



Solving Environmental Problems with Polycentricity

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Environmental problems come in many shapes and sizes. Pollution is harming health in many industrializing countries. Ocean fisheries are collapsing. Thousands of species are facing extinction. In the face of such diverse problems, how do we figure out the best ways to solve them? Scholars Elinor and Vincent Ostrom studied how people can tackle social problems effectively, and their research has direct relevance to modern environmental issues.¹

One of the most important concepts from the Ostroms' research program is "polycentricity," which describes social systems where decision-making centers overlap with one another at

¹ Mercatus Center. 2016. "Bloomington School of Political Economy I: The Science & Art of Association." YouTube Video. *YouTube*. <https://www.youtube.com/watch?v=MFkdg69J1f8&t=216s>.

different scales and scopes—one central authority doesn't dominate the rest. The opposite of a polycentric system is a monocentric one, where all decisions are made by one centralized entity. Traditionally, many people have called for top-down, monocentric approaches to solve environmental problems. The Ostroms, however, showed theoretically and empirically that polycentric systems have many advantages for solving such problems.

There are many examples of polycentric systems: federal systems of government, markets, the scientific community, etc. In a federal system like the United States, decision-making power is split between many decision-makers at different, overlapping levels. City, county, state, and national leaders can all make policies independently, and checks and balances between the different branches of government ensure one branch doesn't have complete power over the others. There are many different spheres of power, but even though they are formally independent of one another, they are highly interconnected.

Top-down, monocentric approaches have some serious shortcomings. Different groups of people have different cultures and values, so public policies that work in one area with one group of people are not likely to produce the same outcomes in another group of people. Additionally, when policies are imposed from the top, local people may not see those policies as legitimate. When people feel that their values, voices, or cultures were not taken into account, they may ignore or actively fight against well-intentioned policies.

High-level policymakers who try to solve problems from the top may not have the relevant knowledge to solve the problem. Not all knowledge is scientific—Knowledge is often dispersed, tacit, and context-dependent. The further a policymaker is from a problem, the less direct knowledge they have about a problem or how to solve it.

People who care about the environment should be aware that polycentric systems have several advantages to solving environmental problems. When there are multiple, overlapping spheres of policymaking, there are more opportunities to experiment with innovations. If there is only one

policy for an entire country, it is difficult to tweak the policy to adjust for unforeseen circumstances. When there are multiple jurisdictions, there are more opportunities to experiment with different types of policies, and policymakers in each of the jurisdictions can learn from the successes and failures of their neighbors.

Having many overlapping jurisdictions also helps protect against institutional failures. In monocentric systems, there is only one public policy. If that one policy fails, the whole system fails. However, a polycentric system means that there are different styles of public policies going on at once. Even if one jurisdiction fails, that doesn't mean that everywhere else will fail. As policymakers learn from their peers in different jurisdictions, the whole system becomes more robust.

Polycentric systems also have interjurisdictional competition, which gives policymakers a stronger incentive to make better policies. When citizens have many choices, they can move to the jurisdiction with the policies that best align with their preferences. Of course, not everyone can move to a different country or state if they don't like the public policies where they live, but some people choose to move to places that better fit what they want. Policymakers are rationally self-interested, and they don't want a shrinking population and fewer tax revenues, so they make better policies to retain taxpayers.

Each environmental problem has a unique scale and scope, which means the response to the problem needs to accurately fit the scale and scope. An environmental problem may be too big for a state government to solve alone, but it may also be too small for the federal government to involve itself in. Polycentric systems are beneficial because small-scale units can organize together when necessary. For example, if New England were suffering from a pollution problem, the six states in New England could come together to form a compact to solve the problem. Interstate compacts today exist for a variety of topics and include environmental conservation, resource management, emergency management, law enforcement, transportation, and taxes.

Polycentric systems have already helped solve environmental problems in a number of contexts. For example, the greater sage-grouse avoided a listing under the Endangered Species Act thanks to a polycentric effort from federal officials, state officials, and private organizations.² Citizens concerned and policymakers should look for ways to leverage polycentric system to solve the diverse set of environmental problems we face today.

Polycentric systems can't magically solve every environmental problem, but scholars and policymakers should look for ways to leverage the benefits of polycentricity as much as possible. Elinor Ostrom argued, "No government system is perfect, but polycentric systems have considerable advantages given their mechanisms for mutual monitoring, learning, and adaptation of better strategies over time." Polycentric system may be the best hope we have for finding solutions for the diverse environmental problems we face.

² Lofthouse, Jordan K, and Camille Harmer. 2017. "A Bird in the Hand: State-Driven Success in Sage-Grouse Conservation." *Strata.Org*. <https://www.strata.org/pdf/2017/sage-grouse.pdf>.

Recommended Readings:

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Hayek, Friedrich A. “The Use of Knowledge in Society.” *The American Economic Review* 35, no. 4 (September 1, 1945): 519–530.

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