

Are existing laws enough to cope with accelerating environmental change?

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Do you think that major statutory reform is necessary address global environmental challenges? Think again.

Newly published research published today in the *Proceedings of the National Academy of Sciences* by a group of environmental law scholars explores the untapped capacity of existing environmental and natural resources management statutes to address accelerating [environmental change](#) in the absence of major legislative reform.

The research, titled "Untapped capacity for resilience in environmental law," comes at a time when the world's environment is changing rapidly in ways that directly impact human well-being, from migrating species to changing precipitation patterns, flooding, and water supplies. As a result, adaptation—both of ecosystems and social-ecological systems—is inevitable, according to researchers.

In many cases, systems will also have to transform into new configurations. In both the U.S. and European Union, policymakers have grappled on how best to handle the challenges. Many believe that new legislative regimes will be necessary. Particularly in the U.S., however, Congress is unlikely to engage in a major and helpful overhaul of the federal environmental and natural resources statutes to help with the necessary adaptation and transformation efforts, even though some state and [local governments](#) are increasingly responding through legal amendments.

The new research in PNAS offers solutions to a lack of legislative reform by focusing on strategies the various government agencies that implement the statutes can take to tap into existing flexibility. Scholars identify existing laws that have provisions that allow for creating new standards as conditions change. One example in the U.S. is the Magnuson-Stevens Fishery Conservation and Management Act, which allows fishery management to adjust catch allowances. The scholars note that the law also has a transformative capacity stemming from the flexibility of the terms of the law itself and procedural discretion. When legal capacities are leveraged, multiple levels of government can respond

to complex environmental changes while staying within a legislative framework that already exists, the scholars found.

The article shows, with examples, that many existing statutes have sufficient flexibility to substantially increase adaptive and transformative capacities to productively cope with a changing world, said Robin Craig of the University of Utah S.J. Quinney College of Law. There are two primary sources of increased capacities, she said.

"First, there is often flexibility within the statute itself—i.e., the statute provides room for new implementation strategies to cope with new realities, such as through productive exercises of federal agency discretion. Second, much of the existing environmental and natural resources statutory regime provides the authority to open up space for social-ecological systems to better utilize their own adaptive and transformative capacities. For example, rather than mandate that a particular protected area remain in an increasingly forced historical state of being, agency management rule changes can allow the area to adapt and evolve to changing conditions while still protecting the new productive system that emerges," Craig expanded.

Craig noted managers and stakeholders can take examples from the research and explore what they can do in their own communities to solve environmental challenges.

"The goal is to avoid system collapse—to ensure that we guide adaptation and transformation so that the evolved social-ecological systems are productive, support biodiversity, and continue to contribute to human well-being, even if they are different systems from what we've been used to in the past," said Craig.

She added: "For Americans, I think that the most important message is that we don't have to wait for Congress to act to more comprehensively

engage in adaptation and transformation to cope with the Anthropocene. While the system of federal statutes that we currently have isn't optimal in many cases, it doesn't severely hamstring us, either, if agencies and stakeholders are willing to be creative and try new approaches within existing agency discretion and flexibility."

Another co-author, J.B. Ruhl, observed that there are examples from the past in which bold agency action overcame legislative gridlock to transform how conservation programs operated, such as how the Department of the Interior during the Clinton administration created innovative new approaches for implementing the Endangered Species Act. "

"We can take a page from the past and put it into action for the future," said Ruhl.

More information: Ahjond Garmestani et al., "Untapped capacity for resilience in environmental law," *PNAS* (2019).

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