

LE:NOTRE *Institute*

Linking Landscape Education, Research and Innovative Practice



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EUROPEAN COUNCIL OF
LANDSCAPE ARCHITECTURE
SCHOOLS

INTERNATIONAL STUDENT COMPETITION

Learning Landscapes
Zagreb Futurescapes

Prize-winning teams of the 5th LE:NOTRE Institute Student Competition



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First Prize: Sava In Between

Nika Miletic, Neza Jelincic, Masa Vertot, Ana Petrovcic, Lucija Pucihar

University of Ljubljana, Slovenia

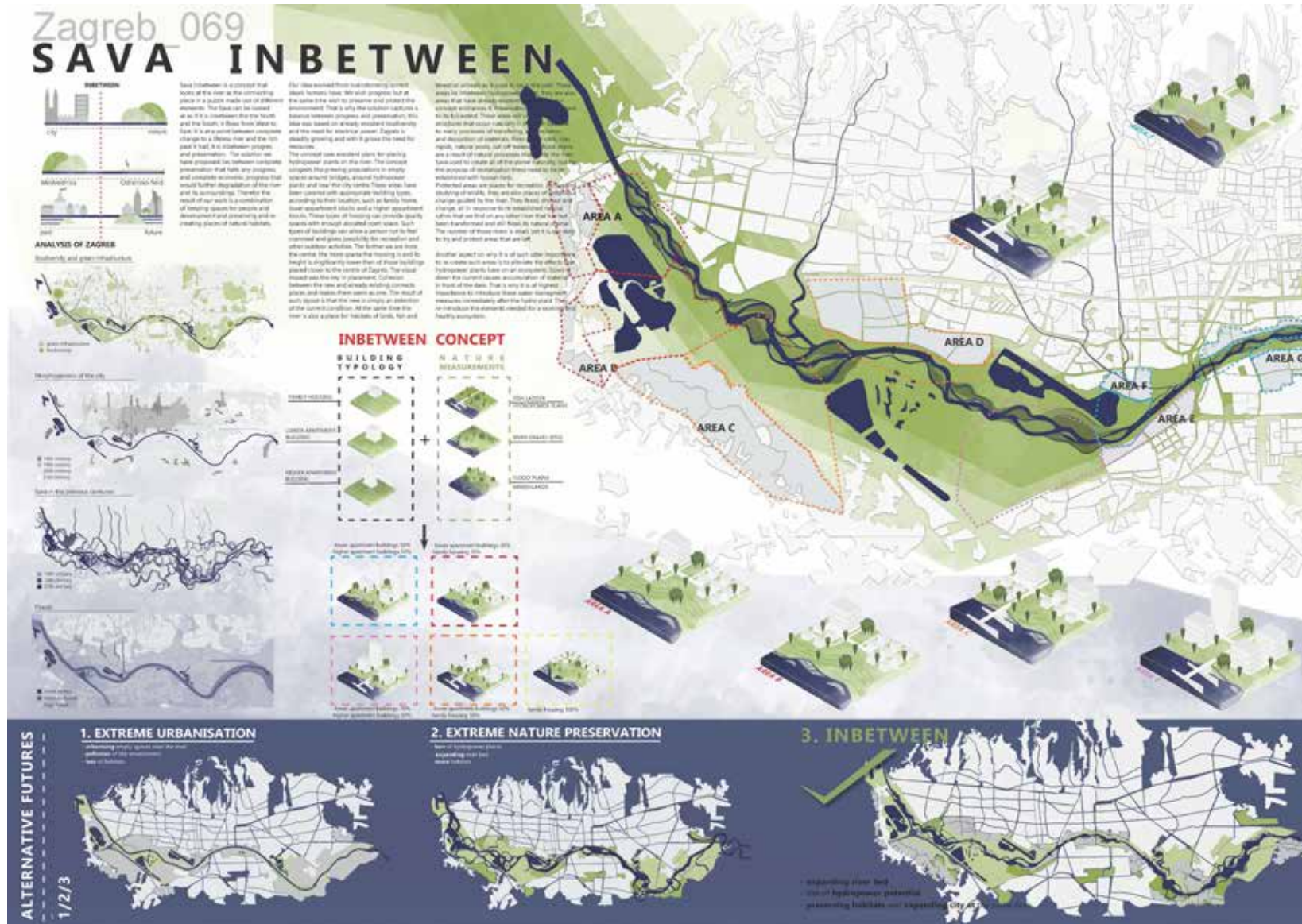
Sava Inbetween is a concept that looks at the river as the connecting piece in a puzzle made out of different elements. The Sava can be looked at as if it is inbetween the North and the South; it flows from West to East; it is at a point between complete change to a lifeless river and the rich past it had. The solution we have proposed lies between complete preservation that halts any progress and complete economic progress that would further degradation of the river and its surroundings. Therefore the result of our work is a combination of keeping spaces for people and development and preserving and re-creating places of natural habitats.

The solution that shows balance between progress and preservation was based on already existent biodiversity and proposed hydropower plants. This was achieved by congesting populations in empty spaces around bridges, hydropower plants or near the city centre. These areas have been covered with appropriate building types according to their surroundings. Areas of newly created habitats can be recognised by the curvature and multitude of the river bed. Location 2 now has a CBD at its most Eastern part, that is also an entrance to the new area that consists of public and private housing, service areas such as shops, a spa and at the end horse race tracks. To the West the landscape turns in to farmland and then forests. The Northwestern part has marshes that enable bird-watching.

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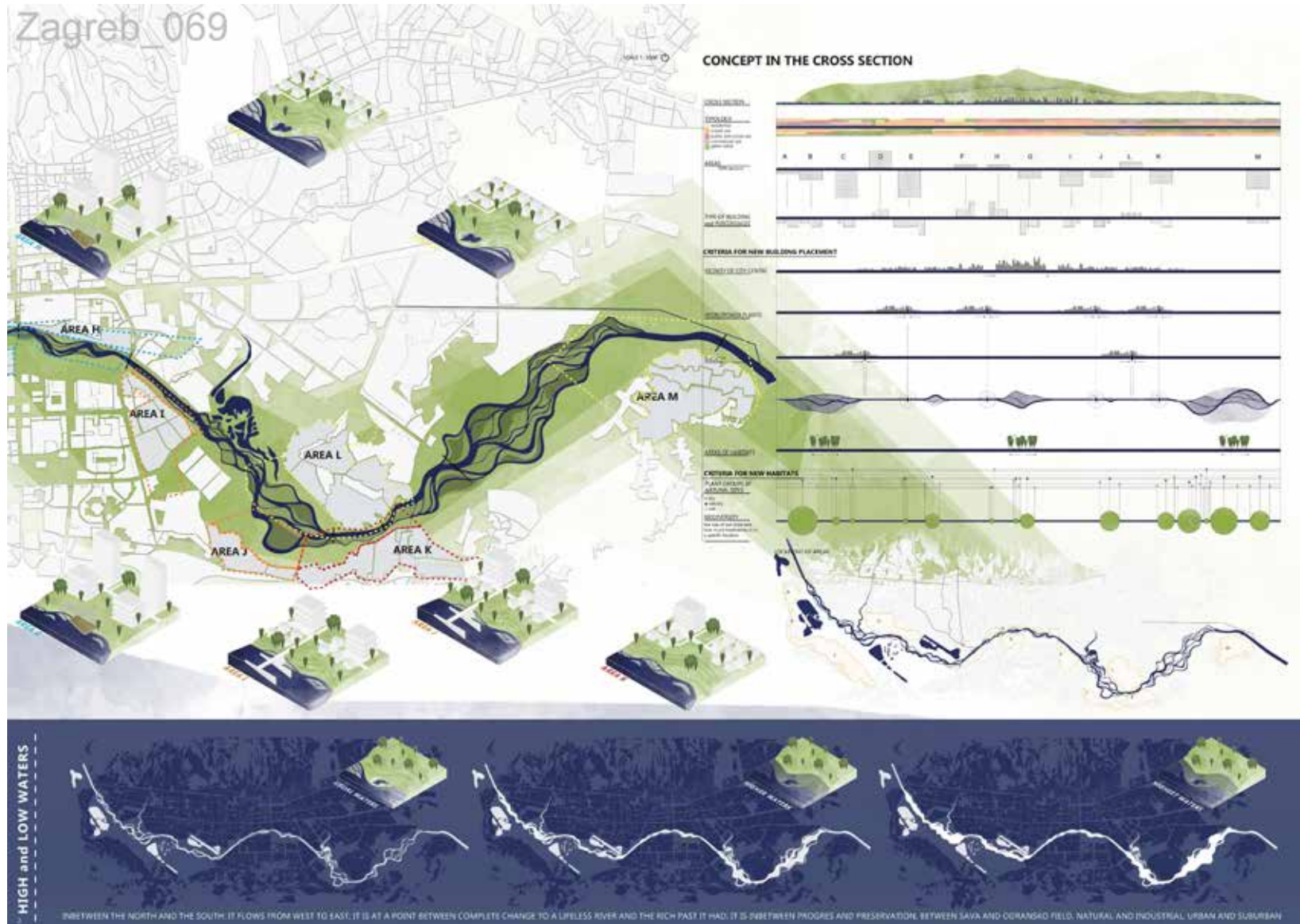
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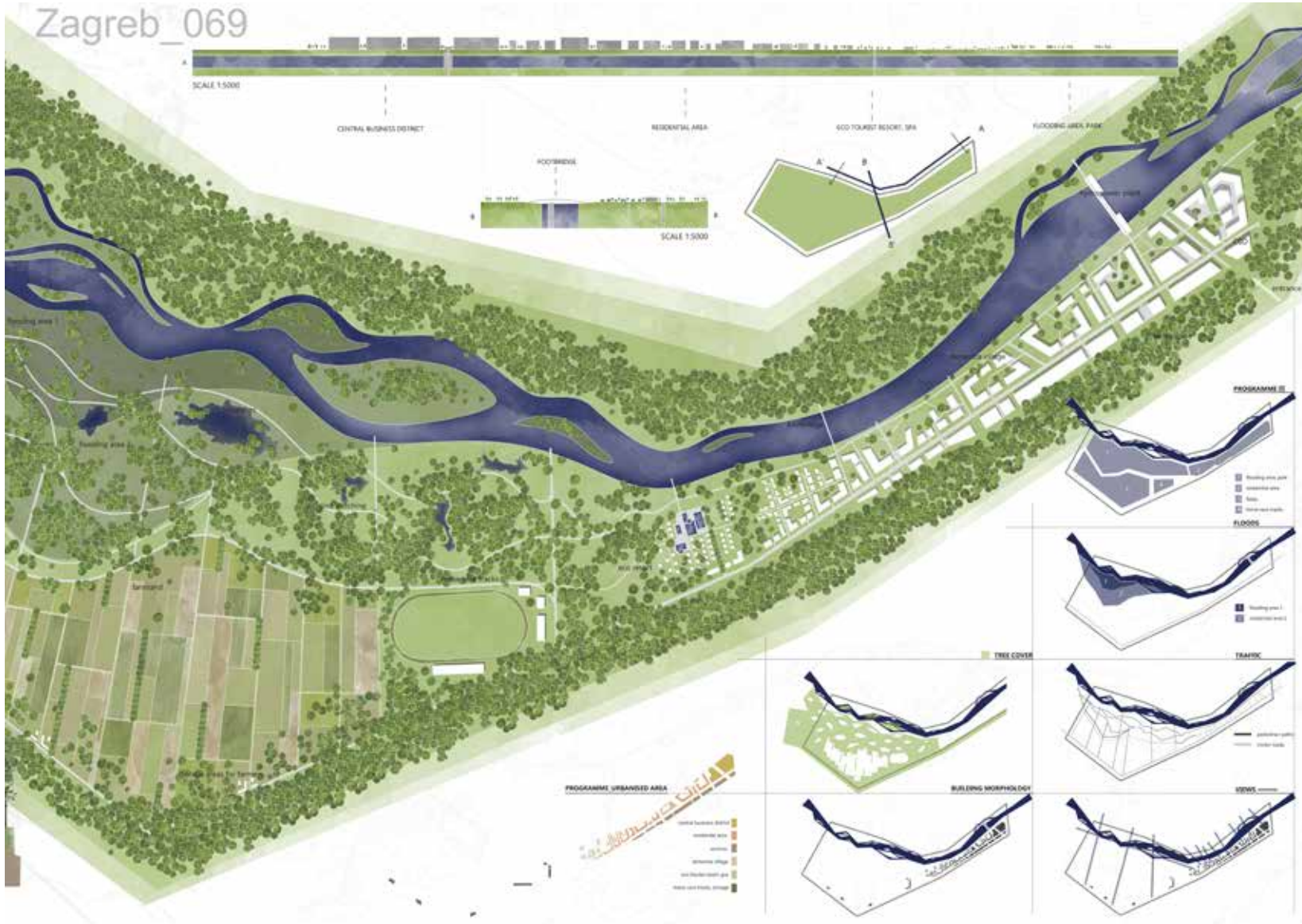
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First Prize: Sava In Between

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Second Prize: Zagreb Living City

Lea Lunder, Zan Lovse, Tilen Tamse, Tea Gombac, Manca Jereb

University of Ljubljana, Slovenia

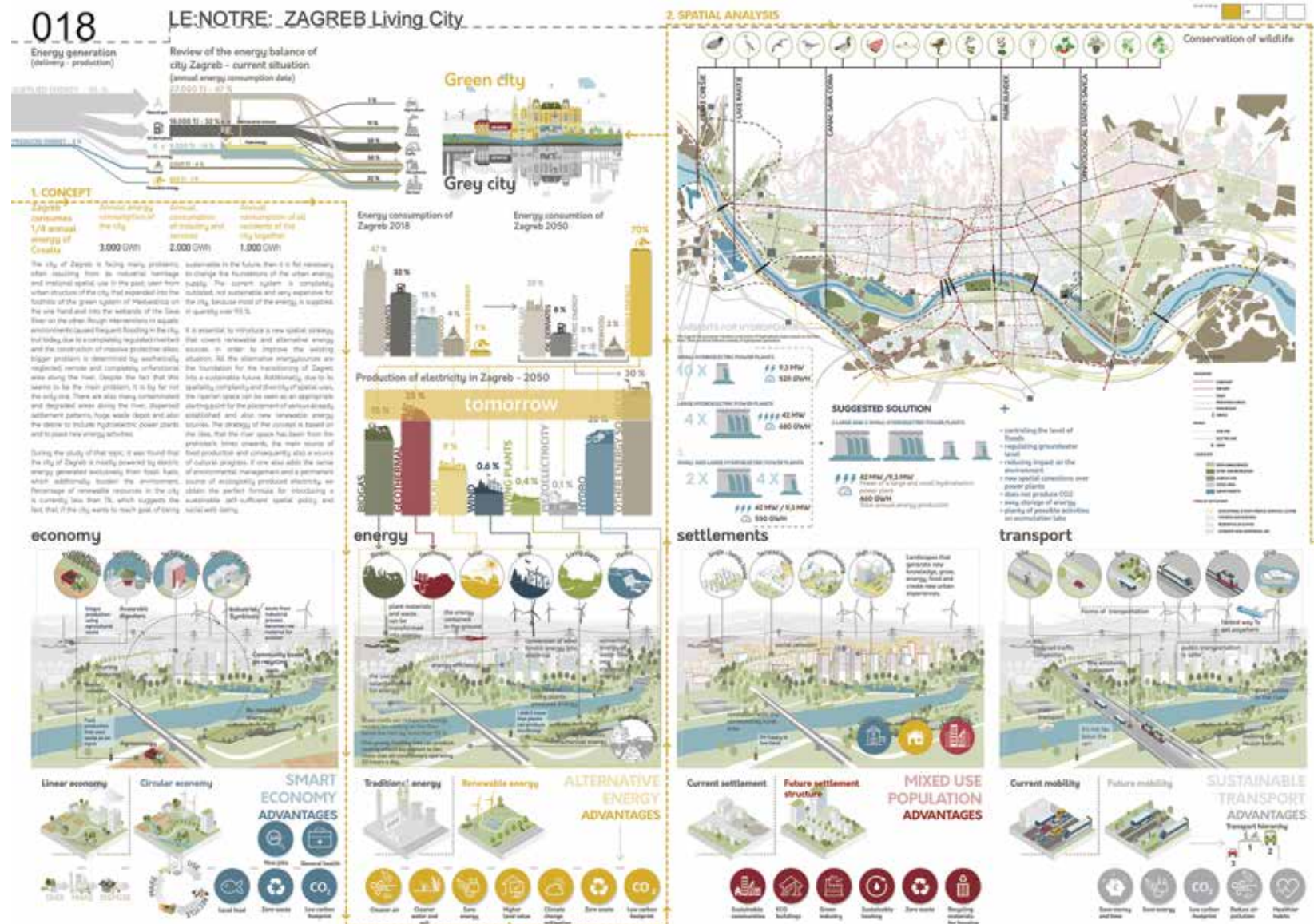
Zagreb is mostly powered by electric energy generated exclusively from fossil fuels, which additionally burden the environment. Percentage of renewable resources in the city is currently less than 1%, which suggests the fact, that, if the city wants to reach goal of being sustainable in the future, then it is first necessary to change the foundations of the urban energy supply. The current system is completely outdated, not sustainable and very expensive for the city, because most of the energy is supplied, in quantity over 90%. Beside raising ecological awareness, tackling various types of pollution and changing general mentality, it is essential to introduce a new spatial strategy that covers renewable and alternative energy sources in order to improve the existing situation. All the alternative energy sources are the foundation for the transitioning of Zagreb into a sustainable future.

Additionally, due to its spatiality, complexity and diversity of spatial uses, the riparian space can be seen as an appropriate starting point for the placement of various already established and also new renewable energy sources. The strategy of the concept is based on the idea, that the river space has been from the prehistoric times onwards, the main source of food production and consequently also a source of cultural progress. If one also adds the sense of environmental management and a permanent source of ecologically produced electricity, we obtain the perfect formula for introducing a sustainable self-sufficient spatial policy and social well-being.

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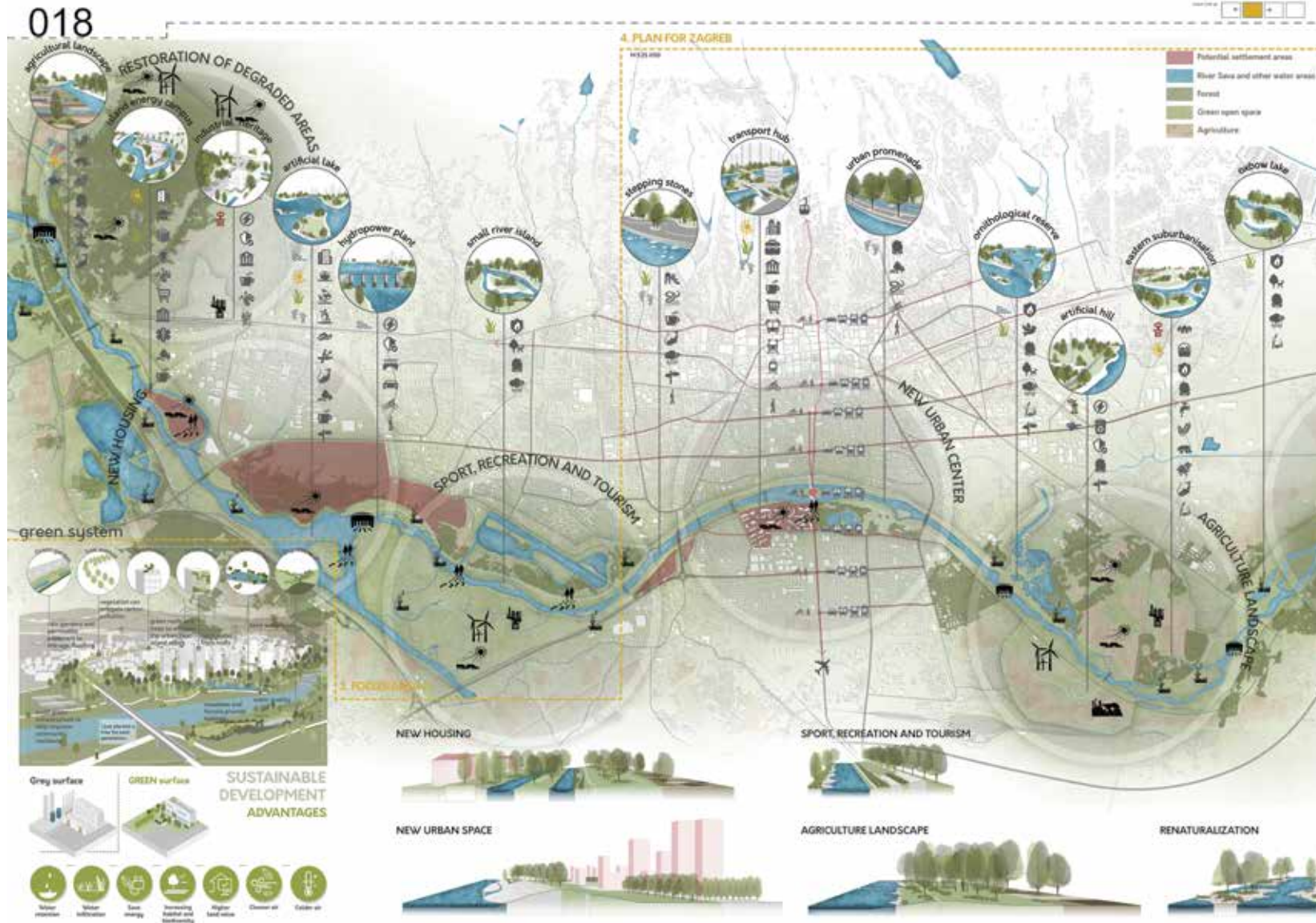
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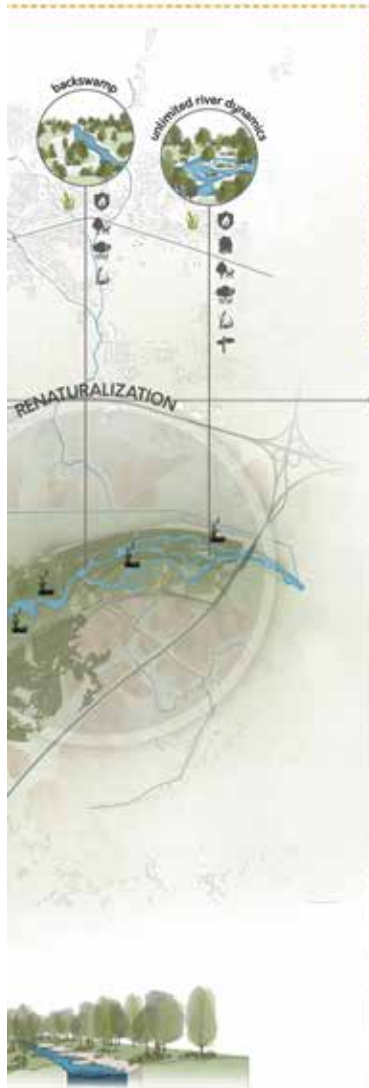


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FOCUS AREA II

The project deals with the focus area II in detail, where an abandoned hospital is currently located. Such a facility is condemned to complete demolition and instead of it, it is planned to build a first-class health spa resort, which is going to create, together with all other spatial activities, a total self-sufficiency. Locational regime is based on a source of income, through the thermal complex, source of food through agrarian landscape and source of energy by placing wind turbines, exploitation of geothermal potential, solar panels and wetland energy fields. The priorities of the area include preservation of unspoiled nature, withdrawal from the stress of the everyday life, practising healthy and sporty active lifestyle and promoting sustainable tourism.

Touristic farm with horse pan and countryside leisure activities



Agricultural landscape based on production of food and electric energy



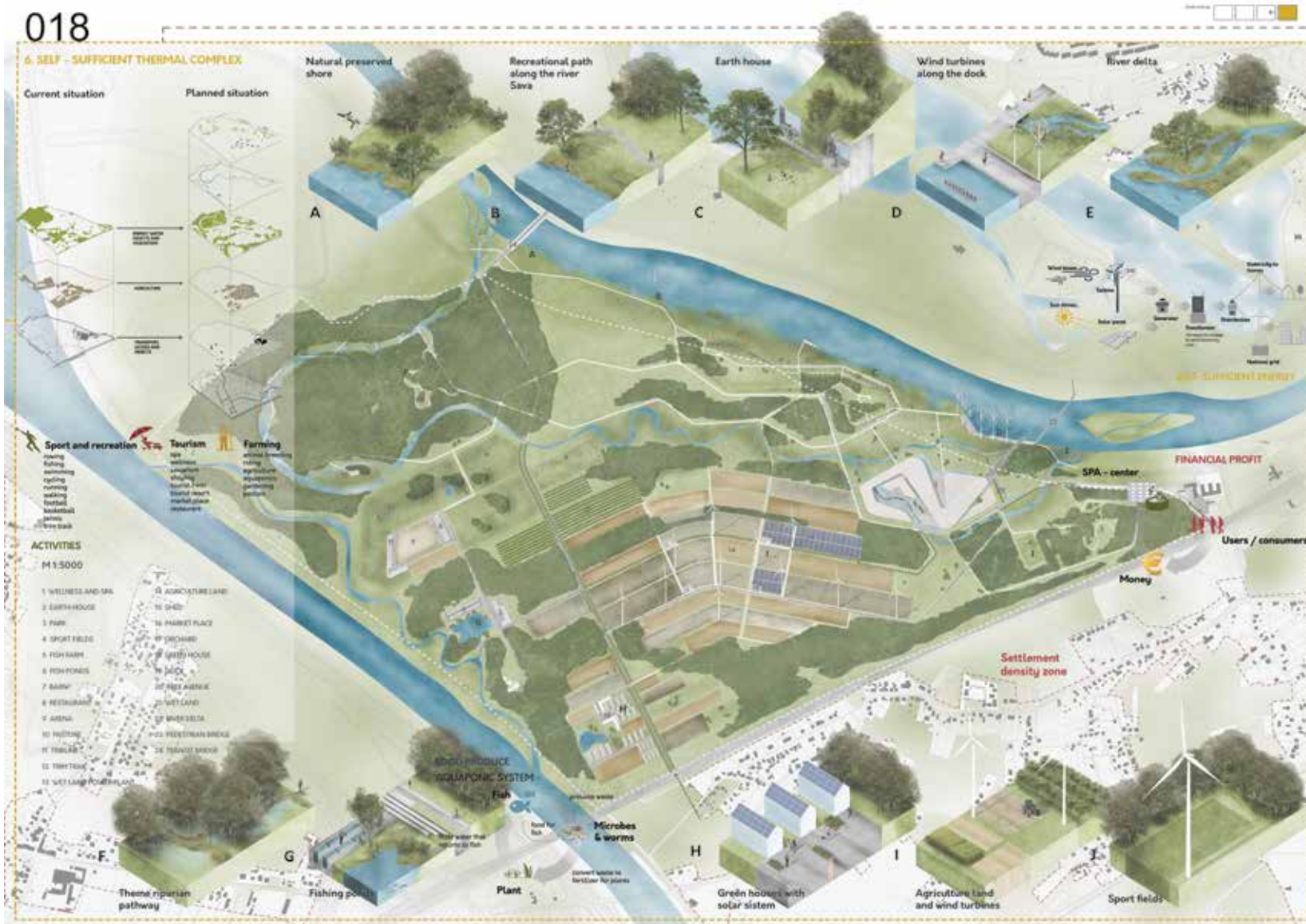
5. VISUALIZATION

Thermal complex surrounded by earth houses and riparian landscape



University of Ljubljana, Slovenia

6. SELF-SUFFICIENT THERMAL COMPLEX



Third Prize: Bernoulli Effect

Qingyi Yu, Chen Chuxi, Zhang Jili, Yuan Jingda, Xie Jieran, Lu Cheng
Huazhong Agricultural University, China

Activate the new Zagreb Center dominated by river landscape

The massive expansion of the city of Zagreb is in desperate need of a new range of supporting facilities. The concept of the Bernoulli effect is to activate the new Zagreb Center dominated by river landscape to provide a more comfortable and complete environment and experience for the residents and tourists of Zagreb.

To this end, we have determined the planning strategy for the four trails:

1. Meeting trail: to create convenient and abundant meeting space for the residents on both sides of the Sava River, to increase the accessibility of the residents to the Sava River through the trail, and provide residents with more comfortable waterfront meeting spaces;
2. Learning trail: Integrating the industrial heritage, cultural landscape and historical waterway along the Sava River has become an important tourist destination for the city's charm, national spirit and ecological civilization.
3. Sport trail: A variety of sports venues such as jogging, cycling, swimming and football are arranged along the river to provide health and vitality for residents and tourists.
4. Ecological trail: Protect and optimize the original Sava River habitat, and connect the animal and plant protection sites along the river through the green corridor to make it a more efficient system.

The four-trail strategy will make the Sava River no longer a hindrance to the expansion of the city, but will closely connect both sides of the city and become the vitality center of the city of Zagreb.

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Zagreb_057 1. STIE

The Sava River, the largest tributary on the right bank of the Danube, flows through the Croatian capital, Zagreb, and is an important landscape resource in Zagreb.

2. TOURISM ANALYSIS

Croatia: Europe's Emerging Tourist Destination: The diverse landscape of the Adriatic waterfront has attracted a large number of tourists from Europe. There are many cultural heritage and natural scenic spots on the coastline.



3. EVOLUTION OF ZAGREB

Zagreb has experienced a gradual expansion from north to south, and the Sava River, an important landscape corridor, will become the new center of Zagreb in the future.

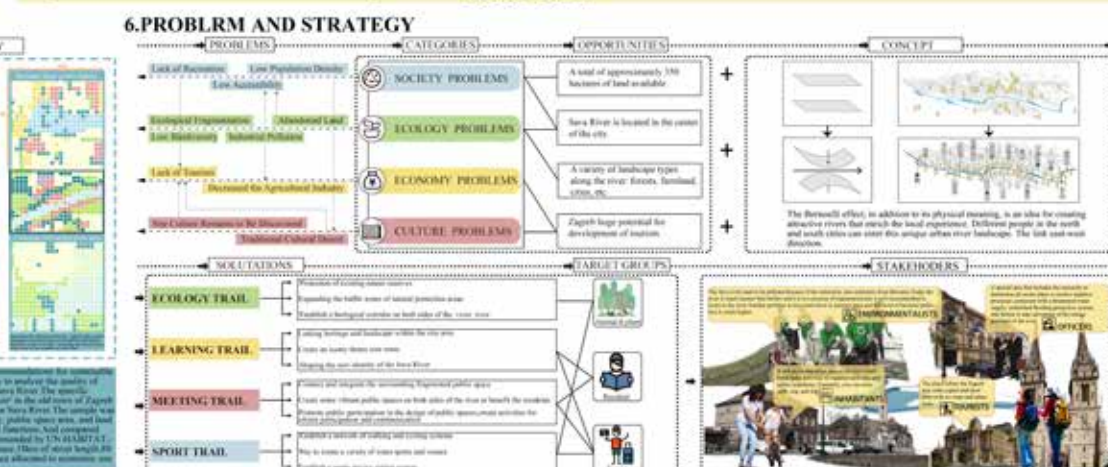
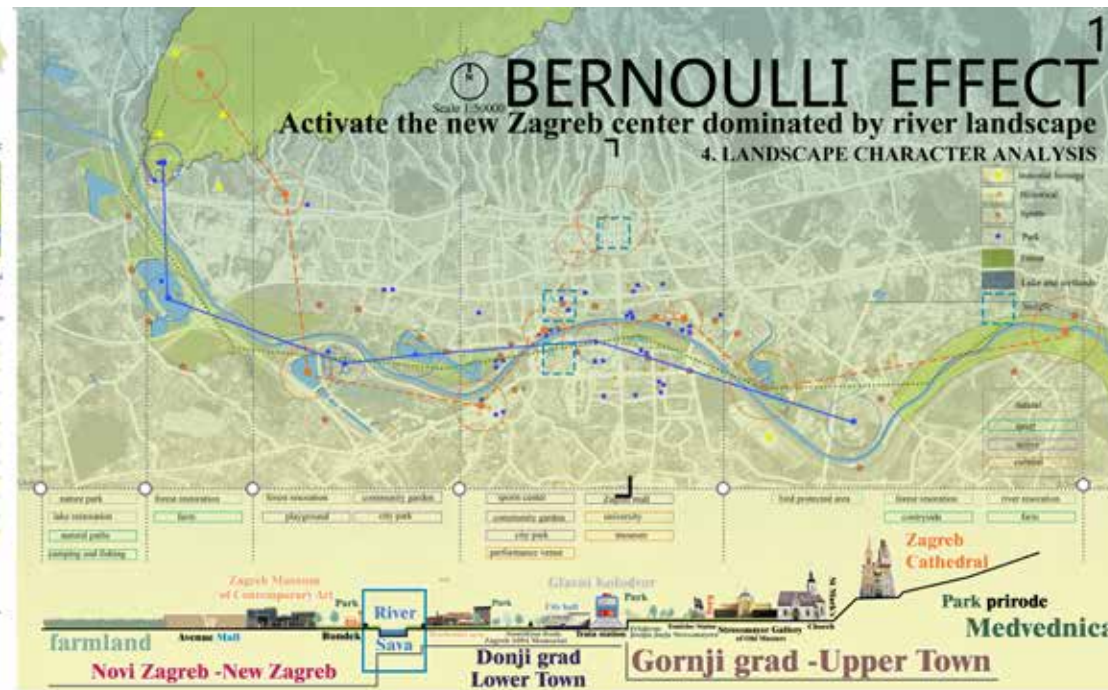
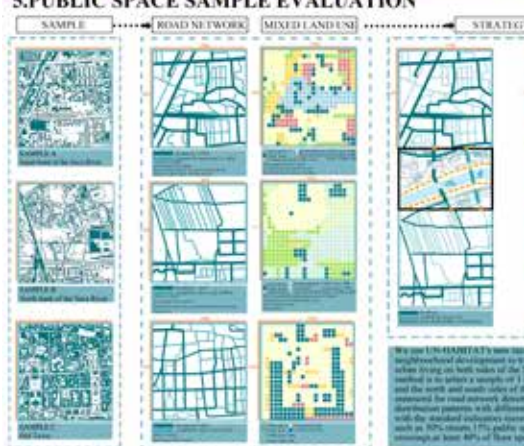


4. LANDSCAPE CHARACTER ANALYSIS

The landscape character analysis identifies key features and trends in the city's development. It highlights the importance of the Sava River as a central landscape corridor and the need for a new center of Zagreb in the future.



5. PUBLIC SPACE SAMPLE EVALUATION



Third Prize: Bernoulli Effect

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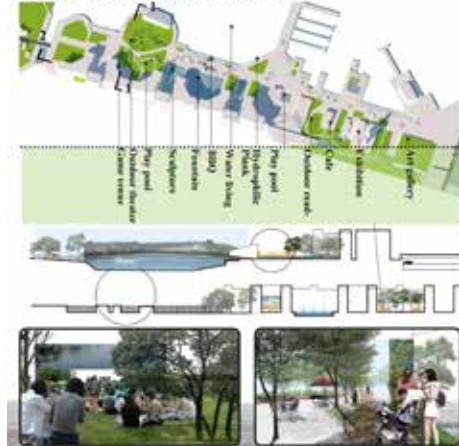
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PIER PUBLIC OPEN AREA



HOT GEOTHERMAL WATER APPLICATION



PUBLIC ENGAGEMENT Implementation Framework

Future Vision: An artistically vibrant waterfront public space area that benefits residents, artists and investors.

Principle: Transparent, Fair, Art Intervention, Multiple ways of public participation (Dedicated app and website, social media, on-site feedback...)

Early stage
Collecting Artists' Ideas - Organize some public art forms in this area to collect the public's understanding of the area.

- Most impressive regional characteristics
- The practical form of design
- Vision for this area

For example, collecting information in the form of graffiti on the outer wall of an abandoned hospital, everyone can pick up their pens and write their wishes.

The middle stage
Master plan based on collected site characteristics, vision, etc. and comprehensive expert opinions from various disciplines. Organized student workshops on regional planning and detail design. Interdisciplinary cooperation: Architecture, Urban planning, Landscape architecture, Ecology, Graphic design.

Use stage
According to different situations such as the seasons and festivals, residents can use the online app to propose and vote for the exhibition contents of the art gallery.

INTELLIGENT INTERACTIVE SYSTEM



BERNOULLI EFFECT

Activate the new Zagreb center dominated by river landscape

Honorable Mention: Nature and Urban

Zhang Beiming, Wu Mengqi, Li Changzuo, Wang Zhexiao, Wu Yunong, Zeng Yong

Huazhong Agricultural University, China

On the first poster, we analyzed the origins of the Sava problem and the series of problems between the city and nature caused by the construction of the dam. We analyze the current situation of “green corridors” from the four aspects: current transportation system, open space, green infrastructure and water space.

The master plan is based on the identification of landscape characteristics. According to the urban development axis and ecological conditions, the site is reorganized into urban characteristics remodeling, gray characteristics returned, and natural characteristics reserved. Then, according to the Zagreb city planning and site characteristics, six functional areas were division- the ruins, water sports, sports parks, cultural centers, urban agriculture, wetland. And rich kinds of open space were designed. Realize the integration of nature and city in the region from three aspects: characteristics, functions and activities.

Focus area 3 represents a bold approach to urban development that celebrates the agricultural, social, and ecological heritage of the Zagreb. This new vision cultivates—within the context of an evolving urban district—an ecosystem that actively supports a more sustainable regional food network. Productive landscape, which functions as a continuous public network integrating urban and ecological systems. Akin to a public utility, the network defines new public spaces, blocks, neighborhood edges, and transitions between the town fabric and its riparian corridor, recalling Zagreb’s lost agricultural heritage.

Zhang Beiming, Wu Mengqi, Li Changzuo, Wang Zhexiao, Wu Yunong, Zeng Yong
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The base is located in the capital of Croatia, Zagreb, and is outside the city.

Europe Croatia Zagreb Site

Green infrastructure distribution

The "green corridor" green infrastructure is widely distributed, but the construction efforts are still very low.

Green open space analysis

The green open space has various forms of activities and lacks reasonable planning.

Traffic problem analysis

Water space analysis

Landscape Characteristic Recognition

There are five main landscape types in our town:

- Cultivated Plain
- Woodland Plain
- Building Plain
- Water Plain
- Grassland Plain

Legend

- Greenland
- Ambic
- Woodland
- Water system

Legend

- Greenland
- Greenland
- Protected Area
- Park
- Contemporary
- Commercial
- Health

Legend

- Special design area
- core zone

Nature park Medvednica / Park prirode Medvednica

Forest park / Park šuma

Special reserve / Posebni rezervat

Old town

Park architecture modernization

0 500 1000 2000 m

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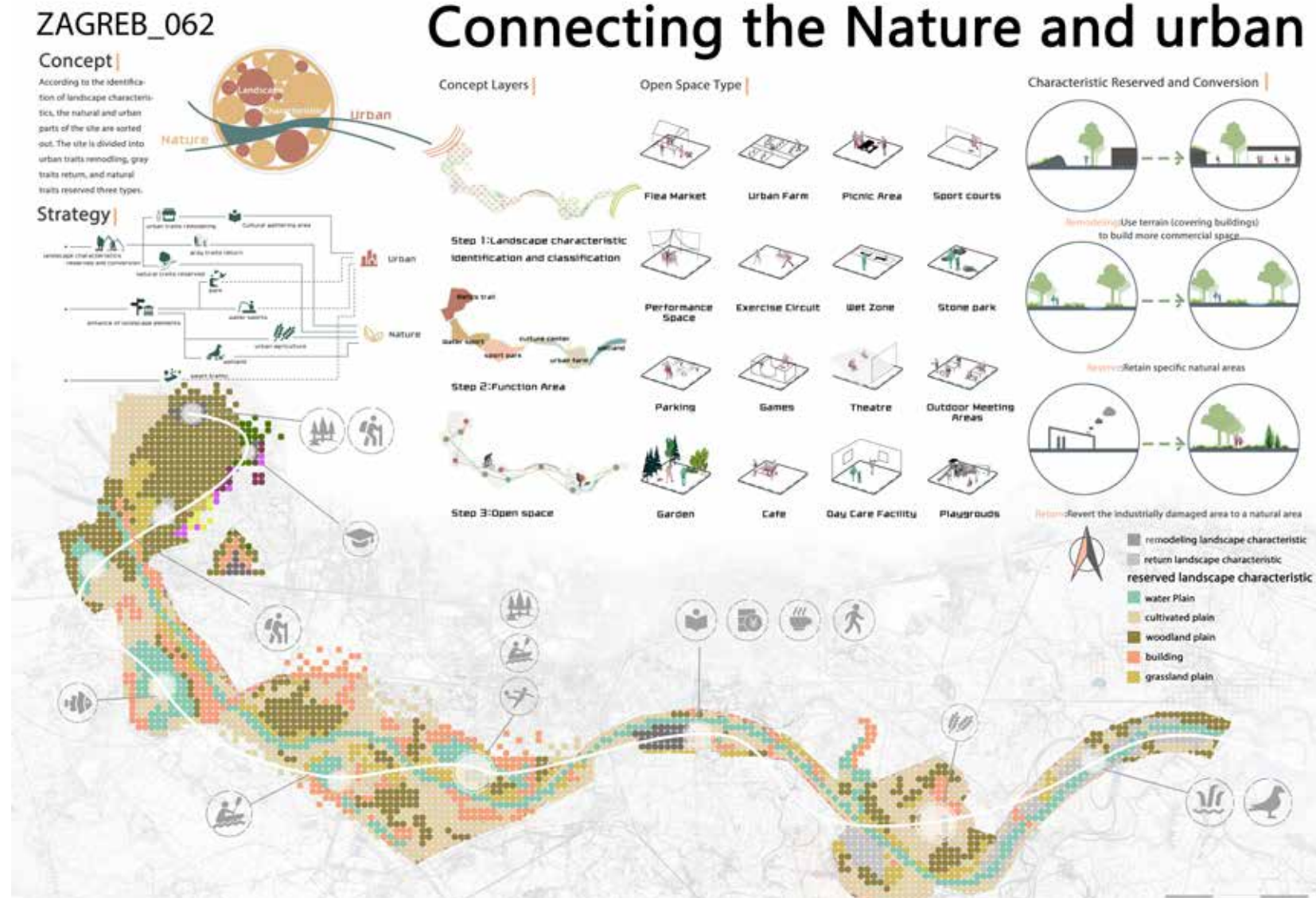
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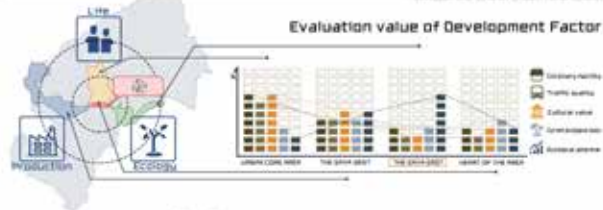
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Looking at Sava East from the Perspective of Development

Regional Factor Recognition Analysis



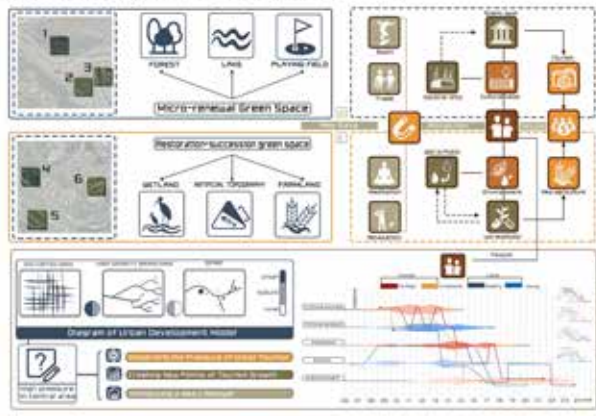
Landscape perception of Sava West



Landscape perception of Sava East



Development Strategy Analysis

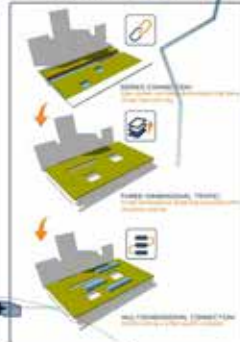


Specific Strategic Analysis

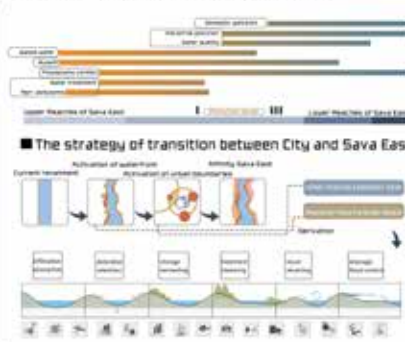
The strategy for connecting Zagreb



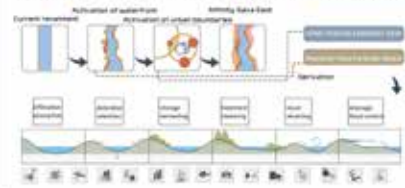
Shaping cultural center



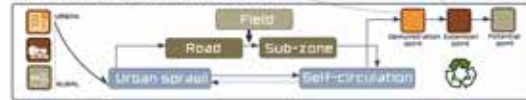
Key issues of the water in Sava East



The strategy of transition between City and Sava East



New Rural Development Strategy



Succession Period Diagram



Self-purification System Of Inferior Water



Zhang Beiming, Wu Mengqi, Li Changzuo, Wang Zhexiao, Wu Yunong, Zeng Yong
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