

# A bad climate

**Hot, cold, wet and wild. The weather is getting more unpredictable and more extreme. Hazards looks at the new risks emerging as a result of the climate crisis which have seen emergency preparedness become an essential part of a workplace safety policy.**

It is much more than a spell of unsettled weather.

A World Health Organisation (WHO) December 2023 statement noted the year had witnessed “an alarming surge in climate-related disasters, including wildfires, heatwaves and droughts, leading to the displacement of populations, agricultural

losses and heightened air pollution.”

And while injuries, stress and strains might be the usual bread and butter issues for trade union safety reps, the climate crisis dictates a new issue is worming its way onto the safety committee agenda – emergency preparedness.

In response to the accelerating crisis,

the International Trade Union Confederation (ITUC) declared the theme for International Workers’ Memorial Day on 28 April 2024 to be ‘Climate risks for workers’.

ITUC says extreme weather and changing weather patterns are affecting job security and health for workers.

Heat-related deaths and diseases in workers in agriculture, construction and other outdoor jobs have soared, the global union body adds.

Not all the at-risk jobs are so obvious. During heatwaves in 2023, postal work-



PHOTO: ILO

**CLEANING UP** Recovery workers can face a high risk of injury or disease from handling debris and materials contaminated with sewage and chemicals.

ers and delivery drivers were among those reported to have died from heat stroke while working.

There are genuine reasons to be concerned that neither employers nor regulators are treating the problem with the seriousness it deserves.

The US Postal Service received a fine of just \$15,625 over its failure to protect workers from heat after a letter carrier died of heat stroke in Dallas.

Eugene Gates collapsed while delivering mail on 20 June 2023, a day when the US National Weather Service had issued an excessive heat warning.

His union, the National Association of Letter Carriers, which lists a series of recent heat-related workplace deaths in



PHOTO: JAWAD QASRAWI

## Good climate for bad infections

“The climate crisis, urbanisation and changing land use are impacting on occupational health and safety and have led to biological hazards posing new risk or risks in new places,” a December 2023 ITUC briefing on biological hazards notes.

ILO’s September 2023 policy brief, ‘Occupational safety and health in a just transition’ (*Hazards* 164), warns “risks from vector-borne diseases, such as malaria or dengue fever, will increase with warming temperatures, including potential shifts in geographic range of these vectors as a result of climate change.

“This development affects all workers, especially outdoor workers who are at higher risk of contracting vector-borne diseases, from vectors such as mosquitoes, fleas and ticks. Moreover, infectious diseases may also affect workers via waterborne and foodborne pathogens, such as *Salmonella* spp. when they have direct contact with contaminated water or food.”

WHO’s December 2023 statement noted: “The ongoing climate crisis has significantly increased the risk of life-threatening diseases such as cholera, malaria and dengue.”

**COLD COMFORT** Whether you’re freezing outdoors, wading to work or simmering slowly in the office, the changing climate has made working and sometimes even getting to work an increasingly challenging prospect for many workers.

postal delivery workers, said Gates was one of potentially thousands of postal service workers who did not receive proper heat safety training or protection in accordance with the Postal Service’s own policies.

Managers across the agency “falsified” official records to hide the lack of training, the union said.

As the temperature increases, so does the rate of workplace injuries.

The UN’s International Labour Organisation (ILO), estimates that worldwide in 2020 there were 22.85 million occupational injuries, 18,967 deaths and 2.09 million disability-adjusted life years (DALYs) lost to occupational injuries attributable to workplace heat exposure.

A UCLA study in 2021 found that even a modest increase in workplace temperatures led to 20,000 additional injuries per year in California, with a social cost of US\$ 1 billion.

The study found that on days with temperatures above 32°C, workers have a 6 to 9 per cent higher risk of injuries than they do on days with cooler temperatures. When the thermometer tops 38°C, the risk of injuries increases by 10 to 15 per cent.

According to a May 2023 briefing from the US thinktank Public Citizen, for every 1°C increase above ambient temperature there is a 1 per cent increase in injuries, with the effect even more marked at higher temperatures.

It also affects the bottom line.

‘Working on a warmer planet: The effect of heat stress on productivity and decent work’, a 2019 report from ILO concludes that if nothing changes, the problem could reduce global GDP by US\$2.4 billion in 2030.

Heat isn’t the only threat.

When an unprecedented weather event saw tornadoes rip through large swathes of the US Midwest on 10 December 2021, workers died because their employers refused them permission to abide by emergency warnings and skip work or proceed to a place of safety.

In Kentucky, eight workers died when the Mayfield Consumer Products candle factory was razed to the ground. They had been told they would be fired if they left the workplace.

Six workers died when a tornado-hit Amazon warehouse in Edwardsville, Illinois, collapsed. Stuart Appelbaum, president of the Retail, Wholesale and Department Store Union, said it was “inexcusable” the company required people to work despite a tornado warning.

Amazon’s employee handbook notifies workers they can be fired for leaving without permission.

An April 2024 ILO guide to occupational safety impacts of climate change, notes “strong evidence demonstrates that climate change and environmental degradation present an increased risk of occupational injury, disease and death.”

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## Extreme weather

Heat-related illnesses are a major concern at work. A 2024 ILO global analysis of climate models, global temperature projections, labour force data and occupational health information calculated at least 2.41 billion full-time workers were exposed to workplace heat in 2020.

And for many across a diverse range of sectors, these exposures can be seriously bad for their health.

Heat-related illnesses range in severity from mild heat rash and swelling, worsening to heat stress and heat exhaustion, and to more severe and potentially fatal illnesses such as rhabdomyolysis (muscle damage), acute kidney injury, heat stroke and heat-stress induced cardiac arrest. Workers with pre-existing health conditions, like diabetes, lung or heart disease, can be particularly at risk (*Hazards* 162).

A recently recognised condition, chronic kidney disease of unknown aetiology (CKDu), has been observed in banana workers and others conducting heavy manual labour in hot temperatures, killing thousands each year.

A 2016 paper in the *Clinical Journal of the American Society of Nephrology* suggested CKDu could represent one of the first climate change-induced epidemics.

WHO/ILO joint estimates, published in the journal *Environment International* in 2023, suggest in 2019 1.6 billion workers worldwide were occupationally exposed to solar UV radiation, “which equates to 28.4 per cent of the working-age population.”

It is the single most common occupational cancer risk factor where workers are routinely exposed to levels in excess of recommended daily thresholds.

UV exposures can also cause irreversible harm to the eyes, either through injury from very high short term exposures, or long-term, causing macular degeneration, eye tumours and cataracts.

Indoor workers can also be at risk. Stifling temperatures, particularly where processes generate heat like bakeries, foundries and glassworks, can affect concentration and cause potentially serious physical and mental distress.

## It is not just heat

Storms, hurricanes, floods, snow blizzards, lightning, tornadoes, wildfires and high winds are all part of the climate change package.

Wildfires – which have become much more frequent as a consequence of climate change – can be deadly, with emergency workers at particular risk. It is not just the heat and flames – the smoke is a real killer.

## Working in a bad climate



**28 APRIL** Want to know what's cooking on International Workers' Memorial Day? Check out the *Hazards*/ITUC events and resources webpages. [www.28april.org](http://www.28april.org)

In 2023, Spanish trade unions CC.OO, UGT and CSIC representing firefighters employed at the Andalusia Environment and Water Agency (AMAYA), won recognition that the smoke was carcinogenic. In Australia, widespread bushfires have been linked to hundreds of additional

## Climate risks make the right to refuse essential

With the climate crisis accelerating, workers will increasingly face natural dangers in the workplace, a report from the US National Employment Law Project warned. It argues workers will increasingly need to exercise their right to refuse dangerous work – and need additional new rights on top.

The report, 'The Right to Refuse Unsafe Work in an Era of Climate Change', notes: "In the environment we face now, workers need more than 20th century health and safety regimes to keep themselves safe. There must be a rebalancing of power so that workers can exercise more autonomy over their workplace safety.

"They must have a real right to refuse dangerous work in the face of natural disasters, and it must be supported with job-protected rights

to paid leave, anti-retaliation provisions with meaningful penalties for noncompliance, and expansive unemployment insurance benefits."

The report concludes: "In a workplace that is dangerously hot (or cold), or where flooding is imminent or there is the real possibility of a roof collapsing, workers should not have to stay onsite while bureaucratic systems play out.

"To ensure that workers feel comfortable availing themselves of this right, it must come with supports like job-protected paid leave and anti-retaliation provisions with meaningful penalties for noncompliance.

"And as a backstop for workers, the unemployment insurance system must improve the scope and implementation of Disaster Unemployment

Assistance so that it is a true support in the wake of a disaster. Finally, the unemployment insurance system must take environmental hazards and employer practices into account when defining 'suitable work' offers for those seeking to recover from natural dangers at work."

Article 13 of the ILO occupational safety and health convention, Convention 155, says any workers who believe their work presents "an imminent and serious danger" to life "shall be protected from undue consequences in accordance with national conditions and practice."

Convention 155 is an ILO 'fundamental' convention, so this is a legally-binding requirement across all ILO's 187 member states.

[www.nelp.org](http://www.nelp.org)

deaths each year from respiratory and heart conditions.

The US government's safety research agency NIOSH says common hazards faced by firefighters working on the fire line "can include burnovers/entrapments, heat-related illnesses and injuries, smoke inhalation, vehicle-related injuries (including aircraft), slips, trips, and falls, and others. In addition, due to prolonged intense physical exertion," they may be "at risk for sudden cardiac deaths and rhabdomyolysis."

Floods can make transport hazardous for all workers and come with an increased risk of infections. Depending where in the world you are, that could be anything from colds to cholera. Agricultural workers could be left with a dangerous job or no job at all.

Floods can create a risk from diseases associated with backflow of sewage, conditions like Weil's disease linked to rodents and from mould exposures. Risks from debris like fallen trees or water ingress compromising electrical or fire safety can make work dangerous or impossible.

A guide to 'Health and safety in flooded areas' prepared by the UK national union federation TUC, says "every employer should have a 'disaster recovery plan' in place, agreed with the union, which should be regularly reviewed" (*Hazards* 125).

Cold weather is the flip side of the extreme temperature problems at work. When the temperature dips below -10°C there is a risk of hypothermia or frostbite if outside for long periods without adequate protection. Wind chill can greatly heighten the risks. Other cold related conditions affecting outdoor workers include trench foot and chilblains.

Slips, falls and vehicle accidents can increase as a result of snow, ice and frost. Snow can obscure dangers, including fall hazards or fragile roof panels.

### Pollution problems

Air pollution and smog events can create acute and long-term health risks. A 2023 paper in the *Journal of Occupational and Environmental Hygiene* noted that the increasing impact of climate change on levels of air pollutants will disproportionately impact outdoor workers, with increased exposure to PM2.5, ozone and allergens.

The 2021 joint WHO/ILO global estimates of the occupational disease bur-

den suggest more than 770,000 deaths a year can be attributed to occupational exposure to air pollutants, but ILO adds the real magnitude of the health impacts from workplace air pollution is likely to be much higher.

ILO notes pollution of air at the workplace, either indoors or during work outdoors, can cause a range of acute and chronic health impacts, including cancer, stroke, respiratory disease, cardiovascular disease and other health issues.

Workers involved in the emergency rescue, clean-up and restoration

response to extreme weather events can be at high risk, by necessity working when conditions may be at their most dangerous and often for long hours, sometimes without the necessary support and protective equipment.

Essential workers – those providing our health care, transport, food and other life- and society-sustaining services – may be at heightened risks as they will usually be required to work but may not be considered high risk under normal circumstances, so may not have the necessary training, protective clothing or equipment.



PHOTO: ILO