



The role of green infrastructure in creating safe urban environments: the case study of Madrid

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The size and number of cities is growing at an unprecedented speed in the 21st century. Whereas in 1900 only a 10% of the global population lived in cities, 2010 marked the point in which more than half of the world moved urban and, according to the United Nations' estimations, more than 70% of humanity will be living in urban agglomerations by 2050.

Covering about the 2% of the Earth surface, cities consume vast extensions of forests, farmland, and other landscapes, polluting rivers, oceans and soils, and account for as much as the 70% of greenhouse gas emissions, all of them making urbanization the main driver for the changes in the Earth surface.

Designing urban systems that reduce the negative impacts of this urbanization process and improve their resilience is crucial for creating a safe operating space for humanity. Cities must identify sustainable development policies because today's investment will be locked in for hundreds of years due to the difficulty of reversing most of the planning decisions.

This study analyzes the role of green infrastructure in creating a healthier urban milieu more resilient and with a smaller impact on the environment through the case study of the city of Madrid, a city that faces climate risks derived of extreme heat and drought. Green infrastructure can reduce urban heat island, regulate storm water overflow and moderate energy consumption, while favoring a healthier lifestyle.