

New Integrated Water Management Systems in a Post-Socialist Peripheral Urban Area

Case Study Morii Lake, Bucharest

supervised by Prof. Wolfgang Dickhaut and Prof. Martin Wickel

This paper identifies and explores the critical aspects and artificial alterations of the urban water cycle in a peripheral neighbourhood of Bucharest, informally named “Morii Lake” after the lake in the area and proposes sustainable development strategies to be applied through integrated urban water management solutions. Recognizing the role that the restoration of the area can play in the city regeneration as well as in the integration of a long-term urban water strategic planning process, this thesis explores the opportunities, on the one hand to develop a long-term urban strategy based on the rehabilitation of the river and other hydrological resources. On the other hand the creation of a strategic planning process providing the framework that facilitated the shift to more integrated urban water management whilst it explores the potential to provide tangible local solutions best suited for the local situation, integrating alternatives and emerging technologies, sensitive to long-term needs.

The proposals presented in this Thesis are based on both the Ecohydrology and Ecosanitation concepts and adopt Water Sensitive Urban Design Strategies (WSUD) for the sustainable management of storm- and wastewater. The proposed strategies are supported on the implementation of natural systems such as constructed wetlands, bioretention and infiltration areas, to improve water quality, attenuate stormwater and encourage biodiversity.

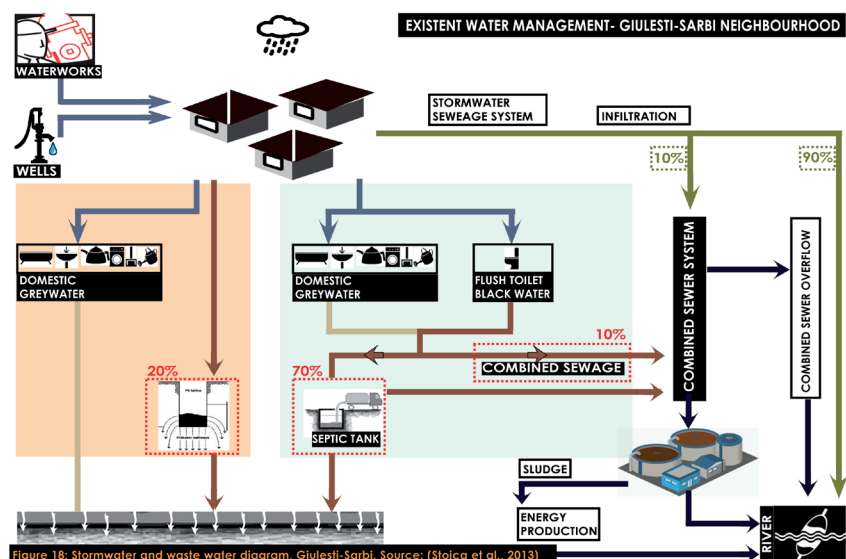


Figure 18: Stormwater and waste water diagram, Giulesti-Sarbi. Source: (Stoica et al., 2013)