Using geospatial methods and data to build more sustainable, livable, and resilient communities for a warming planet

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ABSTRACT

Global warming threatens to modify many of the Earth's systems and human wellbeing in the next few decades. Slowing and mitigating the adverse outcomes of global warming will require an all-hands approach to promote and enlist the help of nature's services as part of efforts to build circular economies. The geospatial community plays a critical role in this journey with its ability to (1) connect policies, interventions and outcomes across multiple scales and (2) measure the performance of these interventions over time. Those advocating for a green infrastructure and the inclusion of trees in circular economies coupled with novel interventions, such as sponge cities and superblocks, point to a better future.

This presentation describes recent work using geospatial approaches and data to clarify what it means to encapsulate and portray ecosystem services as part of a community's green infrastructure in hopes of creating more equitable, more livable, more resilient, and more sustainable outcomes using examples from around the world. The examples will show how spatially inspired methods can be used to design, build and measure the performance of using nature's services and trees in urban settings to combat rising temperatures, mitigate poor air quality, and promote active lifestyles, new leisure and recreation opportunities, and thermal comfort for some of the world's most vulnerable populations.