

DO RE MI: WORKERS' INCLUSION IN ENVIRONMENTAL JUSTICE

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As environmental justice gains momentum in the United States, scholars and advocates alike have considered how environmental justice interacts with different groups and interests across different social dimensions. The recent broadening of the environmental justice movement has, however, generally overlooked labor considerations. Workers deserve unique and particularized consideration within environmental justice, but modern notions of environmental justice continue to ignore how environmental issues and policy affect the working class. As a consequence, workers still suffer disproportionate burdens and endure unique harms. This Comment seeks to position itself within the existing environmental justice scholarship by bringing attention to the insufficient recognition that labor concerns receive within the movement. It advocates for greater inclusion of workers and consideration of labor issues by first establishing why, at a theoretical level, labor deserves a seat at the environmental justice table. Then, this Comment culminates by applying this framework to specific areas of law and policy, highlighting the importance of including workers in the conceptualization of environmental justice.

I.	INTRODUCTION.....	462
II.	THE THEORETICAL BASIS FOR LABOR'S INCLUSION IN ENVIRONMENTAL JUSTICE.....	465
	A. <i>Environmental Justice Defined</i>	465
	B. <i>A Short History of the Environmental Justice Movement</i> ...	466
	C. <i>The Expansion of Environmental Justice</i>	468

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	D. <i>The “Worker vs. Environment” Trap</i>	471
	E. <i>Historical Examples of Labor’s Inclusion in Environmental Justice</i>	474
III.	THE REAL-WORLD OVERLAP OF LABOR AND ENVIRONMENT	478
	A. <i>Coal Workers and a Just Transition</i>	478
	B. <i>Climate Change and Extreme Temperatures</i>	483
	C. <i>Pesticide Use and Exposure</i>	485
IV.	CONCLUSION	488

I. INTRODUCTION

Lots of folks back East, they say, is leavin’ home every day,
 Beatin’ the hot old dusty way to the California line.
 ‘Cross the desert sands they roll, gettin’ out of that old dust bowl,
 They think they’re goin’ to a sugar bowl, but here’s what they find
 Now, the police at the port of entry say,
 “You’re number fourteen thousand for today.”

Oh, if you ain’t got the do re mi, folks, you ain’t got the do re mi,
 Why, you better go back to beautiful Texas, Oklahoma, Kansas,
 Georgia, Tennessee.
 California is a garden of Eden, a paradise to live in or see;
 But believe it or not, you won’t find it so hot
 If you ain’t got the do re mi.

—Woodie Guthrie, *Do Re Mi*¹

Perhaps one of the earliest recorded recognitions of how environmental harms uniquely affected the working class, Woody Guthrie wrote *Do Re Mi* about the Dust Bowl Crisis of the twentieth century and its effect on the working class of the Midwestern United States.² The Dust Bowl, often regarded as the “worst man-made ecological disaster in American History,”³ was caused by the widespread use of

¹ WOODIE GUTHRIE, *Do Re Mi*, on DUST BOWL BALLADS (Folkway Records 1964) (1940); see also *Woody Guthrie Lyrics: Do Re Mi*, WOODY GUTHRIE, <https://perma.cc/6K3L-B5UE> (last visited Feb. 24, 2024).

² Brian McCurdy, *Song Stories: Woody Guthrie’s “Dust Bowl Ballads,”* LIBR. OF CONG.: BLOGS (July 14, 2022), <https://perma.cc/TK7G-VHJF>. Guthrie lived in Pampa, Texas, a town deeply affected by the ecological and economic hardships of the Dust Bowl. *Id.* It was in Pampa that Guthrie witnessed “Black Sunday,” a severe dust storm. *Id.* Black Sunday directly inspired other songs on Dust Bowl Ballads, including *So Long, It’s Been Good to Know You*, *id.*, and *The Great Dust Storm*. WOODIE GUTHRIE, *The Great Dust Storm*, on DUST BOWL BALLADS (Folkway Records 1964) (1940); *Woody Guthrie Lyrics: The Great Dust Storm (aka. Dust Storm Disaster)*, WOODY GUTHRIE, <https://perma.cc/3JBF-J7RT> (last visited Feb. 24, 2024).

³ *The Dust Bowl: The Great Plow-Up*, at 03:41 (PBS 2012), <https://perma.cc/G6V7-GN43>.

unsustainable farming practices⁴ and Congress's failure to act.⁵ The sudden collapse of the farming industry in the Plains States forced an estimated 2.5 million people to flee the Midwest in search of work, constituting the largest ever migration in American history.⁶ In this sense, we can reframe and understand the Dust Bowl crisis⁷ as a natural consequence of environmental policy that uniquely and disproportionately impacted farmworkers.⁸

Almost 100 years later, lessons from the Dust Bowl have led the federal government to implement policies designed specifically to protect workers from a growing list of environmental hazards.⁹ While these policy initiatives indicate some forward progress,¹⁰ climate researchers, legal academics, and federal agencies alike have failed to adequately weigh the significant impacts of climate change on the health and wellbeing of workers, especially marginalized workers.¹¹ At present, environmental

⁴ *The Dust Bowl*, LIBR. OF CONG., <https://perma.cc/L6XV-SJMX> (last visited Feb. 24, 2024).

⁵ See Glenn Corey, *The Great Dust Bowl of the 1930s Was a Policy-Made Disaster*, FOUND. FOR ECON. EDUC. (June 13, 2020), <https://perma.cc/3934-R9JQ> (describing how three groups of people testified before Congress warning its members of the “potentially disastrous consequences of policies that would encourage plowing the land in the Plains States”); John F. Ross, *The Prophet of the Dust Bowl*, WALL ST. J. (June 14, 2018), <https://perma.cc/E5QA-94X2> (describing how Congress had been warned about the ecological consequences of its policies encouraging mass migration to the Plains States).

⁶ *Mass Exodus from the Plains*, PBS, <https://perma.cc/CV44-C5V9> (last visited Feb. 20, 2024).

⁷ See, e.g., Robert A. McLeman et al., *What We Learned from the Dust Bowl: Lessons in Science, Policy, and Adaptation*, 35 POPULATION & ENV'T 417, 418 (2014) (reviewing a list of potential lessons from the Dust Bowl from a variety of disciplines).

⁸ *Id.* at 425–29. It should be noted here that there is much debate about how rural farmers and farmworkers should be conceptualized as they relate to ideas about class struggle. See Bertell Ollman, *Marx's Use of “Class”*, 74 AM. J. SOCIO. 573, 574 (1968) (“On at least one occasion, Marx states explicitly that farm laborers are proletarians; yet, the whole weight of his treatment of the proletariat as workers in industry argues against this.”). For purposes of this paper, the phrase “workers” will include farmers and farmworkers and consider these groups to be members of the proletariat. See *id.* (“Beyond this, there is an indication that Marx sometimes extends the class of proletarians to include small-holding peasants as well, as when he states, ‘The owning peasant does not belong to the proletariat, and there where he does belong to it by his position, he does not believe that he belongs to it.’ Marx’s point is that because of his indebtedness to various capitalists, the mortgage on his property, etc., the peasant does not really own his plot of land, and is actually working for someone else.”).

⁹ See *infra* Sections III(A)–(B) for an overview and evaluation of specific federal policies intended to shield workers from environmental harms and provide a just transition.

¹⁰ See Anabella Rosemberg, *The Environmental and Labour Movements Must Work Together*, AL JAZEERA (May 2, 2021), <https://perma.cc/9V5E-TB64> (explaining that there has been a “shift away from a binary and artificial opposition between protecting jobs and protecting the environment”).

¹¹ Cora Roelofs & David Wegman, *Workers: The Climate Canaries*, 104 AM. J. PUB. HEALTH 1799, 1799 (2014). But see *FACT SHEET: Biden Administration Mobilizes to Protect Workers and Communities from Extreme Heat*, WHITE HOUSE (Sept. 20, 2021) [hereinafter *Extreme Weather Factsheet*], <https://perma.cc/R42X-FD73> (recognizing that the increase in heat caused by climate crisis disproportionately affects Black and Brown workers).

justice seldom takes into account labor interests.¹² While governmental initiatives to prioritize environmental justice have grown more common,¹³ and some agencies have properly recognized the particular needs of “climate vulnerable” populations,¹⁴ workers remain largely neglected by policymakers, researchers, and regulators alike.¹⁵

Despite growing recognition of the “natural synergy” between labor law and environmental law,¹⁶ much of the research in this area has focused on either the role that labor law plays in mitigating or reducing climate change¹⁷ or the effects of green policy on labor.¹⁸ The direct relationship between labor law and the environmental justice movement remains understudied. This Comment will argue that workers are uniquely and disproportionately affected by particular environmental hazards and that labor considerations are thus essential components of environmental justice.

This Comment will begin by explaining why protection and expansion of workers’ rights is a necessary and under-explored element of environmental justice. Section II will first offer a working definition of environmental justice and briefly review the history of the environmental justice movement and its foundational principles. Next, Section II will

¹² See, e.g., Roelofs & Wegman, *supra* note 11, at 1799 (noting that climate scholars rarely consider how environmental issues affect workers); David J. Doorey, *Just Transitions Law: Putting Labour Law to Work on Climate Change*, 30 J. ENV’T L. & PRAC. 201, 205 (2017) (noting that, historically, labor law and environmental law have rarely interacted and arguing that the goals of the two fields compete with one another in many ways).

¹³ See, e.g., *White House Environmental Justice Interagency Council*, WHITE HOUSE, <https://perma.cc/2QW5-8QXT> (last visited Feb. 24, 2024) (explaining that the purpose of the White House Environmental Justice Interagency Council is to develop broad level strategies to implement environmental justice); *Environmental Justice (EJ)*, U.S. DEP’T OF LAB. [hereinafter *EJ*, U.S. DEP’T OF LAB.], <https://perma.cc/YZ3G-DFQU> (last visited Feb. 24, 2024) (articulating the Department of Labor’s environmental justice initiatives); *Environmental Justice*, STATE OF CAL. DEP’T OF JUST., [hereinafter STATE OF CAL. DEP’T OF JUST.] <https://perma.cc/N6F7-D9RX> (last visited Feb. 24, 2024) (documenting that California established its own Bureau of Environmental Justice in February of 2018).

¹⁴ Roelofs & Wegman, *supra* note 11, at 1799.

¹⁵ *Id.* This is not to say that no one else has advocated for the role of workers’ rights in environmental justice or argued that workers need increased protection in light of the worsening climate crisis. Instead, this Comment simply agrees with the suggestions of others that these issues remain minimized and neglected compared to their relative importance.

¹⁶ See U.N. ENV’T PROGRAMME, LABOUR AND THE ENVIRONMENT: A NATURAL SYNERGY 4–5 (2007), <https://perma.cc/7XQZ-WMP9>.

¹⁷ See, e.g., Doorey, *supra* note 12, at 206 (considering how to bring “the insights of labour law into the dialogue about how law can best respond to climate change”); INT’L TRADE UNION CONFEDERATION, CLIMATE JUSTICE: THERE ARE NO JOBS ON A DEAD PLANET 4 (2015), <https://perma.cc/8EEQ-BL74> (arguing that climate action has become a trade union issue).

¹⁸ See, e.g., Amanda Novello, *Workers’ Rights in an Era of Climate Crisis: A Recap*, CENTURY FOUND. (Dec. 19, 2019), <https://perma.cc/5S7Z-7MXY> (exploring the various effects of green policy on labor and arguing that a “green transition” can be both easy and equitable for labor if done correctly); Pascal McDougall, *The Place of Labor Rights in the European Union’s Environmental Policies*, 22 GERMAN L.J. 1, 28–29 (2021) (exploring labor’s role in the European Union’s environmental policies).

assess how modern understandings of environmental justice have expanded to cover more social dimensions and include more groups. Section II will also argue against falling into the “worker vs. the environment” trap. Finally, Section II will explore the nuanced history of labor’s role in environmental justice.

Having established the theoretical basis for labor’s role in the environmental justice movement, Section III will apply these concepts to demonstrate how workers remain particularly vulnerable to a range of environmental harms and policy decisions. This Section examines the effects of environmental policy on “coal communities,” illustrating the harms of excluding workers from policymaking. Next, Section III will argue that workers remain highly sensitive to the impacts of climate change and rising global temperatures. Finally, this Section will describe how pesticides pose a particularly significant risk to workers and emphasize the importance of creating targeted polices to safeguard them from these dangerous chemicals.

II. THE THEORETICAL BASIS FOR LABOR’S INCLUSION IN ENVIRONMENTAL JUSTICE

A. *Environmental Justice Defined*

There is no single definition of environmental justice,¹⁹ but most definitions call for equal protection, community involvement, and the right to a healthy living environment.²⁰ Today, many groups use a definition previously established by the Environmental Protection Agency (EPA), which provided that “[e]nvironmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.”²¹ EPA has since updated its definition, such that, according to the Agency, “[e]nvironmental justice means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment.”²² At bottom, the fundamental principle of environmental

¹⁹ *What Is Environmental Justice?*, DETROITERS WORKING FOR ENV’T JUST. [hereinafter DETROITERS WORKING FOR ENV’T JUST.], <https://perma.cc/A7RV-KWVB> (last visited Feb. 13, 2024).

²⁰ *Id.*

²¹ *See Learn About Environmental Justice*, U.S. ENV’T PROT. AGENCY, <https://web.archive.org/web/20230201214306/https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> (archived Feb. 1, 2023); *see also What is Environmental Justice?*, CLIENTEARTH (Apr. 27, 2021) [hereinafter CLIENTEARTH], <https://perma.cc/22JL-7Z5F> (citing the EPA’s previous definition); *What is Environmental Justice?*, DEP’T OF ENERGY: OFF. OF LEGACY MGMT., <https://perma.cc/9WHM-H877> (last visited Feb. 13, 2024).

²² *Learn About Environmental Justice*, U.S. ENV’T PROT. AGENCY [hereinafter *Learn About Environmental Justice*, EPA 2024], <https://perma.cc/W3J7-HCBN> (last visited Feb

justice is that all individuals and communities have the right to equal environmental protection under the law, as well as the right to live, work, and play in communities free from harmful environmental hazards.²³

Central to the environmental justice movement's principles is a recognition of the various environmental disparities faced by low-income and minority communities across the United States and the globe.²⁴ Specific examples of environmental injustice abound. In the United States, research shows a significant correlation between lack of access to clean drinking water and race, alongside a host of other socioeconomic factors.²⁵ Similarly, Black Americans are 75% more likely to live in communities near industrial facilities, like oil and gas plants, greatly increasing their exposure to the associated pollution, as well as the likelihood that they suffer negative health outcomes as a result.²⁶ These studies simply highlight what affected communities have known since well before academics took the time to prove it: poor communities and communities of color often bear disproportionate environmental burdens.

B. A Short History of the Environmental Justice Movement

While the fundamental issues underlying the environmental justice movement are nothing new, the movement itself is relatively young.²⁷ Many environmental justice advocates were galvanized to organize after the 1982 protests in predominantly Black Warren County, North Carolina, where residents resisted the dumping of thousands of tons of soil contaminated with polychlorinated biphenyl, or PCB, into their community.²⁸ That event, and others like it, sparked more focus and

13. 2024). The EPA goes on to state that just treatment and meaningful involvement includes “full[] protect[ion] from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers.” *Id.*

²³ DETROITERS WORKING FOR ENV'T JUST., *supra* note 19.

²⁴ CLIENTEARTH, *supra* note 21.

²⁵ Kristi Pullen Fedinick, *Watered Down Justice*, NAT. RES. DEF. COUNCIL (Mar. 27, 2020), <https://perma.cc/8URX-K8V6>.

²⁶ LESLEY FLEISCHMAN & MARCUS FRANKLIN, NAT'L ASS'N FOR THE ADVANCEMENT OF COLORED PEOPLE & CLEAN AIR TASK FORCE, FUMES ACROSS THE FENCE-LINE 6 (2017), <https://perma.cc/3VD8-FR7D>.

²⁷ See *History of Environmental Justice*, SIERRA CLUB [hereinafter SIERRA CLUB], <https://perma.cc/E8FN-HALQ> (last visited Feb. 13, 2024) (stating that the environmental justice movement emerged in the late 1980s, with the first significant event occurring in 1982).

²⁸ Alejandro Colsa Perez et al., *Evolution of the Environmental Justice Movement: Activism, Formalization and Differentiation*, ENV'T RSCH. LETTERS, Oct. 2015, No. 105002, at 2 (discussing the founding and history of environmental justice). While the origins of the environmental justice movement are often connected to the Warren County protests of 1982, this was not the first time that communities of color had organized to protest environmental injustices. Natasha Matta, *History of the Environmental Justice Movement*, MEDIUM (April 7, 2021), <https://perma.cc/MX97-25P6>. Indeed, the roots of the environmental justice movement can be traced back even further to the Civil Rights movement of the 1960s. *Id.* In 1967,

investigation into the environmental and health burdens borne by these communities, ultimately leading to the publication of the seminal study, *Toxic Wastes and Race* in 1987—a direct consequence of the Warren County protests.²⁹ The movement gained momentum throughout the late 80s and early 90s, culminating with the First National People of Color Environmental Leadership Summit in Washington D.C. in 1991.³⁰ This event brought representatives from hundreds of communities together to address the nationwide targeting of minority communities for hazardous waste treatment, storage, and disposal facilities.³¹

A key achievement of the Summit was the creation of the Principles of Environmental Justice, a foundational document which sought to establish a set of core beliefs and principles for the burgeoning environmental justice movement.³² In the years following, the federal government began to respond and in 1994 enacted Executive Order 12898,³³ which required federal agencies like the Department of Labor, the Department of Energy, and EPA to establish agency-wide environmental justice strategies.³⁴

Today, the grassroots environmental justice movement continues to grow, with more organizations and affected communities coming into the fold.³⁵ Additionally, governments at the local,³⁶ state,³⁷ and federal³⁸ levels have all continued to recognize the need for expanded environmental justice initiatives. The Biden administration, in particular, has shown a commitment to the advancement of environmental justice through the passing of Executive Order 14008,³⁹

African American students from Texas State University protested a city garbage dump in Houston, Texas, which two children had died within. *Id.* The following year, people of color in West Harlem, New York, protested the siting of a sewage treatment plant in their community. *Id.*

²⁹ BENJAMIN F. CHAVIS JR., UNITED CHURCH FOR CHRIST COMM'N FOR RACIAL JUST., TOXIC WASTES AND RACE IN THE UNITED STATES, at xi–xii (1987), <https://perma.cc/FAJ8-YR7R>.

³⁰ *Environmental Justice History*, DEP'T OF ENERGY: OFF. OF LEGACY MGMT., <https://perma.cc/78VT-X397> (last visited Feb. 18, 2024).

³¹ *Id.*

³² First Nat'l People of Color Env't Leadership Summit, *Principles of Environmental Justice*, ENV'T JUSTICE / ENV'T RACISM, <https://perma.cc/DL5C-AZC5> (Apr. 6, 1996).

³³ Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12898, 3 C.F.R. § 859 (1995).

³⁴ *Id.* § 859, sec. 1-102.

³⁵ *E.g.*, DETROITERS WORKING FOR ENV'T JUST., *supra* note 19.

³⁶ *E.g.*, *Climate Justice by Design*, MULTNOMAH CNTY., <https://perma.cc/VX5Y-YK2W> (last visited Feb. 18, 2024); *Environmental Justice in Los Angeles County*, CNTY. OF LOS ANGELES PUB. HEALTH, <https://perma.cc/FV8A-Z3BA> (last visited February 18, 2024).

³⁷ *E.g.*, STATE OF CAL. DEP'T OF JUST., *supra* note 13.

³⁸ *Environmental Justice*, WHITE HOUSE, <https://perma.cc/JV5V-3CA5> (last visited Feb. 18, 2024) (summarizing large scale federal efforts to pursue environmental justice).

³⁹ Tackling the Climate Crisis at Home and Abroad, Exec. Order 14008, 3 C.F.R. § 477 (2022).

which created the White House Environmental Justice Interagency Council and the White House Environmental Justice Advisory Council.⁴⁰

C. *The Expansion of Environmental Justice*

As outlined in the previous section, the environmental justice movement emerged in response to the disproportionate environmental burdens placed on communities of color. While this historical emphasis on the racial dimensions of environmental justice persists,⁴¹ modern conceptions of social justice call for an expanded notion of environmental justice that “demands that public policy be based on *mutual respect and justice for all peoples*, free from any form of discrimination or bias.”⁴² Today, environmental justice refers not only to how environmental issues and policies affect communities of color but also to how environmental burdens are distributed among all people.⁴³

These calls to factor in other variables and include more vulnerable groups in the environmental justice calculus are not new: over the last several decades, a growing body of literature aiming to expand the umbrella of environmental justice has emerged, making clear why these groups also deserve to be considered environmental justice

⁴⁰ *Id.* §§ 490–91.

⁴¹ See Stacia S. Ryder, *A Bridge to Challenging Environmental Inequality: Intersectionality, Environmental Advocacy, and Disaster Vulnerability*, 34 SOC. THOUGHT & RSCH. 85, 89 (2017) (“Given the movement’s history, early investigations into issues of EJ were overwhelmingly focused on the unequal environmental burdens carried by the African American community in the United States.”); Beth Gardner, *Unequal Impact: The Deep Links Between Racism and Climate Change*, YALE ENV’T 360 (June 9, 2020), <https://perma.cc/PS6Q-JFG5> (noting that “the fights against climate change and racial injustice [are] deeply intertwined”).

⁴² First Nat’l People of Color Environmental Leadership Summit, *supra* note 32, princ. 2 (emphasis added); see also *Yale Experts Explain Intersectionality and Climate Change*, YALE SUSTAINABILITY (July 28, 2022), <https://perma.cc/KMK7-BVYF> (“In recent years, the term Intersectional Environmentalism has been popularized by climate activists such as Leah Thomas, who defines the term as ‘an inclusive form of environmentalism that advocates for the protection of all people and the planet.’”); Ryder, *supra* note 41, at 89 (“The EJ field continues to grow, incorporating more inclusive definitions of EJ, more varied and nuanced concepts and frameworks, and more extensive methodologies. Many of these advances are not incongruent with an intersectional framework for understanding experiences of environmental inequalities.”).

⁴³ See *Learn About Environmental Justice*, EPA 2024, *supra* note 22 (making clear that the federal government’s understanding of environmental justice refers to “the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment” and that people “are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers”).

communities.⁴⁴ Notable examples include advocacy for counting gender⁴⁵ and disability⁴⁶ as environmental justice categories, among others.⁴⁷ This research suggests that considering an array of social dimensions in environmental justice promotes a more inclusive movement better designed to benefit *all people*, rather than just a particular group or community.⁴⁸

This research does not seem to assume that any of these groups lack the ability to advocate for their own interests. The primary purpose for including these groups under the environmental justice banner is to advance the goals of the movement itself and accomplish “the just treatment and meaningful involvement of *all people*.”⁴⁹ Similarly, this

⁴⁴ See, e.g., Ryder, *supra* note 41, at 89–91 (describing recent inclusion of other groups in the environmental justice movement).

⁴⁵ See Nancy Unger, *The Role of Gender in Environmental Justice*, 1 ENV'T JUST. 115, 116 (2008) (arguing “that what people think it means to be a man or a woman (definitions that are socially prescribed and changeable) has played a significant role in their environmental consciousness and actions” and that “gender affected women in their perceptions of, and relationships with, the environment”); Robert R. M. Verchick, *Feminist Theory and Environmental Justice*, in NEW PERSPECTIVES ON ENVIRONMENTAL JUSTICE: GENDER, SEXUALITY, & ACTIVISM 63, 63 (Rachel Stein ed. 2004) (“[W]hile ‘environmental justice’ describes an environmental movement and a civil rights movement, it also describes a *women’s* movement, and, I suggest, a *feminist* movement as well.” (emphasis in original)); Karen Bell, *Bread and Roses: A Gender Perspective on Environmental Justice and Public Health*, INT’L J. ENV’T RSCH. & PUB. HEALTH, Oct. 2016, No. 1005, at 2 (“A gender or feminist perspective is required in relation to environmental justice because women often live and work in circumstances that are not environmentally adequate and this has implications for their health . . .”).

⁴⁶ See Catherine Jampel, *Intersections of Disability Justice, Racial Justice, and Environmental Justice*, 4 ENV’T SOCIO. 122, 122, 126 (2018) (arguing that “Environmental justice . . . work striving to be ‘intersectional’ must consider disability as a category of analysis” and describing how the movement has historically conflated disability and disease with environmental justice); Britney Wilson, *Making Me Ill: Environmental Racism and Justice as Disability*, 170 U. PA. L. REV. 1721, 1723, 1724 (2022) (acknowledging that “[l]ike people of color and low-income people—both groups which many people with disabilities also comprise—disabled people are also disproportionately exposed to environmental harm” and assessing “the connection between environmental justice and public health and the existing critique of the framing of disability as the unwanted result of environmental injustice” (footnotes omitted)); Rachel G. McKane et al., *Envisioning Disabled and Just Futures: Mutual Aid as an Adaptive Strategy for Environmental Change and Ecological Disablement*, ENV’T JUST. (2023) (forthcoming) (manuscript at 2), <https://www.liebertpub.com/doi/pdf/10.1089/env.2022.0104> (describing how even though “disability justice advocates and scholars have drawn comparisons between disablement and climate and environmental justice, [disability justice] is largely absent in mainstream environmental justice theoretical frameworks” and concluding that “work in environmental justice studies has yet to explore how disabled communities are already building adaptive environments in response to ongoing and oncoming disasters”).

⁴⁷ See, e.g., Susan L. Cutter, *Race, Class, and Environmental Justice*, 19 PROGRESS HUM. GEOGRAPHY 111, 112–13 (1995) (considering how class factors into environmental justice concerns and how it interacts with race as it relates to the rest of the movement).

⁴⁸ See Ryder, *supra* note 41, at 89 (“A more inclusive and expansive definition of EJ has since developed, alluding to the ability for everyone to ‘feel safe’ in the environments ‘where we live, work, and play.’”).

⁴⁹ *Learn About Environmental Justice*, EPA 2024, *supra* note 22 (emphasis added).

scholarship rejects the idea that bringing these groups into the fold turns the environmental justice movement into a vehicle for accomplishing the more general goals of communities under its protection. These theorists do not suggest that women's or disability rights advocates are unable to accomplish their own environmental policy goals or that environmental justice is yet another means of pursuing a group's own policy interests; instead, they posit that these groups are often overlooked in traditional debates about environmental policy and that greater awareness of these group's role in environmental justice can result in more equitable policy outcomes. The objective is to develop policy that considers the interests of many from the genesis of the policymaking process, thus preventing environmental policy that benefits some groups at the expense of others.

This Comment seeks to contribute to this body of scholarship by arguing that workers are a vulnerable community and that labor interests deserve a seat at the environmental justice table.⁵⁰ Mirroring the theoretical models proposed by other scholars, this Comment does not suggest that these policy considerations are novel or that labor advocates have not previously made environmental policy a central element of their platforms.⁵¹ Instead, this Comment argues that, to achieve true environmental justice, workers should play a role in the movement, just like any other environmentally-burdened group.

Although the labor movement does have a history of participating in environmental policymaking, occasional opposition to so-called "green" policies has placed workers in a disadvantaged position within discussions of environmental policy and led to the treatment of labor interests as an afterthought.⁵² Including workers in the environmental justice movement would allow their interests to play a central role in policy formation, alongside the interests of other vulnerable communities.⁵³ This will ensure that workers' concerns are considered in

⁵⁰ This is not to suggest that the interests of workers are entirely divorced from the interests of, say, women or those with disabilities. This Comment recognizes that individuals may often belong to more than one of these groups and that the policy objectives of vulnerable communities will often overlap. Rather it suggests that labor interests should be considered a common variable in environmental policymaking alongside race, class, and gender.

⁵¹ Indeed, the just transition movement, a well-recognized environmental movement advocating for the rights of workers during the transition away from fossil fuels and towards alternative energy resources, comes out of the labor movement of the 1990s. SAMANTHA SMITH, JUST TRANSITION CTR., JUST TRANSITION: A REPORT FOR THE OECD 2 (2017), <https://perma.cc/9MMN-TTKM>.

⁵² See Danny MacKinnon et al., *Reframing Urban and Regional 'Development' for 'Left Behind' Places*, 15 CAMBRIDGE J. REGIONS, ECON. & SOC'Y 39, 39 (2022) ("The recent wave of populist discontent across Europe and North America has catapulted social and spatial inequalities to the forefront of domestic political agendas. 'Left behind' places, particularly former industrial regions, have become the economically and politically salient shorthand for key hotspots of disadvantage and discontent." (emphasis added)).

⁵³ For another conceptualization of the role of labor in environmentalism, see Linda Clarke & Carla Lipsig-Mummé, *Future Conditional: From Just Transition to Radical Transformation?*, 26 EUR. J. INDUS. RELS. 351, 352 (2020), who describe integrating workers into the climate movement: "Bringing workers and unions and work itself 'in' to the struggle to

environmental justice decisions and prevent labor groups from having to advocate from a defensive position *after* unfavorable policy decisions have been implemented.

D. The “Worker vs. Environment” Trap

There is a common belief that labor interests and environmental goals are incompatible or that the steady progress made by environmentalists has come at the expense of jobs for the working class.⁵⁴ While the interests of workers and environmentalists sometimes clash, a more nuanced assessment shows that the fundamental motivations and best interests of environmentalists and workers are not inherently in conflict. This Comment suggests that the “worker vs. environment” trap creates a false dichotomy, and it is both possible and correct to reconcile these causes with one another.

Environmental policies are often portrayed as being in direct conflict with other policy goals.⁵⁵ Robert D. Bullard—the “father of environmental justice”⁵⁶—has described a comparable phenomenon: the “race vs. class trap.”⁵⁷ Bullard describes how, in discussions regarding disproportionate

slow global warming means rethinking the social relations of production and the labour process through a green lens, and adapting key steps in the chain of production to mitigate greenhouse gases. It entails reconsidering the legal, political and economic contexts that hinder or facilitate workplace low-carbon adaptation, bringing labour and environment law together, criticizing work design and current business models for their carbon excesses, and rediscovering the influential roles that workers, their unions and professional associations can play in adapting and improving the labour process. And, finally, it means understanding the ways in which political economies and responses to climate change affect not only the labour process, but union goals, alliances, modes of action, organization of young workers, political strength and strategic creativity.” *Id.*

⁵⁴ See Nora Räthzel & David Uzzell, *Trade Unions and Climate Change: The Jobs Versus Environment Dilemma*, 24 GLOB. ENV'T CHANGE 1215, 1216 (2011) (“Trade Unions are typically represented as standing in the way of climate change measures. However, while trade unions might have been slow in placing climate change issues on their agenda, environmental movements have been slow to recognise the legitimacy of workers’ interests in defending their jobs.”); see also ROBERT A. HACKETT & PHILIPPA R. ADAMS, JOBS VS THE ENVIRONMENT? MAINSTREAM AND ALTERNATIVE MEDIA COVERAGE OF PIPELINE CONTROVERSIES 7–8 (2018), <https://perma.cc/T975-VUD4> (articulating how media representations of labor and environmental issues, such as pipeline construction, often pit these communities against each other even though “it is rare to find the voices of actual workers and their unions—the presumed beneficiaries of pipeline construction—represented in the media”).

⁵⁵ Shalanda Baker et al., *Beyond Zero-Sum Environmentalism*, 47 ENV'T L. REP. 10328, 10328 (2017) (“There is a dominant approach to environmental law issues that frames them as zero-sum[,] and . . . this framing can be damaging to environmental progress.”).

⁵⁶ Cara Buckley, *At 75, the Father of Environmental Justice Meets the Moment*, N.Y. TIMES (Sept. 12, 2022), <https://perma.cc/5PVN-WUGF>.

⁵⁷ Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, in CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS 15, 21–22 (Robert D. Bullard ed., 1993) (prefacing an overview of the race vs. class trap with the observation that “[w]hether at home or abroad, the question of who pays and who benefits from current industrial and development policies is central to any analysis of environmental racism”).

environmental burdens borne by communities of color, a different debate often bubbles up: whether this injustice stems from a community's racial identity or its class.⁵⁸ While Bullard maintains that environmental racism persists even when controlling for class as a variable,⁵⁹ and recent research generally supports this conclusion,⁶⁰ this trap artificially pits these variables against each other and distracts from how race and class, both independently and in connection with each other, interact with environmental justice.⁶¹

Borrowing from Bullard's framing, to suggest that environmental policies are somehow at odds with workers' best interests is to fall into a trap that makes it difficult to fully understand either group and inhibits accurate study of how these social dimensions interact to create environmental injustices. The notion of workers versus environmentalists is a misconception⁶²: policy solutions that address climate change and facilitate a transition to renewable energy while simultaneously stimulating the economy and creating stable jobs clearly provide benefits to both groups.⁶³ Indeed, as manufacturing jobs dwindled in the 1990s due to increased environmental regulations, North American labor unions began to advocate for a just transition.⁶⁴ Rather than trying to undo these environmental protections, they requested "Superfund for Workers" programs that would provide workers exposed to toxic chemicals throughout their careers with financial support and educational benefits and facilitate their transition into safer positions.⁶⁵

This discussion is not intended to trivialize the occasional but genuine disputes between environmental and labor communities

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ See, e.g., Paul Mohai et al., *Environmental Justice*, 34 ANN. REV. ENV'T & RES. 405, 410–13 (2009) (showing how more sophisticated statistical models suggested that race was clearly a social dimension along which environmental burdens were allocated independent of class).

⁶¹ Ryder, *supra* note 41, at 91 (noting that the environmental justice literature "has largely failed to apply an intersectional lens to evaluate [how] interlocking systems of oppression[, such as race and class, are] at work in the multitude of [environmental justice] issues across the United States and beyond").

⁶² See Baker et al., *supra* note 55, at 10328–29 (suggesting that environmentalism should not generally be viewed as a zero-sum game but accepting that the use of this terminology is often imprecise and that "when we see the zero-sum rhetoric or when we use it ourselves, we are not really talking the language of economists. We are taking their term and simplifying it (taking a complex topic from another discipline and simplifying it for our use is something we legal academics are good at)").

⁶³ See, e.g., Max Vanatta et al., *The Costs of Replacing Coal Plant Jobs with Local Instead of Distant Wind and Solar Jobs Across the United States*, ISCIENCE, Aug. 2022, No. 104817, at 6–8 (finding that many U.S. coal mining jobs could be replaced with green manufacturing jobs in the wind and solar energy industries, thus demonstrating that labor interests and environmental interests can be achieved simultaneously).

⁶⁴ SMITH, *supra* note 51, at 2.

⁶⁵ ANNABEL PINKER, JUST TRANSITIONS: A COMPARATIVE PERSPECTIVE 8 (2020), <https://perma.cc/GD9H-Y2BP>.

throughout history.⁶⁶ Environmental policy goals will inevitably clash with some goals of labor groups, just as they will clash with some goals of communities of color.⁶⁷ But the existence of some incongruent policies does not necessarily mean that the underlying philosophies of either movement cannot coexist. This paper argues that these tensions will be the exception, not the rule, and that workers and environmentalists can accomplish their goals together through creative policymaking and true collaboration.⁶⁸

The current literature overwhelmingly refutes the existence of the worker vs. the environment trap.⁶⁹ Despite the prevailing narrative, the research suggests that there are a number of potential interpretations that can aid in understanding the relationship between these two groups, leading to mutual policy gains and mending of a seemingly fractured partnership. First, as previously explained, there simply is no significant tension between labor and environmentalism.⁷⁰ Existing policy solutions can help both groups accomplish their goals without major changes to how trade unions and environmental policy interact. Second, media coverage may exaggerate tensions between labor groups and environmentalists, misrepresenting the true sentiments of unions and

⁶⁶ See, e.g., *Spotted Owl Timeline*, FOREST HIST. SOC'Y, <https://perma.cc/2AJV-HQGJ> (last visited Feb. 13, 2024) (chronicling the dispute between loggers in the Pacific Northwest and environmentalists who sought to halt logging operations in order to preserve Northern Spotted Owl populations); *The Spotted Owl Litigation*, U.S. DEPT OF JUST., <https://perma.cc/YJ5L-F3FC> (archived Dec. 8, 2023) (providing technical overview of the regulatory scheme that gave rise to the Spotted Owl controversy); *Seattle Audubon Soc'y v. Robertson*, 1991 WL 180099, at *1, 6 (W.D. Wash. Mar. 7, 1991) (describing one of the many Spotted Owl cases adjudicated by the Honorable William L. Dwyer involving Forest Service timber sales in Spotted Owl habitats).

⁶⁷ See Christopher W. Tessum et al., *Inequity in Consumption of Goods and Services Adds to Racial–Ethnic Disparities in Air Pollution Exposure*, 116 PROC. NAT'L ACAD. SCI. 6001, 6003 (2019) (showing that air pollution is disproportionately caused by the white majority but disproportionately inhaled by the communities of color, thus suggesting that current air pollution control policies do not serve the best interests of people of color).

⁶⁸ See BRIAN K. OBACH, LABOR AND THE ENVIRONMENTAL MOVEMENT: THE QUEST FOR COMMON GROUND (URBAN AND INDUSTRIAL ENVIRONMENTS) 24–25 (2004) (exploring how and why labor unions and environmental organizations either cooperate or come into conflict and proposing a model that seeks to identify key determinants of cooperation among these groups).

⁶⁹ See Richard D. Morgenstern et al., *Jobs Versus the Environment: An Industry-Level Perspective*, 43 J. ENV'T ECON. & MGMT. 412, 412–14 (2002) (analyzing four heavily polluting industries and concluding that increased environmental spending as a result of more stringent environmental regulations has not yielded statistically significant changes in industry employment); Romain Felli, *An Alternative Socio-Ecological Strategy? International Trade Unions' Engagement with Climate Change*, 21 REV. INT'L POL. ECON. 372, 381 (2014) (noting that the deliberative strategy, which “ultimately aims at ‘saving the climate’ or ‘saving the environment’” is the “dominant strategy within the international trade union movement” for dealing with climate change).

⁷⁰ See Vanatta et al., *supra* note 63, at 1–3 (noting that, based on the paper's model, “[o]n a cumulative basis from 2020 through 2031, employment increases in all regions due to renewable construction employment”); Baker et al., *supra* note 55, at 10341 (noting that “[t]he economic and job creation benefits of action on climate change . . . can be enormous”).

workers on environmental regulation.⁷¹ Third, some scholars argue that our current carbon-capitalism economy prevents collaboration among these groups. Alternative economic systems, such as eco-socialism or green capitalism, could ease these tensions and better harmonize the goals between trade unions and environmentalists.⁷²

What this demonstrates is that workers and environmental groups do not have to compete and that mutually beneficial policies exist.⁷³ This conclusion adds weight to the argument that workers should play a greater role in the environmental justice movement. Collaborative policies that benefit both parties will be more innovative and require input from both workers and environmentalists.⁷⁴ Without greater worker involvement, the environmental justice movement risks repeating the mistakes of environmentalists in the 1980s and creating shallow policies that overlook workers and leave labor groups struggling to retroactively address the consequences. Instead, a future where workers collaborate with other groups to develop environmental policy will produce more protective policies while also making genuine progress towards a cleaner and more sustainable environment.⁷⁵

E. Historical Examples of Labor's Inclusion in Environmental Justice

The focus of environmental justice, both at the grassroots level and academically, has been on issues of race and national origin,⁷⁶ but it is clear from the movement's historical origins and modern iterations that

⁷¹ See HACKETT & ADAMS, *supra* note 54, at 8 (finding that, in media coverage of the TransMountain Expansion Project, an oil pipeline project, “neither corporate nor alternative media gave much voice to the perspectives of workers and their unions”).

⁷² *Id.* at 26, 30 (“From this [eco-socialist] viewpoint, the solution is not prioritizing the environment over the existing economy, but restructuring the economy itself through political struggle.”); see also Erin Flanagan & Dennis Raphael, *From Personal Responsibility to an Eco-Socialist State: Political Economy, Popular Discourses and the Climate Crisis*, 16 HUM. GEOGRAPHY 244, 247, 252 (2023) (considering how the structures and processes of existing welfare states are related to societal responses to climate change and accompanying societal discourses, outlining the defining characteristics of eco-socialism, and acknowledging that “while there is general agreement among eco-socialists that capitalism is incapable of dealing with the climate crisis and averting a climate catastrophe, there is rather less agreement as to what an eco-socialist state would actually look like and the means of attaining it”).

⁷³ See, e.g., Vanatta et al., *supra* note 63, at 1–3 (noting that, according to the paper's model, “[a]cross most regions and siting limits, annual renewable energy employment fully replaces but does not exceed coal employment”).

⁷⁴ See Clarke & Lipsig-Mummé, *supra* note 53, at 352–53 (“Responding to the impact of climate change requires deep changes in the labour process: how goods and services are produced and transported; what energy, materials and technology we use; what green knowledge and skills we need; how and for what purpose the built environment is constructed; and how workers and young people are educated.”).

⁷⁵ See *infra* Sections III(A)–(C) (analyzing how three particular environmental harms negatively and disproportionately impact workers and arguing for an approach to environmental justice that includes worker participation in the policymaking process.).

⁷⁶ See, e.g., SIERRA CLUB, *supra* note 27.

labor rights should be considered a key dimension of environmental justice. The life and lasting impact of César Chávez evinces this “natural synergy”⁷⁷ between the two movements. While many view the protests in Warren County as the formal genesis of the environmental justice movement,⁷⁸ Chávez’s lifelong work undeniably paved the way for the movement well before the phrase “environmental justice” entered common parlance.⁷⁹ Chávez is one of the most important labor leaders, social justice advocates, and union organizers of the twentieth century,⁸⁰ but he was also a passionate environmentalist and recognized the inherent connection between the environment and social justice.⁸¹ In a 1970 essay, Chávez expressed his disappointment with an American middle class that celebrated the moon landing but failed to “give a damn about smog, oil leaks, the devastation of the environment with pesticides, hunger, [sic] disease.”⁸² Later, in a 1976 speech, he asked: “What could be more joyful than working to restore and preserve the sacredness of land, water, and air? For patriotism is not protecting the land of our fathers but preserving the land for our children.”⁸³

Chávez’s environmental activism reached its peak in his vocal protest against the use of agricultural pesticides.⁸⁴ In 1965, just three years after the release of Rachel Carson’s groundbreaking *Silent*

⁷⁷ U.N. ENV’T PROGRAMME, *supra* note 16, at vi (noting synergies between “technical expertise, . . . workplace participation, and . . . tools that promote worker’s health and safety” and “environmental protection, public health, and the accountability of employers”).

⁷⁸ See, e.g., Perez et al., *supra* note 28, at 2 (citing the Warren County protests as the origins of the debate around environmental racism).

⁷⁹ See, e.g., Renee Skelton & Vernice Miller, *The Environmental Justice Movement*, NAT. RES. DEF. COUNCIL (Aug. 22, 2023), <https://perma.cc/E4JC-W84D> (listing Chávez as the organizer of campaigns rooted in environmental justice which preceded those in Warren County); Tracy Perkins, *The Environmental Justice Legacy of the United Farm Workers of America: Stories from the Birthplace of Industrial Agriculture*, HUMANS FOR THE ENV’T, <https://perma.cc/KAT7-PYR7> (last visited Feb. 15, 2024) (describing Chavez as “one of the first environmental justice leaders”); Marta Segura, *Cesar Chavez: Forefather of Environmental Justice & Labor Leader*, MEDIUM (Mar. 30, 2021), <https://perma.cc/KN4Y-SC9T> (calling Chávez a “labor leader, but also [an] advocate for environmental health and justice”).

⁸⁰ See, e.g., *César Chávez*, AFL-CIO, <https://perma.cc/F7MP-RVTM> (last visited Feb. 15, 2024) (“Chávez was one of the most inspirational labor leaders of the 20th century, with an influence that stretched far beyond the California fields.”); *Cesar Chavez*, HISTORY (Sept. 26, 2023), <https://perma.cc/36JK-SG9K> (“Cesar Chavez was a Mexican American labor leader and civil rights activist who dedicated his life’s work to what he called *la causa* (the cause): the struggle of farm workers in the United States to improve their working and living conditions through organizing and negotiating contracts with their employers.”).

⁸¹ See Kevin J. O’Brien, *La Causa and Environmental Justice: César Chávez as a Resource for Christian Ecological Ethics*, J. SOC’Y CHRISTIAN ETHICS, Spring/Summer 2012, at 151, 158–59 (“[I]t is . . . appropriate to [note] that Chávez was an environmentalist, concerned with recognizing the dignity of all people by ensuring that they had access to the natural resources necessary for survival and thriving.”).

⁸² CESAR CHAVEZ, AN ORGANIZER’S TALE: SPEECHES 82–83 (Ilan Stavans ed., 2008).

⁸³ CÉSAR CHÁVEZ, THE WORDS OF CÉSAR CHÁVEZ 91–92 (Richard J. Jensen & John C. Hammerback eds., 2002) [hereinafter THE WORDS OF CÉSAR CHÁVEZ].

⁸⁴ O’Brien, *supra* note 81, at 151. For more discussion of how pesticide use affects workers, see *infra* Section III(C).

Spring,⁸⁵ he led the United Farm Workers grape boycott, in part to fight against the use of dangerous pesticides.⁸⁶ Following the boycott's success, Chávez made pesticides the focus of one of his last campaigns.⁸⁷ In 1988, Chávez undertook a thirty-six day fast to highlight the issue of pesticide use in farming.⁸⁸ Despite the campaign's lack of success in changing pesticide practices amongst growers, Chávez's hunger strike brought national attention to the risks that pesticides posed to farmworkers, their children, and their communities.⁸⁹ Speaking in 1989, Chávez made a powerful argument for environmental justice, emphasizing that "there is something more important to the farmworkers' union than winning better wages and working conditions. That is protecting farmworkers—and consumers—from systemic poisoning through the reckless use of agricultural toxics [sic]."⁹⁰ Chávez's commitment to the labor movement went beyond wages and working conditions; he was equally concerned with ensuring the safety and well-being of workers, including preventing exposure to environmental hazards.⁹¹ Stated differently, he fought for environmental justice before advocates had even coined the phrase.⁹²

Beyond the shared objectives of labor organizers and environmental justice advocates, there is a historical basis for including labor rights in the concept of environmental justice. First, while the early stages of the environmental justice movement primarily focused on race,⁹³ the delegates to the First National People of Color Environmental Leadership Summit explicitly considered the role of work and labor in the Principles of Environmental Justice.⁹⁴ One of the foundational principles states that "[e]nvironmental [j]ustice affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards."⁹⁵ Although labor is often overlooked in debates about environmental justice,⁹⁶ the

⁸⁵ RACHEL CARSON, *SILENT SPRING* (1962).

⁸⁶ O'Brien, *supra* note 81, at 153, 156, 159.

⁸⁷ *Id.* at 159.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *See id.* (noting that Chávez called for a grape boycott because farmworkers were being exposed to "agricultural toxics" and were not adequately protected from harm).

⁹² It should be noted that this article is not anachronistically proposing that Chávez was himself a part of the environmental justice movement. Instead, this article is simply arguing that Chávez's goals and desires were consistent with, and even supported by, modern conceptions of environmental justice. *See id.* Conversely, it seeks to demonstrate how an environmental justice movement which fails to give credence to the needs unique to the labor context fails to achieve true justice.

⁹³ *See e.g.*, SIERRA CLUB, *supra* note 27.

⁹⁴ First Nat'l People of Color Environmental Leadership Summit, *supra* note 32, princ. 8.

⁹⁵ *Id.*

⁹⁶ *See* Roelofs & Wegman, *supra* note 11, at 1799 ("US federal agencies have properly paid attention to 'climate vulnerable' populations, such as chronic disease sufferers, the elderly, and children, but again and again, workers fail to make the list.").

movement's architects clearly considered workers' rights to be covered by the environmental justice umbrella.

In addition, the idea that comprehensive environmental justice includes ensuring worker safety from environmental hazards is gaining traction at the state and federal levels. Accepted definitions of environmental justice commonly emphasize its broad reach beyond any specific groups.⁹⁷ Indeed, environmental justice's application to "all people" and explicit emphasis on ensuring that "no population bears a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or from the execution of federal state, and local laws; regulations; and policies"⁹⁸ directly supports the argument that environmental justice implicates workers' rights insofar as workers constitute a "population." The Department of Labor has recognized the inherent connections between labor and environmental justice, stating that "Environmental Justice in the Labor context is the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, culture, income, or education level, with respect to development, implementation, and enforcement of employment laws, regulations, programs, and policies."⁹⁹ More recently, with the implementation of President Biden's Executive Order 14008, the Department of Labor has emerged as a key player in a number of important environmental justice policy initiatives.¹⁰⁰

The important role of labor rights is also gaining recognition amongst prominent environmental justice scholars.¹⁰¹ Climate change and other

⁹⁷ *Learn About Environmental Justice*, EPA 2024, *supra* note 22.

⁹⁸ *What is Environmental Justice?*, *supra* note 21.

⁹⁹ DEP'T OF LAB., ENVIRONMENTAL JUSTICE STRATEGY 4 (2012), <https://perma.cc/S3LE-2LG9>. The document also lays out the Department of Labor's Vision Statement: "Ensuring the training, health, and safety of workers, including minority, Native American, and low-income workers, is at the heart of much of the Department's activities. In pursuit of Environmental Justice, the Department will continue to pursue effective and efficient goals and strategies and engage public participation and trust." *Id.* at 3.

¹⁰⁰ *EJ*, U.S. DEP'T OF LABOR., *supra* note 13. Two key ways that the Biden administration has involved the Department of Labor in environmental justice initiatives are through the Secretary of Labor's role on the White House Environmental Justice Interagency Council and through the Department of Labor's participation in the Justice40 Initiative, which aims to provide 40% of the overall benefits of certain Federal investments to disadvantaged communities who are marginalized, underserved, and overburdened. *Id.*

¹⁰¹ See David Michaels & Robert Bullard, *Environmental Justice Is Essential in the Workplace and at Home*, NATION (Oct. 22, 2021), <https://perma.cc/RJ7V-FTAX> ("[T]here is another crucial aspect of environmental and racial justice that has not gained the same recognition: environment justice in the workplace."); Roelofs & Wegman, *supra* note 11, at 1799 (arguing that the environmental justice framework calls on public agencies to reduce workers' climate change vulnerabilities); FARMWORKER JUST., FARMWORKERS AND THE CLIMATE CRISIS: FARMWORKER JUSTICE'S ENVIRONMENTAL JUSTICE SYMPOSIUM SUMMARY REPORT 1 (2022), <https://perma.cc/CN4A-HNX2> (arguing that the effects of climate change are not evenly distributed and that farmworkers feel these effects in unique and disproportionate ways).

environmental hazards disproportionately burden workers.¹⁰² Language barriers, discrimination, low wages, and substandard housing make workers particularly vulnerable to hazards like extreme heat and toxic pesticides.¹⁰³ Workers in construction, manufacturing, heavy industry, landscaping, agriculture, emergency response, forestry, and postal services and delivery are among those most likely to experience environmental injustice.¹⁰⁴ Although these environmental harms are not exclusive to workers, “workers’ exposures are greater in frequency, duration, and intensity and, thus, represent the ‘sentinel cases’ that sound the alert to the larger society health effects.”¹⁰⁵ In addition, workers’ vulnerability is compounded by their lack of bargaining power as members of the working class.¹⁰⁶

III. THE REAL-WORLD OVERLAP OF LABOR AND ENVIRONMENT

Recognizing the significance of labor considerations in environmental justice, this section will analyze how particular environmental hazards have a disproportionate and adverse effect on workers. These examples illustrate the nuanced interplay between labor and employment law and environmental justice, but also underscore the importance of an approach that is sensitive and specific to labor interests and encourages worker participation in the policymaking process.

A. Coal Workers and a Just Transition

Countless environmental issues affect U.S. workers, but few are as front of mind for labor groups and policymakers as the death of coal. The extraction, processing, and use of coal has had massive implications for the environment and the acceleration of global climate change.¹⁰⁷ Environmentalists have prioritized transitioning away from coal in recent years, and these efforts have been largely successful: global coal

¹⁰² *E.g.*, FARMWORKER JUST., *supra* note 101, at 1 (discussing the impacts of climate change on farmworkers).

¹⁰³ *E.g.*, *id.*

¹⁰⁴ Roelofs & Wegman, *supra* note 11, at 1799.

¹⁰⁵ *Id.* at 1800.

¹⁰⁶ *Id.* at 1799 (“Workers qualify for particular attention and protection because unlike those who may be at greater liberty to respond, adapt, and escape the impacts of climate change, workers’ exposure and their response is controlled by the requirements of their jobs and employers. Their exposures are a direct consequence of their employment . . .”).

¹⁰⁷ *See, e.g.*, Christian Bogmans & Claire Mengyi Li, *A Greener Future Begins with a Shift to Coal Alternatives*, INT’L MONETARY FUND: BLOG (Dec. 8, 2020), <https://perma.cc/6XW3-DS6L> (noting that “[c]oal-fired thermal power plants release sulfur dioxide, nitrogen oxide, particulate matter, and mercury into the air and rivers, streams, and lakes[,] [which] . . . not only degrad[e] the environment but . . . are hazardous to human health”); Tobias Adrian et al., *The Great Carbon Arbitrage* 1–2, 6 (Int’l Monetary Fund, Working Paper 22/107, 2022) (generally advocating for policy solutions which wean global industry off coal and replace it with alternative resources on the basis that coal remains both harmful to the environment and expensive compared to alternatives).

use is down and many have deemed it all but dead.¹⁰⁸ While the decline of coal is a clear victory for the environment,¹⁰⁹ it has posed challenges for the rural communities reliant on the coal industry.¹¹⁰ The exclusion of these “coal communities”¹¹¹ from much of the transition to renewable energy has left them struggling as mines close and leave gaping holes in their local economies.¹¹²

Due to the global shift to alternative energy sources, many labor and energy scholars are advocating for a “just transition” to protect coal communities.¹¹³ Researchers, policymakers, and advocates have yet to

¹⁰⁸ *The End of Coal?*, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE (Oct. 5, 2021), <https://perma.cc/P3YQ-G3JX> (“First, the good news: the demand for new coal power plants has collapsed since the 2015 Paris Agreement, with more than 75 per cent of the planned coal plants being scrapped since the Paris Agreement was signed. It’s an uplifting statistic, and one that suggests coal’s days are numbered.”); CHARLES D. KOLSTAD, STANFORD INST. FOR ECON. POL’Y RSCH., WHAT IS KILLING THE US COAL INDUSTRY? 1 (2017), <https://perma.cc/9JU8-MFKS> (finding that the American coal industry is in decline); SYLVIE CORNOT-GANDOLPHE, CTR. FOR ENERGY & CLIMATE, GLOBAL COAL MARKETS AT A CLIMAX: AN ERA OF COAL DECLINE IS FINALLY ABOUT TO BEGIN 6–7 (2023), <https://perma.cc/T8SP-PEBQ> (predicting “a collapse in coal demand” and noting that “US coal has been on a structural decline since the end of the 2000s”).

¹⁰⁹ *Coal Explained*, U.S. ENERGY INFO. ADMIN. (Nov. 16, 2022), <https://perma.cc/M6AU-2SK6> (describing the significant harmful effects of coal mining and use on the environment and human health).

¹¹⁰ See e.g., Mark Haggerty & Nicole Gentile, *Quitting Fossil Fuels and Reviving Rural America*, CTR. FOR AM. PROGRESS (Sept. 21, 2022), <https://perma.cc/JF9Q-MSFV> (describing how the closure of two of the four mines in a coal community in Montana “forced the county government to lay off staff, reduce benefits, cut services, and raise taxes and fees on families and businesses outside the coal sector—on top of the economic distress the county experienced due to the jobs lost when the mines closed”); Joshua Blonz et al., *The Canary in the Coal Decline: Appalachian Household Finance and the Transition from Fossil Fuels 2* (Fed. Reserve Bank of San Francisco, Working Paper 31072, 2023), <https://perma.cc/QD95-UDJT> (finding “that declines in coal demand driven by exogenous changes in the electricity sector harmed the financial health of people living in Appalachian coal-mining counties, decreasing credit scores and increasing measures of financial distress”); Siri Chilukuri & John McCracken, *The End of Coal Culture: The Fossil Fuel Defined Economies and Local Traditions. What Happens When It Goes Away?*, GRIST (Oct. 4, 2023), <https://perma.cc/TC8M-JQPT> (noting the central role that coal plays in the lives of members of coal communities and highlighting the fear and uncertainty that surrounds the prospect of mine closures).

¹¹¹ See *IRS Release Updated Guidance to Drive Additional Investment to Energy Communities*, U.S. DEPT OF TREASURY (June 15, 2023), <https://perma.cc/F4V9-68WR> (referring to coal communities as a type of energy community that has “been at the forefront of energy production”); Priority Energy Communities, INTERAGENCY WORKING GRP. ON COAL AND POWER PLANT CMTYS. & ECON. REVITALIZATION, <https://perma.cc/5S8U-F6PQ> (last visited Feb. 24, 2024) (stating that coal communities are a “priority energy community”); see also DANIEL RAIMI & SOPHIE PESEK, RES. FOR THE FUTURE, WHAT IS AN “ENERGY COMMUNITY”? ALTERNATIVE APPROACHES FOR GEOGRAPHICALLY TARGETED ENERGY POLICY, at iii (2022), <https://perma.cc/WF9E-KBW8> (arguing for an alternative definition of “energy community” that “more narrowly targets locations that have been or are heavily dependent on fossil fuels as a driver of local economic activity, employment, and government revenue”).

¹¹² Haggerty & Gentile, *supra* note 110; Blonz et al., *supra* note 110, at 2.

¹¹³ See, e.g., Grace E. Chesmore et al., *The Crisis of US Coal Communities: Strategies for a Just Transition to Renewable Energy*, J. SCI. POL’Y & GOVERNANCE, June 2021, No. 180202, at 2–4 (outlining policy options for a just transition for coal communities); RYAN DRISKELL TATE ET AL., GLOBAL ENERGY MONITOR, SCRAPING BY: GLOBAL COAL MINERS AND

agree on a single definition for the “just transition,” however.¹¹⁴ Indeed, calls for a just transition range “from a simple claim for jobs creation in the green economy, to a radical critique of capitalism and a linked refusal to tolerate market solutions.”¹¹⁵ Even the federal government has left the term undefined and instead focuses on promoting general just transition principles.¹¹⁶ While there are clearly a number of ways to understand the just transition, this Comment will employ the definition offered by the International Labour Organization:

A Just Transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. A Just Transition involves maximizing the social and economic opportunities of climate action, while minimizing and carefully managing any challenges—including through effective social dialogue among all groups impacted, and respect for fundamental labour principles and rights.¹¹⁷

Academics have foreseen the decline of coal and the ensuing harm to coal communities.¹¹⁸ These discussions urging a just transition for coal communities were mostly cabined to scholarly articles until the Biden administration unveiled its Investing in America Initiative.¹¹⁹ The Initiative seeks to “create[] new, good-paying jobs” in “critical sectors like infrastructure, clean energy, semiconductors, and biotechnology,” all while “reaching communities in every corner of the United States, including those that have too often been left behind.”¹²⁰ The Biden administration’s emphasis on coal communities¹²¹ is evident in the

THE URGENCY OF A JUST TRANSITION 4 (2023), <https://perma.cc/XP9D-WEMU> (highlighting the need for a just transition for remote coal regions); Kieran Harrahill & Owen Douglas, *Framework Development for ‘Just Transition’ in Coal Producing Jurisdictions*, ENERGY POLY, Nov. 2019, No. 1110990, at 4–10 (developing a framework for just transitions).

¹¹⁴ PINKER, *supra* note 65, at 8 (“[A]s the term [just transition] becomes more popular, it is increasingly understood and used in many different ways.”).

¹¹⁵ Stefania Barca, *Greening the Job: Trade Unions, Climate Change and the Political Ecology of Labour*, in THE INTERNATIONAL HANDBOOK OF POLITICAL ECOLOGY 387, 392 (Raymond L. Bryant ed., 2015).

¹¹⁶ *Just Transition*, U.S. DEP’T OF LAB., BUREAU OF INT’L LAB. AFFS. [hereinafter *Just Transition*, U.S. DEP’T OF LAB.], <https://perma.cc/L3PW-YVVP> (last visited Feb. 18, 2024) (choosing to outline actions or outcomes that the just transition creates rather than provide a discrete definition for the movement).

¹¹⁷ *Climate Change and Financing a Just Transition*, INT’L LABOUR ORG., <https://perma.cc/8P7D-FSNF> (last visited Feb. 24, 2024).

¹¹⁸ Chesmore et al., *supra* note 113, at 1; Tate et al., *supra* note 113, at 3–5; Harrahill & Douglas, *supra* note 113, at 1.

¹¹⁹ *President Joe Biden: Investing in America*, WHITE HOUSE, <https://perma.cc/AESG-3TQ8> (last visited Feb. 24, 2024).

¹²⁰ *Id.*

¹²¹ See Tackling the Climate Crisis at Home and Abroad, Exec. Order 14008, 3 C.F.R. §§ 477, 488 (2022) (establishing the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization); *Background*, INTERAGENCY WORKING GRP. ON COAL & POWER PLANT CMTYS. & ECON. REVITALIZATION, <https://perma.cc/5KK2-EXB4> (last visited Feb. 24, 2024) (describing how the interagency working group seeks to

Bipartisan Infrastructure Act¹²² and the Inflation Reduction Act,¹²³ both of which include provisions specifically designed to facilitate a just transition for coal workers and their communities.¹²⁴

While these recent initiatives suggest forward progress, many labor groups have criticized the Biden administration's efforts as being too little, too late.¹²⁵ For example, critics have derided the Biden administration's overly inclusive definition of a "coal community"—which encompasses communities that, in reality, rely little on coal—coupled with the lack of adequate funding allocated for communities with active mines.¹²⁶ Also missing is any dedicated funding for reskilling programs targeted at coal communities.¹²⁷ What this highlights is that, despite some attention from federal policymakers, workers and the challenges they face from climate change and other environmental issues remain an afterthought in environmental policymaking. By the time many of these policies were implemented, most U.S. coal mines had already shut down¹²⁸ and employment rates in the mining industry had shrunk by over

aid energy communities, including coal communities specifically, by “tak[ing] a place-based approach to economic revitalization, targeting federal engagement and investment to the most hard-hit communities”); *see also* *Biden-Harris Administration Announces \$15.5 Billion to Support a Strong and Just Transition to Electric Vehicles, Retooling Existing Plants, and Rehiring Existing Workers*, U.S. DEP'T OF ENERGY (Aug. 31, 2023), <https://perma.cc/WD4R-6VAU> (describing how the Department of Energy announced a \$15.5 billion funding and loan package designed to help create a just transition to electric vehicles).

¹²² Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

¹²³ Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022).

¹²⁴ *See Just Transition*, U.S. DEP'T OF LAB., *supra* note 116 (describing how the Infrastructure Investment and Jobs Act and the Inflation Reduction Act of 2022 help provide a just transition from coal to clean energy).

¹²⁵ *See The Inflation Reduction Act Is Not a Climate Justice Bill*, CLIMATE JUST. ALL. (Aug. 6, 2022), <https://perma.cc/EAE3-SKXY> (criticizing the Inflation Reduction Act because “the harms of the bill as it is currently written outweigh its benefits” and characterizing the Act as containing “shady side deals that are being pushed by Senator Joe Manchin and the fossil fuel industry” due to its “expansion of fossil fuel production and the inclusion of geo-engineering projects”); *see also* *While Celebrating the Defeat of Manchin’s Dirty Pipeline Deal, the Just Transition Alliance Continues to Condemn Polluter Subsidies in the Inflation Reduction Act*, JUST TRANSITION ALL., <https://perma.cc/Z3P4-2XW6> (last visited Feb. 19, 2024) (calling the passage of the Inflation Reduction Act “political collusion” because “[t]he Act threatens the future of our children with billions of dollars of subsidies to the fossil fuel industry” and “perpetuates a decades-old problem of pitting workers and our environmental justice communities against each other in yet another false ‘jobs versus environment’ binary debate”).

¹²⁶ *See generally* RAIMI & PESEK, *supra* note 111, at 7–9 (describing the two definitions of coal communities in the Inflation Reduction Act and determining what census tracts are eligible for the bonus tax credit under each definition).

¹²⁷ *See* Megan Evans, *Inflation Reduction Act: Limited Funding for Workforce, but Not Enough.*, NAT'L SKILLS COAL.: SKILLS BLOG (Aug. 19, 2022), <https://perma.cc/9ZEW-78JN> (noting lack of funding for reskilling programs and apprenticeships in general and stating that the Inflation Reduction Act “falls short of what training providers need to support workers, businesses and communities”).

¹²⁸ Rosalyn Berry, U.S. ENERGY INFO. ADMIN., *The Number of Producing U.S. Coal Mines Fell in 2020* (July 31, 2021), <https://perma.cc/V45J-8WTB> (showing that the total number of producing U.S. coal mines in 2020 had declined by 62% since 2008); *see also* SETH FEASTER,

40%.¹²⁹ The constant loss of coal mining jobs has left coal communities reeling. Including labor groups in the initial stages of environmental policymaking could have mitigated many of these foreseeable consequences and ensured just transition policies were prioritized from the outset.

To create environmental and labor policy solutions that realize the just transition, the environmental justice movement must recognize and give equal consideration to labor interests alongside other marginalized groups. The Biden administration has given workers at least a wink and a nod in this sense, but these policies fall well short of accomplishing environmental justice because they primarily aim to mitigate damage that has already been done in coal communities. These policies do little to prevent the future economic harms likely to befall surviving coal communities as a result of the transition to renewable energy. The present harm to coal communities is a result of policy decisions made with little to no consideration for workers dependent on the fossil fuel industry. Half-hearted tax credits and limited federal grants are not enough to undo the damage inflicted upon these communities. Workers, and especially vulnerable groups like coal communities, deserve a seat at the table when it comes to policy decisions, just like other marginalized communities. Excluding workers from the environmental justice movement may leave coal communities struggling to catch up in the shift to green energy.

To better include coal communities in the just transition and environmental justice, the Biden administration could first expand the definition of coal community beyond those that have already suffered mine closures to include communities with active mines or processing facilities. This would prepare these communities for the seemingly inevitable closure of their mines. Second, the Biden administration should implement reskilling and retraining programs to prepare coal workers to transition into other industries.¹³⁰ Third, putting economic

INST. FOR ENERGY ECON. & FIN. ANALYSIS, U.S. ON TRACK TO CLOSE HALF OF COAL CAPACITY BY 2026 4 (2023), <https://perma.cc/FP6V-J349> (predicting that that the United States will have closed half of its coal generation capacity, which peaked in 2011, by 2026).

¹²⁹ *Database, Tables & Calculators by Subject: Coal Mining*, U.S. BUREAU OF LAB. STAT., <https://perma.cc/5DZ3-B7CG> (last visited Feb. 18, 2024) (showing the total number of workers employed in the U.S. coal mining industry in October of 2014 was 71,200 and that that number had dropped to 42,200 by October 2023).

¹³⁰ Michaël Aklin & Johannes Urpelainen, *Enable A Just Transition for American Fossil Fuel Workers Through Federal Action*, BROOKINGS INST. (Apr. 2, 2022), <https://perma.cc/5DJ2-G2LD> (“Regardless of the exact cost of sustaining a just transition, the federal government remains best positioned to fund it. . . . First, resources are needed for workers who wish to retrain. Second, some workers may want to relocate, which is difficult and expensive—especially for workers from regions with declining housing markets. Thus, we cannot expect labor markets to clear without policy intervention. Third, funding is necessary to support pension plans. Lastly, and more broadly, public investments and favorable incentive policies are necessary to attract and develop new jobs. The development of alternative livelihoods will not take place without vigorous public investments.”); Brian Palmer, *This Is What a Just Transition Looks Like*, NAT. RES. DEF. COUNCIL (Mar. 2, 2020), <https://>

policies in place to promote the growth of diverse industries in coal communities will help soften the eventual blow of a mine's closure.

B. Climate Change and Extreme Temperatures

The harmful impact of environmental injustices on workers is evident in climate change and escalating global temperatures. The United States experienced the third-hottest summer on record in 2022,¹³¹ and climate change played an undeniable role in the record-breaking heatwaves that struck the Pacific Northwest in 2021.¹³² Heat is the deadliest weather-related hazard in the United States,¹³³ and dangerous heat exposure puts millions of American workers across a wide range of industries at risk.¹³⁴ Heat poses a growing danger to all Americans, but outdoor workers are thirty-five times more likely to die from heat exposure than the general population.¹³⁵ Workers in the agriculture, construction, and emergency response industries often have no choice but to brave this increasingly hot weather, and many must do so in personal protective equipment, such as respirators and protective clothing, which can be unbearable and potentially dangerous in the extreme heat.¹³⁶ Climate change has amplified the danger and scale of wildfires, posing an additional threat to workers in wildfire management.¹³⁷ Even workers in indoor environments like warehouses and steel plants remain vulnerable to extreme heat.¹³⁸

perma.cc/2MPW-Q4AH (“Job training, or retraining, is the centerpiece of most just transition programs.”); Nikolaos Apostolopoulos et al., *Just Transition Policies, Power Plant Workers and Green Entrepreneurs in Greece, Cyprus and Bulgaria: Can Education and Retraining Meet the Challenge?*, SUSTAINABILITY, Nov. 2023, No. 16307, at 16 (“There is a possibility for employing ex-workers within the same (energy) sector . . . ; however, the evolution of renewable energy sources is not considered capable for this at this point. Workers in lignite /coal-fired power generation or the fossil fuel facilities will have to upgrade their knowledge and skills to be able to re-enter the job market.”).

¹³¹ *U.S. Sweltered Through Third-Hottest Summer on Record*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Sept. 9, 2022), <https://perma.cc/SVN5-AHWY>.

¹³² *Western North American Extreme Heat Virtually Impossible Without Human-Caused Climate Change*, WORLD WEATHER ATTRIBUTION (July 7, 2021), <https://perma.cc/2V4F-SMEX>.

¹³³ Denise Chow, *Heat Kills More in U.S. Each Year Than Any Other Extreme Weather Event*, NBC NEWS (Aug. 2, 2022, 2:11 PM), <https://perma.cc/6PA3-TNWL>.

¹³⁴ *Extreme Weather Factsheet*, *supra* note 11.

¹³⁵ KRISTINA DAHL & RACHEL LICKER, UNION OF CONCERNED SCIENTISTS, TOO HOT TO WORK: ASSESSING THE THREATS CLIMATE CHANGE POSES TO OUTDOOR WORKERS 2 (2021), <https://perma.cc/KM9T-ZQDN>.

¹³⁶ Roelofs & Wegman, *supra* note 11, at 1799.

¹³⁷ *Wildfire Climate Connection*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., <https://perma.cc/3AVT-UGT6> (last visited Feb. 19, 2024).

¹³⁸ David Arkush & David Michaels, *Climate Change Isn't Just Cooking the Planet. It's Cooking our Workforce.*, WASH. POST (July 19, 2018, 2:23 PM), <https://perma.cc/5UNW-NYSS>.

Before the Biden administration announced its intent to implement extreme heat protections,¹³⁹ workers had no federal safeguards against the dangers of heat stress.¹⁴⁰ In fact, the Occupational Safety and Health Administration (OSHA) had denied a petition for such safeguards as recently as 2011,¹⁴¹ citing the lengthy rulemaking process and limited agency resources as hurdles.¹⁴² In 2021, the federal government responded by launching a coordinated, interagency effort to protect workers from extreme heat.¹⁴³ The program aims to protect various communities from climate change and extreme heat, with a number of specific provisions meant to protect workers.¹⁴⁴ As part of the Biden administration's plan, the Department of Labor is set to "launch[] a multi-prong initiative on occupational heat exposure to protect outdoor workers, including agricultural, construction, and delivery workers, as well as indoor workers, including those in warehouses, factories, and kitchens."¹⁴⁵ OSHA took immediate action, implementing an enforcement initiative for heat-related hazards, developing a National Emphasis Program on heat inspections, and forming a heat work group to engage stakeholders and inform ongoing efforts.¹⁴⁶ Perhaps most significantly, OSHA issued an Advance Notice of Proposed Rulemaking on heat illness prevention for outdoor and indoor workers, marking the agency's first attempt at a federal workplace heat standard.¹⁴⁷

While a federal heat standard is certainly a step in the right direction, formal rulemaking procedures are slow and implementation may take years, if not decades.¹⁴⁸ Given the length and uncertainty of rulemaking procedures,¹⁴⁹ state attorneys general are urging OSHA to swiftly implement alternative protections for workers now.¹⁵⁰ Attorneys general from seven U.S. states recently signed a petition urging the agency to issue an emergency temporary standard to protect workers from extreme heat.¹⁵¹ In light of the record heat of recent years, the

¹³⁹ *Extreme Weather Factsheet*, *supra* note 11.

¹⁴⁰ Arkush & Michaels, *supra* note 138.

¹⁴¹ *Id.*

¹⁴² Ariel Wittenberg & Zack Colman, *Why OSHA Won't Protect Workers from Climate Change*, E&E NEWS BY POLITICO: GREENWIRE (Aug. 6, 2021, 1:29 PM), <https://perma.cc/D4NX-R6SM>.

¹⁴³ *Extreme Weather Factsheet*, *supra* note 11.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ Melissa Chan, *OSHA is Years Away from Issuing a Federal Heat Standard that Would Protect Workers. Advocates Say it is Dire Now.*, NBC NEWS (July 22, 2022, 9:38 AM), <https://perma.cc/YSW3-2KWS> (explaining the average rulemaking process takes more than seven years).

¹⁴⁹ *See id.* (Juley Fulcher, a representative from the nonprofit group Public Citizen, voiced concern that no rule will be passed if the GOP wins the presidency in 2024).

¹⁵⁰ Kenny Stancil, *As Temps Soar, State AGs Urge OSHA to Implement Heat Protections for Worker Safety*, COMMON DREAMS (Feb. 9, 2023), <https://perma.cc/LDU4-LLVN>.

¹⁵¹ *Id.*

attorneys general argued that workers cannot wait for a formal rule and that an emergency temporary standard would “fill this regulatory void during the hottest months of the year when workers are most likely to experience extreme workplace heat exacerbated by climate change.”¹⁵²

Further action is required to address environmental injustice caused by extreme heat exposure. First, OSHA should issue an emergency temporary heat standard as early as the summer of 2024. This necessary measure is particularly important because OSHA’s current attempts to mitigate workplace heat hazards have been largely unsuccessful without a regulatory standard.¹⁵³ Second, states should create their own standards for workplace heat exposures to bridge the regulatory gap left by future OSHA rulemaking. Federal heat standards would still be needed because, in twenty-seven states and territories, only OSHA can establish workplace health standards that cover public *and* private workers.¹⁵⁴ Both state and federal standards are necessary to facilitate environmental justice for heat-vulnerable workers.

C. Pesticide Use and Exposure

Workers have been advocating for protection from pesticide exposures since the dawn of the environmental justice movement,¹⁵⁵ yet regular exposure to these dangerous chemicals remains a frequent reality for many. Widespread pesticide use remains common, with over one billion pounds of pesticides used¹⁵⁶ on millions of hectares each year.¹⁵⁷ Workers exposed to pesticides may experience a range of symptoms, from nausea and headaches to convulsions, comas, or even death.¹⁵⁸ Exposure to certain pesticides has been associated with lasting health effects¹⁵⁹ and elevated risks of miscarriage or birth defects.¹⁶⁰ Farmworkers remain remarkably unprotected from these chemicals, despite the known risks.

¹⁵² *Id.*

¹⁵³ *Id.* The attorneys’ general letter stated that, “[a]s OSHA has acknowledged, enforcement actions under the General Duty Clause [of the Occupational Safety and Health Act] are almost always unsuccessful . . . because without a regulatory standard for heat, it is difficult for the agency to prove in an enforcement proceeding that working in extreme heat is hazardous.” *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ See Perkins, *supra* note 79 (explaining how the United Farmworkers of America organized grape boycotts to raise awareness about the health risks pesticides posed to both farmworkers and consumers).

¹⁵⁶ Michael C.R. Alavanja, *Pesticides Use and Exposure Extensive Worldwide*, 24 REVS. ON ENV’T HEALTH 303, 303 (2009).

¹⁵⁷ Richard H. Coup & Paul D. Capel, *Trends in Pesticide Use on Soybean, Corn and Cotton Since the Introduction of Major Genetically Modified Crops in the United States*, 72 PEST MGMT. SCI. 1013, 1013 (2016).

¹⁵⁸ Christos A. Damalas & Spyridon D. Koutroubas, *Farmers’ Exposure to Pesticides: Toxicity Types and Ways of Prevention*, TOXICS, Mar. 2016, No. 401001, at 3 (2016).

¹⁵⁹ *Id.*

¹⁶⁰ *Pesticides—Reproductive Health*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://perma.cc/C6EE-55W3> (last updated May 1, 2023).

EPA is responsible for enforcing the Federal Insecticide, Fungicide, and Rodenticide Act¹⁶¹ (FIFRA), the federal law governing pesticide use.¹⁶² The Agency used its broad authority under FIFRA to promulgate a federal regulation known as the Worker Protection Standard (WPS).¹⁶³ The WPS protects workers vulnerable to pesticide exposure or misuse.¹⁶⁴ While a federal regulation, states administer the WPS through a cooperative-federalism system in which the federal government establishes national standards and states enforce those standards.¹⁶⁵

Because the Occupational Safety and Health Act¹⁶⁶ prevents OSHA from regulating areas where “other Federal agencies . . . exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health,”¹⁶⁷ OSHA lacks the power to regulate pesticide use on farms because this control has been granted to EPA by statute. This leaves EPA, an agency familiar with environmental harms but unfamiliar with workplace hazard regulation, in charge of promoting workplace safety. The omission of OSHA’s expertise may contribute to the hazardous conditions farmworkers face due to pesticide exposure.¹⁶⁸

The current regulatory scheme has another critical drawback—the lack of an effective system for tracking cases of acute pesticide-related illnesses among workers. The Centers for Disease Control and Prevention’s National Institute for Occupational Safety and Health (NIOSH) established the Sentinel Event Notification System for Occupational Risks (SENSOR), to enable states to report data on acute pesticide-related illness.¹⁶⁹ But as of 2020, only thirteen states have ever used the program,¹⁷⁰ and only five took advantage of the related federal funding.¹⁷¹ Unfortunately, the SENSOR-Pesticides data set appears inactive and only contains data sets from between 1998 and 2011; no data from 2012 or after is available.¹⁷²

¹⁶¹ Federal Insecticide, Fungicide, and Rodenticide Act of 1947, Pub. L. No. 80-104, 61 Stat. 163 (1947) (codified as amended at 7 U.S.C. §§ 136–136y (2018)).

¹⁶² 7 U.S.C. § 136w(a)(1) (granting the Administrator of the EPA authority to “prescribe regulations to carry out the provisions of” FIFRA).

¹⁶³ 40 C.F.R. pt. 170 (2021).

¹⁶⁴ OLIVIA N. GUARNA ET AL., EXPOSED AND AT RISK: OPPORTUNITIES TO STRENGTHEN ENFORCEMENT OF PESTICIDE REGULATIONS FOR FARMWORKER SAFETY 9 (2022), <https://perma.cc/YKC9-RE3X>.

¹⁶⁵ *Id.* at 10.

¹⁶⁶ Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590 (codified at 29 U.S.C. §§ 651–678 (2018)).

¹⁶⁷ 29 U.S.C. § 653(b)(1).

¹⁶⁸ See GUARNA ET AL., *supra* note 164, at 22.

¹⁶⁹ *About the Pesticide Surveillance Program*, CTRS. FOR DISEASE CONTROL & PREVENTION: NAT’L INST. FOR OCCUPATIONAL SAFETY & HEALTH, <https://perma.cc/WW9Z-GJFE> (last visited Feb. 25, 2024).

¹⁷⁰ *Id.*

¹⁷¹ *Id.* This perhaps indicates that the eight states who failed to utilize federal funding may have been less thorough in the collection and reporting of their respective data sets.

¹⁷² *Id.*

Given the limited data, it is nearly impossible to know how many farmworkers are exposed to pesticides each year. States reported 9,740 cases of acute occupational pesticide-related illness and injury to SENSOR between the years 1998 and 2011,¹⁷³ but these figures are likely underestimated.¹⁷⁴ Difficulties in the data reporting process, outdated records, and limited state participation hinder accurate tracking of pesticide-related illness cases over time. Additionally, exposed workers may lack access to medical professionals or services that can formally diagnose them for national recordkeeping.¹⁷⁵ Fearing employer retaliation, farmworkers may also avoid reporting their exposure to the appropriate medical or enforcement authorities.¹⁷⁶ Without better data, policymakers are unlikely to recognize the need for reform and labor and environmental advocates will struggle to make their case that workers need greater protections from pesticide exposure.

A number of solutions could be implemented to protect farmworkers from pesticide exposure. First, to allow for improved coordination between OSHA and EPA, Congress should restore partial jurisdiction over the regulation of pesticide-related occupational hazards to OSHA.¹⁷⁷ In addition, Congress should eliminate the small farms exception from the Occupational Safety and Health Act,¹⁷⁸ which currently leaves almost half of U.S. farmworkers unprotected.¹⁷⁹ Second, Congress should allocate more funds to NIOSH's SENSOR program to ensure consistent data reporting on acute pesticide-related illness by states.¹⁸⁰ Currently, the program lacks sufficient state participation, and enrolled states have not made their data publicly available for the past decade. Insufficient knowledge about the full scope of acute pesticide-related illnesses hinders

¹⁷³ *Acute Pesticide-Related Illnesses Charts*, CTRS. FOR DISEASE CONTROL & PREVENTION: NIOSH WORKER HEALTH CHARTS (Nov. 2020), <https://perma.cc/X8S6-PJ9P>.

¹⁷⁴ LAURIE J. BEYRANEVAND & LIHLANI SKIPPER NELSON, ESSENTIALLY UNPROTECTED: A FOCUS ON FARMWORKER HEALTH LAWS AND POLICIES ADDRESSING PESTICIDE EXPOSURE AND HEAT-RELATED ILLNESS 35 (2021), <https://perma.cc/4KT3-SSUK>.

¹⁷⁵ Joanne Bonnar Prado et al., *Acute Pesticide-Related Illness Among Farmworkers: Barriers to Reporting to Public Health Authorities*, 22 J. AGROMED. 395, 397 (2017) (farmworkers may experience a lack of access to healthcare from information withholding by supervisors, distance to clinics, transportation to clinics, lack of medical insurance, and mistrust of healthcare providers).

¹⁷⁶ *Id.* at 396 (farmworkers have identified “fear of job loss, demotion, and the reduced chance of being rehired in subsequent seasons” as barriers to reporting pesticide exposures).

¹⁷⁷ GUARNA ET AL., *supra* note 164, at 41.

¹⁷⁸ *Policy Clarification on OSHA's Enforcement Authority at Small Farms*, OCCUPATIONAL SAFETY & HEALTH ADMIN. (July 29, 2014), <https://perma.cc/3F53-6ECS> (explaining that “[s]ince 1976, an appropriations rider has precluded OSHA from expending appropriated funds to conduct enforcement activities with respect to any person engaged in a farming operation with ten or fewer non-family employees that has not maintained a temporary labor camp within the preceding twelve months”).

¹⁷⁹ U.S. DEP'T OF AGRIC., 2017 CENSUS OF AGRICULTURE: SUMMARY AND STATE DATA 339 (2019), <https://perma.cc/3Q8U-ALC9>.

¹⁸⁰ GUARNA ET AL., *supra* note 164, at 41.

the ability to rally support for enhanced protections for farmworkers against pesticide exposure.¹⁸¹

IV. CONCLUSION

Environmental justice is the just treatment and meaningful involvement of *all people* with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.¹⁸² A core principle of the movement is that no group of people should bear a disproportionate share of the negative consequences caused by industrial, governmental, and commercial operations or policies.¹⁸³ Today, workers bear enormous environmental burdens through exposure to extreme heat and pesticides. Even environmental policies that consider workers, such as the Biden Administration's just transition agenda for coal communities, fail to address their actual needs, arriving decades after mine closures have already caused significant economic devastation. Despite the recent recognition of labor's role in environmental justice,¹⁸⁴ there is still limited participation and a lack of genuine consideration for labor interests in policymaking.

But workers themselves have long understood the unique and disproportionate environmental burdens they face, and they have similarly known that addressing these injustices requires solutions intentionally designed for the labor context. From Chávez's grape boycotts to Guthrie's protest folk, workers have shown their desire for environmental protection and fair treatment throughout the history of the labor movement. And they want a seat at the table. They have fought for the right to have a meaningful role in shaping and implementing environmental policy and the right to labor safe from the risk of environmental harm. Workers deserve to actively participate in policymaking and should be recognized for the role they play in achieving environmental justice, regardless of whether they "got the do re mi."

¹⁸¹ Because a more thorough review of the shortcomings of current pesticide regulations exceeds the scope of this chapter, see GUARNA *supra* note 164, at 22–40 for a comprehensive review of these issues.

¹⁸² *Learn About Environmental Justice*, EPA 2024, *supra* note 22.

¹⁸³ *Id.*

¹⁸⁴ Roelofs & Wegman, *supra* note 11, at 1800 (using an environmental justice framework to highlight workers' vulnerability due to climate change); First Nat'l People of Color Environmental Leadership Summit, *supra* note 32, princ. 8 (affirming the right of all workers to a safe work environment).