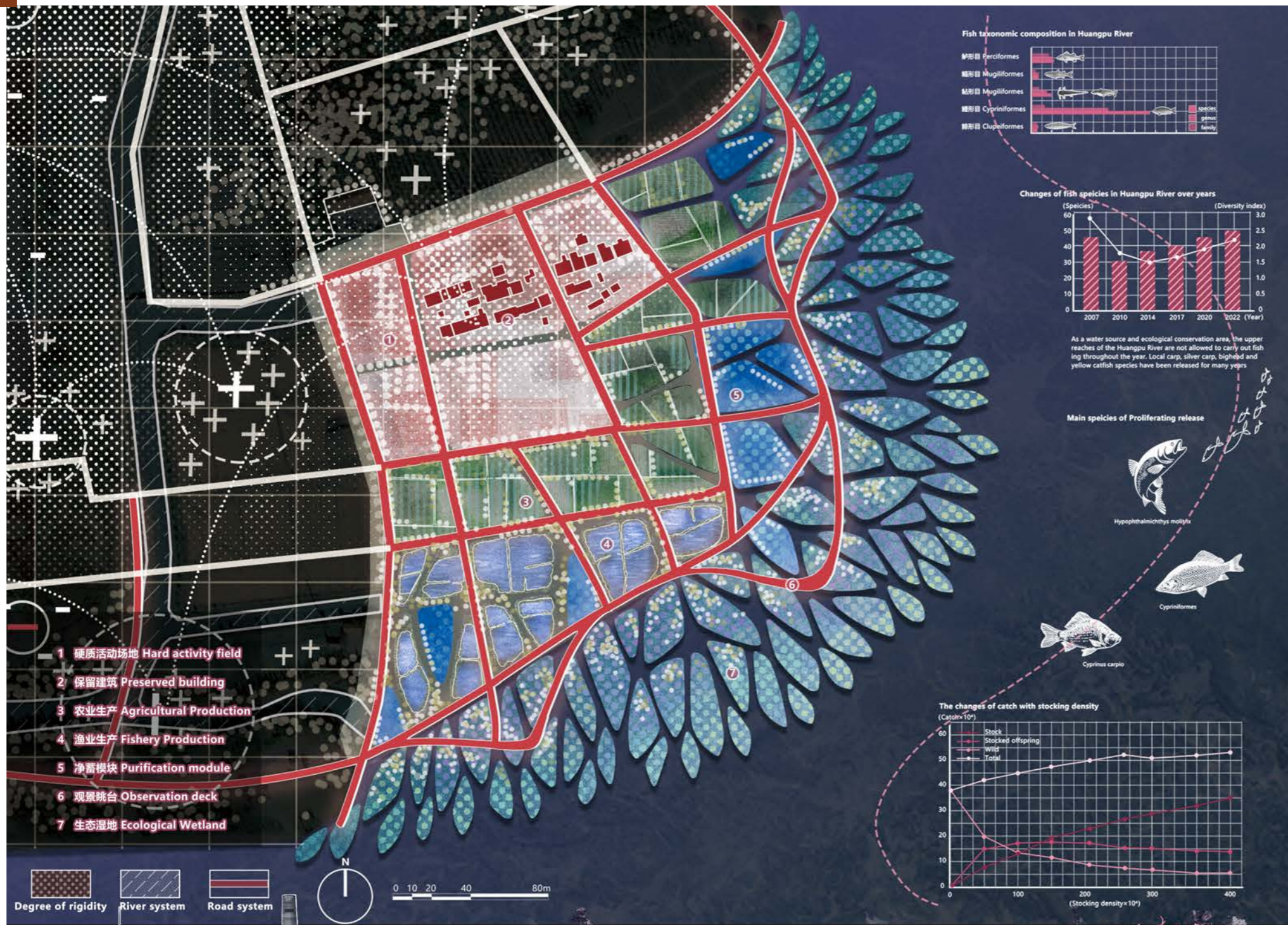
Barcelona October 2023

SCHOOL PRIZE

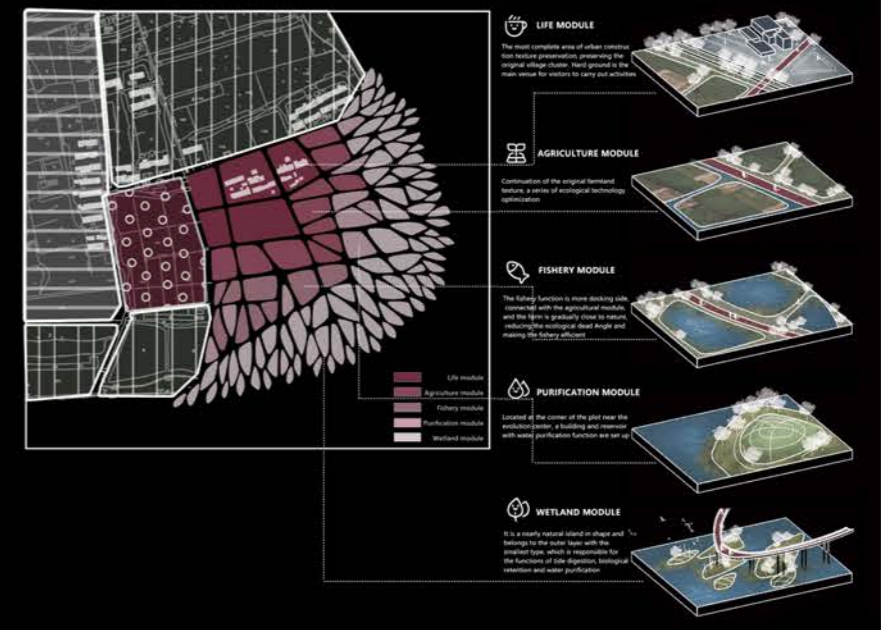
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FIVE MODULE TYPES



ORGANIC MATERIAL ACQUISITION AND RECYCLING

