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NEDLAC LABOUR LAW REFORM

“Climate-proofing” labour law: adapting to increased heat and extreme weather events

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ISSN xxxx-xxxx (*web pdf*)

<https://doi.org/xxxxxx>



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ABSTRACT

Rising temperatures and extreme weather events present challenges for the world of work and the regulation of occupational health and safety (OHS) and increases the need for risk assessment and OHS control and prevention measures. These challenges are an important consideration in climate change adaptation. This report provides a comprehensive overview of the relevant statutory rights, duties and standards, with an emphasis on working hours and OHS measures for the prevention and control of occupational injuries, diseases and illnesses linked to increased temperatures and extreme weather. In addition, social security provisions, including workers' compensation and income protection, are considered. The report identifies legislative changes already in progress, and proposes an action plan for strengthening OHS protection for workers, with priority given to immediate actionable steps, while identifying longer-term areas for development and incorporation into legislation, regulations, and programmes to address the impact of climate change and promote a just transition. (Other labour law mechanisms for planning and implementing a just transition are addressed in *Optimising labour law for a just transition*)

Key words

Thermal stress; climate adaptation; occupational injuries and diseases; heat stress; extreme weather; risk assessment; occupational health and safety; social protection and climate change

Acknowledgements

This report was commissioned as part of an ongoing labour law reform process to support NEDLAC and social partners to develop policy and consider the need for legislative and regulatory reforms in response to the changing world of work and the impact of climate change. A scoping paper and earlier versions of the report were presented to social partners and key stakeholders at workshops in 2023 and 2024. We are extremely grateful for the participation, discussion, and feedback at the workshops, which has informed the report and its recommendations. For their responses to an earlier draft, we would also like to acknowledge the insightful contributions of individuals at the following organisations: NEDLAC; Presidential Climate Commission (PCC); Department of Employment and Labour; and the occupational health and hygiene specialists of the Inspection and Enforcement Services branch. We extend our thanks to Mandy Jayakody (PCC) and Wendy Ovens for their comments, and to colleagues at CENTROW for their insights, in particular Abigail Osiki and Vincent Oniga for research assistance. We greatly appreciate input from Lisa Seftel and Tsholo Lelaka at the NEDLAC secretariat.

Recommended Citation

Godfrey S & Collier D (2024) "*Climate-proofing" labour law: Adapting to increased heat and extreme weather events*. NEDLAC Labour Law Series No. 5, Centre for Transformative Regulation of Work, UWC. ISSN xxxx-xxxx.

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ACRONYMS AND ABBREVIATIONS

BCEA	Basic Conditions of Employment Act, 1997
CCA	Climate Change Act, 2024
COIDA	Compensation for Occupational Injuries and Diseases Act, 1993
DFFE	Department of Forestry, Fisheries and the Environment
DEL	Department of Employment and Labour
DSD	Department of Social Development
ECC	Employment Conditions Commission
ERW	Environment Regulations for Workplaces
ILO	International Labour Organization
LRA	Labour Relations Act, 1995
MHSA	Mine Health and Safety Act, 1996
NEDLAC	National Economic Development and Labour Council
NEMA	National Environmental Management Act
NMWA	National Minimum Wage Act, 2018
NMWC	National Minimum Wage Commission
OHS	Occupational health and safety
OHSa	Occupational Health and Safety Act, 1993
PCC	Presidential Climate Commission
PPE	Personal protective equipment
SANAS	South African National Accreditation System
UIA	Unemployment Insurance Act, 2001
UIF	Unemployment Insurance Fund
WBGT	Wet Bulb Globe Temperature

1. INTRODUCTION

“Temperature projections suggest that temperatures in South Africa are rising faster than in the rest of the world. ... South Africa has a wide range of communities, from suburban communities with formal housing to informal settlements constructed with substandard materials. Extreme heat stress and frequent storms increase the risk of death, homelessness, injuries, mental illness, diarrheal diseases, respiratory infections, and other negative health consequences, especially in informal settlements. Equipping the more vulnerable communities with knowledge and resources to ensure successful adaptation to heat and extreme heat events is of utmost importance.”¹

“Excessive heat poses a significant threat to worker safety, health and well-being, both for indoor and outdoor workers. Already workers in all regions of the world are suffering from serious heat-related health conditions, often with irreversible consequences. This is only going to get worse.”²

Working in heat can impact workers’ health, safety, and productivity.³ High temperatures and climate variability increase the risk of both **biological and non-biological hazards**.⁴ **Higher daily temperatures** affect the well-being of workers and increase the risk of exposure to **extreme heat**⁵ and other hazards, including **extreme weather events** such as heatwaves, storms, and flooding, all of which disrupt work, damage infrastructure, and intensify occupational hazards.⁶ As such, this report examines the adequacy of current labour law and social protection

¹ Wright C, Mathee A, Goldstone C, et al. [“Developing a Healthy Environment Assessment Tool \(HEAT\) To address heat-health vulnerability in South African towns in a warming world”](#) (2023) 20(4) *International Journal of Environmental Research and Public Health* 20 at 21.

² International Labour Organization (ILO) [Heat at work: Implications for safety and health](#) (2024) at 1.

³ Levy BS & Roelofs C [“Impacts of climate change on workers’ health and safety”](#) *Oxford Research Encyclopaedia of Global Public Health* (2019) identify the following increased risks associated with climate change: **heat stress and heat-related illnesses** including heat exhaustion, heat rash, heat syncope, dehydration, heat stroke, and chronic kidney disease; **increased risk of injuries** due to impaired physical and cognitive functioning; potential for **exposure to hazardous chemicals; air pollution**, which is exacerbated by warmer temperatures; **extreme weather events** (for example, storms, floods, hurricanes, and wildfires), which expose workers to injuries, toxic substances, and mental stress; **vector-borne diseases**, for example Lyme disease and malaria, as the distribution of pests and pathogens is impacted by weather; and **psychological stress**, for workers as well as first responders and health-care workers.

⁴ **Non-biological hazards** include environmental and physical risks in the workplace – such as exposure to chemicals, ergonomic issues, and unsafe conditions – whereas **biological hazards** involve harmful agents from living organisms, such as bacteria, viruses, and allergens, which can cause diseases in humans.

⁵ **“Extreme heat”** refers to temperatures of over 35° C on a single day or a heat wave, which is defined as three consecutive days when the maximum temperature is 5 degrees above the mean maximum for the hottest month in an area. See National Department of Health [National heat health action guidelines](#) (2020) at 5. As a rule of thumb, when the radiant heat is above 35° C, which is generally the skin temperature in a hot work environment, the body gains heat, whereas if the radiant temperature is below 35° C, it loses heat through radiation. Our focus is on high environmental temperatures that impact on the workplace rather than high temperatures that arise within the workplace due to the materials being extracted or used, or the processes or operations being conducted. Heat arising within the workplace is dealt with in terms of the Occupational Health and Safety Act, 1993 (OHSA) and the Mine Health and Safety Act, 1996 (MHSA). Rising environmental temperatures, of course, intersect with and exacerbate heat generated in the workplace.

⁶ In Mauritius, the Workers’ Rights Act, 2019 defines “extreme weather conditions” to include cyclonic conditions where a warning class III or IV is issued by the Mauritius Meteorological Services; where an order is issued by the National Crisis Committee requiring a person to remain indoors during a period of heavy or torrential rain; or where a safety bulletin has been issued by the Mauritius Meteorological Services.

mechanisms in responding to these increased risks, as part of which it considers opportunities for regulatory and legislative development.

Rising temperatures and extreme weather, including exposure to cold and flooding, increase the risk of **thermal stress**.⁷ While our initial concerns related to the impact of extreme heat, feedback during the drafting of this report led us to enquire more generally whether current labour statutes and regulatory instruments adequately protect the well-being of workers in situations of higher-than-average temperatures, changing weather patterns, water scarcity, and flooding and other extreme weather events; to this end, we sought to identify gaps or inadequacies in current legislation and regulatory instruments and consider what needs to be done to address them. Extreme weather events present a challenge as they occur unpredictably, vary in duration and severity, and have local or widespread impact. This raises the question of what the effective or appropriate approach is to regulation – amending existing statutory rules and standards, developing more agile and targeted regulation, or engaging in a combination of responses?⁸

Increased temperatures can lead to heat stress when “excess heat is stored in a workers’ body, which, if not released to the environment, will raise core body temperature, leading to potential health risks and reduced productivity”.⁹ **Direct health impacts** include dehydration, heat cramps, heat rash, heat exhaustion, and heat stroke. As for their **indirect health impacts**, high temperatures can **exacerbate a range of pre-existing health conditions** and increase risks for those living with co-morbidities. Elderly people, children, women and pregnant women, and workers with conditions such as hypertension, diabetes, and HIV/TB, are more vulnerable than others.¹⁰ Increased temperatures can lead to **a rise in food- and water-borne infections**, which may increase gastrointestinal illnesses, resulting in diarrhoea, as well as increased outbreaks of listeriosis, typhoid and cholera.¹¹ Other indirect health impacts include reduced concentration and tiredness; extreme heat can also exacerbate irritability and aggressiveness, leading to interpersonal violence.¹² Figure 1 summarises **a range of direct and indirect impacts** of extreme heat events.

⁷ “**Thermal stress**” refers to physiological strain when a person is exposed to extreme temperatures – either hot or cold – that affects his or her ability to maintain a normal temperature range. This condition can lead to serious health issues, decreased productivity, and an increased risk of workplace injuries and accidents.

⁸ For an example of agile responses to extreme weather events, see the Auditor-General [First special report on flood relief funds](#) (31 August 2022).

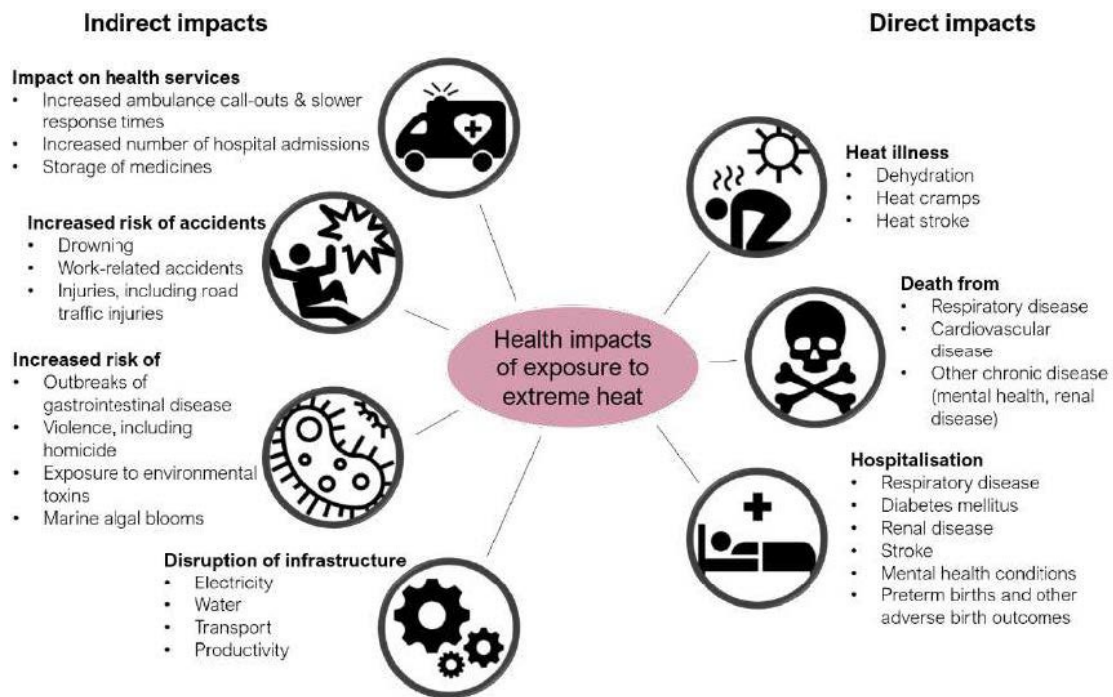
⁹ ILO (2024) at 5. Factors contributing to heat-related risks include excessive heat, thermal insulation (clothing and PPE), and physical activity.

¹⁰ On the workers who are potentially at greater risk, see ILO [Chemicals and climate change in the world of work: Impacts for occupational safety and health](#) (2023); and on the vulnerabilities of, and risk to, pregnant women specifically, see Stassen R, Zottarelli LK, Rowan P et al. “[Extreme heat and pregnancy: A content analysis of heat health risk communication by US public health agencies](#)” (2024) 18(e71) *Disaster Medicine and Public Health Preparedness* 1.

¹¹ National Department of Health (2020) at 12.

¹² National Department of Health (2020) at 5.

Figure/Table 1. Direct and indirect impacts of extreme heat events



Source: National Department of Health [National heat health action guidelines](#) (2020) at 11

In view of these risks, the relevant areas of labour and employment law that we consider are **minimum employment conditions (the BCEA/NMWA)**; **occupational health and safety legislation (OHS and MHS)**; and **social protection legislation** that provides **compensation for injuries or illnesses** arising from and in the course of employment, including occupational diseases (COIDA), as well as **unemployment illness benefits (UIA)**. We also consider the question of whether employees will receive remuneration for breaks in the working day or longer work stoppages due to extreme heat that would not be covered by COIDA and the UIA.

“Climate-proofing” labour law can be achieved for the most part by using pre-existing provisions and administrative powers in statutes – powers and provisions which would be strengthened by the adoption of proposed amendments in the **OHS Amendment Bill**.¹³ We propose that the provisions in statute be used to develop regulatory mechanisms that clarify employer responsibilities in relation to climate change, specifically the responsibilities to implement OHS management systems protecting workers from heat-related illnesses or injuries. Measures in this regard include **guidelines for workplace policies, health and safety management**

¹³ The OHS Amendment Bill [B-2020] is discussed further below.

systems¹⁴ or programmes¹⁵ and appropriate risk assessment¹⁶ tools and workplace specific risk management plans¹⁷ that address the health and safety of workers.

Labour laws are generally limited to those in an employment relationship. Thus, within the broader regulatory framework for a just transition,¹⁸ we propose that **climate change adaptation** should include the development of **heat-health and risk assessment tools for communities, towns and municipalities**, of guidelines on managing the risks, and of appropriate interventions at these levels to reduce heat-health vulnerability.¹⁹ Moreover, we propose that heat and climate-related OHS considerations for the world of work should be incorporated in broader adaptation strategies and action on climate change. Extensive awareness campaigns are needed on risks and vulnerability to risk.

2. RIGHTS, DUTIES, AND STANDARDS RESPONDING TO EXTREME WEATHER AND HEAT STRESS

In this section, we consider relevant **rights, obligations and duties, and standards** prescribed in **statutes** (as well as, inter alia, **regulations, codes, and guidelines**), as well as the **administrative authorities** within each statute, that enable a degree of customisation, specification, and variation (e.g. to extend regulation, or to focus it, or to fill identified gaps) which can provide for a more agile, targeted response to increased temperatures and extreme heat. The extent to which the statutes enable employees and unions to play a role in monitoring, enforcing, and adapting rights and standards that would be relevant for responding to heat stress is also considered.

2.1 Basic Conditions of Employment Act and the Working Time Code

The **Basic Conditions of Employment Act, 1997 (BCEA)** prescribes **minimum employment standards** and includes a scheme for variation of a range of the standards. In addition to considerations related to **sick leave** and protection of **pregnant women**,²⁰ our focus on conditions of work relates **hours of work standards**, which include **maximum weekly and daily hours, rest periods** and **meal break** in a working day, and maximum **overtime**

¹⁴ The OHS Amendment Bill defines a **health and safety management system** as a “co-ordinated, comprehensive set of interrelated or interacting elements to establish OHS policy and objectives in order to optimally manage health and safety” (clause 1).

¹⁵ For example, the Mine Health and Safety Inspectorate’s [Guideline for a Mandatory Code of Practice for an Occupational Health Programme on Thermal Stress](#) (GN 1754, GG 45903, 11 February 2022).

¹⁶ “**Risk assessment**” is defined in the OHS Amendment Bill as “the process of evaluating the risks to an employee’s health and safety from workplace hazards and is a systematic assessment of all aspects of work that onsid[e] [sic]: (a) a complete hazard identification; (b) identification of all who may be affected by the hazard; (c) how the person is affected; (d) the analysis and evaluation of the risks; and (e) prioritisation of risks”. “**Risk management**” “means the identification and mitigation of risks by the application of appropriate control measures”.

¹⁷ As provided for in the OHS Amendment Bill.

¹⁸ See Optimising labour law for a Just Transition NEDLAC Report (2024).

¹⁹ Relevant tools include the [National heat health action guidelines](#) (2020); and in 2023, the South African Bureau of Standards (SABS) published a technical framework to support local government and communities adapt to climate change ((SABS/SATS 14092 (2023) Adaptation to climate change – Requirements and guidance on adaptation planning for local governments and communities). See in this regard Omarjee L “[SA introduces standard to assist local government to adapt to climate change](#)” (20 September 2023) *News24*.

²⁰ On the health concerns of extreme heat for pregnant women, see also Kjellstrom T, Briggs D, Freyberg C et al. “Heat, human performance, and occupational health: A key issue for the assessment of global climate change impacts” (2016) 37 *Annual review of public health* 97.

hours, as well as **night work** provisions. In addition to relevant provisions in the BCEA, **Schedule 1** of the BCEA and the **Code of Good Practice on the Arrangement of Working Time** are considered.

Hours of work consist of ordinary hours of work and overtime hours, with all non-work hours constituting rest periods. **Section 9 of the BCEA** sets maximum weekly ordinary hours of work at **45 hours**, which translates into maximum daily ordinary hours of work of **nine hours** (if working a five-day week) or **eight hours** (if working more than five days per week).

Schedule 1 of the BCEA introduces a procedure for **reducing maximum ordinary working hours** to 40 per week and eight hours per day, and prescribes that the mechanisms to reduce working hours are **collective bargaining** and **sectoral determinations**. However, while collective bargaining is an important mechanism, arguably the emphasis should fall on sectoral determinations, in regard to which the Minister is empowered to regulate hours of work. The procedure anticipates an investigation by the Department of Employment and Labour (DEL) and consultation with the Employment Conditions Commission (ECC) – now the National Minimum Wage Commission (NMWC) – on how ordinary working hours would be reduced to 40 per week.²¹ In addition, the ECC/NMWC can on its own initiative investigate the reduction of working hours in a particular sector and area and make a recommendation to the Minister.²²

Reducing and/or adjusting working hours and more frequent breaks can have a twofold effect: working less, resting more, and reducing work hours or work-time shifting are among the **adaptation measures to reduce exposure to unsafe levels of extreme heat**;²³ in addition, a policy shift in which there is a sustained reduction in working hours could arguably **mitigate climate change and global warming**.²⁴

Section 10 of the BCEA sets the **maximum weekly overtime hours at 10 hours**, while maximum daily hours cannot exceed 12 hours (actual maximum overtime hours will therefore vary according to the ordinary hours in the workplace). A collective agreement can vary the maximum weekly overtime hours by increasing it to 15 hours, but this increase may not apply for more than two months in any 12-month period. However, to protect workers, overtime can only be worked in accordance with an individual agreement.

In terms of **section 14**, an employee who works for more than five continuous hours in a day must be given a break for a **meal interval** after five hours of continuous work.²⁵ Such a break must be at least one continuous hour, but can be reduced to a minimum of 30 minutes by individual agreement.²⁶ In terms of **section 13**, the provisions in respect of ordinary weekly and daily hours, **overtime hours, and meal intervals may be amended by the Minister by regulation, on grounds of health and safety**, but such an amendment may not increase the

²¹ We are not aware of any systematic steps that were taken to implement a procedure to reduce ordinary hours of work from 45 per week.

²² Section 52(2) of the BCEA.

²³ See, for example, Tigchelaar M, Battisti DS & Spector JT [“Work adaptations insufficient to address growing heat risk for US agricultural workers”](#) (2020) 15(9):094035 *Environmental Research Letters*; Morabito M, Messeri A, Crisci A, et al. “Heat-related productivity loss: Benefits derived by working in the shade or work-time shifting” (2021) 70(3) *International Journal of Productivity and Performance Management* 507.

²⁴ See Rosnick D “Reduced work hours as a means of slowing climate change” (2013) 63(25) *Real-World Economics Review* 124. However, this is an area that would need further investigation. See, for example, the scenarios studied in King LC & Van den Bergh J “Worktime reduction as a solution to climate change: Five scenarios compared for the UK” (2017) 132 *Ecological Economics* 124, which suggests that “a 20% reduction in work time could result in a decrease in national energy use by 16%”, and that “reducing working hours may therefore help in keeping emissions low enough to limit global warming to 2 °C”.

²⁵ See case law and analysis in Du Toit D, Van Staden P, Taylor M et al. *Labour law through the cases* Durban: LexisNexis (2023) at BCEA-12(4) and 12(5).

²⁶ Or an employee who works less than six hours on a day can dispense with a meal interval by individual agreement.

maximum ordinary and overtime hours (that is, the regulation can only reduce the maximum hours). However, there is no such restriction on how a regulation may amend section 14 in respect of meal breaks. A **regulation in terms of section 13** may be made **by the Minister only on the advice of the chief inspector** appointed in terms of section 27 of the Occupational Health and Safety Act, 1993 (OHSA) or the chief inspector appointed in terms of section 48 of the Mine Health and Safety Act, 1996 (MHSA) and after consulting the NMWC. The provision thus effectively bars any increases in daily and weekly ordinary hours and overtime limits, and authorises the Minister to decrease the maximums by regulation subject to advice and consultation. Variation of key hours-of-work provisions is similarly constrained for ministerial and sectoral determinations.²⁷

The **daily and weekly rest periods** in terms of **section 15** set an absolute limit on total working hours, that is, ordinary hours plus overtime. The daily rest period is 12 hours and the weekly rest period, 36-hours, which should include a Sunday. There is some scope for variation in the section to allow for the introduction of limited flexibility.

Night work (s 17) is defined as work between 18h00 and 06h00, but the Act gives additional protection for work between 23h00 and 06h00, including the requirement for a medical examination at the request of the employee. Given that the ambient temperature goes down at night, it is probable that the night-work provision gives sufficient protection as is (and it would be uncontentious if an amendment were to require the medical examination to include the health impact of high temperatures).

The **Code of Good Practice on the Arrangement of Working Time (“Working Time Code”)** aims to provide information and guidelines to employers and employees concerning the arrangement of working time and the impact of working time on the health and safety and family responsibilities of employees. It applies to all employers and employees covered by the BCEA, but its main thrust is in respect of employers and employees who perform shift work or regular night work. The Code repeats the general duties of employers to provide and maintain a **working environment that is safe** and without risk to the health of employees as per OHSA and the MHSA.

The **Working Time Code** is useful as it provides an approach for adopting a code of good practice on heat stress.²⁸ In terms of the code, employers should **regularly assess whether the work environment (for example, lighting and heating) is adequate for the health, safety, and physical comfort to employees (item. 9)**. With

²⁷ Neither type of determination may be made for section 7, and neither may reduce the protection afforded by section 17(3) and (4) or by a regulation made in terms of section 13, and they may vary section 9 only in the circumstances contemplated by section 50(2A). Section 50(2A) provides that a determination may be made in respect of section 9 only if “the employees’ ordinary hours of work, rest periods and annual leave are on the whole more favourable to the employees than the basic conditions of employment in terms of sections 9, 10, 14, 15, and 50”. In other words, section 9 may be varied by a ministerial or sectoral determination only if an increase of ordinary weekly and/or daily hours is more than off-set by improvements to a range of other basic conditions dealing with hours of work. The Minister must, furthermore, take into account additional conditions before issuing such a determination, that is, the determination has been agreed to in a collective agreement; or is necessitated by the operational circumstances of the sector in respect of which the variation is sought and the majority of employees in the sector are not members of a registered trade union; or it applies to the agricultural sector or the private security sector.

²⁸ For an example of a code of practice broader than the working time considerations from a comparative perspective, see Republic of Cyprus Department of Labour Inspection [“Safety and health at work: Heat stress in outdoor working during the summer months”](#). The Cyprus code “provides guidance on how to implement ... legislation in order to reduce the risks of heat exposed workplaces ... [and] describes measures to protect workers from heat stress in both indoor and outdoor settings”. See International Labour Organization [Achieving a just transition towards environmentally sustainable economies and societies for all](#) (2023) International Labour Conference 111/Report VI at 35. For the position in California, which has separate regulations for indoor heat requirements and for outdoor heat illness prevention, see State of California Department of Industrial Relations [“Cal/OSHA Heat illness prevention guidance and resources”](#) (2024). In addition, see [Annexure C](#) for [developments in Qatar](#).

respect to the **medical examination** that may be required by employees performing **night work** (s 17(3)(b)), the code (item. 8) recommends that the medical practitioner consider any health problems the employee might be experiencing, including a long list which specifies potential health problems that should be investigated in the examination.

The section in the code (**item. 4**) dealing with the management of shift work and night work provides further useful pointers. It stipulates that the **number and duration of rest pauses should be adapted** to the workload, with particular attention given to the **scheduling of rest periods** for employees who are engaged in, among others, physically and mentally strenuous work, work involving manual lifting, work involving repetitive movement, and shifts of longer than eight hours. Employers should also provide appropriate and up-to-date information to employees on coping measures both in the workplace and at home. The measures listed are specific to shift and night work, but one may envisage **equivalent measures for working in heat**.

As noted above, the BCEA provides a comprehensive scheme for variation, some examples of which have been mentioned in the examination of hours-of-work provisions. The BCEA sets **minimum conditions which may be exceeded** by a contract or collective agreement (including a bargaining council agreement) as well as a ministerial or sectoral determination (and all these instruments can introduce additional conditions not in the BCEA). However, the scheme for variation in the Act is primarily about **downward variation, which aims to balance increased employee protections with elements of flexibility for employers** (albeit conditioned by the provisions of the Act).

Accordingly, the Act provides that a contract, collective agreement, ministerial determination, or sectoral determination can also vary specified conditions downwards. The Minister is given the most power to vary downwards, that is, he or she may vary the largest number of basic conditions downwards (in the form of ministerial and sectoral determinations as well as exemptions); followed by a bargaining council, which can vary a smaller set of conditions; then an ordinary collective agreement; and, lastly, an individual agreement. Importantly, certain “core” conditions are excluded from any form of variation (in other words, only an amendment to the Act could lower these standards).

Climate-proofing labour legislation is primarily concerned with ways to improve protection for workers as a response to rising temperatures – for example, by adjusting or reducing working hours, introducing more breaks in the day, or stopping work once a temperature threshold is reached.²⁹ This can be done by the Minister and collective bargaining. However, as indicated, some basic conditions can be varied downwards, and there is also provision for exemptions on application by employers. To enhance worker protection and occupational health and safety, consideration should be given to whether additional **restrictions** should be placed **on downward variation** in respect of certain conditions, or whether downward variation of these conditions should be removed from the BCEA.

Two basic conditions in the Act that have relevance to the health impacts of heat stress: **sick leave** and **protection for pregnant women, or maternity leave**. **Section 22** of the BCEA provides for 30 to 36 days³⁰ of paid sick leave for each three-year leave cycle. However, if the employee was off work due to, for example, heat stroke that arose from performing work, he or she would be able to claim **worker’s compensation** (discussed below) **via COIDA** (and could preserve sick leave). Similarly, employees could claim **illness benefits in terms of sections 19–23 of the UIA but would not be able to claim such benefits if they were off work for less than seven days**, or if they were entitled to unemployment benefits for the relevant period. Illness benefits can be claimed

²⁹ At the level of the worker and workplace, adaptation or modification measures include optimising (ensuring access to breathable) work clothing and PPE, and access to cool (shaded or air-conditioned) work and rest places.

³⁰ The actual number of days of sick leave per leave cycle will be the number of days an employee would normally work during a period of six weeks, that is, 30 for an employee working a five-day week and 36 for a six-day week.

even if the employee had been on paid sick leave for the period, but the total received should not be more than the usual remuneration the employee would have received if he or she had worked through the relevant period.

Pregnant women are at greater risk in conditions that cause heat stress.³¹ In terms of **section 25** of the BCEA, a pregnant employee is entitled to four consecutive months' maternity leave, which may commence four weeks before the expected date of birth, or earlier if a medical practitioner certifies that it is necessary, and cannot end less than six weeks after the birth. Maternity leave is not paid, but an employee can claim maternity benefits in terms of the UIA; apart from the provisions of section 25, pregnant women also have access to the sick leave provisions and social protection measures outlined above.

2.2 OHS legislation and related regulatory instruments

When it comes to legislation, our focus is on **OHSA**, as the **MHSA** in most respects adopts a similar approach to that of OHSA. However, in the context of the mining sector, the **Guideline for the Compilation of a Mandatory Code of Practice or an Occupational Health Programme (Occupational Hygiene and Medical Surveillance) on Thermal Stress**,³² gazetted in 2022, is important.

OHSA and the MHSA differ in approach to the BCEA. The design of the BCEA is to set standards and provide a scheme for a degree of variation and customisation of some of those standards. Breaches of standards are identified by inspectors or brought to the attention of inspectors via complaints, and there is a procedure to provide recompense to employees and penalise employers. However, **the stakes of non-compliance with health and safety requirements** are usually higher than with most basic employment conditions (that is, breaches can result in injury, illness or even death), so the approach in OHSA and the MHSA is more proactive. The two statutes place the onus on employers (and employees), through sets of broad **duties and obligations** and based on **risk assessments**, to create appropriate **health and safe systems** in their workplaces. Employees are given a frontline role in the design, implementation and monitoring of the workplace health and safety system in their capacity as employees or as either health and safety representatives or members of health and safety committees. The emphasis is therefore on employer and employee responsibility to create a health and safety system, within a framework of general duties (or principles), for the prevention of injuries and illnesses at work. Inspectors have the power to conduct proactive inspections of workplaces,³³ but, as just noted, the emphasis is on making the design of the workplace system and its day-to-day monitoring the responsibility of employers and employees.³⁴

Specific **health and safety standards and minimum and maximum thresholds**, among others, are introduced as necessary via numerous **regulations**, including **guidelines** for the introduction of mandatory codes of practice, most of which are focused on especially dangerous occupations (for example, commercial diving) or operations (for example, electrical installations).

³¹ According to ILO (2023) at 18, “[p]regnant workers are more susceptible to heat exhaustion, heat stroke, or dehydration, with heat stress linked to birth defects and other reproductive problems”.

³² [Guideline for a Mandatory Code of Practice for an Occupational Health Programme on Thermal Stress](#) (GN 1754, GG 45903, 11 February 2022).

³³ **Inspectors** have substantial **powers**, including the power **to prohibit an employer from commencing or continuing with the performance of an act** if the inspector is of the opinion that the act threatens or is likely to threaten the health or safety of any person (s 30).

³⁴ Inspectors also have powers to do **ex post facto investigations**, hold formal inquiries, and, if necessary, **prosecute non-compliance** where accidents have occurred or diseases arisen. Underpinning the weight given to compliance with health and safety rules is the fact that the breach of many provisions in the Act is a criminal offence.

The general duties of employers are to take the necessary **steps to introduce rules and procedures to ensure health and safety in the workplace**, which they must do in consultation with safety representatives or **health and safety committees**. The duties of employers (OHSA, s. 8) include the following:

- providing and maintaining **systems of work**, plant and machinery that, **as far as is reasonably practicable, are safe and without risks to health**;
- taking reasonably practicable **steps to eliminate or mitigate any hazard** or potential hazard to the safety or health of employees, **before resorting to personal protective equipment**;
- providing **information, instructions, training and supervision**, as necessary and reasonably practicable, to ensure the health and safety of employees at work;
- taking all necessary measures to ensure that the requirements of OHSA are complied with;
- enforcing such measures as may be necessary in the interest of health and safety; and
- ensuring that work is performed and plant or machinery used under the **general supervision of a person trained to understand the hazards** and with the authority to ensure that precautionary measures taken by the employer are implemented.

2.2.1 Relevant OHSA regulations and the OHS Amendment Bill

Regulations are an essential component of both OHSA and the MHSA, and are relied on for the introduction of focused and detailed **standards for operations and occupations or to flesh out risk assessment**.³⁵ It is therefore useful to consider the scope of the Minister's powers in respect of **OHSA regulations (s. 43)**, powers which include the power to make regulations on **any matter** which in terms of the Act shall or may be prescribed and which in the opinion of the Minister are **necessary or expedient in the interest of the health and safety of persons at work or the health and safety of persons** in connection with the use of plant or machinery, or the protection of persons **other than persons at work against risks to health and safety arising from or connected with the activities of persons at work**, including, inter alia, regulations as to:

- **occupational hygiene and health or safety measures to be taken** by employers or users;
- matters regarding biological **monitoring or medical surveillance** of employees;
- **performance of work in hazardous or potentially hazardous conditions** or circumstances;
- **emergency equipment and medicine** to be available by employers and users, and the requirements with which such equipment and medicine shall comply, the application of first aid and the qualifications required by persons applying first aid;
- the compiling of **health and safety directives in respect of a workplace** employers, the matters to be dealt with in such directives, and the manner in which such directives shall be brought to the attention of employees and other persons;
- **consultations** between an employer and employees on matters of health and safety; and
- **provision of information** by an employer or user to employees or the public on any OHS matter.

³⁵ For example, there is a **regulation for the construction sector** (Construction Regulations, 2014) which contains a requirement for a risk assessment to be conducted by the employer prior to the start of any construction project. While this does not explicitly include any mention of extreme heat as a hazard, the requirements set out in the risk assessment section would encompass high temperatures if this were likely to be a hazard.

In 2020, the **Occupational Health and Safety Amendment Bill, 2020** (OHS Amendment Bill) was tabled in Parliament.³⁶ However, following its tabling and subsequent publication for public comment in May 2021, it appears not to have made any progress towards approval and implementation.

The **OHS Amendment Bill** is a substantial revision of aspects of OHS, ranging from minor corrections and updating to the modernisation and strengthening of the occupational health and safety regime, with innovative new provisions in this regard. The modernisation is evident in the **greater emphasis on the notion of risk and the requirement for risk assessments to be conducted**, which will lead to the implementation of **risk management plans in workplaces**. All work in the workplace must thereafter be conducted subject to the **control measures in a risk management plan**. The **conduct of risk assessments** and the **preparation of a risk management plan** are inserted into the **general duties of employers** in proposed amendments to sections 8, 9 and 12. In similar vein, the directive from the chief inspector to an employer or group of employers to prepare a written health and safety policy is translated by the proposed amendment into a requirement for the preparation of a **health and safety management system**.

The bill also streamlines and tightens enforcement procedures, in addition to which the penalties for non-compliance have been increased. Innovations include the incorporation of the South African National Accreditation System (SANAS) in the standard-setting process. Furthermore, the chief inspector may approve an organisation, which has been accredited by SANAS, as an “approved inspection authority” for specifically defined work. Such an approved authority may, inter alia, conduct investigations and make findings about whether a particular standard has been or is being complied with (s. 44A). This has the potential to enhance the DEL’s inspection capacity.

Moreover, the OHS Amendment Bill defines and introduces “occupational diseases” and “occupational health standards” (s. 1) into the OHS Act, and makes provision for a “**sectoral advisory forum**” to be established by the chief inspector to advise him or her on any regulation (s. 6). The latter could allow for some customisation of the application of regulations to a **specific sector** and, potentially, **regions**.

In regard to OHS regulations,³⁷ the **Environment Regulations for Workplaces (ERW)**, 1987, deal with “thermal requirements”, along with issues such as lighting, ventilation, and noise. The **thermal requirements** focus on work in very cold or very hot environments. While some of the language of the regulation suggests that it could be read as applying to the inside of workplaces and to radiant heat, that is, heat generated by the nature of a particular operation or the processing of certain materials or substances, this is unlikely to be a sustainable interpretation (although its application to external workplaces and ambient temperatures could arguably be made more explicit).³⁸ The clause dealing with heat stress uses the threshold of 30°C (as measured by the time-weighted average **Wet Bulb Globe Temperature (WBGT) index**³⁹ determined over a period of one hour) as the

³⁶ Published in Government Gazette 44572 dated 14 May 2021 under No.R.422, with written comments invited a week later by No.R.447 in Government Gazette 44610 dated 21 May 2021.

³⁷ In addition to the ERW and the Draft PAR, the recent **Regulations for Hazardous Biological Agents, 2022** respond to health risks that are heightened by exposure to extreme heat.

³⁸ **Ambient heat** is the temperature of the environment. This refers mainly to the air temperature but also to heat stored in the upper layers of the ground and in bodies of water – in other words, it is heat transmitted by conduction (direct contact) or convection (through movement of air or fluid). **Radiant heat** is heat emitted directly from a heat source, such as the sun or a fire, or reflected from such a source.

³⁹ The **wet bulb globe temperature (WBGT)** is described in the International Organization for Standardization [ISO 7243:2017 Ergonomics of the thermal environment — Assessment of heat stress using the WBGT \(wet bulb globe temperature\) index](#) as a “screening method to establish the presence or absence of heat stress” which applies to both indoor and outdoor working environments. The WBGT assesses temperature by considering factors such as air temperature, humidity, wind speed, and solar radiation to evaluate heat stress risks in both indoor and outdoor working environments.

temperature at which the employer is required to take certain steps. These include either attempting to reduce the index below 30°C or, failing that, where hard labour is involved, taking, inter alia, the following measures: certification of fitness to work at such a temperature by a medical practitioner; ensuring workers are acclimatised to work in such an environment; informing employees of the need to drink at least 600 millilitres of water every hour; and training workers in precautions to avoid heat stroke.

Given that the ERW dates to 1987, the OHS Advisory Committee has authorised the OHH Directorate to review it by taking into account current developments and environmental hazards affecting the workplace. A more recent regulation has been drafted and is likely to be promulgated in the near future. The [Draft Physical Agents Regulations \(PAR\)](#) involves a more extensive treatment of health and safety in respect of the working environment, and follows the approach of OHSA in setting out duties to be complied with; provision for information, instruction and training; risk assessment; and medical surveillance. It also has **dedicated sections dealing with cold stress and heat stress**. The heat stress section intends to expand upon and strengthen the current regulation in respect of work in high temperatures (see above).

Aspects of the draft would benefit from clarification, as the provisions prohibit work if the WBGT index exceeds 30°C (however, the wording reads “does not exceed 30°C”), with a lower measure of 27°C introduced as the temperature at which the employer must take steps such as **training** and having an **acclimatisation programme**.⁴⁰ There is a proviso that an employer may require or permit an employee to work when the WBGT index exceeds 30°C if the employer implements an appropriate **ventilation system**, a **work-rest cycle** is established and implemented, **sufficient potable water** is provided to workers, prompt first aid is available, and appropriate personal protective clothing and equipment are provided.⁴¹

2.2.2 The MHSa Thermal Stress Guideline of 2022

The 2022 MHSa Guideline for a Mandatory Code of Practice for an Occupational Health Programme on Thermal Stress (“**Thermal Stress Guideline**”) provides a comprehensive framework for dealing with heat stress in the mining sector and sets a strong example for other industries and the broader economy. In keeping with the approach in OHSa and the MHSa, **the Guideline is not itself a code of practice: the onus is placed on the employer to develop the code of practice**, which is **mandatory** in terms of section 9(2) and (3) of the MHSa and must follow the content of the Guideline.

The Guideline assists employers on the requirements for compiling a **code of practice for protecting employees’ health by monitoring and reducing exposure to thermal stress**. It also provides assistance on the methods which the code should include (for example, **measurement and monitoring**).⁴² The foundation is a risk assessment in terms of section 11 of the MHSa. The approach to risk assessments is first to try and **eliminate the risk**; if a risk

⁴⁰ For example, a city like Kimberley, situated in a province (the Northern Cape) that experiences high temperatures, has an average high monthly temperature of more than 30 degrees Celsius in January, February, March, November and December, with record high temperatures of more than 30 degrees in all the months of the year except June and July, and with record highs of more than 40 degrees in January, February, October, November and December. In short, on many days of the year, temperatures exceed 30 degrees Celsius for significant periods of the day. Musina in Limpopo Province has an average high monthly temperature of more than 30 degrees Celsius in October, November and December (and marginally below 30 degrees in January, February and March), with record high temperatures of over 30 degrees in all months of the year, with the record high temperature exceeding 40 degrees Celsius in November. It also experiences daytime temperatures higher than 30 degrees Celsius for considerable periods of the day at many times of the year.

⁴¹ We are grateful to the Occupational Health and Hygiene Specialist at the Department of Employment and Labour for providing us with this information.

⁴² See [Annexure A](#) and [Annexure B](#) for an idea of the nature of the standards and monitoring mechanisms for heat stress.

remains, the employer should try to **control the risk** at source; the subsequent step – if there is still some risk – is to **minimise the risk**, and, in so far as the risk remains, provide **personal protective equipment** and institute a programme to **monitor the risk**. On the basis of the risk assessment, a **code of practice** must be produced that deals with

- an **occupational hygiene programme**, sub-divided into components on **heat stress**, **cold stress**, and reporting or recording; and
- **occupational medical surveillance**, sub-divided into an occupational medical surveillance programme; methodological standards for test techniques forming part of medical surveillance; and medical surveillance according to health hazard.

The next component of the code of practice is an **implementation plan**. This must make provision for the organisational structure of the workplace, the responsibilities of managers and other personnel, and the programmes and schedules for implementation of the code. The employer must take measures for monitoring and ensuring compliance with the code of practice. Finally, the employer must ensure access to the code as well as access to a range of related documents.

The Guideline has a set of annexures that provide more detail on reference documents, explain radiant temperature, and deal with cold stress measurement and management; however, **most of the annexures focus on heat stress**, including the following:

- **structural organisation** for heat stress management – including detailed flow charts for the management of heat stress;
- **medical or physical examinations** to establish overall fitness to work in hot environments;
- **heat-tolerance screening** – highly technical measurements and procedures;
- **work practices** – technical examination of work rates in a range of different mining operations or environments and their relationship with heat conditions;
- **absenteeism** from routine work in “hot” environments – the focus is on steps to be taken on the employee’s return to work rather than on leave or remuneration;
- **water and nutritional requirements** during work in heat; and
- **emergency work** in abnormally hot environments (underground).

There are clearly elements of the Guideline that may not apply to ordinary workplaces, such as a retail outlet and some factories (it will depend on the nature of the operations and related risks). However, the Guideline could be adapted relatively easily to provide a general guideline on heat stress to protect workers from heat stress in both indoor and outdoor settings. For a comparative example of a more general directive on measures to protect workers from heat stress, see the [developments in Qatar](#) and the [measures by the Qatar Minister \(Annexure C\)](#) to protect workers from heat stress, which include guidelines that employers must observe for the prevention of heat-related illnesses.

2.3 Administrative authority to expand and vary statutory rules and establish standards

The relevant labour statutes fall under a Minister, which in most cases is the **Minister of Employment and Labour** but is the **Minister of Minerals and Energy** in respect of the **MHSA**. The **Ministers have extensive powers** in terms of the statutes, including the making of **regulations** and **determinations**; the issuing of **codes of good practice**; declaring work as “**listed**” work (for which **OHSa** prescribes specific general duties); and issuing **general**

prohibitions in respect of employees, premises, or activities that could threaten the health and safety of the employee or a category of employees. Most of these powers may be delegated by Ministers to officials within their departments. Directors-General will in practice be the first recipients of such delegated authority, besides directly receiving certain powers in terms of the statutes. Other officials in the departments with significant authority in terms of the statutes and delegated powers by the Ministers include the **Chief Inspector (OHSA)**;⁴³ **Chief Inspector of Mines (MHSA)**; **Compensation Commissioner (COIDA)**; and the **Unemployment Insurance Commissioner (UIA)**.

Furthermore, the statutes establish councils, boards, or commissions: the **NMWC**, which has functions in respect of the NMWA and the BCEA; the **Advisory Council for Occupational Health and Safety (OHSA)**;⁴⁴ the **Mine Health and Safety Council (MHSA)**;⁴⁵ the **Compensation Board (COIDA)**; and the **Unemployment Insurance Board (UIB)**.

Besides the general powers and functions of the above administrative authorities, the statutes give specific powers to an official. For example, **the chief inspector has the power in terms of section 7 of OHSA to direct any employer or any category of employers to prepare a written policy for the protection of the health and safety of employees at work** (this directive must be accompanied by **guidelines as to the contents of the policy**).

Arguably, there are an adequate **number of administrative mechanisms** within the statutes with a wide range of extensive powers to complement and supplement in various ways the rights, duties and standards prescribed by the statutes (or the absence of necessary rights, duties and standards). These powers include investigations, research, and expert advice with respect to statutory rights, duties and standards. This suggests that relatively few amendments to the statutes need to be contemplated, and that much of any additional protection for workers in conditions that cause heat stress can be achieved through regulations and codes of good practice.

2.4 Enabling worker or union participation in health and safety decision-making

Labour statutes empower **trade unions and employees** to participate **in decision-making in respect of health and safety issues** and in the variation of minimum standards. At the apex level, this takes the form of union federations' membership of NEDLAC; at the level of the relevant statutes, trade unions and employees are granted positions in key decision-making structures, including organised labour representatives on the NMWC; representatives nominated by trade unions or union federations on the Advisory Council for Occupational Health and Safety; employee representatives on the Mine Health and Safety Council; and representatives of employees nominated by employees' organisations and selected by the Minister on the Compensation Board;

⁴³ In terms of section 7 of OHSA.

⁴⁴ As an example of the powers of these bodies, the Advisory Council for Occupational Health and Safety shall advise the Minister with regard to matters of policy arising from or in connection with the application of the Act, as well as any matter relating to occupational health and safety, and shall perform functions assigned to it by the Act or referred to it by the Minister. It may also undertake research and conduct investigations it deems necessary for the performance of its functions. Furthermore, it may advise the DEL on the formulation and publication of standards, specifications and other forms of guidance that will assist employers, employees and users to maintain appropriate standards of occupational health and safety (including the promotion of education and training in occupational health and safety and the collection and dissemination of information).

⁴⁵ The MHSA provides that committees and sub-committees may be established by the Mine Health and Safety Council. It specifies that these may include the Mining Regulation Advisory Committee, the Mining Occupational Health Advisory Committee, and the Safety in Mines Research Advisory Committee, all of which were established as permanent committees in 1997. Given that health and safety in mines involves specialised training, the MHSA also establishes the Mining Qualifications Authority.

on the Unemployment Insurance Board, three representatives are nominated by NEDLAC to represent organised labour.

The Labour Relations Act, 1995 (LRA) regulates and promotes **collective bargaining** as the primary method of engagement between employers and employees, which includes sectoral collective bargaining through the voluntary establishment of **bargaining councils**. The BCEA explicitly links to collective bargaining by making provision for collective agreements to vary certain provisions in the Act and for bargaining councils to vary certain additional provisions. Although the provisions permit (and anticipate) variation downwards (as well as exemptions),⁴⁶ the BCEA anticipates that, as an implicit general rule, collective bargaining can improve on the BCEA's standards as well as standards introduced in ministerial determinations and sectoral determinations. Furthermore, with respect to hours of work, the importance of collective bargaining is recognised explicitly in Schedule 1, which requires that if a party (a trade union) to negotiations introduces a demand to reduce maximum working hours, then the parties must negotiate on the issue – that is to say, the Act introduces a duty to bargain on this issue.

In addition, **workplace forums** are enabled by the LRA, although few have been established. Nonetheless, there is a role for them to play in the space between collective bargaining, with its distributive orientation, and the more specific focus of health and safety committees (see below), such as **consultation over changes in the organisation of work (s. 84)** or **joint decision-making over proper regulation of the workplace (s. 86)**. The point of workplace forums is that they would give workers – or trade unions in the case of a union-based workplace forum (s. 81) – statutory rights to be involved in decision-making responding to conditions of heat stress (and other aspects of climate change and a just transition).

As noted above, at the level of the workplace, OHS Act provides for, depending on the size of the workplace, the appointment of **health and safety representatives** or the establishment of **health and safety committees**. Health and safety representatives have wide powers to, inter alia, review health and safety measures, identify potential hazards, investigate complaints by employees about their health and safety, and make representations to the employer about specific health and safety issues as well as general matters affecting the health and safety of employees in the workplace. In a workplace where two or more health and safety representatives have been appointed, the employer is obliged to establish one or more health and safety committees and meet with such committee(s) with a view to initiating, developing, promoting, maintaining, and reviewing measures to ensure the health and safety of employees at work. OHS Act also prescribes general duties for employees that effectively give them certain indirect powers, including:

- the duty to report to the employer or the health and safety representative any situation which is unsafe or unhealthy; and
- to report to the employer or the health and safety representative any involvement in an incident which may affect his health or which has caused an injury to him- or herself.

3. SOCIAL PROTECTION FOR WORK-RELATED INJURIES OR ILLNESS: COIDA AND UIA

Sick leave, whether in terms of the BCEA or a collective agreement or a contract, is one means for dealing with periods off from work due to an injury or **illness caused by heat or thermal stress**. Similarly, medical expenses might be covered by a medical aid introduced by an employer or in terms of a collective agreement. In addition, COIDA and UIA provide compensation (and recovery of medical expenses), although **compensation through COIDA** is only for **an illness that arises out of and in the course of employment**; with **(UIA) unemployment benefits** for time off from work for heat-induced illnesses (for which employees qualify whether or not the

⁴⁶ Trade union consent must be sought when an employer makes an application for an exemption from the BCEA.

illness arose from working). Sick leave, worker's compensation, and illness benefits can therefore overlap and, if properly managed, complement one another.

3.1 Compensation under the Occupational Injuries and Diseases Act (COIDA)

The main objective of COIDA is to provide compensation to employees who suffer **injury or contract an occupational disease at work**, either on a temporary or permanent basis (which might be partial or total disablement in both cases). It also provides compensation for dependents in the event of the death of an employee due to a work injury or occupational disease.

The first question is whether COIDA could provide compensation for workers put off from work due to illness resulting from heat stress experienced in their employment. The Act defines an "accident" as an accident incident or occurrence arising out of and in the course of an employee's employment and resulting in a personal injury, illness, occupational disease or the death of the employee.⁴⁷ An "occupational disease" is defined as a disease mentioned in Schedule 3 arising out of and in the course of an employee's employment.⁴⁸ **Schedule 3** comprises a long list of **diseases, including** a category of diseases caused by **physical agents**. In the latter category are occupational diseases caused by **extreme temperatures (hot or cold)** and occupational diseases caused by **ultraviolet radiation** (although no specific diseases, illnesses or health conditions are identified in respect of extreme temperatures or ultraviolet radiation). However, the list in Schedule 3 is not a closed list: the Act includes diseases other than those listed in Schedule 3, provided that the disease arose out of and in the course of the employee's employment.

The recently passed **COIDA Amendment Act**⁴⁹ probably clears up any confusion there might have been about the relationship between an "accident" and an "occupational disease" by the inclusion of the latter in the definition of an "accident". At present, an illness due to heat or thermal stress (for example, heat stroke) might be an illness arising from an accident or it might be an occupational disease. The Amendment Act indicates that an "accident" and "occupational disease" overlap rather than there being a possible gap between them.

Secondly, and relatedly, it is not clear whether the rising or extreme temperatures that cause the illness must be related to radiant heat from operations or substances within the workplace, or if they include **ambient heat arising from the external environment**. On the face of it, extreme ambient heat impacting on workers performing their work within a workplace would qualify as an occupational disease (and therefore an "accident"), while heat stress experienced while working outside would be covered by both the extreme-temperature provision (ambient heat) and the ultraviolet provision (radiant heat).

An argument might be made, however, that heat exhaustion or heat stroke experienced by factory workers where no radiant heat is being produced in the workplace does not qualify as an "occupational disease". Although such an argument would be a stretch, the inclusion of a definition of "heat" in the Act, which incorporates ambient and radiant heat, could clear up any confusion.

The **amount of compensation** is determined in terms of Schedule 4 to the Act. Compensation for temporary total disablement, which would probably be the most common claim for heat-related illnesses, is 75 per cent of the employee's monthly earnings at the time of the accident or disease. Compensation for permanent

⁴⁷ An amendment to the Act has been passed – namely, the Compensation for Occupational Injuries and Diseases Amendment Act, 10 of 2022 (Government Gazette 48431 dated 17 April 2023) – but at the time of writing has not yet been proclaimed. In the definition, the underlined words have been added by the amendment and the struck-through words have been deleted.

⁴⁸ **Section 66 of COIDA** creates a **presumption** that if an employee "was employed in any work mentioned in Schedule 3 in respect of that disease", the disease arose out of and in the course of his or her employment.

⁴⁹ See n 47.

disablement varies according to the degree of disablement. There is also compensation to dependants for fatalities, which can be paid as a lump sum or a monthly pension. However, compensation may not be claimed for temporary total disablement that lasts for three days or less. The employee would have to rely on sick leave for such periods. COIDA also covers “reasonable” medical expenses incurred as a result of an “accident” or “occupational disease” that arose out of and in the course of employment. The amount is calculated in accordance with a tariff of fees determined by the Director-General.

It should be noted that the Amendment Act includes two new chapters. The first (Chapter VIIA) includes provisions for the rehabilitation and reintegration of employees who have had accidents or contracted occupational diseases. The second (Chapter XA) provides for the appointment of inspectors, sets out their functions and powers, and introduces compliance orders as a mechanism for the enforcement of COIDA.

3.2 Unemployment Insurance Act

Unemployment insurance benefits are not only for those who are unemployed. The Unemployment Insurance Act, 2001 (UIA) includes a category of **benefits for absence from work due to illness**. To claim illness benefits the person must still be **in employment but unable to perform work on account of illness**; an employee is not entitled to illness benefits if the period of absence is less than seven days. So, an employee would have to rely on sick leave for an absence of six days or less as a result of heat-induced illness. There is also provision for dependants to claim benefits in terms of the UIA if an illness resulted in the death of a contributor.

The amounts that can be claimed are calculated in terms of Schedules 2 and 3. The calculation involves a “benefit transition income level”, an “income replacement rate” (which ranges between 38 per cent and 60 per cent), and the employee’s “daily income” at the time of absence. The total amount of the benefit will also be determined by how long the employee was a contributor, that is, by the “duration of benefit days that have been accrued by a contributor”. This will not equal the remuneration the employee had been earning while at work, but such an amount might be reached if sick leave can be drawn on and/or COIDA compensation is paid out. In such cases, however, the employee cannot earn more than what he or she would have earned as remuneration if at work (that is, the combined benefit and compensation is capped at the employee’s level of remuneration). A dependant’s benefit is calculated in the same way as unemployment benefits.

4. SHORT-TERM INCOME PROTECTION WHEN WORK IS STOPPED

The common law rule is that an employer must pay an employee where service has been tendered. However, **if work is stopped due to a legislative or regulatory provision linked to a temperature threshold**, then the question arises of whether the employer is still obliged to pay the employee for the duration of the stoppage.⁵⁰ To provide clarity, this issue **should be dealt with in a legislative provision**.⁵¹

Currently, the only provision that touches on this issue is **section 9A of the BCEA**, which requires **payment of a minimum of four hours** remuneration to an employee: that is, if work is stopped prior to four hours of the working day, the employee must be paid for a minimum of four hours. This does not relate specifically to heat stress, but one may infer that if work must be stopped due to a high temperature within the first four hours, a

⁵⁰ Note that “[a]s a general rule, **impossibility of performance** will excuse performance of a contract”. See *Glencarol (Pty) Ltd v National Bargaining Council for the Clothing Manufacturing Industry (Northern Chamber)* (2023) 44 ILJ 563 (LC), para 14.

⁵¹ More generally, a comprehensive review should be conducted to assess the adequacy of social protection measures responsive to climate change disruptions, including income protection and other forms of social security. This should be viewed as part of a broader social protection framework that supports both workers and affected communities most vulnerable to climate-induced challenges.

worker would get payment for at least four hours.⁵² However, the provision does not deal with payment if work is stopped, where workers are notified thereof prior to tendering services or commencing work.

Figure/Table 2. Remuneration and income support when work is stopped for climate-related reasons

The [Workers' Rights Act, 2019](#) in Mauritius makes provision for the following:

Payment of remuneration in specific (temporary) circumstances, for example due to "climatic conditions"

Section 32 provides for

- payment of a full day's remuneration if work is stopped after two hours or more have been completed;
- payment of half a day's remuneration if work is stopped before two hours of work are completed;
- payment of remuneration is made when certain cyclone warnings are in force (and an allowance of three times the basic rate where the nature of the undertaking requires the worker to continue); and
- twice the rate of remuneration for performing work from home during periods of **extreme weather conditions**.⁵³

In addition, section 32(6A)(a) requires employers to "provide an insurance policy to cover injury, disease or death sustained by a worker in ... circumstances [such as extreme weather conditions]".

Income support (social protection) when work is stopped due to impossibility of performance

The Workers' Rights [\(Social Plan\) \(Income Support to Workers\) Regulations 2024](#) makes provision for "monthly income support equivalent to the basic wage or salary of an eligible worker" – in this particular regulation, from April 2024 to November 2024 in a particular region where employers cannot operate "due to infrastructural workers being undertaken by the Road Development Authority".

Payment of income support is in terms of Part VII of the [Workers' Rights Act, 2019](#), which establishes the Workfare Programme Fund to provide for social security in certain circumstances, including "remuneration due to a worker ... in the case of force majeure", which would likely include circumstances such as floods, hurricanes, and fires.

5. LEGISLATIVE AND REGULATORY MECHANISMS FOR CONSIDERATION

As mentioned, "climate proofing" labour law can be achieved for the most part using existing administrative powers established in the statutes. Trade unions are represented in the relevant bodies established by statute and in workplace structures and procedures, which places (at least on paper) worker consultation and collaborative decision-making at the heart of the development of mechanisms for the protection of worker health and safety. The options we present and our recommendations in the report assume that the administrative authorities and trade unions are adequately capacitated to implement the proposals, and that if

⁵² Note that this applies only to employees and workers earning below the earnings threshold set in terms of section 6(3) of the BCEA.

⁵³ See n 6.

necessary, steps would be taken either to strengthen capacity or to adjust the proposed approach on the basis of existing capacities.

In this part of the report, we categorise the options for future development into legislative and regulatory mechanisms under the BCEA, OHS Act and LRA. Key regulatory mechanisms are indicated in Table 2 below.

Figure/Table 3. Regulatory mechanisms under the BCEA, OHS Act, and LRA

	BCEA	OHS Act	LRA
REGULATIONS	s. 86 Regulations by Minister after consulting the NMW Commission regarding any matter to achieve objects of the BCEA	s.43 Regulations by Minister after consultation with OHS Advisory Council, on extensive list of matters related to the activities of persons at work	s. 208 Regulations by Minister after consulting NEDLAC on matters related to achieving the primary objects of the Act
MINISTERIAL DETERMINATION	s. 13. Determination of hours of work on advice of chief inspector; s. 50 & 50(2A) Variation, and variation of hours of work by Minister (within specified circumstances) Ch.8, s. 51 Sectoral determination in a sector or area		
DIRECTIONS & GUIDELINES		s. 7 Directions and guidelines by chief inspector for categories of employers to prepare a written policy [OHS management systems]	
CODE OF GOOD PRACTICE	s.87 Codes of Good Practice after consulting NEDLAC; s.87(2) specifically requires a code for working time arrangements		s. 203 Code of Good Practice prepared and issued or changed or replaced by NEDLAC; s. 203(2A) Code issued by the Minister (if NEDLAC has been unable to reach agreement); s. 203(4) a code may provide that it is to be taken into account when applying any employment law

The instruments, ranging from legislation and regulations to codes of good practice, vary in terms of their authority, legal force, and intended function within the labour law system. This should inform decisions on the appropriate regulatory mechanism(s) for the development of effective OHS protection against the increased risks posed by warmer temperatures and extreme weather events.

- **Legislation** – foundational statutes; highest level of authority (complying with the Constitution) establishing broad principles, rights and obligations.
- **Regulations** – subordinate to legislation; operationalise the foundational statute; have binding legal force in providing more detailed rules and procedures on the application of the broad statutory

principles. For example, OHSA mandates general duties of employers, while regulations may specify the exact requirements or standards for implementation.

- **Ministerial determinations** – have legal force similar to regulations; directed at specific sectors or areas or classes of employees or employers.
- **Chief Inspector directions** – directions focused on achieving compliance; guidelines for employers to follow in preparing an OHS workplace policy.
- **Codes of Good Practice** – provide practical advice on implementation and compliance; these are taken into account when applying or interpreting employment law.

In the discussion below, we provide an overview of relevant legislative developments (current as well as under consideration for the future) in which we elaborate on the potential for regulations, directions, and codes to afford protection against increased risks.

5.1 Legislative developments and options for the future

Current and future legislative developments under the BCEA, COIDA and OSH include the following:

1. Currently, OHS legislative developments are under way. Progress on the **OHS Amendment Bill and draft Physical Agents Regulations** should be monitored, and, depending on developments, consideration given to the possibility of amending OHSA to clarify the employer’s obligations regarding thermal stress or ambient heat from the external environment within the scope of general duties, with provision for specific regulations. However, amending legislation is a lengthy process, and it is likely that the desired outcomes could be achieved more efficiently through regulations.
2. The **progressive reduction of ordinary hours** per Schedule 1 (BCEA) should be considered as part of the response to climate change, rising temperatures, and other conditions of heat stress (the NMWC would play a role). In regard to working time, the allocation of rest periods, and provisions for **adjusting working hours and work-time shifting** in the working day, should be considered, particularly in response to a specified threshold temperature.⁵⁴ However, the details of this could be introduced in the regulatory mechanisms considered below. As temperatures continue to increase, one might see a push for the conventional working day to be moved into the cooler night hours (or early mornings).⁵⁵ Currently, an individual agreement is required from an employee to work at night, with certain further conditions attached to working between 23h00 and 06h00, with the latter excluded from any form of variation. Arguably, this is sufficiently flexible, albeit with protections, for a larger proportion of the working day to be converted to night work. Options for flexible work arrangements that balance the interests of workers and employers could also be considered.
3. Legislative **certainty regarding remuneration if work is stopped** for reasons related to heat or extreme weather events should also be considered (see [Table 1](#)). This could be achieved by a statutory provision, or potentially by regulatory instruments such as sectoral determinations or collective agreements that target particular sectors, for example agriculture and construction.⁵⁶ In respect of worker compensation

⁵⁴ In this case, attention should be paid to the potential impact on workers with family responsibilities. In particular, consideration should be given to measures relating to child-care and transportation, as well as the possibility for workers with care responsibilities to access flexible working arrangements.

⁵⁵ Again, the implications of such an arrangement for inclusivity and gender should be considered.

⁵⁶ Jobs involving physical exertion and prolonged outdoor exposure, such as agriculture, surface mining, and construction work, are likely to be most affected. This is true as well as of basic services performed outdoors, some forms of transport, and indoor work where there is poor temperature control. Sectors of the informal economy, such as waste reclaimers and street traders, are also likely to be impacted.

for injuries and illnesses related to thermal stress, the **pending amendments to COIDA** are noted, and consideration should be given to the need for further **regulations or guidelines** in this regard. More generally, a comprehensive review should be considered for **assessing the adequacy of social protection measures** as part of a broader social protection framework that supports both workers and affected communities most vulnerable to climate-induced challenges (see the report, *Optimising labour law for a just transition*).

5.2 BCEA Regulations and OHS Regulations and Directions

Regulations under the BCEA and OHS⁵⁷ provide scope for the development of a framework for minimum standards and the protection of worker health and safety in the context of extreme weather conditions and thermal stress. Considerations include the following:

1. The **BCEA** mandate for **regulations** is broad (s. 86) and includes ‘any matter that may be necessary or expedient to prescribe’ to achieve the objects of the BCEA, including regulating basic conditions of employment in accordance with the constitutional right to fair labour practices, with the objective of advancing economic development and social justice. In this regard, BCEA regulations could be introduced to regulate relevant **aspects of working time (and working time adjustments and the like) (s. 13)** and related concerns, including the rights of workers and protections related to vulnerable workers, as well as clarify the issue of **payment when work is stopped**. While BCEA ministerial determinations provide a potential alternative to regulations, determinations are more specific and are typically sector based, which may result in unintended exclusions and unequal treatment across sectors. Regulations ensure coherence and broader application of the protections. Regulations could be supplemented, however, by ministerial determinations in high-risk sectors.
2. Drawing broadly from the MHSA and the related Thermal Stress Guideline, **an OHS regulation** could be introduced that specifies employer obligations and certain key thresholds and actions to be taken in respect of thermal and heat stress, with additional details in a code of practice. In addition, **regulations** could be considered for the implementation of action plans in sectors or regions impacted by conditions of extreme heat over protracted periods.
3. An important point to note is that the **BCEA and OHS Regulations could be combined**. A precedent for this is the 2010 Regulations on Hazardous Work by Children in South Africa (Government Gazette No. 32862), which were published by the Minister in terms of section 44(1) of the Basic Conditions of Employment Act 75 of 1997 and section 43(1) of OHS.
4. The **chief inspector** has powers in terms of **section 7 of OHS** (note, pending amendments) to provide directions (accompanied by guidelines as to the contents of the policy) requiring an employer or any category of employers to prepare a **policy for the protection of the health and safety of employees at work**. These powers can be invoked to require employers to prepare a written policy on thermal and heat stress prevention and control measures, which could be accompanied by guidelines for OHS management systems that integrate prevention and control measures, taking into account risks that arise both outdoors and inside workplaces. Measures and guidelines should also take into account the needs of different sectors and risks and risk management relating to travel to and from work, remote work, and related issues.

Regulations and direction could be supplemented by a relevant code of practice.

⁵⁷ The **Advisory Council for Occupational Health and Safety** should play a key role in the development of OHS regulatory mechanisms.

5.3 Codes of Good Practice

The **Code of Good Practice on the Arrangement of Working Time** could be expanded to address challenges presented by weather conditions. Aspects of the current Code already cover some of the necessary ground (albeit focused on shift work and night work), for example through regular assessment of the working environment, medical examinations, and the introduction of rest periods and provision for work-time shifting. However, whether this should be part of the current Code or rather be included in a dedicated Code on Heat Stress in terms of OHSA would need to be considered. The **Thermal Stress Guideline** provides a comprehensive example that could be adapted to non-mining workplaces. Technical considerations in a code of practice for the protection of workers should include risk assessment techniques and relief measures such as **hydration** and **electrolyte intake**, and **appropriate clothing**.

5.4 National, provincial, and municipal climate change mitigation and adaptation responses⁵⁸

Protection from heat stress is cross-cutting⁵⁹ and a matter for **cooperative governance**. Additional mechanisms outside of labour and employment include the provisions of the **National Environmental Management Act (NEMA)**⁶⁰ and the **Climate Change Act 22 of 2024 (CCA)** – enacted in July 2024 although not yet promulgated – which emphasise the importance of an **integrated and coordinated approach** to managing the impact of climate change. In the context of damage to property and the loss of or threat to human life in the case of extreme weather events including heaving rains, flooding, strong winds and landslides, the **Disaster Management Act, 2002** establishes the framework for an **integrated and coordinated approach** and **disaster management policy**. In this regard,

1. the PCC is required to ‘advise government on adapting to climate change’ (CCA, s. 11(b)) and should be encouraged to advise it on a ‘whole-of-government’ approach to awareness about and management of heat stress (prevention and control strategies), as well as the latter’s implications for safety and health,

⁵⁸ See Collier D, Godfrey S, Oniga V & Osiki A *Optimising labour law for a just transition* NEDLAC Report (2024).

⁵⁹ As noted by Turek-Hankins LL, Coughlan de Perez E, Scarpa G et al. “Climate change adaptation to extreme heat: A global systematic review of implemented action” (2021) 1(1) *Oxford Open Climate Change* at 9, the socio-economic effects of climate change have a disproportionate impact on vulnerable communities, with the result that “extreme heat [is] a hazard with justice implications”. The authors thus argue that adaptation to it “presents a significant opportunity to address historic injustices”.

⁶⁰ For example, section 16(4) of NEMA requires that provincial government and municipalities *adhere to the relevant environmental implementation and management plans, as well as the principles contained in section 2, in the preparation of any policy, programme, or plan*. This extends to building-specification plans and other integrated development plans and objectives. In addition, South Africa is a member of the International Organization for Standardization (ISO), further to which the South African Bureau of Standards (SABS) is tasked with ensuring compliance with ISO guidelines to aid local governments and communities in preparing for and managing the impact of climate change. The relevant guidelines – including SANS 10400XA: Energy Usage in Buildings, SANS 13742: Thermal Performance of Buildings Guidelines, and SANS/ISO 45001: Occupational Health and Safety Management System Standard – provide a comprehensive framework for managing workplace hazards, health issues, and incidents. Additionally, the guidelines prescribe minimum specifications for climate-resilient buildings to mitigate heat stress and reduce fatalities and injuries in the workplace. In the context of local government, see also the recent issuing of a [new standard by the SABS](#) on adaptation to climate change – Requirements on adaptation planning for local governments and communities. The standard “supports local government and communities in adapting to climate change based on vulnerability, impacts and risk assessments”.

including heat stress in the world of work, which could be incorporated as an aspect of the National Adaptation Strategy and Plan; and

2. the Minister of the Department of Forestry, Fisheries and the Environment (DFFE) is required (CCA, Ch. 4) to determine adaptation objectives, develop adaptation scenarios (based on best evidence and including monitoring and early warning systems), and publish a National Adaptation Strategy and Plan; as such, he or she should be encouraged to incorporate prevention and control strategies for heat stress, including heat stress in working environments, in these adaptation objectives and the National Adaptation Strategy and Plan.

Extracts from the relevant provisions of the CCA on the functions of the PCC and the DFFE are provided in the tables below.

Figure/Table 4. Functions of the Presidential Climate Commission

Extract from Climate Change Act (s. 11)

11. Functions of Presidential Climate Commission. —

- (1) The functions of the Presidential Climate Commission are to—
 - (a) advise on the Republic’s climate change response to ensure realisation of the vision for effective climate change response and the long-term just transition to a low-carbon and climate-resilient-economy and society;
 - (b) advise government on the mitigation of climate change impacts, including through the reduction of emissions of greenhouse gases, and adapting to the effects of climate change; and
 - (c) advise government on any socio-economic matter related to the just transition.
- (2) The Presidential Climate Commission may establish committees to assist it in the performance of its functions and may delegate or assign such functions to such committees.
- (3) The committees established in terms of subsection (2) must be composed of persons suitably qualified in environmental management, climate change mitigation, finance, law and related fields.⁶¹

Figure/Table 5. Climate change adaptation and functions of the (DFFE) minister

Extract from Climate Change Act (ss. 19 – 21)

19. Adaptation objectives. —

- (1) The Minister must, within one year of the coming into operation of this Act, determine by notice in the *Gazette*—
 - (a) national adaptation objectives which will guide the Republic’s adaptation to climate change impacts, the development of resilience and sustainable development;
 - (b) indicators for measuring progress towards achieving the national adaptation objectives; and
 - (c) a date by which the national adaptation objectives must be incorporated into all relevant national planning instruments, policies and programmes which address, or are affected by, the actual and potential impacts of climate change.
- (2) The Minister must, periodically, review and amend the national adaptation objectives contemplated in ss (1) (a).

20. Adaptation scenarios. —

- (1) The Minister must, within one year of the coming into operation of this Act, develop adaptation scenarios which anticipate the likely impacts of climate change in the Republic and associated vulnerabilities over the short, medium and longer term.

⁶¹ Emphases added.

- (2) The adaptation scenarios must—
- (a) be based on best available science, evidence and information;
 - (b) include climate monitoring infrastructure for the climate system and early warning systems;
 - (c) include a consideration of the potential impacts of climate change on the environment of the Republic and associated vulnerabilities; and
 - (d) contain available adaptation response options to reduce identified vulnerabilities by building adaptive capacity and resilience, in the context of actual or anticipated social, economic and environmental costs.
- (3) The Minister must, periodically, review and amend the national adaptation scenarios contemplated in subsection (1).

21. National Adaptation Strategy and Plan. —

- (1) Climate change adaptation within the Republic must be managed in a coherent and coordinated manner and in accordance with a National Adaptation Strategy and Plan.
- (2) The Minister must, in consultation with the Ministers responsible for the functions listed in Schedule 2, develop and publish a National Adaptation Strategy and Plan by notice in the *Gazette* within two years of the coming into operation of this Act.
- (3) The Minister must review and amend the National Adaptation Strategy and Plan at a five-yearly interval to take into account—
- (a) monitoring and evaluation results;
 - (b) technological advances;
 - (c) the best available science, evidence or information; or
 - (d) the Republic’s international commitments and obligations.
- (4) The purpose of the National Adaptation Strategy and Plan is to—
- (a) achieve a reduction in the vulnerability of society, the economy and the environment to the effects of climate change, strengthen the resilience of the socio-economic and environmental system and enhance the adaptive capacity of society, the environment and economy to the impacts of climate change;
 - (b) reduce the risk and vulnerabilities from current and future climate scenarios;
 - (c) achieve the national adaptation objectives contemplated in section 19;
 - (d) provide a strategic and policy directive for adaptation to the impacts of climate change; and
 - (e) provide an integrated and coordinated approach to the management of adaptation measures in response to the impacts of climate change by organs of state in all spheres of government, and where relevant it must also include non-governmental organisations, the private sector and local communities.
- (5) The National Adaptation Strategy and Plan must include—
- (a) the national adaptation objectives contemplated in section 19;
 - (b) a consideration of the Republic’s climate change scenarios as informed by the adaptation scenarios contemplated in section 20;
 - (c) an assessment of the Republic’s vulnerability to climate change and related risks at sectoral, cross-sectoral and geographic levels, including a consideration of relevant disaster risk assessments in terms of the Disaster Management Act;
 - (d) available adaptation response options to reduce identified vulnerabilities by building adaptive capacity and resilience, in the context of actual or anticipated social, economic and environmental costs; and
 - (e) a plan that details the implementation of adaptation responses informed by the objectives and indicators contemplated in section 19.⁶²

⁶² Emphases added.

6. STAKEHOLDER ENGAGEMENT AND RECOMMENDATIONS

6.1 Considerations at the NEDLAC workshop

A draft of the report was presented to participants at the NEDLAC workshop in July 2024. In addition, presentations were made by Dhesigen Naidoo, PCC Climate Adaptation Lead, and Dr Gloria Maimela, Director: Climate and Health (Wits RHI). Naidoo cautioned that rising temperatures are a complex and dynamic issue requiring adaptation as circumstances evolve and that the 1.5°C Paris Agreement threshold was likely to be exceeded, as the rate of temperature change appears exponential rather than linear. The results of a temperature increase include high-energy storms, agricultural and food production challenges, sea-level rise, and ocean acidification.

The impact on the world of work is significant, and categories of workers will also be affected by new disease burdens, including vector-borne and non-communicable diseases, which will be more prevalent. Addressing these issues involves focusing on the workplace, workers' homes, and their commute; in addition, the shift to a hybrid work model accelerated by COVID-19 and the Fourth Industrial Revolution needs careful planning. Discussions should also consider the timing of workdays, particularly in response to energy crises, and the potential need for seasonal adjustments, including the potential for introducing daylight saving. Interventions are required to protect coastal and high-temperature regions and manage the shifting population.

Dr Maimela, an expert on climate change and health, outlined the significant impacts of heat stress in the workplace, and emphasised the accelerating trajectory towards severe global warming and the latter's dire consequences for future generations. South Africa faces severe climate challenges including droughts, heat waves, precipitation extremes, and flooding. Vulnerable populations, especially the young, elderly, women, and those with pre-existing conditions, are at heightened risk from heat-related illnesses. Maimela sounded a cautionary note regarding the economic impact, pointing out that significant labour hours lost, projected increases in job losses, and the exacerbation of non-communicable diseases due to climate change would have greater impact in low- and middle-income countries than others.

She underscored the importance of workplace adaptations such as cooling systems, insulation, and heat-reflective coatings, along with policies regarding scheduled breaks, worker hygiene, and emergency responses, and stressed the necessity of reducing carbon emissions and adopting alternative energy sources to mitigate the root causes of climate change.

Participants considered the proposals in the draft report and the existing regulatory mechanisms and powers of administrative authorities that provide scope for responding to extreme weather and thermal or heat stress, in particular the provisions of the BCEA and OHS Act. There was consensus that further work is required to review the framework for social protection and the potential expansion of access to workers' compensation and income protection for heat-related illnesses (COIDA and UIA measures) and income benefits when income is lost due to extreme weather and thermal or heat illness (UIA).

Current regulations address exposure to thermal stress through a specified temperature index, with employers being required to provide clean water and shaded areas based on risk assessments and with the principles of reasonable practicability and self-regulation noted. It was noted too that the regulations date to 1987 and that recent developments include a draft regulation from 2019 that introduces an action level of 27°C for the WBGT index. The draft regulations also incorporate medical screening, clothing adjustment values for personal protective equipment (PPE), as well as considerations in regard to non-ionizing radiation.

It was indicated that effective control measures should include a hierarchy of engineering and administrative controls, such as risk assessments, exposure management, and adjusting work hours based on local weather patterns. Additional considerations include arrangements for disaster management, adequate surveillance

systems (injuries increase by 1 per cent for every 1°C rise above 21°C), better data collection, adaptive databases, and evidence-based practices. Heat-stress impacts are exacerbated by factors such as radiant heat, humidity, and wind, while precarious working conditions, working outdoors, and working in the informal sector increase vulnerability. The need for a coordinated approach across different sectors and departments was stressed, given the currently siloed nature of efforts.

The broader themes of climate change's impact on mental health, gender, biodiversity, and agriculture, were raised, and the importance of global and national coordination was stressed in ensuring that low- and middle-income countries are not left behind. The need for workplace-level interventions, training, and awareness-raising, as well as better preparing health professionals and occupational health and safety practitioners, was considered. Specific regulations to manage extreme heat, akin to measures in Qatar, were considered, and challenges discussed, including a lack of integration across sectors, difficulties in quantifying risk, and the need for a centralised best practices database.

Future considerations include whether current sectoral determinations and regulatory measures for biological and physical hazards are sufficient or if more is needed, including soft law instruments like codes of practice. Education and awareness initiatives are also important, as are possible amendments to the Unemployment Insurance Fund and the development of appropriate social protection measures.

The importance of government coordination, efficient use of available funds, better integration of climate change strategies in labour market policies, and improved regulatory measures was emphasised. The disproportionate OHS impact on vulnerable workers requires a comprehensive, whole-of-government approach to prevent an unjust transition for workers. Participants considered the need for improved surveillance systems and adaptation measures. Innovative solutions, such as working time adjustments and a four-day workweek, were debated.

The strain on resources due to budget cut was raised as a concern; the importance of including relevant departments, such as Water, Tourism, and Environmental Affairs, in the conversation to effectively tackle climate change challenges was highlighted. It was stressed that worker input must inform the development of policies and solutions: stakeholder engagement is crucial for achieving fair and effective outcomes in the transition process.

It was noted that regulatory developments under the auspices of the DEL are ongoing, with these including practical efforts to address heat stress and other climate-related risks in the workplace. Ministerial guidance is being developed through explanatory notes, following advice from state law advisors, and the Technical Committee is working on creating a process flow similar to past ergonomic regulations, focusing on managing heat stress in the workplace. This includes identifying symptoms and protective measures for workers. Additionally, a working committee (with a relevant National Institute) is addressing concerns in the agriculture and forestry sectors, which are crucial for food security.

As regards the way forward, continued collaboration between NEDLAC and the PCC was supported. Discussions included the possibility of integrating OHS and worker protections and climate adaptation measures in a joint work programme, noting that the provisions of the CCA provide the framework for a national adaptation strategy. The need for immediate as well as long-term responses to climate change was raised, and a suggestion was made to engage with the Department of Health for further input. There was agreement that consideration would be given to key stakeholders' inputs, including the Department of Health and local government, as well as to building consensus for the development of an adaptation plan that considers the broader impact (long-term and indirect effects) on workers along value chains and across sectors. An inclusive approach is required, one ensuring that all vulnerable workers are considered and that no one is left behind. In addition, the PCC and NEDLAC collaboration should include considerations related to job creation and losses within the just transition

framework, as well as to the need for both immediate and long-term responses to climate change challenges as well as for engaging with the Department of Health and DEL on related issues.

Specific recommendations for the consideration of NEDLAC are set out in the remaining sections of the report.

6.2 Legislative developments and OHS standards in the pipeline

The following Acts, Amendment Bills and draft Regulations are already in progress and require finalisation and/or enactment and/or promulgation and/or proclamation:

- Occupational Health and Safety Amendment Bill [B – 2020]
- Draft Physical Agents Regulations 2022
- COIDA Amendment Act 2023 (operational date still to be proclaimed)

Although not directly impacting on labour standards, the principle of decent work underpins the just transition regulatory framework, which would be enhanced by proclamation of the CCA.

Suggested actions and processes:

We recommend ongoing engagements by social partners who are represented in the relevant statutory advisory bodies that advise the Minister, in support of finalisation and/or enactment and/or promulgation and/or proclamation of the OHS standards that are already in the pipeline.

In addition, the NEDLAC protocols provide for “Tabling of Reports in Parliament” and “Monitoring the Passage of an Issue through Parliament” (para 9.3), which provide avenues for monitoring progress or tabling a NEDLAC report on prioritising the finalisation and enactment of proposed legislation or regulations on OHS standards concerned with the impact of extreme temperatures and climate change on workers.

In addition to the enactment and implementation of amendments in progress, we recommend prioritising the development of regulatory mechanisms under the BCEA and OHS Act. Considerations should include future statutory developments in respect of workers’ compensation and income protection (discussed below), which could include legislative provisions for income protection if work is stopped.

6.3 Regulatory mechanisms for risk assessment and risk management in the workplace

We recommend the following:

1. The development of integrated **regulations under the BCEA and OHSA** to provide a coherent framework for the application of basic conditions and OHS responsibilities in relation to increased risks and impacts of extreme weather conditions, and to require employers to implement OHS policies and/or risk management systems that will protect workers from heat-related illnesses or injuries. section 5 provides additional detail on elements to be addressed in the regulations.

Although the regulations under the BCEA and OHSA could be developed separately, combining them would provide coherence and certainty as well as minimise the potential for gaps and conflicting provisions. As noted above, there is a precedent for combined regulations.⁶³

2. Although provisions for working time adjustments and the like may be addressed comprehensively in integrated regulations, it should be noted that the **Working Time Code** is required by section 87(2) of the BCEA, which may require amendment or cross-reference between the code and regulations; if integrated regulations are delayed, amendments to the Working Time Code could provide a more immediate solution in this regard (see the discussion in section 5 above).
3. As a supplement to regulations, or even as an alternative or precursor to them, **the chief inspector under OHSA⁶⁴ can direct employers** by notice in the Gazette **to prepare an OSH policy** to manage increased risks, including provisions on risk assessment and risk management plans in relation to thermal and heat stress prevention and control (noting that the OHSA amendments provide for directions to establish OHS management systems). Important elements include integrated prevention and control measures – taking into account risks that arise both outdoors and inside workplaces, as well as when traveling to work and in the context of remote work – and requirements for policies tailored for different sectors. Guidelines could be provided in relation to the following:
 - clarifying the applicable law and relevant definitions;
 - risk factors for occupational diseases and illnesses caused by extreme temperatures and exposure to heat;
 - how to identify and manage (first aid) a medical condition or illness related to extreme temperatures and exposure to heat;
 - provisions for monitoring health;
 - risk assessment;
 - prevention and control strategies and measures (hierarchy of controls protocol);

⁶³ Government Gazette No. 32862, published by the Minister in terms of section 44(1) of the BCEA and section 43(1) of OHSA.

⁶⁴ Section 7 (health and safety policy) provides as follows: “(1) The chief inspector may direct – (a) any employer in writing; and (b) any category of employers by notice in the *Gazette*, to prepare a written policy concerning the protection of the health and safety of his employees at work, including a description of his organization and the arrangements for carrying out and reviewing that policy. (2) Any direction under subsection (1) shall be accompanied by guidelines concerning the contents of the policy concerned.” An employer is required to display a copy of the policy in the workplace.

- guidance on effective and affordable protection practices, including “the provision of adequate hydration; work breaks with cool, shaded and ventilated rest areas; modified work schedules; and heat acclimatization programmes”;⁶⁵
 - guidance on tailored strategies for different sectors and for indoor and outdoor workers;
 - processes for worker consultation (social dialogue) for developing and implementing prevention strategies and control measures;
 - guidance on training, education, and awareness strategies; and
 - information on reporting requirements, submitting workers’ compensation claims, and income protection available to workers.
4. A **Code of Good Practice** could also be introduced independently of, and prior to, any other regulatory mechanisms (such as regulations or directions); or, in the event that directions or other regulatory developments are prioritised, a Code of Good Practice could supplement, and provide assistance with, the implementation of regulations or directions. A code could provide guidance on best practice for managing the impact of extreme temperatures and heat at work, either as a stand-alone code or within the context of labour law and just transition mechanisms more broadly, including providing guidance on a “model” collective agreement and set of just transition provisions.

Figure/Table 6. Examples of practical guidelines for risk management

By way of example, Safe Work Australia provides the following practical tools and guidance materials:

- [SWA Managing the risks of working in heat Guidance material](#)
- [First aid for heat-related illness](#)
- [Checklist for risk-managing heat in the workplace](#)
- [Model Code of Practice: Managing the Work Environment and Facilities](#)
- [Model Code of Practice: Work health and safety consultation, cooperation and coordination](#)
- [Model Code of Practice: How to manage work health and safety risks](#)
- [Model code of Practice: First aid in the workplace](#)
- [Guide on exposure to solar ultraviolet radiation](#)

6.4 Comprehensive review of workers’ compensation and income protection

It is recommended that NEDLAC (in collaboration with the PCC and other relevant government departments, including the Department of Social Development) undertake a review of existing workers’ compensation and income protection systems. Such a review would include consideration of the just transition imperative as well as gaps in coverage for vulnerable workers in informal and precarious employment, and provision of benefits that reflect the changing nature of work (see also *Optimising labour law for a just transition*). The review should consider comparative developments in social protection and international best practices, and should involve engagement with stakeholders, including workers, employers, and relevant government agencies and advocacy groups. An action plan should be developed for the review process.

⁶⁵ ILO (2024) at 77.

6.5 Coordination with PCC and DFFE for an integrated climate change adaptation response

The importance of an integrated, coordinated and holistic (whole-of-government) approach was emphasised at the NEDLAC workshop. Ongoing collaboration between NEDLAC and the PCC, and initiatives by the [DEL](#) and the [Department of Health](#) should be supported. Importantly, “adaptation to extreme heat presents a significant opportunity to address historic injustices”.⁶⁶

The PCC plays an important advisory role and must advise government on “*any socio-economic matter related to the just transition*”, including the significant socio-economic impact of heat stress on labour productivity and decent work.⁶⁷ The broad representativity of government and society on the PCC, and its statutory mandate to advise on adaptation and mitigation, optimally positions the PCC to facilitate the coordination of climate change action (adaptation and mitigation) and to ensure policy coherence on thermal and heat stress-related issues with relevant stakeholders, who include the Minister of DFFE, who (as previously noted) must (CCA, Ch. 4) determine adaptation objectives, develop adaptation scenarios based on best evidence and including monitoring and early warning systems, and publish a National Adaptation Strategy and Plan.

In addition to the PCC and DFFE, relevant stakeholders in an integrated approach include:

- the DEL;
- the Department of Health;
- the Department of Water and Sanitation;
- Cooperative Governance and Traditional Affairs (COGTA); and
- the South African Weather Service (for weather and climate forecasting, as part of early warning systems).

Finally, **local government and communities** have a critical role to play in climate change adaptation; and in this regard the SABS/SATS 14092 (South African technical specification for local government and communities to adapt to climate change), published in 2023, and the development of accessible guidelines and tools for the implementation of the technical specification, and similar initiatives should be encouraged.⁶⁸

Ongoing **education and awareness** campaigns on thermal and heat-related illnesses and heat-stress prevention and control measures, which could be co-ordinated by the PCC or its committee and include input from the Department of Health and DEL, should also be considered.

⁶⁶ Turek-Hankins et al. (2021) at 9, noting that the inequities of the socio-economic impact of climate change “reinforc[e] extreme heat as a hazard with justice implications”.

⁶⁷ See ILO (2024); ILO [Working on a warmer planet: The impact of heat stress on labour and productivity and decent work](#) Geneva: International Labour Office (2019).

⁶⁸ For example, in Kwazulu-Natal, the provincial Department of Economic Development, Tourism and Environmental Affairs hosted a two-day master class in October 2024 on the effects of climate change on worker safety and wellness.

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ANNEXURE A. “THE CLASSIFICATION SYSTEM FOR HEAT STRESS”

<i>Classification and temperature range (for categorisation)</i>		<i>Interpretation</i>	<i>General action</i>
A.	<p>Wet Bulb $\geq 32.5^{\circ}\text{C}$ or Dry Bulb $\geq 37.0^{\circ}\text{C}$ or Globe Temperature $\geq 37.0^{\circ}\text{C}$ or Wet Bulb Globe Temperature index ≥ 34</p>	Abnormally hot environment	<ul style="list-style-type: none"> ■ No normal work should be undertaken except work to rectify the condition(s). ■ Work to rectify the condition(s) must be undertaken only on a basis of risk assessment, supervision and protocols.
B.	<p>Wet Bulb $\geq 27.5^{\circ}\text{C}$ - $< 32.5^{\circ}\text{C}$ and/or Dry Bulb $\geq 32.0^{\circ}\text{C}$ - $< 37.0^{\circ}\text{C}$, and/or Globe Temperature $\geq 32.0^{\circ}\text{C}$ - $< 37.0^{\circ}\text{C}$, and/or WBGT index ≥ 30 - < 34</p>	Hot environment	<ul style="list-style-type: none"> ■ Heat Stress Management mandatory.
C.	<p>Wet Bulb $\geq 25.0^{\circ}\text{C}$ - $< 27.5^{\circ}\text{C}$ and/or Dry Bulb $\geq 32.0^{\circ}\text{C}$ - $< 37.0^{\circ}\text{C}$ and/or Globe Temperature $\geq 32.0^{\circ}\text{C}$ - $< 37.0^{\circ}\text{C}$ and/or WBGT index ≥ 25 - < 30</p>	Significant risk	<ul style="list-style-type: none"> ■ Heat Stress Management mandatory.
D.	<p>Wet Bulb $< 25.0^{\circ}\text{C}$ and/or Dry Bulb $< 32.0^{\circ}\text{C}$ and/or Globe Temperature $< 32.0^{\circ}\text{C}$ and/or WBGT index < 25</p>	Non-significant risk	<ul style="list-style-type: none"> ■ No special precautions. ■ Environmental monitoring must be sufficiently sensitive to detect critical upward drifts in the environmental heat load. ■ The monitoring programme to satisfy this requirement should be specified.

Source: Guideline for a Mandatory Code of Practice for an Occupational Health Programme on Thermal Stress, 2022

ANNEXURE B. CLASSIFICATION OF HEAT STRESS AND MONITORING FREQUENCY

<i>Classification and temperature range (for categorisation)</i>		<i>Monitoring frequency</i>
A.	<p>WB ≥ 32.5°C or DB ≥ 37.0°C or GT ≥ 37.0°C or WBGT index ≥ 34</p>	<ul style="list-style-type: none"> Continuously monitor until the environmental conditions have improved to acceptable limit(s).
B.	<p>WB ≥ 27.5°C - < 32.5°C and/or DB ≥ 32.0°C - < 37.0°C and/or GT ≥ 32.0°C - < 37.0°C and/or WBGT index ≥ 30 - < 34</p>	<ul style="list-style-type: none"> Monitoring must be conducted within every 30 days.
C.	<p>WB ≥ 25.0°C - < 27.5°C and/or DB ≥ 32.0°C < 37.0°C and/or GT ≥ 32.0°C - < 37.0°C and/or WBGT index ≥ 25 - < 30</p>	<ul style="list-style-type: none"> Monitoring must be conducted within every 45 days.
D.	<p>WB < 25.0°C and/or DB < 32.0°C and/or GT < 32.0°C and/or WBGT index < 25</p>	<ul style="list-style-type: none"> As determined by the risk assessment.

Source: Guideline for a Mandatory Code of Practice for an Occupational Health Programme on Thermal Stress, 2022

ANNEXURE C. MEASURES BY QATAR MINISTER TO PROTECT WORKERS FROM HEAT STRESS

Qatar as a comparative example of initiatives to address occupational heat stress

Qatar regularly experiences high temperatures, and in 2019, the ILO and Qatar Ministry of Labour undertook an extensive study on occupational heat stress, focusing on outdoor manual work.⁶⁹ The study involved collecting data on mental and physical health, physiology, work effort per second for more than 5,500 hours of work, and the effectiveness of different coping strategies in varying environmental conditions. The applied measures included:

- workers being able to regulate work intensity and to take frequent breaks;
- effective hydration strategies (given that many workers were found to be dehydrated from the beginning of their shift); and
- replacing dark-coloured overalls with loose, light-coloured clothing made of breathable fabrics.

The applied research laid the foundation for proposed amendments to Qatar's legislation in response to occupational heat stress,⁷⁰ and in May 2021 new regulation was introduced.⁷¹ The Minister's Decision specifies measures to protect workers from heat stress, including a requirement that work must cease when temperatures in the workplace exceed 32.1°C. According to the ILO, within the initial year of implementation, the measures, while maintaining productivity levels, resulted in a more than 50% reduction in workers' hospitalisation due to health issues related to heat stress.

Unofficial Translation

Decision of the Minister of Administrative Development, Labour and Social Affairs No. (17) for the year 2021 specifying measures to protect workers from heat stress (Qatar)

The Minister of Administrative Development, Labour and Social Affairs,

After perusal of the Labour Law promulgated by Law No. 14 of 2004 and its amending laws, Emiri Decision No. 29 of 1996 on the decisions of the Council of Ministers and submitted to the Emir for approval and issuance;

Minister of Civil Service Affairs and Housing Decision No. 16 of 2007 specifying working hours in outdoor places during summer time;

And on the adoption by the Council of Ministers of this Draft Law during its regular meeting (40) of 2020 held on 21/10/2020

Decided the following:

⁶⁹ See ILO "[New legislation in Qatar provides greater protection to workers from heat stress](#)" (27 May 2021) *Newsroom*; Flouris AD, Ioannou LG, Dinas PC, et al. [Assessment of occupational heat strain and mitigation strategies in Qatar](#) International Labour Organization (2019).

⁷⁰ See ILO (27 May 2021).

⁷¹ Minister of Administrative Development, Labour and Social Affairs [Qatar] "[Decision of the Minister of Administrative Development, Labour and Social Affairs No. \(17\) for the year 2021 specifying measures to protect workers from heat stress](#)" (24 May 2020).

Article (1)

In the implementation of the provisions of this decision, the following words shall have the respective meaning assigned to them unless the context requires otherwise:

Heat Stress: occurs when the body fails to maintain its normal temperature in response to physical effort made while exposed to high temperatures combined with humidity. This may occur under direct sunlight, in shaded areas or indoor and could lead to illness due to the malfunction of the parts in charge of regulating body temperature, resulting in a number of health problems.

Workplaces: places where workers need to be or go to by reason of their work.

Outdoor workplaces: workplaces where workers are exposed to weather conditions such as solar radiation, heat and humidity.

Shaded and ventilated workplaces: covers outdoor workplaces where there is a sufficient and suitable system of artificial ventilation, where workers are not exposed to solar radiation, and where there is no exposure to heat from operating machines.

Wet Bulb Globe Temperature (WBGT) index: A system used to assess the ambient temperature of a work environment. It measures the combined proportional effect of dry bulb temperature (DB), globe temperature (GT) and wet bulb (WB), using specific devices.

Heat Stress Index: the WBGT temperature announced by the Ministry or recorded by the company in the workplace using approved WBGT devices.

Article (2)

It is prohibited to work in the sun, in outdoor workplaces or in places that are not shaded and ventilated, during the period from June 1 to September 15 of each year, starting from 10 a.m., until 3:30 p.m.

Article (3)

Employers shall set a schedule with the daily working hours in accordance with the provisions of this Decision, and publish this schedule in a visible location, which is easy for all workers to view, and for labour inspectors to check during their inspection visits.

Article (4)

Employers shall follow the guidelines on heat stress mitigation issued by the Ministry at all times and shall observe the following:

1. Complete a risk assessment to mitigate heat stress together with the workers and update it regularly. A copy of the assessment shall be kept at the workplace to be available to labour inspectors for review.
2. Provide training on heat stress to all workers by the beginning of the month of May of each year.
3. Provide free and suitably cool drinking water to all workers throughout the working time.
4. Secure shaded rest areas that are easily accessible to workers and effective in providing shelter from solar radiation and high temperatures during breaks.
5. Provide workers with appropriate personal protective equipment for the hot weather including thin, loose and light-coloured clothing.
6. Perform annual health check-ups to diagnose and manage chronic diseases that may contribute to the risk of heat stress. The medical examination shall be performed at no cost to the worker. Employers shall keep a record of such medical examination.

7. Train paramedics and occupational safety and health supervisors to provide guidance and first aid to workers.
8. Adopt the Wet-Bulb Globe Temperature (WBGT) index to assess the level of occupational heat stress. The assessment shall take into account all weather parameters: solar radiation, relative humidity, air temperature, wind speed. Employers shall take the necessary measures in case of surges in the indicators.
9. Monitor and record weather conditions in the workplace and stop the work in workplaces where the WBGT index rises beyond 32.1 °C.

Article (5)

When two or more employers undertake activities simultaneously at one work site, the main contractor shall commit to follow-up on the application of the measures prescribed in the previous article with the remaining employers.

Article (6)

Workers have the right to stop working and submit a complaint before the Ministry when they have good reason to believe that heat stress is a threat to their safety or health. Workers shall inform their supervisors to examine their situation. In such cases, workers may not be dismissed, subjected to discrimination or deprived of their rights.

Article (7)

In case of violation of the provisions of this Decision, a workplace may be shut down, in part or in whole, by a decision of the Minister.

Article (8)

This Ministerial Decision does not apply to the activities undertaken by companies working on oil and gas projects.

Article 9

Decision No. 16 of 2007 issued by the Minister of Civil Service Affairs and Housing and any other provision that contravenes the provisions of this Decision, shall be revoked.

Article (11)

All the competent authorities, each within its own competence, shall implement the provisions of this decision, which shall enter into force on the day that follows its publication in the Official Gazette.

Yousef bin Mohamed Al-Othman Fakhroo

Minister of Administrative Development, Labour and Social Affairs

Issued on: 12/10/1442/ A.H.

Corresponding to: /24/05/2020 A.D.

THE NEDLAC LABOUR LAW SERIES

The **NEDLAC Labour Law Series** consists of research outputs aimed at supporting NEDLAC and its social partners to develop policy and where appropriate legislative amendments in ongoing labour law reform processes. The series addresses identified areas of labour law that respond to the changing nature of work, the future of work, and the labour market impacts of a just transition to a low-carbon economy. It also focuses on improving social protection for non-standard workers, addressing bottlenecks in existing labour market systems, and enabling economic growth and sustainability for small and emerging businesses.

A collaborative evidence-based approach was used in the development of the outputs, incorporating stakeholder engagement, comparative perspectives, and international labour standards. The outputs are designed to support social partners in shaping responsive labour law and policy and to facilitate capacity building for government, labour, and business constituencies. The series considers the following key concerns

- *Workers who are not employees*
- *Remote work*
- *Enabling a just transition*
- *Efficiency of labour market institutions responsible for adjudication and enforcement of awards*

The outputs in the Labour Law Series were developed through NEDLAC processes including scoping workshops, the preparation of think pieces, stakeholder engagements, and capacity-building initiatives. The outputs are tailored to address South Africa's specific labour market challenges and opportunities.

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- No. 4 | *Optimising labour law for a just transition* (2024), by Debbie Collier, Shane Godfrey, Vincent Oniga and Abigail Osiki
- No. 5 | *“Climate-proofing” labour law: Adapting to increased heat and extreme weather events* (2024), by Shane Godfrey and Debbie Collier

The series is designed to encourage social dialogue and critical discourse on the development of labour law and to build the capacity of social partners and enable their engagement in shaping a just and inclusive labour market. The outputs and recommendations are intended as a foundation for future direction, and feedback and comments are welcomed to inform ongoing developments. Correspondence may be emailed to centrow@uwc.ac.za, or to the authors contact details included in each publication.

Published by Centre for Transformative Regulation of Work (CENTROW)

Website: <https://centrow.org/nedlac-labour-law-reform/>

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