

Working Against Climate Change: Connecting Labor Rights and Environmental Justice

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ABSTRACT

Global climate change is widely understood as one of the biggest and most urgent problems of our time. World leaders and climate activists alike advocate for sharp and quick action to reduce greenhouse gas emissions, which will require a dramatic transformation of the global economy. Meanwhile, the effects of climate change are already upon us. These effects, and the challenges of economic transition, are falling most heavily on the workers of the world. The same policies and practices that allow for the destruction of the climate are also those that exploit workers. For these reasons, there is an important connection between workers' rights and climate justice. The two movements need one another to be successful.

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INTRODUCTION

Early in December of 2021, a series of tornadoes tore through nine states in the South and the Midwest of the United States.¹ Eighty-eight people were confirmed dead.² At least eight of those people died while at work at the Mayfield Consumer Products candle factory in Mayfield, Kentucky, while several other workers were injured.³ Representatives of the company have denied any such claims, but workers claim that they were not permitted to leave work as tornadoes approached.⁴ A number of workers have described being threatened with termination if they left their shifts early, despite asking to leave and emphasizing the potential danger of staying.⁵ At first, managers had employees gather in the hallways and bathrooms for shelter, and later sent everyone back to work under the mistaken impression that the danger had passed.⁶ According to one worker, some shift leaders even went so far as to take a roll call in order to find out who had left.⁷ Several employees have filed a lawsuit against the company, and an attorney representing them has described the factory as a “modern-day sweatshop.”⁸ The building was completely leveled, and images of the rubble have become representative of the degree of the destruction these storms caused.⁹ An Amazon warehouse in Edwardsville, Illinois, saw six employees killed and another hospitalized when the facility collapsed during the same spate of storms.¹⁰ This tragedy is raising questions about emergency preparedness training for employees, the structure of

1. Anna Phillips, *The Record-Breaking Tornadoes that Swept the United States, by the Numbers*, WASH. POST (Dec. 13, 2021), <https://www.washingtonpost.com/climate-environment/2021/12/13/tornado-mayfield-kentucky-amazon> [<https://perma.cc/6YZK-3AL3>].

2. *Id.*

3. *Injured Workers Sue Mayfield, Kentucky Candle Company, Claiming it Deterred them from Leaving Factory as Tornado Approached*, CBS NEWS (Dec. 16, 2021), <https://www.cbsnews.com/news/tornado-workers-sue-mayfield-kentucky-candle-company> [<https://perma.cc/W3NH-M67U>].

4. *Id.*

5. Deon J. Hampton, *Factory Workers Threatened with Firing if they Left Before Tornado, Employees Say*, NBC NEWS (Dec. 13, 2021), <https://www.nbcnews.com/news/us-news/kentucky-tornado-factory-workers-threatened-firing-left-tornado-employ-rcna8581> [<https://perma.cc/LS5J-ERNB>].

6. *Id.*

7. *Id.*

8. CBS NEWS, *supra* note 3.

9. NBC NEWS, *supra* note 5.

10. Kari Paul, *Amazon Faces Scrutiny Over Worker Safety After Tornado Strikes Warehouse*, THE GUARDIAN (Dec. 13, 2021) <https://www.theguardian.com/technology/2021/dec/13/amazon-warehouse-collapse-safety-illinois> [<https://perma.cc/K6FP-HL8Z>].

the increasingly ubiquitous massive warehouses, and the adequacy of building codes.¹¹

One tornado in the outbreak followed a track up to 250 miles long, making it one of the longest ever.¹² Temperatures were at record highs in the area.¹³ One week later, Minnesota saw its first December tornado.¹⁴ While there is not definitive proof of the connection between this particular set of tornadoes and global climate change, researchers believe that a warming atmosphere has created conditions conducive to severe storms such as these.¹⁵ This is because as the climate warms, there is more energy in the atmosphere, which can “feed” tornadoes.¹⁶ A shift in the prevalence of tornadoes to more populated states like Kentucky and Arkansas has also been observed, meaning when storms do hit, there are more buildings and people in their path.¹⁷

Addressing global climate change has been called the greatest challenge of our generation,¹⁸ and even if dramatic measures are taken to slow the process of climate change and mitigate its effects, it is all but inevitable that it will completely change the ways we work and live. The pace of warming, the melting of Arctic sea ice, the rise of sea levels, and the incidence of extreme weather events are all accelerating.¹⁹ Climate change is already creating upheaval in many parts of the world, much of which is being felt acutely by working people. At the same time, a rapid transformation of the global economy will be required if we are to succeed in reducing greenhouse gas emissions while continuing development at anything like our current pace. Once again, it is workers who will bear the brunt of these changes.

If our efforts to save the environment are to succeed, we must strive to both support and learn from the labor movement. This Article will make the case that the future of workers’ rights and the health of our climate are inextricably linked, and climate policy that fails to consider its impact on labor is at best incomplete, and at worst doomed to fail. It will begin by exploring the present and future

11. *Id.*

12. WASH. POST, *supra* note 1.

13. *Id.*

14. Lora Korpar, *Minnesota Sees First December Tornado, Hurricane-Force Winds Reported in Midwest States*, NEWSWEEK (Dec. 16, 2021), <https://www.newsweek.com/minnesota-sees-first-december-tornado-hurricane-force-winds-reported-midwest-states-1660234> [<https://perma.cc/Q7MT-56SY>].

15. Sarah Gibbens, *Why We Still Don’t Fully Understand the Tornado-Climate Change Relationship*, NAT’L GEOGRAPHIC (Dec. 13, 2021) <https://www.nationalgeographic.com/environment/article/why-we-do-not-understand-the-tornado-climate-change-relationship> [<https://perma.cc/Q5NW-4CG8>].

16. *Id.*

17. *Id.*

18. Madison Park, *Obama: No Greater Threat to Future Than Climate Change*, CNN (Jan. 21, 2015) <https://www.cnn.com/2015/01/21/us/climate-change-us-obama/index.html> [<https://perma.cc/86KG-2TX5>].

19. Jonathan Lovvorn, *Climate Change beyond Environmentalism Part I: Intersectional Threats and the Case for Collective Action*, 29 GEO. ENVTL. L. REV. 1, 10 (2016).

effects of global climate change on workers around the world in Section I. Next, Section II will analyze connections, both real and potential, between the climate movement and the labor movement. Section III will consider the intersection of environmental harm and the mistreatment of workers, and the circumstances that allow for both. Finally, it will conclude in Section IV with a set of policy proposals that emphasize the importance of workers' rights to climate advocacy, and the importance of climate change mitigation and adaptation efforts to conditions for workers. These proposals include reforming immigration laws in the United States, strengthening international cooperation, focusing on the public sector, and protecting workers' rights.

I. BACKGROUND – CLIMATE CHANGE'S IMPACT ON THE GLOBAL WORKFORCE

A. "CANARIES IN THE COAL MINE"

Global climate change disproportionately harms the most vulnerable members of the global workforce, and places stress on the systems designed to protect those workers.²⁰ Workers have been called the "canaries in the coal mine" of climate change—harmful effects on workers, such as illness or injury, are often the first indicators of climate change's health impacts.²¹ These risks are especially acute for those employed in agriculture, manufacturing, and emergency response.

Some of the major climate-related hazards that put workers at risk include heat stress, extreme weather events, and exposure to hazardous chemicals and pathogens.²² Agricultural and other outdoor workers are particularly vulnerable to weather conditions. Those who are paid based on how much they harvest are disincentivized from taking breaks to rest, hydrate, and move to cooler areas.²³ The resulting dehydration is believed to be the cause of an unusually large outbreak of kidney disease among these workers.²⁴ Manufacturing is another sector in which many workers are exposed to heat, because the buildings that house large-scale manufacturing are in some cases too big to be air-conditioned, and as a result conditions can even be hotter inside than outside.²⁵ For both indoor and outdoor workers, heat exposure can cause heat exhaustion and heat stroke, and can exacerbate chronic diseases.²⁶ Hotter working conditions are also associated with

20. Max Kiefer et al., *Worker Health and Safety and Climate Change in the Americas: Issues and Research Needs*, 40(3) REV PANAM SALUD PUBLICA, 192 (2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176103/> [<https://perma.cc/2Q9C-CE7B>].

21. *Id.*

22. Cora Roelofs & David Wegman, *Workers: the Climate Canaries*, 104(10) AM. J. OF PUB. HEALTH, 1799, 1799-1801 (Oct. 2014), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4167120/>, [<https://perma.cc/5EVB-7R2R>].

23. *Id.*

24. *Id.*

25. Colleen Walsh, *Toll of Climate Change on Workers*, HARV. GAZETTE (Nov. 1, 2019).

26. Roelofs & Wegman, *supra* note 22.

reduced cognitive function, which has serious implications for worker safety because it can lead to increased risk of injury.²⁷

A specific subset of workers whose risk of illness or injury is directly proportional to rising global temperatures are those on the front lines of responding to extreme weather events and natural disasters.²⁸ For example, the increasing frequency and magnitude of wildfires in the Western United States, will require the employment of more and more firefighters. Their work is increasingly dangerous and includes risks of exposure to smoke-based air pollution and psychological injury when responding to loss of life and property.²⁹

Climate change intensifies other existing threats, such as exposure to hazardous chemicals. As the ranges of weeds and pests expand, farming tends to rely on more and different pesticides, to which agricultural workers are then exposed. Environmental pollutants to which workers are already exposed are more volatile due to warmer temperatures, which can result in airborne transport of chemicals for long distances.³⁰ Vectors for pathogens like mosquitos and ticks will also see increasing and varying ranges, which has health implications for outdoor workers.³¹

There is a persuasive historical case for paying attention to adverse outcomes among workers as the first signs of how a shifting climate is impacting the rest of the population.³² Historically, workers have first “sounded the alarm” with respect to “chemical exposure such as the pesticide DBCP, the flavoring agent diacetyl, and latex as an allergen.”³³ These warnings have allowed for research and protective measures for the general population.³⁴

B. A JUST TRANSITION

Challenges related to climate change also intersect with and exacerbate the impacts of social inequality and the instability of work. In low- and middle-income countries, community challenges include malnutrition due to climate-related food insecurity and distress due to forced displacement.³⁵ These are likely to also be the same countries with the fewest resources available for mitigation

27. Kiefer et al, *supra* note 20.

28. Roelofs & Wegman, *supra* note 22.

29. Kiefer et al, *supra* note 20.

30. Barry Levy & Cora Roelofs, *Impacts of Climate Change on Workers' Health and Safety*, OXFORD RSCH. ENCYC., GLOBAL PUB. HEALTH (Feb. 25, 2019), [https://oxfordre.com/publichealth/display/10.1093/acrefore/9780190632366.001.0001/acrefore-9780190632366-e-39;jsessionid=E2B6EEAF45D23C0C469C1B459302B076, \[https://perma.cc/B8QS-2V32\].](https://oxfordre.com/publichealth/display/10.1093/acrefore/9780190632366.001.0001/acrefore-9780190632366-e-39;jsessionid=E2B6EEAF45D23C0C469C1B459302B076, [https://perma.cc/B8QS-2V32].)

31. *Id.*

32. Kiefer et al, *supra* note 20.

33. Cora Roelofs & David Wegman, *Workers: the Climate Canaries*, 104(10) AM. J. PUB. HEALTH 1799, 1800 (2014).

34. *See Id.*

35. Levy & Roelofs, *supra* note 30.

and adaptation.³⁶ In less developed places, threat-response is likely to be less established than in developed ones that have institutionalized disaster response systems and more thorough regulations.³⁷ These, like other forms of socioeconomic or political instability, can lead to collective violence.³⁸ The same countries where populations are most vulnerable to the adverse effects of climate change are those least responsible for creating it.³⁹

As nations and industries strive to adapt to climate change, inequalities may be intensified. The international labor market will have to adapt as we transition to a “greener” economy. New jobs will be created as others cease to exist. Efforts to address climate change that do not take labor rights into consideration risk further exclusion of many segments of the global workforce that are already marginalized by present development trends.⁴⁰ As Carla Roelofs and David Wegman explain in their article *Workers: The Climate Canaries*, “Immigrant workers and workers with other labor market vulnerabilities such as informal and contingent employment (day labor), piece work pay schemes, absence of sick days, remote work locations, limited regulatory oversight, and low wages, are heavily represented in occupations likely to be affected by climate change.”⁴¹ Further, a significant cause of climate-related migration is poverty and the absence of economic growth due to environmental degradation.⁴² Some communities rely heavily on certain natural resources. As climate change disrupts these resources, it is predicted that these communities will suffer especially devastating effects.⁴³ For communities for whom geographic location is central to their cultural identities, relocation also inflicts fundamental cultural disruption.⁴⁴ When climate refugees are displaced from their home communities due to climate disasters and forced to migrate to other countries, they then find themselves under economic pressure to accept uncertain and dangerous jobs like those in agriculture and construction.⁴⁵

Although extreme weather events are difficult for anyone who experiences them, there is evidence that more marginalized groups like low-wage workers undergo disproportionately greater psychological effects.⁴⁶ This is believed to be due in part to underlying economic instability and difficulty coping with the loss

36. Kiefer et al, *supra* note 20.

37. *Id.*

38. Levy & Roelofs, *supra* note 30.

39. Maria Nilsson & Tord Kjellstrom, *Climate change impacts on working people: how to develop prevention policies*, 3 GLOBAL HEALTH ACTION, Nov. 29, 2010, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2997730/> [perma.cc/H4GB-5Q5L].

40. Katherine H. Regan, *The Case for Enhancing Climate Change Negotiations with a Labor Rights Perspective*, 35 COLUM. J. ENVTL. L. 249, 252 (2010).

41. Roelofs & Wegman, *supra* note 33, at 1800.

42. Regan, *supra* note 40 at 261.

43. Alice Kaswan, *Domestic Climate Change Adaptation and Equity*, 42 ENVTL. L. REP. NEWS & ANALYSIS 11125, 11137 (2012).

44. *Id.* at 11134.

45. Levy & Roelofs, *supra* note 30.

46. Kaswan, *supra* note 43, at 11133.

of community that can result from a major disaster. These groups are also less likely to have access to adequate mental health care.⁴⁷

C. OLD FRAMEWORKS FOR A NEW AND CHANGING PROBLEM

Existing regulatory systems like OSHA and Workers' Compensation are not well-equipped to address climate-related challenges, in large part due to unpredictable and rapidly changing conditions. There are not many regulatory standards in place that are designed to protect workers specifically from climate-linked threats.⁴⁸ The current regulatory framework is inadequate to protect the most vulnerable members of the workforce.⁴⁹

The pace of new regulation is painfully slow, and current frameworks are not flexible enough to protect workers from the hazards of a rapidly changing work environment.⁵⁰ Three states: California, Washington, and Minnesota, have adopted their own standards for workplace heat exposure, but a federal requirement does not yet exist.⁵¹ While OSHA has guidance for heat exposure and other workplace-based risks, it is lightly enforced, and affirmative and mandatory rules are hard to come by.⁵² Extreme weather events can also undermine those mechanisms to protect worker safety that are in place. For example, in 2017, OSHA suspended enforcement of safety regulations for over a month in Texas, Florida, and Puerto Rico after three major hurricanes.⁵³

Regulatory responses to the COVID-19 pandemic have been illustrative of this limited capacity to address wide-spread and fast-moving crises. During the first part of 2020, OSHA published guidelines for employer operations during the COVID crisis, including recommendations for cleaning, social distancing, and the use of PPE (personal protective equipment).⁵⁴ All of this was voluntary and did not create new legal obligations for employers. This was despite the agency receiving thousands of complaints related to COVID in the time period leading up to this guidance.⁵⁵ OSHA also failed to issue an Emergency Temporary Standard (ETS) to protect workers against potentially dangerous working conditions with respect to exposure to the virus.⁵⁶ OSHA later issued an ETS for vaccination and testing within certain categories of businesses, which faced swift

47. *Id.*

48. Kiefer et al, *supra* note 20.

49. Roelofs & Wegman, *supra* note 33, at 1800.

50. *Id.*

51. Walsh, *supra* note 25.

52. Roelofs & Wegman, *supra* note 33, at 1800.

53. Levy & Roelofs, *supra* note 30.

54. Michael J. Cahalane, Kyle E. Mjornlund & Xavier Q. Lawrence, *OSHA in the Time of Covid-19: A Call for Enforceable Standards for the Sake of Employees and Employers*, 67 FED. LAW. 20, 20 (2020).

55. *Id.*

56. *Id.*

challenge in federal court.⁵⁷ This would have required private employers with 100 or more employees to establish and enforce vaccination or testing for COVID-19.⁵⁸ In November 2021, the Fifth Circuit granted a motion to stay that standard, citing constitutional concerns related to the Commerce Clause and non-delegation doctrine, while suggesting that the ETS went beyond OSHA's statutory authority.⁵⁹ This further demonstrates the problems with applying these outdated and clunky regulatory regimes to novel challenges.

II. STRANGE BEDFELLOWS?: THE CASE FOR COLLABORATION BETWEEN THE LABOR AND CLIMATE MOVEMENTS

A. WORKERS WILL BE MAJOR BENEFICIARIES OF CLIMATE MOVEMENT PRIORITIES

Workers need the power to advocate for mitigation efforts and bargain for workplace-based protections against climate-related threats. The current approach to addressing climate change treats workers' rights as ancillary, seemingly based on the assumption that by addressing other, more "important" effects of climate change, concerns like workers' rights will also be solved.⁶⁰ Anyone with a background in labor knows this is not necessarily the case. Workers are at a greater risk for the harms of climate change because they are typically less free to elect to avoid risk factors like heat stress, extreme weather events, and exposure to hazardous chemicals and pathogens. Their exposures are therefore greater in frequency, duration, and intensity. Because of financial burdens, many workers are unable to stay away from these dangers. For example, while the general public is free to observe heat-related warnings, outdoor workers must continue to labor in the heat.⁶¹ Systems in which agricultural workers are paid based on the quantity of crop each worker harvests create disincentives for them to take breaks to rest, hydrate and move into shade or other cooler areas.⁶²

Unions have an important role to play in advocating to protect workers in new "green" industries. In the fossil fuel industries, dwindling unionization rates are especially troubling for workers when it comes to safety and job quality.⁶³ Presently, the renewable energy sector has lower rates of unionization than others, including fossil fuel industries.⁶⁴ While it is true that some unions have initially taken a position against climate change mitigation efforts, this is because

57. Jon O. Shimabukuro, *Fifth Circuit Stays OSHA Vaccination and Testing Standard*, CONG. RESEARCH SERV., LSB10658, (Nov. 17, 2021).

58. *Id.*

59. *Id.*

60. Regan, *supra* note 40 at 257.

61. Levy & Roelofs, *supra* note 30.

62. *Id.*

63. J. Mijin Cha, *A Just Transition: Why Transitioning Workers into a New Clean Energy Economy Should Be at the Center of Climate Change Policies*, 29 *FORDHAM ENVTL. L. REV.* 196, 202 (2017)

64. *Id.* at 214.

they need to shield their members against job losses as the economy shifts.⁶⁵ For related reasons, there is also a history of distrust and conflict between organized labor and environmentalists in certain places and contexts.⁶⁶ This need not continue to be the case.

The labor movement has become increasingly active in working to address climate change. The first U.S. labor delegation to the United Nations Framework on Climate Change Conference attended in Bali in 2007,⁶⁷ and labor has maintained an active presence in international climate negotiations since. The AFL-CIO passed its first resolution on climate change in 2008.⁶⁸ Unions in the United States have successfully lobbied for stimulus funding of green energy projects.⁶⁹ Now, as Congress and the Biden Administration work toward economic recovery following the COVID-19 Pandemic, union leaders are advocating for climate action accompanied by robust labor standards.⁷⁰

B. THE CLIMATE MOVEMENT NEEDS THE LABOR MOVEMENT

The burning of fossil fuels has been the foundation on which economies in regions throughout the United States and throughout the world were built; it is also the greatest cause of climate change.⁷¹ Activities related to work are the main cause of climate change, and therefore workers need to be at the center of climate adaptation and mitigation.⁷² A workers' rights or labor perspective is useful in the fight against climate change, because like a human rights perspective, it defines harms to individuals, moral and ethical questions, and concerns for justice within a widely accepted legal framework.⁷³ Unions can play a major and important role in advocating for climate policy. Workers' rights can be seen as what Katherine Regan refers to as "a social floor, providing a safety net against the fluctuations and possible negative social ramifications of climate change on the labor market."⁷⁴

In the labor movement, solidarity is a foundational principle. It is used to describe the practice of joining with others to promote common interests.⁷⁵ It goes beyond "you scratch my back, I'll scratch yours," but instead refers to a

65. *Id.* at 203-205.

66. Barbara Byrd & Marcus Widenor, *Labor and Climate Policy: A Curriculum for Union Leaders and Members*, 36 LAB. STUD. J. 162, 165 (2011).

67. *Id.* at 162.

68. *Id.*

69. *Id.*

70. Marc Boom, *United: Union Jobs Improve the Clean Energy Economy*, NAT. RES. DEF. COUNCIL 4 (2021).

71. Mijin Cha, *supra* note 63, at 198.

72. *Id.*

73. Regan, *supra* note 40, at 273.

74. *Id.* at 260.

75. Stephen H. Unger, *The Need for Solidarity*, COLUM.: ENDS AND MEANS (Sep. 11, 2014) <http://www1.cs.columbia.edu/~unger/articles/solidarity.html> [<https://perma.cc/B7UH-JQ48>].

sense that our seemingly disparate challenges are, in fact, deeply interconnected.”⁷⁶ Solidarity is also used to describe the practice of unions across different workplaces and different industries cooperating and supporting one another for mutual benefit. This principle can be reconceptualized as global, intergenerational solidarity, creating a theoretical and moral foundation for a commitment to environmental protection.⁷⁷

Additionally, workers may have a point of leverage with their employers that even consumers and shareholders lack. In 2019, a group of Amazon employees who call themselves “Amazon Employees for Climate Justice” wrote an open letter advocating for a commitment that the company would get all of its electricity from renewable sources and criticizing the acquisition of 20,000 vans with diesel engines.⁷⁸ Although Amazon claims it had been planning to do so for years, just a few weeks later they committed to all renewable energy by the year 2030 and added the largest number of electric vehicles to their delivery fleet in the company’s history.⁷⁹ Concrete actions to reduce greenhouse gas emissions are becoming a recruitment and retention issue for big tech companies as these are increasingly high priorities for their employees.⁸⁰

Finally, labor rights are no longer just a domestic issue. As the economy has globalized, issues that impact workers in one country also impact workers in other countries. Just as one nation cannot address climate change alone, worker exploitation, workers’ rights, and the labor movement have become global issues that require a multinational response.⁸¹

C. WE OWE A DEBT TO WORKERS

We have a moral responsibility to support the health and financial stability of workers in the fossil fuel industry as we move away from those sources of energy. They have sacrificed their health and professional lives to provide the fuel that has been the foundation of our economic development and prosperity, and we are again asking them to make sacrifices as we strive to mitigate climate change.⁸² Climate and labor activists can agree that a focus on equity will be necessary as we transition away from fossil fuels in order to prevent this transition from driving and further entrenching inequality.⁸³ The economic effect of this change will

76. Anna Kurhajec, *Building a Solidarity Union*, LABORNOTES (Dec. 10, 2012) <https://labornotes.org/2012/12/building-solidarity-union>. [<https://perma.cc/6P24-AVNC>]

77. Consuelo Chacartegui, *Workers’ Participation and Green Governance*, 40 COMP. LAB. L. & POL’Y J. 89, 93, 105-107 (2018).

78. Russell Gold, *New Source of Climate Pressure for Companies: Workers*, WALL STREET J. (Feb. 16, 2020) <https://www.wsj.com/articles/new-source-of-climate-pressure-for-companies-workers-11581861601> [<https://perma.cc/699G-EN5D>].

79. *Id.*

80. *Id.*

81. Regan, *supra* note 40, at 267.

82. Mijin Cha, *supra* note 63, at 208.

83. *Id.* at 198.

be felt most acutely by fossil fuel workers and communities, many of which are already confronting economic difficulties.⁸⁴ The benefits and burdens of climate action should be shared equitably, and not just enjoyed by the elite or shouldered by the most marginalized.⁸⁵

III. WORKER EXPLOITATION AND ENVIRONMENTAL DEGRADATION GO HAND-IN-HAND

A. THE SAME POLICIES EXPLOIT WORKERS AND DEGRADE THE ENVIRONMENT

There is a strong link between worker exploitation and environmental degradation. Public and corporate policies that allow for worker exploitation also have the effects of exacerbating environmental degradation, and vice versa. Communities that are home to extractive industries like coal have been exploited by those industries. For example, coal production in Kentucky proliferated at the expense of other industries, leaving communities highly dependent on coal.⁸⁶ Tax policies that favor these extractive industries via subsidies and other breaks make other kinds of economic development more expensive, making it more difficult for an area to diversify its economy.⁸⁷

So-called “fast fashion” is one well-known area that has concerning effects for both workers and the environment. Cotton ranks as one of the most water-intensive crops.⁸⁸ It frequently needs to be heavily treated with pesticides. Alternatives to cotton like polyester are petroleum-based. Untreated wastewater contaminated with textile dyes are released into local water systems, creating negative health effects for those who live near (and often work in) these industries.⁸⁹ Globally, more than 40 million people are employed in the garment industry.⁹⁰ Some of the hazards these workers face may be familiar. In the 2013 Rana Plaza disaster, 1,134 Bangladeshi workers died when the factory where they were employed collapsed on top of them, tragically exposing the corners cut when it comes to safe working environments.⁹¹ Other risks may not be as well-known, such as respiratory hazards from particulates and poor ventilation, and repetitive stress injuries from completing the same motion over and over again.⁹²

Another example of connection between inadequate worker and environmental protections is the location of dirty industrial and waste disposal sites in communities of color and low-income communities. Sea-level rise and more intense rainfall create dangers from toxic contamination. Not only are surrounding

84. *Id.*

85. *Id.* at 213.

86. *Id.* at 199.

87. *Id.*

88. R. Bick, E. Halsey, & C.C. Ekenga, *The Global Environmental Injustice of Fast Fashion*. 17 ENVTL. HEALTH 92 (2018).

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

communities employed in these potentially dangerous industries, but they are also those most likely to be exposed to contaminated floodwater and remaining contaminated sediment as extreme weather events become increasingly common.⁹³

B. SHAREHOLDER VALUE AT THE COST OF HUMAN AND ENVIRONMENTAL VALUE

The prioritization of short-term benefits for shareholders undermines long-term strategies to address both sustainability and issues like workers' rights and pay equity.⁹⁴ Both the globalization of work (via the globalization of supply chains and capital markets) and the nature of climate change can be characterized as a global market failure or "race to the bottom."⁹⁵ Countries that put stricter rules in place for fair labor or emissions reductions may face adverse consequences if corporations or industries move to countries with fewer of these regulations, undercutting the original country's domestic regulatory goals. Greenhouse gas emissions and other environmental harms, and labor rights abuses, can both be understood as negative externalities that the world economy can no longer externalize if it is to remain sustainable.⁹⁶

C. THE CASE FOR LINKING THE POLICY PRIORITIES

Linking the policy priorities of empowering workers and addressing climate change strengthens them both. Climate change is predicted to completely disrupt economic and social activity as we know it.⁹⁷ In many ways, this disruption is already taking place. Changes such as higher temperatures negatively impact worker productivity, leading to undesirable consequences for both workers and employers.⁹⁸ Extreme weather events like the December 2021 tornadoes described above further disrupt workplace norms around safety, work schedules, and the role of managers. Regrettably, this is far from the last time we will see a tragic intersection of environmental disasters and worker exploitation.

It is generally understood that the transition to a "green" economy will impact labor markets in the following ways: some jobs will be lost, some jobs will be created, and some jobs will be adapted or refined (and, of course, a fourth category of jobs will remain the same).⁹⁹ Extreme weather events and adaptation to minimize damage will likely increase jobs in construction, utility, and tree work, all of which have high injury rates.¹⁰⁰ The loss of sea-ice cover in the Arctic Ocean

93. Kaswan, *supra* note 43, at 11130.

94. Mijin Cha, *supra* note 63, at 203.

95. Regan, *supra* note 40, at 268.

96. *Id.* at 279.

97. Sean Stephenson, *Jobs, Justice, Climate: Conflicting State Obligations in the International Human Rights and Climate Change Regimes*, 42 OTTAWA L. REV. 155, 177 (2010).

98. *Id.* at 168.

99. *Id.*

100. Levy & Roelofs, *supra* note 30.

is allowing for the expansion of oil and gas exploration, mining, and commercial shipping in remote areas.¹⁰¹ These are potentially high-risk industries for both workers and the environment, and the need for emergency response, search and rescue, and responses to environmental contamination events like oil spills are of increasing concern.¹⁰²

Labor rights is a helpful framework for understanding climate change's problems and solutions because it seeks to advance both human rights and economic development. Advanced planning about the jobs and sectors that will grow and shrink as a result of the transition to a green economy can actually accelerate an effective transition.¹⁰³ The environmental advantages of clean energy are not always adequate to earn community support. Ensuring from the start that clean energy projects bring high-quality local jobs and economic expansion can boost labor and community support for these initiatives. That in turn can accelerate progress, which is vital to meeting the clean energy goals we need to achieve to successfully deal with our climate challenges.¹⁰⁴ Advances in technology will be an important part of climate change adaptation and mitigation efforts. This requires changes in the skills utilized by workers.¹⁰⁵ In some cases, renewable energy industries have been slowed by shortages of skilled workers.¹⁰⁶ By anticipating future employment trends, we can avoid some of these skill gaps and shortages, making transition more efficient and effective.¹⁰⁷ Entrepreneurial risk is often a precursor for technological breakthroughs. Without the safety net of a labor market where safe and decent jobs are available, the potential cost of entrepreneurial risk is too high, and we may lose out on development that could be key to combatting climate change.¹⁰⁸

IV. POLICY PROPOSALS

As the foregoing makes clear, an approach to addressing climate change that does not explicitly include the experiences of workers as a key focus is an inadequate approach. Although there are a myriad of climate-related problems and solutions, this Article focuses on those most relevant to protecting and empowering workers. What follows is a set of suggestions to address some of the shortcomings of climate policy that fails to prioritize workers, and to make the most of the potential synergy between the environmental and labor perspectives.

101. Kiefer et al, *supra* note 20.

102. *Id.*

103. Stephenson, *supra* note 97, at 175.

104. Boom, *supra* note 70, at 8.

105. Stephenson, *supra* note 97, at 175.

106. *Id.*

107. *Id.*

108. Regan, *supra* note 40, at 269.

A. RETHINKING INTERNATIONAL COOPERATION

Article 2 of the International Covenant on Economic, Social and Cultural Rights (“ICESCR”) outlines state obligations to take action toward reaching the complete realization of the rights specified in the ICESCR to the greatest extent possible given available resources.¹⁰⁹ The ICESCR is a multilateral treaty adopted by the United Nations General Assembly.¹¹⁰ Although it states a preference for legislative methods, “all appropriate means” has been construed broadly to incorporate “administrative, judicial, economic, social and educational measures.”¹¹¹ The right to work includes all kinds of work, and protects a worker’s fundamental rights including the right to *decent* work.¹¹² States are obligated to take a comprehensive policy approach to ensure employment opportunities and security; and to work toward economic growth and development to achieve full employment.¹¹³ These obligations include specific measures to protect security in employment during large-scale structural change, like the transition to a greener economy.¹¹⁴ According to the International Labor Organization (“ILO”), environmental and social development should not be understood as distinct pillars of sustainability, but instead should be thought of as tightly interconnected.¹¹⁵

The 2015 Paris Agreement under the United Nations Framework Convention on Climate Change addressed the importance of a just transition of the workforce, and the creation of good, quality jobs in accordance with nationally identified development goals.¹¹⁶ Binding climate change mitigation agreements at the global level are an important starting point but are not, on their own, sufficient. Any such agreements should include strategies on how high-income countries can contribute to the protection of more vulnerable nations and populations.¹¹⁷ International cooperation to combat climate change should also explicitly take workers’ rights into account. It should be developed and strengthened alongside other international frameworks that are already designed to protect workers. Existing international labor rights frameworks lack the enforcement power needed to make them maximally effective.¹¹⁸ These should be strengthened as part of any international efforts to combat climate change.

Additionally, an understanding of the link between climate change and the health, well-being, and productivity of millions of workers may provide the

109. International Covenant on Economic, Social and Cultural Rights art. 2, Dec. 16, 1966, Treaty Document 95-19, 993 U.N.T.S. 3.

110. *Id.*

111. *Id.*

112. Stephenson, *supra* note 97, at 164.

113. *Id.* at 165.

114. *Id.* at 173.

115. Chacartegui, *supra* note 77, at 95.

116. *Id.* at 90.

117. See Nilsson & Kjellstrom, *supra* note 39.

118. Regan, *supra* note 40, at 262.

incentive needed for governments and multinational corporations to take more decisive action toward mitigation and adaptation efforts.¹¹⁹

B. IMMIGRATION REFORM

The United States should implement new protections for migrant workers as we see increasing climate-related migration. Climate migrants are not just those whose homes in coastal areas are made uninhabitable by rising sea levels. Environmental degradation as the driver of displacement, but not the unique cause of displacement, complicates the issue.¹²⁰ By way of example, the Syrian civil war is believed to have displaced almost 5 million people.¹²¹ Some experts now believe that an extended period of severe drought and conflicts over access to water resources, followed by internal displacement, was an important factor in setting off the conflict.¹²² A potential approach is to address the complicated issues presented by these migrants under existing law for political refugees. The Refugee Convention does not require individuals to demonstrate that political persecution was the only reason for their migration, but simply that such persecution exists.¹²³ Similarly, a framework should be created for climate refugees in which climate change is accepted as one contributing factor for their migration.

There is a case for a moral obligation to these displaced people on the part of developed nations like the United States, who are responsible for a large proportion of greenhouse gas emissions. “Natural” disasters are not entirely natural, and so we have a responsibility to grant climate refugees access to our nation, because we are at least partially responsible for the events that forced them to relocate.

Draconian immigration policies undermine disaster preparedness. Preparation to make communities more resilient to climate disaster rely on the ability to communicate information, which can be hindered by linguistic or cultural isolation. If materials are only available in English, immigrant communities with limited English-language proficiency cannot benefit from them. Anti-immigrant policy and rhetoric limits the effectiveness of police or other government figures at conveying crucial preparedness information.¹²⁴ To allow for effective disaster preparedness, government agencies should suspend legal consequences for undocumented status during disaster events, and clearly communicate this policy. The government officials responsible for distributing disaster preparedness information should be plainly separate from those responsible for enforcing any immigration laws.

119. See Nilsson & Kjellstrom, *supra* note 39.

120. Benoit Mayer, *The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework*, 22 COLO. J. INT'L ENVTL. L. & POL'Y 357, 366 (2011).

121. Lovvorn, *supra* note 19, at 23.

122. *Id.*

123. Mayer, *supra* note 120, at 369.

124. Kaswan, *supra* note 43, at 11129.

C. MITIGATION AND ADAPTATION, ADAPTATION AND MITIGATION

Even if we immediately stopped greenhouse gas emissions completely, it would not halt the present negative effects of climate change. Carbon dioxide takes decades, even centuries to dissipate once in the atmosphere.¹²⁵ Unfortunately, many adverse outcomes from climate change are already with us, and so while we work to prevent further emissions and head off the worst effects of a warming environment for future generations, we must simultaneously adapt to the reality of an environment that has already changed.

The capacity of health systems to deal with this reality needs to be improved. A focus on the capability to identify and control the risks to health arising from climate change is especially important, so healthcare systems and professionals can intervene and provide proper care. The health sector also needs a wider capacity to work with different sectors in society such as employers and workers' organizations.¹²⁶ Widespread access to affordable healthcare makes it more likely that low-wage workers (who often lack insurance and are therefore less likely to access care due to its cost) will receive timely diagnosis and treatment for climate-related illness and injury.

We can follow historical programs as models for a just transition. The G.I. Bill is one promising model for transitioning fossil fuel workers and communities away from extractive industries. The G.I. Bill included education and training, a housing allowance and funding for books and supplies, in addition to other programs that provide veterans with health care and pensions.¹²⁷ Private businesses can benefit from tax incentives to hire veterans.¹²⁸ A comprehensive program like this for workers whose jobs are collateral damage in the fight against climate change, has the potential to aid our efforts to do right by those workers and their communities.

D. THE IMPORTANCE OF THE PUBLIC SECTOR

Mandates and incentives for private sector preparedness will be necessary. The magnitude of the transition described here is likely to involve dramatic changes in work operations, scheduling, buildings and more.¹²⁹ These large-scale changes will be expensive and resource-intensive, and we cannot assume that employers will undertake them voluntarily and preemptively. Depending solely on market forces to adequately prepare for the effects of climate change will not generate a successful adaptation response, because dependence on private action does not account for those who lack necessary information or resources, systematically

125. Lovvorn, *supra* note 19, at 11.

126. Nilsson & Kjellstrom, *supra* note 39.

127. Mijin Cha, *supra* note 63, at 207.

128. *Id.*

129. Levy & Roelofs, *supra* note 30.

disadvantaging the most marginalized.¹³⁰ Regulatory agencies should create guidelines or standards for corporate governance that incentivize employers to identify worker health and safety hazards and incorporate occupational health and safety into long-term planning.¹³¹

If we believe (as this author argues we should) that labor protections belong in any good climate policy, this is another reason for centering efforts in the public sector. The climate jobs that replace jobs in fossil fuel industries will not be decent, well-paying jobs with good benefits, without deliberate steps toward this end.¹³² One way to accomplish this goal is by focusing on public sector job creation instead of simply creating incentives for new and existing private companies. Unionization rates in the public sector are more than five times higher than in the private sector.¹³³

Finally, locating policies and actions in the public sphere will better guarantee access to clean energy and emissions-reductions benefits to low-income communities and communities of color who have tended to bear the brunt of environmental harms, rather than only to those who have enough money to purchase low-carbon technologies.¹³⁴

E. PROTECTING THE RIGHT TO ORGANIZE

Climate advocacy groups like the National Resource Defense Council have included in their policy priorities the Protecting the Right to Organize (“PRO”) Act.¹³⁵ This legislation, if passed, would clarify the definition of “employee” to include app-based workers like ride-share drivers, for the purposes of their right to unionize. It would also ban employers from requiring employees to sign agreements that would prevent them from pursuing class action lawsuits for employment-related matters.¹³⁶ Additionally, if passed, the PRO Act would: allow unions to override “right-to-work” laws in order to collect union dues; prohibit employer interference and influence in union elections (and allow ballots to be cast away from employer’s facilities); allow newly-formed unions to pursue arbitration or mediation to settle impasses in contract negotiations with management; prevent employers from using employee immigration status against them when determining terms of employment; and implement consequences in the form of

130. Kaswan, *supra* note 43, at 11139.

131. Levy & Roelofs, *supra* note 30.

132. Mijin Cha, *supra* note 63, at 205.

133. *Id.* at 214.

134. *Id.*

135. Boom, *supra* note 70, at 18.

136. *Why the US Pro Act Matters for the Right to Unionize: Questions and Answers*, HUMAN RIGHTS WATCH (Apr. 29, 2021), <https://www.hrw.org/news/2021/04/29/why-us-pro-act-matters-right-unionize-questions-and-answers> [<https://perma.cc/P66K-EGJ5>].

monetary penalties for companies and executives that violate workers' rights.¹³⁷ Overall, measures to fortify the bargaining power of unions vis-à-vis employers will strengthen their ability to advocate for both individual workers' rights and for sustainable development that will support the just transition to a green economy.

F. RESEARCH

We should better fund and focus research priorities on the intersection between climate change and workers' rights. The United States has been slow to recognize workers in research on the impacts of climate change on human health. A focus on workers is lacking even as other groups like the very young, very old, and those who suffer from chronic disease, have been recognized as particularly vulnerable to the effects of climate change.¹³⁸ This is especially important when developing new technologies in an effort to respond to and mitigate climate change and its effects. This includes carbon capture, the design of buildings and infrastructure, and renewable energy.¹³⁹ Prioritizing worker safety can help head off unintended consequences. For example, workers in energy-efficient "tight" buildings are more likely to experience illness related to indoor air quality, especially where there is water damage, or air conditioning and humidifiers are used. Additionally, these buildings see more radon buildup in small spaces.¹⁴⁰ Another example is the impact of the increased demand for sugar as a less carbon intensive biofuel. Ironically, there has been a high incidence of kidney disease among workers harvesting sugarcane in increasingly dangerous temperatures.¹⁴¹

CONCLUSION

Working people are often exposed to the adverse effects of climate change sooner, longer, and to a greater degree than the general population. For this reason, they have been called the "canaries in the coal mine" of global climate change. This situation is intensified by other social and political inequalities. Due to the speed at which conditions can change, our current regulatory frameworks are not fast enough or flexible enough to respond. If their priorities are included, workers are positioned to be one of the climate movement's most significant beneficiaries. The climate movement also stands to benefit enormously from labor's contributions. In addition to this pragmatic imperative, there is a moral

137. Don Gonyea, *House Democrats Pass Bill That Would Protect Worker Organizing Efforts*, NATIONAL PUBLIC RADIO (Mar. 9, 2021), <https://www.npr.org/2021/03/09/975259434/house-democrats-pass-bill-that-would-protect-worker-organizing-efforts> [https://perma.cc/N3AS-7HUL].

138. Roelofs & Wegman, *supra* note 33, at 1799.

139. Kiefer et al, *supra* note 20.

140. *Impact of Climate on Workers*, NAT'L INST. FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH), CTRS. FOR DISEASE CONTROL AND PREVENTION (CDC), <https://www.cdc.gov/niosh/topics/climate/how.html> [https://perma.cc/22YX-EN3S].

141. Roelofs & Wegman, *supra* note 33, at 1800.

imperative for centering workers in our efforts to combat climate change. Harm to the environment and the mistreatment of workers are branches grown from the same tree, and often enable one another. As a result, it is logical to link the two as policy priorities. Some entry points for tackling these two issues together include strengthening international agreements, acknowledging that we must adapt to the realities of climate change, stepping up protection for migrant workers, locating our efforts in the public sector, and directing research focus and funding towards the intersections of labor and environment.

The unfortunate truth is that we have dramatically altered our environment, and we are now seeing the consequences. We cannot ignore climate change, and there is a national and international consensus that we must take dramatic steps both to limit further destruction of our planet, and to adapt to the changes we cannot reverse. If we do not act, workers will continue to be the collateral damage of our failure. A focus on workers, and a labor lens for these efforts, will allow us to undertake the necessary and inevitable changes in a way that is economically viable and builds in the values of justice and fairness. Focusing on workers may even make our efforts to combat climate change more successful.