



# Coupled Natural-Human-Engineered Systems: An Urban Water Perspective on the Sustainable Management of Security and Resilience

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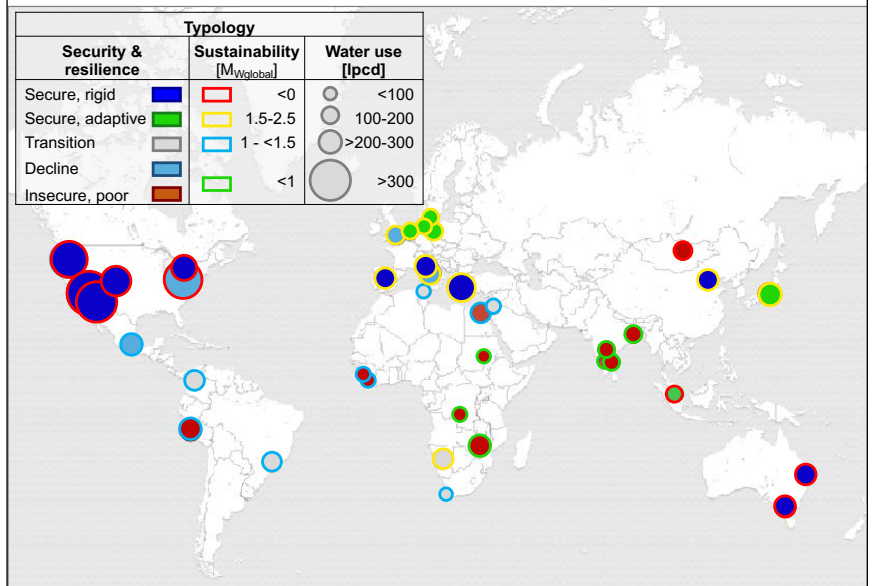
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Typology of Urban Water Security, Resilience,  
Sustainability



Global Change is threatening the security, resilience and sustainability of urban water systems. While cities with adequate resources and management power tend to invest into securing the safe access to water resources, citizens in developed countries are left to cope with inadequate services and the risk of urban water poverty. This work explores the dynamics of coupled social-ecological-technical systems and how to minimize trade-offs between security, resilience and sustainability by investigating human-environment interactions mediated through infrastructure. An integrated assessment framework is presented that combines the quantification of service performance with systems dynamics modeling and is applied to several global cities.