Editors' Letter: The interface of science, society, and politics

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What is the role of science in society? What are the obligations of researchers and practitioners hoping to work with communities? How can researchers, practitioners, and communities work together to develop sustainable, equitable, and just solutions to problems? How can we make research more inclusive and diverse? These are some of the questions at the heart of the editorials, articles, and project notes included in this special issue of the *Michigan Journal of Sustainability*. Instigated by current events and national conversations about the politics of knowledge production, circulation, and application—especially around issues of sustainability—this issue seeks to address broader questions about the appropriate role of science, researchers, and practitioners within a climate in which: 1) there is an erosion of trust in science-based information; 2) knowledge is co-opted to serve specific political agendas; and 3) research occurs without the input of communities, who largely remain voiceless when issues of environmental injustice occur.

As this is the final issue of the *Michigan Journal of Sustainability*, we adhered to our tradition of being a journal written for and by practitioners and researchers from a wide range of fields and at different stages of their careers. Specifically,

this issue contains contributions from researchers and practitioners from Environment and Sustainability, Earth and Environmental Science, Science and Technology Studies, Public Health, Architecture, Urban Planning, and Engineering, as well as the ministry, who provide unique perspectives on the interface between science, politics, and society. At the same time, we also wanted to break with tradition to reflect upon our role as knowledge producers and practitioners when we seek to intervene or to work with communities. For this reason, we have included more editorials and reflection pieces than in previous issues. We also placed an emphasis on project notes that highlight the kinds of inclusive work that students from the University of Michigan are undertaking—to showcase both how far we have come and how far we still have yet to go.

Before we preview this issue, we must first extend a warm thank you to those who served as anonymous reviewers for the initial proposals and full manuscripts that appear here. Every piece in this journal improved from its initial submission to final acceptance because of your invaluable services. We would also like to thank the Graham Sustainability Institute for supporting the journal and all of its endeavors, without which this journal would never have been possible. Elizabeth LaPorte was especially helpful with shepherding the editorial board through the publication process, and her enthusiasm and commitment to the journal was unfailing. Thank you. Last but not least, we would like to thank our copy editor Allison Peters and the staff at Michigan Publishing for ensuring that the pieces published here are of the highest quality. Without further ado, the rest of this introduction previews volume 6.1 of the *Michigan Journal of Sustainability*.

We begin with Yanna Lambrinidou's powerful editorial. Drawing on her experiences living in and studying lead-in-water crises in Washington, D.C. and Flint, Michigan, Lambrinidou reminds us that such crises are far from technical problems; rather, they are the result of historical inequalities that structure and pattern the kinds of injustice that the poor and communities of color in the United States often experience. She argues that framing these crises as technical problems in need of technical solutions risks erasing these complex social and political histories while reproducing these historical inequalities. Underscoring the often large power disparities between "experts" and the public, Lambrinidou outlines how scientists and engineers hoping to "do good" in communities may do so—in large part by starting with the communities themselves, drawing on their knowledge and resources, and working with communities until they have determined their problems have been solved.

Don Scavia's editorial explores the ideas of scientific engagement, science's social contract, and how researchers can better work to co-produce knowledge with com-

munities so that scientific research is both useful and used by stakeholders, drawing on lessons learned from climate change research. Suggesting that some of the biggest sustainability problems facing our planet today could be solved through an understanding of different worldviews, as well as through engagement, Scavia draws on the theoretical work of Roger Pielke, Jr., to outline four different ways scientists can act as advocates, each of which has its tradeoffs. Scavia urges scientists to reflect on and decide for themselves the appropriate research topic, role, and type of advocacy they will pursue in their career.

We begin the articles, project notes, and reflections with Reverend Dan Scheid's piece written from his unique perspective as a member of the clergy leading the congregation at St. Paul's Episcopal Church in Flint, Michigan. Rev. Scheid underscores how a city grappling with its own history of racial and economic divides struggled with and sometimes against the realization that their city's water was being contaminated with lead. In the midst of the Flint Water Crisis, disparities in the allocation of resources and wealth continue as certain parts of the city are gentrified, while others are left to languish, unsure of the safety of their water, unable to trust the scientific reports that tell them their water is now safe to drink, and continuing to rely on bottled water—even as the government has shut down bottled water distributions, declared victory, and washed its hands of further responsibility. Throughout it all, Rev. Scheid emphasizes the importance of bearing witness to forms of oppression and echoes Yanna Lambrinidou's sentiments that the Flint Water Crisis represents just one symptom out of many that demonstrates broader processes of dispossession and discrimination.

Following Rev. Scheid's reflection, Rodriguez et al. explore perceptions of drinking water in Benton Harbor, Michigan, a city with a similar socioeconomic make-up as Flint and its own history with poor drinking water quality and affordability. This Master's project demonstrates the need for further research into examining how communities perceive their drinking water quality and associated health risk, existing knowledge gaps, strategies residents employ to reduce their perceived risk, and issues of trust in sources of information about the quality of their drinking water.

The clash between ecological and housing rights is the focus of the project note from Devine et al. A group of University of Michigan Master's students in Urban Planning and Architecture report on their project, *Ocupação Anchieta Avançada*, which investigates the tension in these two rights and proposes a sustainable solution for a community in Brazil. The group shares its grappling with the complex problems of the community they are working with to design solutions and draw

from their experience to present the roadmap for a community-led solution. What kinds of sustainable solutions are appropriate, and how do you move forward when action to increase one right might threaten the security of another?

Finally, Agee and Li report on the initial findings of a university- and department-wide effort at the University of Michigan to retain women in the earth and environmental sciences at later academic stages. In their teaching and learning article, Agee and Li describe how the establishment of the Michigan Earth Science Women's Network provides support to women by forging strong social networks and support mechanisms for women. Citing the rise in cuts to funding for the sciences and the politicization of science, they argue that peer networks are part of the key to success for staunching the leaky pipeline of potential future female earth and environmental scientists.

We hope you will enjoy reading and learning from the pieces of this issue as much as we have. We are honored and humbled to have been able to participate in the production of this knowledge, which can be directly linked to policies and applications that foster sustainability. While this is the final issue of the *Michigan Journal of Sustainability*, we hope that its overall commitment to the integration of knowledge from across disciplines, as well as this issue's reflection on the social contract of researchers and practitioners to the public, pushes you to think deeper, to challenge your assumptions, to be more inclusive, and to humbly listen to differing worldviews. Sustainable solutions and policies only work when communities are included, when relationships of trust are built and maintained, and when we work together to identify problems *and* their appropriate solutions.

Thank you.