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Outdoor Workers and the Struggle for Heat Protection Rights:
A Critical Stakeholder and Qualitative Content Analysis of Florida's
Public Policy Debate

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Abstract *(English)*

Outdoor laborers in the U.S. face a disproportionate risk of heat-related illness and fatality, a growing public health issue under climate change. Despite occupational heat protection standards being implemented in many other countries, public health researchers advocating a policy shift, and decades of pressure from worker-advocates, few U.S. states have enacted legal standards. Guided by political ecology and critical environmental justice perspectives, this master's thesis investigates the discursive arguments and power dynamics employed by stakeholders in the occupational heat protection policy debate in the state of Florida—a region with a large migrant and Hispanic labor force, a propensity for extreme heat, and characterized by a right-wing political environment. Combining qualitative content analysis with a stakeholder analysis, this study analyzes news and advocacy documents (n=93) surrounding heat protection legislation at the local and state level. Findings include a collection of more than 100 stakeholders central to the debate. The analysis revealed instances of recognitional and procedural injustice, whereby workers and local politicians were excluded from decision-making processes to improve heat-related working conditions on the local level. Workers, advocates, and politicians in support of heat protection standards broadly acknowledged the growing impact of heat upon outdoor workers and saw local, state, and federal heat legislation as a necessity. Industry representatives and Republican state legislators prioritized the interests of the construction and agricultural industries, discounted the impacts of heat upon workers, and ensured that workers continue to shoulder the burden of occupational heat risk. This study seeks to support the realization of environmental justice for outdoor workers on the ground, and contributes to the understanding of power dynamics in occupational health and labor policymaking in a warming world.

Zusammenfassung *(Deutsch)*

Außenarbeiter:innen in den USA sind einem überproportional hohen Risiko hitzebedingter Erkrankungen und Todesfälle ausgesetzt—ein im Zuge des Klimawandels zunehmend relevantes Problem der öffentlichen Gesundheit. Trotz der Einführung arbeitsrechtlicher Hitzeschutzstandards in zahlreichen anderen Ländern, der langjährigen Forderungen von Public-Health-Forscher:innen nach einem politischen Kurswechsel sowie des jahrzehntelangen Drucks durch Arbeiter:innenvertretungen haben bislang nur wenige US-Bundesstaaten verbindliche gesetzliche Regelungen zum Hitzeschutz erlassen. Vor dem theoretischen Hintergrund der Politischen Ökologie (Political Ecology) sowie kritischer Umweltgerechtigkeitsperspektiven (Critical Environmental Justice) untersucht diese Masterarbeit die diskursiven Argumentationsmuster und Machtverhältnisse, die von unterschiedlichen Stakeholdern in der politischen Auseinandersetzung um arbeitsrechtlichen Hitzeschutz im Bundesstaat Florida mobilisiert werden. Florida erweist sich dabei als besonders relevanter Untersuchungsraum, da der Bundesstaat durch einen hohen Anteil migrantischer und hispanischer Arbeitskräfte, eine ausgeprägte Anfälligkeit für extreme Hitze sowie ein von rechtsgerichteten politischen Strömungen geprägtes politisches Umfeld gekennzeichnet ist. Methodisch kombiniert die Arbeit eine qualitative Inhaltsanalyse mit einer Stakeholder-Analyse und untersucht hierzu Medienberichte sowie Advocacy-Dokumente (n = 93), die sich mit Hitzeschutzgesetzgebung auf kommunaler und bundesstaatlicher Ebene befassen. Zu den zentralen Ergebnissen der Analyse zählt die Identifikation von über 100 Stakeholdern, die eine wesentliche Rolle in der politischen Debatte einnehmen. Darüber hinaus zeigt die Analyse Fälle von Anerkennungs- und Verfahrensungerechtigkeit auf, in denen Arbeitnehmer:innen sowie Lokalpolitiker:innen von Entscheidungsprozessen zur Verbesserung hitzebedingter Arbeitsbedingungen auf lokaler Ebene ausgeschlossen wurden. Akteur:innen wie Arbeitnehmer:innen, zivilgesellschaftliche Interessenvertretungen sowie politische Entscheidungsträger:innen, die die Einführung von Hitzeschutzstandards unterstützen, erkennen in breitem Maße die zunehmenden Auswirkungen extremer Hitze auf Außenarbeitende an und erachten entsprechende gesetzliche Regelungen auf kommunaler, bundesstaatlicher und föderaler Ebene als notwendig. Demgegenüber priorisieren Industrievertreter:innen sowie republikanische Abgeordnete auf Ebene der Bundesstaatspolitik die Interessen der Bau- und Landwirtschaftsindustrie, relativieren die gesundheitlichen Auswirkungen von Hitzeexposition auf Arbeitnehmer:innen und tragen dazu bei, dass diese weiterhin den Großteil des arbeitsbedingten Hitzebelastungsrisikos tragen.

Die vorliegende Studie zielt darauf ab, die Verwirklichung von Umweltgerechtigkeit für Außenarbeitende auf praktischer Ebene zu unterstützen, und leistet zugleich einen Beitrag zum Verständnis von Machtverhältnissen und politischen Entscheidungsprozessen in der Arbeits- und Gesundheitspolitik in einer sich zunehmend erwärmenden Welt.

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This thesis is dedicated to the Florida outdoor workers continuing their struggle for the right to a safe, healthy, and dignified livelihood, and to all those workers who have perished in the heat.

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There are never sick days; there are never vacations
unless there is no work in the fields,
and even then, the work can be followed
hunted down, chased through
California
Arizona
Washington.

My father follows the crops,
with a tribe of seasonal bachelors.
Sending back wages,
minus the cost of rent,
the cost of food,
the high cost of separated lives.

My mother searches packing sheds
along the roads for work.
La corrida,
running for our lives.

From "La Corrida," by Aideed Medina (2022)

1 | Introduction

In July 2023, 29-year-old Efraín López García, an immigrant from Guatemala, collapsed while working in 100-degree heat (38°C) on a tropical fruit farm in Miami-Dade County, Florida, and died shortly thereafter (N. Rivero, 2023b). Public health research shows that outdoor workers in the United States, many of whom are migrants, immigrants, and/or Hispanic, face a disproportionate risk of heat-related illness and fatality (Hawkins & Ibrahim, 2023; Shkembi et al., 2025). Researchers have consistently pointed to the need for occupational heat protection laws in the U.S. to improve health outcomes for outdoor workers (Manni, 2023), yet despite decades of organizing by workers and advocates (Union of Concerned Scientists, 2024), there is currently no national heat protection standard. While a handful of states have implemented such laws, the majority of the country has not (Occupational Safety and Health Administration, n.d.). On the contrary, in April 2024, Florida Governor Ron DeSantis signed a law banning occupational heat protection across the state in response to a local protection bill spearheaded by immigrant workers in Miami-Dade County (Harrison, 2024). Given the widespread awareness of the health risks, the intentional withholding of life-saving labor rights for outdoor workers can be categorized as a clear environmental injustice (Greco, 2023), especially as heat hazards intensify under the growing influence of climate change (Mora et al., 2017), which begs the question: how is this intentional regulatory gap being justified within the public narrative, and which actors are responsible?

Global temperatures from 2023-2025 marked a three-year period in which the planet has warmed 1.5°C over pre-industrial levels—a concerning trend toward crossing the threshold set in the 2015 Paris Agreement (Power, 2026). As projected, climate change has supercharged natural disasters around the world, including countless heatwaves across every continent over the last three years (Otto et al., 2024, 2025; World Weather Attribution, 2023). Despite being one of the deadliest weather-related health threats (Romanello et al., 2021), extreme heat receives less serious media attention than acute natural disasters (O'Neill et al., 2023). This is perhaps because heat-related injury and mortality are often misdiagnosed and attributed to other causes, making it an underappreciated public health risk (Schiffman, 2024). For the same reason, the global count of heat-related deaths is difficult to estimate. However, research shows that approximately 30% of the global population experiences deadly heat conditions at least 20 days each year—a figure projected to expand to 74% by end of century under a “business-as-usual” (RCP 8.5) emissions scenario (Mora et al., 2017, p. 507).

The impacts of heat exposure can lead to heat-related illness (HRI), which ranges in symptoms from dizziness and nausea to life-threatening heatstroke (Lugo-Amador et al., 2004). Heat exposure is especially relevant in the workplace: conservative estimates suggest around 28,000 workers were injured in 2023 due to environmental heat exposure across all U.S. workers (Alahmad et al., 2025). Likewise, across all U.S. workers, the number of annual hazardous outdoor heat exposure events (measured as one possible exposure per worker per day) is approximately 544 million (Shkembi et al., 2025). Research shows that outdoor workers such as farmworkers, construction workers, and landscapers have a higher risk of health impacts from extreme heat than the general population due to the prevalence of risk factors inherent to the work, including high labor intensity, long hours, sun and heat exposure, and more (Dong et al., 2019; Hawkins & Ibrahim, 2023; Zhang et al., 2016).

Occupational heat protection laws, at their most basic level, require employers to provide guidelines and infrastructure to support workers in avoiding heat hazards without any penalty for the worker, including providing shade, water, breaks, work limits, first aid, and HRI prevention training. Substantive laws are based on strictly defined heat thresholds, and allow workers to report unsafe conditions to a government body that can issue fines to rein in noncompliant employers (EUROGIP, 2023). On the international stage, occupational heat protection policy has been framed as a climate adaptation tool to safeguard the health of outdoor workers, as well as to reduce injury compensation costs and productivity loss amid intensifying heat (Workclimate 2.0, 2025). Several countries have established comprehensive heat standards to protect workers in this manner, including Chile, Costa Rica, Greece, Japan, and South Korea (Adewumi-Gunn, 2021; EUROGIP, 2023; Flouris et al., 2024). Research by Alahmad et al. (2025) has shown that heat safety regulations in states such as California, Washington, and Oregon are likely reducing the risk of heat-related injuries at high temperatures. Farmworkers in the U.S. have been pushing for a national heat protection standard for decades (Union of Concerned Scientists, 2024), but made little progress until 2021, when the Biden administration directed the Occupational Safety and Health Administration (OSHA) to begin developing a law (Jones & Rodriguez-Delgado, 2021). Since the second inauguration of Donald Trump in 2024, however, the fate of that legislation is unclear. The first challenge to the proposed national law came in the form of a preemption bill in late 2025, which was designed to stop OSHA from implementing it entirely (Heat Workforce Standards Act, 2025).

1.1 Outdoor worker demographics and disproportionate harm

Recent statistics show that migrant, immigrant, and Hispanic workers are over-represented in the outdoor construction and agricultural industries compared to the general population (Hawkins & Ibrahim, 2023; U.S. Department of Labor, 2023), and therefore receive a disproportionate share of harm from HRI. Regarding U.S. demographics of farmworkers—in 2024, approximately 80% were foreign born (2 million people) and 33% were undocumented migrants (0.9 million people) (Martin & Rutledge, 2025); in 2021, an estimated 75% of farmworkers were Hispanic (1.9 million people) (U.S. Department of Labor, 2023). Regarding demographics of the construction industry—in 2024, approximately 30% of workers across the industry were foreign born (3.5 million people) and more than half of construction wage laborers were Hispanic or Latin American (1.2 million people) (Bureau of Labor Statistics, 2024; U.S. Census Bureau, 2024a); in 2023, approximately 15% of construction industry workers were undocumented migrants (1.7 million people) (Lisiecki, 2025).

In addition to the disproportionate impact upon these workers at the population level, some studies show a combination of structural factors may exacerbate harm for migrant, immigrant, and Hispanic workers, including poor working conditions, limited healthcare access, and for some, undocumented migrant status (Arcury et al., 2019; Mizelle, Larson, & Doherty, 2022; Zhang et al., 2016). Some outdoor wage laborers report employers penalizing their breaks, even to take a sip of water, and some report a risk of losing their jobs or being deported if they speak up about work conditions (Arnold et al., 2020; Cheney et al., 2022; Kristen et al., 2015; Stoecklin-Marois et al., 2013). Such conditions cause workers to risk their own health without a safety net, while at the same time performing some of the nation's lowest paid work. Structural inequalities such as racism, ethnic marginalization, xenophobia, and poverty also exacerbate harm by impacting mental health and making it difficult to escape precarious and exploitative situations, including health risks in the workplace (Mccallister, 2012; Salinas & Salinas, 2022).

In public health research on outdoor workers in the U.S., the varied categorization of overlapping demographic groups has made synthesizing health outcomes challenging, especially in the context of agricultural labor (Manni, 2023). Labels used to categorize demographic groups may stem from ethnic or racial identity (e.g., Hispanic, Latin American, Indigenous, Black), migration or visa status (e.g., immigrant, migrant, undocumented, H-2A visa holder), country of origin (e.g., foreign-born vs. U.S.-born), or labor orientation (e.g., seasonal, migratory) (Manni, 2023). An individual may fall into several of these categories, and

they may also change over time as the individual settles or moves around. The meaning of the term *migrant worker* is especially tricky and context dependent, as it may indicate either a worker who has entered the country for labor opportunities, or a resident who follows work from place to place within a country. Additionally, some studies have revealed different health outcomes among different demographic groups working the same jobs (El Khayat et al., 2022). As this research is primarily concerned with the labor conditions and rights of outdoor workers, especially those who face a disproportionate risk of HRI, the term *marginalized outdoor workers* will be used to refer to the broad swath of those workers who are sidelined in the U.S. by structural racism, ethnic discrimination, and xenophobia. The term *migrant workers* will be used to refer to foreign-born individuals who are engaged in labor in the U.S., with no presumption of legal status or duration of stay. The term *migrant* will be used broadly in the manner defined by the International Organization for Migration (IOM): to describe anyone who has moved away from their home for any length of time, within their country or internationally, for a variety of reasons (IOM, n.d.).

1.2 Migrant rights in the current political moment

Over the past decade, immigration to the U.S. has been highly politicized by the far-right political movement, which has used racism and ethnic marginalization against primarily Black and brown migrants from the Global South to stoke xenophobia among its constituents (Hout & Maggio, 2021; Misra et al., 2021). As I write, the Trump administration's Department of Homeland Security has deployed federal agents across the country aimed at detaining and deporting undocumented migrants en masse, an aggressive operationalization of this anti-immigrant sentiment (Chishti et al., 2026). Civil rights groups have criticized the administration for breaking laws and employing unconstitutional tactics in the service of its goals, including the mass detention of tens of thousands of people, the detention of children, and the deportation of migrants without due process (American Civil Liberties Union, 2025). In some incidents, Immigration and Customs Enforcement (ICE) agents have targeted individuals based on the color of their skin or their accent, which, alongside their frequently violent and confrontational approach, has instilled fear across migrant communities in the U.S., regardless of their legal status (Hellmann, 2026). ICE has also conducted raids in many of the places where undocumented migrants work, including construction sites and crop fields (Goñi-Lessan & Palm, 2025; Sainato, 2025). These tactics are being employed by a nation that has benefited from—and in more than one sense, has been sustained by—over a century of agricultural labor

by Latin American lawful and undocumented migrants (Mendoza, 2019), and which seeks to expand its foreign labor programs into the future (Martin & Rutledge, 2025).

These alarming events signify the current political moment in the U.S. and set the contextual backdrop for the consideration of migrant labor rights in the country. They also help crystallize some important questions applicable to the wider world: What happens to the rights of migrants and marginalized ethnic groups during a time of widespread anti-immigrant ideology—a trend reflected in many other countries as right-wing populism continues to gain power? In a globalized world, where many of the most undesirable and low-paying jobs are taken on by migrant and marginalized workers, do governments not have the same responsibility to protect them, even as they support a nation's critical infrastructure? Should corporations, employers, and landowners be allowed to continue risking the lives of marginalized workers for capital? In an era increasingly defined by climate crisis, what kind of legislation becomes necessary to protect workers as certain types of labor grow ever more dangerous? Finally, what are the power dynamics at play when governments openly decide to implement policies that fail to protect those workers?

1.3 Florida—a case of extremes

As a region with a propensity for extreme heat (Reidmiller et al., 2018), a large migrant and Hispanic outdoor labor force (Migration Policy Institute, 2023; U.S. Census Bureau, 2024b), and characterized by a right-wing political environment (Ballotpedia, n.d.), the state of Florida is at the frontlines of this debate in the United States. Located in the southeast, Florida is one of the warmest states in the country, with an annual average temperature of 72.3°F (22.4°C) (Powell, 2026). Florida's climate is subtropical in its northern and central regions and tropical in its southern regions, and continues to warm in line with long-term global averages (Powell, 2026). The state has also experienced an intensification of heatwaves: in the summer of 2023, the southern city of Miami experienced a record-breaking 46 consecutive days reaching a heat index over 100°F (38°C) (N. Rivero & Harris, 2023). Climate prediction models suggest most of the state will experience more than 150 days over 90°F (32°C) annually by 2050, based on a business-as-usual (RCP 8.5) emissions scenario (see **Figure 1**) (Reidmiller et al., 2018). This puts Florida in similar territory as southern Texas, California, and Arizona when it comes to climate-induced extreme heat.

With 23 million residents, Florida has the 4th largest economy in the U.S., and if it were a country, its economy would rank 15th in the world (Florida Chamber of Commerce, 2025). Florida's large agricultural and construction industries are disproportionately supported by the

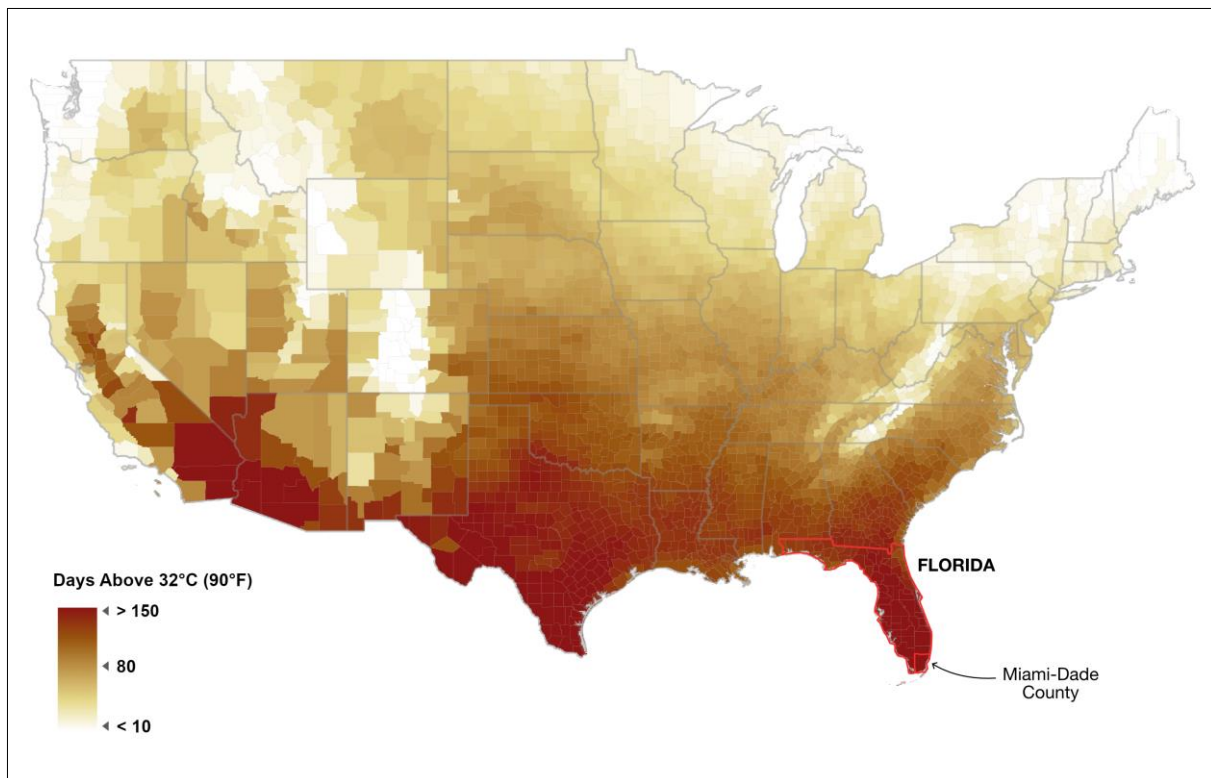


Fig. 1 | Projected days above 32°C (90°F) in 2050, United States. Climate data is projected over the average period of 2036-2065 under the RCP 8.5 emissions scenario, sourced from high resolution LOCA climate models used in the 4th National Climate Assessment (2018). The original 6.5 km resolution gridded data was summarized into means for each county in the U.S. Map source: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS; Data: USGCRP, LOCA at UCSD. Adapted from *Extreme Heat and Immigrant Farmworker Health in the US*, by G. Manni, Climate Mobilities Hub (<https://www.climohub.org/project/extreme-heat-and-immigrant-farmworker-health-in-the-us>).

state's immigrant and Hispanic populations, alongside temporary migrant workers. To provide a measure of these groups among the general population, approximately 23% of state residents were foreign born in 2024, while 26% were Hispanic or Latin American (U.S. Census Bureau, n.d.-a). By contrast, foreign-born workers made up 47% and 38% of the agricultural/mining and construction industries respectively in 2023 (Migration Policy Institute, 2023); likewise, Hispanic workers made up 54% and 45% of those industries respectively in 2024 (U.S. Census Bureau, 2024b).

Since the late 1990s, Florida has been characterized by a conservative, Republican-controlled political environment (Ballotpedia, n.d.). Since the inauguration of Governor Ron DeSantis in 2018, state policy has shifted further toward the right on politically contentious issues such as immigration and climate change. Recent laws signed by DeSantis have ramped up difficult conditions for undocumented migrants living and working in the state (Haverkate, 2025), and one statute removed the term *climate change* from all state law (The Associated Press, 2024). As previously mentioned, Florida's political establishment has taken an oppositional stance to occupational heat protection law. According to reporting from Grist,

“there have been more attempts to pass a heat protection bill in Florida than in any other state—but almost all of them have died without being heard in a single committee meeting” (Rosenfield & Cholakovska, 2023, para. 19). This is despite the fact that Florida leads the nation in reported heat-related illness, with 31,000 heat-related hospitalizations occurring between 2018 and 2022 (Tsoukalas & Sela, 2024). The latest attempt to pass a heat protection bill in Florida came at the municipal level in Miami-Dade County—an ordinance that would have required employers to provide outdoor workers with clean drinking water, access to shade, and rest breaks when the heat index rose above 90°F (32°C), alongside mandating first aid procedures and heat safety training (D. Rivero, 2023). Six months after the Miami-Dade ordinance was introduced, state senators brought Florida House Bill 433 (HB 433) to the floor, a preemptive bill seeking to ban heat protection regulations below the state level (for a legislative timeline, see **Figure 3**). The governor signed the ban in early 2024, removing local authorities’ ability to regulate heat-related working conditions in the county (Employment Regulations, 2024).

As the jurisdiction responsible for triggering the statewide preemption bill, Miami-Dade County demonstrates the breadth of this policy debate across governance scales. Located on the southeastern tip of Florida, Miami-Dade County faces intensified climate-induced heat concerns. The county has historically experienced around 41 days annually with a heat index over 100°F (38°C), but is projected to reach 134 days annually by mid-century, making it one of the country’s most impacted counties in terms of climate warming (Union of Concerned Scientists, 2019). While official records show only a handful of total heat-related deaths in Miami-Dade County, undercounting has impacted figures. The author of two different estimation studies has stated the actual count is likely somewhere between 34 and 600 deaths annually (Harvey & Wittenberg, 2024). **Figure 2** depicts the simplified land use of the region, in which major agricultural areas including crop farms and greenhouses sit between vast natural conservation areas and urban development spreading outward from the city of Miami. There were an estimated 320,000 outdoor workers in the county as of 2023, working primarily in agriculture and construction (Creating a Heat Standard for Outdoor Workers, 2023). With a population of 2.7 million, latest census figures for Miami-Dade show approximately 55% of the population is foreign-born and 69% are Hispanic or Latin American (U.S. Census Bureau, n.d.-b). In terms of government structure, Miami-Dade County is run by an elected board of commissioners. These commissioners began deliberating the local heat protection ordinance in July 2023 due to mounting pressure following a years-long campaign by immigrant-worker-led

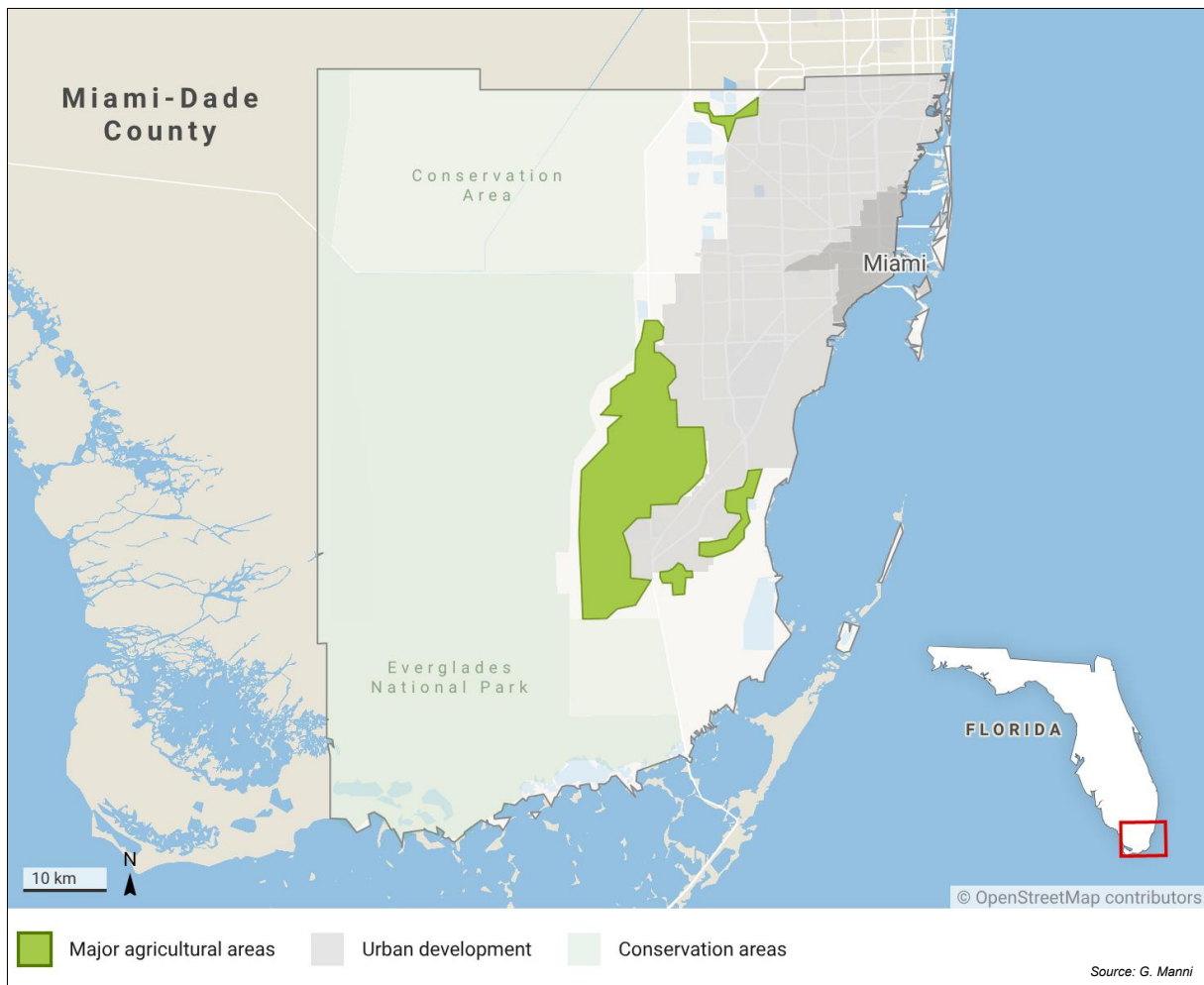


Fig. 2 | Map of Miami-Dade County, Florida. Area designations are based on land use records.
 Data: *Miami-Dade Land Management: Existing Land Use*, Miami-Dade County, 2026
 (<https://gisweb.miamidade.gov/landmanagement>). (Image by author)

nonprofit WeCount! (D. Rivero, 2023), as well as the death of Guatemalan farmworker Efraín López García. By the time the ordinance was withdrawn in 2024, however, the legislation had been watered down due to opposition from industry voices, and deliberation had been deferred to a later date (N. Rivero, 2023c).

1.4 Purpose & structure

This master's thesis aims to understand the power dynamics central to the struggle for occupational heat protections in the state of Florida—a region where workers could particularly benefit from heat standards, but where efforts to implement them have been stymied by strong political opposition. It will do so by surveying the public discourse in news, policy, and advocacy circles pertaining to three legislative bills on occupational heat protection in the state. To that end, this thesis will address the following research question: **What does the public**

policy debate over occupational heat protections for outdoor workers in Florida reveal about the power dynamics between the workers, advocates, and politicians involved?

Sub-questions:

- SQ1: Who are the primary stakeholders and what power do they have?
- SQ2: Which are the dominant narratives and debates in the public discourse?
- SQ3: Which discursive strategies were employed to limit or expand the establishment of occupational heat protections?

By examining this case of political opposition to heat protection standards, this research will contribute a typology of arguments, strategies, and framings employed by actors surrounding occupational health-, migrant labor-, and climate adaptation policymaking in Florida. Findings may be helpful in understanding power dynamics in other places where marginalized working populations bear a disproportionate environmental burden. By contributing to a deeper understanding of the policy debate, this study also seeks to support the realization of environmental justice for outdoor workers on the ground.

The structure of this master's thesis is as follows: The next chapter reviews the current state of the art, which encompasses a brief history of farm labor migration and migrant labor rights organizing in the U.S., an overview of the research on HRI among outdoor workers in the U.S., the status of occupational heat protection policy in the U.S. and around the world, and key studies on power, heat, and health. Chapter 3 describes the theoretical underpinnings of the work in political ecology and critical environmental justice. Chapter 4 lays out the methodology, describing the data collection process, the application of the qualitative content analysis and stakeholder analysis, and my positionality as a researcher. Chapter 4.2, which describes the document search protocol, also includes an overview of the legislative timeline covered in this work. The analysis and results are presented in Chapter 5, including a breakdown of the stakeholders in Florida's heat protection policy debate, descriptive statistics of the qualitative dataset, and five overarching themes that arose from the public discourse. Chapter 6 provides an interpretation of the results in relation to the existing research landscape, as well as research limitations, future directions, and policy recommendations, followed by the conclusion in Chapter 7.

2 | State of the Art

There is a large and growing body of literature addressing heat stress and HRI as a matter of public health, with many research studies incorporating the effects of climate change,

addressing existing legislation and regulatory frameworks, and focusing on outdoor workers as a population of interest, with a large proportion of the literature focusing specifically on U.S. farmworkers. There is also growing interest in the development of workplace heat protection regulations as a facet of occupational safety and health governance, and efforts to implement such measures are well-documented in many countries and state/provincial governments. While drawing on these areas of research, this thesis seeks to incorporate the perspectives of marginalized outdoor workers, including migrant and Hispanic workers—actors who have been organizing for labor rights in the U.S. for decades (Perez, 2020). As such, this review of the relevant literature begins with an overview of the recent history of farm labor migration and migrant labor rights efforts in the U.S.

2.1 A brief history of Mexico-U.S. farm labor migration and migrant labor rights organizing

There is a long history of labor rights organizing among migrant outdoor workers in the U.S., particularly within the farmworker movement. Before reviewing some key moments of this history, it's important to examine how the current pattern of U.S. agricultural labor migration was established to begin with. While migrants from many countries have long undertaken farmwork in the U.S., Mexico-U.S. farm labor migration has played an influential role in the history of both countries, and is used here as a basis for understanding. Today, a majority of the 2 million foreign-born farmworkers in the U.S. come from Mexico (U.S. Department of Labor, 2023). Though migration dynamics between the U.S. and Mexico are influenced by a range of geopolitical, economic, and social factors, researchers cite the large wage gap between the two countries as a primary driver of emigration to the U.S. (Carrión-Flores, 2018; Chiquiar & Hanson, 2005; Hanson & Spilimbergo, 1999). The low barrier of entry and high employment demand of the U.S. agricultural sector is a draw for many migrant workers (Kocchar, 2005), who often find their way to employment opportunities through pre-existing social connections (Carrión-Flores, 2018). The pattern of hiring migrant workers to meet the U.S. agricultural labor shortage began in the southwestern U.S. during the onset of World War I as many of the country's own agricultural workers left to fight in the war, and has become further ingrained over the last century (Mendoza, 2019).

While immigration waned between the first and second world wars, the farm labor shortage returned with the beginning of World War II (Mendoza, 2019). Foreign labor programs were instated to meet the demand, such as the Bracero Program, which brought 4.6 million Mexican workers to the U.S. for temporary farm labor between 1942-1964 (Garip, 2012).

Foreign labor recruitment also had another outcome: depressed wages for workers (Martin, 2020). During this time, many migrant farmworkers received little pay in return for long days toiling away in hot and dangerous conditions (Perez, 2020). Many workers had little access to drinking water, were not provided bathrooms, and were given little to eat (Mendoza, 2019; Perez, 2020)—one farm owner in northern California admitted to feeding his workers beef from sick cattle (Mendoza, 2019). Farmworkers were also subject to long-term exposure to pesticides and other toxic chemical agents, resulting in poisonings and adverse health effects like vomiting, rashes, and muscle spasms (Gordon, 1999). Migrant workers were also often housed in dilapidated structures without plumbing (García-Colón, 2008; Perez, 2020), all of which resulted in sickness and death for many migrant farmworkers (Mendoza, 2019).

Many years of migrant worker exploitation led to unrest in the 1960s and 70s, which exploded into a migrant labor rights movement in the U.S., with hotspots in California and New York (García-Colón, 2008; Perez, 2020). Back in 1935, the National Labor Relations Act had institutionalized workers' rights to form labor unions, formalized negotiation processes, and protected workers from retaliation, but critically, it had excluded farmworkers (Greco, 2023). This meant migrant farmworkers could not rely on the state to enforce negotiations between workers and owners, and had to find alternative means to exercise pressure. One of the first successful instances of migrant worker organizing came with the Delano Grape Strike in California in 1965, started by union organizer Larry Itliong and around 1,000 Filipino farmworkers from the Agricultural Workers Organizing Committee (AWOC) (Perez, 2020). The Mexican-American farmworker union National Farm Workers Association, co-led by Dolores Huerta, joined forces with AWOC and other unions to form the United Farm Workers (UFW) (Perez, 2020). According to historian Luke Perez (2020), “the UFW led peaceful pickets of the grape fields, convinced strikebreaking workers to join the strike, marched 300 miles to Sacramento, and organized grassroots and community boycotts of grapes and grape products throughout the United States” (para. 6). The five-year strike led to the first contract between farmers and a farm labor union in the U.S., leading to higher pay and improved working conditions (Perez, 2020). In New York in 1966, Puerto Rican farmworkers facing segregation, discrimination, poor living conditions, and police brutality in the town of North Collins were prepared to start a riot against local officials and set the town on fire (García-Colón, 2008). After a mediator stepped in, they staged a protest instead, resulting in some wins for the Puerto Rican workers, including the shuttering of some of the labor camps, the opening of a migrant center, and a new realization of power among the growing Puerto Rican community (García-Colón, 2008).

Up through the 1970s, labor market conditions between the U.S. and Mexico continued to foster a large influx of Mexican migrants for agricultural labor, which by that time had come to be defined as undesirable “immigrant jobs” by the U.S. public (Garip, 2012, p. 413). Up until stark immigration reform in 1986, migration restrictions had been relaxed for Mexican farmworkers due to their central role in the country’s agricultural economy, allowing millions of undocumented Mexican migrants to enter the U.S. over the decades (Garip, 2012). In the years to follow, most of those who migrated from Mexico were individuals with family and community ties in the U.S., which was followed by a large proportion of highly educated urban migrants working manufacturing jobs in the mid-1990s (Garip, 2012). As in decades prior, a majority of farm labor in the country today is undertaken by migrants, immigrants, and seasonal workers—some that are naturalized U.S. citizens, some that arrive through temporary work visa programs, and some that are undocumented (Martin & Rutledge, 2025). Some of the same hazardous and exploitative working conditions experienced by migrant workers in the mid-1900s continue to impact workers three-quarters of a century later (Heine et al., 2017; López-Gálvez et al., 2021; Mills et al., 2009; Mizelle, Larson, Bolin, et al., 2022). Migrant farmworker organizing by groups such as the UFW has continued, but has changed shape as the rise of labor contractors and guest-worker visa programs has limited the leverage between workers and farm owners (Greco, 2023). In recent years, the Coalition of Immokalee Workers (CIW), a worker-led human rights organization based in Florida, has had success in reducing modern day worker slavery and implementing protections and wage increases in certain produce operations across the U.S. (Coalition of Immokalee Workers, n.d.). By pressuring large retailers to buy produce only from growers complying with the CIW’s Fair Food Program, the organization has been able to ensure better working conditions for workers, beginning with Florida’s tomato industry and expanding to many other farm operations in other states, and even internationally (Coalition of Immokalee Workers, n.d.).

2.2 Heat-related illness among outdoor workers in the U.S.

According to the extensive public health literature on heat stress and heat-related illness (HRI) in the U.S., outdoor workers are especially impacted by this growing health risk (Dong et al., 2019; Ebi et al., 2021; Hawkins & Ibrahim, 2023). Working long hours in the extreme heat without taking the proper precautions can lead to symptoms of HRI (Lugo-Amador et al., 2004). These symptoms may include the following: dizziness, headache, profuse sweating, rapid pulse, thirst, swelling of the hands and feet, painful muscle spasms or cramps, nausea or vomiting, weakness, fainting, or exhaustion (Lugo-Amador et al., 2004). The worst cases can

lead to life-threatening heat stroke, which may cause hyperventilation, delirium, hallucinations, stumbling or shaky movements, erratic behavior, seizures, coma, acute kidney failure, and death (Lugo-Amador et al., 2004). Rates of heat-related mortality are difficult to track among the population, since HRI and mortality are often attributed to other causes, leading to significant undercounts (Schiffman, 2024). Using the counts provided, however, one U.S. study showed that heat-related death was 35 times more likely for agricultural workers and 13 times more likely for construction workers compared to other occupations (Gubernot et al., 2015). Studies have shown this trend follows for heat-related injuries and illness, with the highest rates impacting workers in “farming, fishing, and forestry; installation, maintenance, and repair; and construction/extraction occupations” (Hawkins & Ibrahim, 2023, p. 401). Due to farmworkers’ exposure to heat, sunlight, and dust, alongside agricultural chemicals such as fertilizer, pesticides, and fumes, they also experience higher rates of kidney disease (López-Gálvez et al., 2021) and some forms of cancer (Mills et al., 2009).

Furthermore, studies examining demographic disparities in occupational heat exposure and HRI in the U.S. have shown that Hispanic, Black, and foreign-born workers are disproportionately affected (Hawkins & Ibrahim, 2023; Shkempi et al., 2025). One study examining heat-related deaths among U.S. construction workers between 1992-2016 found that Hispanic workers had elevated rates of heat-related mortality, and that the rate for foreign-born workers from Mexico was nearly double that of all construction workers (Dong et al., 2019). As previously explained, industries like agriculture and construction frequently employ foreign-born as well migratory workers who move from place to place following employment opportunities. Marginalized outdoor workers often experience structural factors which can exacerbate health risks, such as poor working and living conditions, limited access to healthcare, or undocumented status (Arcury et al., 2019; Mizelle, Larson, & Doherty, 2022), alongside systemic inequalities such as racism, xenophobia, and poverty (Mccallister, 2012; Salinas & Salinas, 2022; Snipes et al., 2017). One farmworker case study in Colorado found that, for male migratory farmworkers, medical clinic visits increased by 118% on hot days—an effect not seen in local seasonal farmworkers (Zhang et al., 2016). Several studies examining the work environments of migratory farmworkers revealed they often work under exploitative conditions that have a negative impact on heat-related health outcomes, including having inadequate housing (Heine et al., 2017; Mizelle, Larson, Bolin, et al., 2022), limited access to clean drinking water (Mizelle, Larson, & Doherty, 2022), or the ability to take breaks (Arnold et al., 2020). However, a literature review of research on heat stress among marginalized farmworkers in the U.S. showed that working conditions differ across farms, states, and produce

industries, with some conditions being safer than others, making this factor challenging to compare (Manni, 2023).

Recommended precautions to avoid HRI in the workplace include environmental monitoring, adequate hydration, taking rest breaks in cool areas, slow acclimatization to the working environment, changing work times to avoid the hottest hours of the day, using personal protective equipment, and using sunscreen and breathable clothing to counter sun exposure (Idris et al., 2025; Luque et al., 2020). Public health researchers have recommended several preventative measures and solutions to counteract HRI in outdoor workers, including HRI training for employers and employees, mandating worker acclimatization, improving housing conditions, improving worker-employer relationships, and more structural shifts such as addressing health care inequality and poverty (Krenz et al., 2021; Mizelle, Larson, & Doherty, 2022; Tigchelaar et al., 2020). In their research, many scientists recommend the establishment of workplace heat standards and regulations in order to protect outdoor workers from the worst effects of HRI (Kearney et al., 2016; Krenz et al., 2021; Mirabelli et al., 2010; Mizelle, Larson, Bolin, et al., 2022; Mizelle, Larson, & Doherty, 2022; Tigchelaar et al., 2020), including implementing programs across multiple levels of governance, creating equitable policies that protect disproportionately affected workers, and addressing workplace heat protection as a fundamental human right (Anderson, 2024; Arnold et al., 2020; Dong et al., 2019; Greco, 2023; Idris et al., 2025). Studies based in Florida have made similar policy recommendations (Luque et al., 2020; Mutic et al., 2018; Rudner et al., 2025).

2.3 The status of national and international occupational heat protection policy

Several international organizations have communicated that establishing heat protection measures for workers is of critical importance as extreme heat intensifies due to climate change, including the World Health Organization (WHO), World Meteorological Organization (WMO), International Labor Organization (ILO), and European Trade Union Confederation (Flouris et al., 2024; WHO & WMO, 2025). Additionally, in recent years major research projects dedicated to workplace heat stress have scoured the policy environment, run experiments, modeled future scenarios, and produced recommendations for keeping workers safe, such as the EU-funded Horizon 2020 research project HEAT-SHIELD, followed by projects Workclimate and Workclimate 2.0 (Workclimate 2.0, 2025). Across these reports, researchers demonstrate that occupational heat standards not only safeguard worker health, but from an economic perspective, limit productivity loss and reduce costs over time. Research by Foster et al. (2021) shows that workers lose approximately 10% of their physical work capacity starting at a heat

index of 18°C (64°F), and by 40°C (104°F), they lose as much as 78%. In economic terms, reduced work capacity translates to reduced output for the employer. At the same time, injured workers who file compensation claims increase the cost of insurance paid by employers (Flouris et al., 2024). According to the ILO, the global economic loss due to reduced productivity and injured workers' compensation as a result of workplace heat stress amounts to approximately 361 billion USD each year (Flouris et al., 2024). In addition, the ILO found that effective workplace protection measures such as providing water, shade, breaks, and heat acclimatization can be simple and affordable for employers to implement (Flouris et al., 2024). Through these economic incentives, the research shows that well-enforced heat standards can benefit workers, employers, and the economy.

Many countries have already implemented heat protection standards or are in the process of doing so, though some policies are more substantive than others. As a governing body, the European Union only briefly mentions temperature with regard to indoor work, and has not set a maximum acceptable temperature for the workplace (EUROGIP, 2023). Within the EU, Germany, Latvia, and Portugal have some protections in place, but mainly for indoor workers, while Austria, Cyprus, Belgium, Slovenia, and Spain have implemented limited measures that include outdoor work settings (EUROGIP, 2023; Flouris et al., 2024). In the Middle East, several countries prohibit outdoor work at peak times of day during the warmer months, including Oman, Saudi Arabia, and UAE (Flouris et al., 2024). Chile, Costa Rica, Greece, Japan, and South Korea have implemented more comprehensive workplace heat protections across the board, including measures such as providing water, shade, rest breaks, employee training, first aid, and personal protective equipment, as well as assuring worker acclimatization to heat, all based on defined heat exposure thresholds (Adewumi-Gunn, 2021; EUROGIP, 2023; Flouris et al., 2024).

In the U.S. and Canada, there are no national heat protection standards for outdoor workers, though a number of individual states and provinces of both countries have implemented their own (EUROGIP, 2023). In 2021, the Biden administration directed the Occupational Safety and Health Administration (OSHA) to form a federal heat protection standard in the U.S., a task which continues to be influenced by political pressures (Jones & Rodriguez-Delgado, 2021). Concerning U.S. states, only California, Oregon, and Washington have implemented comprehensive measures for outdoor workers based on defined heat thresholds, while Colorado has a heat standard for agricultural workers only (Occupational Safety and Health Administration, n.d.). In California, for example, shade, water, and HRI training for managers and workers must be provided at all times, and at temperatures above

35°C (95°F), employers must implement measures such as rest breaks, mandatory peer monitoring among workers, and reviewing high-heat procedures (Cal. Code Regs. Tit. 8, § 3395, 2006). States such as Maryland, Minnesota, and Nevada have recently implemented outdoor standards, though without strict heat thresholds, while several other states are considering legislation (Work Comp Advisory, n.d.). Like Florida, the state of Texas in 2023 issued a statewide preemptive ban on outdoor heat protection at the local level, and has not implemented any policy at the state level (Seemuth, 2023).

On a national scale, research shows that states' implementation of heat safety regulations is likely reducing the risk of heat-related injuries among the U.S. population (Alahmad et al., 2025). It should be noted, however, that the existence of regulations hasn't automatically translated to safe working conditions for workers on the ground. Farmworkers in California argue the state's policy isn't working as intended due to lack of legal enforcement (Mays, 2024)—a claim backed up by one medical study examining HRI risk among Latino farmworkers on policy-compliant farms in California (Langer et al., 2021), and another study that observed employers pushing the responsibility of occupational health back onto workers (Wadsworth et al., 2019). If a state's OSHA department is understaffed and overloaded with complaints, or if the department simply overlooks workers' concerns, as alleged by California farmworkers, heat regulations are unlikely to improve health outcomes. Additionally, despite regulations in Washington state, Sophia Anderson (2024) argues that employers there can still use law enforcement to retaliate against undocumented farmworkers who try to raise a formal complaint.

2.4 Key studies on power, heat, and health

Beyond these strands of the research landscape, this thesis draws on three papers in particular that examine the power dynamics between governments, outdoor workers, and employers as they relate to heat protection standards. In his paper, environmental law researcher Luca Greco (2023) outlines the many challenges U.S. farmworkers face in leveraging power to secure labor rights. Using an environmental justice framework, Greco argues that the exclusion of the agricultural industry from foundational federal labor protections such as the National Labor Relations Act (NLRA), which have barred farmworker unions from utilizing traditional government-backed bargaining power, have left farmworkers “with limited rights and resources to advocate for themselves in the face of hazardous and exploitative working conditions” (p. 311). Greco contends that the incorporation of farmworkers into the NLRA could grant them

the leverage to combat the many environmental injustices they face, including heat in the workplace.

In the article titled “Labor Rights in the Anthropocene,” Sophia Anderson (2024) uses an environmental justice perspective to examine the ineffectiveness of Washington’s heat standard for undocumented farmworkers. She unpacks the power-laden interactions between employers, workers, and law enforcement, explaining how employers use the threat of deportation to stop undocumented workers from reporting poor labor conditions (Kristen et al., 2015). She advocates extensive regulatory avenues to strengthen workplace protections for these particularly vulnerable migrant workers, including the creation of laws that would penalize employers for retaliatory practices. Anderson additionally advocates moving the state’s heat exposure threshold from 90°F (32°C) to 84°F (29°C), based on the scientific consensus of HRI risk.

Wadsworth et al. (2019) conducted a qualitative analysis of focus group discussions with farmworkers in California, aiming to understand why HRI is still prevalent among workers in the state despite the fact that California has had heat standards in place since 2006. Their results point to a number of factors likely influencing HRI outcomes, many of which are rooted in worker-employer power relations. These include employers engaging in subtle power plays such as withholding information from workers, the use of piece-rate pay as opposed to an hourly wage, which disincentivizes taking breaks, and the classification of “good workers” (p. 223) as those who work harder and take less breaks. Despite the existence of state heat regulations, Wadsworth et al. argue that these other forms of control enacted by employers have allowed them to shift the responsibility for HRI to the workers, who often could not exercise appropriate self-care due to material or social penalties. Like Greco and Anderson, Wadsworth et al. argue that U.S. farmworkers currently have little to no agency in the workplace, and conclude that “the choices workers make rely on an industry structured to thrive on an essentially powerless underclass” (p. 231). While there is less research tying worker-employer power dynamics to environmental injustice in the construction industry, Mark Erlich (2021) explains how construction workers have also experienced a decline in bargaining power due to the strategic use of non-union independent contractors.

This review of the current literature on labor rights, HRI, and heat protection policy for outdoor workers in the U.S. has shown limited research assessing the power relations between stakeholders regarding the implementation of heat protection standards, though the papers by Greco, Anderson, and Wadsworth et al. shed light on the topic. This thesis contributes another angle to the existing literature on power by assessing the public discourse surrounding outdoor

workers' organizing efforts and the intentional regulatory gap created by the state legislature in Florida. As stated previously, this research provides a typology of arguments, discursive strategies, and framings employed by actors in this debate, which may contribute to an understanding of the narratives used by actors in other environmental justice debates, especially those concerning labor rights and occupational health.

3 | Theoretical Framework

3.1 Political Ecology

The field of political ecology has been defined variously as it has evolved, but principally, it is concerned with the politics of nature and the environment, and has been applied across a range of contexts where human-environment interactions are tempered by structural power (Robbins, 2020). According to Perreault et al. (2015), political ecology research is more than a single theory or perspective, but is marked by a common commitment to “critical social theory,” to “in-depth, direct observation involving qualitative methods,” and to a “normative political commitment to social justice and structural political change” (pp. 13-14). Critical social theory, or critical theory, is a fundamental theoretical lens which views reality and knowledge as socially constructed and shaped by societal power relations (Scotland, 2012), and which “focuses on deconstructing how knowledge is produced, whose knowledge is valued, and how control of such knowledge equates to power in society, with the purpose of preventing people from becoming slaves to the ideas and activities that societal institutions push upon them” (Ryoo & McLaren, 2010, p. 348). Thus, the goal of political ecology is “not just to explain social and environmental processes, but to construct an alternative understanding of them, with an orientation toward social justice and radical politics” (Perreault et al., 2015, p. 14). This understanding provides another way of describing the underlying purpose of this research study: to go beyond an explanation of the disproportionate risk of HRI by interrogating the socio-political drivers behind who gets harmed by heat, with an eye on social justice and political change.

According to Jason Roberts (2020), political ecologists study the following key areas: “the central relationships between environmental degradation and social marginalization, the causes of environmental conflicts over changing patterns of access to and control of resources, and the fundamental connections between place, identity, and social movements” (p. 2). Applied to particular case studies, political ecology tends to examine broader structural forces as they bear down on the local level, looking at for example, the expulsion of an Indigenous

people group from their land as outside actors seek to establish a nature conservation area, or the class conflict that erupts when a garbage dump is built on the outskirts of a city where housing is cheapest (Robbins, 2020). By looking at the small scale up to the large scale, Roberts (2020) states that a political ecology approach often brings to the fore “the role of capitalist markets and state forces in such processes of local dispossession and environmental disruption” (p. 1). By focusing on the local level in Florida’s heat protection policy debate, and by interrogating how state politics have influenced the outcome for outdoor workers, we can get a sense for which broader structural forces are involved, such as the state government or industry voices.

In his critical introduction to political ecology, Paul Robbins (2020) explains another foundational concept: that political ecology runs counter to the idea of “apolitical ecologies” (p. 13), or the notion that ecological systems operate neutrally, with no impact from or upon politics. Comparing these two viewpoints, he states, “this is the difference between identifying broader systems rather than blaming proximate and local forces; between viewing ecological systems as power-laden rather than politically inert” (p. 13). In our case, an apolitical stance might look like blaming heat injury on the outdoor worker for not drinking enough water, or claiming that death as a result of an extreme heat wave is statistically inevitable. Political ecology would instead examine how power plays a role in producing this outcome. In his explanation, Robbins also points to the idea that supposedly *apolitical* approaches to the environment commonly employ capitalist logics, such as the assertion that economic growth is paramount when confronted with the consequences of carbon emissions, or the assertion that deregulation of labor and environmental controls keeps the free market functioning most efficiently. Robbins contends, however, that the rhetorical use of the *apolitical* in this manner is still entirely political.

In what manner can political ecology be applied to the public discourse in Florida’s heat protection policy debate? A central question posed by political ecologists, according to Roberts (2020), helps as a starting point: “whose use of, claims to, and/or perceptions of the environment prevail, and why?” (p. 2). When considering a labor context across different industries such as agriculture and construction, what constitutes *the environment* is not immediately clear. A farmworker may work on crop fields directly owned and managed by a farmer, while a construction worker may be dispatched to many different locations, typically to the land of a property owner who has contracted the construction company. However, the land itself is not the focal point in this case study—across different labor contexts, the interaction between outdoor workers and the environment centers around the risk of heat. These human-

environment interactions are tempered by employers, who have control over, or *claims to*, workers' behavior within the environment while they are on the job. For example, a construction worker installing the roof on a new home may be under time pressure to finish the job despite direct sun exposure and oppressive temperatures; whether the construction worker keeps their job may mean working long hours in the heat without a break to finish the roof on time. From a political ecology lens, then, the heat itself is a force and representation of the environment. Furthermore, the worker *uses* the environment as a workplace, whereas the employer *uses* the environment as a parameter within which to build capital. For the worker, the heat becomes a dangerous working condition, while for the employer, it may only be a barrier to productivity. Through the opposing policy stances of the actors involved—whether or not heat is a legitimate health risk worth addressing through regulations—the risk of heat becomes politicized. Returning to Roberts' question, the consideration of *perceptions* stands out as particularly relevant in the context of a policy debate, since one's perceptions tend to influence one's political arguments, and are then expressed in public discourse. Translating the question with this new understanding, we arrive at a more grounded view of how to filter the analysis through the lens of political ecology: whose perceptions of the heat prevail, and why?

3.2 Critical Environmental Justice

In addition to political ecology, the lens of environmental justice theory is used in this thesis to analyze particular aspects of inequality relating to the distribution of environmental harm, the distribution of power in decision-making, as well as to help understand whether workers on the ground are seeking other avenues to solve the issue of HRI in the workplace beyond institutional remedies. The environmental justice movement grew out of the civil rights and environmentalism movements of the 1970s and 80s, and has since become an interdisciplinary research field spanning many disciplines, include sociology, geography, epidemiology, environmental law, and political science (Mohai et al., 2009). The meaning of environmental justice, according to the U.S. Environmental Protection Agency (2024), is “the just treatment and meaningful involvement of all people” in decisions “that affect human health and the environment, so that people are fully protected from disproportionate and adverse human health and environmental effects,” including those related to “the legacy of racism or other structural or systemic barriers” (para. 5). *Justice* in this context does not refer to the legal workings of the *justice system* such as those discussed in environmental law, but rather to the broader principles of fairness and equity in society.

Throughout its use in scientific research, environmental justice framing has expanded from simple spatial analysis to encompass a wider range of methodologies, geographies, and justice considerations (Schlosberg et al., 2024). What began as a field primarily concerned with distributive justice, or the equal distribution of environmental benefits and burdens, has grown to encompass further forms of justice, including what are termed “recognition justice,” “procedural justice,” and the “capabilities approach” (Menton et al., 2020, p. 1624). Recognition justice, according to Menton et al. (2020), is the “recognition of collective identities and their particular concerns, needs, and livelihoods in relation to nature and the environment” (p. 1624). Put another way, the existence of an injustice and the population it affects must first be acknowledged before it can be addressed. Procedural justice, sometimes referred to as “participatory” justice, refers to the inclusion of all affected groups, including especially marginalized people groups, in institutions and decision-making processes concerning the distribution of environmental benefits or burdens (Menton et al., 2020, p. 1624). Finally, the capabilities approach in environmental justice looks at whether individuals have the capacity or opportunity to “function fully” or even “flourish” in relation to the distribution of environmental goods, services, and harms (Menton et al., 2020, p. 1624).

These threads of environmental justice theory can be applied to the topic at hand. Distributive injustice in the context of this study can be understood as the disproportionate impact of heat-related illness upon all outdoor workers, and particularly marginalized outdoor workers, in comparison to other groups (Greco, 2023; Hawkins & Ibrahim, 2023; Shkembi et al., 2025). This distributive injustice forms the basis of this research and is not the target of its analysis; rather, the target is the injustice inherent to the intentional creation of a regulatory gap in occupational heat protection by Florida’s Republican political establishment. Here, a recognition justice approach might ask: is outdoor workers’ concern of heat-related illness acknowledged as a problem by stakeholders in power? A procedural justice approach might ask: were marginalized outdoor workers excluded from a policymaking process that concerned their own health and wellbeing? The capabilities approach might ask: does the combination of HRI risk, exploitative working conditions, and structural inequalities limit the ability of marginalized outdoor workers to live healthy, dignified lives? Some of these aspects of environmental justice cannot be assessed through an analysis of public discourse alone. While some facet of each of these may be highlighted in the statements made by stakeholders, this thesis puts its focus on recognition injustice, which can be assessed through stakeholder statements directly, as well procedural injustice, which can be assessed by examining the broader patterns of influence by stakeholders upon the policymaking process.

One strand of recent environmental justice scholarship has also sought to incorporate critical social theory by taking the field in the direction of “critical environmental justice,” which emphasizes a plurality of perspectives and critiques structural power dynamics (Schlosberg et al., 2024, p. 7). Based on the book *What is Critical Environmental Justice?* by David Pellow (2018), Schlosberg et al. summarize a list of priorities meant to address the limitations of earlier approaches to environmental justice research, including:

- “(1) A focus on social categories of difference (race, class, gender), and, crucially, on their intersectionality in the study of disadvantage and injustice;*
- (2) Examining the causes, impacts, and responses to environmental injustice at multiple scales;*
- (3) Acknowledging and addressing the entrenched and embedded nature of power, including state power;*
- (4) Critiquing the perceived expendability of both humans and nonhumans in the eyes of capital.”* (Schlosberg et al., 2024, p. 8)

In addition, critical environmental justice acknowledges that previously, the “vision of change” espoused by environmental justice scholars and activists typically meant turning to “the state and capital to accommodate demands via legislation, institutional reforms, and other policy concessions” (Pellow, 2016, p. 4). In practice, this has meant depending on the cooperation of the very same institutions responsible for the injustice to begin with. In a critique on justice approaches to environmental racism, Pellow (2016) argues that, so far, “the track record of state-based regulation and enforcement of racial and environmental justice policies in communities of color has been abysmal” (p. 10). Critical environmental justice instead aims to look beyond capital and state-based remedies to modes of self-governance that circumvent the injustice entirely. This research aims to incorporate aspects of each of these priorities, though the data and research methods limit what can be addressed. Social categories of difference (1) are acknowledged in the research population by paying particular attention to different marginalized groups, however the ability to identify the social categories of individual stakeholders is limited, since the data comprises statements pulled from news articles and advocacy documents. The causes, impacts, and responses to environmental injustice (2) are borne out in the analysis, which also incorporates a multi-scalar approach by way of the policy environment spanning both Miami-Dade County and Florida’s state government. Power dynamics between the stakeholders (3) are addressed by analyzing the public discourse and

stakeholders involved. The perceived expendability (4) of migrant, immigrant, and Hispanic workers in the U.S. despite their intrinsic value as human beings and their contributions to the functioning of the U.S. and its economy was one of the central tensions that drew me to this topic. In addition, the analysis seeks out methods used by stakeholders aiming to bring about more systemic change beyond the actions of the liberal state. One aspect of this is simply examining the power dynamics between stakeholders to understand how systemic changes could come about. However, there may also be specific solutions or approaches raised by stakeholders that circumvent state and capitalist power, and they are acknowledged as a part of the plurality of environmental justice approaches.

4 | Methodology

4.1 Data Collection

As previously mentioned, the state of Florida makes for an important case study due to its great potential to benefit from occupational heat standards, while at the same time exhibiting staunch political opposition to such laws. The recent legislative conflict between Florida's state government and Miami-Dade County created a flashpoint in the policy debate from which an outpouring of reactions entered the public discourse. These reactions were collected by searching for public statements referencing the three different legislative bills wrapped up in the legislative conflict. This sampling approach allows for a high volume of statements from a wide range of stakeholders, including the viewpoints of individuals such as workers and politicians, as well as industry and advocacy organizations. By collecting statements that represent opinions, reactions, and talking points on both sides of the policy debate, this approach assures that the data represents dominant narratives spoken by and communicated to the public.

The data comprises 249 stakeholder statements originating from 65 news articles and 28 advocacy documents (letters, press releases, petitions, website text, op-eds, and blog posts). Statements collected from news articles average around five sentences in length, while statements from advocacy documents are typically several paragraphs. The documents used in this study were published between June 2023 to September 2024. Of the statements for all three bills, many stakeholders are represented, including:

- 44 organizations (plus approx. 87 other organizations that co-signed advocacy letters)

- 27 state & local politicians (including 15 Democrats and 11 Republicans)
- 28 Florida outdoor workers (19 listed as farmworkers, 5 as construction workers, and 16 as migrant workers)
- 10 other individuals (organizers, scientists, business owners, plus approx. 120 other activists and healthcare professionals who made group statements)

The data were collected following a total purposive sampling strategy, meaning the collection of all available statements which met the following criteria: (1) statements from news sources and advocacy documents (2) pertaining to three related legislative bills addressing heat stress protection for outdoor workers in Florida between 2023-2024, (3) excluding: statements from individual academics and scientists unless they commented specifically on the policy debate, and statements from politicians outside of Florida. This exclusion was used to filter out individuals that don't meet the definition of relevant stakeholders in the research context. Documents were collected through an iterative process of Google searches and document capture, followed by screening for relevant statements, stakeholders, and other linked documents, which led to the next round of Google searches, and so on (an in-depth explanation of the search protocol can be found in the next section). To collect stakeholder statements from news coverage, quotes by relevant stakeholders were scraped from news articles, and the stakeholders were noted down. All direct quotes from stakeholders pertaining to the policy debate were collected, in addition to any supporting contextual information about the speaker. Duplicate statements across news articles were removed.

Formal statements published on websites and blogs by advocate/lobby organizations, businesses, and individuals were also considered an important source of data. These statements were collected in the form of *advocacy documents*, which I define in the context of this study as any public-facing text written by a stakeholder for the purpose of advancing their own interests, including letters, petitions, press releases, reports, op-eds, blog posts, legal testimony, website text, or accompanying audio/video transcripts. Screening for advocacy documents followed the same protocol listed above, except that the entire document was considered a stakeholder statement rather than scanning for direct quotes. Messages conveyed through social media or other forms of visual media were excluded from the document pool to maintain a more uniform data format and source context, which allows for more consistent analysis.

4.2 Search Protocol

Preliminary research indicated the existence of Florida House Bill 433 (HB 433), which was signed into state law under the title *Employment Regulations* on April 11, 2024 (Employment Regulations, 2024). A first Google search was conducted to discover news articles pertaining to HB 433 six months before and after its signing from Sept. 2023-Sept. 2024, of which the top 50 results were screened. If the news articles linked to other relevant articles within their texts, those articles were also screened for statements. The search string was designed to capture a broad swath of commentary on this political debate, using all of the following terms: *Florida, bill, heat, work*, and any of the following terms: *protection, workplace, exposure*. While migrant, immigrant, and Hispanic outdoor workers are of particular interest to this research due to their disproportionate HRI burden, preliminary research showed that statements regarding Florida's policy debate did not often mention these populations outright. For that reason, search terms related to migration and ethnicity were left out.

Upon screening, it became clear that HB 433 was a response to a local occupational heat protection ordinance in Miami-Dade County, Florida called the *Heat Standard for Outdoor*

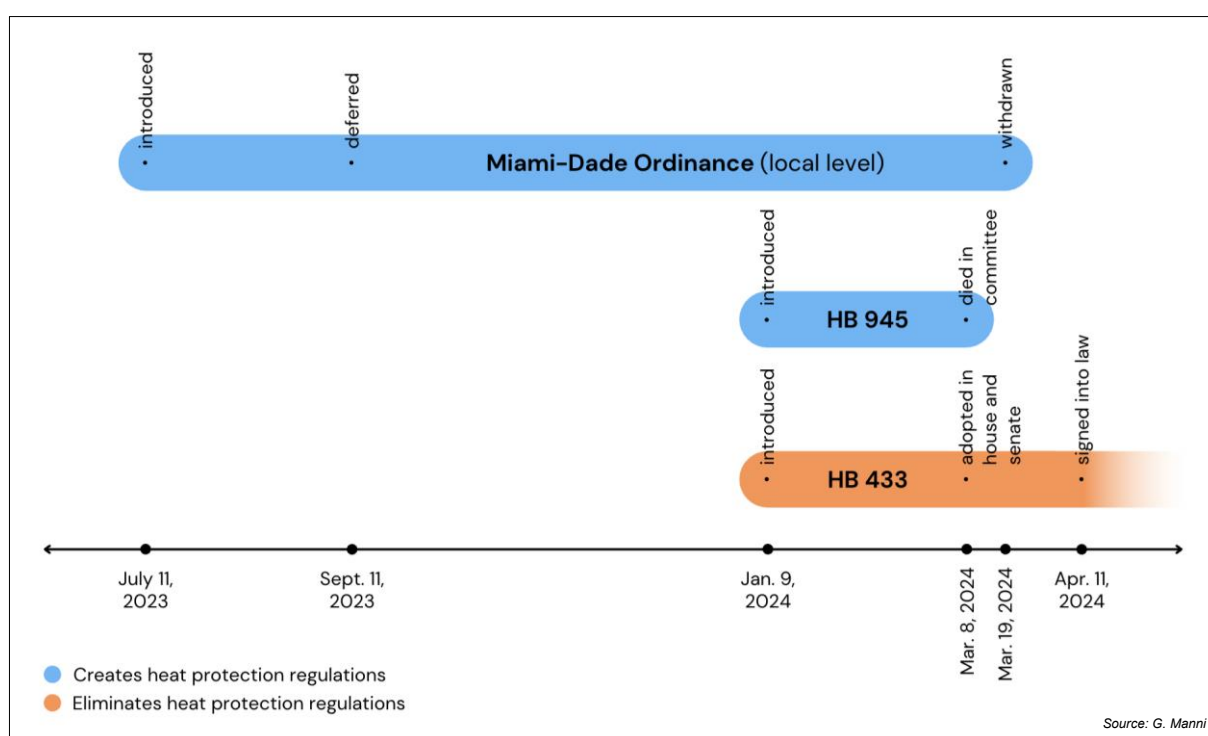


Fig. 3 | 2023-2024 timeline of Florida legislation on heat protection for outdoor workers. HB 433 and HB 945 were bills at the state level, while the Miami-Dade ordinance was introduced at the local county level. HB 433 sought to eliminate any local-level regulations across the state, and once signed into law, effectively ended other avenues for securing formal heat protection regulations in Florida. (Illustration by author)

Workers, which was gaining traction in mid-2023 (see **Figure 3**) (Creating a Heat Standard for Outdoor Workers, 2023). To encompass this local-to-state dynamic and capture stakeholder statements concerning the Miami-Dade ordinance, a second Google search was conducted using the same search terms (plus the term *Miami-Dade*) spanning March 2023-March 2024. Again, the top 50 results were screened.

Throughout further screening, it was revealed that Florida House Bill 945: *Heat Illness Prevention* (HB 945), which would have required a comprehensive outdoor worker heat illness prevention program, had been filed at the state level shortly after HB 433 (Heat Illness Prevention, 2024). A third Google search was conducted spanning the same time frame (inserting the term *HB 945*) and the top 50 results were screened. However, all news articles pertaining to this third bill had already been captured by the previous searches.

While the first round of searches and screening identified three important legal documents, captured statements to the news media, and led to a small database of stakeholders, it was also important to seek primary documents released by worker advocacy groups, industry voices, and politicians. Using the collected list of stakeholders, a second round of Google searches was conducted looking for any advocacy documents that had been released on the topic. Search queries included a combination of the stakeholder's name, the name of the legal text, and the previously listed search terms.

4.3 Qualitative Content Analysis

Qualitative content analysis (QCA) is a useful method for “systematically describing the meaning of qualitative data” (Schreier, 2013, p. 181) while also reducing large amounts of data. QCA requires the systematic examination of *all* collected material related to the research question through a process of text coding, which helps reveal key insights while counteracting confirmation bias (Schreier, 2013). Units of text are assigned “codes” (Schreier, 2013, p. 173) that help to categorize, organize, and determine the frequency of whichever concepts the researcher aims to understand about their data. Researchers can begin to analyze their data by examining all text that falls under one code, but they can also compare codes to one another, finding patterns and themes across variables. The method is systematic but flexible, and can be applied to fit varying contexts and types of qualitative data, while still providing a guiding framework for extracting meaning. Writing about document-based research methods, Lindsay Prior (2008) contends that “content analysis can also blend into discourse analysis, a form of analysis that examines how objects and relations between objects are represented and structured by means of text and talk” (p. 112). By seeking to understand the power dynamics between

stakeholders based on the way they talk and present their arguments (examining not only what they say, but how they frame it) the focus of this study leans toward discourse analysis while employing a QCA as described by Margrit Schreier (2013). This approach has precedence in research by Franklin Halprin (2024), who applied QCA with a political ecology framing to extract overarching themes and assess power dynamics surrounding an environmental policy debate.

Alongside political ecology, this study uses critical environmental justice theory as the basis for developing deductive code categories. Rooted in the critical research paradigm (Ryoo & McLaren, 2010), these theories support an analysis of the public discourse from a power-critical angle while also encompassing human-environment interactions (Robbins, 2020; Schlosberg et al., 2024). Further codes were developed inductively based on the texts themselves, allowing me to identify and explore emergent themes. Using a combined deductive-inductive coding approach helps to provide a nuanced understanding of the content while maintaining a theoretical backbone (Schreier, 2012).

For this study, individual statements from stakeholders were the text units. As statements were collected, the content and speaker of the statements were used to classify them based on two cross-cutting descriptive variables: stakeholder type and policy stance. Statements were classified by four possible stakeholder types: (1) organizations, (2) politicians, (3) outdoor workers, and (4) other individuals that don't fit neatly into the other three. Statements were also classified by three possible policy stances: (1) in support of local heat protection policy for outdoor workers, (2) opposed to local heat protection policy for outdoor workers, and (3) the speaker's statement did not indicate a clear side in the policy debate and was therefore considered neutral or unclear. Thus, each statement was sorted into one of twelve mutually exclusive groups (e.g. politicians in support, politicians in opposition, politicians with a neutral/unclear stance, and so on).

To conduct the coding portion of the QCA, the statements were loaded into the software MAXQDA, sorted by stakeholder type and policy stance. The theory-based coding frame began with five major categories and a small number of subcategories for each. On the political ecology end, these categories included: framing of environment (heat), framing of economy / industry, framing of outdoor workers, and framing of government / politicians / legislation. There was also a category for critical environmental justice, with subcategories pertaining to decolonial perspectives, as well as four types of justice outlined by the theory: distributive, recognitional, procedural, and capabilities (Menton et al., 2020). An initial test of the coding frame was conducted on a handful of statements, after which the theory-based categories were

adjusted to more closely fit the content. During the inductive portion, the coding frame was expanded as new concepts emerged. Many subcategories were added, representing stakeholders' framing and arguments surrounding other stakeholders and the legislation itself; as new subcategories were added, prior statements were revisited to ensure a uniform coding process across the material. To collect statements which represented rhetorical strategies used by stakeholders in their arguments, one other main category was added: Rhetoric. **Figure 4** depicts the main categories (n=6) and first order subcategories (n=36), though 127 codes were used in total.

All 249 stakeholder statements were coded through to completion by the author, resulting in 1,627 code assignments. Of the 249 statements collected, 17 (6.8%) were not assigned any codes, since they did not provide any information relevant to the public discourse on this topic or were too ambiguous, leaving 232 coded statements. Due to the potential for multiple framings and discursive angles within each individual statement, an overlapping codes approach was taken in which individual segments could be assigned multiple codes. This allowed broader thematic codes to be assigned in tandem with specific subcodes. Additionally, individual statements could be assigned the same code multiple times across different segments of text, since a stakeholder's repetition of a concept could potentially convey its importance to the speaker as well as its emphasis in the public discourse. Code frequencies were used to determine dominant framings for qualitative analysis, as well as to create charts depicting the most common arguments across stakeholder type and policy stance. Dominant framings are understood as those that were articulated most frequently within stakeholder

Code System		1627
▼ Rhetoric		0
● Call to action		15
● Polarization/opposing teams		9
● Threatening		2
● Amplification of terms/situation or name-calling		24
● Demonstration/protest		4
● Claiming there was misinformation		8
● Appeal to common sense		19
● Personal narrative		58
▼ Framing of Environment (Heat)		0
● Claims of climate change denial		3
● Climate change/growing risk of heat		69
● Heat as barrier to productivity		9
▼ Framing of Economy/Industry		0
> ● Industry treatment of workers		82
> ● "Money," industry associates, lobbyists block protection		50
> ● Sympathetic toward industry		128
> ● Economy as justification		18
▼ Framing of Outdoor Workers		0
● Im/migrant as subtext		5
● Working class / working families / "Floridians"		20
● Framed as predatory "labor organizations"		3
● Workers should take care of themselves		3
● Workers also need heat safety education		10
● Workers as "asset"		3
● Healthy workers = good for business/economy		16
> ● Sympathetic toward outdoor workers		259
▼ Framing of Government/Politicians/Legislation		0
● Heat protection as "Climate Adaptation"		4
● Government is slow to act/wilfully stagnant		14
> ● Specific politicians are:		136
> ● Laws across scales (local, state, fed)		117
> ● Law is necessary to protect workers		154
> ● Protection law is harmful/unnecessary		67
> ● Sympathetic toward government/politicians		19
▼ Critical Environmental Justice		0
● Names environmental injustice		4
> ● Acknowledges heat as health risk to workers		248
> ● Discusses lack of capabilities/opp. to live healthy lives		3
> ● Discusses workers' inclusion in decision-making		3
> ● Discusses uneven burden of health risk		27
> ● Discusses beyond-state solutions		14

Fig. 4 | Code system in MAXQDA.

statements, and therefore within the public discourse.

The code frequencies were normalized across the twelve stakeholder-policy stance groups, since some of the groups had more total statements than others. This was accomplished by converting absolute code frequency to code frequency per statement, which involved dividing the frequency of each code in each group by the total number of statements for that group (e.g., the code *life and death* was applied 43 times across statements by organizations in support of local heat protection, a group with 88 total statements; thus, the code frequency of *life and death* per statement for this group was: $43 \div 88 = 0.489$). This approach allows for a comparison of code frequency across stakeholder type and policy stance without losing the ability to compare which codes were more prevalent than others (see **Figure 5a-b**).

4.4 Stakeholder Analysis

In their review on stakeholder analysis, Brugha and Varvasovszky (2000) write that the method can be used to “evaluate and understand stakeholders from the perspective of an organization, or to determine their relevance to a project or policy” (p. 239). Conducting the analysis involves questioning the characteristics of stakeholders, including their position, interest, influence, interrelations, and networks. Stakeholders may be defined as “all those who affect, and/or are affected by the policies, decisions and actions of the system” (Grimble, 1995, p. 3), and can be any individual or group with a shared interest in a particular issue or system (Grimble & Wellard, 1997). Stakeholder analysis is not one single approach, but encompasses a range of methodologies with roots in policy, development, and organizational management research, and has been applied in the context of public health policymaking for many years (Brugha & Varvasovszky, 2000).

Raum et al. (2021) describe a web-content based method of conducting stakeholder analysis resulting in the identification and categorization of stakeholders in a natural resource management case. The basis of their approach is the collection of a list of stakeholders from various sources (including literature, reports, and websites), narrowing down the list to those relevant to the study, and performing a keyword search on stakeholder websites to differentiate and categorize different stakeholders. Their method aligns well with this study’s focus on the public discourse surrounding a policy debate, since stakeholders often make their views known via web-accessible content such as news articles, advocacy documents, and websites. Based on the definition by Grimble & Wellard (1997), a stakeholder was defined in the context of this study as: any individual or group who affects, and/or is affected by outdoor occupational heat protection policy in Florida. This broad definition is intended to encompass all actors who play

a role, but it should be noted that the stakeholders included in this study are not on equal footing and have varying levels of influence and interest in the policy outcome.

While there are many approaches for performing complex and comprehensive stakeholder analyses for mapping the relationships between stakeholders (Brugha & Varvasovszky, 2000), this study uses the method solely as a means of understanding more about which stakeholders are involved and their influence upon Florida's heat protection policy debate, which is encompassed in the web-content based approach laid out by Raum et al. (2021). Throughout the course of data collection and statement sorting for the QCA, a list of stakeholders was collected containing any stakeholder whose public statement had been captured online regarding the research topic. This effectively limited the stakeholder pool to those stakeholders who made a public statement regarding bills HB 433, HB 945, and the Miami-Dade ordinance. No further narrowing down of the stakeholders was necessary with this approach, since every stakeholder had made a relevant statement.

A matrix was developed using the cross-cutting descriptive variables established during the QCA which sorted stakeholders by type and policy stance based on the statements they made (see **Annex 1**). Following the QCA, further information was collected on the many organizations involved by visiting the *about* page of organizational websites, as well as researching the roles of Florida politicians. For organizations, this included the type of organization, geographical coverage, its potential role in policymaking, and a brief description (see **Annex 2**). The names of small businesses and individuals were anonymized, except for elected politicians. Findings were additionally summarized within the research context, and the power differential across individual stakeholders and stakeholder groups was assessed.

4.5 Positionality

Both the critical research paradigm and QCA method emphasize that a researcher's subjectivity exerts an influence on the research design and analytical process, and therefore, disclosing one's positionality becomes an important part of the framing. To that end, I disclose that I am a white, non-Hispanic U.S. citizen currently living and working in Europe. Up to this point, I have never myself been an employer, outdoor wage laborer, or politician like many of the stakeholders in this study. I do, however, engage in climate activism and environmental advocacy, support justice for all, believe in the inherent value of human life and wellbeing, and for many years have adopted an environmental justice perspective in my work.

5 | Analysis & Results

5.1 Stakeholders in Florida's public policy debate

A total of 109 different stakeholders contributed to the pool of 249 statements that were analyzed, including 44 organizations, 27 local and state politicians, 28 Florida outdoor workers, and 10 other individuals. If multi-actor statements such as group advocacy letters were included in the count, the number of stakeholders would expand to approximately 320. An overview of all the stakeholders broken down by type and policy stance can be found in a table in **Annex 1**. While this does not account for every individual stakeholder who influenced policy in this context (many stakeholders likely did not make public statements or acted in ways that were not picked up in news or advocacy circles), it does represent a substantial proportion of those involved in the public discourse. The following sections provide background information on the four different stakeholder types as well as their distribution in terms of policy stance, followed by a brief analysis of power across stakeholder types.

5.1.1 Organizations

Of the 44 organizations that made an individual statement, 25 were in support of heat protection policy, 10 were opposed, and 9 were neutral/unclear. Approximately 87 additional Florida-based organizations signed multi-actor statements, or group letters, of policy support. The results of the background research into each organization are summarized in a table in **Annex 2**. Most of the organizations involved in the policy debate play a lobbying or advocacy role in the policymaking process, since they are nonprofits (n=20), trade associations (n=11), and labor unions (n=4). Those that play other roles are either businesses such as newspapers (n=2), law firms (n=2), construction and agricultural businesses (n=3), or part of the federal government (n=1). The organizations range in size, influence, and geographical coverage, with 21 having a statewide scope, 16 a national or international scope, and 9 a local or within-state regional scope.

Most organizations on the policy support side are nonprofits (including for social welfare) or labor unions, which is perhaps unsurprising considering their advocacy for workers' health and safety. Some of these organizations are themselves organized by workers, such as the Coalition of Immokalee Workers, which represents tens of thousands of farmworkers. The breadth of worker representation by the labor unions spans from thousands up to one million workers, as is the case with the Florida American Federation of Labor – Congress of Industrial Organizations (AFL-CIO). Some of the smaller organizations are more policy- or community-

oriented and focus on a range of issues from economic and racial justice to climate-related public health, local governance, and migrant worker safety. The total number of people represented by every organization on this side of the policy debate is likely in the millions, though estimation is difficult since membership was not always reported or may overlap.

Organizations opposing local heat protection policy comprise trade or business-related associations representing the construction and agricultural industries, as well as the business community in general, including the Florida Chamber of Commerce, Dade County Farm Bureau, and Florida Homebuilders Association. Construction and agriculture are in general heavily reliant on outdoor workers and are therefore directly affected by worker heat protection regulation. Common concerns from these industries included being overburdened by regulation and fines and being unfairly targeted by a new heat law. In that sense, this collection of trade associations, along with one international horticultural business, can be thought of as the responding voice of industry and employer sovereignty in Florida. Though some membership figures are missing, it is likely that more than 25,000 companies and farm owners are represented on this side of the policy debate.

Organizations classified as neutral/unclear include businesses, trade associations, a nonprofit, a labor union, and the federal Occupational Safety and Health Administration (OSHA). These organizations play a variety of roles with no clear trend, and while most made statements lacking enough information to determine a clear policy stance ($n=7$), some made statements that were decidedly neutral ($n=2$). Regarding HB 433 for example, the president of the Marine Industries Association of Florida stated, “We didn’t support it, we didn’t object to it” (Jamieson & Kaufman, 2024, para. 20). The Florida Solar Energy Industries Association also stated that it did not take a position.

In some ways, the neutral/unclear category became a residual category for organizations and individuals whose statements did not provide enough information: even for those who were clearly neutral, no explanation was reported. This was also a limitation of the dataset, since it is possible that some information was simply not included in the news article.

5.1.2 Politicians

The distinction between political parties stands out among the characteristics defining politicians on either side of the policy debate. While not entirely polarized, it was close: 14 Democrats and 1 Republican supported local heat protection policy, while 9 Republicans and 1 Democrat opposed it. The supporting side included 8 state house representatives, 3 state senators, 1 U.S. house representative, and from Miami-Dade County: 2 commissioners, 1

appointed official, and the county mayor. The opposing side included 5 state house representatives, 2 state senators, the state governor, and 2 Miami-Dade commissioners. One Miami-Dade commissioner's policy stance was unclear. The ratio of female to male politicians was 12:4 on the support side and 2:8 on the oppose side.

In terms of power and influence, Florida Governor Ron DeSantis ranks the highest, as he holds sway over the entire state executive branch and was responsible for signing HB 433 into law. In the context of Florida policymaking, the state senators and representatives are on the next rung, since they create and pass state law. Individuals on this level introduced both HB 945 and HB 433. One rung below that is the Miami-Dade County mayor, followed by the county commissioners and the appointed official. Commissioners formulate policy for the county (such as the Miami-Dade ordinance for heat protection), which can be vetoed by the mayor (Miami-Dade County, 1957). The power exercised by the U.S. representative from Florida is adjacent to this hierarchy, since she has the ability to influence policy on the federal level, but does not have direct influence on the state level. In this case, she responded to the passage of HB 433 by writing a letter on behalf of her Florida district urging OSHA to move faster in establishing a national heat standard (Castor, 2024).

The local vs. state power hierarchy becomes evident when examining politicians' capabilities to pass a law: commissioners on the county level might normally hold more influence over their local policy environment, but the Miami-Dade ordinance for heat protection likely would have set a precedent for other local jurisdictions, ultimately impacting the entire state. Politicians on the state level stepped in with HB 433, which was designed to preempt the authority of local law and set a new legal standard statewide (Harrison, 2024). Though the Miami-Dade ordinance was still being legislated, it was ultimately nullified by the passage of HB 433. This conflict between local and state governance was a major theme in the public discourse.

5.1.3 Workers

The 28 Florida outdoor workers include 19 farmworkers, 5 construction workers, as well as 2 landscapers, 1 utility technician, and 1 house painter. A total of 16 workers were referenced as migrants, making up more than half of the workers who gave statements, though migrant status was not referenced in some new reports, meaning the remaining 12 workers may or may not be migrants. Inferring from the pronouns used, 12 of the outdoor workers were female and 11 were male, while the remaining 5 were not reported. Of all the outdoor workers, 9 were reported as organizers or members of labor organizations. Statements given by the

outdoor workers represent a range of personal experiences surrounding extreme heat and working conditions—many about their own experiences, and some about witnessing coworkers’ heat stress episodes, hospitalizations, or deaths. Most outdoor workers referenced the specific need for heat protection regulations (n=23), and many told stories emphasizing the health risks or unjust working conditions of the current system; none opposed heat protection policy or made statements that could be categorized as neutral.

5.1.4 Other stakeholders

The *other* stakeholder group became another residual category for any stakeholder that did not fit into the previous three. On the policy support side, this was a combination of organizers and advocates, healthcare professionals, and a news columnist. A group of approximately 35 demonstrators was referenced in one news article including the phrases they chanted, as well as a group of 88 healthcare professionals who signed a group letter urging Miami-Dade commissioners not to weaken the heat threshold of the proposed ordinance as it was being legislated. On the opposing side was 1 local construction contractor who stated they would not support the broad coverage of an occupational heat protection law in Miami-Dade County, but would support a more specific law on the state or national level. The policy stance of both remaining individuals, 1 local climate researcher and 1 tour operator, was classified as unclear. The tour operator revealed an instance of climate change denial however, stating, “It’s not getting hotter; people are just getting weaker” (Winokur, 2024, para. 21).

5.1.5 Policymaking power across stakeholder types

Considering the power differential across these four stakeholder types in a policymaking context, politicians rank highest with their ability to wield state power, followed by organizations which utilize varying levels of institutional power, and then to differing degrees the *other* individuals with occupations in medical care, knowledge work, and management. Ranking lower are the outdoor workers providing labor to the agriculture and construction industries, and perhaps further down, the marginalized workers facing systemic barriers, with any undocumented migrant workers in the lowest precarious position. Florida’s outdoor workers stood to gain the most by the passage of occupational heat regulations, and research shows they will likely continue to face adverse health outcomes and fatality as long as this issue goes unaddressed (Luque et al., 2020; Mutic et al., 2018; Rudner et al., 2025).

Comparing power by policy stance, the cluster of trade associations in the opposition camp likely have a much greater degree of economic power and political influence compared

to the many nonprofits and labor organizations on the support side; we will see in a later section how these trade associations use large donations, awards, and election endorsements to influence politicians. In terms of people power however, labor unions made up of millions of workers across Florida likely outnumber the business owners, farmers, and contractors representing the state’s construction and agricultural industries, and may have the ability to apply pressure by going on strike to get demands met. The politicians of the policy opposition outnumbered supporting politicians 2:1 in the vote for the passage of HB 433, but surprisingly, not in the public discourse (Employment Regulations, 2024). However, one of the politicians who gave a statement was the single most powerful individual when it comes to Florida lawmaking, Governor Ron DeSantis.

5.2 Descriptive statistics: what does the dataset reveal?

Because the data collection approach was intended to be comprehensive for the period of interest in news and advocacy circles, the dataset gives a sense of the overall number of public statements made by each stakeholder group and side of the policy debate in Florida

Table 1a | Number of statements by policy stance

	Support	Oppose	Neutral/Unclear	Total
Organization	86	31	8	125
Politician	38	24	1	63
Worker	30	0	0	30
Other	7	1	1	9
Total	161	56	10	227

Table 1b | Number of stakeholders by policy stance

	Support	Oppose	Neutral/Unclear	Total
Organization	25	10	7	42
Politician	16	9	1	26
Worker	28	0	0	28
Other	7	1	1	9
Total	76	20	9	105

Table 1c | Average number of statements per stakeholder by policy stance

	Support	Oppose	Neutral/Unclear	Avg. of Totals
Organization	3.44	3.10	1.14	2.98
Politician	2.38	2.67	1.00	2.42
Worker	1.07	-	-	1.07
Other	1.00	1.00	1.00	1.00
Avg. of Totals	2.12	2.80	1.11	2.16

Support, oppose, and neutral/unclear convey stakeholders’ policy stance: in support of local heat protection policy for outdoor workers, opposed to it, or neutral/unclear. Counts only represent coded statements and stakeholders, and are therefore slightly lower than the total number of statements and stakeholders collected. Counts also exclude multi-actor statements (e.g. by letter signatories) that could skew the calculation.

during that time. Summing the number of coded statements by policy stance from **Table 1a**, 161 supporting, 56 opposing, and 10 neutral/unclear statements were analyzed. Note that no statements by workers appear in the oppose or neutral/unclear columns. **Table 1b** shows there were 76 supporting, 20 opposing, and 9 neutral/unclear stakeholders analyzed, and that organizations were the largest stakeholder group in each category. Looking at the number of statements by individual stakeholders, organizations WeCount! and the Farmworker Association of Florida were most outspoken on the support side, making 30 and 13 statements, respectively; Florida Sen. Jay Trumbull (R) and the Associated Builders & Contractors of Florida organization were most outspoken on the oppose side, making 9 and 7 statements respectively.

To provide a clearer picture of the level of representation of different stakeholders, **Table 1c** shows the average number of coded statements per stakeholder broken down by policy stance. This reveals that the stakeholders who supported local heat protection policy made 2.12 statements on average, slightly less than those who opposed it at 2.80 statements. Nevertheless, the total number of statements by policy supporters in the public discourse far outnumbered those by opposers, possibly because outspoken policy supporters were greater in number (more than double that of opposers). It's also possible that journalists reported on some sources more than others. Organizations were the most represented stakeholder type on average across each policy stance. It should also be noted that there were many more organizations and individuals who signed onto group letters advocating their policy support that were excluded from this calculation.

Figure 5a gives a broad picture of the absolute frequency of codes across all documents, helping to demonstrate the breadth of arguments and framings in the public discourse surrounding heat protection policy in Florida. One stacked column in the chart represents one code. Individual columns with all colors and shades indicate a code used across the full range of stakeholders and policy stances. The figure reveals some distinctions between discursive arguments used by opposing sides of the policy debate, shown most clearly in the separate groupings of orange and blue. The two prominent spikes in the chart (code frequencies reaching approx. 150) are correlated codes indicating stakeholders' acknowledgment of heat as a health risk to outdoor workers and sympathy for their concerns. Some features of **Tables 1a-c** also appear in the chart: for example, organizations made the most statements and were therefore assigned the most codes, which was also the case for policy supporters.

Due to the varying number of statements across the stakeholder and stance variables, normalized code frequencies will be used in the following sections to determine the most

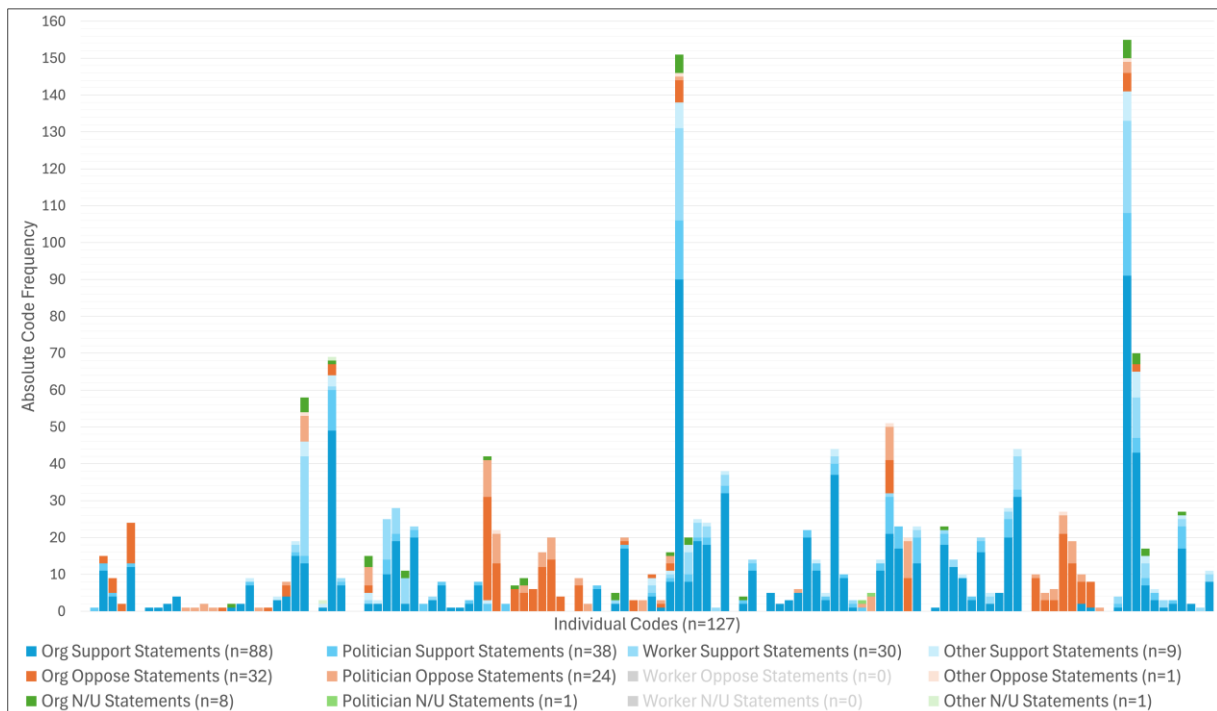


Fig. 5a | Overview, absolute code frequency by stakeholder type and heat protection stance.

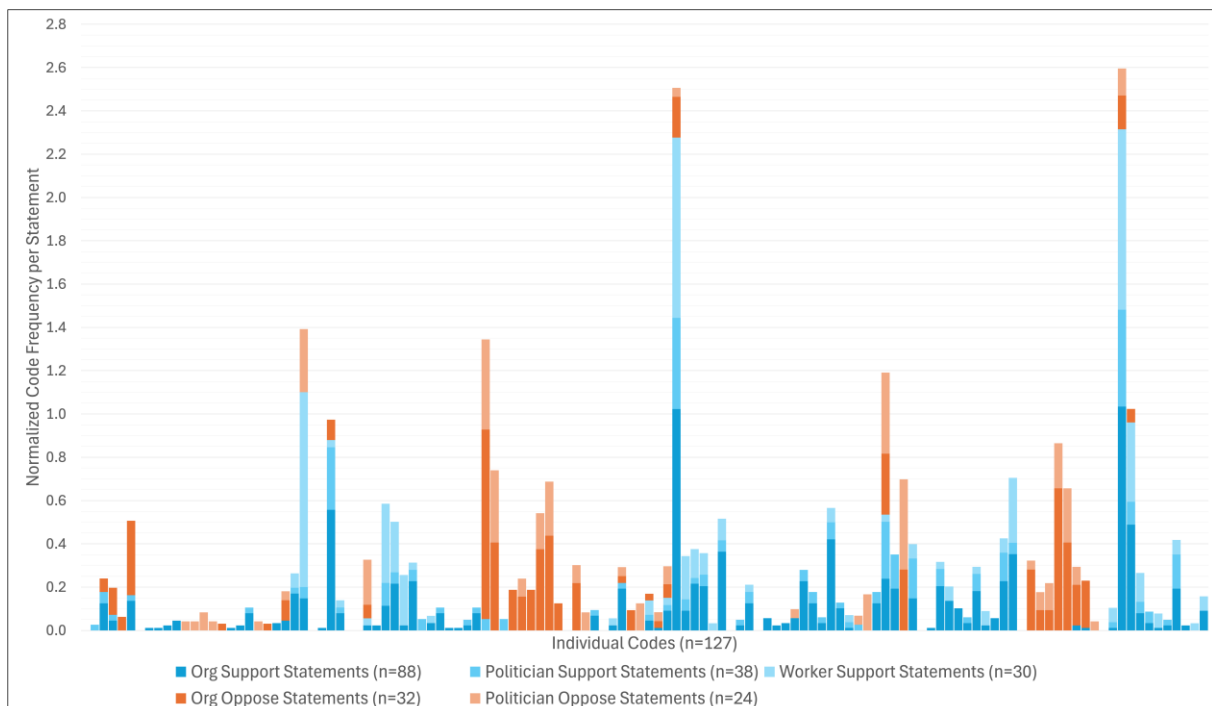


Fig. 5b | Overview, normalized code frequency by stakeholder type and heat protection stance. Stacked columns represent the absolute code frequency (5a) and the normalized code frequency per statement (5b) across each stakeholder and stance category per single code in MAXQDA. Codes are organized thematically from left to right, but their names have been removed. Blue (support), orange (oppose), and green (neutral/unclear) convey stakeholders' policy stance: in support of local heat protection policy for outdoor workers, opposed to it, or neutral/unclear. (Created by author.)

dominant arguments, as well as make comparisons between these variables (see **Figure 5b**, **Annex 3a-g**). Neutral/unclear statements (n=10) as well as those by *other* stakeholders (n=11) will be left out of further analysis; while they help to give an overall picture of the public discourse, the small number of statements in both categories makes findings unreliable and skews the results when the code frequencies are normalized. These residual categories are also conceptually blurred, making it difficult to draw insights from them.

5.3 Asymmetric recognition of heat as an occupational health risk

The remaining sections of this chapter describe the outcome of the QCA, including the dominant themes, debates, and discursive strategies appearing in Florida's public policy debate. These findings are paired with the results of the stakeholder analysis, which contribute to the understanding of power dynamics between stakeholders. Overall, the analysis identifies recurring patterns in the way different stakeholder groups frame workplace heat stress, impacts on industry, and decision-making power. These patterns display differing priorities, representations of outdoor workers, and views of legal jurisdiction across levels of governance. In the following sections, stakeholder statements are used to demonstrate these dynamics on both sides of the policy debate through five overarching themes: (1) the asymmetric recognition of heat as an occupational health risk, (2) claims of harm to industry and economy, (3) contesting the need for local heat protections, (4) jurisdictional conflict and the erosion of local democracy, and finally, (5) additional forms of institutional and material power referenced in the discourse.

Beginning with the first theme, the most prominent framing in the public discourse, found almost entirely in statements by supporters of local heat protection policy, was the *recognition of heat as a health risk to outdoor workers* (see **Annex 3a**). This claim goes to the heart of recognitional justice, and demonstrates how policy supporters made their struggle known through the policymaking process in Miami-Dade County, as well as through their negative reactions to HB 433. By contrast, stakeholders of the policy opposition prioritized industry concerns while asserting their care for workers' health, which is contested by the personal narratives of outdoor workers on the ground.

Organizations made the most statements recognizing heat as a health risk, and often highlighted the dangerous reality for workers by framing the issue as a matter of life and death. For example, the immigrant labor nonprofit that spearheaded the campaign in Miami-Dade County said the following about the introduction of the local bill in 2023:

“In their daily work, these workers can experience thermal stress and heat-related illnesses such as fatigue, dehydration, muscle cramps, organ failure, and even death. ... We want to educate not only the workers but also business owners on how to treat these employees, have safety programs to deal with high temperatures, and know what to do in the worst-case scenarios, such as when a worker collapses.” (Ponce, 2023, para. 16)

— Representative for WeCount!

After the Miami-Dade bill was watered down due to negotiations with industry representatives, WeCount! sought to validate workers’ struggle by tying it to the scientific consensus:

“Because of the humidity here in South Florida, it’s important to make sure that we’re accounting for the kind of temperature that will protect outdoor workers. ... The science is very clear. Doctors, nurses, physicians, climate scientists are in consensus that at a 90 degree heat index[,] outdoor workers are at deadly risk of experiencing heatstroke on the job.” (N. Rivero, 2023a, para. 6)

— Executive director of WeCount!

In this way, the organization insisted on the importance of a stronger heat threshold for worker health and leveraged the recognition put forth by scientists and medical professionals—actors with more institutional power. In alignment with WeCount!’s statement, the Union of Concerned Scientists and Florida Clinicians for Climate Action issued statements of support, as well as 88 medical professionals that signed a group letter. A different organization, the United Farmworkers Foundation, gave the following reaction to the impending implementation of HB 433:

“While working to feed us, farm workers have died because they were exposed to extremely high temperatures but were denied water, shade and paid breaks. ... This will only create a more dangerous work environment for the men and women who do backbreaking work under the sun.” (Arredondo, 2024, para. 3)

— Spokesperson for United Farmworkers Foundation

The United Farmworkers (UFW) have a long history of organizing for farmworker and migrant worker rights. In their statement, the UFW draw a direct line between extreme heat and unmet basic needs as the cause for workplace fatality, and argue that the preemption bill will harm workers. The phrase “while working to feed us” (Arredondo, 2024, para. 3) emphasizes farmworkers’ pivotal role in the U.S. food system. The recognition of health risks to workers

was also widespread among supporting politicians, as demonstrated in this statement following the passing of HB 433:

“So many of our outdoors workers are just looking for some basic safety and guidance. ... We have generations of folks who are experiencing heat stress because they’re outside, kidney failure because there are no bathroom breaks.” (Uteuova et al., 2024, para. 8)

— Florida House Rep. Anna Eskamani (D)

Rep. Eskamani’s claim that workers are looking for guidance was echoed by a handful of other stakeholders, including workers. Both the Miami-Dade *Heat Standard for Outdoor Workers* and the proposed bill HB 945 would have required heat illness training for employers and workers. Here, she connects workers’ own policy solution to her recognition of the health impacts.

Both supporting organizations and politicians frequently mentioned climate change as a factor increasing the risk of negative health impacts to outdoor workers, and one that makes the state’s preemption law HB 433 seem particularly egregious:

“Every single year, it’s going to get hotter and hotter. Many more workers’ lives are going to be at risk. We will see fatalities, because of what Florida Republicans chose to do this week.” (Uteuova et al., 2024, para. 6)

— Executive director of WeCount!

“Climate change is real. The planet is getting hotter. Florida is ground zero for this, and instead of accepting that reality and taking action to mitigate risk we continue to ignore it for the benefit of large corporations.” (Green & St. Martin, 2024, para. 22)

— Florida House Rep. Anna Eskamani (D)

By invoking climate change, these statements rely on science as a justification for a heat standard, though they likely fell on deaf ears in the Florida legislature. Stakeholders didn’t know at the time that a month after the signing of HB 433, the governor would sign another bill banning the term *climate change* from state law (The Associated Press, 2024).

Also prominent in the public discourse were the number of workers and family members speaking up for themselves and their health concerns, particularly through personal narrative (see **Annex 3g**). The Miami Herald reported one story of a 35-year-old Florida construction worker who died due to heart failure after he began to feel ill during a long shift in 85-degree

heat (29°C) (Harris & Ceballos, 2024). The worker's spouse explained that his employer did not allow breaks for water or shade, and is certain the heat contributed to his death. "This wouldn't have happened," she said, if he had been aware of the danger (Harris & Ceballos, 2024, para. 20). The following statement details the story of another worker—a 48-year-old immigrant farmworker who harvests peppers and tomatoes in North Carolina and South Florida, and who witnessed the death of a coworker:

"'He was lying on the ground and looked very bad. We quickly called 911. ... By the time they arrived, the young man was no longer showing vital signs.' She says the man suffered from blood sugar problems, which can increase the risk of developing heat illness." (Crowder, 2024, paras. 18-19)

— Immigrant farmworker

Both stories express the workers' close proximity to death as a result of heat and poor working conditions. Seventeen other Florida outdoor workers shared personal experiences of heat-related injury or death in their statements to the press.

Only a few of the statements from the policy opposition referenced the risk of heat to workers, but these instances were always followed by arguments outlining the greater importance of employer sovereignty, industry stability, or a strong economy. As a result, a much more prominent framing among the policy opposition was the assertion from both industry voices and politicians that *employers care exceedingly about worker health and safety* (see **Annex 3b**). Each of the many statements collected under this theme claimed concern for worker health and workplace safety in general, but they rarely mention heat as a health risk to workers. The following statement from a construction industry organization referencing the local law demonstrates this dynamic:

"The reality is that no one is more concerned with the safety and well-being of their workers than the members of the construction and agricultural industries themselves. ... The heart of these industries lies in the well-being of their staff. To truly protect the health of outdoor workers, the real solution is more education and information on best practices for employers and employees, continuing to raise awareness of the risks associated with a warming climate. Creating a new government agency to impose duplicative regulations and excessive fines on two industries crucial to our overall community and economy will only exacerbate some of our other current challenges,

such as rising inflation and the cost of housing. However, it will do very little to enhance the well-being of our workers.” (Perry, 2023, paras. 12-13)

— President of the Builders Association of South Florida

In this quote, the industry representative claims his stakeholder group cares more than anyone else about worker health, and details how the harm brought to the industry and economy would outweigh the benefit to workers. He references the risks of climate change, but only seeks to address them by raising more awareness. He does not seem to realize that the Miami-Dade law would meet his definition of the “real solution” (Perry, 2023, para. 13) by requiring worker and employee education. Furthermore, this general line of thinking was often used among the policy opposition to justify the idea that *employers should be the decision makers over health and safety in the workplace*—alongside assertions that employers always have the best intentions, value their workers because they rely on them, or already comply with existing standards. The following statement was given by a Florida politician before his vote of approval on HB 433:

“I’m infuriated that any local government thinks that they can do a better job of management — managing my employees. I’ve farmed in South Florida for 45 years. People that work outside—contractors, agriculture — we cannot farm or work without good employees. And I guarantee you, we do everything to do the best for our employees, and this insinuation that we need more help from local government regulating heat exposure problems, it’s insulting.” (Harrison, 2024, para. 18)

— Florida House Rep. Rick Roth (R)

At least four of the Republican politicians who voted for preemption bill HB 433 also run businesses hiring outdoor workers, and like Rep. Roth, often used personal narratives from their business experiences to argue their position. This reveals a conflict of interest among these politicians, since their votes had a direct impact on their personal business operations. Roth also asserts on behalf of the industry that employers rely on “good employees” (Harrison, 2024, para. 18) to sustain their businesses, and for that reason, are incentivized to take care of their workers. What this argument doesn’t seem to account for is the high turnover of wage laborers in the U.S. construction and agricultural industries, which often hire migratory, seasonal, or undocumented workers (Erlich, 2021; Martin & Rutledge, 2025). For such jobs, the barrier of entry is low, the demand is high, and workers may come and go at the end of a growing season or construction project (Kocchar, 2005). In other words, workers can often be replaced, giving employers less incentive to value their health. The large number of heat-related injuries and

deaths among outdoor workers in Florida (Tsoukalas & Sela, 2024), as well as the firsthand experience of many workers, would seem to support this claim.

Taking a broader view, this logic conceptualizes workers as resources or machines that should be kept in good working condition in order to maintain industry output—as opposed to human beings whose wellbeing is inherently valued. The following statement issued by the Dade County Farm Bureau, an industry association of farm owners and producers, seems to confirm this viewpoint in calling workers “assets”:

“The health and safety of our workers is our top priority for our farmers and our nursery owners. ... Our workforce is one of our greatest assets, [which is] the reason why we follow the current standards that are already in place [and] do everything we can to take care of our employees.” (N. Rivero, 2023a, para. 16)

— Executive director of Dade County Farm Bureau

In a conservative policy environment, this perspective may appear apolitical, but a political ecology lens reveals that this type of argument centers industry and capital production while sidelining workers and the impacts of heat (Robbins, 2020). One could argue that if employers cared about the health and safety of their workers, they might consider workers’ own concerns, which in the case of Miami-Dade County was the implementation of mandatory heat standards. These contradictions to the assertion that employers care exceedingly about worker health rather communicate that, in the eyes of industry and capital, the lives of outdoor workers are not worth the effort of complying with heat regulations, and are therefore perceived as expendable.

As stated previously, the firsthand experiences of workers serve to back up this claim. The following quote comes from an immigrant farmworker who had success requesting heat safety measures from a previous employer, but then emphasized how easily workers can be fired and replaced:

“[Having heat safety measures] makes the work tolerable. ... That way, people can work happily and with pride. Every company should work like that, but not all of them do. ... There are bosses that don’t respect people. ... They’d rather fire you. There are plenty of people looking for work.” (Harris & Rivero, 2023, paras. 8-9, 13)

— Immigrant farmworker

This statement exemplifies a common sentiment among worker statements in the public discourse: the feeling that *employers do not care about their lives or health*, due to the poor treatment of workers and the risk of being fired when asking for basic needs (see **Annex 3b**). One immigrant farmworker at a plant nursery explained how her manager yells at her if she tries to drink water or go to the bathroom. She shared this story:

“When you’re at work, there’s nowhere for you to go if you’re fainting or feel dizzy in the sun. ... They fired me from my job because I couldn’t take it anymore. ... I felt dizzy, and I didn’t know if it was the sun. I went to look for a tree far away, and I went to drink water. But when the owner of the company arrived, he told me to go home and that there was no more work for me.” (Martinez, 2023, paras. 5, 7)

— Immigrant farmworker

This juxtaposition reveals major contradictions between stakeholders. While some employers may provide safe working conditions for outdoor workers, workers’ assertion of widespread negligence, aggression, and precarity demonstrate that many employers do not. By demanding an enforceable standard across the different industries, workers make known their lived experience of heat, as well as the only solution they see in the face of this power differential. In the words of the plant nursery worker who was fired for seeking shade, “There [was] no law. But if there is a law, they will obey; how can they not?” (Martinez, 2023, para. 7).

One other policy dynamic highlights what appears to be contradictory voting behavior among Republican politicians on heat. In 2020, Florida politicians voted on the Zachary Martin Act, a bill establishing a heat protection standard for high school athletes, including many of the same measures workers have been asking for: water, breaks, cooling areas, training, and first aid based on defined heat index thresholds (Rosenfield, 2024). The law passed unanimously, and included positive votes from many of the same politicians that supported the ban on worker heat protections (Fla. Stat. § 1006.165, 2020). In their statements, politicians and worker-advocates noted the double standard:

“If these politicians already recognize the crisis of extreme heat for student athletes, why don’t they care as much about the outdoor workers who grow their food and build their cities?” (Jamieson & Kaufman, 2024, para. 34)

— Executive director of WeCount!

“I think that employees who are outside or inside who are exposed to extreme heat are as valuable as athletes.” (Harris et al., 2024, para. 19)

— State Sen. Geraldine Thompson (D)

The stark contrast in outcome of the two bills confirms recognitional injustice by politicians of the opposition. Both statements point to the fact that Republican politicians seem to value outdoor workers less than student athletes, or put another way, that student athletes are worth protecting, while outdoor workers are not. Heat standards for students, perhaps most notably, do not threaten the power of industry; only when labor rights were at the center of the debate did industry groups exercise pressure, and the swing in political favor among Republicans shows how influential that pressure can be.

5.4 Claims of harm to industry and economy

One of the predominant views among the policy opposition was the claim that *local heat protection standards would be harmful to industry*, particularly because complying with a “patchwork of regulation” (Mulligan, 2024, para. 32) across the state would be difficult, businesses would be burdened by regulations and fines, and such a law would constitute government overreach (see **Annex 3b, 3e**). Politicians and organizations that opposed a heat standard were generally in alignment over industry concerns, shown through the prevalence and similarity of their arguments in the public discourse. Reference to the negative impact of a *patchwork of laws and regulations* on businesses, for example, happened 21 times across both stakeholder groups throughout the policy debate. This idea was explained in a press release from the National Federation of Independent Businesses (NFIB):

“Running a small business is never easy, but it’s even harder when owners have to contend with a patchwork of local and sometimes contradictory rules and regulations. Big corporations can afford to hire compliance officers to ensure they follow every ordinance in every city and county where they do businesses[sic]. Small business owners don’t have the time or the resources to navigate a confusing and contradictory array of local ordinances that go beyond [what] the state already mandates.” (NFIB, 2024, para. 2)

— Representative for NFIB

Behind this explanation is the concern that the Miami-Dade law would set a precedent for other counties in the state to create their own heat standards, creating a non-uniform set of regulations

for statewide businesses to contend with. Several politicians argued that one of the main goals of HB 433 was avoiding this problem, which they said would be harmful to the state economy:

“At the end of the day, the goal is to make sure that we have a uniform standard and we don’t have a patchwork of regulation.” (Mulligan, 2024, para. 32)

— Florida Sen. Jay Trumbull (R)

“Without continuity in business, businesses will not come to Florida. People will stop coming to Florida.” (Budryk, 2024, para. 3)

— Florida Rep. Bob Rommel (R)

This argument appears superficial, however, in light of Republicans’ effort to stop the implementation of heat standards via a statewide law such as HB 945, as well as many other attempts in previous years (Rosenfield & Cholakovska, 2023). According to reporting from Jacksonville Today, when House Democrats “asked whether stronger heat protections for workers could be increased at the state level—to avoid the patchwork issue,” the Republican chair of the state affairs committee “cut off that line of questioning” (Harrison, 2024, para. 12). This apparent contradiction was pointed out by social justice nonprofit Florida People’s Advocacy Center:

“The only reason [workers] decided to go to their local government was because their state legislature failed to do anything. ... The same lobbyists that are pushing this preemption bill are the same ones who blocked us from having a hearing on what they say they want when they’re arguing against the local ordinances: statewide uniform standards.” (Jamieson & Kaufman, 2024, para. 16)

— Director of Florida People’s Advocacy Center

The refutation of heat standards across multiple levels of governance despite years of repeated attempts by workers and supporting politicians to address the issue suggests a “policy monopoly” (Baumgartner & Jones, 2009, p. 6) by Republican politicians, potentially involving the powerful industry organizations they are aligned with. Concerned workers made some progress at the local level, but were routinely cut off by decision makers at the state level. Compared to the direct access industry advocates have to state politicians (explained in Chapter 5.7) this pattern amounts to the exclusion of workers from the policymaking process—an instance of procedural injustice.

Industry representatives from the policy opposition also often described how a local heat standard would burden their businesses with fines and excessive regulation, describing the law as “overly punitive” (N. Rivero, 2023a, para. 28), “anti-business” (Bolivar, 2023, para. 18), and “discriminatory” toward the construction and agricultural industries (Perry, 2023, para. 11). In a report from the Associated Industries of Florida (AIF), the trade association stated the Miami-Dade ordinance would result in endless litigation against employers:

“AIF SUPPORTS regulatory consistency in workplace safety regulations that prevents a patchwork of local regulations that could include unattainable standards which do little to protect employees while opening an onslaught of fines, penalties, and other punitive measures. AIF OPPOSES local, state, and federal regulations that create a private right of action, thus enabling the cottage lawsuit industry.” (Associated Industries of Florida, 2024a, p. 10)

— Associated Industries of Florida

This statement combines some of the same arguments discussed above, but focuses primarily on the threat of fines and lawsuits, particularly through a “private right of action,” a legal term describing the ability of a private individual or organization to sue the employer for violating the law (Democracy Docket, n.d., para. 1). In this case, the Miami-Dade ordinance would have allowed workers to sue an employer if the employer fired or retaliated against them when they raised a complaint about basic necessities such as water, shade, or breaks (Creating a Heat Standard for Outdoor Workers, 2023). The ability to sue for relief is a common tool in civil rights law (Democracy Docket, n.d.), and is one way individuals can leverage power against injustices overlooked by government institutions. One statement from an international plant nursery based in Florida was also critical of the potential for fines due to the Miami-Dade bill:

“‘It is overreaching. ... Its anti-business sentiment sends a message to the county and the rest of the country that Miami doesn’t want businesses to survive, no less thrive.’ [The representative] questioned the need for ‘the establishment of a county new-level agency, in essence, a ‘heat police department,’ solely funded by fines imposed on construction and agriculture businesses.’” (Bolivar, 2023, para. 18)

— Representative for Costa Farms

Costa Farms, one of the largest horticultural growers in the world, expresses that the law could put corporations like theirs out of business due to fines for heat standard violations. The

negative framing of the phrase “heat police” (Bolivar, 2023, para. 18), which was used a handful of times by different industry groups, communicates the industry’s aversion to ceding power to a law enforcement agency that would examine their business practices. Many organizations and politicians also stated that the Miami-Dade bill would lead to government overreach in business dealings, another angle on the claim *employers should be the decision makers*. The following passage comes from the Miami Herald:

“Sen. Dennis Baxley (R-Orange County), whose family has grown citrus for four generations, said in last week’s hearing that employers and employees already know how to stay cool in the Florida heat and don’t need additional regulations to enforce that. ‘I don’t think we need a nanny government standing over any person who might get too hot today,’ he said. ‘It’s over-regulating.’” (Harris & Ceballos, 2024, paras. 29-30)

— Florida Sen. Dennis Baxley (R)

In his statement, Sen. Baxley paints the picture that the discussion over worker heat stress is entirely overblown, asserting in contrast to some of his Republican colleagues that employers and workers do not need heat safety education, and in fact, that heat in Florida is a non-issue. By insisting that there is no problem, his statement seeks to depoliticize the risk of heat while emphasizing a hands-off approach to business practices—in other words, it commits recognitional injustice while claiming an apolitical stance.

Governor Ron DeSantis, the stakeholder with the largest degree of state power, downplayed his role in the legislative process and similarly tried to depoliticize the issue. He signed HB 433 after standard business hours with no formal announcement. He later gave the following statement:

“It wasn’t anything that was coming from me. There was a lot of concern out of one county, Miami-Dade. And I don’t think it was an issue in any other part of the state. I think they were pursuing something that was gonna cause a lot of problems down there, so I think a lot of the members of the Dade delegation created that just to steer clear of those problems.” (Moline, 2024, para. 12)

— Florida Governor Ron DeSantis

DeSantis is known to unveil legislation that has wide-ranging support with a public signing or a press release, rather than quietly slipping it into statutory code, as was done with HB 433

(Moline, 2024). By stating that other politicians from Miami-Dade created the preemptive legislation to “steer clear of those problems” (Moline, 2024, para. 12), the governor signals that he is not responsible for the law and makes no mention of the effect it will have upon millions of outdoor workers in the state. In this way, his public statement also represents a recognitional injustice, since it neither acknowledges the problem of HRI nor the population it affects.

5.5 Contesting the need for local heat protections

There were conflicting views regarding whether a local heat law was necessary to protect workers in Florida. The most common sentiment from organizations of the opposition was the claim that *federal occupational health regulations already cover heat hazards in the workplace*, and therefore a local law would be “duplicative” (Perry, 2023, para. 13), or redundant (see **Annex 3e**). This argument centers around the existence of general federal OSHA regulations, and in some instances, the promise of a future national heat standard that may eventually go into effect. The following statements from industry reports reference preemption bill HB 433:

“Employers are already required under OSHA to provide a place of employment that is free from recognized standards including heat. There are clear standards employers must meet and this bill will prevent another level of regulation in this area and an unlevel regulatory playing field.” (Associated Industries of Florida, 2024b, para. 3)

— Associated Industries of Florida

“The legislation ensures that regulating safety regulations for heat exposure is preempted to OSHA. While opponents incorrectly argued that there are no current standards, OSHA does have the Duty of Care requirements for employers - requiring them to ensure a safe work environment for their employees. Additionally, OSHA is working on a more comprehensive and specific regulation on heat safety standards for the workplace.” (Associated Builders and Contractors of Central Florida, 2024, p. 12)

— Associated Builders and Contractors of Central Florida

These statements refer to the “General Duty Clause” of the *Occupational Safety and Health Act*, which requires employers to provide a workplace “free from recognized hazards that are causing or likely to cause death or serious harm to employees” (U.S. Department of Labor, 2026, para. 1). While OSHA recognizes heat as a workplace hazard, there are no formal guidelines that ensure its enforcement, which is why states such as California, Washington, and

Oregon have created their own laws. In this context, heat hazards are a legal gray area for which the definition of “hazardous” is left up to the employer (U.S. Department of Labor, 2026, para. 1). In concurrence with the above statement, Miami-Dade Commissioner Danielle Cohen Higgins stated that a local law wouldn’t be worth the county’s time due to the potential for a federal heat standard at some point down the road (Harris & Miznazi, 2023).

In contrast, policy supporters frequently argued that *local heat protection standards are necessary to protect outdoor workers*, particularly because they see OSHA’s regulatory apparatus failing workers when employers don’t protect them (see **Annex 3a, 3e**).

“Workers, especially undocumented but even documented workers, are afraid to say anything. ... They can come to us, and we can try and file a complaint, but that’s really hard. And workers tell us that their supervisor will harass them, or threaten them, or laugh at them if they try and say something about it. ... Usually OSHA only gets involved when a death occurs. So it’s not helping with prevention.” (Catherman, 2024, paras. 29, 31)

— Organizers for the Farmworker Association of Florida

In her statement, the organizer references the particular challenge for marginalized outdoor workers and the backlash they often experience. She points to the fact that OSHA’s oversight only seems to be enforced when it’s too late to protect workers. Some policy supporters stated that OSHA did not have the capacity or resources to respond to every complaint. One letter calling on the governor to veto HB 433 from a group of 44 Florida organizations and businesses answered the industry argument directly:

“Another industry argument is that OSHA regulations protect workers against heat stress. If this were the case, OSHA would not have begun the arduous regulatory process of developing a heat stress standard. The general duty clause is most often exercised only after a worker has died.” (Re: CS/CS/HB 433, ‘Employment Regulations’ Veto Request, 2024, p. 2)

— Letter signed by 44 Florida organizations and businesses

A background document from the Biden administration’s proposed national heat standard confirmed that OSHA’s general duty clause leaves fatal gaps in worker protection when it comes to heat:

“OSHA’s enforcement efforts to protect employees from hazardous heat conditions using the General Duty Clause, although important, have been met with significant legal challenges, leaving many workers vulnerable to heat-related hazards. Because there are no specific, authoritative exposure thresholds for OSHA to rely on, it has been challenging for the agency to prove the existence of a recognized hazard, even in cases in which a heat-related fatality has occurred.” (Occupational Safety and Health Administration, 2021, p. 59314)

— Occupational Safety and Health Administration

Taken together, these statements point to the structural and socio-political causes behind the negative impacts of heat on outdoor workers. While a federal agency has been tasked with enforcing workplace heat safety—in practice, the degree of protection is the industry’s prerogative. In their arguments against a local heat standard, industry representatives use the federal government’s broken enforcement mechanism as a justification that, because heat violations aren’t being found, there must not be a problem. By succeeding in watering down the local law and subsequently getting it thrown out entirely, the industry’s perception of the environment, of the non-existent risk of heat, prevails. The following testimony to state lawmakers by the daughter of a worker who died in the heat sheds light on the consequences:

“He left every morning, and I watched him take his water and his ice — and he did everything he could to be able to go back home to us. ... OSHA failed us. ... The private market and private employers failed us. And I’m here to ask you, did my father not deserve better? Did I not deserve better? How much profit was worth his life?” (Aton, 2024, paras. 3-4)

— Member of Florida Student Power

She articulates to Republican politicians that it seems as though, despite the promise of protection by the federal government and employers, her father’s life was traded for capital.

5.6 Jurisdictional conflict and the erosion of local democracy

Another way to analyze the debates covered in the previous two sections is by focusing on the conflict over legal jurisdiction and power access across geographical scales (see **Annex 3e**). A fundamental position of the policy opposition was that occupational health and safety laws should be under the jurisdiction of the state, and through OSHA, ultimately the federal government. They viewed Miami-Dade County’s heat protection bill as a legislative overstep

that would have imposed more stringent regulations on businesses operating at the state level, and would have opened the door to other counties doing the same.

“You have, again, an OSHA standard. ... If you’ve got one level of government, the federal government, with a good standard, we really don’t need the state government or local governments duplicating that regulation. And that’s really what was going on here.” (Seemuth, 2023, para. 12)

— Representative for Florida Associated Builders and Contractors

Regarding the purpose of HB 433, several politicians agreed:

“Sen. Jay Trumbull, R-Panama City, the sponsor of the bill, said the goal is to have the entire state follow the heat exposure guidelines set by the federal Occupational Safety and Health Administration, also known as OSHA. He said those should be the ‘overarching standard for the state.’” (Harris et al., 2024, para. 7)

— Florida Sen. Jay Trumbull (R)

“When Esposito introduced the bill on Feb. 14 to the House State Affairs Committee, she said, ‘This bill preempts the regulation of terms and conditions of employment to the state. That is the bill.’” (Harrison, 2024, para. 7)

— Florida House Rep. Tiffany Esposito (R)

By preempting the local law, the state redistributes power away from local government—Rep. Esposito reveals this redistribution of power was the primary goal of HB 433. Preemption of local laws is a growing trend in many other states, particularly around the issue of workers’ rights (Melton-Fant, 2023). In an analysis of workers’ rights preemption bills in the U.S. south, Courtnee Melton-Fant (2023) found that corporate interest groups often drive the implementation of these preemption measures, and cites the National Federation of Independent Businesses, a stakeholder in this study, as one organization doing so. Melton-Fant argues these measures are anti-democratic, and that they are likely “re(creating) racial and economic inequities” (p. 1) since they are often enacted in response to local labor organizing by Black, brown, and migrant workers and have tangible material and health impacts on the lives and livelihoods of workers. Research by Flavin and Shufeldt (2020) found that states with a large number of preemption measures are correlated with Republican-controlled legislatures, more conservative citizens, and a higher percentage of Black residents. A higher percentage of Hispanic residents is also associated with certain labor-related preemptions, including bans on

more stringent local pesticide regulations and allowing outside contractors to pay below the prevailing wage.

In their remarks, supporting stakeholders often argued that by passing HB 433, the state government was undermining local democracy and removing local governments' ability to protect their constituents. Counter to the theory of wide-ranging state power pushed by the policy opposition, several stakeholders argued that local governments have the legal right to protect their workers.

"We think that it's shameful that politicians in Tallahassee are stripping localities of their right to protect outdoor workers without offering a statewide solution in exchange." (Jamieson & Kaufman, 2024, para. 34)

— Executive director of WeCount!

"I'm disappointed by the heat exposure preemption because I believe we have a responsibility to protect our outdoor workers. We as Miami-Dade policymakers have the right and the duty to pass legislation to protect our essential workers." (Harris et al., 2024, para. 16)

— Miami-Dade Commissioner Marleine Bastien

One supporting politician named the political power dynamic of the preemption outright:

"Rep. Fentrice Driskell, minority leader of the Florida House of Representatives, said Republicans in red states have systematically been taking power away from local governments as part of an effort to limit the influence of left-leaning cities." (Santucci et al., 2024, para. 12)

— Florida House Rep. Fentrice Driskell (D)

A representative of the Local Solutions Support Center, an organization that advocates for local governing authority, stated:

"Banning heat safety ordinances 'is another example of preemption being used to take power away from communities to appease corporations.'" (Marr, 2024, para. 26)

— Representative for Local Solutions Support Center

Also critiquing corporate interests, a representative for social justice nonprofit Florida Rising called HB 433 "a slap in the face of democracy and local freedoms" (Cerabino, 2024, para. 33). The Florida legislature's preemption of local laws seems like a jarring contradiction given the

fact that the Republican Party has long stood for small government, individual freedoms, and local sovereignty. As the literature on preemption reveals, however, there is a more systematic exclusionary process underway—not for all local governments, but for those with certain types of constituents advocating for certain causes (Flavin & Shufeldt, 2020; Melton-Fant, 2023). As addressed previously, this is an instance of procedural injustice. The added context that industry representatives are driving a broad pattern of local preemption across the nation suggests that the locus of power and influence may lie more with businesses themselves than the politicians running the state government. A statement by one immigrant farmworker seemed to point to the connection between corporate interests and the politicians enacting the heat standard preemption:

“With all of their millions, they want to use it to block basic protections which we need and which will only make us more productive for them. ... They have no conscience if they pass this law.” (Jamieson & Kaufman, 2024, para. 40)

— Immigrant farmworker

In his statement, the worker faults both the industry that employs him and state policymakers, linking them together as complicit actors.

5.7 Additional forms of power

It’s important to highlight some more direct forms of institutional and material influence referenced in stakeholder statements, since they too have an impact on Florida’s heat protection policy debate beyond what could be revealed by the analysis of stakeholder arguments. On the opposition side, these include the use of institutional access and financial incentives by Florida’s industry groups to sway policymakers. Investigative reporting by McKenna Scheuler (2024) and Jason Garcia (2024) revealed private conversations between politicians and industry representatives that were not originally a part of the public discourse. These communications were unearthed through records requests, and demonstrate how negotiations and power relations between stakeholders often take place behind closed doors. The reporting revealed that multiple industry lobbyists had direct text message channels to the office of the Speaker of the Florida House of Representatives, Paul Renner. A representative for the Florida Associated Builders and Contractors (ABC) sent the following message to Renner’s office:

“I haven’t texted you in weeks—HEAT cannot die. The entire business community is in lock step on this. Thank you for your attention to this concern.” (Schueler, 2024, para. 6)

— Representative for Florida ABC

Here, the representative invokes the “the entire business community” as she asks the speaker of the house to ensure the passage of the “HEAT” bill, HB 433 (Schueler, 2024, para. 6). Another lobbyist wrote:

“Hey...looking for insight on HB 433. Are yall looking to put the wage stuff back on? We obviously would like to see both the heat and the wage stuff get through but a little worried about what the Senate may do. Definitely want to be helpful, just trying to get an understanding of the state of play?” (Schueler, 2024, para. 12)

— Representative for Associated Industries of Florida

The news reports also revealed emails showing that the Florida Chamber of Commerce helped draft a portion of the text for HB 433 (Garcia, 2024). These messages demonstrate how the access industry groups have to powerful lawmakers allows them to receive insider information on the policymaking process and push their agendas before impending votes. Text messages from the Chamber of Commerce referenced another factor of influence industry representatives had over politicians: legislative report cards (Schueler, 2024). These score cards are essentially endorsements of certain politicians who have won legislative successes in alignment with industry priorities. For example, the AIF gave “Champions of Business” awards to Sen. Jay Trumbull and House Rep. Tiffany Esposito, both of whom were sponsors of HB 433 (Associated Industries of Florida, 2024c, para. 8). The Florida ABC recognized both politicians, while the Florida Home Builders Association named them “Champions of Housing” (Florida ABC, 2024; Florida Home Builders Association, 2024, Champion section). Finally, reporting revealed that the Florida Chamber of Commerce and the AIF have given thousands of dollars in political contributions to Rep. Esposito, as well as millions of dollars to Republican Party campaign funds between October 2023-March 2024 (Harris & Ceballos, 2024; Schueler, 2024). Through these measures, industry groups support certain candidates in winning elections, creating a system that incentivizes politicians’ cooperation during their tenure.

Among the policy support, worker-advocates articulated another form of power helping secure heat protections for workers, but which goes beyond state-based remedies. As mentioned in the state of the art, the Coalition of Immokalee Workers (CIW) has been operating a “worker-

driven social responsibility” initiative since 2011 called the Fair Food Program (FFP) (Coalition of Immokalee Workers, 2026, para. 2). An organizer with the CIW commented that the lack of state-backed regulations isn’t stopping them from trying to protect workers:

“We as workers can’t afford to wait for the Florida legislature to find its conscience. ... That’s why we are focused on our partnership with many of the state’s largest growers and on expanding the Fair Food Program. ... [Farmworkers in the FFP] don’t feel pressure to keep working under conditions that are placing their lives and their health at risk. And that’s fundamentally different from what happens outside of the program.” (Moran, 2024, paras. 5, 7)

— Organizer with the CIW

The program works by leveraging consumer preferences against large restaurant brands and grocers, which can avoid the CIW’s public boycotts and pressure campaigns by agreeing to purchase produce solely from growers with certified labor standards (Coalition of Immokalee Workers, n.d.). The FFP circumvents the wide power gap between workers and employers by going directly to the buyers—companies that have reputations to uphold like Subway, Whole Foods, and Walmart (Coalition of Immokalee Workers, n.d.). The program’s heat protocol requires the provision of water, shade, rest breaks every two hours, and heat illness monitoring by managers between the months of April and November (Moran, 2024). According to another organizer, the FFP covers around 90% of tomato farms in Florida, protecting thousands of workers (Perry, 2024). The CIW says this solution is working well for swaths of the agricultural industry, and has expanded to farms in 21 other states as well as a handful of other countries (Fair Food Program, n.d.). Workers who organized the campaign in Miami-Dade County recognized the success of the FFP, but said it wasn’t going far enough:

“We look to [the Fair Food Program] for best practices in terms of how can agricultural employers already begin to implement these kinds of protections. ... But we also believe that it’s important to have regulations and forcible regulation that covers entire industries.” (Myers & Chilukuri, 2023, para. 7)

— Executive director of WeCount!

The CIW argues that even with official state regulations, a model like the FFP will still be necessary to ensure proper enforcement (Myers & Chilukuri, 2023).

6 | Discussion

This critical analysis examined the power dynamics among workers, advocates, and politicians involved in Florida's policy debate over occupational heat protections for outdoor workers. The stakeholder analysis revealed a collection of more than 100 stakeholders central to the debate, as well as their stances on the issue of local heat protection. It also discussed the vast difference in levels of power held by workers, organizations, and politicians, and gave a brief background on 44 organizations, including nonprofits, labor unions, and trade associations. Through the QCA, dominant themes were extracted from the public discourse tracing the major narratives, debates, and discursive strategies used by stakeholders. These demonstrate that opposing sides of the policy debate have fundamentally different priorities when it comes to heat-related workplace regulations, different conceptions of outdoor workers and their needs, and different understandings of legal jurisdiction across levels of governance. Additional forms of material and institutional power were also revealed in materials collected during the QCA, showing that construction and agricultural industry groups have unique access to and alignment with Florida state politicians, but also highlighting an alternative avenue that farmworkers are using to gain better working conditions, including heat protections.

Stakeholders in support of local heat protection broadly acknowledged the growing impacts of heat upon outdoor workers, recognized their inherent value as human beings, and saw stringent local, state, and federal heat legislation as a necessity. Workers made their struggle known through first-hand accounts of illness and fatality, communicated their feeling of poor treatment and perceived expendability, and organized for labor protections at the local level. Advocacy organizations expressed the dangers of heat, the necessity of local legal protections due to lack of enforcement, as well as their frustration at the state legislature for preempting Miami-Dade County's local heat standard. While contributing to these arguments, supporting politicians also stressed that the statewide preemption bill HB 433 was undermining local democracy.

Stakeholders opposing local heat protection generally viewed the regulations as antagonistic to industry and the state economy, spoke of workers and their health as factors of production, and saw heat legislation below the federal level as unnecessary. There was a broad alignment in the statements made by industry groups and opposing politicians, as they prioritized the perceived harms of non-uniform regulations, fines upon businesses, and government overreach. They also often argued that employers should be the decision-makers

in matters of occupational health and safety, since they care about maintaining a productive workforce and already comply with existing regulations.

The critical environmental justice lens helped in defining key instances of recognitional injustice (Menton et al., 2020), in which policymakers were reluctant to acknowledge heat as a dangerous health risk to outdoor workers. This sits in stark contrast to the fact that opposing politicians recognized the dangers of heat to student athletes in Florida, and unanimously voted to protect them (Rosenfield, 2024). Environmental justice also helped in revealing instances of procedural injustice (Menton et al., 2020), whereby Republican state politicians operate what can be termed a “policy monopoly” (Baumgartner & Jones, 2009, p. 6). This is evidenced by the exclusion of workers, advocates, and politicians from considering local heat protection standards, culminating in a statewide preemption of local heat protection laws, while also indicating that state-level protections were not up for debate. The convergence of talking points among industry representatives and Republican politicians, in tandem with the evidence of material and institutional alignment between them, suggests that industry groups likely play a role in reinforcing, if not shaping, the aims of this policy monopoly.

Additionally, the analysis helped answer some aspects of the question prompted by the political ecology literature in Chapter 3.1—*who’s perception of the heat prevails, and why?* Broadly, those in support of local heat standards conceived of the heat as a dangerous working condition to be managed with government regulation of the construction and agricultural industries. As shown in their statements, the policy opposition broadly conceived of the heat as a non-issue for outdoor workers. Due to the passage of HB 433, it’s clear that the policy opposition’s perception of heat prevails—but why?

One possible explanation for the reason why industry groups and Republican politicians avoided recognizing the plight of outdoor workers is because doing so would mean acknowledging the existence of a problem that necessitates change. The Florida legislature’s ban of the term *climate change* from state laws just a month after passing HB 433 is additional evidence in this direction (The Associated Press, 2024). Statements by industry representatives and politicians suggest they currently perceive the cost of implementing heat regulations to businesses and the economy to be greater than the cost of workers’ lives. Though research shows workers are more productive and injury compensation costs could be reduced when they are protected from the heat (Flouris et al., 2024), employers likely have a limited market incentive to take on the burden of heat, in part because outdoor workers are perceived to be easily replaceable. Additionally, there is currently no substantive penalty for industry to

continue operating in this manner due to the gaps in OSHA's enforcement mechanism (Occupational Safety and Health Administration, 2021).

Furthermore, industries and the state economy benefit from the continued use of precarious temporary labor in the form of marginalized outdoor workers because this workforce is willing to take on so-called "immigrant jobs" (Garip, 2012, p. 413), and has few avenues to secure better wages or working conditions (Anderson, 2024; Erlich, 2021; Greco, 2023; Martin, 2020; Wadsworth et al., 2019). Legislators and the industry maintain control of this precarious workforce through the use of preemption laws like HB 433: as shown in the literature, labor rights preemption laws are more prevalent in Republican-controlled legislatures, and they are often pushed by corporate interests (Flavin & Shufeldt, 2020; Melton-Fant, 2023). In the Florida state legislature, the line is blurred between politician and business owner, decision-maker and industry representative. Both groups have the incentive to exclude workers, their unions, and political advocates from the decision-making process, as well as the incentive to perpetuate the burden of heat upon the shoulders of workers rather than seek ways to distribute that burden.

However, the analysis also revealed discussions surrounding an alternative avenue to securing heat protections for outdoor workers without relying on regulation-resistant governments: the worker-driven social responsibility model demonstrated by the CIW's Fair Food Program (Asbed & Sellers, 2013). Through the program, workers have been able to use the market power of consumer choice to penalize employers that don't comply with demands. It should be noted, however, that this approach still leaves much of the power in the hands of large corporations and their consumers, as changes in the market or in consumer behavior could reduce its effectiveness. Additionally, it may be difficult to implement in industries that aren't much swayed by public consumer preferences, such as construction and landscaping. Nevertheless, the FFP model represents an impactful innovation that has created a dramatic shift in working conditions on the ground, according to the CIW and other researchers (Asbed & Sellers, 2013; Kurtz et al., 2021). In the face of systemic exclusion from the policymaking progress, as in Florida, or in places where laws are implemented but not enforced, such a model may be an effective way forward for workers.

6.1 Limitations, future research avenues, and policy recommendations

This research approach was met with several limitations. While the use of quotes from news articles allowed for a wide range of stakeholders and perspectives, the quotes did not come directly from the speakers themselves, but were filtered through the writing process of

journalists. As a result, the stakeholders and statements appearing in the discourse are to some degree a representation of journalists' selection of sources and interview subjects, the quotes they chose to print, and the characteristics they included or left out (e.g., migrant status, age, sex). This effect was tempered by the use of additional advocacy documents that came directly from stakeholders. Another potential limitation of the dataset was exclusion of documents in languages other than English, since the document search returned some news articles published in Spanish, suggesting Spanish-language documents could have contributed additional statements to analyze. Nevertheless, several news articles in the document pool noted that quotes from outdoor workers had been translated into English, and in that sense, the language barrier did not stop these speakers from being included in the analysis. Furthermore, the research approach did not address the temporality of the public discourse. Analyzing how framings developed over time could provide additional insights into the way messaging was dispersed, or the ways in which certain stakeholder groups coalesced around an argument. Finally, this methodological approach was unable to comprehensively account for other forms of power not represented in the discourse: some sources gave a glimpse into private stakeholder negotiations and financial ties that likely had an influence on the policy outcome, suggesting the existence of further financial and communication records that could provide insight into power relations between stakeholders.

Future research avenues on this topic include the analysis of the institutional and financial ties between businesses, industry groups, and politicians, which may uncover further important power dynamics leading to a lack of heat protection standards. While some studies have examined the ways in which limited labor rights have impacted workers' ability to secure better working conditions in the agricultural industry, further research is needed to address this dynamic in construction and other industries. Such research could assess worker-employer power dynamics, the decline of unionization in the construction industry, and their impact upon worker health and safety regulations as they relate to heat.

Workers should be afforded the fundamental right to a safe, healthy, and dignified livelihood. While research points to the reality that even relatively strong state regulations have not transformed working conditions and HRI outcomes for outdoor workers, the track record in states like California and Washington shows that such regulations can prove as a starting point which can be strengthened over time through subsequent regulation and litigation (Anderson, 2024; Mays, 2024). Strong and responsive enforcement mechanisms are essential to ensure that employers comply with these laws when violations are reported by workers. Local, state, and national heat standards can also be combined with other approaches such as

the worker-driven social responsibility model demonstrated by the CIW's Fair Food Program to give workers more control and agency over their occupational safety and health (Asbed & Sellers, 2013). Mechanisms that keep workers in a position of powerlessness and perpetual precarity should be dismantled; measures to do so include the expansion of the NLRA to include the agricultural industry as outlined by Greco (2023), penalizing retaliatory practices against migrant worker whistleblowers (Anderson, 2024), and giving power back to local governments by undoing statewide preemption laws such as HB 433 in states like Florida and Texas.

7 | Conclusion

This thesis surveyed the public discourse in news, policy, and advocacy circles surrounding Florida's heat protection policy debate across the local and state level. A stakeholder analysis revealed over 100 stakeholders on both sides of the policy debate, including outdoor workers, nonprofit organizations, labor unions, trade associations, businesses, and local and state politicians. A brief analysis of stakeholders' levels of influence over policymaking demonstrated the vast power gap spanning from precarious undocumented migrant workers on the low end to the state governor at the top. Informed by political ecology and critical environmental justice perspectives, a qualitative content analysis of 249 stakeholder statements resulted in a typology of the dominant arguments, framings, and discursive strategies used.

The findings revealed that stakeholders on opposite sides of the policy debate displayed conflicting priorities, conflicting conceptions of outdoor workers, and conflicting understandings of legal jurisdiction across levels of governance. Findings were demonstrated across five major themes: (1) the asymmetric recognition of heat as an occupational health risk, (2) claims of harm to industry and economy, (3) contesting the need for local heat protections, (4) jurisdictional conflict and the erosion of local democracy, and (5) additional forms of institutional and material power referenced in the discourse. The analysis also revealed instances of recognitional and procedural injustice, whereby workers and local politicians were excluded from decision-making processes originally intended to create a heat standard for outdoor workers on the local level.

Workers, advocacy organizations, and politicians in support of local heat protection broadly acknowledged the growing impacts of heat upon outdoor workers, recognized their inherent value as human beings, and saw stringent local, state, and federal heat legislation as a necessity. Construction and agricultural industry groups and Republican legislators that

opposed local heat protection viewed the regulations as harmful to industry and the state economy, often spoke of workers and their health as factors of production, and sought to depoliticize the risk of heat. While workers and worker-advocates organized for live-saving labor rights through the policymaking process in Miami-Dade County, state legislators preempted their local bill with the backing of industry groups and banned heat protection standards across the state. In doing so, stakeholders of the policy opposition perpetuated the disproportionate impact upon outdoor workers and ensured that they continue to shoulder the burden of occupational heat risk.

Overall, the findings show that whose perceptions prevail within the political landscape pertaining to climate-related risks such as heat is a function of who holds the most political and economic power. At the same time, initiatives like the Fair Food Program demonstrate that these dynamics are not fixed, and that in some instances, alternative forms of leverage can shift whose priorities matter most. Across policy environments, organizing for legislation which centers the wellbeing of disproportionately affected and marginalized populations remains an important tool for the realization of environmental justice. In the case of Florida, however, unless state or federal priorities change, that goal may require an approach which circumvents state power.

Bibliography

- Adewumi-Gunn, T. (2021, September 15). Workplace Heat Protections Across the Globe. *Natural Resources Defense Council*. <https://www.nrdc.org/bio/teniope-adewumi-gunn/workplace-heat-protections-across-globe>
- Alahmad, B., Kessler, W., Alwadi, Y., Schwartz, J., Wagner, G. R., & Michaels, D. (2025). A nationwide analysis of heat and workplace injuries in the United States. *Environmental Health*, 24(1), 65. <https://doi.org/10.1186/s12940-025-01231-1>
- American Civil Liberties Union. (2025). *Groups Take Legal Action to Halt Trump Fast-Track Deportation Policy*. <https://www.aclu.org/press-releases/groups-take-legal-action-to-halt-trump-fast-track-deportation-policy>
- Anderson, S. (2024). Labor Rights in the Anthropocene: The Effects of Climate Change On Undocumented Farm Workers. *Seattle Journal for Social Justice*, 22(1). <https://digitalcommons.law.seattleu.edu/sjsj/vol22/iss1/10>
- Arcury, T. A., Arnold, T. J., Quandt, S. A., Chen, H., Kearney, G. D., Sandberg, J. C., Talton, J. W., Wiggins, M. F., & Daniel, S. S. (2019). Health and Occupational Injury Experienced by Latinx Child Farmworkers in North Carolina, USA. *International Journal of Environmental Research and Public Health*, 17(1), 248. <https://doi.org/10.3390/ijerph17010248>
- Arnold, T. J., Arcury, T. A., Sandberg, J. C., Quandt, S. A., Talton, J. W., Mora, D. C., Kearney, G. D., Chen, H., Wiggins, M. F., & Daniel, S. S. (2020). Heat-Related Illness Among Latinx Child Farmworkers in North Carolina: A Mixed-Methods Study. *New Solutions: A Journal of Environmental and Occupational Health Policy*, 30(2), 111–126. <https://doi.org/10.1177/1048291120920571>
- Arredondo, V. (2024, March 7). Florida could become the latest state to block extreme heat protections for workers. *Reckon*. <https://www.reckon.news/news/2024/03/florida-could-become-the-latest-state-to-block-extreme-heat-protections-for-workers.html>
- Asbed, G., & Sellers, S. (2013). The Fair Food Program: Comprehensive, verifiable and sustainable change for farmworkers. *U. Pa. JL & Soc. Change*, 16(39). http://jlasce.org/attachments/category/39/16.1_Asbed%20%20Sellers.pdf
- Associated Builders and Contractors of Central Florida. (2024). *Building Central Florida* (2). https://issuu.com/abccf/docs/bcf_2024_issue2_web
- Associated Industries of Florida. (2024a). *2024 Session Priorities*. <https://aif.com/publications/sessionpriority/2024-session-priorities.pdf>
- Associated Industries of Florida. (2024b, February 22). *Daily Legislative Brief from February 22, 2024*. https://aif.com/legislative_info/2024/db-24-22.html
- Associated Industries of Florida. (2024c, April 23). *AIF Releases 2024 Voting Records Report & Announces Champions for Business Award Recipients*. <https://aif.com/information/2024/pr240423.html>

- Aton, A. (2024, February 27). Florida Considers Banning Local Heat Protections for Workers. *Scientific American*. <https://www.scientificamerican.com/article/florida-considers-banning-local-heat-protections-for-workers/>
- Ballotpedia. (n.d.). *Party control of Florida state government*. Retrieved March 21, 2026, from https://ballotpedia.org/Party_control_of_Florida_state_government
- Baumgartner, F. R., & Jones, B. D. (2009). *Agendas and instability in American politics* (2nd ed). The University of Chicago Press.
- Bolivar, S. (2023, November 9). As heat records are broken, ¿Qué Calor! Fights for outdoor workers' rights. *Caplin News*. <https://caplinnews.fiu.edu/we-count-florida-que-calor-miami-workers-rights/>
- Brugha, R., & Varvasovszky, Z. (2000). Stakeholder analysis: A review. *Health Policy and Planning*, 15(3), 239–246. <https://doi.org/10.1093/heapol/15.3.239>
- Budryk, Z. (2024, April 15). DeSantis signs bill banning local heat protections for workers. *The Hill*. <https://thehill.com/policy/energy-environment/4595139-florida-desantis-ban-local-heat-protections-workers/>
- Bureau of Labor Statistics. (2024). *Labor Force Statistics from the Current Population Survey* [Dataset]. <https://www.bls.gov/cps/cpsaat11.htm>
- Cal. Code Regs. Tit. 8, § 3395, Heat Illness Prevention in Outdoor Places of Employment (2006). <https://www.dir.ca.gov/title8/3395.html>
- Carrión-Flores, C. E. (2018). What makes you go back home? Determinants of the duration of migration of Mexican immigrants in the United States. *IZA Journal of Development and Migration*, 8(1), 3. <https://doi.org/10.1186/s40176-017-0108-0>
- Castor, K. (2024, June 13). *RE: Heat-related injury and illness prevention in the workplace* [Letter]. https://castor.house.gov/uploadedfiles/letter_to_oshare_heat_safety.pdf
- Catherman, C. (2024, May 8). A ‘slap in the face:’ Farmworker groups blast Florida law preventing heat rules. *Orlando Sentinel*. <https://www.detroitnews.com/story/business/2024/05/08/a-slap-in-the-face-farmworker-groups-blast-law-preventing-heat-rules/73612648007/>
- Cerabino, F. (2024, February 16). Burned: Florida lawmakers cast aside efforts to protect outdoor workers from heat. *Palm Beach Post*. <https://www.palmbeachpost.com/story/opinion/columns/2024/02/16/state-lawmakers-stymie-heat-protection-legislation-for-outdoor-workers/72597360007/>
- Cheney, A. M., Barrera, T., Rodriguez, K., & Jaramillo López, A. M. (2022). The Intersection of Workplace and Environmental Exposure on Health in Latinx Farm Working Communities in Rural Inland Southern California. *International Journal of Environmental Research and Public Health*, 19(19), 12940. <https://doi.org/10.3390/ijerph191912940>

- Chiquiar, D., & Hanson, G. H. (2005). International Migration, Self-Selection, and the Distribution of Wages: Evidence from Mexico and the United States. *Journal of Political Economy*, 113(2), 239–281. <https://doi.org/10.1086/427464>
- Coalition of Immokalee Workers. (n.d.). *About CIW*. Retrieved April 16, 2026, from <https://ciw-online.org/about/>
- Creating a Heat Standard for Outdoor Workers, Miami-Dade County (2023). <https://www.miamidade.gov/govaction/matter.asp?file=true&matter=231454>
- Crowder, V. (2024, March 1). Florida Legislature closer to banning local heat protections for outdoor workers. *Health News Florida*. <https://www.wlrn.org/government-politics/2024-02-29/heat-protections-workers-florida-miami-legislation-hb433>
- Democracy Docket. (n.d.). *Private Right of Action*. Retrieved April 13, 2026, from <https://www.democracymocket.com/proa/>
- Dong, X. S., West, G. H., Holloway-Beth, A., Wang, X., & Sokas, R. K. (2019). Heat-related deaths among construction workers in the United States. *American Journal of Industrial Medicine*, 62(12), 1047–1057. <https://doi.org/10.1002/ajim.23024>
- Ebi, K. L., Capon, A., Berry, P., Broderick, C., De Dear, R., Havenith, G., Honda, Y., Kovats, R. S., Ma, W., Malik, A., Morris, N. B., Nybo, L., Seneviratne, S. I., Vanos, J., & Jay, O. (2021). Hot weather and heat extremes: Health risks. *The Lancet*, 398(10301), 698–708. [https://doi.org/10.1016/S0140-6736\(21\)01208-3](https://doi.org/10.1016/S0140-6736(21)01208-3)
- El Khayat, M., Halwani, D. A., Hneiny, L., Alameddine, I., Haidar, M. A., & Habib, R. R. (2022). Impacts of Climate Change and Heat Stress on Farmworkers' Health: A Scoping Review. *Frontiers in Public Health*, 10, 782811. <https://doi.org/10.3389/fpubh.2022.782811>
- Employment Regulations, HB 433, Florida House of Representatives (2024). <https://www.flhouse.gov/Sections/Bills/billsdetail.aspx?BillId=79034&SessionId=103>
- Erlich, M. (2021). Misclassification in Construction: The Original Gig Economy. *ILR Review*, 74(5), 1202–1230. <https://doi.org/10.1177/0019793920972321>
- EUROGIP. (2023). *Working in extreme heat and heatwaves: What legislation and preventive measures at international level?* https://eurogip.fr/wp-content/uploads/2023/08/EUROGIP_Working-in-extreme-heat-and-heatwaves-legislation-and-preventive-measures-at-international-level.pdf
- Fair Food Program. (n.d.). *Fair Food Program: The Power of Prevention*. Retrieved April 20, 2026, from <https://fairfoodprogram.org/>
- Fla. Stat. § 1006.165, Pub. L. No. CS/HB 7011, Well-being of students participating in extracurricular activities; training. (2020). <https://www.flhouse.gov/Sections/Bills/billsdetail.aspx?BillId=69059&SessionId=89>
- Flavin, P., & Shufeldt, G. (2020). Explaining State Preemption of Local Laws: Political, Institutional, and Demographic Factors. *Publius: The Journal of Federalism*, 50(2), 280–309. <https://doi.org/10.1093/publius/pjz024>

- Florida Associated Builders and Contractors. (2024). *2024 ABC Legislative Priorities*. <https://abcfloirida.com/wp-content/uploads/2024/05/2024-ABC-Legislative-Priorities.pdf>
- Florida Chamber of Commerce. (2025). *Florida Chamber Foundation Announces Florida Now Ranks as the World's 15th Largest Economy*. <https://www.flchamber.com/florida-chamber-foundation-announces-florida-now-ranks-as-the-worlds-15th-largest-economy/>
- Florida Home Builders Association. (2024). *FHBA Awards*. <https://fhba.com/news-events/fhba-awards/>
- Flouris, A., Azzi, M., Graczyk, H., Nafradi, B., & Scott, N (Eds.). (2024). *Heat at Work: Implications for Safety and Health. A Global Review of the Science, Policy and Practice*. ILO.
- Foster, J., Smallcombe, J. W., Hodder, S., Jay, O., Flouris, A. D., Nybo, L., & Havenith, G. (2021). An advanced empirical model for quantifying the impact of heat and climate change on human physical work capacity. *International Journal of Biometeorology*, 65(7), 1215–1229. <https://doi.org/10.1007/s00484-021-02105-0>
- Garcia, J. (2024, January 22). Records show a big-business lobbying group wrote a bill to block better wages and benefits for Florida workers. *Seeking Rents*. <https://jasongarcia.substack.com/p/records-show-a-big-business-lobbying>
- García-Colón, I. (2008). Claiming Equality: Puerto Rican Farmworkers in Western New York. *Latino Studies*, 6(3), 269–289. <https://doi.org/10.1057/lst.2008.23>
- Garip, F. (2012). Discovering Diverse Mechanisms of Migration: The Mexico–US Stream 1970–2000. *Population and Development Review*, 38(3), 393–433. <https://doi.org/10.1111/j.1728-4457.2012.00510.x>
- Goñi-Lessan, A., & Palm, V. (2025, June 4). Families scramble to find loved ones – and answers – after massive ICE raid in Florida. *USA Today*. <https://www.usatoday.com/story/news/nation/2025/06/04/florida-ice-raid-detainees-locations/84025818007/>
- Gordon, R. (1999). Poisons in the Fields: The United Farm Workers, Pesticides, and Environmental Politics. *Pacific Historical Review*, 68(1), 51–77. <https://doi.org/10.2307/3641869>
- Greco, L. (2023). An Environmental Justice Analysis of the Exclusion of Farmworkers From the National Labor Relations Act. *Harvard Environmental Law Review*, 47.
- Green, A., & St. Martin, V. (2024, March 19). Florida Legislators Ban Local Heat Protections for Millions of Outdoor Workers. *Inside Climate News*. <https://insideclimatenews.org/news/19032024/florida-legislators-ban-heat-protections-for-outdoor-workers/>
- Grimble, R. (1995). *Trees and trade-offs: A stakeholder approach to natural resource management* (Gatekeeper 52). International Institute for Environment and

Development (IIED).

<https://www.iied.org/sites/default/files/pdfs/migrate/6066IIED.pdf>

- Grimble, R., & Wellard, K. (1997). Stakeholder methodologies in natural resource management: A review of principles, contexts, experiences and opportunities. *Agricultural Systems*, 55(2), 173–193. [https://doi.org/10.1016/S0308-521X\(97\)00006-1](https://doi.org/10.1016/S0308-521X(97)00006-1)
- Gubernot, D. M., Anderson, G. B., & Hunting, K. L. (2015). Characterizing occupational heat-related mortality in the United States, 2000–2010: An analysis using the census of fatal occupational injuries database. *American Journal of Industrial Medicine*, 58(2), 203–211. <https://doi.org/10.1002/ajim.22381>
- Hanson, G. H., & Spilimbergo, A. (1999). Illegal Immigration, Border Enforcement, and Relative Wages: Evidence from Apprehensions at the U.S.-Mexico Border. *American Economic Review*, 89(5), 1337–1357. <https://doi.org/10.1257/aer.89.5.1337>
- Harris, A., & Ceballos, A. (2024, February 13). Tallahassee bills aim to kill efforts by counties to protect workers from extreme heat. *Miami Herald*. <https://www.miamiherald.com/news/local/environment/climate-change/article285250097.html>
- Harris, A., Ceballos, A., & Miznazi, A. (2024, March 6). Lawmakers poised to kill Miami-Dade effort to pass heat protections for outdoor workers. *Miami Herald*. <https://www.miamiherald.com/news/local/environment/climate-change/article286277130.html>
- Harris, A., & Miznazi, A. (2023, November 7). After industry pressure, Miami-Dade puts heat protections for outdoor workers on ice. *Miami Herald*. <https://www.miamiherald.com/news/local/community/miami-dade/article281487003.html>
- Harris, A., & Rivero, N. (2023, June 14). Florida heat can kill, but there are no laws to protect outdoor workers. *WFSU News*. <https://news.wfsu.org/state-news/2023-06-14/florida-heat-can-kill-but-there-are-no-laws-to-protect-outdoor-workers>
- Harrison, C. (2024, July 11). Why prevent stronger local heat protections for workers? *Jacksonville Today*. <https://jaxtoday.org/2024/07/11/askjaxtdy-l-why-prevent-stronger-local-heat-protections-for-workers/>
- Harvey, C., & Wittenberg, A. (2024, September 4). Coroners ignore heat in many deaths. That’s dangerous. *E&E News*. <https://www.eenews.net/articles/coroners-ignore-heat-in-many-deaths-thats-dangerous/>
- Haverkate, J. R. (2025, February 20). Florida Enacts Immigration-Related Laws Expanding Law Enforcement, Restricting In-State Tuition, and Increasing Criminal Penalties. *Ogletree Deakins*. <https://ogletree.com/insights-resources/blog-posts/florida-enacts-immigration-related-laws-expanding-law-enforcement-restricting-in-state-tuition-and-increasing-criminal-penalties/>
- Hawkins, D., & Ibrahim, M. (2023). Characteristics of Occupational Environmental Heat Injuries/Illnesses: Survey of Occupational Injuries and Illnesses, 2011 to 2019.

- Journal of Occupational & Environmental Medicine*, 65(5), 401–406.
<https://doi.org/10.1097/JOM.0000000000002794>
- Heat Illness Prevention, HB 945, Florida Senate (2024).
<https://www.flsenate.gov/Session/Bill/2024/945>
- Heat Workforce Standards Act of 2025, H. R. 6213, 119th Congress (2025).
<https://www.congress.gov/bill/119th-congress/house-bill/6213/text>
- Heine, B., Quandt, S. A., & Arcury, T. A. (2017). “Aguantamos”: Limits to Latino Migrant Farmworker Agency in North Carolina Labor Camps. *Human Organization*, 76(3), 240–250.
- Hellmann, M. (2026, January 22). ‘It’s like they’re hunting’: US citizens and legal residents report increase in racial profiling by ICE. *The Guardian*.
<https://www.theguardian.com/us-news/2026/jan/22/us-citizens-racial-profiling-ice>
- Hout, M., & Maggio, C. (2021). Immigration, Race & Political Polarization. *Daedalus*, 150(2), 40–55. https://doi.org/10.1162/daed_a_01845
- Idris, M. A., Mena, K. D., Markham, C., & Perkison, W. B. (2025). Heat Stress Prevention and Management in the Construction Industry: A Gap Analysis. *Annals of Global Health*, 91(1), 75. <https://doi.org/10.5334/aogh.4833>
- International Organization for Migration. (n.d.). *Who is a Migrant?* IOM UN Migration. Retrieved March 23, 2026, from <https://weblog.iom.int/who-migrant>
- Jamieson, D., & Kaufman, A. C. (2024, March 8). Republicans In An Incredibly Hot State Are Trying To Block Protections For Outdoor Workers. *HuffPost*.
https://www.huffpost.com/entry/florida-climate-heat-protections_n_65eb3ef5e4b05ec1ccd9bfae
- Jones, C., & Rodriguez-Delgado, C. (2021, October 7). The U.S. will develop a federal heat standard for the first time. Here’s what advocates and labor experts want. *PBS News*.
<https://www.pbs.org/newshour/nation/what-will-it-take-to-keep-workers-dying-from-heat-enforcement-and-trust-advocates-say>
- Kearney, G. D., Hu, H., Xu, X., Hall, M. B., & Balanay, J. A. G. (2016). Estimating the Prevalence of Heat-Related Symptoms and Sun Safety–Related Behavior among Latino Farmworkers in Eastern North Carolina. *Journal of Agromedicine*, 21(1), 15–23. <https://doi.org/10.1080/1059924X.2015.1106377>
- Kocchar, R. (2005). *Survey of Mexican Migrants Part Three: The Economic Transition to America*. Pew Hispanic Center. https://www.pew.org/-/media/legacy/uploadedfiles/wwwpewtrustsorg/reports/hispanics_in_america/phcmexicanmigrants1205pdf.pdf
- Krenz, J., Santos, E. C., Torres, E., Palmández, P., Carmona, J., Blancas, M., Marquez, D., Sampson, P., & Spector, J. T. (2021). The multi-level heat education and awareness tools [HEAT] intervention study for farmworkers: Rationale and methods. *Contemporary Clinical Trials Communications*, 22, 100795.
<https://doi.org/10.1016/j.conctc.2021.100795>

- Kristen, E., Banuelos, B., & Urban, D. (2015). Workplace Violence and Harassment of Low-Wage Workers. *Berkeley Journal of Employment & Labor Law*, 36(1).
<https://doi.org/10.15779/Z38MS1C>
- Kurtz, J., Blackstone, N. T., Sparks, J. L. D., Rodriguez, R., & Pinto, C. (2021). The true cost of labour must be worker-defined. *Nature Food*, 2(9), 630–631.
<https://doi.org/10.1038/s43016-021-00369-8>
- Langer, C. E., Mitchell, D. C., Armitage, T. L., Moyce, S. C., Tancredi, D. J., Castro, J., Vega-Arroyo, A. J., Bennett, D. H., & Schenker, M. B. (2021). Are Cal/OSHA Regulations Protecting Farmworkers in California From Heat-Related Illness? *Journal of Occupational & Environmental Medicine*, 63(6), 532–539.
<https://doi.org/10.1097/JOM.0000000000002189>
- Lisiecki, M. (2025, August 27). Undocumented Workers in High-Growth U.S. Occupations. *The Center for Migration Studies*. <https://cmsny.org/publications/undocumented-workers-in-high-growth-occupations-and-industries/>
- López-Gálvez, N., Wagoner, R., Canales, R. A., Ernst, K., Burgess, J. L., De Zapien, J., Rosales, C., & Beamer, P. (2021). Longitudinal assessment of kidney function in migrant farm workers. *Environmental Research*, 202, 111686.
<https://doi.org/10.1016/j.envres.2021.111686>
- Lugo-Amador, N. M., Rothenhaus, T., & Moyer, P. (2004). Heat-related illness. *Emergency Medicine Clinics of North America*, 22(2), 315–327.
<https://doi.org/10.1016/j.emc.2004.01.004>
- Luque, J. S., Becker, A., Bossak, B. H., Grzywacz, J. G., Tovar-Aguilar, J. A., & Guo, Y. (2020). Knowledge and Practices to Avoid Heat-Related Illness among Hispanic Farmworkers along the Florida-Georgia Line. *Journal of Agromedicine*, 25(2), 190–200. <https://doi.org/10.1080/1059924X.2019.1670312>
- Manni, G. (n.d.). *Extreme Heat and Immigrant Farmworker Health in the US*. Climate Mobilities Hub. Retrieved January 17, 2026, from <https://www.climohub.org/project/extreme-heat-and-immigrant-farmworker-health-in-the-us/>
- Manni, G. (2023). *Heat Stress and Im/migrant Farmworker Health in the US and Mexico* (MECC Case Studies 2). Climate Mobilities Hub. https://www.climohub.org/wp-content/uploads/2024/10/MECC-Case-Studies_-_Gregory-Manni.pdf
- Marr, C. (2024, April 17). Worker Heat Safety Laws Are Latest Focus of Red State Preemption. *Bloomberg Law*. <https://news.bloomberglaw.com/daily-labor-report/worker-heat-safety-laws-are-latest-focus-of-red-state-preemption>
- Martin, P. (2020, July 10). *Mexican Braceros and US Farm Workers*. <https://www.wilsoncenter.org/article/mexican-braceros-and-us-farm-workers>
- Martin, P., & Rutledge, Z. (2025). President Trump and Farm Labor: The Outlook. *ARE Update*, 28, 5-8. University of California Giannini Foundation of Agricultural Economics. https://s.giannini.ucop.edu/uploads/pub/2025/02/27/v28n3_2.pdf

- Martinez, A. (2023, September 20). Miami-Dade may soon have the first county-wide heat standard. *Prism*. <https://prismreports.org/2023/09/20/miami-dade-first-county-wide-heat-standard/>
- Mays, M. (2024, February 8). California lawmakers blast state’s workplace safety agency over “dangerous” farmworker conditions. *Los Angeles Times*. <https://www.latimes.com/california/story/2024-02-08/california-lawmakers-call-for-state-action-on-dangerous-and-illegal-farmworker-conditions>
- Mccallister, J. L. (2012). Pre, Peri, and Post-Migration Perspectives of Mexican National Refugees Related to Experiences of Violence, Migration, and Resettlement Along the Texas-Mexico Border. *Open Access Theses & Dissertations*, 2341. https://scholarworks.utep.edu/open_etd/2341
- Medina, A. (2022). La Corrida. In *Segmented bodies* (pp. 13–15). Prickly Pear Publishing.
- Melton-Fant, C. (2023). Corporate influenced state preemption and health: A legal mapping analysis of workers’ rights preemption bills in the US south. *Social Science & Medicine*, 336, 116255. <https://doi.org/10.1016/j.socscimed.2023.116255>
- Mendoza, M. E. (2019). Mexican Farm Labor and the Agricultural Economy of the United States. *History Now*, (53). <https://www.gilderlehrman.org/history-resources/essays/mexican-farm-labor-and-agricultural-economy-united-states>
- Menton, M., Larrea, C., Latorre, S., Martinez-Alier, J., Peck, M., Temper, L., & Walter, M. (2020). Environmental justice and the SDGs: From synergies to gaps and contradictions. *Sustainability Science*, 15(6), 1621–1636. <https://doi.org/10.1007/s11625-020-00789-8>
- Miami-Dade County. (n.d.). *Miami-Dade Land Management: Existing Land Use*. Retrieved January 17, 2026, from <https://gisweb.miamidade.gov/landmanagement/>
- Miami-Dade County. (1957). *Miami-Dade Home Rule Amendment and Charter*. <https://www.miamidade.gov/charter/library/home-rule-charter.pdf>
- Migration Policy Institute. (2023). *State Workforce Data—Florida* [Dataset]. <https://www.migrationpolicy.org/data/state-profiles/state/workforce/FL>
- Mills, P. K., Dodge, J., & Yang, R. (2009). Cancer in Migrant and Seasonal Hired Farm Workers. *Journal of Agromedicine*, 14(2), 185–191. <https://doi.org/10.1080/10599240902824034>
- Mirabelli, M. C., Quandt, S. A., Crain, R., Grzywacz, J. G., Robinson, E. N., Vallejos, Q. M., & Arcury, T. A. (2010). Symptoms of Heat Illness Among Latino Farm Workers in North Carolina. *American Journal of Preventive Medicine*, 39(5), 468–471. <https://doi.org/10.1016/j.amepre.2010.07.008>
- Misra, S., Kwon, S. C., Abraído-Lanza, A. F., Chebli, P., Trinh-Shevrin, C., & Yi, S. S. (2021). Structural Racism and Immigrant Health in the United States. *Health Education & Behavior*, 48(3), 332–341. <https://doi.org/10.1177/10901981211010676>

- Mizelle, E., Larson, K., & Doherty, C. (2022). Understanding Farmworker Fluid Intake Using Intersectionality Theory. *NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy*, 32(1), 19–29. <https://doi.org/10.1177/10482911221078964>
- Mizelle, E., Larson, K. L., Bolin, L. P., & Kearney, G. D. (2022). Fluid Intake and Hydration Status Among North Carolina Farmworkers: A Mixed Methods Study. *Workplace Health & Safety*, 70(12), 532–541. <https://doi.org/10.1177/21650799221117273>
- Mohai, P., Pellow, D., & Roberts, J. T. (2009). Environmental Justice. *Annual Review of Environment and Resources*, 34(1), 405–430. <https://doi.org/10.1146/annurev-environ-082508-094348>
- Moline, M. (2024, April 12). DeSantis nixes local efforts to protect outdoor workers from FL’s brutal weather. *Florida Phoenix*. <https://floridaphoenix.com/2024/04/12/desantis-nixes-local-efforts-to-protect-outdoor-workers-from-fls-brutal-weather/>
- Mora, C., Dousset, B., Caldwell, I. R., Powell, F. E., Geronimo, R. C., Bielecki, C. R., Counsell, C. W. W., Dietrich, B. S., Johnston, E. T., Louis, L. V., Lucas, M. P., McKenzie, M. M., Shea, A. G., Tseng, H., Giambelluca, T. W., Leon, L. R., Hawkins, E., & Trauernicht, C. (2017). Global risk of deadly heat. *Nature Climate Change*, 7(7), 501–506. <https://doi.org/10.1038/nclimate3322>
- Moran, G. (2024, March 20). Florida Banned Farmworker Heat Protections. A Groundbreaking Partnership Offers a Solution. *Civil Eats*. <https://civileats.com/2024/03/20/florida-banned-farmworker-heat-protections-a-groundbreaking-partnership-offers-a-solution/>
- Mulligan, M. (2024, February 12). *Florida’s outdoor workers want heat safety. Why it’s an uphill battle*. Tampa Bay Times. <https://www.tampabay.com/news/environment/2024/02/12/floridas-outdoor-workers-want-heat-safety-why-its-an-uphill-battle/>
- Mutic, A. D., Mix, J. M., Elon, L., Mutic, N. J., Economos, J., Flocks, J., Tovar-Aguilar, A. J., & McCauley, L. A. (2018). Classification of Heat-Related Illness Symptoms Among Florida Farmworkers. *Journal of Nursing Scholarship*, 50(1), 74–82. <https://doi.org/10.1111/jnu.12355>
- Myers, K., & Chilukuri, S. (2023, October 27). How Florida farmworkers are protecting themselves from extreme heat. *Grist*. <https://grist.org/agriculture/how-florida-farm-workers-are-protecting-themselves-from-extreme-heat/>
- National Federation of Independent Businesses. (2024, April 11). *DeSantis Signs Bill Stopping Local Government Overreach—NFIB*. <https://www.nfib.com/content/news/florida/desantis-signs-bill-stopping-local-government-overreach/>
- Occupational Safety and Health Administration. (n.d.). *Heat—Standards*. U.S. Department of Labor. Retrieved April 4, 2026, from <https://www.osha.gov/heat-exposure/standards>

- Occupational Safety and Health Administration. (2021, October 27). Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings. *Federal Register*, 86(205), 59309-59326. <https://www.govinfo.gov/content/pkg/FR-2021-10-27/pdf/2021-23250.pdf>.
- O'Neill, S., Hayes, S., Strauß, N., Doutreix, M., Steentjes, K., Ettinger, J., Westwood, N., & Painter, J. (2023). Visual portrayals of fun in the sun in European news outlets misrepresent heatwave risks. *The Geographical Journal*, 189(1), 90–103. <https://doi.org/10.1111/geoj.12487>
- Otto, F., Giguere, J., Zachariah, M., Clarke, B., Barnes, C., Philip, S., Kew, S., Pinto, I., Vahlberg, M., & Merz, N. (2024). *When Risks Become Reality: Extreme Weather In 2024*. World Weather Attribution. <https://doi.org/10.25561/116443>
- Otto, F., Keeping, T., Vrkic, D., Clarke, B., Barnes, C., Philip, S., Kew, S., Pinto, I., Bacher, A., Vahlberg, M., & Singh, R. (2025). *Unequal evidence and impacts, limits to adaptation: Extreme Weather in 2025*. World Weather Attribution. <https://doi.org/10.25560/126543>
- Pellow, D. N. (2016). Toward a Critical Environmental Justice Studies: Black Lives Matter as an Environmental Justice Challenge. *Du Bois Review: Social Science Research on Race*, 13(2), 221–236. <https://doi.org/10.1017/S1742058X1600014X>
- Pellow, D. N. (2018). *What Is Critical Environmental Justice?* Polity Press.
- Perez, L. (2020, October 12). *Essential and expendable: The rise of agricultural labor and the United Farm Workers*. National Museum of American History. <https://americanhistory.si.edu/explore/stories/essential-and-expendable-rise-agricultural-labor-and-united-farm-workers>
- Perreault, T. A., Bridge, G., & McCarthy, J. (Eds.). (2015). *The Routledge handbook of political ecology*. Routledge, Taylor & Francis Group.
- Perry, M. (2023, November 2). FL's excessive heat: Miami-Dade could be first in heat-related protections for outdoor workers. *Florida Phoenix*. <https://floridaphoenix.com/2023/11/02/fls-excessive-heat-miami-dade-could-be-first-in-heat-related-protections-for-outdoor-workers/>
- Perry, M. (2024, April 9). Legislation in Florida would ban local workplace heat protections; Arizona just approved measures. *Florida Phoenix*. <https://floridaphoenix.com/2024/04/09/legislation-in-florida-would-ban-local-workplace-heat-protections-arizona-just-approved-measures/>
- Ponce, J. C. (2023, July 25). The fight to protect Miami's outdoor workers against the deadly heat. *Yale Climate Connections*. <https://yaleclimateconnections.org/2023/07/the-fight-to-protect-miamis-outdoor-workers-against-the-deadly-heat/>
- Powell, E. (2026). *2025 Florida Year in Review*. Florida Climate Center. https://climatecenter.fsu.edu/images/docs/Fla_Annual_climate_summary_2025.pdf
- Power, J. (2026, January 14). Scientists confirm 2025 as third-warmest year ever recorded. *Al Jazeera*. <https://www.aljazeera.com/news/2026/1/14/scientists-confirm-2025-as-third-warmest-year-ever-recorded>

- Raum, S., Rawlings-Sanaei, F., & Potter, C. (2021). A web content-based method of stakeholder analysis: The case of forestry in the context of natural resource management. *Journal of Environmental Management*, 300, 113733. <https://doi.org/10.1016/j.jenvman.2021.113733>
- Re: CS/CS/HB 433, ‘Employment Regulations’ Veto Request. (2024, April 2). [Letter]. <https://drive.google.com/file/d/1Ro1E-m4oMU8Esc2jJgFbQvQ2SnQIlzz8/view>
- Reidmiller, D. R., Avery, C. W., Easterling, D. R., Kunkel, K. E., Lewis, K. L. M., Maycock, T. K., & Stewart, B. C. (Eds.). (2018). *Impacts, Risks, and Adaptation in the United States: The Fourth National Climate Assessment, Volume II*. U.S. Global Change Research Program. <https://doi.org/10.7930/NCA4.2018>
- Rivero, D. (2023, July 18). Push to give outdoor workers extreme heat protections passes first hurdle in Miami-Dade. *WLRN*. <https://www.wlrn.org/business/2023-07-18/outdoor-workers-extreme-heat-protections-miami-dade>
- Rivero, N. (2023a, September 27). Miami-Dade’s worker heat protection bill was a milestone. Lobbyists are watering it down. *Miami Herald*. <https://www.miamiherald.com/news/local/environment/climate-change/article279745304.html>
- Rivero, N. (2023b, October 3). Calls for change after Florida farmworker, 29, dies in heat. ‘Is that what we deserve?’ *Miami Herald*. <https://www.miamiherald.com/news/local/environment/climate-change/article277399723.html>
- Rivero, N. (2023c, November 8). An effort to create the strictest workplace heat rules in the U.S. failed. *The Washington Post*. <https://www.washingtonpost.com/climate-solutions/2023/11/06/miami-dade-county-heat-ordinance/>
- Rivero, N., & Harris, A. (2023, October 3). 46 sweltering days: Miami’s record heat streak offers a glimpse at summers to come. *Miami Herald*. <https://www.miamiherald.com/news/local/environment/climate-change/article277743448.html>
- Robbins, P. (2020). *Political ecology: A critical introduction* (Third edition). Wiley.
- Roberts, J. (2020). Political Ecology. *Cambridge Encyclopedia of Anthropology*. <https://doi.org/10.29164/20polieco>
- Romanello, M., McGushin, A., Di Napoli, C., Drummond, P., Hughes, N., Jamart, L., Kennard, H., Lampard, P., Solano Rodriguez, B., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Cai, W., Campbell-Lendrum, D., Capstick, S., Chambers, J., Chu, L., Ciampi, L., Dalin, C., ... Hamilton, I. (2021). The 2021 report of the Lancet Countdown on health and climate change: Code red for a healthy future. *The Lancet*, 398(10311), 1619–1662. [https://doi.org/10.1016/S0140-6736\(21\)01787-6](https://doi.org/10.1016/S0140-6736(21)01787-6)
- Rosenfield, N. (2024, March 13). As heat becomes a national threat, who will be protected? *Grist*. <https://grist.org/extreme-heat/extreme-heat-protection-florida-law-athletes-workers/>

- Rosenfield, N., & Cholakovska, J. (2023, October 19). Workers are dying from extreme heat. Why aren't there laws to protect them? *Grist*. <https://grist.org/accountability/outdoor-worker-extreme-heat-protections-labor-law-osha/>
- Rudner, N., Elon, L., Xiuhtecutli, N., Ruiz, E., & Chicas, R. (2025). Heat Exposure, Rest Breaks, Dehydration, and Heat-Related Illness Among Agricultural Workers in Florida Summer Heat. *Journal of Health Care for the Poor and Underserved*, 36(2), 590–604. <https://doi.org/10.1353/hpu.2025.a959115>
- Ryoo, J. J., & McLaren, P. (2010). Critical Theory. In *International Encyclopedia of Education* (pp. 348–353). Elsevier. <https://doi.org/10.1016/B978-0-08-044894-7.01388-9>
- Sainato, M. (2025, July 14). US undocumented farm workers feel 'hunted like animals' amid Trump's immigration raids. *The Guardian*. <https://www.theguardian.com/us-news/2025/jul/14/us-farm-workers-ice-raids>
- Salinas, J. L., & Salinas, M. (2022). Systemic racism and undocumented Latino migrant laborers during COVID-19: A narrative review and implications for improving occupational health. *Journal of Migration and Health*, 5, 100106. <https://doi.org/10.1016/j.jmh.2022.100106>
- Santucci, J., Pulver, D. V., Arshad, M., & Jiminez, K. (2024, April 18). Florida baffles experts by banning local water break rules as deadly heat is on the rise. *USA TODAY*. <https://www.usatoday.com/story/news/nation/2024/04/18/florida-bans-local-heat-rules-for-outdoor-workers-baffling-experts/73355824007/>
- Schiffman, R. (2024, August 1). In *Warming World, Global Heat Deaths Are Grossly Undercounted*. Yale Environment 360. <https://e360.yale.edu/features/kristie-ebi-interview>
- Schlosberg, D., Rickards, L., Pearse, R., Della Bosca, H., & Moraes, O. (2024). Critical environmental justice in contemporary scholarship and movements: Consensus and plurality of the discourse. *Environmental Politics*, 1–22. <https://doi.org/10.1080/09644016.2024.2362573>
- Schreier, M. (2012). *Qualitative Content Analysis in Practice*. SAGE Publications Ltd. <https://doi.org/10.4135/9781529682571>
- Schreier, M. (2013). Qualitative Content Analysis. *The SAGE Handbook of Qualitative Data Analysis*.
- Schueler, M. (2024, April 19). Florida lobbyists leaned on pols to get ban on local heat safety and wage laws across the finish line, records show. *Orlando Weekly*. <https://www.orlandoweekly.com/news/florida-lobbyists-leaned-on-politicians-to-get-ban-on-local-heat-safety-and-wage-laws-across-the-finish-line-records-show-36667788/>
- Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms. *English Language Teaching*, 5(9), 9–16. <https://doi.org/10.5539/elt.v5n9p9>

- Seemuth, M. (2023, August 2). Local Heat Protection Rules for Outdoor Workers Face Opposition in Texas and Florida. *Commercial Observer*.
<https://commercialobserver.com/2023/08/local-heat-protection-rules-for-construction-workers-face-industry-opposition/>
- Shkembi, A., Payne-Sturges, D., Park, S. K., & Neitzel, R. L. (2025). Occupational heat exposure incidence and sociodemographic disparities for outdoor workers in the United States, 2010–2019. *Journal of Exposure Science & Environmental Epidemiology*. <https://doi.org/10.1038/s41370-025-00813-y>
- Snipes, S. A., Cooper, S. P., & Shipp, E. M. (2017). “The Only Thing I Wish I Could Change Is That They Treat Us Like People and Not Like Animals”: Injury and Discrimination Among Latino Farmworkers. *Journal of Agromedicine*, 22(1), 36–46.
<https://doi.org/10.1080/1059924X.2016.1248307>
- Stoecklin-Marois, M., Hennessy-Burt, T., Mitchell, D., & Schenker, M. (2013). Heat-related Illness Knowledge and Practices among California Hired Farm Workers in The MICASA Study. *Industrial Health*, 51(1), 47–55.
<https://doi.org/10.2486/indhealth.2012-0128>
- The Associated Press. (2024, May 16). A new Florida law rejects the term “climate change” in state statues. *WFSU News*. <https://news.wfsu.org/state-news/2024-05-16/a-new-florida-law-rejects-the-term-climate-change-in-state-statues>
- Tigchelaar, M., Battisti, D. S., & Spector, J. T. (2020). Work adaptations insufficient to address growing heat risk for U.S. agricultural workers. *Environmental Research Letters*, 15(9), 094035. <https://doi.org/10.1088/1748-9326/ab86f4>
- Tsoukalas, A., & Sela, A. (2024). *High Heat, Higher Responsibility: The Sunshine State Must Enact Policies to Protect Working Floridians*. Florida Policy Institute.
https://cdn.prod.website-files.com/5cd5801dfdf7e5927800fb7f/66bf86851b55d19de59d89b6_7.23.24_RT_Heat_Illness_Report_w-cover.pdf
- Union of Concerned Scientists. (2019, July 8). *Killer Heat Interactive Tool*.
<https://www.ucs.org/resources/killer-heat-interactive-tool>
- Union of Concerned Scientists. (2024, March 8). *Inhumane Florida Bill Underscores Need for Federal Heat-Protection Standards for Workers*.
<https://www.ucsusa.org/about/news/inhumane-florida-bill-underscores-need-federal-heat-protection-standards-workers>
- U.S. Census Bureau. (n.d.-a). *Florida—Census Bureau Profile*. Retrieved February 3, 2026, from <https://data.census.gov/profile/Florida?g=040XX00US12>
- U.S. Census Bureau. (n.d.-b). *Miami-Dade County, Florida*. Retrieved February 6, 2026, from https://data.census.gov/profile/Miami-Dade_County,_Florida?g=050XX00US12086#populations-and-people
- U.S. Census Bureau. (2024a). *Foreign-Born: 2024 Current Population Survey Detailed Tables* [Dataset]. <https://www.census.gov/data/tables/2024/demo/foreign-born/cps-2024.html>

- U.S. Census Bureau. (2024b). *S0201: Selected Population Profile in the United States* [Dataset].
<https://data.census.gov/table/ACSSPP1Y2024.S0201?t=400:450:Occupation&g=040XX00US12>
- U.S. Department of Labor. (2023). *Findings from the National Agricultural Workers Survey (NAWS) 2021–2022: A Demographic and Employment Profile of United States Crop Workers*. U.S. Department of Labor.
<https://www.dol.gov/sites/dolgov/files/ETA/news/pdfs/NAWS%20Research%20Report%2017.pdf>
- U.S. Environmental Protection Agency. (2021, January 19). *Learn About Environmental Justice*. https://19january2021snapshot.epa.gov/environmentaljustice/learn-about-environmental-justice_.html
- Uteuova, A., Lakhani, N., & Sainato, M. (2024, March 8). Florida passes ‘cruel’ bill curbing water and shade protections for workers. *The Guardian*.
<https://www.theguardian.com/us-news/2024/mar/08/florida-bill-extreme-heat-worker-protection>
- Wadsworth, G., Courville, M., & Schenker, M. (2019). Pay, Power, and Health: HRI and the Agricultural Conundrum. *Labor Studies Journal*, 44(3), 214–235.
<https://doi.org/10.1177/0160449X18767749>
- Winokur, J. (2024, September). In Miami, the Nation’s First Chief Heat Officer Charts a Course for Surviving on a Warming Planet. *Smithsonian Magazine*.
<https://www.smithsonianmag.com/innovation/how-nations-first-chief-heat-officer-working-keep-miami-cool-180984902/>
- Work Comp Advisory. (n.d.). *Heat safety at work: Updates on OSHA’s proposed rule and state laws*. Institute of WorkComp Professionals. Retrieved April 4, 2026, from <https://www.workcompprofessionals.com/advisory/2025L5/may/a1.html>
- Workclimate 2.0. (2025). *Occupational Heat Stress, Adaptation and Prevention Policies*. Climate ADAPT. <https://climate-adapt.eea.europa.eu/en/metadata/projects/workclimate-2-0-occupational-heat-stress-adaptation-and-prevention-policies>
- World Health Organization, & World Meteorological Organization. (2025). *Climate change and workplace heat stress: Technical report and guidance*.
<https://iris.who.int/server/api/core/bitstreams/5334aba1-063d-4163-94ac-a1154bb48e83/content>
- World Weather Attribution. (2023, December 22). *Climate change fuelled extreme weather in 2023; expect more records in 2024*. <https://www.worldweatherattribution.org/climate-change-fuelled-extreme-weather-in-2023-expect-more-records-in-2024/>
- Zhang, K., Arauz, R. F., Chen, T.-H., & Cooper, S. P. (2016). Heat effects among migrant and seasonal farmworkers: A case study in Colorado. *Occupational and Environmental Medicine*, 73(5), 324–328. <https://doi.org/10.1136/oemed-2015-103332>

Annex & Declarations

Annex 1 | Stakeholder Type & Policy Stance Matrix

Stakeholders were sorted into categories based on their own statements. Policy stance is conveyed as: in support of local heat protection policy for outdoor workers (blue), opposed to it (orange), or neutral/unclear (green). The names of individuals (excluding elected politicians) and small businesses have been anonymized. “Multi-actor statements” refers to large groups of individuals or organizations who gave a collective statement (e.g. letter signatories). “Migrant worker” refers to foreign-born individuals engaged in labor in the U.S.

Policy Stance	Stakeholder Type			
	Organization (n = 25 [112, including multi-actor statements])	Politician (n = 16)	Outdoor Worker (n = 28)	Other (n = 7 [130, including multi-actor statements])
Support (n = 76) [n = ~286, including multi-actor statements]	- Coalition of Immokalee Workers - Communications Workers of America - Fair Food Standards Council - Farmworker Association of Florida - Farmworker Coordinating Council of Palm Beach County, Inc. - Florida American Federation of Labor – Congress of Industrial Organizations (AFL-CIO) - Florida Clinicians for Climate Action - Florida Council of Churches - Florida People's Advocacy Center - Florida Policy Institute - Florida Rising - Florida Student Power - genCLEO - Local Solutions Support Center - National Council for Occupational Safety and Health (COSH) - Orlando Sentinel & Miami Herald Editorial Boards - Palm Beach Post Editorial - Public Citizen - Sierra Club Florida - State Innovation Exchange Action - Sunrise Movement Miami - The CLEO Institute - Union of Concerned Scientists - United Farm Workers - WeCount! 43 organizations (letter signatories) 44 organizations (letter signatories)	- Anna Eskamani — State Rep. (D) - Appointed county-level climate health officer - Ashley Gantt — State Rep. (D) - Daniella Levina Cava — Mayor Miami-Dade County (D) - Felicia Simone Robinson — State Rep. (D) - Fenrice Driskell — State Rep. (D) - Geraldine Thompson — State Sen. (D) - Kathy Castor — U.S. Rep., FL (D) - Kionne McGhee — Miami-Dade County Commissioner (D), heat ordinance sponsor - Marleine Bastien — Miami-Dade County Commissioner (D), heat ordinance sponsor - Michael Gottlieb — State Rep. (D), HB 945 sponsor - Michele Rayner — State Rep. (D) - Mike Beltran — State Rep. (F) - Susan Valdes — State Rep. (D) - Tina Polsky — State Sen. (D) - Victor Torres — State Sen. (D)	- Construction worker - Construction worker, activist - Farmworker - Farmworker - Farmworker - Farmworker - Farmworker - House painter, organizer - Migrant construction worker - Migrant construction worker, activist - Migrant farmworker - Migrant farmworker - Migrant farmworker - Migrant farmworker - Migrant farmworker - Migrant farmworker - Migrant farmworker, founder - immigrant labor organization - Migrant farmworker, activist - Migrant farmworker, organizer - Migrant farmworker, organizer - Migrant farmworker, organizer - Landscaper - Landscaper - Spouse of construction worker - Utility technician, union member	- Academic epidemiologist - Approx. 35 demonstrators (demo organized by WeCount!) - Climate activist - Community organizer - Farmworker advocate, former organizer - Immigrant, academic researcher - Medical professional - News columnist 88 healthcare professionals (letter signatories)

Annex 1 | Stakeholder Type & Policy Stance Matrix (continued)

	Organization (n = 9)	Politician (n = 1)	Outdoor Worker (n = 0)	Other (n = 2)
Neutral/ Unclear (n = 12)	- Federal Occupational Safety and Health Administration (OSHA) - Florida Immigrant Coalition - Florida Solar Energy Industries Association - Kelley Kronenberg, law firm - Laborers International Union of North America - Marine Industries Association of Florida - Ogletree Deakins, law firm - Shawmut Design and Construction - Small business (roofing)	Juan Carlos Bermudez — Miami-Dade County Commissioner (R)		- Local climate researcher - Tour operator
	Organization (n = 10) - Associated Builders & Contractors of Florida, Inc. - Associated General Contractors of America, South Florida Chapter - Associated Industries of Florida - Builders Association of South Florida - Costa Farms - Dade County Farm Bureau - Florida Chamber of Commerce - Florida Homebuilders Association - Florida Roofing and Sheet Metal Contractors Association - National Federation of Independent Business	Politician (n = 10) - Anthony Rodriguez — Miami-Dade County Commissioner (R) - Bob Rommel — State Rep. (R) - Danielle Cohen Higgins (D) — Miami-Dade County Commissioner - Dennis Baxley — State Sen. (R) - Jay Trumbull — State Sen. (R), HB 433 sponsor - Lawrence McClure — State Rep. (R), House State Affairs Committee Chair - Rick Roth — State Rep. (R) - Ron DeSantis — Governor of Florida (R) - Tiffany Esposito — State Rep. (R), HB 433 sponsor - Webster Barnaby — State Rep. (R)	Outdoor Worker (n = 0)	Other (n = 1) Local contractor, construction
Oppose (n = 21)				

Annex 2 | Organization Descriptions

Blue (support), green (neutral/unclear), and orange (oppose) convey stakeholders' policy stance: in support of local heat protection policy for outdoor workers, opposed to it, or neutral/unclear. The names of small businesses have been anonymized. *Multi-actor statements* refers to large groups of individuals or organizations who gave a collective statement (e.g. letter signatories).

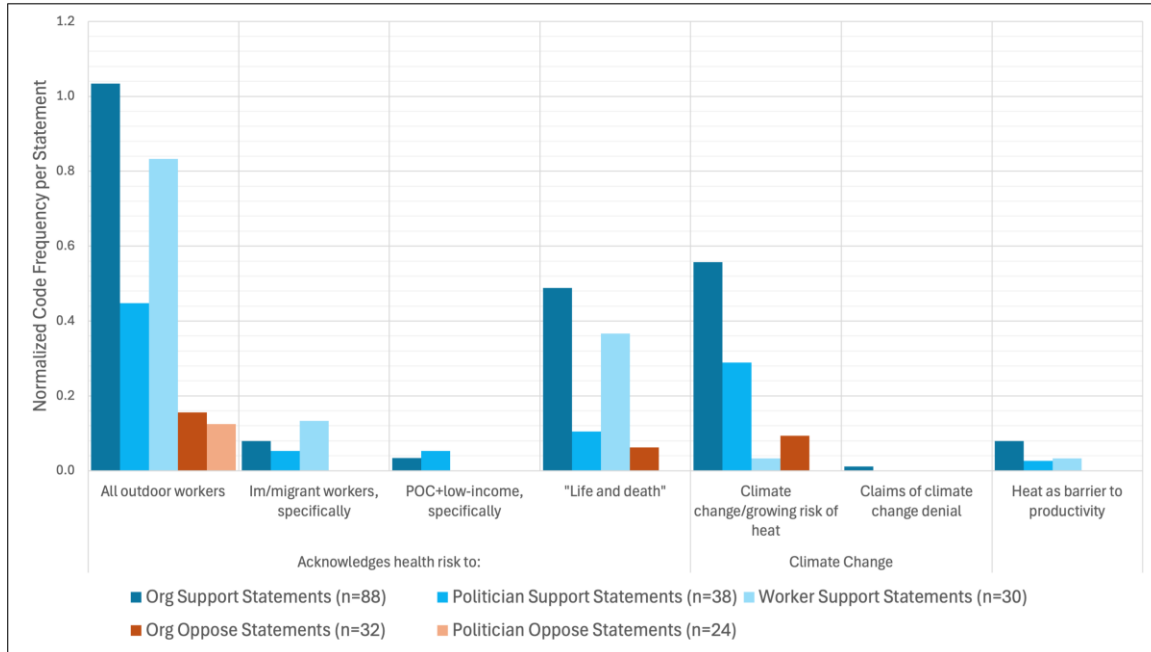
Policy Stance	Organization	Type	Description	Geographical Coverage	Role in Policy-making
Support (n = 25) [n = 112, including multi-actor statements]	Coalition of Immokalee Workers (CIW)	Nonprofit	Worker-led human rights nonprofit; represents tens of thousands of farmworkers	National (FL-based)	Lobbying / advocacy
	Communications Workers of America	Labor union	Communications/media labor union; hundreds of thousands of members	National	Lobbying / advocacy
	Fair Food Standards Council	Nonprofit	Oversees the national Fair Food Program; an outgrowth of the CIW	National (FL-based)	Lobbying / advocacy
	Farmworker Association of Florida	Nonprofit	Nonprofit for farmworkers; 10k members (majority immigrants)	Florida state	Lobbying / advocacy
	Farmworker Coordinating Council of Palm Beach County, Inc.	Nonprofit	Local nonprofit for migrant/seasonal farmworkers; membership unknown	Palm Beach County, FL	Lobbying / advocacy
	Florida American Federation of Labor – Congress of Industrial Organizations (AFL-CIO)	Labor union	Federation of labor unions; represents 500 unions & 1mil members	Florida state	Lobbying / advocacy
	Florida Clinicians for Climate Action	Nonprofit	Focus: climate-related public health issues; membership unknown	Florida state	Lobbying / advocacy
	Florida Council of Churches	Nonprofit	Religious social/moral advocacy nonprofit; membership unknown	Florida state	Lobbying / advocacy
	Florida People's Advocacy Center	Nonprofit	Social justice nonprofit; no longer registered	Florida state	Lobbying / advocacy
	Florida Policy Institute	Nonprofit	Institute for economic mobility, equity, life quality	Florida state	Lobbying / advocacy
	Florida Rising	Nonprofit	Focus: economic and racial justice; membership unknown	Florida state	Lobbying / advocacy
	Florida Student Power	Nonprofit	Organizing marginalized youth for safe/sustainable communities	Florida state	Lobbying / advocacy
	genCLEO	Social welfare nonprofit	Youth-led nonprofit for climate policy; an outgrowth of The CLEO Institute	Florida state	Lobbying / advocacy
	Local Solutions Support Center	Unknown	National hub organizing for local governance (anti-preemption); membership unknown	National	Lobbying / advocacy
	National Council for Occupational Safety and Health (COSH)	Nonprofit	Federation of 25 worker organizations; focus: worker safety	National	Lobbying / advocacy
	Oriando Sentinel & Miami Herald Editorial Boards	Business	Sentinel: central Florida newspaper, circulation 71k; Herald: south Florida newspaper, circulation 75k	Central/south Florida	Journalism, advocacy via editorial
	Palm Beach Post Editorial	Business	Newspaper for southeastern Florida; circulation 49k	Southeast Florida	Journalism, advocacy via editorial
	Public Citizen	Social welfare nonprofit	Advocacy watchdog; 1mil members	National	Lobbying / advocacy
	Sierra Club Florida	Social welfare nonprofit	Conservation/environmental advocacy; 32k members	Florida state	Lobbying / advocacy
	State Innovation Exchange Action	Social welfare nonprofit	Progressive policy advocacy	National	Lobbying / advocacy
	Sunrise Movement Miami	Social welfare nonprofit	Local chapter of national climate justice advocacy nonprofit, membership unknown	Miami, Florida	Lobbying / advocacy
	The CLEO Institute	Nonprofit	Focus: climate advocacy; women-led	Florida state	Lobbying / advocacy
	Union of Concerned Scientists	Nonprofit	Focus: advocacy and scientific research; 250 members, 23k scientist network, 500k supporters	National	Lobbying / advocacy
	United Farm Workers	Labor union	National farmworker's union; 5k members	National	Lobbying / advocacy

Annex 2 | Organization Descriptions (continued)

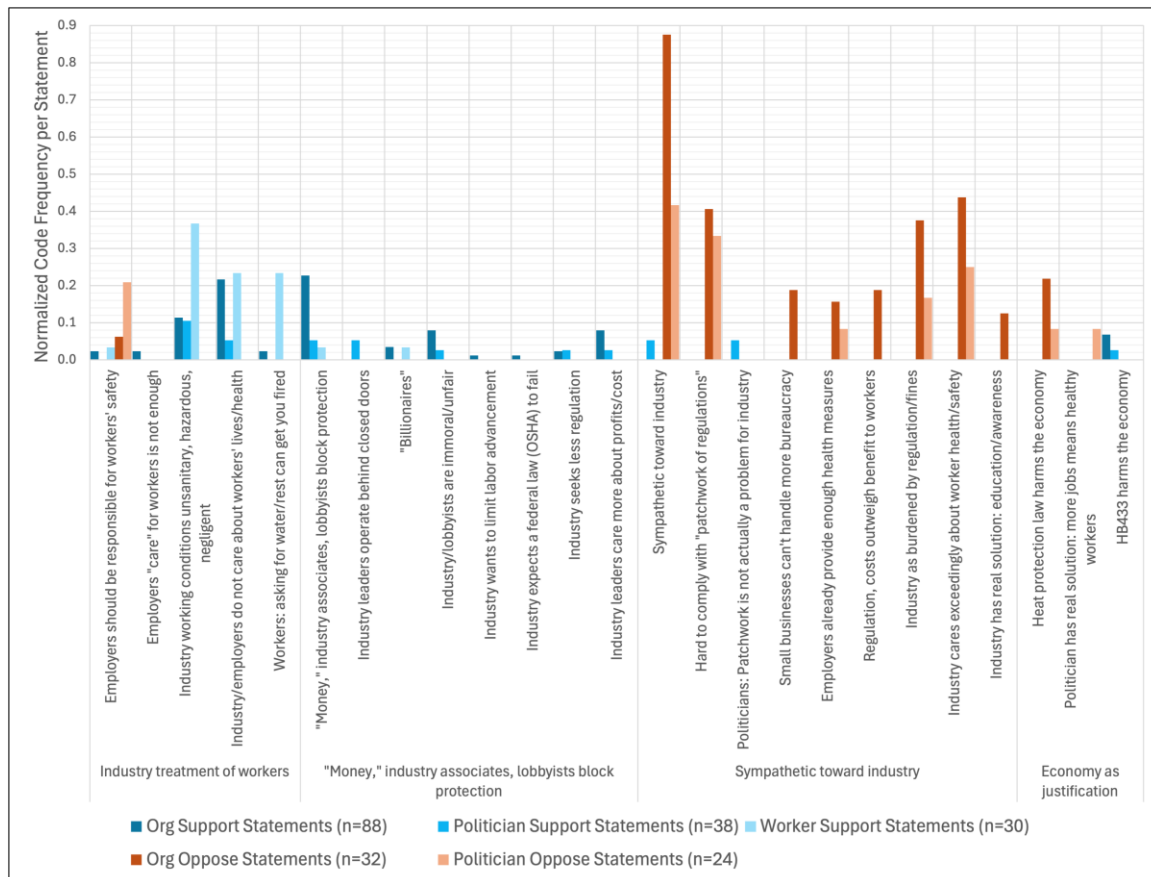
Policy Stance	Organization	Type	Description	Geographical Coverage	Role in Policy-making
	WeCount!	Nonprofit	Organizing immigrant workers; led heat-protection campaign in Miami-Dade; membership unknown	South Florida	Lobbying / advocacy
	43 organizations (letter signatories)	-	FL-based organizations	Florida state	Lobbying / advocacy
	44 organizations (letter signatories)	-	FL-based organizations	Florida state	Lobbying / advocacy
Neutral/Unclear (n = 9)	Federal Occupational Safety and Health Administration (OSHA)	Federal government	Federal government agency, part of U.S. Dept. of Labor	National	Defines labor hazards, sets national standards, investigates noncompliance
	Florida Immigrant Coalition	Nonprofit	Coalition of 83 organizations; focus: protecting Florida immigrants	Florida state	Lobbying / advocacy
	Florida Solar Energy Industries Association	Trade association	Solar industry; 170 member organizations	Florida state	Lobbying / advocacy
	Kelley Kronenberg, law firm	Business	National law firm; large presence in Florida	National	Reports on policy updates
	Laborers International Union of North America	Labor union	Construction/energy labor union; 0.5mil members	U.S. & Canada	Lobbying / advocacy
	Marine Industries Association of Florida	Trade association	Marine-associated business advocacy	Florida state	Lobbying / advocacy
	Ogletree Deakins, law firm	Business	Top international law firm	International	Reports on policy updates
	Shawmut Design and Construction	Business	Construction management firm	National	Directly affected by policy; self-advocacy
	Small business (roofing)	Business	Roofing company	South Florida	Directly affected by policy; self-advocacy
Oppose (n = 10)	Associated Builders & Contractors of Florida, Inc.	Trade association	Construction industry; 2.5k members	Florida state	Lobbying / advocacy
	Associated General Contractors of America, South Florida Chapter	Trade association	Construction industry; membership unknown	South Florida	Lobbying / advocacy
	Associated Industries of Florida	Trade association	Industry (all); membership unknown	Florida state	Lobbying / advocacy
	Builders Association of South Florida	Trade association	Construction industry; 682 members	South Florida	Lobbying / advocacy
	Costa Farms	Business	Horticultural business	International (FL-based)	Directly affected by policy; self-advocacy
	Dade County Farm Bureau	Agriculture association	Agricultural industry (owners & producers); 2.6k members	Miami-Dade County, FL	Lobbying / advocacy
	Florida Chamber of Commerce	Chamber of commerce	Business network; membership unknown	Florida state	Lobbying / advocacy
	Florida Homebuilders Association	Trade association	Construction industry; 7.5k member companies	Florida state	Lobbying / advocacy
	Florida Roofing and Sheet Metal Contractors Association	Trade association	Roofing industry; 1k member companies	Florida state	Lobbying / advocacy
	National Federation of Independent Business	Trade association	Independent businesses; 325k member companies nationally	National	Lobbying / advocacy

Annex 3 | Normalized Code Frequencies by Topic

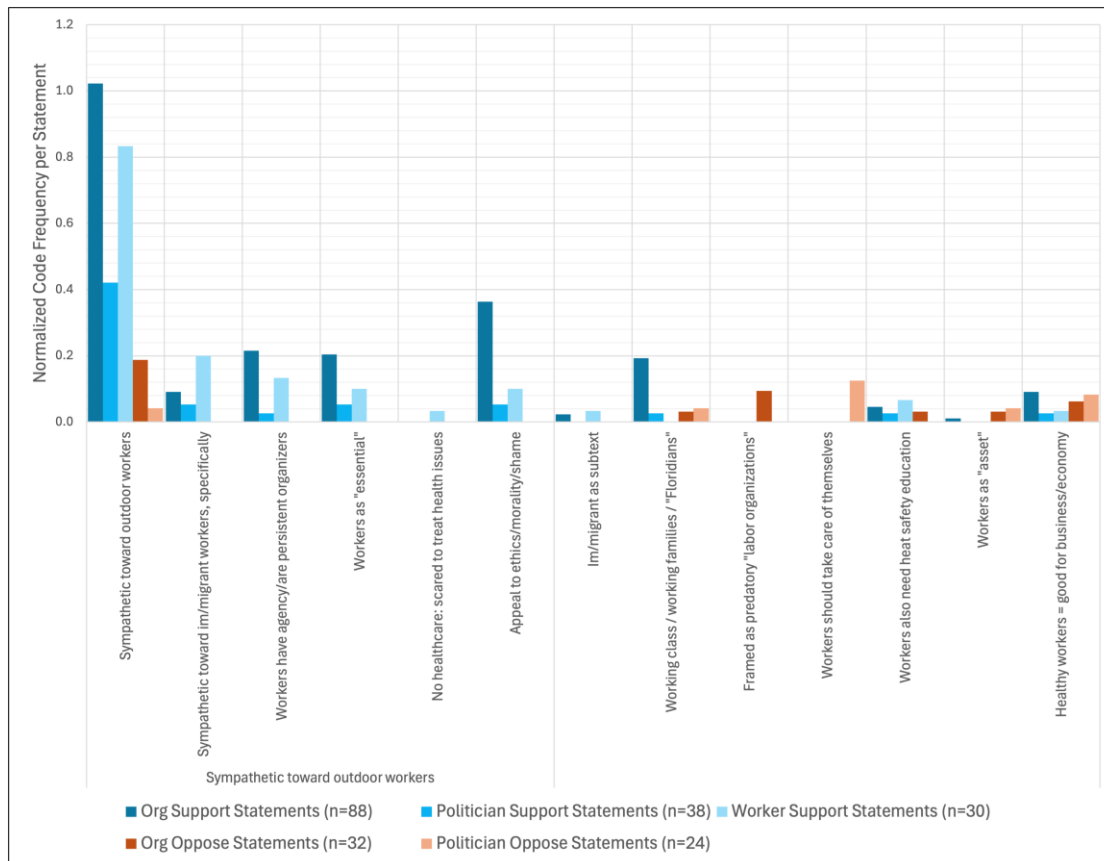
Columns represent the normalized code frequency per statement distributed across stakeholder type and policy stance. Blue conveys support of local heat protection policy for outdoor workers, while orange conveys opposition. Codes are arranged thematically, and some codes may appear more than once between charts if the conceptual framings overlap.



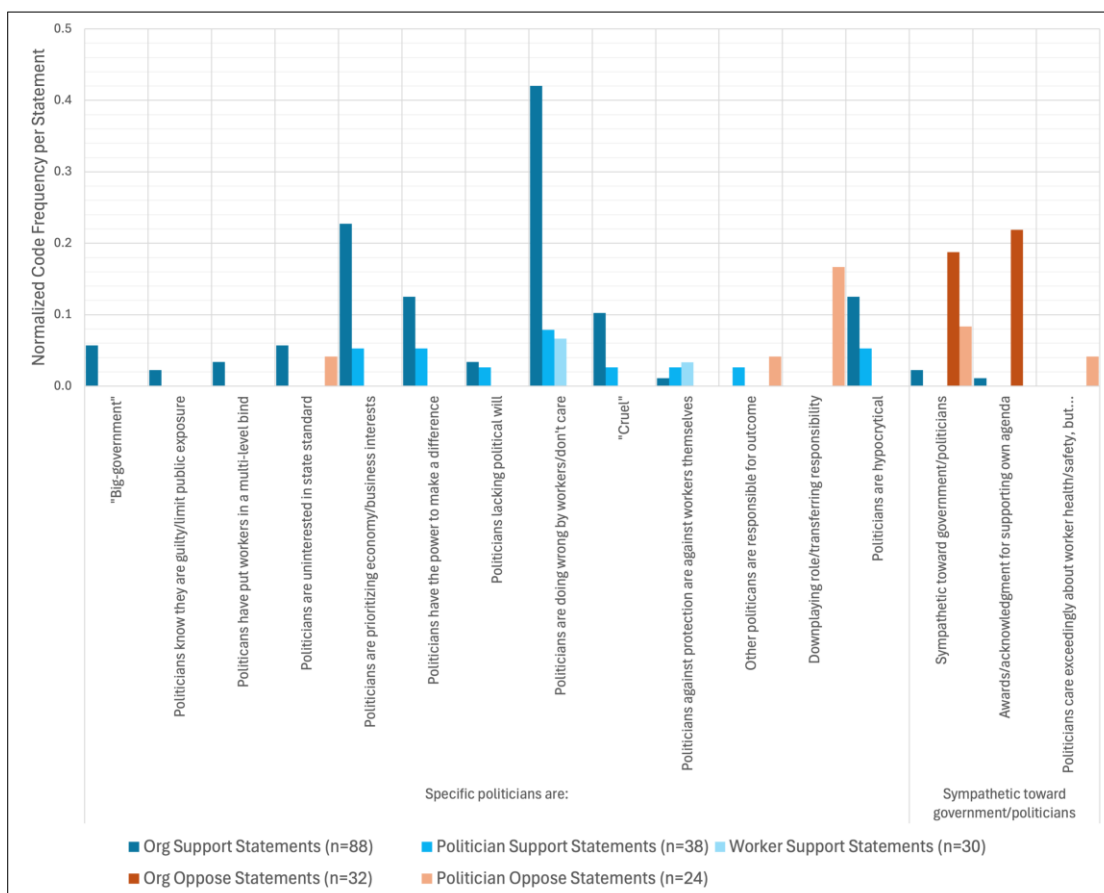
3a | Framing of Environment (Heat). (Created by author.)



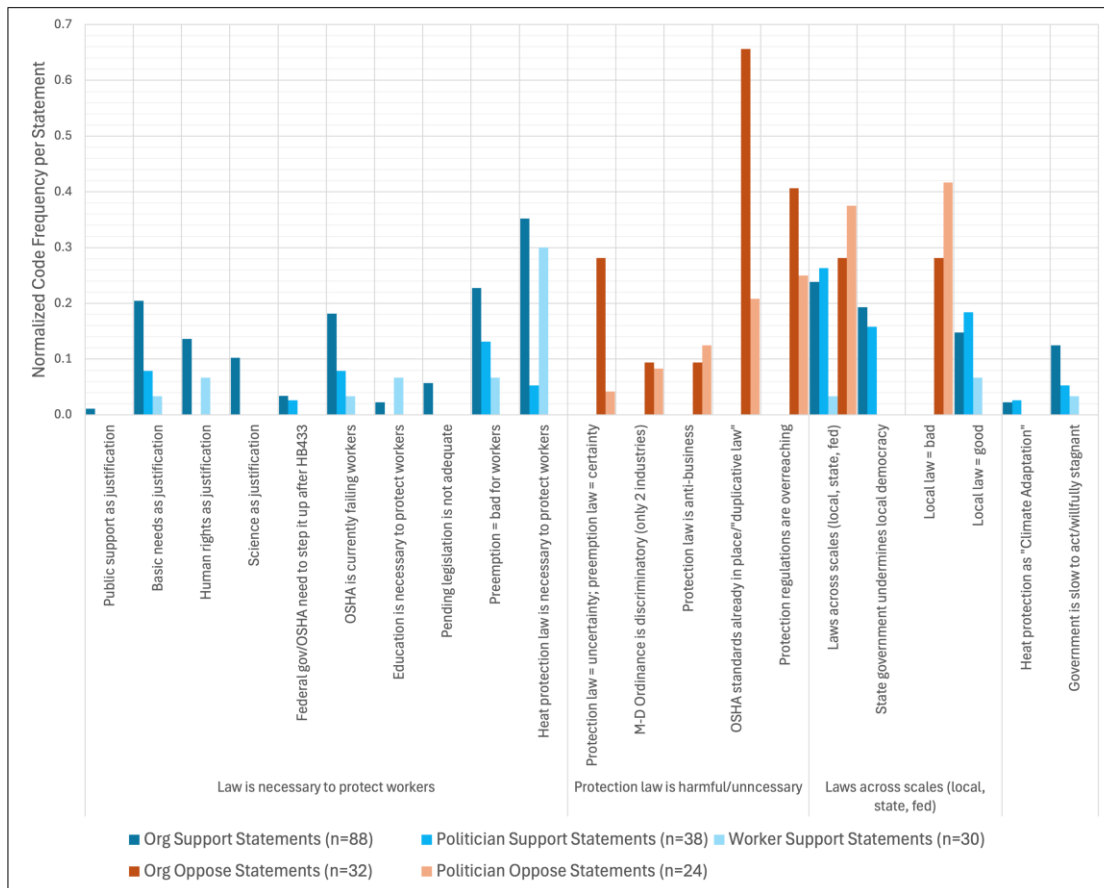
3b | Framing of Industry/Economy. (Created by author.)



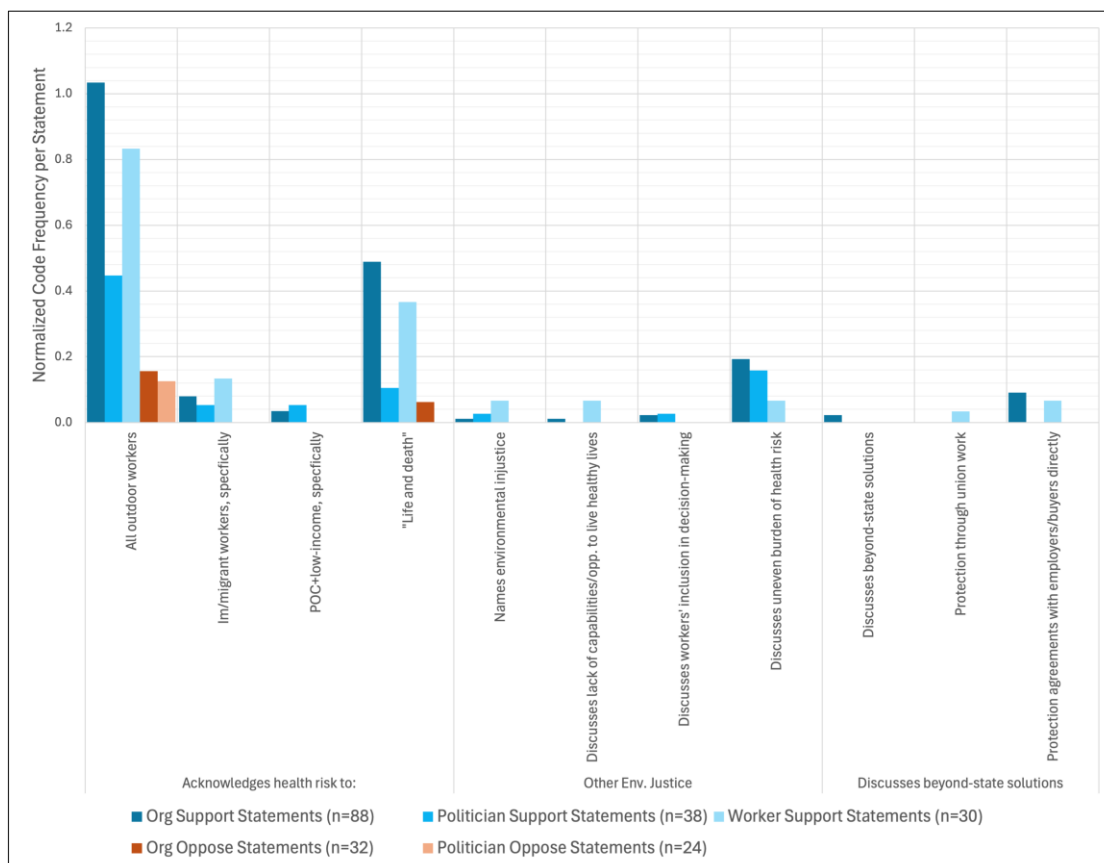
3c | Framing of Outdoor Workers. (Created by author.)



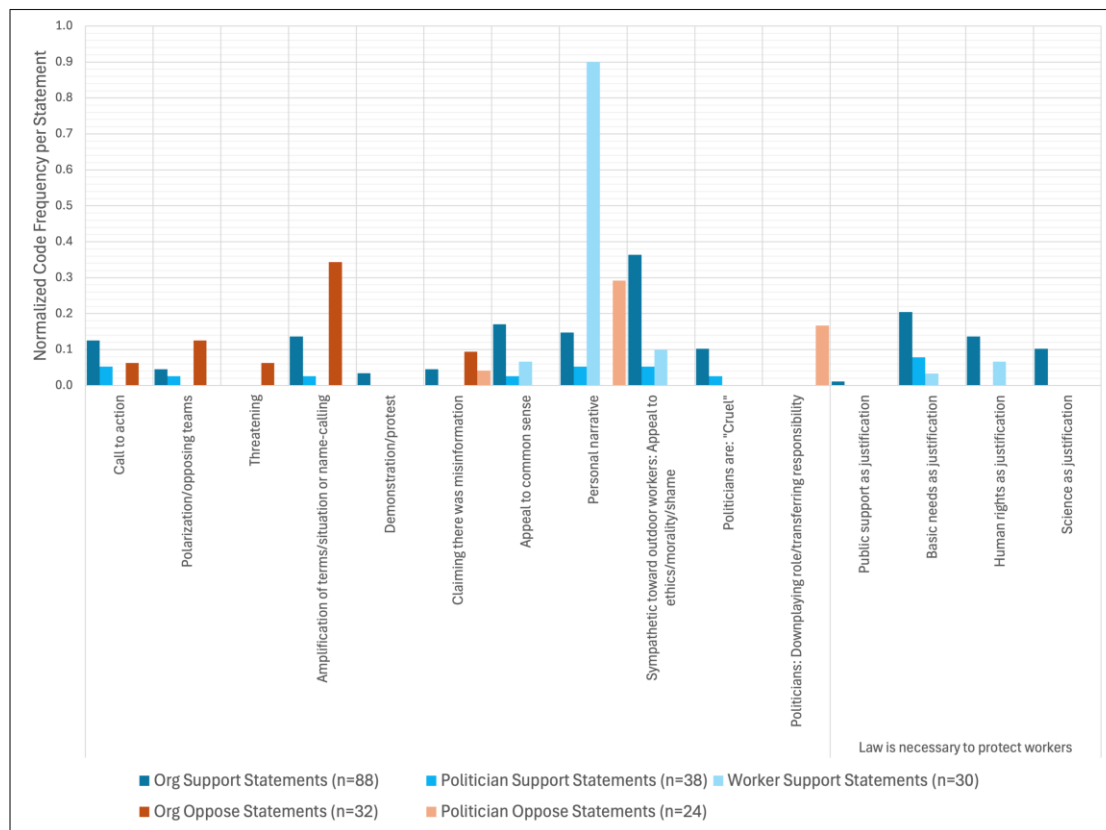
3d | Framing of Politicians. (Created by author.)



3e | Framing of Government/Legislation. (Created by author.)



3f | Critical Environmental Justice Framing. (Created by author.)



3g | Rhetoric. (Created by author.)

Declaration on Aids and Tools Used

Google advanced search was used for data collection. The software MAXQDA was used to perform the qualitative content analysis. Zotero was used to manage citations. Microsoft Word and Excel were used in the preparation of tables and charts, and to format this document. Affinity Photo 2, Datawrapper, and Canva were used in the creation of maps and figures.

The latest free models of ChatGPT were used as a preliminary research tool (theory and method exploration, AI-assisted web search), as a thesaurus, and to provide feedback on sentence clarity. Google's AI Overview is now embedded in every query, and therefore was also used for AI-assisted web search. Microsoft Copilot was used in the translation of the German abstract. No other large language models were used. All intellectual contributions and conclusions presented in this master's thesis are my own.