



efficiency, to a more sustainable model.

- 6. Evaluate the likely benefits (health and wellbeing, social and economic) arising from climate change mitigation strategies, with a focus on WA health services.
- 7. Define the role of the Department of Health in leading public policy on climate change and health.
- 8. Recommend the Terms of Reference, scope and preferred methods for undertaking a climate change vulnerability assessment for the health sector.
- 9. Recommend the Terms of Reference, scope and preferred methods for developing a Climate Change Adaptation Plan for the health sector.

### Submissions response field

Please type your response to the item(s) selected above into the field below. Alternatively you may provide your submission as a separate attachment (suggested maximum 5 pages).

#### Overview

The Safety Regulation Group plays a significant part in building and strengthening Western Australia's economy by ensuring one of its most significant assets, its workforce, operates in a healthy and safe environment where their rights as workers are protected.

The Group provides regulatory and policy oversight of workers' health and safety in the resources and general industries sectors and the licensing regime, and safety legislation for dangerous goods, including regulation of the State's major hazard facilities and petroleum operations.

The Group consists of the following:

- WorkSafe
- Mines Safety
- Dangerous Goods and Petroleum Safety
- Labour Relations
- Regulatory Support

Mines Safety is the regulator tasked with enforcing industry compliance with the *Mines Safety and Inspection Act 1994* (MSIA or the Act) and the Mines Safety and Inspection Regulations 1995 (MSIR).

Current strategies and regulatory requirements for protecting workers from the effects of extremes of heat or cold

One of the objectives of the MSIA is to 'secure the safety and health of persons engaged in mining operations. Section 9 specifically places a duty on employers to have systems so that employees are not exposed to hazards.

Provision in the Regulations for hot and cold environments is covered in the Mines Safety and Inspection Regulations 1995 as follows:

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### **Air temperature in workplaces**

9.15 (1) *Each responsible person at a mine must cause all necessary measures and precautions to be taken to ensure that employees at the mine do not suffer harm to their health from the adverse effects of extremes of heat or cold.*

(2) *If conditions in any workplace are, or are likely to be, hot and humid, each responsible person at the mine must ensure that -*

(a) *all employees are provided with training on measures to be taken to avoid any harmful effects from those conditions; and*

(b) *appropriate workplace environmental controls (including ventilation) and monitoring are implemented; and*

(c) *if appropriate, a program for monitoring the health of employees in the workplace is implemented.*

(3) *In any workplace in an underground mine, and in any tunnel under a surge stockpile on the surface of a mine, each responsible person at the mine must ensure that -*

(a) *if the wet bulb temperature exceeds 25 degrees Celsius, an air velocity of not less than 0.5 metres per second is provided; and*

(b) *any appropriate action referred to in sub regulation (2) is implemented.*

Working in a hot environment places workers at risk of impaired performance, heat illnesses and heat stroke. These effects are not only due to geographical location (i.e. high summer temperatures in the north and inland areas of the State), other workplace risk factors include:

- working in confined workplaces without adequate ventilation
- working where there is direct exposure to solar radiation
- working in hot and humid conditions
- work performed in the vicinity of hot sources such as furnaces, heaters and ovens
- dehydration
- some medications
- heavy physical work in moderately hot and humid conditions (e.g. such as in some underground mines)
- work situations where protective clothing has to be worn
- unacclimatised workers.

Added to this danger is the fact that many mining operations are in remote areas in Western Australia where the required medical assistance is not easily available. This is especially the case for exploration activities and travel between mine sites.

To assist in the identification and management of health hazards (including extreme heat and cold where applicable), all mines are required to have a Health

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and Hygiene Management Plan. A HHMP provides a systematic process for managing health hazards at all stages of the mining operation. It is an integral part of an organisation's safety management system and complements other major hazard management plans for the site. The document is intended to describe how health hazards are controlled and what methods are used to verify that controls are effective.

### Publications

The department has released two significant incident reports (SIR's) on fatalities relating to heat stress in the past 5 years listed below:

- Significant Incident Report No. 257 Field technician collapses during exploration activities – fatal accident - 28 February 2018
- Significant Incident Report No. 232 Underground operator collapses underground – fatal accident – 30 November 2015

In addition to SIR's, a suite of guidance material about heat and thermal stress management is available on the department's website including a guideline on the management and prevention of heat stress.

### Our commitments

Towards 2020 commitments details the goals, focus areas and measures of success for safety and health initiatives undertaken by the regulator.

Its purpose is to give stakeholders a clear understanding of the department's regulatory focus on safety and health in the resources sector, going beyond the day-to-day inspectorate activities.

Progress on these commitments will be reported annually. Examples of progress reporting include online news items, Resources Safety Matters articles, publications, web pages or case studies.

Completed commitments will be archived and available to industry online. The reports made on commitment progress can be used as a way to assess the regulator's performance and effectiveness. This will help the department effectively engage with its stakeholders to collect and share safety information, and help identify emerging health and safety trends and how they can be addressed.

Included in the department's 2020 vision is the increased attention on chronic exposure to agents that lead to adverse impacts on health. The inspectorate is committed to promoting the safety and health of workers involved in the exploration, mining, extraction and processing of mineral resources.

### Conclusion / Recommendation

Climate change is unlikely to have a major direct impact on mine workers, for which regulations and management strategies are already in place to manage hazards that affect their safety and health.

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The prospect of increased frequency and/or severity of storms in parts of Western Australia, combined with extended periods of high temperatures and droughts, increases the risks of damage from subsequent heavy rainfall and flooding. To reduce the risk of adverse outcomes of these events, risk mitigation strategies that incorporate heavy rainfall and flooding into operational models (including emergency management plans) and increased awareness at sites will be required.

The highest risk to the mining industry from climate change is most likely to come from meeting growing community concerns about environmental issues. This may cause difficulty for mining operators trying to obtain approvals for mining projects. Additional constraints on mining may also affect the economic viability of individual mines, leading to flow-on effects to communities, through job losses and a decline in regional revenue.

Greater knowledge sharing in the public domain and a more active dialogue with government and communities regarding the importance of climate change adaptation is part of the industry's 'social licence to operate'. Adopting a collaborative approach in recognising the potential implications of extreme weather events would allow the WA mining industry to focus on planning and delivering adaptation measures to benefit stakeholders and industry.

**Please complete this sheet and submit with any attachments to: Climate Health WA Inquiry**