

# Extending the city to the water Designing a floating, modular, and self-sustaining neighbourhood

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## **Abstract**

As a response to land scarcity, climate change, the decreasing stock of fossil fuels and the pressure on the drinking water system, this proposal proposes to extend cities onto the water within a floating, modular and self-sustaining neighborhood. This proposal includes research into floating mechanisms, modular systems, and various systems to realize self-sustainability regarding energy, water and wastewater. These systems can work on a small scale, but also on a larger scale when combined. When certain resources regarding water and energy are shared between household, the system becomes more economical and the stock of resources becomes more stable. A modular system that enables the interplay between the resources has been chosen. Therefore, a plug-in system is proposed where houses can connect to the neighborhood, to become self-sustainable, each contributing to the system. Land scarcity, climate change, water, energy, floating, modular, self-sustainable design

*Keywords:* land scarcity; climate change; water; energy; floating; modular; self-sustainable design

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