

# Landscape ecology must play a role in policymaking

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The world faces unprecedented environmental transformation. Successfully managing and adapting to a rapidly changing Earth requires the swift action of well-informed policymakers. In a State of the Science report for *BioScience*, Audrey L. Mayer of Michigan Technological University and her colleagues argue for a major role for landscape ecology in tackling the urgent global issues of climate change, land use-land cover change, and urbanization.

The authors describe a major role for landscape ecologists in informing policy decisions, because these practitioners "employ an interdisciplinary perspective to understand multiple natural and human-caused drivers of landscape change operating simultaneously and interactively." Furthermore, the interdisciplinary team points out that landscape ecology is "often focused on coupled human and natural systems with policy-relevant outcomes."

Mayer and her colleagues highlight the complementarity of urban planning and [landscape ecology](#) skill sets: "Planners have developed detailed classifications of human uses but relatively poor classifications of natural land covers. The opposite is true of landscape ecologists." Combining these skill sets, the authors argue, "can inform land-use policies that dictate green infrastructure design, its distribution throughout urban landscapes, and the optimal locations for urban infill through brownfield redevelopment."

The field's influence is already being felt. Forest certification, such as

that under the United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation, can "operationalize concepts of [sustainable forest management](#) in the marketplace and in international agreements and is increasingly reflected in government policies in Europe and North America," report the authors. Similarly, collaborative efforts between landscape ecologists and policymakers are under way to protect areas of the Florida Everglades and other sensitive ecosystems.

Time is of the essence, say Mayer and her colleagues—collaboration between landscape ecologists and those working in other disciplines must continue apace if planners and policymakers are to effectively address the world's crucial environmental problems as it enters "a period of significant climate departure for which there is no analog in our historical data sets."

Provided by American Institute of Biological Sciences

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