Reflection
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Track: Landscape Architecture
Graduation Studio: Flowscape

1 MOTIVATION THROUGH FLOWSCAPE
The graduation studio of flowscape explores infrastructure as a type of landscape and landscape as a type of infrastructure (cf. Strang, 1996). Landscape infrastructure actually integrate “flows” which are nature and human process and movement and “scapes” which are defined and considered as spatial entity. Under this background, I choose the topic related to rainwater which relates to one of the urban water cycle processes and the need of improve the quality and continuity of public space. The motivation is to think of these two words: rainwater, public space in an integrating and collaborating way. What will happen when they collide?

2 CASE SELECTION
Metropolitan cities all over the world are faced with the flooding issue because of the loss of natural permeable condition and existing urban water system which uses combined drainage of wastewater and rainwater. Moreover, in the summer time, they are faced with drought. In the European cities, the quality and quantity of public spaces couldn’t satisfy people there. Under this circumstance, I choose south neighborhood of New Belgrade as a case study to test the combination of the general problem and the above described approach. New Belgrade is threatened with large runoff during the rain every year and it is considered as typical post-socialist city where undesirable and flat public spaces are discontinuous and low quality just reminded as “a dormitory area”.

3 NEW APPROACH OF RAINWATER MANAGEMENT IN URBAN CONTEXT
Base on the theory, case study, and the toolbox (FIG.1) which accumulated from practical cases of categories of how to integrate in the rainwater into urban public space, I propose a new approach to solve rainwater problem, and also propose an alternative for improving the urban public space system.
I use New Belgrade as an example to test how this method works. Through the recognition of specific location and specific problems within it, coming with my research question: how to create a sustainable urban landscape, and improving the livability of the city, utilizing rainwaters a tool, while integrating flood-resilient area with improvements of qualities of public spaces and cohesion of public space system of the south neighborhood of New Belgrade?

After system analysis: rainwater and functional, ecological, social, spatial, I utilize the new approach to test the design framework. Firstly, creating a hydrologic setting in New Belgrade means to infiltration, collection on-site and storage and reuse and consideration of water flow when it is heavy rain. Secondly, forming the cohesion of a hierarchy open space (3 scales in New Belgrade) means to make diverse-value, diverse-scale public space get together. Thirdly, developing a network is healthy, high-performing cohesion which expands the recreation opportunities and facilitates movement and allows new function to arrive. Fourthly, identifying different waterscape type is using toolbox diversify the public space and connect blue with green network. Lastly, activating hubs means adding recreational and other social values which evoke local initiatives.

4 WHAT COULD FURTHER DEVELOP IN THIS APPROACH?
If more time and more resource available, some parts of this graduation project could be developed. For example, the third step, the choice of local hub selected from spatial view, which could selected more from local view through more investigation and more satisfy daily need of local people. The fourth step, application of different toolbox could more from real technical view and decides its urban or ecological or combined character.

5 WHAT COULD WE LEARN FROM THE APPROACH?
After implementing the 5-step framework, it would promote sustainability of built environment and increases the livability. It reduces the flooding problem, improving public space qualities and a better coherence.

In a wider context, due to the loss of permeable surface and combined drainage system, big cities are flooding during heavy rain. And because of rapid development, cities left lots of undefined and monotonous open spaces which could lead to the unsatisfied situation of living, especially central and eastern European facing the city restructuring and transformation. New Belgrade is one of these cities. The new approach introduced make a developing a green-blue-mobility network, introducing rainwater as a clue to reclaim the unlivable open space may make a reference of other similar projects.

The new approach provides an integrated design framework of integrating rainwater into public space and also considers the bottom-up initiatives. It provides an overall spatial planning structure and also gives the flexibility to develop and operate.