

FEDERALISM AND CLIMATE CHANGE: THE ROLE OF THE STATES IN A FUTURE FEDERAL REGIME—AN INTRODUCTION

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Climate change seems far too vast a subject to engage state and local actors in any significant way. Global warming and greenhouse gas control, sea level alterations and polar ice melts—as a practical matter, all these climate-related issues have international repercussions on a scale that state and local actors seldom address. As a legal matter, there are other impediments: the Constitution charges the federal government, rather than the states and localities, with managing our relations with other countries. No doubt this pattern exists because in international matters, the federal government is expected to present a unified national position, unimpeded by the fragmentation that would arise from provincial state and local interference. Nevertheless, in the current absence of the federal government's participation in international climate change efforts, states and local governments have begun to fill the void.

The pieces in this Symposium examine these efforts by states and local actors. While the authors address diverse issues and take widely differing approaches, many touch on three common themes, and it is upon those themes that I wish to dwell briefly in this Introduction.

The first theme asks whether state and local actors—the entities that Richard Stewart calls “sub-national actors,” or SNAs¹—will actually have any impact on global climate change. The answers given here are mixed. The consensus among the authors is that SNA efforts are unlikely to have any major direct impact on climate change, particularly on emissions reductions. The largest and most active of the state actors is California, with an economy that would be

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1. Richard B. Stewart, *States and Cities as Actors in Global Climate Regulation: Unitary vs. Plural Architectures*, 50 ARIZ. L. REV. 681, 681 (2008).

eighth in the world if California were an independent nation.² Yet, as Kirsten Engel and David Adelman point out, California's proposed emission standards would reduce global carbon dioxide production less than 1%.³ If even big, powerful California could make only a paltry contribution to greenhouse gas cutbacks, it might seem that other SNAs would be equally ineffective in reducing global warming through direct emission controls, even in the aggregate.

On the other hand, SNA measures may well have a substantial impact when it comes to *indirect* measures to control climate change. Several articles take up these indirect measures. Holly Doremus and Michael Hanemann argue that SNA regulations are particularly adept at influencing behavior, and through such behavioral effects the states and localities can indirectly bring about greenhouse gas reduction.⁴ Just as important, as Richard Stewart's contribution observes, in the absence of federal action, the states can exhibit leadership and set a good example. State and local actors can nudge the laggards, including not only other SNAs but also the federal government itself.⁵ Even the much-decried "patchwork" of SNA regulation can have an impact on moving emission controls forward. Uneven regulatory patterns may induce industry to lobby for a more comprehensive approach, as occurred over a century ago when differing state railroad regulations drove the industry to demand a single federal Interstate Commerce Commission.⁶

Closely related to the first theme of effectiveness *vel non*, a second major theme is the issue of practical constraints that might limit SNA effectiveness in dealing with climate change. In this Symposium, however, controversy swirls around the issues of constraints, and several of the pieces dispute the arguments that SNA activity is necessarily hemmed in by purported practical limitations.

David Adelman and Kirsten Engel discuss one such supposedly constraining factor, the pattern that has acquired the unlovely name of "leakage" among the countries currently attempting to curtail greenhouse gas emissions. "Leakage" emerges from competition among the large number of governmental entities that are implicated in an issue of common concern. Internationally, the leakage phenomenon occurs when Country A limits greenhouse gas emissions, but then the producing factories move or "leak" over into unregulated Country B, thereby undercutting the global effectiveness of Country A's regulations as well as

2. David E. Adelman & Kirsten H. Engel, *Reorienting State Climate Change Policies to Induce Technological Change*, 50 ARIZ. L. REV. 835, 862 (2008).

3. *Id.* at 873.

4. Holly Doremus & W. Michael Hanemann, *Of Babies and Bathwater: Why the Clean Air Act's Cooperative Federalism Framework Model is Useful for Addressing Global Warming*, 50 ARIZ. L. REV. 799, 828 (2008).

5. Stewart, *supra* note 1, at 683–87, 691–93.

6. Herbert Hovenkamp, *Regulatory Conflict in the Gilded Age: Federalism and the Railroad Problem*, 97 YALE L.J. 1017, 1060–62, 1070 (1988). For some environmental examples, see J. R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499, 1506–16 (2007) (outlining factors that lead to industry pressure for "defensive preemption" of state regulations). See also Adelman & Engel, *supra* note 2, at 837 (noting the argument); Stewart, *supra* note 1, at 701–02 (same, citing "defensive preemption" possibility).

putting Country A at a competitive disadvantage. If leakage is already a problem on the international front, one could certainly imagine that it would equally be a problem, if on a smaller scale, as between Arizona and Nevada, Vermont and New Hampshire, or Kansas City and Omaha. Nevertheless, Adelman and Engel argue that leakage takes many forms and may ultimately be less significant than others think.⁷ Stewart joins them, arguing that a variety of factors may induce SNAs to continue their activities even in the face of the interstate competition underlying the leakage phenomenon.⁸

Another potential practical constraint on SNAs could be their limited technical capacity for dealing with the enormous complexity of climate change. In earlier debates about federalism and environmental law, some commentators argued that the federal level might be the most efficient locus for scientific inquiry into environmental concerns, because national agencies could take advantage of scale economies in research and could act as central clearing houses for information.⁹ One might certainly expect to hear this same argument with respect to climate change, a subject that involves vast areas of scientific uncertainty.

Nevertheless, the Symposium authors are remarkably sanguine about the possibilities for SNAs to contribute relevant and useful knowledge. Lisa Heinzerling stresses the very considerable air pollution control expertise that already exists in California's environmental agencies.¹⁰ Doremus and Hanemann extend Heinzerling's argument to other states, while also noting the ability of the states to adapt general policies to specific local and regional circumstances.¹¹ Barry Rabe thinks that SNA initiatives can generate substantial advances in knowledge, and that their decentralized activities might even have an advantage over centralized control, insofar as states and localities can experiment with different approaches.¹² Adelman and Engel focus on the ways in which SNAs can foster technological innovation to cope with climate change. But like the scale-economy argument that favors federal control, all these points add up to a classic counterargument in federalism debates: together, they defend the states and even localities as "experimental laboratories" for various kinds of regulatory agendas.¹³

7. Adelman & Engel, *supra* note 2, at 842–46.

8. Stewart, *supra* note 1, at 689–94.

9. See Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 614–16 (1996) (arguing generally for federal environmental authority on grounds of scale economies in research).

10. Lisa Heinzerling, *Climate, Preemption, and the Executive Branches*, 50 ARIZ. L. REV. 925, 929 (2008).

11. Doremus & Hanemann, *supra* note 4, at 825–26 (describing "many states" as "sophisticated environmental players," and describing the states' ability to adapt general policies to particular localities).

12. Barry Rabe, *Commentary*, 50 ARIZ. L. REV. 787, 790–91 (2008).

13. The "experimental laboratories" phrase for states appears to originate with Justice Brandeis' dissent in *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (using the separate terms "laboratory" and "experiments"); see also Doremus & Hanemann, *supra* note 4, at 829 (noting prevalence of the experimental laboratory description of state legislation).

The third major theme of the Symposium revolves around normative and legal limitations to SNA climate change initiatives. The prospect of federal preemption looms like a dark cloud over SNA activities. With respect to any particular legal problem, the underlying rationale for federal preemption is that state and local interventions can confuse and complicate issues that require a unified national approach. The preemption argument frequently surfaces in the area of foreign policy. As Dan Farber notes, foreign relations are often thought to require a single national policy, and for that reason, the preemption issue could have serious negative consequences for SNA programs relating to climate change.¹⁴

A very similar argument for preemption derives from the enormous economic importance of maintaining a single national economy. Preemption on this ground is usually linked to the Commerce Clause, and it too could have major implications for SNA programs. SNA climate change initiatives could fragment national markets into a maze of state and local regulations concerning everything from auto emissions to mandatory windmill electricity usage, and they might even threaten prospective national emissions trading programs.¹⁵ David Leitch argues that with respect to the auto industry, not only should unified federal controls prevail, but that they are already on the books in the form of fuel-efficiency standards.¹⁶ He is no fan of the current standards, but if there are to be any controls over emissions, he regards it an economic necessity that they be federal.¹⁷

Finally, Judith Resnik, Joshua Civin, and Joseph Frueh gently hint that preemption arguments may flow from the need to retain control over our own democratic decisionmaking.¹⁸ Resnik and her coauthors demonstrate at length that SNAs often do not act alone but in concert with other SNAs. One local government might not make much difference to national policy, but the National League of Cities—especially acting in concert with foreign powers—might indeed affect national policy. But no citizens elected the National League of Cities, and they might well wonder to whom it responds.

The authors in this Symposium, however, make it clear that all these preemption arguments are contestable. Farber questions whether foreign relations can preempt the states if the federal government is doing nothing internationally about climate change and has no articulated policy for the future.¹⁹ Resnik, Civin, and Frueh have mild reservations about SNA alliances, but they sharply reject the

14. Daniel A. Farber, *Climate Change, Federalism, and the Constitution*, 50 ARIZ. L. REV. 879, 907 (2008) (noting this position though saying that the actual doctrine is somewhat murky); Stewart, *supra* note 1, at 705 (describing the position but arguing that other factors outweigh it).

15. Farber, *supra* note 14, at 914–20 (paying particular attention to the preemption issues involved in emissions trading schemes); *see also* Stewart, *supra* note 1, at 698 (noting the potential impact of SNA actions on emissions trading).

16. David G. Leitch, *Commentary*, 50 ARIZ. L. REV. 793, 793–95 (2008).

17. *Id.* at 797.

18. Judith Resnik et al., *Ratifying Kyoto at the Local Level: Sovereignism, Federalism, and Translocal Organizations of Government Actors (TOGAs)*, 50 ARIZ. L. REV. 709, 784 (2008).

19. Farber, *supra* note 14, at 908–09.

“essentialist” view that international affairs are reserved for national governments. They argue that climate change is only the latest in a long string of international issues in which SNAs have participated through collaborative organizations.²⁰ With respect to Commerce Clause preemption, Judge William Fletcher reminds us that uniform federal action does not always produce optimal results, particularly when powerful economic interests can turn federal preemption to their advantage.²¹ Heinzerling takes the view that preemption doctrine itself should take account of SNA capacities, asserting that California, the leading state on climate change issues, has world-class, state-level expertise in air pollution control.²² Others note that California’s proposed auto emission standards, the showcase SNA initiative on climate change, can hardly be charged with fragmenting the national market; under the Clean Air Act, the other states cannot simply adopt their own emission controls but must rather follow standards set either by the federal government or by California.²³ Two sets of standards hardly equal “fragmentation.”

Finally, although Resnik and her coauthors raise the issue of democratic decisionmaking in SNA alliances, they go on to argue that regulators can prod these alliances to act with greater transparency and accountability.²⁴ Moreover, their extensive treatment of these collaborations suggests another safeguard: while SNAs might join the National League of Cities, they might also join a number of other overlapping and conflicting leagues, adding to the usual democratic cacophony that still has room for the New England town meeting (and, more recently, the Iowa caucus).

Along with the common themes of the Symposium, readers may also note a few common absences. The topic of “capture,” a concept derived from public choice theory and a mainstay of earlier federalism debates, is largely missing from this Symposium. Capture is the name for takeover of a regulatory body by the would-be regulated interests, and some think it is a matter of special concern for state and local governments.²⁵ Because of their relatively small sizes and relatively undiversified economies, the argument goes, state and local governments may be particularly vulnerable to the blandishments of major industries or other interest groups.²⁶ With respect to climate change, those interest groups might align themselves with environmental groups to support programs that flaunt the

20. Resnik et al., *supra* note 18, at 721–22.

21. William A. Fletcher, *Commentary*, 50 ARIZ. L. REV. 935, 936–37 (2008) (describing railroad rate regulation in late nineteenth century as well as current automobile fuel efficiency standards).

22. Heinzerling, *supra* note 10, at 929 (describing the California Air Resources Board as “[t]he premier air pollution control agency in the world”).

23. Adelman & Engel, *supra* note 2, at 871; Resnik et al., *supra* note 18, at 779.

24. Resnik et al., *supra* note 18, at 783–84.

25. See, e.g., Michael C. Blumm, *The Case Against Transferring BLM Lands to the States*, 7 FORDHAM ENVTL. L. REV. 387, 392–93 (1996) (arguing that the capture problem is much greater for states than for federal governmental agencies).

26. See Robert V. Percival, *Environmental Federalism: Historical Roots and Contemporary Models*, 54 MD. L. REV. 1141, 1178 (1995) (arguing that state and local governments are particularly susceptible to development pressures).

appearance of addressing global warming, but whose real object is to gain competitive advantage over rivals—favoritism to natural gas producers, for example, over coal producers.²⁷

Perhaps the capture theme has little persuasive appeal for the Symposium authors, however, because at least insofar as climate change is concerned, state and local governments do not seem to stand out as particular culprits. Quite the contrary, it is the federal government that seems most susceptible. To take one recent example, whatever instances of capture there may have been for SNAs, they would be hard-pressed to match the spectacle of the farm lobby's success in garnering federal support for ethanol.²⁸

A second, understated theme in this Symposium is the potential role for SNAs in the area of adaptation—that is, measures to deal with the consequences of global warming instead of the causes. One variant on adaptation is the sequestration of greenhouse gases through forestry and vegetation. Forestry measures for carbon sequestration are not fully developed even among the current international participants in climate change control,²⁹ but biological sequestration, like many adaptation efforts, offers potentially useful roles for SNAs. These kinds of measures often require land use controls, a subject particularly familiar to state and local governments. Moreover, many of these land-related measures do not involve such high-tech solutions that research and development need be centralized in a national agency. As Doremus and Hanemann point out, state and local governments are already conversant with such land-use related regulations as development controls and building codes, which these authors cite as behavior-related measures that could mitigate greenhouse gases.³⁰

But state and local development controls can promote not only reduction in greenhouse gas emissions but also adaptation to the climate change that does occur, for example by requiring waterfront setbacks to avoid storm damage, open space for flood control, plantings and replantings to reduce urban heat, and contour grading to prevent runoff, among other measures.³¹ SNA measures like these can

27. Bruce Yandle & Stuart Buck, *Bootleggers, Baptists, and the Global Warming Battle*, 26 HARV. ENVTL. L. REV. 177, 211–12 (2002) (arguing that supporters of greenhouse gas controls have been aligned with natural gas interests against coal interests). Yandle and Buck's analysis, however, while a variant on a capture theme, is not directed at state or local governments. *See id.*

28. *See, e.g.*, David Olive, *Ill-Conceived Rush to Ethanol*, TORONTO STAR, June 29, 2008, at A06 (sharply criticizing U.S. and Canadian rush to support ethanol production, describing these moves as satisfying to the farm lobby but expensive to others and ecologically counterproductive).

29. ROGER SEDJO ET AL., FOREST SEQUESTRATION: PERFORMANCE IN SELECTED COUNTRIES IN THE KYOTO PERIOD AND THE POTENTIAL ROLE OF SEQUESTRATION IN POST-KYOTO AGREEMENTS (2006), available at <http://www.rff.org/Documents/RFF-Rpt-ForestSequestrationKyoto.pdf>.

30. Doremus & Hanemann, *supra* note 4, at 816, 828.

31. *See, e.g.*, Ann E. Carlson, *Heat Waves, Global Warming, and Mitigation*, 26 UCLA J. ENVTL. L. & POL'Y 169, 213–15 (2008) (describing local land use measures to adapt to expected increase in urban heat waves, including planting requirements, open space increases, and other development controls); *see generally* Craig Anthony (Tony) Arnold,

be controversial because of their impact on property rights,³² but adaptation to climate change could add a powerful rationale in defense of land use regulation. Adaptation can be a prickly subject, however, because it potentially involves an uncomfortable tradeoff: greater attention to SNA adaptation *ex post* could undercut efforts to prevent greenhouse gas emissions *ex ante*, particularly if adaptation measures appear to be cheap relative to prevention.³³

In the final analysis, it may not matter a great deal that SNA measures do not have a major direct effect on preventing global warming. Their major role may turn out to be something different, perhaps encouraging new technologies, prodding behavioral changes, or dealing with adaptation. While there are serious arguments for federal preemption in climate change policy, or at least federal dominance, these arguments anticipate that in the long run, there will be *some* federal policy with respect to climate change. Until that day, perhaps the best case for SNA prevention initiatives is not that these initiatives are efficacious, or even that they foster creative ideas, although they definitely may do that. The best case may simply be that they keep the pot boiling, and that they provide a forum and a hope for the many citizens who really do care. Most of all, they keep climate change in the public eye until the day when our national leaders really do decide to lead.

Clean-Water Land Use: Connecting Scale and Function, 23 PACE ENVTL. L. REV. 291 (2006) (detailing a variety of land use measures for watershed protection, stressing local and state role).

32. See, e.g., *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1019 (1992) (holding a beachfront setback requirement a “taking” of property because it denied all economic value).

33. On January 22–23, 2009, the University of Arizona will host a conference at the Westward Look Resort in Tucson, Arizona dealing specifically with climate change adaptation, focusing on the arid southwest. The upcoming conference, “Adaptation to Climate Change in the Desert Southwest: Impacts and Opportunities,” is sponsored by the University of Arizona’s Institute for the Study of Planet Earth, the James E. Rogers College of Law, and the University of Arizona’s Economics, Law and Environment Program. For more information, see http://www.ispe.arizona.edu/library/publications/flyers/climate_change_postcard.pdf.
