

From Pixels to Policies: Advancing Environmental Footprints Mapping through Geoinformatics

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English Abstract

Understanding the environmental footprint of production and consumption activities is crucial for gauging their impact on vital natural components such as water, forests, biodiversity, climate, and soil. While the carbon footprint concept has been prevalent since the 1990s, there has been a recent surge in interest and research into the footprints of deforestation and biodiversity. This shift in focus acknowledges the complex and varied nature of environmental impacts across different regions and ecosystems. Our research highlights the critical role of comprehensive data collection and methodological advancement in detailing environmental footprints, essential for formulating and implementing effective environmental protection policies at multiple scales, from local to global. This talk presents recent advances in global environmental footprint mapping, showcasing the integral role of geoinformatics in this domain. The successful implementation of policies derived from these quantifications necessitates the involvement of a diverse array of stakeholders. We advocate for a proactive engagement of geoinformatics in interdisciplinary and transdisciplinary approaches to address the multifaceted challenges of environmental sustainability. By doing so, geoinformatics not only contributes to the precise measurement of environmental impacts but also plays a crucial role in bridging the gap between scientific understanding and practical policy action.