

C O M M E N T

MAKING PARTICIPATION IN ALGORITHM-ASSISTED DECISIONMAKING IN CLIMATE INVESTMENTS MORE ACCESSIBLE AND EQUITABLE

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In *How Algorithm-Assisted Decisionmaking Is Influencing Environmental Law and Climate Adaptation*, Prof. Sonya Ziaja provides a useful framework to analyze whether an algorithm-assisted decisionmaking (AADM) tool and its design process is procedurally equitable. Professor Ziaja's framework contains several different questions advocacy groups can use to analyze the AADM tools that are increasingly used for environmental resource governance, such as the INFORM and RESOLVE algorithms discussed in the article, which guide the allocation and distribution of water and energy resources. The questions within the framework can help stakeholders assess the legal and policy assumptions ("value-laden assumptions") embedded in algorithmic decision tools and are a starting point for identifying potential biases and substantive equity issues within those systems and encouraging greater deliberation and coproduction of AADM tools between governmental agencies and advocacy groups. In this Comment, we discuss some of the barriers advocacy organizations face when engaging in the development of algorithmic systems, how the framework can ease those barriers, and finally the need for the developers of algorithmic decision systems to complete impact or risk assessments to further enable informed discussion and coproduction of these tools.

I. Barriers to Participation in AADM Development

The framework in the article is described as a tool to help advocacy organizations engage in the development of increasingly inaccessible and technically complex algorithms and to guide a critical analysis of these tools in an effort to make

them more equitable.¹ The Greenlining Institute (Greenlining) is an organization focused on undoing the impact of historical discrimination and redlining on communities of color through advocacy focused on economic and climate equity. As it relates to this article, Greenlining works with state and federal agencies developing algorithmic decision tools, making Greenlining a prime target for Professor Ziaja's framework. For example, Greenlining and over 2,600 other commenters provided input to the White House Council on Environmental Quality (CEQ) on its development of the federal Climate and Economic Justice Screening Tool (CEJST). CEJST is used by federal agencies to identify disadvantaged communities and determine their eligibility and priority for billions of dollars of federal benefits and investment. CEJST is an AADM tool that is a critical part of the Justice40 initiative which aims to direct 40% of federal investments in clean energy and transit, pollution reduction, sustainable housing and climate infrastructure to disadvantaged communities.² Greenlining's comments advocated for substantive and procedural equity in CEJST through the inclusion of datasets that ensured redlined and disadvantaged communities of color were properly identified by the tool and for community participation and transparency in

1. Sonya Ziaja, *How Algorithm-Assisted Decision Making Is Influencing Environmental Law and Climate Adaptation*, 48 *ECOLOGY L.Q.* 899, 934 (2022).

2. See Justice40, A Whole of Government Initiative, THE WHITE HOUSE (2022), <https://www.whitehouse.gov/environmentaljustice/justice40/> (last visited Mar 17, 2023).

selecting the metrics or thresholds used for identifying disadvantaged communities.³

In our experience, the level of engagement and participation we saw in the development of CEJST is the exception not the rule when it comes to stakeholder participation in the development of algorithmic systems. As Professor Ziaja notes, meaningful participation takes time, is costly and requires technical capacity-building and translation,⁴ all culminating in significant barriers to participation, even for intermediate advocacy groups like Greenlining that have attorneys, scientists, and other experts on staff. The CEJST tool was open-source, but the ability to understand and provide feedback around the algorithms used to identify disadvantaged communities required an understanding of Python programming and familiarity with GitHub—making it inaccessible to many advocacy groups, community-based organizations and individuals who may not have the time or technical knowledge to apply. This is especially the case for algorithms that are more complex, inscrutable, and lack a specific focus on equity, such as the INFORM and RESOLVE algorithms described in the article. The highly technical nature of many public algorithmic decision tools, the unclear or seemingly attenuated impacts of any particular algorithm on an organization’s particular community of interest, or limited opportunities for stakeholder collaboration with developers can make investing time and staff resources into the development process a difficult decision. Public participation in the development of algorithmic decision tools is often limited to a 30- to 60-day notice-and-comment process that occurs with unpredictable timing that can interfere with ongoing projects and other rulemaking efforts. Given these constraints, advocacy organizations like Greenlining are less likely to comment and get involved if there is a concern that participation will be superficial and will not add value to the development process. This concern is further magnified by the lack of transparency on how advocate and community feedback gets translated into substantive changes to the methodology or development of an AADM tool. Within the CEJST development process, CEQ provided an opportunity for users to provide feedback on specific census tracts, but there was not a clear process for how this feedback would be implemented in the designation of those census communities as disadvantaged (and therefore eligible for future funding). In addition, there was not much transparency around the process for how advocates could influence future iterations or the implementation of the tool. These constraints and structural barriers to stakeholder participation ultimately limit the oversight and analysis of inequity and value-laden assumptions embedded in algorithmic systems.

3. See The Greenlining Institute, Comment Letter on the White House Council of Environmental Quality’s Climate and Economic Justice Screening Tool (CEJST) (May 23, 2022), <https://www.regulations.gov/comment/CEQ-2022-0002-2483>.

4. See Ziaja, *supra* note 1, at 919, 933.

II. Applying the Framework

This article serves as a reminder that it may not be feasible for advocates to pivot to procedural equity issues when engaging on the technical or substantive elements (datasets, inputs, optimization criteria, etc.) of an algorithmic tool due to the constraints mentioned above or simply because those issues would be properly addressed in another organization’s comments. Pushing developers to include proper notice and transparency about the logic and methodologies of their AADM tools, information on the diversity of the decisionmakers, the sources of uncertainty in a model, how an AADM tool will be used and implemented and ensuring sufficient opportunities for effective stakeholder collaboration is especially justified when it comes to the development of public-purpose algorithms used by government agencies and funded by taxpayers. The benefits of procedural equity do not just flow to the public, they also benefit the regulators and developers behind these algorithms by catalyzing a feedback loop that can help save time and prevent missteps and public outcry if these algorithms fall short of public expectations.

The California Public Utilities Commission (Commission) recently partnered with a developer to create an AADM tool that would identify “priority” areas for broadband infrastructure funding.⁵ Public comments on the tool centered around the need to prioritize disadvantaged communities with socioeconomic barriers to broadband adoption for this funding.⁶ In practice, the Commission and the developer built a model focused on identifying areas that were profitable to invest in, and in doing so, prioritized wealthier and more advantaged communities in terms of socioeconomic vulnerability and exposure to environmental health hazards—reflecting a value-laden assumption that embedded the primacy of profit over equity in prioritizing communities for broadband investment.⁷ In terms of Professor Ziaja’s framework, the model was quite transparent about its logic and focus on prioritizing profitable investments, but this also created a significant disconnect with the public as it disregarded stakeholder knowledge that was advisory rather than determinative. This disconnect, along with strong disagreement around how the model reflected existing governance and expectations in selecting priority areas led to public outcry, multiple legislative oversight

5. CostQuest Associates, *California Broadband Analysis Federal Funding Account Priority Areas Process Overview and Methods*, CALIFORNIA PUBLIC UTILITIES COMMISSION 4 (Dec. 2022), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/broadband-implementation-for-california/priority-areas-webpage/ca-broadband-analysis-priority-areas.pdf>.

6. See generally California Public Utilities Commission, Decision Adopting Federal Funding Account Rules, Rulemaking 20-09-001, D. 22-04-055 22-25 (Apr. 22, 2022), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M470/K543/470543650.PDF>.

7. The priority areas had an average CalEnviroScreen score (where a higher score indicates greater exposure to pollution and poverty) between 19.2 and 27.6, while the average CalEnviroScreen score for Black and Latino communities is above 65. See CostQuest Associates, *supra* note 5, at 17; California Environmental Protection Agency (CalEPA), *Analysis of Race/Ethnicity and CalEnviroScreen 4.0 Scores* (2021) 2 <https://oehha.ca.gov/media/downloads/calenviroscreen/document/calenviroscreen40raceanalysisf2021.pdf>.

hearings, and pressure to scrap the use of the tool entirely. Approximately one month later, the Commission scrapped the use of investment criteria in the model and the development of priority areas, and it indicated that it is developing an updated model that focuses on selecting areas without access to broadband and providing higher scores to projects that serve disadvantaged communities.⁸

III. Integrating the Framework Into Risk and Impact Assessment Requirements

As the above example shows, Professor Ziaja's framework provides a lens that advocates can use to guide their analysis of algorithmic systems and their asks for the incorporation of substantive equity as well as transparency obligations and plain-language explanations within algorithmic decision tools. However, given the resource constraints for advocacy organizations, it raises the question, why should advocates have to apply the framework and ask these questions in the first place? As developers have greater control over the development of algorithmic systems, it should be their responsibility to affirmatively answer the questions contained in the framework as they develop the tool. Providing this type of information before, during, and after the development of algorithmic systems can lower the barriers to entry for organizations interested in participating in the development and governance of algorithmic systems and can act as an internal quality control process for the developers as they think through the implications and potential public response to the assumptions embedded within an algorithmic-decision tool.

A key part of Greenlining's algorithmic equity work is to develop legislation and regulations that require developers and government agencies to systematically publish impact or risk assessments of algorithmic-decision systems that make critical decisions. Environmental risk assessments are already required by laws like the California Environmental Quality Act (CEQA), which generally requires state and local government agencies to inform decisionmakers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. In Canada, government agencies are required to complete an algorithmic impact assessment with varying peer review, transparency, and documentation requirements depending on the purpose, risk, and uses of the algorithm. Impact assessments are crucial as they enable the identification and evaluation

of potential risks and harms that could result from the deployment of algorithmic systems. These assessments consider various factors, including the accuracy and fairness of the algorithm, potential for bias or discrimination, and the possibility of negative impacts on individuals or groups. These assessments often incorporate the elements of the framework described in this article. For example, the National Institute of Standards and Technology (NIST) risk management framework asks developers to have processes in place for stakeholder engagement as well as documenting the limitations of the system that correspond with the framework's focus on transparency, uncertainty, and stakeholder engagement.⁹ By conducting and publishing risk assessments that address equity concerns, developers and decisionmakers can do a self-assessment for potentially harmful value-laden assumptions. Public risk assessments can lower the barriers for effective stakeholder involvement and engagement by helping advocates understand the purpose of the algorithm and if there are any measures in place to minimize risks and ensure equity. This can increase the likelihood that advocacy organizations can engage in the policy processes underpinning the development of algorithmic systems and generate more constructive comments and feedback in the use of these tools and the development of assumptions that guide their algorithmic decisions. Moreover, a risk assessment can address topics that cannot be included for some reason in the tool itself. For example, CalEnviroScreen, an AADM tool similar to CEJST could not include race as a factor in the tool, but it did publish an analysis on how the factors were correlated to race.¹⁰

The article concludes its analysis by asking if algorithmic tools are destined to be increasingly inequitable in environmental governance due to the increasing complexity of these systems. In Professor Ziaja's view, inequity could rise from the need for high technical capacity that excludes the necessary people and organizations that could drive equity in development of AADM tools. The article's framework, complemented with legislation imposing an affirmative obligation for developers to complete public risk assessments of algorithmic decision tools would lower the barriers to entry into the AADM development processes, improve procedural and substantive equity, and encourage informed engagement and coproduction of these systems. In this way, advocates, developers, and other stakeholders have a greater chance at avoiding a destiny where algorithmic decision systems become increasingly complex, opaque, and inequitable.

8. See Federal Funding Account Priority Areas, California Public Utilities Commission (2023), <https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/last-mile-federal-funding-account/priority-areas> (last visited Mar. 17, 2023).

9. See NIST, *AI Risk Management Framework: Second Draft* 19-25 (2022), https://www.nist.gov/system/files/documents/2022/08/18/AI_RMF_2nd_draft.pdf.

10. See CalEPA, *supra* note 7.