

Decent Work in a Changing Climate

Dr Bethany Jackson, Dr Nicole Tichenor Blackstone, and Dr Jessica L. Decker Sparks

Abstract

Climate change is placing increased pressures on workers, including their health, working conditions, and economic outcomes. Whilst efforts by international governance mechanisms and governments espouse the need to achieve decent work, in reality, the threats facing workers are shifting. In this article, we begin to assess how decent work is undermined by climate change. We explore what barriers render decent work increasingly out of reach for some workers in the context of a changing climate. Using examples from the literature, we review different sectors, geographies, and climate impacts, such as extreme heat, flooding, and wildfires, to assess the varied risks to workers. We outline some of the extant approaches in policy and labour rights spaces to identify integrated solutions for decent work in a changing climate. Finally, we conclude that a future shift in discourse is needed to ensure decent work becomes the minimum standard when addressing labour rights and climate change concerns, including centring expertise from worker-led initiatives.

Keywords: climate change, decent work, labour rights, Just Transition, occupational safety and health

Suggested citation: B Jackson, N T Blackstone, and J L Decker Sparks, 'Decent Work in a Changing Climate', *Anti-Trafficking Review*, issue 25, 2025, pp. 109-129, <https://doi.org/10.14197/atr.201225257>

Introduction

In a world of growing global crises, collaboration across siloed domains will be critical to define shared objectives and maximise their success. The intersection of workers' rights and human-driven environmental change is one area where this has become increasingly important. Decent work has been a concept promoted by the International Labour Organization (ILO) since the

start of the century.¹ At its core, decent work could be considered the minimum standard for working conditions, as it embeds labour rights and centres the protection of workers in the labour market. In practice, the agenda promoted by the ILO is a ‘top-down’ approach to improve working conditions through a series of priority pillars enacted through country programmes that have been both praised and criticised.² This global agenda is particularly important for informal forms of employment where workers can be overlooked and be at greater risk of the effects of climate change and exploitation.³ Many cases of human trafficking begin with people seeking opportunities for decent work; and violations of decent work can often be a precursor to exploitation. As such, ensuring decent work reduces vulnerability to human trafficking.

The ILO’s decent work agenda initially focused on the primary risks to workers in terms of labour standards, employment opportunities, social protection measures, and social dialogues.⁴ Intersecting issues such as climate change remained siloed within intergovernmental activities, and this is reflected in disjointed international governance discourses focused on labour rights and environmental concerns that do not always explicitly address climate change.⁵ Yet climate change has

¹ D Ghai, ‘Decent work: Concept and Indicators’, *International Labour Review*, vol. 142, no. 2, 2003, pp. 113–145, <https://doi.org/10.1111/j.1564-913X.2003.tb00256.x>; L Brill, ‘What Is Decent Work? A Review of the Literature’, in F Christie *et al.* (eds.), *Decent Work: Opportunities and Challenges*, Emerald Publishing, Bingley, 2021, pp. 11–26, <https://doi.org/10.1108/978-1-80117-586-920211002>; T Ferraro, ‘The Genesis of the Decent Work Agenda’, in M Moore, C Scherrer, and M van der Linden (eds.), *The Elgar Companion to Decent Work and the Sustainable Development Goals*, Elgar, Cheltenham, 2025, pp. 39–51, <https://doi.org/10.4337/9781035300907.00008>.

² J Rantanen, F Muchiri, and S Lehtinen, ‘Decent Work, ILO’s Response to the Globalization of Working Life: Basic Concepts and Global Implementation with Special Reference to Occupational Health’, *International Journal of Environmental Research and Public Health*, vol. 17, no. 10, 2020, pp. 3351, <https://doi.org/10.3390/ijerph17103351>; F Christie, ‘Decent and Indecent Work’, *Career Matters*, vol. 10, no. 2, 2022, pp. 40–41.

³ Brill; Christie.

⁴ International Labour Organization (ILO), *Decent Work Indicators: Guidelines for Producers and Users of Statistical and Legal Framework Indicators (ILO Manual Second Version)*, ILO, Geneva, 2013.

⁵ B Jackson *et al.*, *Modern Slavery, Environmental Degradation and Climate Change: Present and Future Pathways for Addressing the Nexus*, University of Nottingham Rights Lab, 2021; N Räthzel and D Uzzell, ‘Mending the Breach Between Labour and Nature: Environmental Engagements of Trade Unions and the North-South Divide’, *Interface*, vol. 4, issue 2, 2012, pp. 81–100.

been identified as a barrier to productive and decent employment.⁶ It has also both pushed and pulled individuals or communities into exploitative working conditions.⁷ Thus, the duality of the climate–work nexus leads to economic, social, and environmental precarity.⁸

In this article, we consider the risks workers face in the context of a heating planet. We have been researching the intersections between climate change and working conditions across multiple sectors and geographies, and working alongside lived-experience experts and leading worker-led organisations. Here we define decent work in the current context and then highlight key case study examples of climate impacts upon workers in a range of sectors and geographies, reflecting the scale of challenges that climate change poses to the decent work agenda. Finally, we suggest areas to strengthen both developing and established decent work strategies to reflect the need to directly address the climate crisis. This includes amplifying leadership and solutions developed by worker-led organisations.

Defining Decent Work

The United Nations defines decent work as ‘work that respects the fundamental rights of the human person as well as the rights of workers in terms of conditions of work safety and remuneration... provides an income allowing workers to support themselves and their families... [and] also include[s] respect for the physical and mental integrity of the worker in the exercise of his/her employment’.⁹ The ILO outlines four key concepts linked to the decent work agenda: ‘(i) International

⁶ For example, ILO has identified climate hazards as leading to lower productivity levels and the undermining of working conditions, which, without sustainable climate mitigation, will only exacerbate inequalities. See: International Labour Organization (ILO), *World Employment and Social Outlook 2018: Greening with Jobs*, ILO, Geneva, 2018.

⁷ See D Brown *et al.*, ‘Modern Slavery, Environmental Degradation and Climate Change: Fisheries, Field, Forests and Factories’, *Environment and Planning E: Nature and Space*, vol. 4, issue 2, 2019, pp. 191–207, <https://doi.org/10.1177/2514848619887156>; S Coelho *et al.*, *The Climate Change–Human Trafficking Nexus*, IOM, Bangkok, 2016; J L Decker Sparks *et al.*, ‘Growing Evidence of the Interconnections between Modern Slavery, Environmental Degradation, and Climate Change’, *One Earth*, vol. 4, issue 2, 2021, pp. 181–191, <https://doi.org/10.1016/j.oneear.2021.01.015>; Jackson *et al.*, 2021; C O’Connell, *From a Vicious to a Virtuous Circle: Addressing Climate Change, Environmental Destruction and Contemporary Slavery*, Anti-Slavery International, London, 2021.

⁸ S Lawreniuk, ‘Climate Change Is Class War: Global Labour’s Challenge to the Capitalocene’, in N Natarajan and L Parsons (eds.), *Climate Change in the Global Workplace: Labour, Adaptation, and Resistance*, Routledge, London, 2021.

⁹ United Nations, *The Right to Work. General Comment No. 18. Article 6 of the International Covenant on Economic, Social and Cultural Rights*, E/C.12/GC/18, United Nations, New York, 2006.

labour standards and fundamental principles and rights at work; (ii) Employment creation; (iii) Social protection; and (iv) Social dialogue and tripartism'. The agenda thus covers appropriate wages and breaks (including enabling work-life balance), workplace stability and security, occupational safety and health (OSH), equal opportunities and treatment, access to social security schemes, the ability to unionise, and the elimination of extreme forms of exploitation.¹⁰

The shift to decent work is being driven by workers and their representatives. Trade unions have pushed the ILO to outline indicators, set standards, and monitor the links between climate change and working conditions, emphasising that decent work, rather than economic growth or developmental matters, should be viewed as a fundamental rights-based issue. For example, the International Trade Union Confederation (ITUC) has called for the need to dismantle policy siloes related to climate action and labour as a means of ensuring adaptability of workers in response to climate change, the ability to migrate safely, and access to more formalised quality jobs.¹¹

Such rights-based responses have been rooted in the 'Just Transition' movement which advocates for better work opportunities and labour protections as economies and industry move towards activities that seek to mitigate, adapt, or reverse the impacts of climate change.¹² Foundational elements linked to the 'Just Transition' movement are now more firmly rooted in the decent work agenda supporting workers who may be engaged in so-called 'dangerous, dirty, and demanding' jobs in sectors such as agriculture, fishing, mining, construction, and quarrying. The recent inclusion of a safe and healthy working environment within the ILO's Fundamental Principles and Rights at Work has led to additional guidance to support the achievement of decent work.¹³ We argue that climate change poses a fundamental risk to the working environment. Therefore, failing

¹⁰ ILO, 2013; Brill; Christie; M Tigchelaar *et al.*, 'Decent Work in Fishing in a Changing Climate', *Marine Policy*, vol. 181, 2025, pp. 106846, <https://doi.org/10.1016/j.marpol.2025.106846>.

¹¹ International Trade Union Confederation (ITUC), *Decent Work at the Nexus between Climate Change and Migration*, ITUC, Brussels, 2024.

¹² United Nations Development Programme (UNDP), 'What is Just Transition? And Why Is It Important?', UNDP, 2022, 3 November 2022, <https://climatepromise.undp.org/news-and-stories/what-just-transition-and-why-it-important>; S Barca, *Workers of the Earth: Labour, Ecology and Reproduction in the Age of Climate Change*, Pluto Press, London, 2024.

¹³ International Labour Organization (ILO), *Working on a Warmer Planet: The Impact of Heat Stress on Labour Productivity and Decent Work*, ILO, Geneva, 2019; International Labour Organization (ILO), *Resolution on the Inclusion of a Safe and Healthy Working Environment in the ILO's Framework of Fundamental Principles and Rights at Work*, ILO, Geneva, 2022.

to address climate change as a threat to decent work, especially without involving workers, can undermine efforts to improve working conditions.¹⁴ To fill the gap from the lack of international ratifiable standards on climate-influenced extremes (e.g. temperatures) put forward by the ILO in the context of the decent work agenda, workers should define how work needs to be adapted to be considered ‘decent’ in a changing environment.

Climate Change is Challenging Notions of Decent Work

Many people are facing changes to their climate but also poorer conditions at work.¹⁵ This includes violations of labour laws, as well as a continuum of ‘less severe’ labour exploitation, from wage violations and long working hours to the ‘more severe’ forced labour, debt bondage, and human trafficking.¹⁶ As the effects of climate change become extreme, workers are likely to face conflicts between labour and their personal safety, leaving them even more vulnerable to labour violations. Workers may also choose to accept ‘indecent’ working conditions due to limited options or to work in a sector that is impacted by—or drives—environmental degradation due to their skillsets or the perception of limited opportunities. Tensions can arise even where workplace regulations exist (e.g. between current OSH practices and rapidly changing environmental working conditions). For example, miners may be recommended to wear personal protective equipment (PPE) (e.g. hard-hats or steel boots) to reduce the number of workplace accidents; however, this equipment can increase body temperature to uncomfortable or dangerous levels, leading to it not being worn. While outdoor workers can be exposed directly to midday heat, indoor factory workers can also be impacted as temperatures rise in poorly ventilated buildings.¹⁷ Workers may also tolerate abuses due to economic priorities (e.g. requiring employment, or being unable to find alternative work), which disincentivises employers to institute climate protections. These tensions are only likely to increase as workers must choose between prioritising conflicting factors, which affect their safety within the workplace. Thus, consultation and leadership by workers in climate change

¹⁴ J Kurtz *et al.*, ‘The True Cost of Labour Must Be Worker-defined’, *Nature Food*, issue 2, 2021, pp. 630–631, <https://doi.org/10.1038/s43016-021-00369-8>.

¹⁵ L Parsons, *Carbon Colonialism: How Rich Countries Export Climate Breakdown*, Manchester University Press, Manchester, 2023.

¹⁶ B France, *Labour Compliance to Exploitation and the Abuses In-between*, Position Paper, Labour Exploitation Advisory Group, London, 2016; International Labour Organization (ILO), *Global Estimates of Modern Slavery: Forced Labour and Forced Marriage*, ILO, IOM, and Walk Free, Geneva, 2022; J L Decker Sparks, *Letting Exploitation Off the Hook? Evidencing Labour Abuses in UK Fishing*, University of Nottingham Rights Lab, 2022.

¹⁷ ILO, 2019.

responses are vital, providing an opportunity to radically transform workers’ rights.

The focus on the extreme end of the labour exploitation spectrum has left a gap in knowledge and consideration for decent work to address issues such as low wages and labour violations at the ‘lesser’ end of the spectrum. Limited understanding of work in a changing climate across the spectrum has come at the expense of understanding interactions in a nuanced manner. **Table 1** outlines a series of ‘risky’ sectors for which the achievement of decent work is further challenged by the intersection of climate change and extreme forms of labour exploitation.

Table 1: Example Risks to Ensuring Decent Work in Select Sectors with High Potential Exposure to Climate-Related Hazards. *This is not an exhaustive list but rather demonstrates a variety of hazards to which workers are exposed and that hinder access to decent working conditions within such sectors.*

Sector	Selected climate change and environment-related impacts ^a	Examples of risks to ensuring decent work
Agriculture ^b	<ul style="list-style-type: none"> • Agrochemicals • Heat stress • Wildfires (workplace air pollution) • UV radiation • Flooding 	<ul style="list-style-type: none"> • Safety equipment increases body temperature, so workers are less likely to wear equipment when spraying pesticides • Working shorter but more shifts, creating challenges to defining safe continuous rest • Piece-rate payments incentivise workers to not follow high-heat protocols or continue work in areas where they may be exposed to severe air pollutants • Risk of long-term health conditions due to prolonged exposure with limited shade and protections • Reduced working hours or cancelled contractual work
Aquaculture ^c	<ul style="list-style-type: none"> • Increased salinity and temperatures • Vector-borne diseases 	<ul style="list-style-type: none"> • Exposure to parasitic produce and chemical actors that lead to illnesses

Brick kilns ^d	<ul style="list-style-type: none"> • Heat stress 	<ul style="list-style-type: none"> • Debt bondage means labourers either work during harsh heat conditions or obtain more debt by altering their working patterns (i.e. working at night when they must pay for their electricity use so they can continue working to fulfil targets)
Construction ^e	<ul style="list-style-type: none"> • Workplace air pollution; UV radiation • Heat stress 	<ul style="list-style-type: none"> • Frequent exposure to workplace emissions and exposure to UV radiation whilst working outdoors for extended periods, leading to risks of long-term health impacts • High core bodily temperatures experienced by prolonged periods of outdoor building activities compared to indoor construction work
Fishing ^f	<ul style="list-style-type: none"> • Increased frequency and severity of storms at sea • Extreme temperatures 	<ul style="list-style-type: none"> • Vessels using exploited workers are more likely to go to sea in extreme weather, creating unsafe working environments, while migrant workers often cannot refuse or stay ashore due to immigration precarity • Denying access to safety equipment is used as a means of controlling exploited workers, increasing their risk of death or injury during storms at sea • Exploited fishers are often denied sufficient quality and quantity of drinking water as a means of control; yet may be forced to work outdoors on deck in extreme heat or cold for shifts exceeding 30 hours during abundant hauls

<p>Fish processing^g</p>	<ul style="list-style-type: none"> • Cyclones • Heat stress 	<ul style="list-style-type: none"> • Lengthening cyclonic seasons expose workers to storm surges, high winds, injury from debris, and disease risk in extreme situations • Processing of fish (sorting, cleaning, preparing, cooking, and selling) in the informal food sector is linked to dangerous body temperatures due to poor building ventilation (factory sites) and uses of cooking equipment in hot temperatures (food markets)
<p>Garment production^h</p>	<ul style="list-style-type: none"> • Flooding • Heat stress • Workplace air pollution 	<ul style="list-style-type: none"> • Factory closures (full or partial) can lead to a reduction in production and wages • High ambient air temperatures are exacerbated by the conditions and job roles (e.g. ironing) within the factories where ventilation can be poor and health risks increase • Higher heat and poor ventilation combined with chemical exposure can lead to multiple respiratory issues within factories
<p>Loggingⁱ</p>	<ul style="list-style-type: none"> • Wildfires (workplace air pollution) 	<ul style="list-style-type: none"> • Health risks from prolonged exposure to air pollutants through fire exposure
<p>Manufacturing^j</p>	<ul style="list-style-type: none"> • Flooding 	<ul style="list-style-type: none"> • Suspended production and a reduction in wages due to staff being unable to work
<p>Extractive industries^k</p>	<ul style="list-style-type: none"> • Heat stress 	<ul style="list-style-type: none"> • Safety equipment increases the body temperature, and without cooling systems, workers are less likely to wear equipment when in the extraction location (e.g. mines or quarries) • Adequate hydration and breaks are sometimes not provided, leading to greater risks of heat stress

- a. Some language has been aligned with the concerns in the report: International Labour Organization (ILO), *Ensuring Safety and Health at Work in a Changing Climate*, ILO, Geneva, 2024.
- b. J T Spector, J Krenz, and K N Blank, 'Risk Factors for Heat-related Illness in Washington Crop Workers', *Journal of Agromedicine*, vol. 20, issue 3, 2015, pp. 349–359, <https://doi.org/10.1080/1059924x.2015.1047107>; Food and Agriculture Organization (FAO), *Guidelines for Personal Protection When Working with Pesticides in Tropical Climates*, FAO, Rome, 1990; M El Khayat *et al.*, 'Impacts of Climate Change and Heat Stress on Farmworkers' Health: A Scoping Review', *Frontiers in Public Health*, vol. 10, 2022, pp. 782811, <https://doi.org/10.3389/fpubh.2022.782811>; L Gross, 'Fires Fuel New Risks to California Farmworkers', *Inside Climate News*, 21 September 2021, <https://insideclimatenews.org/news/21092021/wildfires-california-farmworkers-smoke-health>; ILO, 2024; D Pineda and B Mejia, 'Storm Flooding Compounds Misery for California Farms and Workers', *Los Angeles Times*, 21 January 2023, <https://latimes.com/california/story/2023-01-21/storm-flooding-compounds-misery-for-california-farmworkers>; M Singh, 'An Immigrant Farmer Grew Produce for Restaurants. California Floods Ruined Her Crops', *The Guardian*, 18 April 2023, <https://theguardian.com/us-news/2023/apr/18/california-immigrant-farmers-flooding>; L Parsons *et al.*, 'Climate-linked Heat Inequality in the Global Southern Workforce: Cambodian Workers' Economic and Health Vulnerability to High Core Temperatures in Five Occupational Sectors', *Climate and Development*, 2025, pp. 1–13, <https://doi.org/10.1080/17565529.2025.2474026>.
- c. D Ngajilo and M F Jeebhay, 'Occupational Injuries and Diseases in Aquaculture – A Review of Literature', *Aquaculture*, vol. 507, 2019, pp. 40–55, <https://doi.org/10.1016/j.aquaculture.2019.03.053>.
- d. K Lundgren-Kownacki *et al.*, 'Climate Change-induced Heat Risks for Migrant Populations Working at Brick Kilns in India: A Transdisciplinary Approach', *International Journal of Biometeorology*, vol. 62, issue 3, 2018, pp. 347–335, <https://doi.org/10.1007/s00484-017-1476-0>; S B Bajracharya *et al.*, 'Do Working and Living Conditions Influence Brick-kiln Productivity? Evidence from Nepal', *International Journal of Occupational Safety and Ergonomics*, vol. 28, issue 3, 2022, pp. 1452–1460, <https://doi.org/10.1080/10803548.2021.1899498>.
- e. L Parsons, J Cole, and P Mishra, *Heat Stress in the Cambodian Workplace*, Royal Holloway, University of London, 2024; Parsons *et al.*, 2025.
- f. Based on ongoing research undertaken by Decker Sparks. See also: Tigchelaar *et al.*, 2025.
- g. B Jackson, *Climate Change, Migration and Human Trafficking: Assessing the Impact of Climate Change, Migration and Human Trafficking Risks for Populations in the Bangladesh and India Sundarbans*, University of Nottingham Rights Lab, 2023; Parsons *et al.*, 2024.
- h. L Parsons *et al.*, *Hot Trends: How the Global Garment Industry Shapes Climate Change Vulnerability in Cambodia*, Royal Holloway, University of London, 2022; Parsons *et al.*, 2024; Parsons *et al.*, 2025.

- i. S M D'Evelyn *et al.*, 'Wildfire, Smoke Exposure, Human Health, and Environmental Justice Need to be Integrated into Forest Restoration and Management', *Current Environmental Health Reports*, vol. 9, 2022, pp. 366–385, <https://doi.org/10.1007/s40572-022-00355-7>.
- j. R Leitold *et al.*, 'Flood Risk Reduction and Climate Change Adaptation of Manufacturing Firms: Global Knowledge Gaps and Lessons from Ho Chi Minh City', *International Journal of Disaster Risk Reduction*, vol. 61, 2021, pp. 102351, <https://doi.org/10.1016/j.ijdr.2021.102351>.
- k. J Nelson and R Schuchard, *Adapting to Climate Change: A Guide for the Mining Industry*, Business for Social Responsibility (BSR), 2011; E B Meshi *et al.*, 'Thermal Exposure and Heat Illness Symptoms among Workers in Mara Gold Mine, Tanzania', *Annals of Global Health*, vol. 84, issue 3, 2018, pp. 360–368, <https://doi.org/10.29024/aogh.2318>.

Climate Impacts for Workers around the World

The scale and scope of climate-related impacts vary across sectors and geographies. Much has been written about the impacts of climate change—particularly the effects of heat—upon agricultural workers in the United States.¹⁸ For example, the number of days agricultural workers are exposed to unsafe conditions due to heat stress is expected to nearly double by 2050; for migrant workers, acute exposure to heat can be compounded by socio-economic barriers and limited healthcare access.¹⁹ Some interventions have been put in place. In California, the state's Occupational Safety and Health Administration (Cal/OSHA) introduced measures which seek to address heat illness for workers in both outdoor and indoor settings.²⁰ Despite the risks, some workers are compelled to

¹⁸ J T Spector *et al.*, 'A Case-crossover Study of Heat Exposure and Injury Risk in Outdoor Agricultural Workers', *PLoS One*, vol. 11, issue 10, 2016, pp. e0164498, <https://doi.org/10.1371/journal.pone.0164498>; M Tigchelaar, D S Battisti, and J T Spector, 'Work Adaptations Insufficient to Address Growing Heat Risk for U.S. Agricultural Workers', *Environmental Research Letters*, vol. 15, no. 9, 2020, pp. 094035, <https://doi.org/10.1088/1748-9326/ab86f4>; C Z De Lima *et al.*, 'Heat Stress on Agricultural Workers Exacerbates Crop Impacts of Climate Change', *Environmental Research Letters*, vol. 16, no. 4, 2021, pp. 044020, <https://doi.org/10.1088/1748-9326/abeb9f>.

¹⁹ *Ibid.*; J Margolis, 'Workers Are Dying of Heat Outdoors without Standards to Protect Them', *NPR*, 17 August 2021, <https://www.npr.org/2021/08/17/1028542777/workers-are-dying-of-heat-outdoors-without-standards-to-protect-them>.

²⁰ Cal/OSHA, Section 3395. Heat Illness Prevention in Outdoor Places of Employment. California Code of Regulations, 2005, <https://www.dir.ca.gov/title8/3395.html>; Cal/OSHA, Section 3396. Heat Illness Prevention in Indoor Places of Employment. California Code of Regulations, 2005, <https://www.dir.ca.gov/title8/3396.html>.

work in adverse conditions. Because of their piece-rate payment systems, migrant agricultural workers may be pressured to continue working during wildfires where temperatures can become extreme and air can become unbreathable (Table 1).²¹

In India's agricultural industry, rising temperatures also mean workers are facing prolonged heat stress even in the winter months. The increase in heat and more erratic monsoon seasons has led to changes in the crop growth cycles, meaning there is uncertainty in the fields around cultivation practices, and losses can reduce the income and adaptive capacity of workers in the state of Gujarat. Responding to heat has also been associated with greater exposure to pests and the use of pesticides, with workers sometimes disregarding PPE during uncomfortably high temperatures, creating precarious health conditions due to pest, chemical, and heat exposure.²² Similar concerns have been raised for workers in the brick manufacturing sector in India (Table 1) where payment per brick may be linked to working in more extreme temperatures, leading to 'decent work deficits' in an informal sector with limited contracts and negotiations.²³

In the garment industry (Table 1), indoor workers in Cambodia have been exposed to greater levels of air pollutants from microfibres and excessive heat, coupled with limited ventilation, which raises health risks.²⁴ The conditions within factories in Cambodia are compounded by strict targets which mean workers may avoid taking breaks to drink water or go to the bathroom, and even when provisions have been put in place by factory owners (e.g. fans and misting machines), not all workers are covered.²⁵ Yet the range of climatic impacts explored in detail for workers in informal work and indoor settings are limited.

Climate change also has an impact on working conditions in the construction industry.²⁶ For example, following Hurricane Katrina in the US, reconstruction was linked to exploitative working practices, with migrant workers subjected to poor OSH conditions at recovery sites and the introduction of visa schemes which

²¹ Gross.

²² L Donovan, S Poonam, and A Oppong-Ansah, 'The World's Garment Workers Are on the Front Lines of Climate Impacts', *Grist*, 2 May 2024, <https://grist.org/labor/the-worlds-garment-workers-are-on-the-frontlines-of-climate-impacts>.

²³ D S Boyd *et al.*, 'The Future of Decent Work: Forecasting Heat Stress and the Intersection of Sustainable Development Challenges in India's Brick Kilns', *Sustainable Development*, vol. 33, issue 2, 2025, pp. 3099–3117, <https://doi.org/10.1002/sd.3272>.

²⁴ Parsons *et al.*, 2022.

²⁵ Donovan, Poonam, and Oppong-Ansah.

²⁶ Occupational Safety and Health Administration (OSHA), 'Heat: Case Studies', US Department of Labor, 2025, <https://www.osha.gov/heat-exposure/case-studies>.

exacerbated debts for workers and were linked to deceptive recruitment practices.²⁷

Fluctuating weather conditions and more severe storms also create unsafe working conditions for seafarers which have led to death of workers who have been made to go out to sea despite clear risks.²⁸ Some efforts have been made in the development of ratifiable *minimum* international standards for maritime work (e.g. ILO Convention 188 and 186 outlining minimum standards for fishers and seafarers, respectively) that can be transposed into different contexts, including a changing climate.²⁹

Further, flooding has been associated with changing conditions for workers. In agriculture, US-based workers have been impacted by flooding (Table 1) that has led to reduced working hours being available or ended in cancelled contracts, which is particularly risky for workers on the restrictive H-2A visa (the US temporary guest worker programme—an example of a tied visa regime),³⁰ as this leaves workers unable to pivot to other sectors or jobs to secure additional work, rendering labourers more vulnerable to economic precarity and exploitation. Flooding has also caused issues for the garment recycling industry in Ghana—which developed in response to climate change ravaging traditional farming communities—where flooding in cities like Accra closes trading markets, adversely affecting the wages workers are paid and compounding economic stresses during adverse weather events.³¹ The effects of flooding are felt by indoor workers, too; for Cambodian garment factory workers, flash flooding can close factories when there are power outages; upon reopening, workers must work faster and longer to make up for the shortfalls during closures.³²

In the Sundarbans region of Bangladesh, sea-level rise is leading to greater levels of salt-water intrusion. Former rice paddy production has already been altered to accommodate the changing salinity of the water and as a response to waterlogging

²⁷ L McCallum, 'Reflections from the Field: Disparate Responses to Labour Exploitation in Post-Katrina Louisiana', *Anti-Trafficking Review*, issue 15, 2020, pp. 21–41, <https://doi.org/10.14197/atr.201220152>; K Bales, 'What Is the Link between Natural Disasters and Human Trafficking and Slavery?', *Journal of Modern Slavery*, vol. 6, issue 3, 2021, pp. 34–45, <https://doi.org/10.22150/jms/MOJJ8604>.

²⁸ International Transport Workers' Federation (ITF), 'Troy Pearson: The Human Cost of an Industry in Crisis', ITF, 2022, retrieved 13 May 2025, <https://www.itfglobal.org/en/stories/troy-pearson-human-cost-industry-in-crisis>.

²⁹ International Labour Organization (ILO), *C188 Work in Fishing Convention*, 2007; International Labour Organization, *Maritime Labour Convention*, 2006.

³⁰ Pineda and Mejia; Singh.

³¹ Donovan, Poonam, and Oppong-Ansah.

³² *Ibid.*

from cyclones; aquaculture is now a common livelihood adaptation.³³ Such changes alongside increased heat and flooding can lead to greater exposure of workers to zoonotic diseases, as they work in close proximity to aquatic species, often without PPE, and come into contact with animal species that may have greater levels of antibiotic resistance (Table 1).³⁴

Opportunities for Embedding Climate Change in the Decent Work Agenda

To avoid an overemphasis on a small number of sectors and geographical contexts, the issue of climate change—beyond a hyper-focus on heat—needs to be expanded in scope and scale to address the complex and wide-reaching issues that workers are experiencing. One way to achieve this is by embedding climate change within the international framework of decent work. The decent work agenda itself is fundamentally linked to international governance (top-down) and so much of the consideration for climate change impacts needs to be rooted in this agenda. However, this can be supported by direct action (bottom-up), mainly in geographies and sectors where workers are highly organised. To address the concerns raised earlier around considering all elements of the decent work agenda, there need to be concerted and collaborative efforts across different scales, activities, and leaders that coalesce around the agenda's core concepts. In this discussion, we outline how these actions manifest from the top-down and bottom-up approaches, and where greater integration could strengthen efforts to successfully achieve decent work in the context of climate change.

³³ S M Kais and M S Islam, 'Resilience to Climate Change in Industrial Shrimping in Bangladesh: Assessing the Comparative Role of the Stakeholders', *Sustainability*, vol. 13, issue 1, 2021, pp. 307, <https://doi.org/10.3390/su13010307>; B C Bhowmik *et al.*, 'Salinity Extrusion and Resilience of Coastal Aquaculture to the Climatic Changes in the Southwest Region of Bangladesh', *Heliyon*, vol. 9, issue 3, 2023, pp. e13935, <https://doi.org/10.1016/j.heliyon.2023.e13935>; S Samui, B Mallick, and A Bailey, 'Impact of Shifting from Rice to Shrimp Farming on Migration Aspirations in Bangladesh', *Regional Environmental Change*, vol. 24, issue 4, 2024, <https://doi.org/10.1007/s10113-024-02312-6>.

³⁴ Ngajilo and Jeebhay.

Strengthening the ILO Decent Work Agenda and Baseline Standards

Combined action on climate impacts and decent work has begun,³⁵ and the UN Sustainable Development Goals (SDGs) accelerated such ambitions—despite critique, particularly around the continued call for economic growth without delinking environmentally degrading practices.³⁶ Tensions around achieving decent work in a changing climate mean that responses to climate impacts are often not prioritised, as productivity concerns are seen as more pressing issues.³⁷ *Explicitly* embedding workers' experiences of climate change in the design of workplace interventions to achieve the decent work agenda is an opportunity to address these prioritisation gaps and ensure decent work is rooted in all transitional sectors.

Climate change within the decent work agenda is commonly associated with the 'Just Transition', linking changes to the economy to the provision of decent working conditions, often within 'green jobs'.³⁸ The 'Just Transition' shift has occurred alongside greater community engagement, including with Indigenous populations, to advance knowledge in addressing climate change impacts,³⁹ consider climate resilience and the mobility of vulnerable populations and geographies,⁴⁰ and expand beyond a focus on heat across sectors to address

³⁵ International Labour Office, *Decent Work for Sustainable Development – The Challenge of Climate Change*, International Labour Office, Geneva, 2007; United Nations General Assembly, *Transforming our World: The 2030 Agenda for Sustainable Development*, United Nations, New York, 2015.

³⁶ M Menton *et al.*, 'Environmental Justice and the SDGs: From Synergies to Gaps and Contradictions', *Sustainability Science*, vol. 15, issue 6, 2020, pp. 1621–1636, <https://doi.org/10.1007/s11625-020-00789-8>; H Kreinin and E Aigner, 'From "Decent Work and Economic Growth" to "Sustainable Work and Economic Degrowth": A New Framework for SDG 8', *Empirica*, vol. 49, issue 2, 2022, pp. 281–311, <https://doi.org/10.1007/s10663-021-09526-5>; E Chertkovskaya, 'From Economic Growth to Socio-ecological Transformation: Rethinking Visions of Economy and Work under SDG 8', in L Partzsch (ed.), *The Environment in Global Sustainability Governance*, Bristol University Press, Bristol, 2023, pp. 197–216, <https://doi.org/10.51952/9781529228021.ch016>.

³⁷ Parsons *et al.*, 2022.

³⁸ ILO and UNFCCC, *Global Forum on Just Transition: Climate Change, Decent Work and Sustainable Development*, ILO, Geneva, 2018; International Labour Organization (ILO), 'Just Transition Towards Environmentally Sustainable Economies and Societies', ILO, n.d., retrieved 9 December 2024, <https://www.ilo.org/topics-and-sectors/just-transition-towards-environmentally-sustainable-economies-and-societies>.

³⁹ R K Dhir, M Oelz, and M Harsdorff, *Indigenous Peoples and Climate Change: From Victims to Change Agents through Decent Work*, International Labour Office, Geneva, 2017.

⁴⁰ International Labour Organization (ILO), *Future of Work for Climate Resilience in the Pacific Islands*, ILO, Fiji, 2019; International Organization for Migration (IOM) and International Labour Organization (ILO), *Climate Change and Labour Mobility in Pacific Island Countries Policy Brief*, IOM, Bangkok, 2022.

additional climate risks through evidence of good practice.⁴¹ Further, the ILO led on the integration of labour rights and decent work in climate policy negotiations at the 2024 UNFCCC Conference of the Parties (COP29),⁴² where risks to workers were also highlighted by the UN Secretary-General.⁴³ Such work is vital, and leadership from the international governance system on combined action is one area in which to push for national and sectoral legislative protections for workers in the long term.

The inclusion of a ‘safe and healthy environment’ in the ILO’s agenda⁴⁴ provides an ideal opportunity for explicit reference to climate change, as more than 70% of workers are likely to face exposure to OSH impacts linked to climate change.⁴⁵ Core health-climate risks identified include: excessive heat, exposure to ultraviolet radiation and air pollution, increasing contact with vector-borne diseases and pesticides, and the impacts of extreme weather.⁴⁶ Resulting public health frameworks and approaches are considered particularly important to addressing worker exploitation.⁴⁷ As noted earlier, the impacts of climate are affecting both the safety and security of work—by limiting access to stable periods of employment or affecting the health outcomes of workers—yet the impacts of climate change are not explicitly included. This is an oversight in the agenda preventing effective top-down action.

⁴¹ United Nations Development Programme (UNDP), *Climate Change and Labour: Impacts of Heat in the Workplace*, UNDP, New York, 2016; ILO, 2019; L A Hoffner *et al.*, *Turning up the Heat: Exploring Potential Links between Climate Change and Gender-based Violence and Harassment in the Garment Sector*, ILO, Geneva, 2021; ILO, 2024.

⁴² International Labour Organization (ILO), ‘Just Transition Policies Must Prioritize Labour Rights and Decent Work’, ILO, 7 November 2024, <https://www.ilo.org/resource/news/just-transition-policies-must-prioritize-labour-rights-and-decent-work>.

⁴³ United Nations, ‘Secretary-General’s remarks to World Leaders Climate Action Summit at COP29 [as delivered]’, 12 November 2024, <https://www.un.org/sg/en/content/sg/statement/2024-11-12/secretary-generals-remarks-world-leaders-climate-action-summit-cop29-delivered>.

⁴⁴ ILO, 2022.

⁴⁵ ILO, 2024.

⁴⁶ *Ibid.*

⁴⁷ E Such, C Laurent, and S Salway, ‘Modern Slavery and Public Health. Public Health England’, UK Government, 7 December 2017, <https://www.gov.uk/government/publications/modern-slavery-and-public-health/modern-slavery-and-public-health>; E Such *et al.*, ‘A Public Health Approach to Modern Slavery in the United Kingdom: A Codeveloped Framework’, *Public Health*, vol. 232, 2024, pp. 146–152, <https://doi.org/10.1016/j.puhe.2024.04.004>.

Thus, we argue that the decent work agenda—to be effective—should explicitly name climate change as a risk that needs to be considered within ratifiable conventions around OSH and labour conditions (e.g. by developing a Convention on Decent Work in a Changing Climate that would address the decent work agenda by tying it to core climate risks identified by the ILO).⁴⁸ The context of a changing climate can be inferred in some conventions,⁴⁹ but ratifiable conventions focused on protecting workers from climate impacts would help to push integration through national legislation and across varied geographies and sectors. Whilst formal standards continue to be lacking in many sectors, the risks of working conditions impacted by climate change become more acute and will erode potential minimum standards, making the achievement of decent work across ‘at-risk’ industries more difficult. The decent work agenda itself should be considered as representing the *minimum* standards required to establish a baseline of protection and codified as such within sectoral conventions. Establishing such a baseline (via a dedicated convention) would then enable the consideration of adaptive standards that can more effectively integrate and address climate change without degrading the existing standards. The role of the international governance system is vital to ensure the rapid development and adoption of ratifiable standards on work impacted by climate, led by the experiences and needs of impacted workers.⁵⁰

Due Diligence Legislation and Action Plans

Action to address working conditions in conjunction or on par with environmental and climate concerns are starting to be developed, particularly in relation to supply chain action.⁵¹ Mandatory due diligence is currently the dominant form of legislation but rarely explicitly considers decent work, due to the lack of ratifiable conventions led by international governance institutions. Yet such legislative actions are being heralded as a more standardised approach in addressing issues for workers (in terms of employment and working conditions as well as climate-related environmental issues). Historically, the framing of environmental and social governance (ESG) has placed greater emphasis on the environmental aspects, leading to imbalanced action or an appending of social issues to environmental activities which fails to support workers due to a lack of business and investor

⁴⁸ ILO, 2013; ILO, 2022; ILO, 2024.

⁴⁹ Tigchelaar *et al.*, 2025.

⁵⁰ T Novitz, ‘Engagement with Sustainability at the International Labour Organization and Wider Implications for Collective Worker Voice’, *International Labour Review*, vol. 159, issue 4, 2020, pp. 463–482, <https://doi.org/10.1111/ilr.12181>.

⁵¹ B Jackson *et al.*, *Integrating policies addressing modern slavery and climate change*, Modern Slavery & Human Rights Policy & Evidence Centre, London, 2024; B Jackson *et al.*, *Review of Global Legislation on Labour and Environmental Compliance Applicable for the UK Context*, University of Nottingham Rights Lab and Transparentem, 2024.

buy-in.⁵² The current leading legislative action combining labour rights and climate action is the European Union’s recently passed Corporate Sustainability Due Diligence Directive (CSDDD)⁵³—although it is under considerable threat of being further watered down.

Such mandatory due diligence should also frame the social and human rights needs through the decent work agenda, with companies’ due diligence reports tied to the agenda’s main elements. For instance, to identify compliance with decent working time, reporting should be linked to the average number of working hours and breaks provided to employees, whereas for worker representation, it should include policies to enable unionisation and collective bargaining for workers. Further, reporting on addressing issues such as air pollution and other climatic conditions (including heat) should be linked to ensuring a safe work environment through reporting measures and tie together the social and environmental aspects of due diligence monitoring, potentially through the lens of OSH. If due diligence continues to be the preferred approach to legislation, countries and economic blocs seeking to design legislation should use the decent work agenda as the basis for the worker rights-focused portion and seek to identify and include risks of climate impacts within this structure.

Further at the national level, some integration of decent work is being undertaken under the ‘Just Transition’ framing. For example, the Scottish and Northern Irish legislatures in the UK have implemented ‘Just Transition’ policies to address climate change. This legislation explicitly includes decent work as an aim of the policies, ensuring that opportunities are made available to support workers who may be adversely affected by both climate change and the responses to address it.⁵⁴ However, the specific inclusion of decent work as an agenda within policy

⁵² A Gözlügöl, ‘The Clash of “E” and “S” of ESG: Just Transition on the Path to Net Zero and the Implications for Sustainable Corporate Governance and Finance’, *The Journal of World Energy and Law Business*, vol. 15, issue 1, 2020, pp. 1–21, <http://dx.doi.org/10.2139/ssrn.3962238>; C Williams and J L Decker Sparks, ‘Fishery Improvement Projects: A Voluntary, Corporate “Tool” Not Fit for the Purpose of Mitigating Labour Abuses and Guaranteeing Labour Rights for Workers’, *Marine Policy*, vol. 147, 2023, pp. 105340, <https://doi.org/10.1016/j.marpol.2022.105340>.

⁵³ M Foley, ‘Beware: The Scaled-Down CSDDD Regulation Still Has Bite’, *Forbes*, 27 March 2024 <https://www.forbes.com/sites/maryfoley/2024/03/27/beware-the-scaled-down-csddd-regulation-still-has-bite>; J McGowan, ‘European Parliament Approves Corporate Sustainability Due Diligence Law’, *Forbes*, 24 April 2024 <https://www.forbes.com/sites/jonmcgowan/2024/04/24/european-parliament-approves-corporate-sustainability-due-diligence-law>; Anti-Slavery International, ‘EU Omnibus Threatens Legislation Designed to End Forced Labour in Supply Chains’, 26 February 2025, <https://www.antislavery.org/latest/eu-omnibus-threatens-legislation-designed-to-end-forced-labour-in-supply-chains>.

⁵⁴ Jackson *et al.*, 2024.

beyond the international framework remains limited.

One area where this may be further considered is integration of decent work within national climate action plans, also known as Nationally Determined Contributions (NDCs). Responses to adapt and mitigate against climate change will inevitably alter the ways in which people work and the conditions they experience. As a mechanism, action plans should be used as a tool to move beyond the reporting of greenhouse gas emissions required for signatories of the Paris Agreement to expand in scope and include broader actions related to the 'Just Transition'⁵⁵—not only referencing economic diversification but also working conditions. NDCs should outline the process for community engagement to ensure dialogues for climate change interventions focus on coproduction with a diverse range of workers. This is because—as recognised by the ILO⁵⁶—some workers may want to continue to engage with, and indeed rely on, more environmentally damaging sectors (e.g. mining) which can have a broader impact on local communities (e.g. polluted run-off into water sources). In such sectors that may conflict with the decent work and 'Just Transition' agenda, efforts should instead improve environmental and working practices by understanding the needs of all concerned parties. These practices should be actioned through community forums in the design, implementation, and evaluation of the NDCs.

Worker-led and Grassroots Initiatives

Vitaly, worker-led and worker-focused organisations are both acting and leading in the fight against climate change.⁵⁷ For example, The Coalition of Immokalee Workers' (CIW) Fair Food Program (FFP) provided updated guidance and standards in 2021 after increasing numbers of workers in the United States were experiencing negative health outcomes from heat whilst working in agriculture fields. The standards were updated for heat-related responses and now include mandatory cool-down rest breaks once every two hours, monitoring prevention measures, as well as assessing new employees and their acclimation to hotter climatic conditions. They were also expanded to include training on heat specific information and ensure responses to health conditions, exacerbated or prompted by extreme temperatures, are addressed

⁵⁵ United Nations Framework Convention on Climate Change (UNFCCC), *Paris Agreement*, United Nations, 2015, https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

⁵⁶ International Labour Organization (ILO), *Just Transition, Decent Work, and Climate Resilience*, ILO Regional Office for Asia and the Pacific, Bangkok, 2017.

⁵⁷ L Clarke and M Sahin-Dikmen, 'Workers and Labour Movements in the Fight Against Climate Change', in M Atzeni *et al.* (eds.), *Handbook of Research on the Global Political Economy of Work*, Elgar, Cheltenham, 2023, pp. 209–2018; Barca.

with speed and appropriateness if they occur in the fields.⁵⁸

The global union BWI (Building and Wood Workers' International) have developed a campaign entitled 'Heat-up Workers' Rights, Not the Planet!' to improve working environments through the lens of safe and healthy working spaces whilst highlighting the effects to which climate change is exposing workers across the sector.⁵⁹ Trade union activities have also focused on identifying areas where climate change may impact wages and conditions, amongst other issues; on how workers can be protected as the climate changes; and on how climate change concerns should be addressed through policy and collective bargaining activities in the construction sector.⁶⁰ International trade unions have also developed frameworks for sectors to engage with that focus on access to decent work for migrant workers impacted by climate change.⁶¹ Further, union membership has been noted as being key to lowering the risks of workers experiencing heat stress and being exposed to unsafe working conditions in Cambodia.⁶²

To maximise the effective role of workers, and their representatives, in striving for decent work and recognising the impact this could have to shape the overarching international agenda, sharing knowledge and experiences on good practice is vital. These learnings should be exchanged between sectors and organisational groups, for example, during trade union conferences and sector-wide events. Such knowledge exchange around practical actions and positive outcomes, as well as lessons learnt from failed approaches, could be a further effective step to ensure continued responses to climate change and achieving decent work.

Finally, worker-led initiatives and organisations should also be involved in all discussions related to international, regional, and national responses. Workers and their representatives should advocate for their positions during the design and creation of climate change adaptation and mitigation actions to improve working conditions—but this should equally be undertaken by organisations, such as the ILO, to create, maintain, and ensure an equitable space (e.g. community forums

⁵⁸ Fair Food Program (FFP), 'Relief from the Heat', FFP, 20 August 2021, <https://fairfoodprogram.org/2021/08/20/relief-from-the-heat>.

⁵⁹ Building and Wood Workers' International (BWI), 'Call to Action: Heat Up Workers' Rights, Not the Planet!', BWI, n.d., retrieved 26 November 2024, https://archive.bwint.org/de/de_DE/cms/take-action-heat-up-workers-rights-not-the-planet-3023.html.

⁶⁰ Building and Wood Workers' International (BWI), 'From Crisis to Action: Unions Mobilise for Climate Justice in Construction', BWI, 21 January 2025, <https://www.bwint.org/BwiNews/NewsDetails?newsId=146>.

⁶¹ ITUC, 2024.

⁶² Parsons *et al.*, 2024.

and advisory boards) to discuss and respond to decent work in a changing climate that is rooted in worker expertise.

Conclusion

Climate change is causing pressures on workers that are increasingly limiting access to working conditions that would align with the definition of decent work. As climate change worsens, the threats to workers are only going to increase, and they may lead to more vulnerabilities for communities, pushing them into riskier forms of employment, and more exploitative forms of work.⁶³ Achieving decent work is being hindered by climate change across sectors such as agriculture, construction, garment manufacturing, and fish processing, with risks from extreme heat and flooding to severe storms and air pollutant exposure harming workers. To ensure workers are protected, decent work must be at the heart of climate action.

Whilst this is being led by workers' organisations and their representatives, and new legislation seeks to draw together efforts for businesses to engage with ESG practices, an innovative and radical restructuring of climate change responses is urgently needed—and must focus on adaptation and mitigation with workers rather than solely on issues arising from sectors' emissions. These responses should centre the knowledge and experience of workers. Such reframing may require a shift away from the quantity towards the quality of jobs that are often limited when considering what work is seen as 'productive' to encompass and achieve all elements of the decent work agenda.

Climate change will only make work more difficult, and without addressing the exposure faced by workers in some of the most precarious working conditions, the risks of extreme forms of exploitation will become worse. The urgency of climate change provides the opportunity to overhaul the normative approaches to addressing climate-influenced impacts on workers through the centring of worker experience and knowledge to develop flexible strategies to adapt, mitigate, and respond to climate change—strategies by workers and for workers. As such, tandem action across the labour–climate divide is the only approach that can ensure a truly 'Just Transition' for workers and guarantee that the minimum standards of decent work for all are met.

⁶³ Jackson *et al.*, 2021; Decker Sparks *et al.*

Acknowledgements

Funding for the work that has contributed to the formulation of this paper was provided by both WWF US (Contract No. MK10888, awarded to the Rights Lab, 2020–2021) and the University of Nottingham (Nottingham Research Fellowship, awarded to Jackson, 2024–2027). The authors would also like to thank the reviewers for their comments and the editors Borislav Gerasimov, Denise Brennan, and Sallie Yea for their feedback on the initial scope and later drafts of the paper which helped to shape the content and argument.

Dr Bethany Jackson is a Nottingham Research Fellow at the School of Geography and Rights Lab Lead in Decent Work and Climate Change at the University of Nottingham, UK. Email: bethany.jackson1@nottingham.ac.uk

Dr Nicole Tichenor Blackstone is an Associate Professor in the Division of Agriculture, Food, and Environment at the Friedman School of Nutrition Science and Policy at Tufts University, US. Email: nicole.blackstone@tufts.edu

Dr Jessica L. Decker Sparks is an Assistant Professor in the Division of Agriculture, Food, and Environment at the Friedman School of Nutrition Science and Policy at Tufts University, US. Email: jessica.sparks@tufts.edu