



Queensland Mines and Quarries Safety Performance and Health Report

1 July 2013–30 June 2014

Photography

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Disclaimer

The data in this report is derived from the Department of Natural Resources and Mines (DNRM) Queensland mining industry Lost Time Accident database, in addition to information, including survey responses supplied by mining and quarrying operators throughout Queensland.

Some data have been summarised or consolidated in order to present a standardised format in this report. Although DNRM makes every effort to verify supplied data, it accepts no responsibility for data that was incorrect when supplied. The data in this report may not be fully representative of the industry or any component of it.

Please note: *The figures reported in this document are collected from mine sites on an ongoing basis. The figures are not finalised until the following year. For this reason there may be variations in the figures reported for the previous period of 2012–13.*

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Abbreviations

AFC	armoured face conveyor
CMWHS	coal mine workers' health scheme
DI	disabling injury
DNRM	Department of Natural Resources and Mines
HPI	high potential incident
HSU	Health Surveillance Unit
LTI	lost time injury/disease
LTIFR	lost time injury frequency rate
MTI	medical treatment injury
NMA	nominated medical advisor
OCR	optical character recognition
RIS	regulatory impact statement
PPE	personal protective equipment
PPI	positive performance indicators
QGSO	Queensland Government Statistician's Office
TARP	trigger action response plan
TRI	total recordable injury
TRIFR	total recordable injury frequency rate

Definitions*

Coal mines	Mines subject to the <i>Coal Mining Safety and Health Act 1999</i> and associated Regulations.
Days on alternative duties	The number of days a worker is unable to perform his/her regular job and has been assigned other temporary or modified duties. Alternative duties include a changed work environment, roster or shift pattern.
Days lost	All rostered shifts that a worker is unable to work because of injury, not including the day of the injury. This also includes days lost because of recurrences of injuries from previous periods and days on alternative duties after returning to work. A fatal injury is treated as 220 days lost (as per Australian Standard AS1885.1–1990, Clause 6.17).
Disabling injury	A work-related injury or disease resulting in a worker being unable to fully perform his/her regular job. Either light or alternative duties are performed.
Duration rate	The average time (days) lost and the time (days) on alternative duties for each lost time injury/disease (LTI) or disabling injury (DI). In this report, time lost includes all time lost for an incident to date.
High potential incident	An event, or series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person.
Lost time injury/disease	An incident resulting in a fatality, permanent disability or time lost from work of one shift or more. The shift on which the incident occurred is not counted as a shift lost.
Lost time injury frequency rate	The number of lost time injuries/diseases per million hours worked.
Lost time and disabling injury frequency rate	The number of lost time injuries/diseases and disabling injuries per million hours worked.
Medical treatment injuries	Those incidents, which were not lost time injuries or disabling injuries, for which first aid and/or medical treatment was required by a doctor, nurse or person qualified to give first aid.
Metalliferous mines	Mines subject to the <i>Mining and Quarrying Safety and Health Act 1999</i> and associated Regulations.
Quarries	Excavations of hard rock for use in construction; covered by the <i>Mining and Quarrying Safety and Health Act 1999</i> and associated Regulations.
Severity rate	The time (days) lost and time (days) on alternative duties per million hours worked.
Total recordable injury	Includes the number of fatalities, lost time injuries/diseases, medical treatment injuries and disabling injuries.
Total recordable injury frequency rate	The number of total recordable injuries/diseases per million hours worked.

* The definitions in the report for bodily location, breakdown agency, lost time injury/disease, mechanism of injury, nature of injury, incidence rate and frequency rate generally conform to the workplace injury and disease recording standard (AS 1885.1–1990). The Standard's 'average lost time rate' (number of days lost per lost time injury) is called duration rate. The Standard's 'no lost time injuries/diseases' (those occurrences that were not lost time injuries and for which first aid or medical treatment was administered) are called *medical treatment injuries or disabling injuries* (the injured person cannot return to their normal job and is put on alternative duties). When calculating duration rate (number of days per lost time injury) and severity rate (days lost per million hours worked) for a lost time injury, the days lost include the days away from work and the days on alternative duties. The Australian Standard is not clear on whether days lost should include days on alternative duties. It is common practice in other Australian jurisdictions to only include days away from work in duration and severity calculations. However, as the number of days required to be spent on alternative duties is a reflection of the severity of the injury, it is considered that including these days presents a more accurate picture of the industry with respect to the severity of an injury or illness.

Message from the Deputy Director-General Mine Safety and Health



I am pleased to present the *Queensland Mines and Quarries Safety Performance and Health Report* for the year 1 July 2013 to 30 June 2014.

The responsibility for the regulation of mine safety and health in Queensland lies with the Mine Safety and Health Group in the Department of Natural Resources and Mines. The central purpose of the Mine Safety and Health

Group is to diligently pursue on the ground, day to day activities that assist the mining industry in achieving its aspirational goal of Zero Harm.

This report is one of the tools we use to assess the safety and health performance of the industry and drive the continuous improvement needed to achieve this goal. The performance measures collated in this report aim to focus the attention of all of us in the mining industry — owners, management, workers and government alike, on areas of safety and health priority and to encourage implementation of strategies to further improve safety and health performance.

The statistics tell us that in most areas the industry safety and health performance has improved over the previous year and that the Queensland mining industry continues to maintain its pre-eminent position as one of the safest and healthiest in the world. This is heartening news; nonetheless, there remains opportunity for further progress.

The data indicates that the combined number of lost time injuries and disabling injuries experienced by workers fell from 1026 in 2012–13 to 831 in 2013–14. At the same time the severity rate for these injuries dropped from 293 per million hours to 231. Across all sectors combined, the lost time injury frequency rate fell from 3.5 to 3.0 injuries per million hours over the same period. Despite these improvements, the number of permanent incapacities in the industry rose from 32 to 38 with the increases occurring at surface coal mines and underground metalliferous mines. Furthermore, examination of the lost time injury frequency rate at a more granular level shows the rates for underground coal mines and quarries increased from 5.9 to 6.5 and 5.0 to 6.4 respectively.

Sadly, we also had two fatal incidents in Queensland mines this year. One was in an underground coal mine, bringing to an end a fatality free period in Queensland underground coal of seven years. The second fatality was in an underground metalliferous mine. I extend my sympathy and condolences to the families and friends of these mine workers and give them my assurance that the Mines Inspectorate continues to work tirelessly to eliminate such tragedies.

Distressingly, 2013–14 was a bad year for fatalities in the Australian mining industry as a whole with a total of 16 workplace deaths in mining during the year. This is the worst result experienced for a number of years and has raised significant concern amongst regulators and mine operators alike.

Although the investigations into these 16 fatal incidents are yet to be concluded, improved training, competency and support of line supervisors has been identified as a key area requiring attention. This was one of the chief proposals put forward in the consultation regulatory impact statement for the Mine Safety Amendment Bill released by the Mines Inspectorate for public consultation in September 2013. Poor knowledge and competency are the precursors to disasters and fatal accidents. They were key contributors to the Moura disaster, and there is a strong link between these factors and the last six mine disasters in Australia as well as the Pike River Mine disaster in New Zealand.

A further area of concern, and one that has been the focus of many discussions between the Mines Inspectorate and the mining industry and warranted mention in previous editions of this report, is the disproportionate representation of contractors in fatal accident statistics. Seven of the 16 fatalities in Australian mines this year were contractors; roughly two thirds of the fatalities at Queensland mines in the last thirteen years (since the new legislation was introduced) have been contractors.

The safe management of contractors as well as mine employees is one of the key obligations under Queensland's mine safety and health legislation. Our legislation does not distinguish between a mining company employee and a contracting company employee. Mine operators, site senior executives and mine management owe an equal duty of care to both.

I would like to take this opportunity to thank Mr Stewart Bell PSM, for fulfilling the role of Deputy Director-General and Commissioner for Mine Safety and Health very ably for the past seven years. Stewart retired in April 2014 after 34 years of public service to mine safety and health. He has left an indelible mark on safety and health in the mining industry, not only in Queensland but also beyond the shores of Australia. Stewart was part of the small team which established Simtars in 1986, later becoming its Executive Director; he was Queensland's inaugural Commissioner for Mine Safety and Health; and served as a Royal Commissioner on the Royal Commission of Inquiry into the Pike River Mine disaster. He leaves behind him a legacy of major improvements in safety and health practices and technology which have made a very tangible contribution to the high safety and health standards experienced by workers in the mining industry today.

It is fitting then that I should close with Stewart's safety and health mantra one last time — we should all focus on the task of getting every mine worker home safe and healthy to their families every day. Nothing else should be a higher priority.



Paul Harrison
Deputy Director-General Mine Safety and Health
Acting Commissioner for Mine Safety and Health

Summary from the Chief Inspectors of Mines

Sadly, as the Deputy Director-General stated in his message, we must report this year that two workers in the Queensland mining industry lost their lives at work. We extend our heartfelt sympathies to the parents, families and friends of the two men.

The first of the fatal accidents occurred on 6 May 2014 at an underground coal mine in central Queensland. An electrician was overcome by an irrespirable atmosphere when he opened a hatch to gain access to a sealed area. This was the first underground fatality in Queensland for seven years.

The second fatal accident occurred on 18 June 2014 in an underground metalliferous mine in north Queensland. While working in the vicinity of an ore pass, a timberman sustained fatal injuries when he fell into the ore pass.

These two tragic events run counter to what appears to be an improvement in the safety statistics that have been gathered over the year. Unfortunately the gathering of lagging indicator safety statistics does not always provide an accurate predictor of the potential for a fatality to occur.

In summary, if we compare 2013–14 to the previous 2012–13 data, adding to the figures mentioned on page 1, we observe the following:

- lost time injuries (LTIs) down from 425 to 339 injuries
- LTI frequency down from 3.5 to 3.0 injuries per million hours worked
- LTIs down from 21 282 to 15 479 days
- LTI severity rate down from 175 to 139 days
- days lost to disabling injuries down from 14 279 to 10 230 days
- medical treatment injuries down from 865 to 707 injuries
- permanent incapacities are up from 32 to 38 injuries or illnesses.

Overall, there has been an improvement in lagging indicator numbers across the industry. We note that the figures in this report for the period 2012–2013 vary from last year's report. This is due to on-going revisions and changes to the data base subsequent to the publication of this report.

The Inspectorate is fully supportive of the approach of critical control identification that is currently being adopted by some mining organisations.

This methodology identifies those controls that are critical in preventing a fatality or serious injury and ensures these controls are in place.

Often after a fatality we look at the circumstances and ask ourselves “how could the individual have made that decision?” It is too simple to blame the victim. If we are asking the question “how could they have chosen to do that?” then we are probably using administrative controls to manage hazards with the potential to either fatally or seriously injure.

Controls to manage hazards which may become high potential incidents must aim at limiting the application of worker discretion contributing to the outcome. These controls should fall into the categories of substitution, isolation and engineering.

The importance of reporting and learning from high potential incidents in the management of hazards that could result in serious injury or a fatality cannot be overstated.

In the surface coal sector, the following are examples of significant high potential incidents which occurred over the reporting period:

- An operator was operating a dozer cleaning up in front of an excavator. While cleaning the floor, a rock mass fell from the dig face spilling rocks onto the right hand side of the dozer, damaging the rear walk way handrails and splitting the fuel tank.
- A section of the high wall strata adjacent to a pontoon pump failed and fell into the water. The subsequent wave damaged the pontoon and the pumps.
- A tyre deflated on a fuel truck while travelling along a back access road. The operator safely parked the vehicle, reported and then left the vehicle. When he returned, approximately 1hr and 15 minutes later, he observed a fire on the deflated tyre.
- A light vehicle was travelling south on the northern haul road and slowed to see if a haul truck would stop at the stop sign of the ‘T’ intersection. The truck stopped at the sign, looked each way but did not see the light vehicle and moved forward. As the operator of the truck moved forward he saw a glimpse of white and stopped. The light vehicle braked suddenly and then reversed back.

These examples illustrate hazards that are still not adequately controlled in the surface mines, slope stability, tyre management, equipment fires and vehicle interactions.

In the underground coal sector the following are examples of significant high potential incidents that have occurred over the reporting period:

- The rear caving slider on the back of a longwall shield came into contact with the rear armoured face conveyor (AFC). Upon investigation, the operator found hot shards of steel (glowing red) peeling off the bottom caving door slider.
- During a clean-up run of the rear AFC, the Longwall fitter whilst bumping the rear AFC to inspect sprays noticed sparking along the rear AFC tailgate guide plates near the rear AFC tailgate drive sprocket.
- A coal mine worker was potentially exposed to an irrespirable atmosphere whilst hanging a brattice sail into stub.
- A goaf gas bag sample indicated a Level 4 spontaneous combustion TARP. This resulted in mine personnel being withdrawn from the underground workings.

These incidents are a reminder that there still exists the real potential for an underground explosion or fire in Queensland's coal industry. It also highlights that there is a poor understanding of the hazards associated with noxious and flammable gasses.

The Mines Inspectorate uses the reported high potential incidents to set priorities for the coming year. This coming year our main focus areas in coal mines will be:

- stone dust application
- explosion protected equipment
- principal hazard management plans
- proximity detection
- management of noxious and flammable gasses in underground coal mines
- statutory officials and their obligations
- competencies of appointed persons
- management of contractors
- emergency response and post incident management.

In the surface metalliferous sector, examples of significant high potential incidents that occurred over the reporting period include:

- A trespasser fell 10 metres after hitting a rock wall while using a flying fox over water in the abandoned open pit workings. The person sustained a broken back.
- The position 5 tyre of a Cat 789 rear dump truck exploded, projecting stones up to 40m impacting the window of an excavator and the truck behind.
- While preparing to tip a load on the edge of a waste dump, the ground underneath the Cat 773B dump truck slumped resulting in the truck sliding down the face, flipping over backwards and landing upside down 10m below the tipping area. The operator suffered a crush fracture to the vertebra and soft tissue damage to the neck and back.
- An on highway agitator truck operator driving down a pit ramp lost control of the truck when the brakes failed. The truck travelled 470 m down the ramp before the operator steered into and through a bund on a corner and the truck rolled onto its side.

Examples of significant high potential incidents that occurred in the underground metalliferous sector during this reporting period include:

- An operator was in the basket of a Normet charge car 2.5 m off the ground hanging a cable when the basket tilt cylinder broke and the basket fell forwards.
- During a shaft inspection the conveyance travelled uncontrolled for 14 seconds and over a distance of 39 m until tripped by the shaft brace limit switch.
- An operator was inspecting the bottom of an ore pass draw point when another worker tipped a bucket of ore into the pass. Rocks exited the open draw point brow striking the operator. He sustained contusions, abrasions and lacerations.

These incidents highlight that there is still a need for the industry to adequately manage the hazards and risks associated with mobile equipment, falls of personnel and material and integrity of plant and equipment

This coming year our main focus areas in metalliferous mines and quarries will be:

- proximity detection
- falls of people, equipment and material
- entanglement of people with equipment and material
- uncontrolled energy releases and catastrophic failures in pressurised systems
- fire on mobile equipment and plant

Our attention will not be limited to these areas but will also include any other relevant areas that contribute towards our mine workers returning home safe and healthy every day.

We wish to thank the contributors to this report for their assistance and we look forward to this document being used by the industry to identify safety and health priorities for 2014–15 and beyond.

We encourage industry to continue to work with the Mines Inspectorate to ensure Queensland maintains its place as a best practice example of mining safety and health performance and to strive vigilantly for our common goal of an industry free of safety and health incidents.



Andrew Clough
Chief Inspector of Coal Mines



Phil Goode
Chief Inspector of Mines
(Metalliferous and Quarries)

Industry safety and health performance



*Andrew Cripps MP,
Minister for Natural Resources and Mines,
Miners Memorial Day 2013
Photo: DNRM*

1. Industry safety and health performance

This report summarises the accident and incident data collected from Queensland mines and quarries that are subject to the provisions of the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*. It relates to accidents and incidents that occurred at mine sites from 1 July 2013 to 30 June 2014. Accidents that occurred while employees were travelling to or from work are not included in the analysis.

Fatalities, accidents that resulted in injuries involving the loss of at least one full working shift, disabling injuries – employees on alternative/light duties – and medical treatment injuries are reported. High potential incidents are also reported. The report was prepared using the Department of Natural Resources and Mines (DNRM) Queensland mining industry lost time accident database.

The data reported is collected from mine sites on an ongoing basis and via monthly and quarterly summaries. The dataset is usually not complete until well into the following financial year because mines often take considerable time to supply the data. An arbitrary cut-off, in order to begin data analysis, usually takes place in September each year when most of the data has been received. For this reason there will be minor changes in data reported in last year's report for the previous year because these data are updated with each new report.

Table 1.1 shows a comparison of key performance indicators for 2013–14, in each sector of the mining industry. Performance measures for individual mines in each sector can be found on the DNRM website at www.dnrm.qld.gov.au.

1.1 Miners Memorial Day

On 19 September each year a service is held on the anniversary of the worst disaster that has occurred in Queensland's mining history, when 75 coal miners lost their lives at the Mount Mulligan Mine in 1921. The 2013 Miners Memorial Day service was held at the Townsville Entertainment and Convention Centre and commemorated the lives of more than 1500 miners who have died in mining tragedies in Queensland over three centuries since 1877.

Members of the clergy, government, unions, industry officials and families of deceased mine workers were invited to attend and to lay wreaths at the service. The service was also attended by members of the local mining community as well as the Minister for Natural Resources and Mines, – Andrew Cripps, the then Commissioner for Safety and Health – Stewart Bell, the then Director General – Dan Hunt and the Deputy Director-General Mines Safety and Health – Paul Harrison as well as representatives from the Mines Inspectorate and Simtars.

The 2014 Miners Memorial Day will be held at Moura in Central Queensland to commemorate the 20 year anniversary of the Moura No.2 mining disaster on 7 August 1994.

1.2 Fatal injuries

There were two fatal injuries in the mining industry in Queensland in 2013–14. Figure 1.1 shows the declining trend in mine fatalities since 1900, with major fatality events noted on the graph.

Figure 1.2 shows fatalities remained steady in 2013–14 when compared with 2012–13. It also illustrates that total employee numbers in the mining industry decreased again in 2013–14.

Coal mines

There was one fatal accident in the coal mining sector in 2013–14. On 6 May 2014 an electrician at an underground coal mine was overcome by an irrespirable atmosphere after opening a hatch into sealed waste workings.

Metalliferous mines and quarries

There was one fatal accident in the metalliferous mines and quarries sector in 2013–14. On 18 June 2014 a worker was killed in an underground metalliferous mine when he fell into an orepass.

1.3 Permanent incapacities

There were 38 permanent incapacities reported for 2013–14, compared to 32 permanent incapacities in 2012–13. The number of incapacities, the type of mine or quarry site work from which they resulted, and the previous year's statistics are listed below:

- 21 from surface coal (16 in 2012–13)
- 6 from underground coal (7 in 2012–13)
- 3 from metalliferous surface (6 in 2012–13)
- 6 from metalliferous underground (1 in 2012–13)
- 2 from quarries (2 in 2012–13).

The Mines Inspectorate will continue highlighting the importance of reporting permanent incapacity injuries and illnesses. We need to have a complete record of all permanent incapacities occurring in the mining industry in Queensland so that we can monitor the hazards encountered in that industry. Table 1.2 details permanent incapacities reported by mines in 2013–14.

Under section 279 of the *Coal Mining Safety and Health Act 1999*, and under section 259 of the *Mining and Quarrying Safety and Health Act 1999*, the department may require mines to submit statistics or other information about the mining industry on an approved form.

Table 1.1: Comparison of key performance indicators 2012–14

	Number of lost time injuries (LTI)		Number of disabling injuries (DI)		Number of medical treatments (MTI)		Number of high potential incidents (HPI)		LTI – days lost [†]		Number of DI days		LTI frequency rate (LTFR)*		LTI severity rate ^{††}		LTI Duration rate ^{††}		LTI + DI severity rate [†]		LTI + DI duration rate*		Million hours worked*		Number of permanent incapacities		Number of fatalities	
	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14	12–13	13–14
Coal surface	219	159	293	290	396	368	1 397	1 303	12 150	9 056	6 524	5 785	3.3	2.6	182	148	55.5	57.0	280	242	36.5	33.1	66.6	61.3	16	21	0	0
Coal underground	109	93	167	109	201	88	428	423	5 719	3 616	3 100	2 118	5.9	6.5	307	253	52.5	38.9	474	401	32.0	28.4	18.6	14.3	7	6	0	1
All Coal	328	252	460	399	597	456	1 825	1 726	17 869	12 672	9 624	7 903	3.8	3.3	210	168	54.5	50.3	323	272	34.9	31.6	85.2	75.6	23	27	0	1
Metalliferous surface	64	46	64	39	131	120	238	196	1 833	1 128	1 939	731	3.5	2.4	100	58	28.6	24.5	206	95	29.5	21.9	18.3	19.6	6	3	2	0
Metalliferous underground	19	23	76	50	79	60	210	186	1 145	1 323	2 699	1 520	1.3	1.7	76	99	60.3	57.5	256	214	40.5	38.9	15.0	13.3	1	6	0	1
All Metalliferous	83	69	140	89	210	180	448	382	2 978	2 451	4 638	2 251	2.5	2.1	89	75	35.9	35.5	228	143	34.2	29.8	33.3	32.9	7	9	2	1
Quarries	14	18	1	4	58	71	71	60	435	356	17	76	5.0	6.4	155	127	31.1	19.8	161	154	30.1	19.6	2.8	2.8	2	2	0	0
All Sectors	425	339	601	492	865	707	2 344	2 168	21 282	15 479	14 279	10 230	3.5	3.0	175	139	50.1	45.7	293	231	34.7	30.9	121.4	111.2	32	38	2	2

*Rounded to whole numbers.

†Rounded to 1 decimal place

††Days lost to LTIs include lost time days and days on alternate duties

The approved forms for submitting these statistics are the Queensland Mining Industry Incident Report Form and the Queensland Mining Industry Monthly Incident Summary. The incident report form defines a permanent incapacity as any work-related injury or disease that leads to one or more of the following outcomes:

- the complete loss, or permanent loss of use, of any member or part of the body
- any permanent impairment of any member or part of the body, regardless of any pre-existing disability of that member or part
- any permanent impairment of physical/mental functioning, regardless of any pre-existing impaired physical or mental functioning
- a permanent transfer to a different job
- termination of employment.

Data extracted from the Queensland Employee Injury Database and supplied by the Queensland Government Statistician's Office (QGSO), which includes data on all workers compensation cases in Queensland from WorkCover Queensland and the self insurers, can be found in Chapter 7. However, it is not possible to determine which of the claims listed in Chapter 7 would have resulted in permanent incapacity, nor is it possible to determine which claims may be as a result of the injuries reported as permanent incapacities.

1.4 Lost time injuries and disabling injuries

Figures 1.3–1.5 show statistics for the lost time injury frequency rate (LTIFR), severity rate and duration rate over a 10 year period from 2004–14; they are produced as statistical process control charts to emphasise changes in trend over time.

Figures 1.6 and 1.7 show the trends in lost time injury (LTI) and disabling injury (DI) duration and severity rates from 2004–14.

Figure 1.8 shows that in recent years, the number DIs in coal mines had increased in line with the steady increase in employment numbers. In 2013–14, although the number of LTIs remained steady, the number of DIs decreased. This coincided with a decrease in coal mine employment numbers for the same period.

Figure 1.9 shows that while the employment numbers increased again at metalliferous mines and quarries in 2013–14, the number of LTIs and DIs has decreased in the 2013–14 period. The numbers of LTIs recorded in 2013–14 are at historic lows for these sectors.

1.5 High potential incidents

An HPI is defined in mining legislation as an event, or series of events, that causes, or has the potential to cause, a significant adverse effect on the safety or health of a person. The identification of HPIs enables industry to implement proactive strategies for managing the identified risks before someone is injured.

The reporting of HPIs at mines and quarries is mandated by legislation because the ramifications of these incidents are often costly, both in human and commercial terms. It is therefore important that this data is captured and not lost. The publication of this collective data benefits industry by raising awareness of repeat incidents at mines so that corrective action can be taken. An effective incident-reporting system also indicates a mature industry that takes the safety of its workers seriously.

The incidents described below have been selected from the HPI database. They do not include all HPIs that have occurred but represent a sample of incidents of particular concern in 2013–14.

Coal mines

- An operator with eight years' experience was operating TRD362 cleaning up in front of SHE39. While cleaning the floor, a rock mass fell from the dig face spilling rocks onto the right hand side of TRD362 damaging rear walk way handrails, and splitting the fuel tank. No injuries sustained.
- A section of the high wall strata in Pit 12 adjacent to a pontoon pump failed and fell into the water. The subsequent wave damaged the pontoon and the pumps in the flooded pit.
- Pos 1 tyre deflated on fuel truck while travelling along R15 Nth back access road. The operator safely parked vehicle, reported and then left the vehicle. Returned approximately 1 hour and 15 minutes later and observed a fire on the deflated tyre.
- Light vehicle PEA 205 was travelling south on the northern haul road and slowed to see if Truck 7008 would stop at the stop sign of the 'T' intersection. Truck 7008 stopped at the sign, looked each way but did not see the light vehicle and moved forward. As the operator of Truck 7008 moved forward he saw a glimpse of white and stopped. The light vehicle braked suddenly and then reversed back. No contact was made.
- Whilst conducting the daily electrical inspections the longwall electrician found that the 3.3 kilovolt cable to the rear tailgate drive motor had been pulled out of its gland. Power to the tailgate drive was then isolated at the maingate DCB by racking the cable out and locking and tagging. The area ERZ Controller was notified and also the shift supervisor. Investigations revealed that the area surround the drive was full of coal dust and the cable was bent tight, resulting in tension on the cable pulling it from the gland.
- The rear caving slider on the back of Longwall shield came into contact with the rear AFC. Upon investigation the operator found hot shards of steel (glowing red) peeling off the bottom caving door slider.

- During a clean-up run of the rear AFC, the longwall fitter whilst bumping the rear AFC to inspect sprays noticed sparking along the rear AFC tailgate guide plates near the rear AFC tailgate drive sprocket.
- Coal mine worker potentially exposed to irrespirable atmosphere of approximately 10% oxygen whilst hanging brattice sail in stub.
- During an inspection of MG 23 Belt the Outbye Deputy noted embers glowing just inside the coffin seal adjacent to the inbye end of the main fan grill. The area was hosed by the Deputy and Engineer. The belt was off at the time to allow a clean-up of excessive spillage as a result of increased water in the conveyed coal. Statements from the parties involved seemed to indicate that the nucleus of the heating was a damaged roller.
- Level 3 trigger of the Spontaneous Combustion Sealed Goaf TARP resulting in an evacuation of the mine.
- Bag sample indicting a Level 4 TARP result requiring the mine personnel to be withdrawn from the underground workings.
- An opal miner tunneled from a shaft into a ballroom in old workings. The roof of the ballroom collapsed as he was setting up his gear. He managed to escape back to the shaft with bruises and scratches.
- During stope extraction 1000 tonnes of rock fell from the back of a stope when the crown pillar of the stope unraveled and broke through into the top drill crosscut.
- A 15 000 tonne rockfall in an empty stope knocked down three fill bulkhead frames in the stope drawpoints.
- While a worker was inspecting the brow of a stope draw point, rocks fell within the stope with one bouncing out and striking the worker in the calf as he retreated from the stope. The worker received bruising to the calf.
- A worker in the elevated work basket of a Manitou MT1030s lift truck was isolating a pipe valve when the lift truck rolled backwards for 55 metres down a 1:7 decline. The operator steered into the wall. The lift truck rolled onto its side dislodging the work basket. The worker in the basket sustained numerous fractures and lacerations while the operator sustained minor injuries.

Metalliferous mines and quarries

- A trespasser fell 10 metres after hitting a rockwall while using a flying fox over water in the abandoned open pit workings. The person sustained a broken back.
- An operator was in the basket of a Normet charge car 2.5 metres off the ground hanging a cable when the basket tilt cylinder broke and the basket fell forwards.
- A development heading broke into the top of a stope while the heading was being mucked after a firing in the heading.
- An ore grade sampler assisting a surface production driller to recover a drill string from a hole sustained crush injuries to his left foot when the break out jaws closed on his foot. He was using his foot to help centralise a drill rod which was to be attached to the drill string.
- During a shaft inspection the conveyance travelled uncontrolled for 14 seconds and over a distance of 39 metres until tripped by the shaft brace limit switch.
- While preparing to tip a load on the edge of a waste dump the ground underneath a Cat 773B dump truck slumped resulting in the truck sliding down the face, flipping over backwards and landing upside down 10 metres below the tipping area. The operator suffered a crush fracture to the vertebra and soft tissue damage to the neck and the back.
- A Cat D6 dozer was completing work on the edge of a gypsum waste dam when the dam wall slumped. The dozer sank and the operator had to swim to shore.
- While an IT loader was back blading over fill on an active bench stope a 10 metres void formed in front of the loader when the fill slumped as result of ore extraction on the level below.
- An on highway agitator truck operator driving down a pit ramp lost control of the truck when the brakes failed. The truck travelled 470 metres down the ramp before the operator steered into and through a bund on a corner and the truck rolled onto its side.
- On nightshift a Komatsu 465 dump truck reversing to be loaded at a stockpile collided with a Komatsu 605 dump truck which was queued behind it. The operator in the rear truck radioed the reversing truck operator to stop however the corner of the tray struck the handrail and broke the windscreen of the rear truck before the front truck was able to stop.
- A Cat 980G loader was exiting a pit on a single lane haulroad when it collided with a Cat 769C truck coming down the haulroad.
- Flyrock from a shot in highly weathered and jointed rock travelled beyond the 200 metre exclusion zone and landed near a worker.
- A person conducting end of shift firing tag board duties gave permission for firing before he noticed a tag in bottom right hand corner. Two headings had been fired by the time the tag was seen and a halt to firing called. The tag was later identified as a lost tag that had been placed on the board by a worker
- An arc flash explosion occurred inside a substation enclosure when an electrician energized a feeder circuit breaker for pumping equipment. The electrician sustained burns to both arms.

Figure 1.1: Fatalities in Queensland mines, 1900–2014

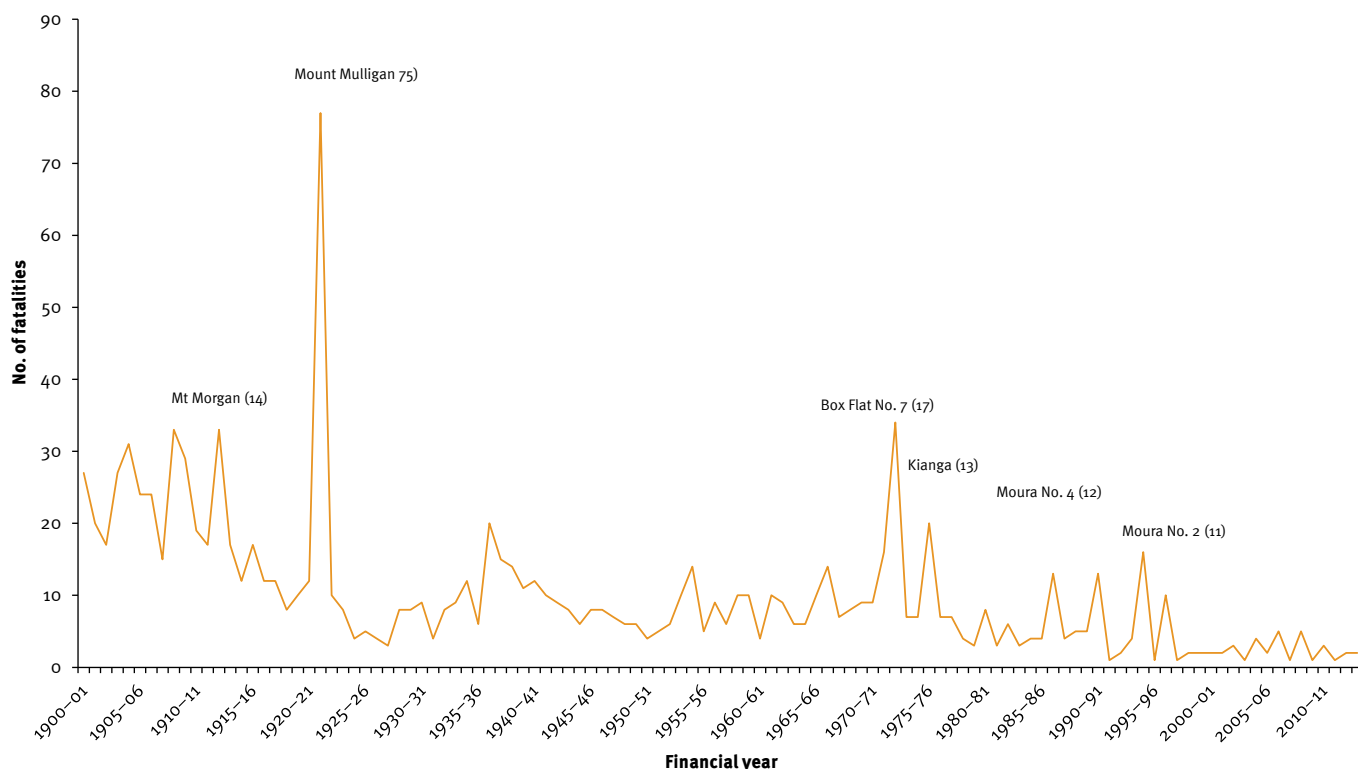
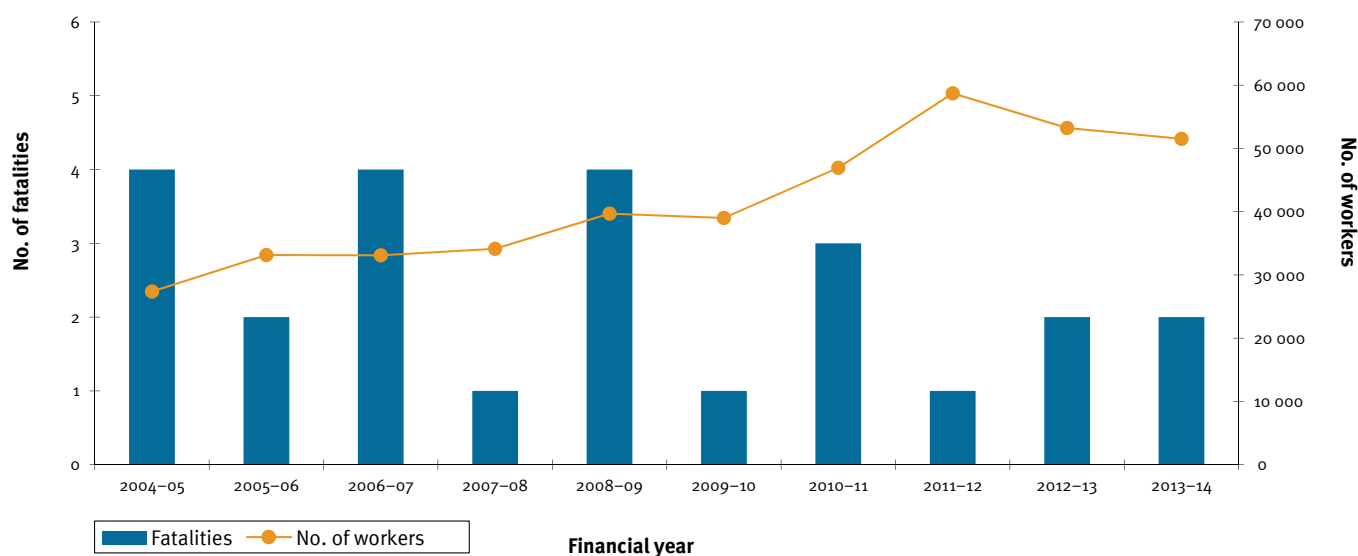


Figure 1.2: Fatalities versus employment numbers (all sectors), 2004–14



- A worker sustained an electric shock when he made contact with a live voltage transformer while commissioning 3.3 kilovolt switchboards in a process plant. He sustained two fractured vertebrae, a fractured shoulder and a number of small entry and exit wounds.
- Two workers were relocating water hoses and cannons which were to be used to cool reactive mullock from underground development which was stockpiled on the

surface while a dozer was pushing hot layers of the material into the cooling zone. While the dozer was pushing the hot material there was a change in wind direction and the two workers were engulfed in a plume of hot dust. One of the workers sustained burns to his various parts of his body requiring treatment and surgery at the Royal Brisbane Hospital Burns Unit.

Table 1.2: Permanent incapacities reported by mines, 2013–14

Injury/disease	Incapacity type	Incapacity description	Qty
Coal surface			
Sprain/strain	Upper limbs shoulder	Shoulder injury from vehicle rollover	1
	Upper limbs shoulder	Left Shoulder sprain	1
	Trunk–back (upper/lower)	Lower back injury	2
	Lower limbs	Muscular/Ligament strain	1
	Lower limbs–knee	Knee injuries	3
Traumatic amputation	Upper limbs–hand/finger/thumb	Amputation to the tip of left index finger	1
	Upper limbs–hand/finger/thumb	Partial finger amputation - right hand index finger to second knuckle	1
Unspecified injury	Other/unspecified injury	Ongoing degenerative shoulder condition	1
	Other/unspecified injury	Unspecified Injuries	7
	Other/unspecified injury	Musculoskeletal Disease or Disorder - Upper back.	1
	Other/unspecified injury	Fracture–Right foot	1
	Other/unspecified injury	Phycological	1
Coal underground			
Sprain/strain	Trunk–back (upper/lower)	Back injury	1
	Upper limbs shoulder	Left Shoulder sprain	1
Unspecified injury	Other/unspecified injury	Total/partial disability	3
	Other/unspecified injury	Acute mental condition	1
Metalliferous surface			
Sprain/strain	Trunk–back (upper/lower)	Back injury	1
Unspecified Injury	Other/unspecified injury	Foot/Toe	1
	Other/unspecified injury	Operator caught between boat and kettle in smelter	1
Metalliferous underground			
Traumatic amputation	Upper limbs–hand/finger/thumb	Amputation of the tip of the left thumb	1
	Upper limbs–hand/finger/thumb	Loss of tip of ring finger	1
	Upper limbs–hand/finger/thumb	De-tipping of left finger	1
Unspecified Injury	Other/unspecified injury	Hand/finger/thumb	1
	Other/unspecified injury	Injury to knee	1
	Other/unspecified injury	Back injury	1
Quarries			
Sprain/strain	Trunk–back (upper/lower)	Back injury	1
Unspecified Injury	Other/unspecified injury	Unspecified Injuries	1
Total			38

Periodic summaries of reported HPIs – in the form of general incident descriptions and quarterly year-to-date graphs – are emailed to mines. Graphical breakdowns and statistics on HPIs by mining sector are available on DNRM’s website at www.dnrm.qld.gov.au.

As shown in Figure 1.10, over the last two years the number of HPIs reported has fallen from the peak in 2011. The industry is to be commended on the sustained compliance with reporting of HPIs.

Table 1.3: Comparison of high potential incident-reporting across all sectors, 2010–14

	High potential incidents per 1000 workers			
	2010–11	2011–12	2012–13	2013–14
Coal–surface	47	41	44	47
Coal–underground	54	52	60	62
All coal	48	43	47	50
Metalliferous–surface	24	36	28	38
Metalliferous–underground	31	35	32	28
All metalliferous	27	36	29	32
Quarries	50	55	43	41
All sectors	42	42	42	45

Figure 1.3: Lost time injury frequency rate per month (all sectors), 2004–14

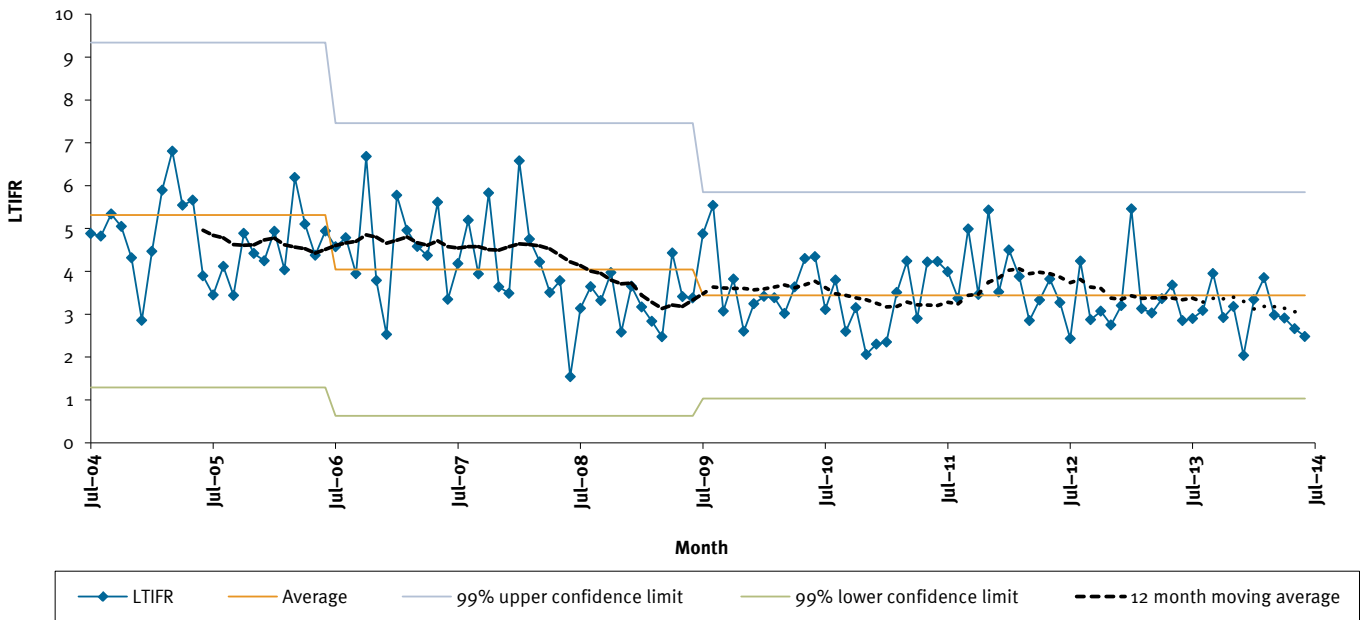


Table 1.3 shows that the number of HPIs reported per 1000 workers across all sectors increased in 2013–14.

Figure 1.11 outlines the number of HPIs per type of incident. The five most common categories of HPIs, according to the number of reported incidents in 2013–14, are listed below.

1. Fire
2. Electrical
3. Loss of control/unplanned movement
4. Vehicle
5. Use of explosives.

DNRM has issued safety alerts and bulletins in response to these HPIs (see Table 1.4). Further information on these and other HPIs is available from the DNRM website at www.dnrm.qld.gov.au.

Figures 1.12–1.16 illustrate each reported HPI type as a percentage of the total HPIs in each mining sector.

Table 1.4: Safety alerts and bulletins relating to high potential incidents, 2013–14

Hydraulics/compressed air	
Safety Bulletin 139	Risk management of high pressure fluids and gases
Gas ignition	
Safety Bulletin 134	Review of Queensland underground coal mines' stone dust application and sampling and analysis of roadway dust
Vehicle	
Safety Alert 300	Failure of Normet Charmec carrier basket tilt cylinder
Safety Bulletin 135	Pedestrian and light vehicle interaction with loaders at surface mines and quarries
Physical work environment	
Safety Alert 301	Access between primary and secondary escape ways
Safety Bulletin 137	Storm season is coming – Get ready
Safety Alert 304	Fatal accident in an irrespirable atmosphere
Safety Bulletin 138	Employee injured while working in remote location
Equipment/structural failure	
Safety Alert 303	Imported electrical equipment standards
Safety Bulletin 136	Mine and quarry electrical installation design expectations
Other	
Safety Alert 302	Report raises concerns about false mine training qualifications
Safety Bulletin 140	Drowning hazards in open excavations
Mobile plant	
Safety Bulletin 141	Deep vein thrombosis (DVT) and operating mobile equipment

Figure 1.4: Severity rate per month (all sectors), 2004–14

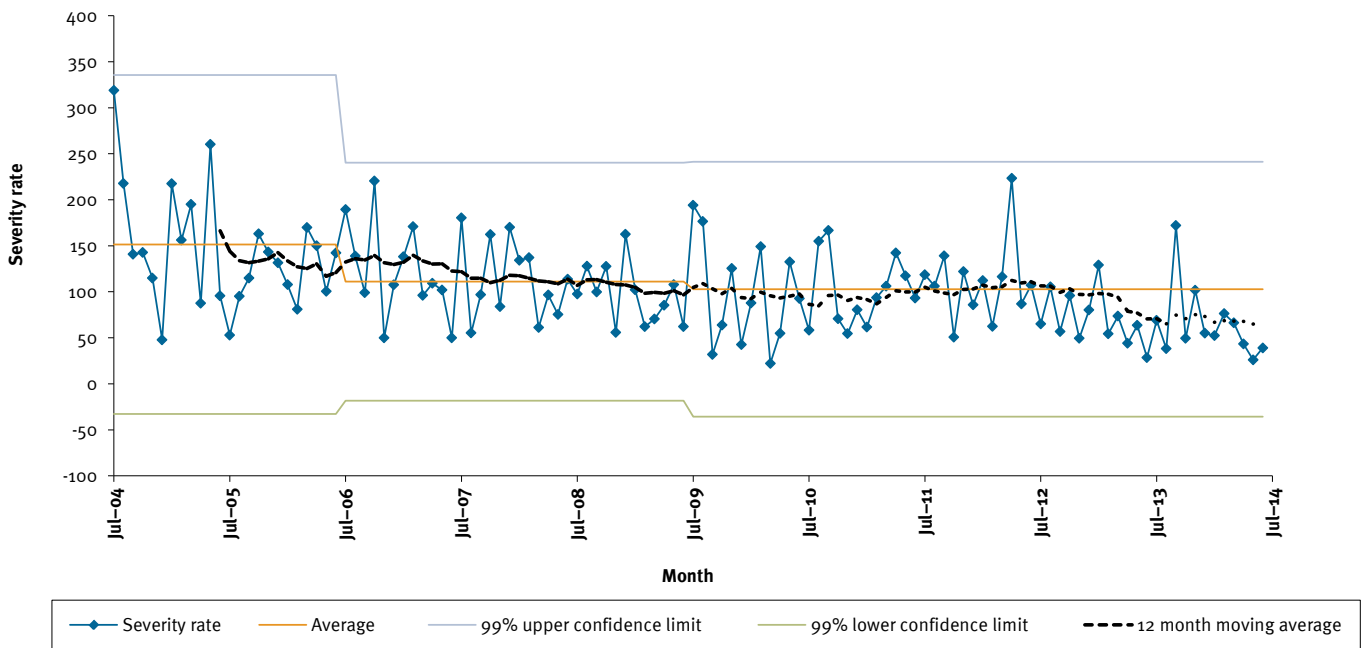


Figure 1.5: Duration rate per month (all sectors), 2004–14

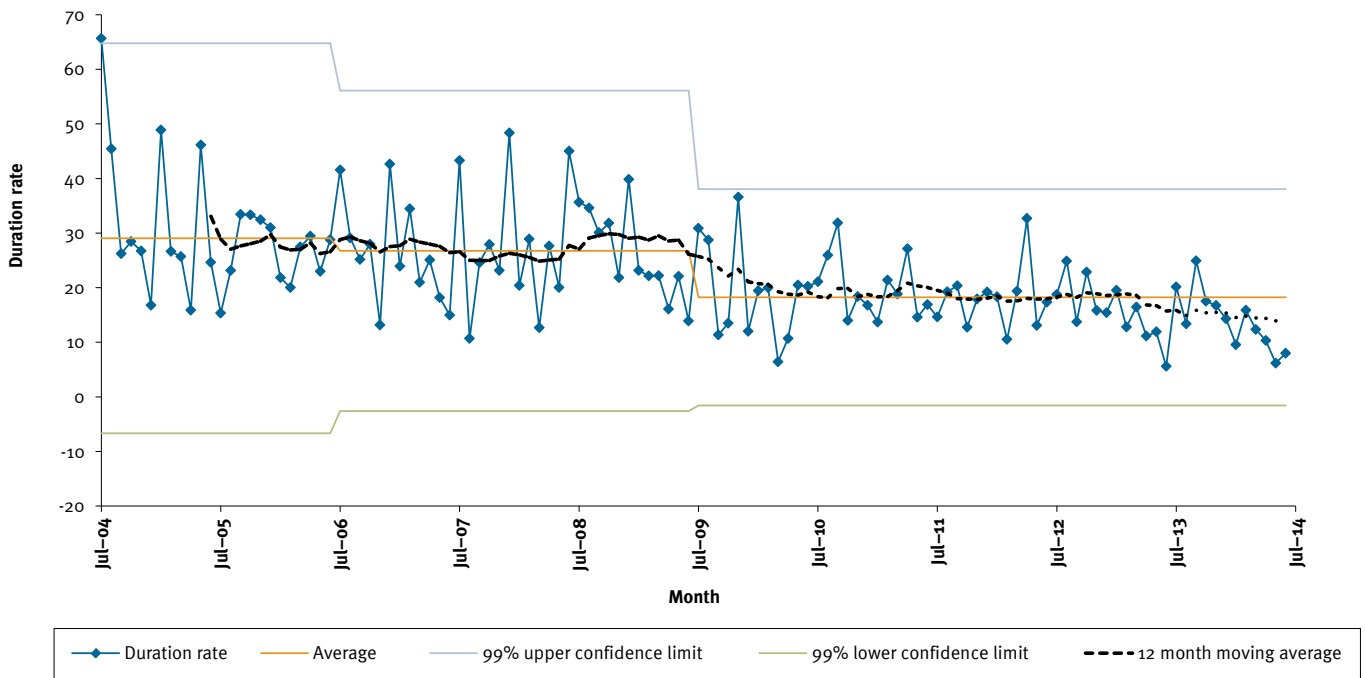


Figure 1.6: Lost time and disabling injury severity rate versus employment numbers (all sectors), 2004–14

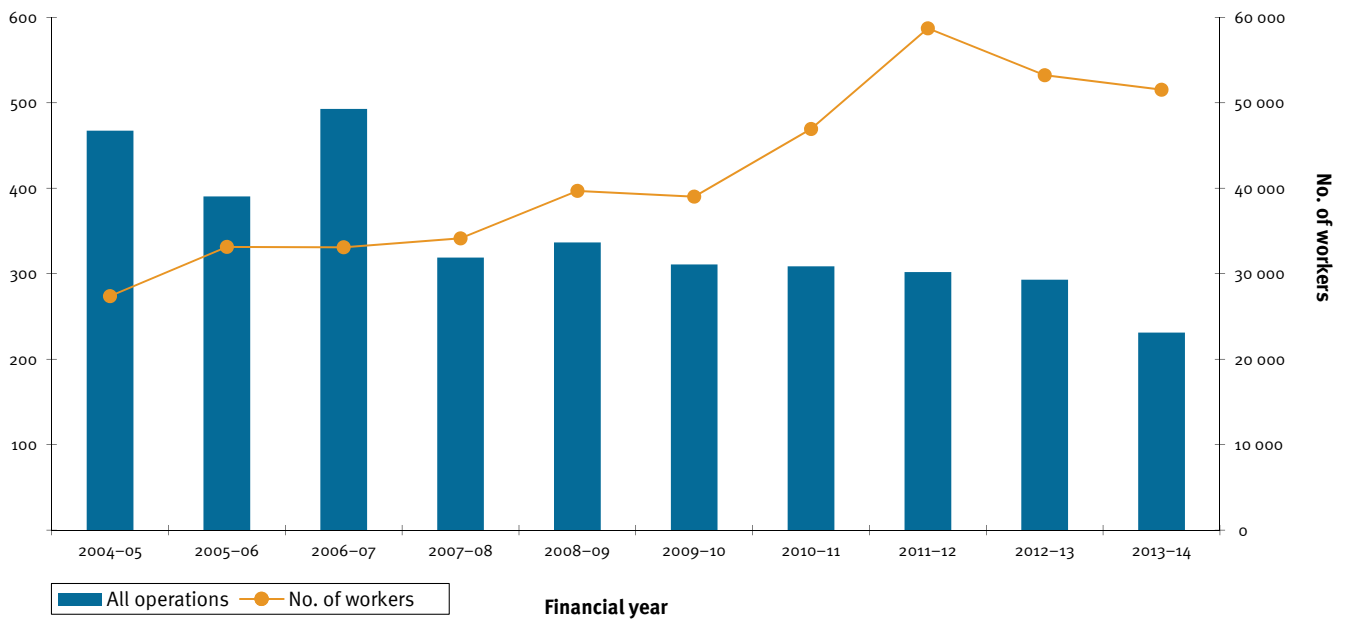


Figure 1.7: Lost time and disabling injury duration rate versus employment numbers (all sectors), 2004–14

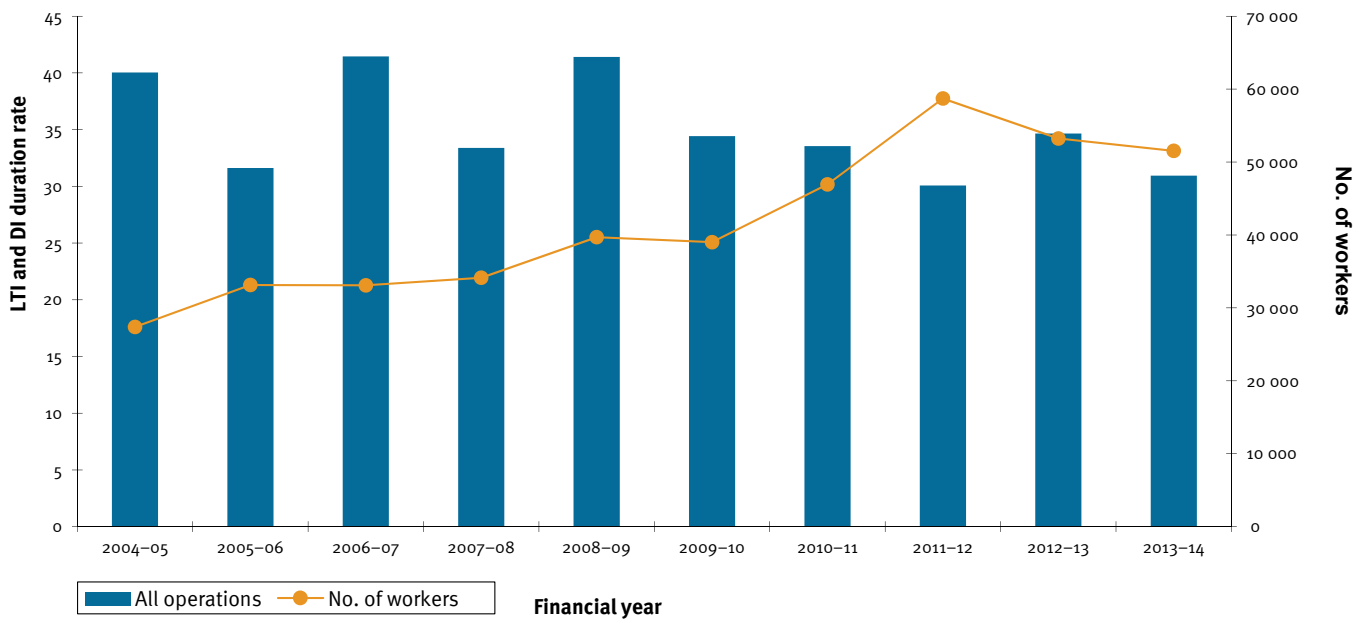


Figure 1.8: Lost time and disabling injuries versus employment numbers for coal mines, 2004–14

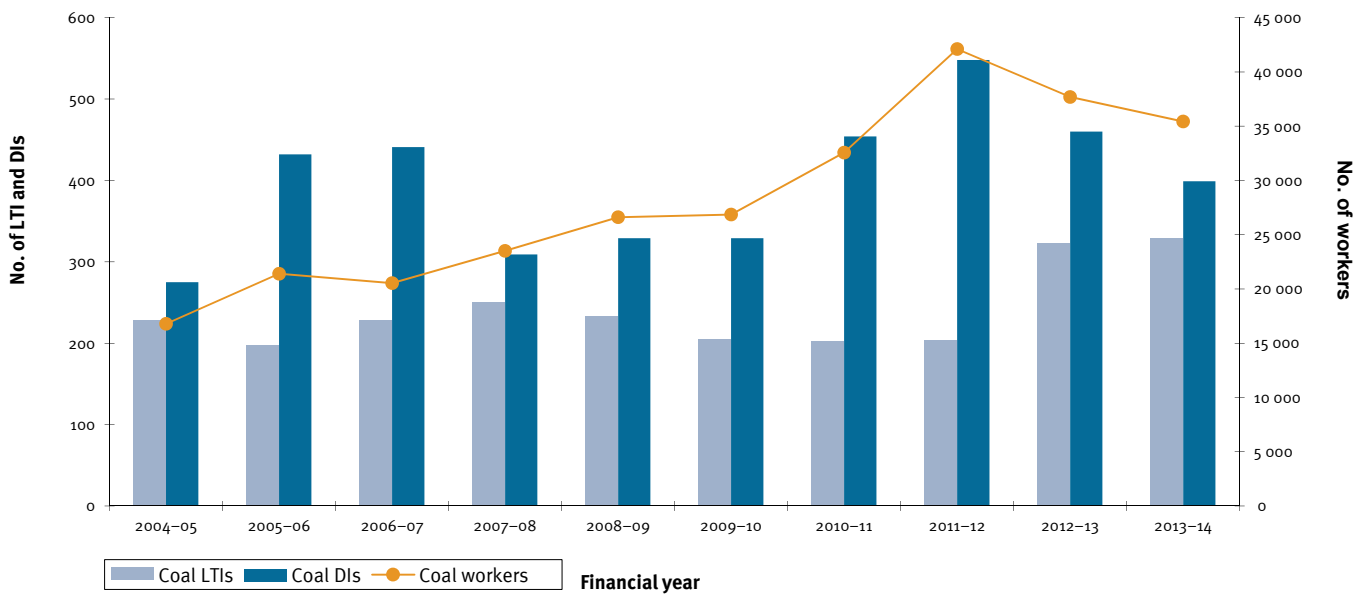


Figure 1.9: Lost time and disabling injuries versus employment numbers for metalliferous mines and quarries, 2004–14

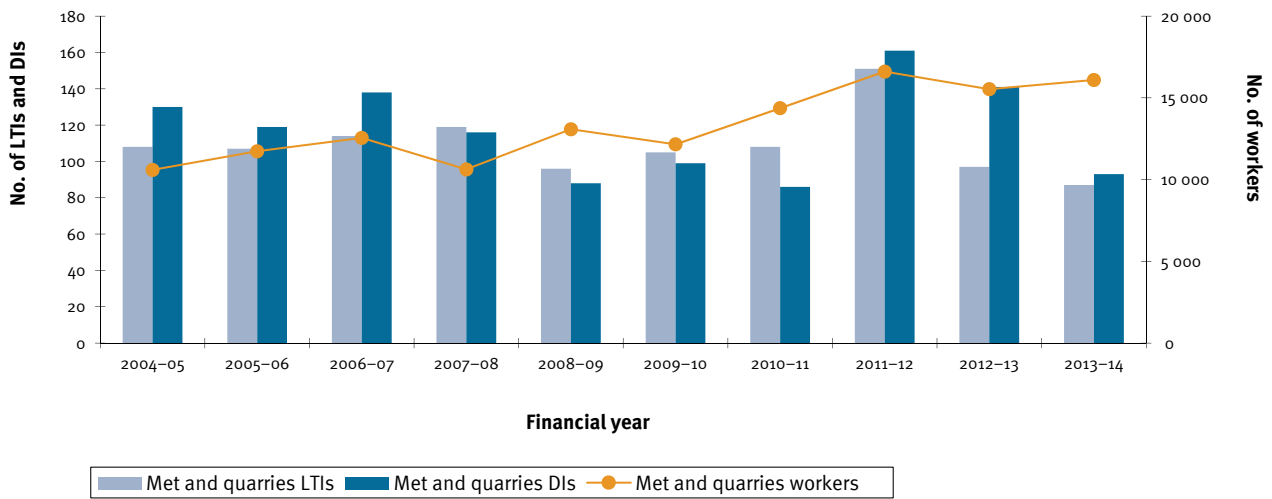


Figure 1.10: High potential incidents versus employment numbers (all sectors), 2004–14

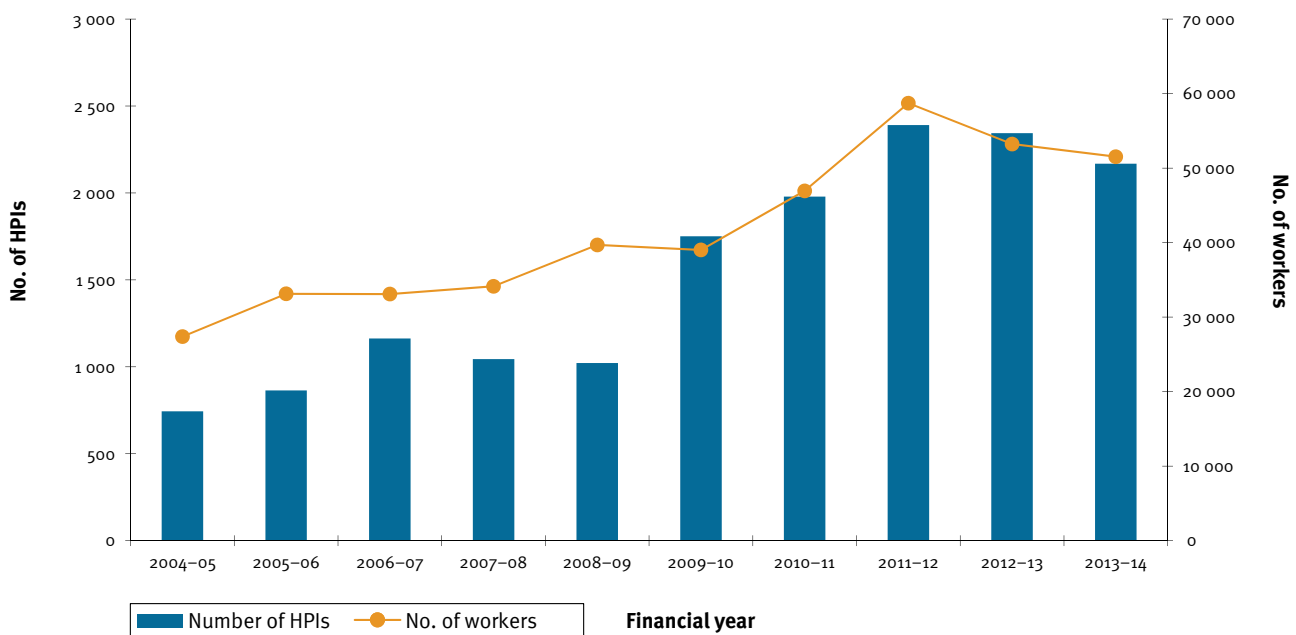
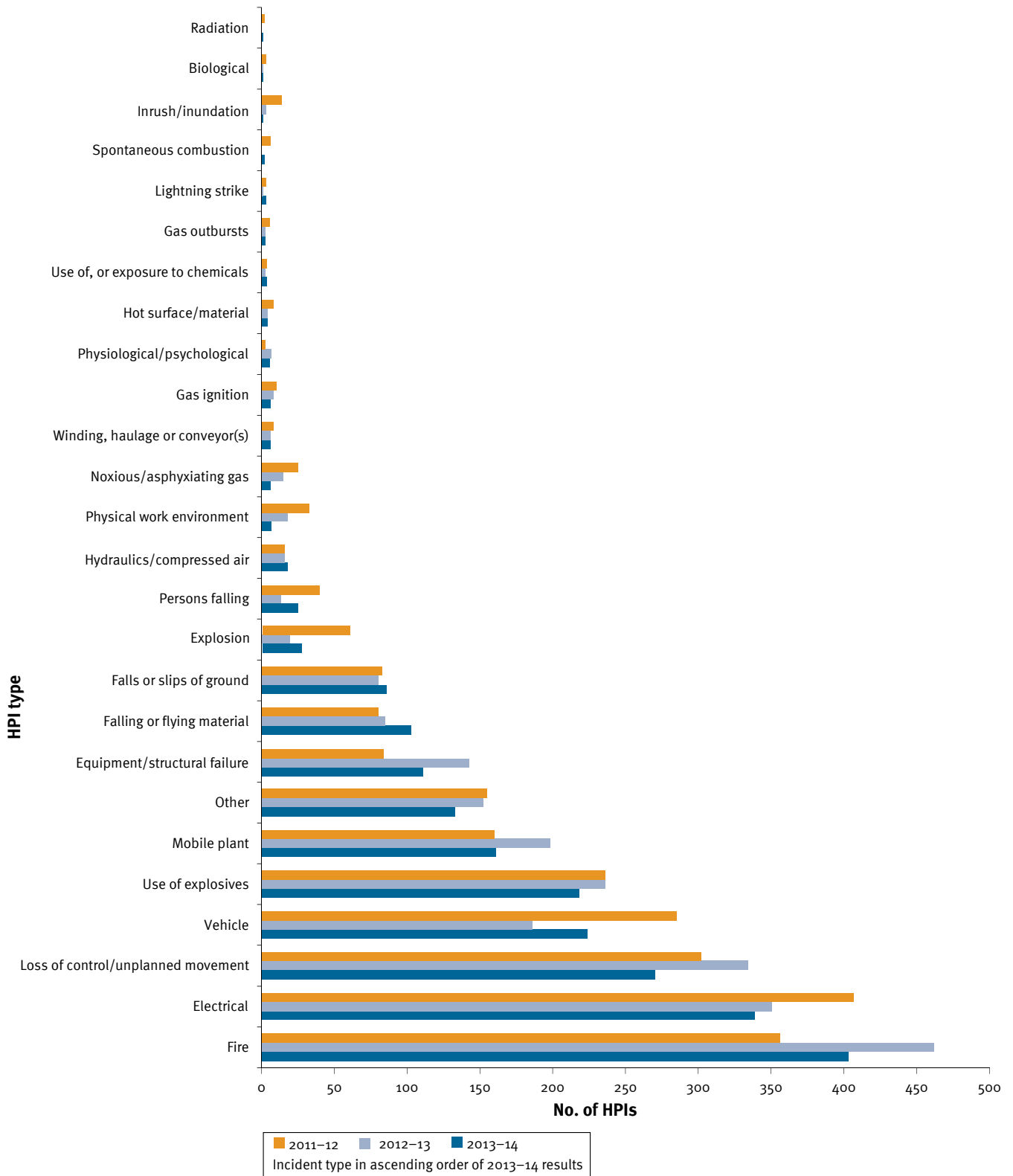


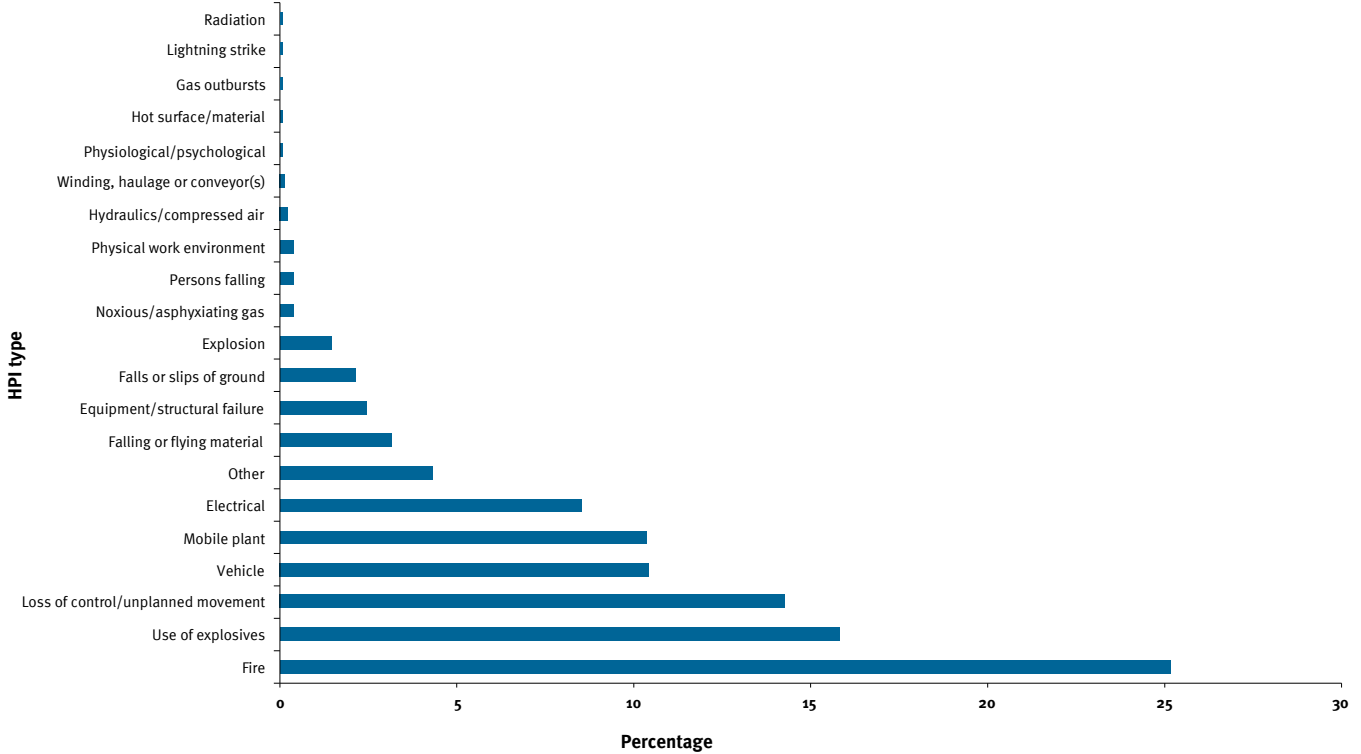
Figure 1.11: High potential incidents in the Queensland mining industry 2011–14



High potential incidents—surface coal mines

The total number of surface coal mine HPIs reported decreased from 1397 in 2012–13 to 1303 in 2013–14. Although reduced slightly from last year, fire was once again the highest contributing HPI type for surface coal at 25.2% in 2013–14 compared to 26.2% in 2012–13. Use of explosives was the second most-reported incident and has increased from 11.6% to 15.8%. Loss of control incidents reduced significantly from 17.3% in 2012–13 to 14.3% in 2013–14. (See Figure 1.12)

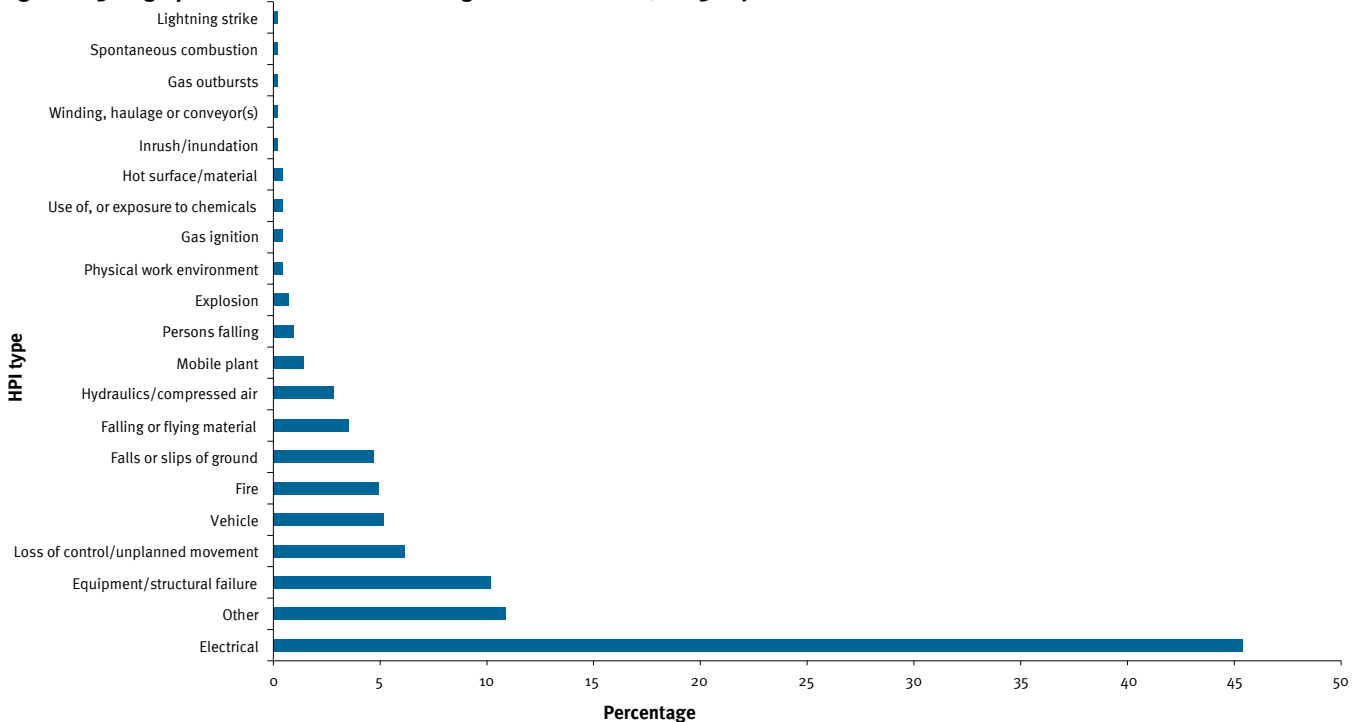
Figure 1.12: High potential incidents at surface coal mines, 2013–14



High potential incidents—underground coal mines

The total number of underground coal mine HPIs reported decreased from 428 in 2012–13 to 423 in 2013–14. The percentage of electrical incidents increased from 39.3% in 2012–13 to 45.4% in 2013–14 and remained the most commonly reported HPI in underground coal mines. Equipment/structural failure incidents increased from 9.8% in 2012–13 to 10.2% in 2013–14 but remained the third most-reported HPI. Loss of control incidents reduced from 8.4% to 6.1%. (See Figure 1.13)

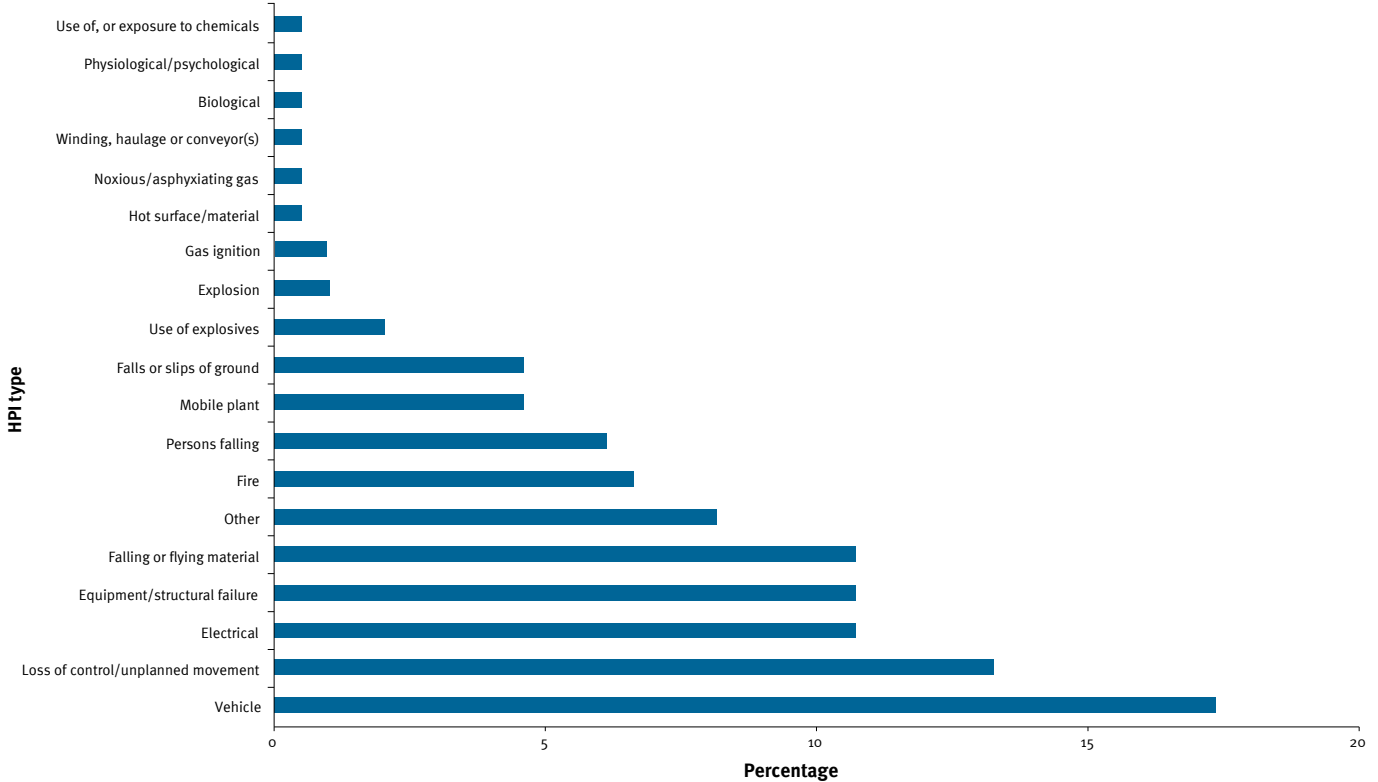
Figure 1.13: High potential incidents at underground coal mines, 2013–14



High potential incidents – surface metalliferous mines

The total number of surface metalliferous mine HPIs reported decreased from 238 in 2012–13 to 196 in 2013–14. Loss of control/unplanned movement decreased from 17.6% in 2012–13 to 13.3% in 2013–14. Vehicle incidents rose from 11.8% in 2012–13 to 21.0% in 2013–14 to be the highest. Fire related decreased from 8.8% in 2012–13 to 6.6% in 2013–14. (See Figure 1.14)

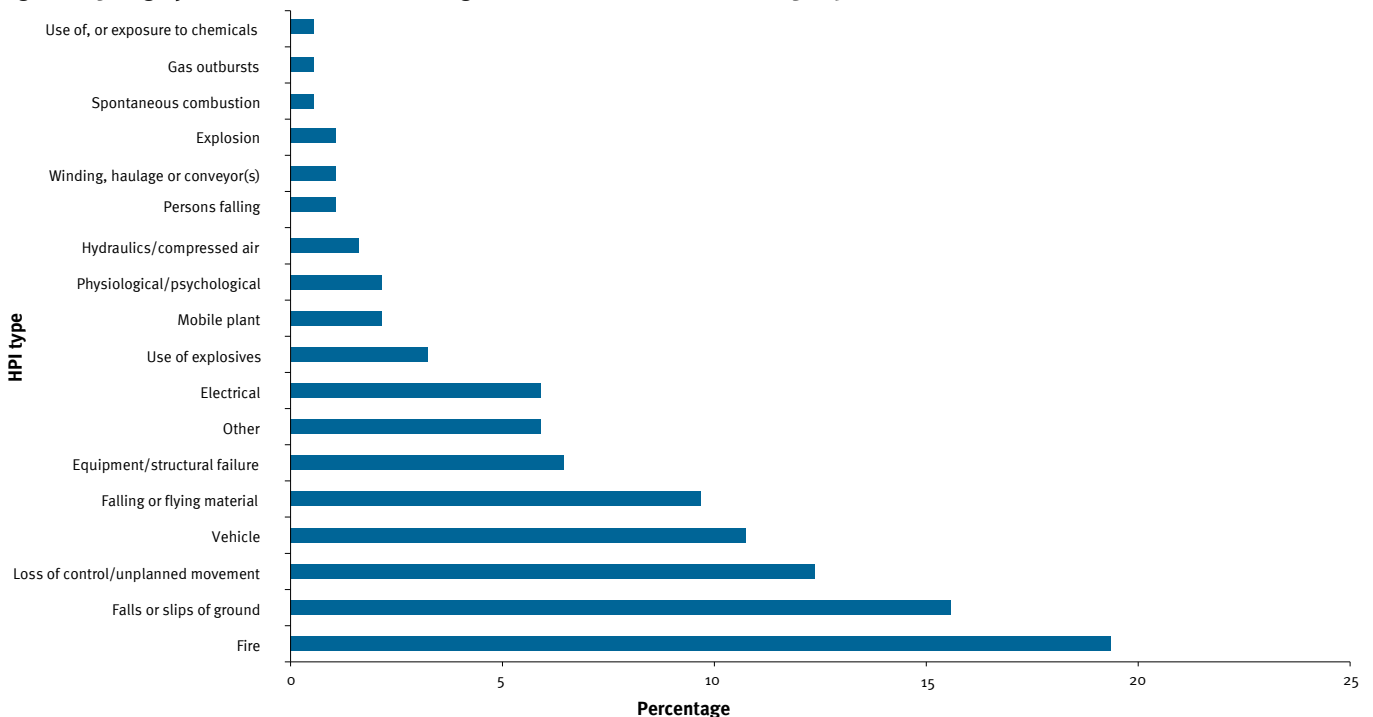
Figure 1.14: High potential incidents at surface metalliferous mines, 2013–14



High potential incidents—underground metalliferous mines

The total number of underground metalliferous mine HPIs reported decreased slightly from 210 in 2012–13 to 186 in 2013–14. Incidents involving fire remains the same and is still the most reported incident at 19.4% in 2013–14 from 19.5% in 2012–13. The second highest reported incident was falls or slips of ground, increasing from 14.3% in 2012–13 to 15.6% in 2013–14. Equipment/Structural failure decreased significantly from 9.0% in 2012–13 to 6.5% in 2013–14. (See Figure 1.15)

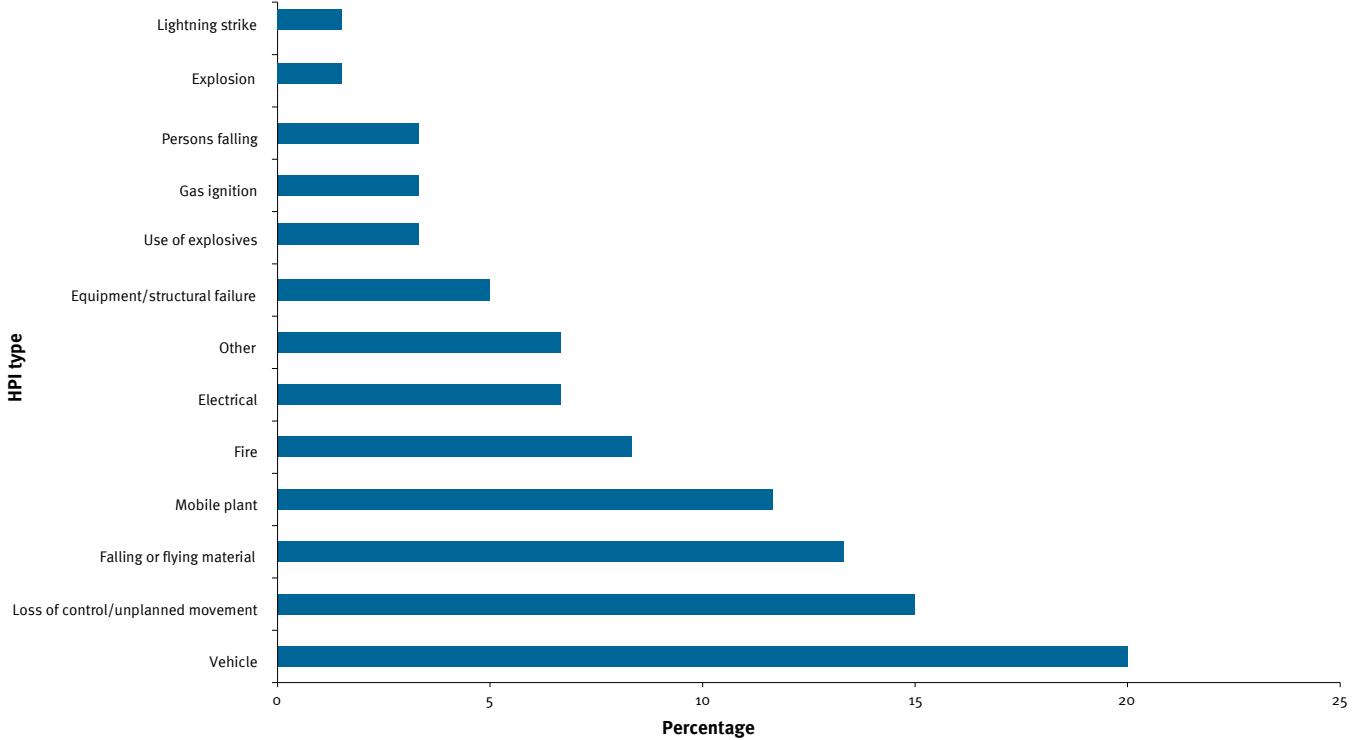
Figure 1.15: High potential incidents at underground metalliferous mines, 2013–14



High potential incidents—quarries

The total number of quarrying HPIs reported decreased from 71 in 2012–13 to 60 in 2013–14. Mobile plant incidents decreased substantially from the highest reported incident in 2012–13 of 21.1% to 11.7% in 2013–14. Vehicle incidents rose from 15.5% in 2012–13 to 20.0% in 2013–14 to be the highest reported quarry incident. Electrical decreased from 9.9% in 2012–13 to 6.7% in 2013–14. (See Figure 1.16)

Figure 1.16: High potential incidents at quarries, 2013–14



2

INCIDENT NUMBERS

Lag performance indicators: incident numbers

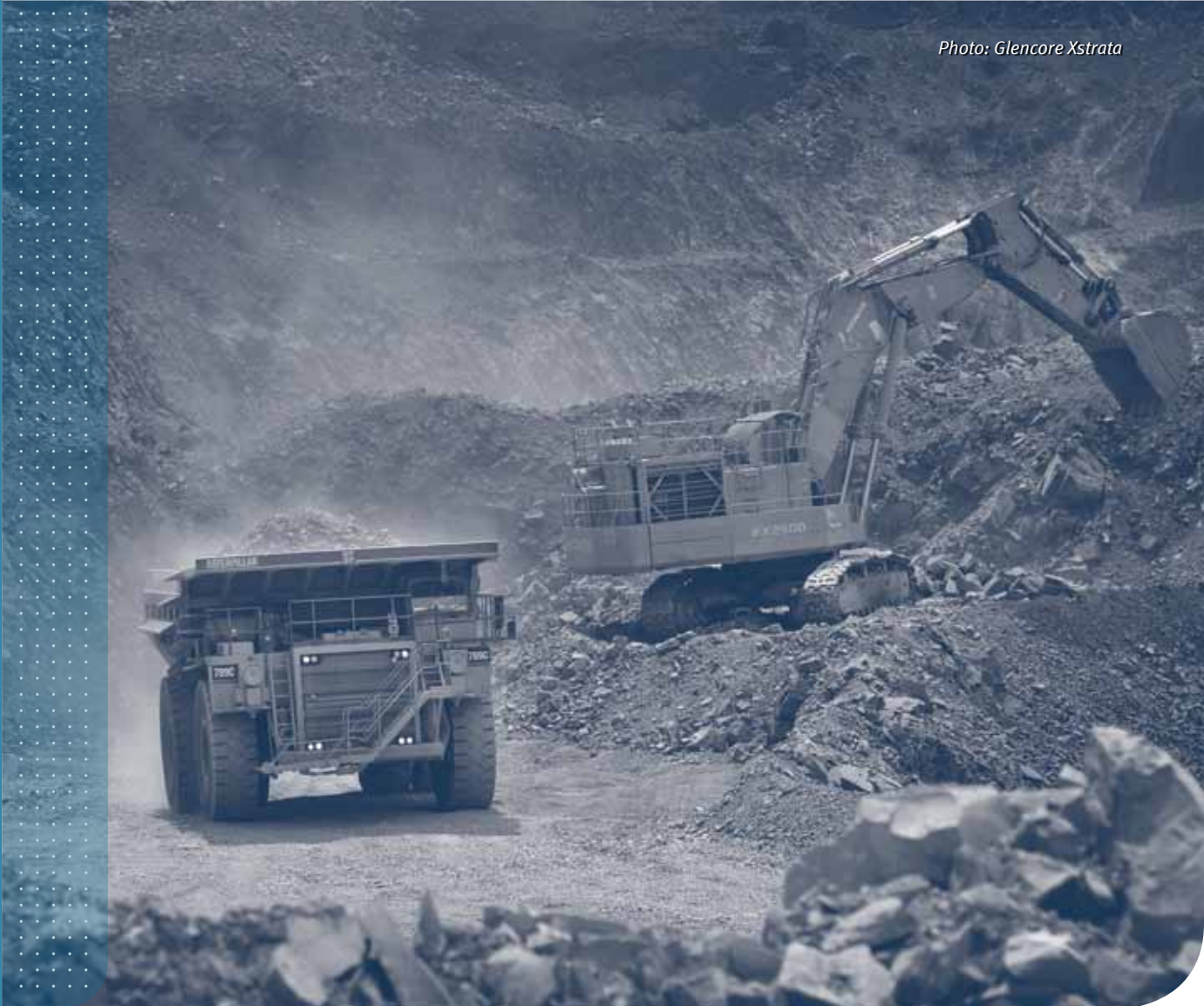


Photo: Glencore Xstrata

2. Lag performance indicators: incident numbers

The following graphs and accompanying tables show five-year trends in a number of indicators used to assess safety and health performance across the industry. These are the raw number of incidents. Comparison of these numbers across sectors is not valid because they are not normalised. Normalised data and rates are presented in Chapter 3 of this report.

The performance indicators plotted are:

- Table 2.1: Number of lost time injuries, 2009–14
- Table 2.2: Number of lost time injury days (days away from work only), 2009–14
- Table 2.3: Number of lost time injury days (days away from work and days on alternative duties), 2009–14
- Table 2.4: Number of disabling injuries (injuries where the worker is given alternative duties because they cannot return to their normal job), 2009–14
- Table 2.5: Number of disabling injury days (days on alternative duties), 2009–14
- Table 2.6: Number of lost time injuries and disabling injuries, 2009–14
- Table 2.7: Number of lost time injury and disabling injury days (days away from work and days on alternative duties), 2009–14
- Table 2.8: Number of permanent incapacities, 2009–14
- Table 2.9: Number of fatalities, 2009–14
- Table 2.10: Number of medical treatment injuries, 2009–14
- Table 2.11: Total recordable injuries, 2009–14
- Table 2.12: Number of reported high-potential incidents, 2009–14
- Table 2.13: Number of employees at 30 June, 2009–14
- Table 2.14: Total hours worked (millions), 2009–14

These indicators are all lag indicators – they are a measure of performance after the event. It is better to measure and trend lead indicators so that incidents can be predicted; however, appropriate lead indicators are much more difficult to define and measure. A suite of lead indicators has been measured and these are detailed in Chapter 5 of this report.

The use of the number of LTIs as the main industry performance measure with respect to health and safety has been criticised. The criticism centres on the fact that the number of LTIs can be manipulated by having injured or sick workers prematurely return to work and be placed on alternative or light duties so they do not appear in the statistics as an LTI. To prevent such manipulation, the use of total recordable injuries – the sum of the number of fatalities, LTIs, DIs and MTIs – is proposed as a parameter that more accurately reflects the injury status at a mine site. The department only commenced collecting MTI data from metalliferous mines and quarries in 2010–11.

Table 2.3 shows the number of days lost from work and the number of days on alternative duties for LTIs. Most jurisdictions in Australia do not include the number of days on alternative duties but only count the days lost from work (see Table 2.2). The true severity of an injury can only be assessed by evaluating the number of days a worker is away from their normal job. Thus, it is necessary to count the days lost from work and the days on alternative duties when assessing injury severity.

Table 2.1: Number of lost time injuries, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	138	150	200	219	159
Coal–underground	64	53	122	109	93
Coal subtotal	202	203	322	328	252
Metalliferous–surface	47	53	75	64	46
Metalliferous–underground	30	27	50	19	23
Metalliferous subtotal	77	80	125	83	69
Quarries	28	28	26	14	18
All operations	307	311	473	425	339

Table 2.2: Number of lost time injury days (days away from work only), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	3 184	4 988	5 212	6 718	6 520
Coal–underground	2 010	1 287	3 129	2 280	2 253
Coal subtotal	5 194	6 275	8 341	8 998	8 773
Metalliferous–surface	1 110	994	1 521	1 239	670
Metalliferous–underground	639	621	1 023	479	911
Metalliferous subtotal	1 749	1 615	2 544	1 718	1 581
Quarries	462	1 023	571	410	279
All operations	7 405	8 913	11 456	11 126	10 633

Table 2.3: Number of lost time injury days (days away from work and days on alternative duties), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	6 461	10 297	9 594	12 150	9 056
Coal–underground	3 884	2 463	5 453	5 719	3 616
Coal subtotal	10 345	12 760	15 047	17 869	12 672
Metalliferous–surface	1 785	1 375	1 896	1 833	1 128
Metalliferous–underground	1 560	1 132	1 451	1 145	1 323
Metalliferous subtotal	3 345	2 507	3 347	2 978	2 451
Quarries	635	1 605	734	435	356
All operations	14 325	16 872	19 128	21 282	15 479

Table 2.4: Number of disabling injuries (injuries where the worker is given alternative duties), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	214	270	356	293	290
Coal–underground	115	184	192	167	109
Coal subtotal	329	454	548	460	399
Metalliferous–surface	28	35	59	64	39
Metalliferous–underground	70	51	92	76	50
Metalliferous subtotal	98	86	151	140	89
Quarries	1	0	10	1	4
All operations	428	540	709	601	492

Table 2.5: Number of disabling injury days (days on alternative duties), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	4 234	6 010	8 955	6 524	5 785
Coal–underground	2 828	3 836	2 711	3 100	2 118
Coal subtotal	7 062	9 846	11 666	9 624	7 903
Metalliferous–surface	1 264	876	1 565	1 939	731
Metalliferous–underground	2 610	955	2 951	2 699	1 520
Metalliferous subtotal	3 874	1 831	4 516	4 638	2 251
Quarries	41	0	231	17	76
All operations	10 977	11 677	16 413	14 279	10 230

Table 2.6: Number of lost time injuries and disabling injuries, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	352	420	556	512	449
Coal–underground	179	237	314	276	202
Coal subtotal	531	657	870	788	651
Metalliferous–surface	75	88	134	128	85
Metalliferous–underground	100	78	142	95	73
Metalliferous subtotal	175	166	276	223	158
Quarries	29	28	36	15	22
All operations	735	851	1 182	1 026	831

Table 2.7: Number of lost time injury and disabling injury days (days away from work and days on alternative duties), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	10 695	16 307	18 549	18 674	14 841
Coal–underground	6 712	6 299	8 164	8 819	5 734
Coal subtotal	17 407	22 606	26 713	27 493	20 575
Metalliferous–surface	3 049	2 251	3 461	3 772	1 859
Metalliferous–underground	4 170	2 087	4 402	3 844	2 843
Metalliferous subtotal	7 219	4 338	7 863	7 616	4 702
Quarries	676	1 605	965	452	432
All operations	25 302	28 549	35 541	35 561	25 709

Table 2.8: Number of permanent incapacities, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	36	40	16	16	21
Coal–underground	5	10	3	7	6
Coal subtotal	41	50	19	23	27
Metalliferous–surface	3	1	3	6	3
Metalliferous–underground	2	1	3	1	6
Metalliferous subtotal	5	2	6	7	9
Quarries	1	5	3	2	2
All operations	47	57	28	32	38

Table 2.9: Number of fatalities, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	0	2	0	0	0
Coal–underground	0	0	0	0	1
Coal subtotal	0	2	0	0	1
Metalliferous–surface	0	0	0	2	0
Metalliferous–underground	0	1	0	0	1
Metalliferous subtotal	0	1	0	2	1
Quarries	1	0	1	0	0
Exploration	0	0	0	0	0
All operations	1	3	1	2	2

Table 2.10: Number of medical treatment injuries, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	264	403	463	396	368
Coal–underground	138	271	350	201	88
Coal subtotal	402	674	813	597	456
Metalliferous–surface	n/a	88	197	131	120
Metalliferous–underground	n/a	60	149	79	60
Metalliferous subtotal	n/a	148	346	210	180
Quarries	n/a	31	35	58	71
All operations	402	853	1 194	865	707

n/a = data was not collected at this time

Table 2.11: Total recordable injuries, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	616	823	1 019	908	817
Coal–underground	317	508	664	477	290
Coal subtotal	933	1 331	1 683	1 385	1 107
Metalliferous–surface	n/a	176	331	259	205
Metalliferous–underground	n/a	138	291	174	133
Metalliferous subtotal	n/a	314	622	433	338
Quarries	n/a	59	71	73	93
All operations	933	1 704	2 376	1 891	1 538

n/a = data was not collected at this time

Table 2.12: Number of reported high potential incidents, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	988	1 228	1 380	1 397	1 303
Coal–underground	356	338	398	428	423
Coal subtotal	1 344	1 566	1 778	1 825	1 726
Metalliferous–surface	214	183	302	238	196
Metalliferous–underground	121	162	216	210	186
Metalliferous subtotal	335	345	518	448	382
Quarries	72	68	94	71	60
All operations	1 751	1 979	2 390	2 344	2 168

Table 2.13: Number of employees at 30 June, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	22 339	26 346	34 516	30 729	28 655
Coal–underground	4 516	6 222	7 592	6 964	6 778
Coal subtotal	26 855	32 568	42 108	37 693	35 433
Metalliferous–surface	6 653	7 776	8 664	7 265	7 841
Metalliferous–underground	4 195	5 219	6 168	6 613	6 586
Metalliferous subtotal	10 848	12 995	14 832	13 878	14 427
Quarries	1 310	1 373	1 773	1 653	1 666
All operations	39 013	46 936	58 713	53 224	51 526

Table 2.14: Total hours worked (millions), 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Coal–surface	44.8	50.3	63.9	66.6	61.3
Coal–underground	10.3	12.0	17.3	18.6	14.3
Coal subtotal	55.1	62.3	81.2	85.2	75.6
Metalliferous–surface	15.0	18.0	20.1	18.3	19.6
Metalliferous–underground	9.0	10.2	14.2	15.0	13.3
Metalliferous subtotal	24.0	28.2	34.3	33.3	32.9
Quarries	2.3	2.0	2.2	2.8	2.8
All operations	81.4	92.5	117.7	121.4	111.2

2.1 Complaints about safety and health at mines

Queensland mine safety and health legislation, particularly section 254 of the *Mining and Quarrying Safety and Health Act 1999* and section 275 of the *Coal Mining Safety and Health Act 1999*, allows mine workers or their representatives to make confidential complaints about safety and health matters to the Mines Inspectorate.

The Mines Inspectorate received 121 complaints about safety and health matters during 2013–14, of which 85 were from mine workers or their representatives. Figure 2.1 shows the type and number of complaints made in 2013–14 including dust exposure, inadequate equipment maintenance, quality of training, fatigue and working hours, drug use, lack of supervision, not reporting or investigating incidents, workplace bullying and heat exposure.

Of the 121 complaints, a total of 98 complaints have been closed out at the time of drafting this report, with outcomes including:

- directive/s or substandard condition or practice notice(s) issued by the Mines Inspectorate
- a mine record entry being made by the Mines Inspectorate
- the Mines Inspectorate contacting the site
- the complaint being addressed by other means.

2.2 Directives issued by the Mines Inspectorate

Inspectors of mines and inspection officers have the power to issue various directives under Part 9, Division 5 of the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*.

During 2013–14, the Mines Inspectorate issued 307 directives; an increase from the 265 issued in 2012–13.

The directives issued included:

- 191 in the Central Region
- 87 in the Northern Region
- 29 in the Southern Region.

Of these directives, 148 were issued under the *Coal Mining Safety and Health Act 1999* and 159 were issued under the *Mining and Quarrying Safety and Health Act 1999*. The types of directives issued are listed below:

- ensure coal mine worker competent
- carry out test
- reduce risk
- suspend operations for unacceptable level of risk
- review safety and health management system and principal hazard management plans
- review safety and health management system
- suspend operations for ineffective safety and health management system
- provide an independent engineering study.

Figure 2.1: Complaint type and number received in 2013–14 (the number shown in brackets is for 2012–13)

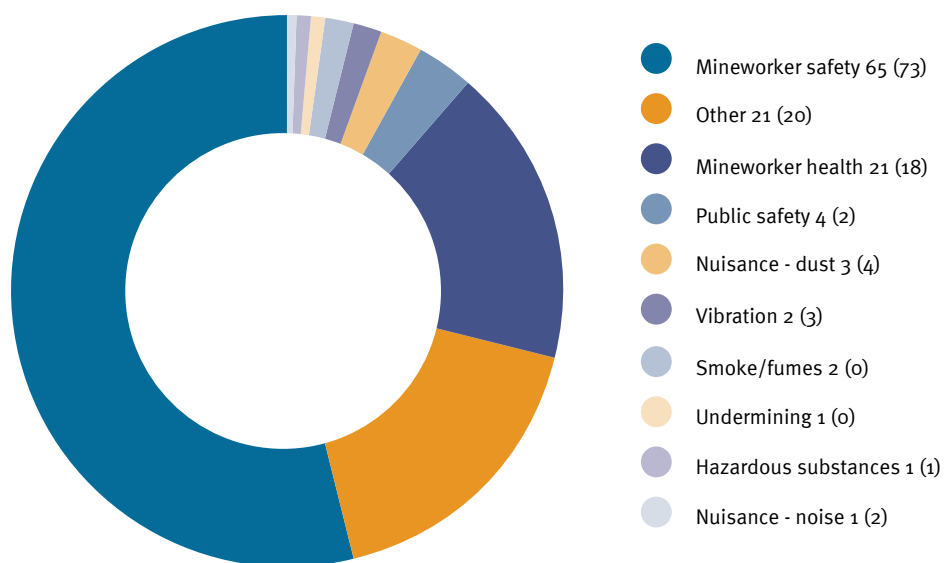


Table 2.15: Mines Inspectorate activity 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Inspections	1 197	1 321	1 387	1 451	1 487
Inspections–unannounced	288	161	136	127	135
Inspections–weekend or backshift	18	18	8	13	12
Inspections–unannounced weekend or backshift	32	12	12	11	7
Audits–subject or system specific	135	135	48	14	36
Audits–compliance audits	108	44	7	19	13



3

INCIDENT RATES

Lag performance indicators: incident rates

Photo: Glencore Xstrata



3. Lag performance indicators: incident rates

The graphs in this chapter and their accompanying tables show five-year trends across a number of indicators used to assess safety and health performance across the industry. The data presented here are normalised either in terms of the number of hours worked or the average days lost per injury. These normalised values can be used to make comparisons across different sectors.

The performance indicators plotted are:

- Figure 3.1: Lost time injury frequency rate, 2009–14
- Figure 3.2: Lost time injury severity rate (days away from work only), 2009–14
- Figure 3.3: Lost time injury duration rate (days away from work only), 2009–14
- Figure 3.4: Lost time injury severity rate (days away from work and on alternative duties), 2009–14
- Figure 3.5: Lost time injury duration rate (days away from work and on alternative duties), 2009–14
- Figure 3.6: Disabling injury frequency rate, 2009–14
- Figure 3.7: Disabling injury severity rate, 2009–14
- Figure 3.8: Disabling injury duration rate, 2009–14
- Figure 3.9: Lost time injury and disabling injury frequency rate, 2009–14

- Figure 3.10: Lost time injury and disabling injury severity rate, 2009–14
- Figure 3.11: Lost time injury and disabling injury duration rate, 2009–14
- Figure 3.12: Permanent incapacity frequency rate, 2009–14
- Figure 3.13: Fatality frequency rate, 2009–14
- Figure 3.14: Total recordable injury frequency rate for coal mines, 2009–14

Figures 3.10 and 3.11 indicate the combined LTI and DI severity rate and duration rate respectively. These performance indicators are the best measure of safety performance and are primarily referred to when assessing industry performance.

Figure 3.1: Lost time injury frequency rate, 2009–14

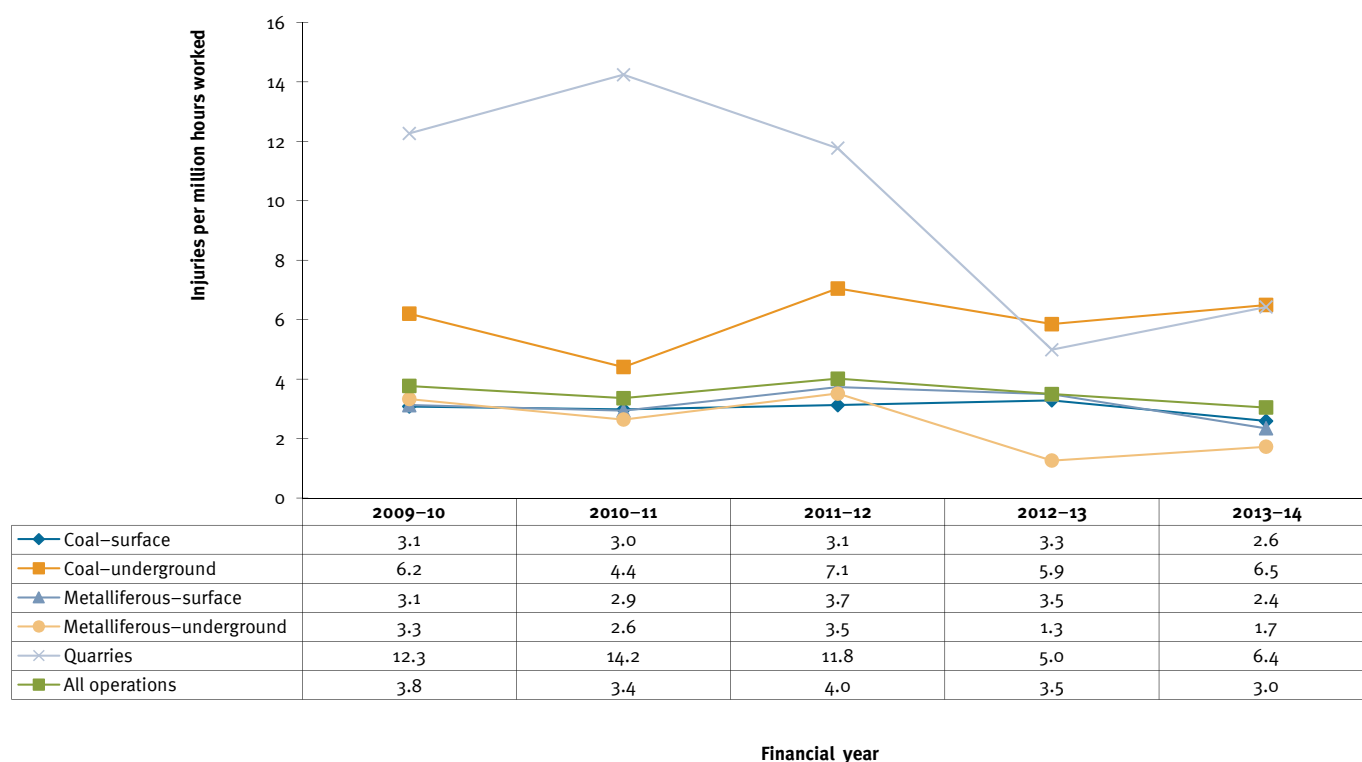


Figure 3.2: Lost time injury severity rate (days away from work only), 2009–14

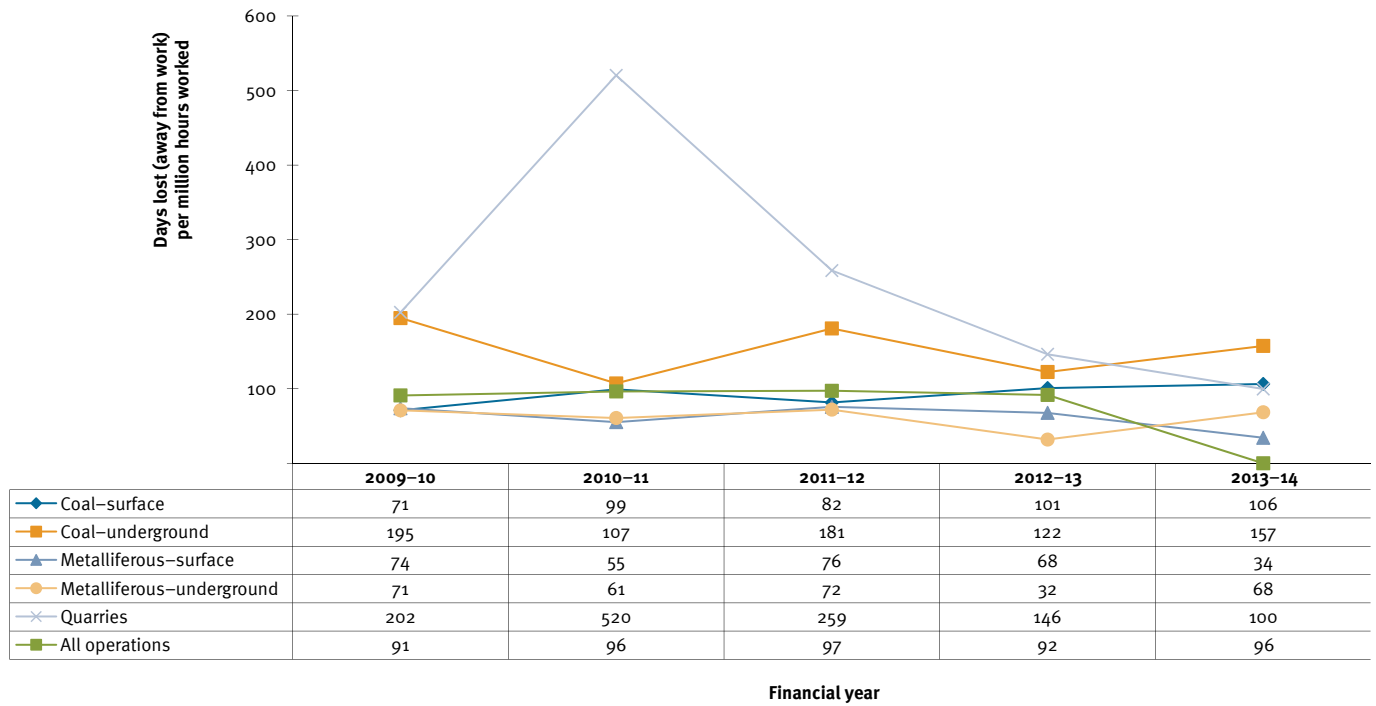


Figure 3.3: Lost time injury duration rate (days away from work only), 2009–14

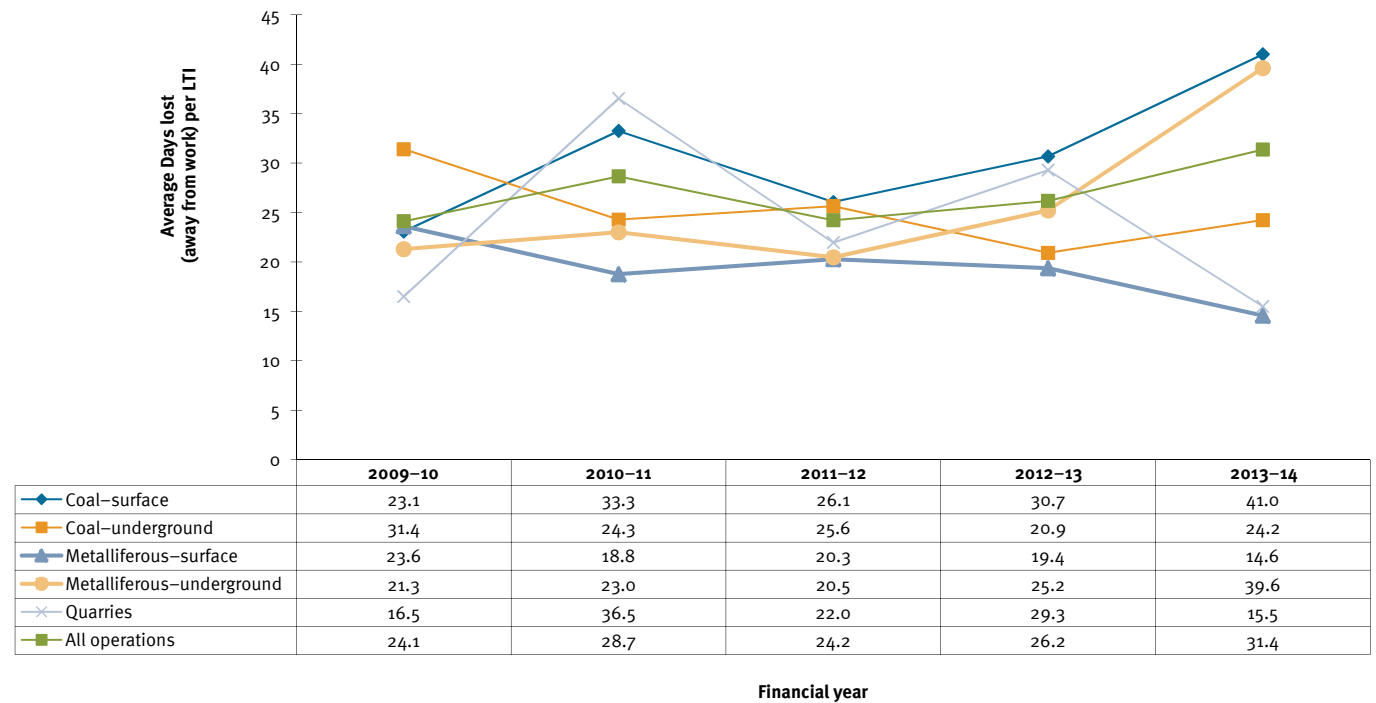


Figure 3.4: Lost time injury severity rate (days away from work and on alternative duties), 2009–14

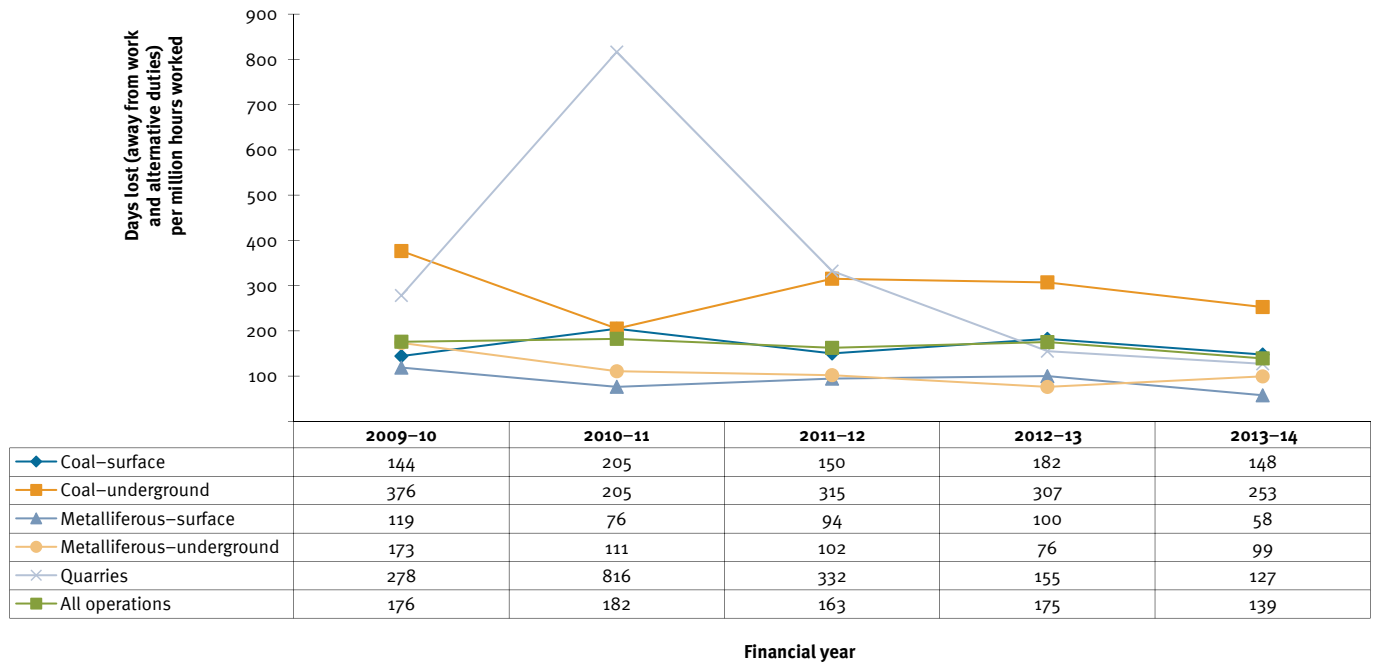


Figure 3.5: Lost time injury duration rate (days away from work and on alternative duties), 2009–14

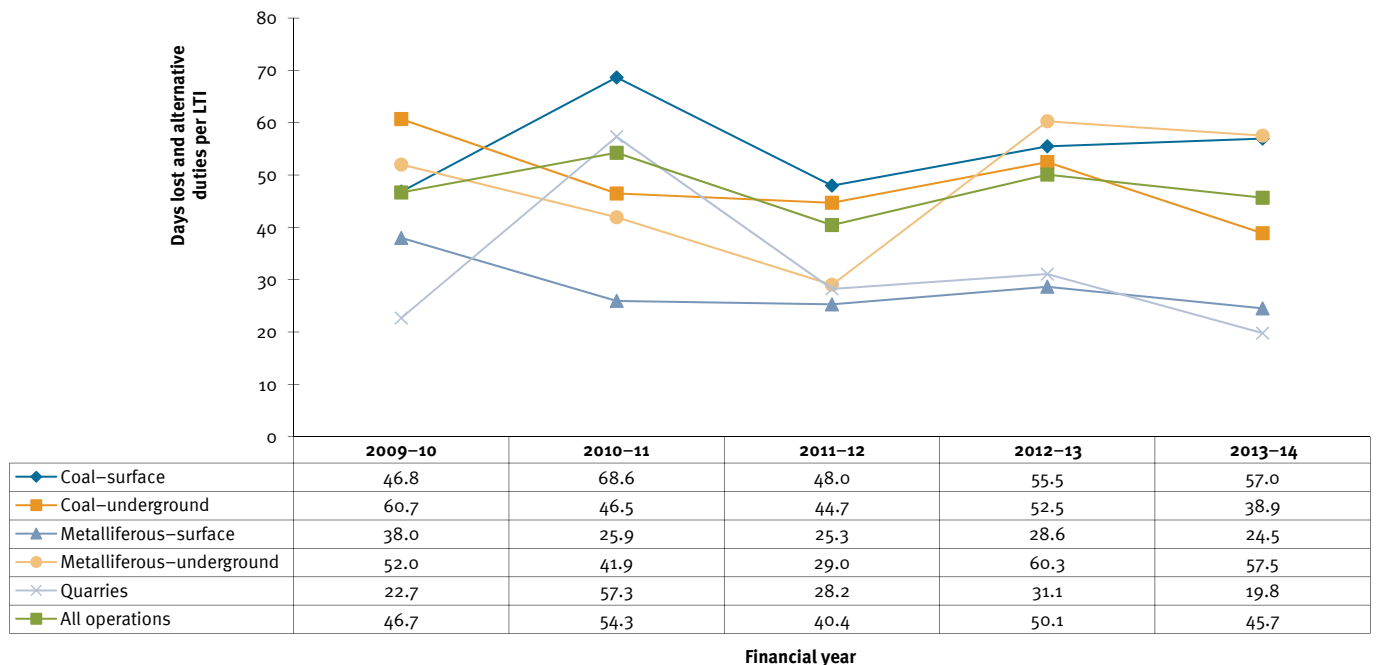


Figure 3.6: Disabling injury frequency rate, 2009–14

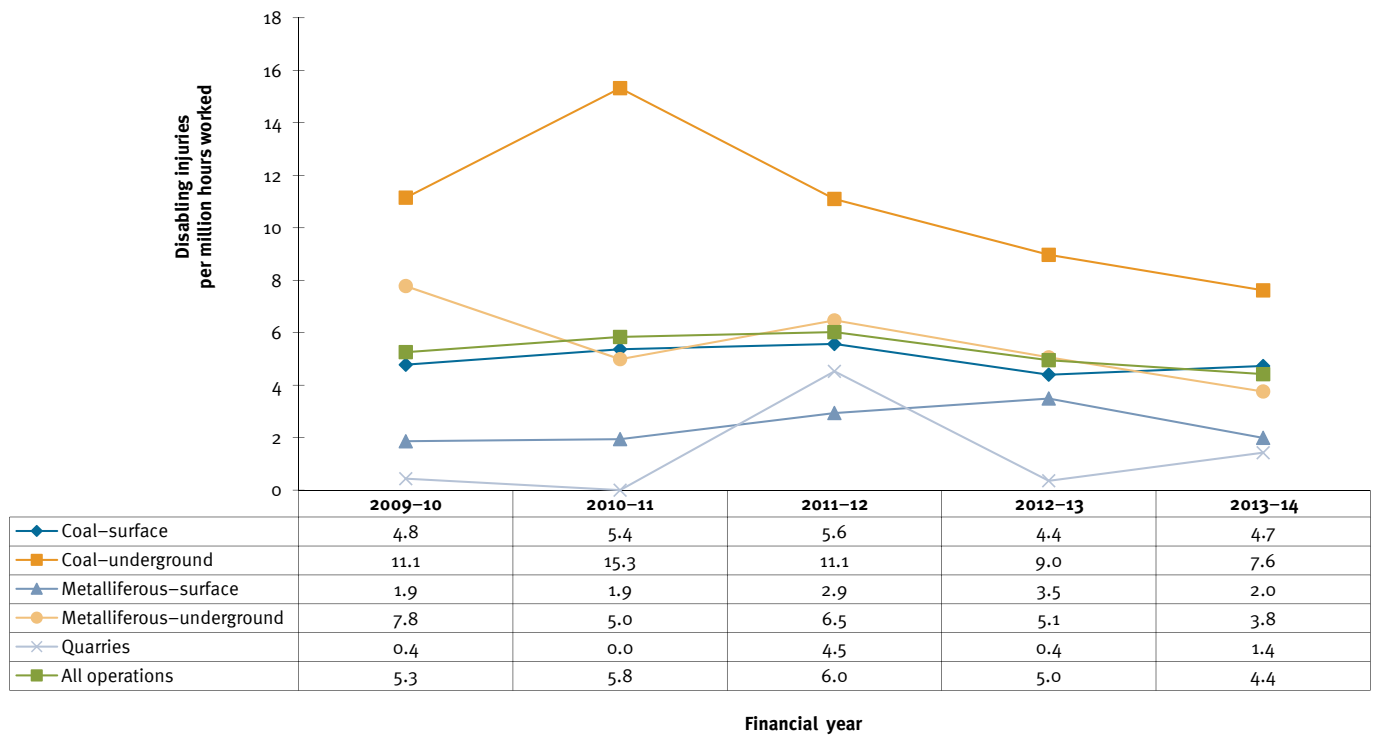


Figure 3.7: Disabling injury severity rate, 2009–14

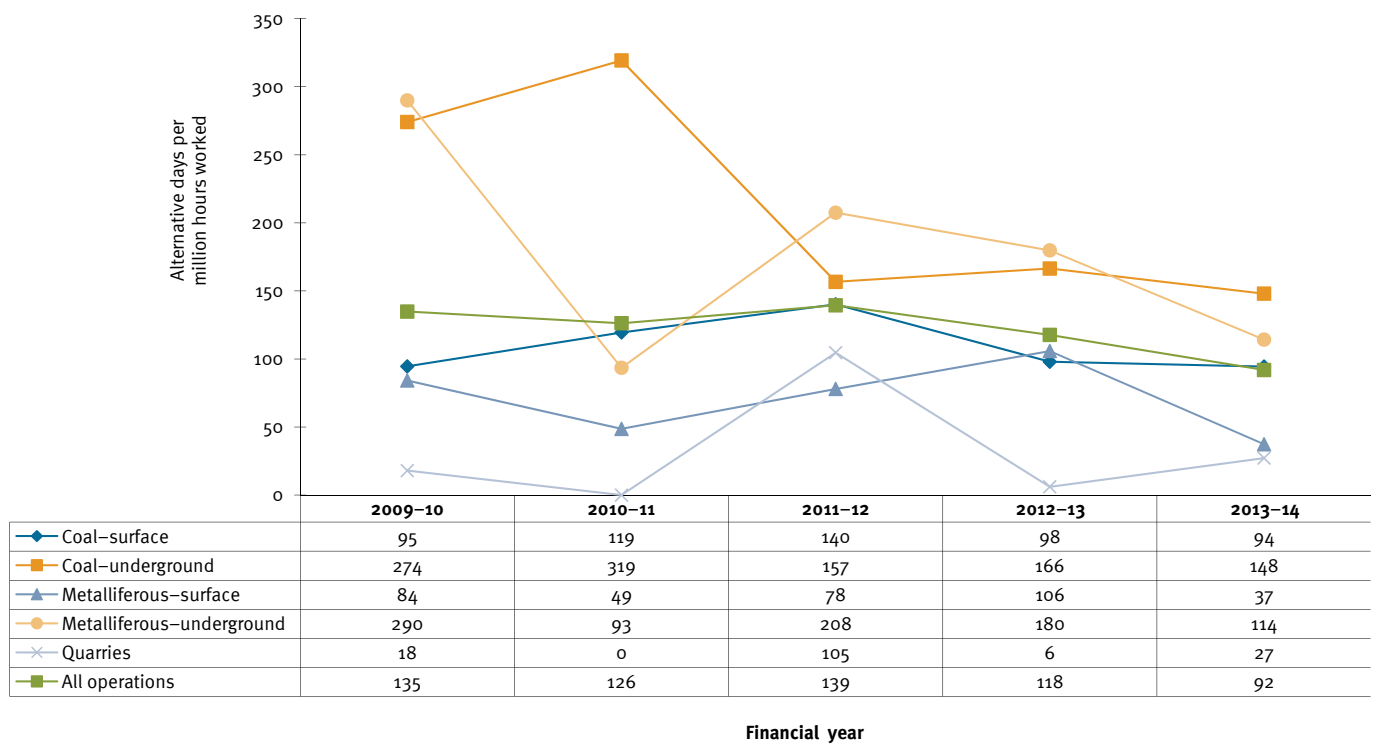


Figure 3.8: Disabling injury duration rate, 2009–14

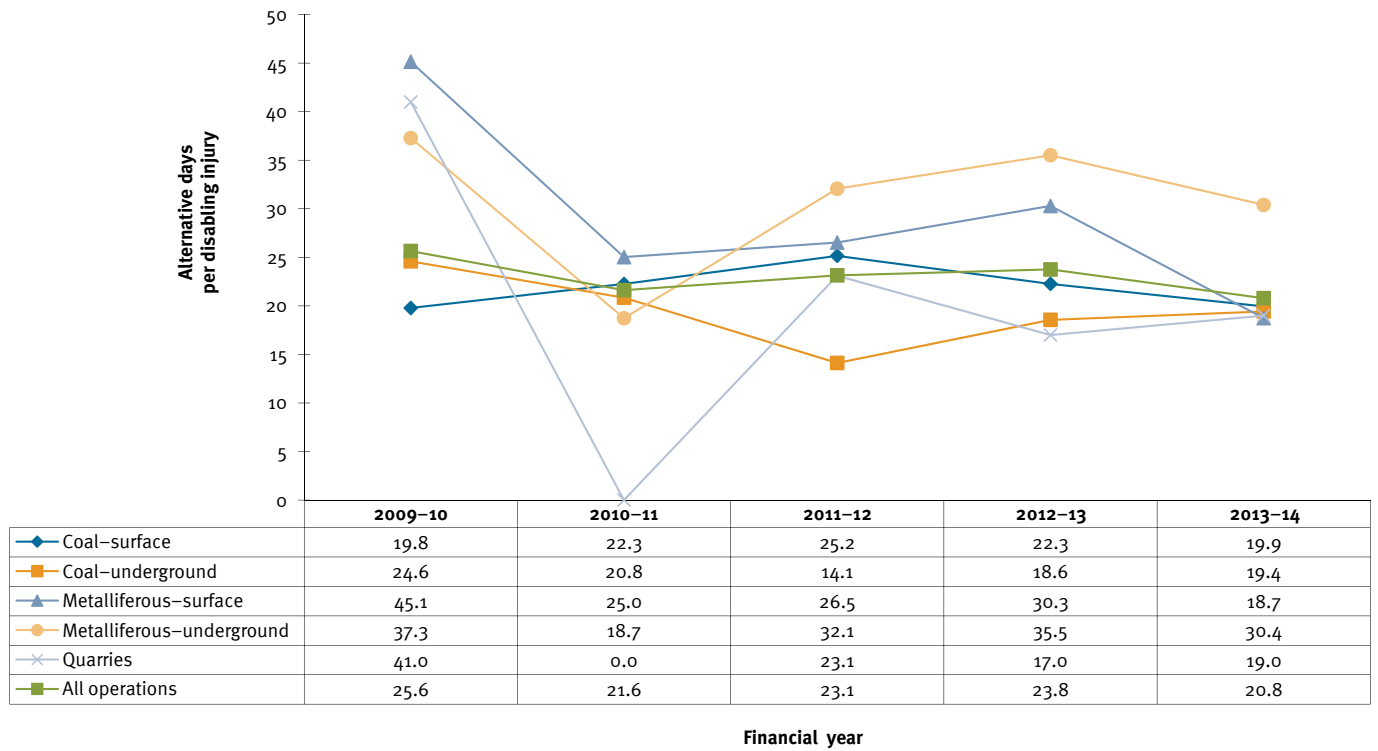


Figure 3.9: Lost time injury and disabling injury frequency rate, 2009–14

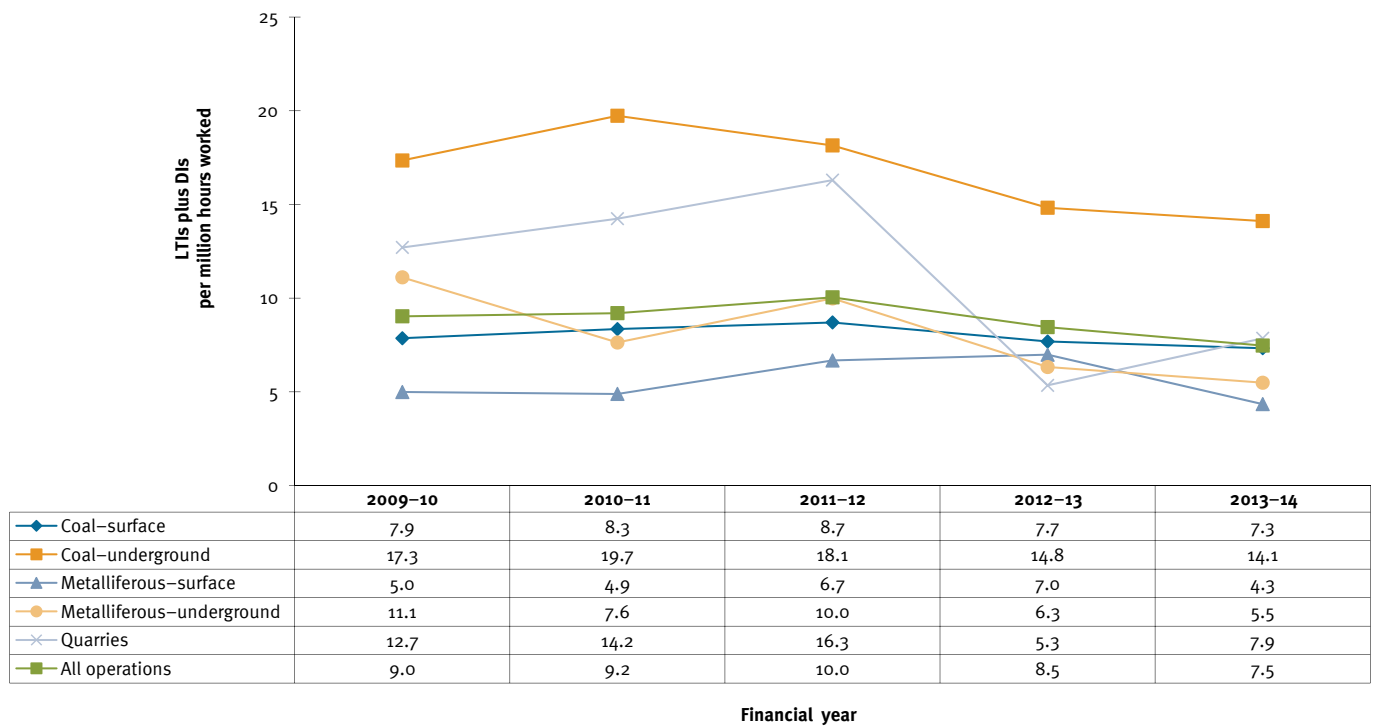


Figure 3.10: Lost time injury and disabling injury severity rate, 2009–14

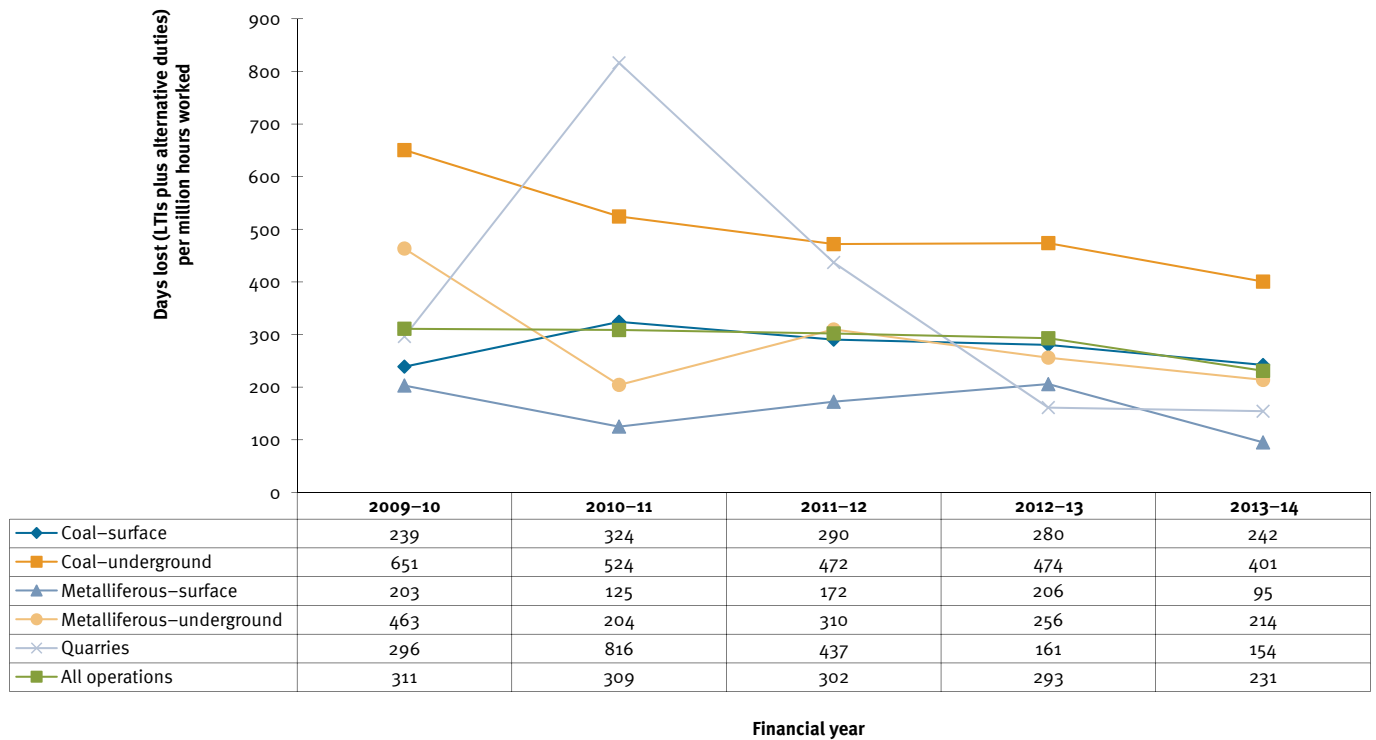


Figure 3.11: Lost time injury and disabling injury duration rate, 2009–14

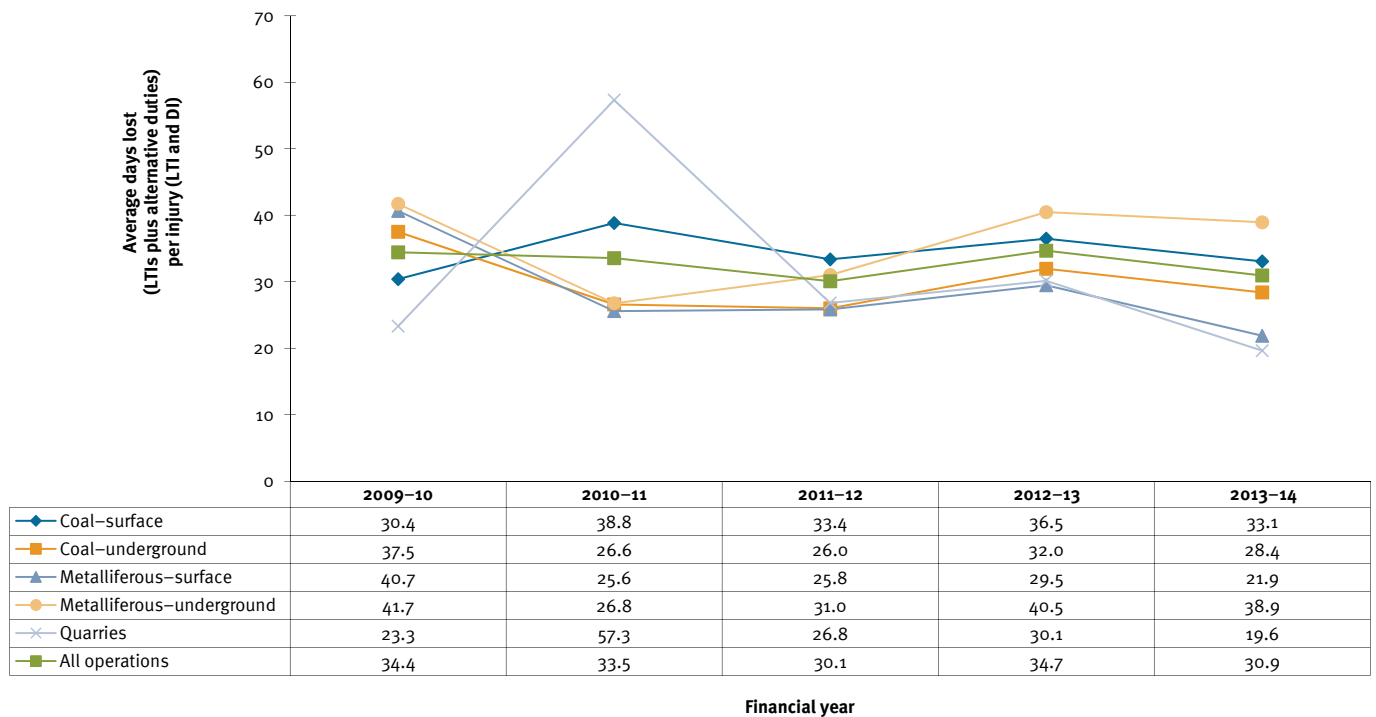


Figure 3.12: Permanent incapacity frequency rate, 2009–14

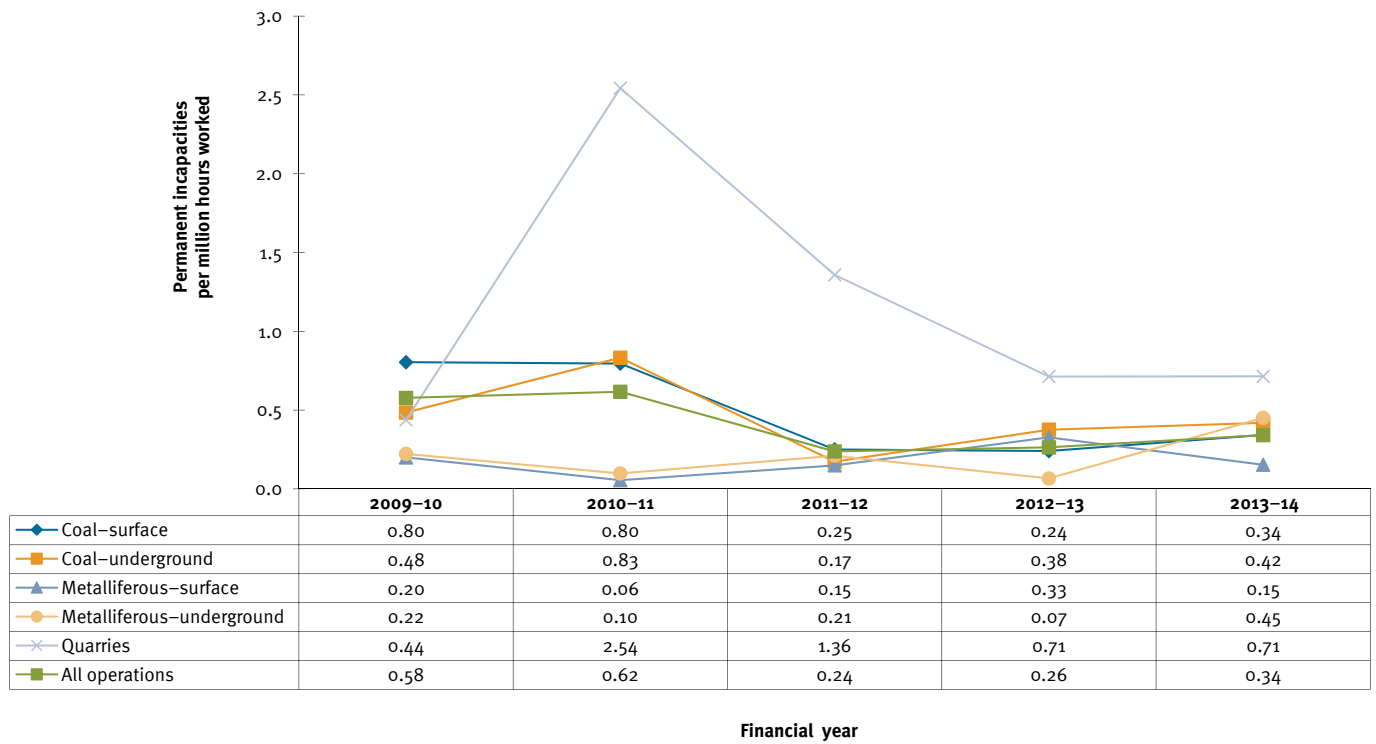


Figure 3.13: Fatality frequency rate, 2009–14

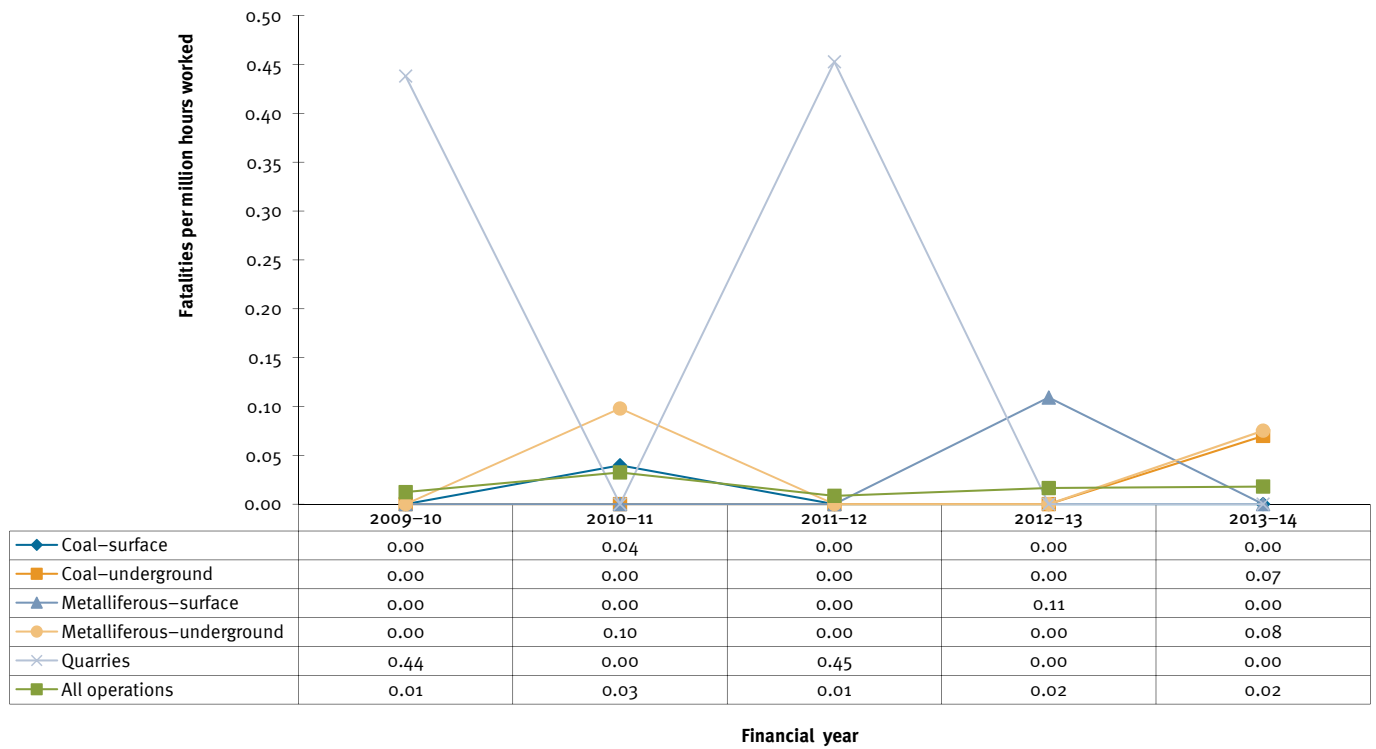


Figure 3.14: Total recordable injury frequency rate, 2009–14

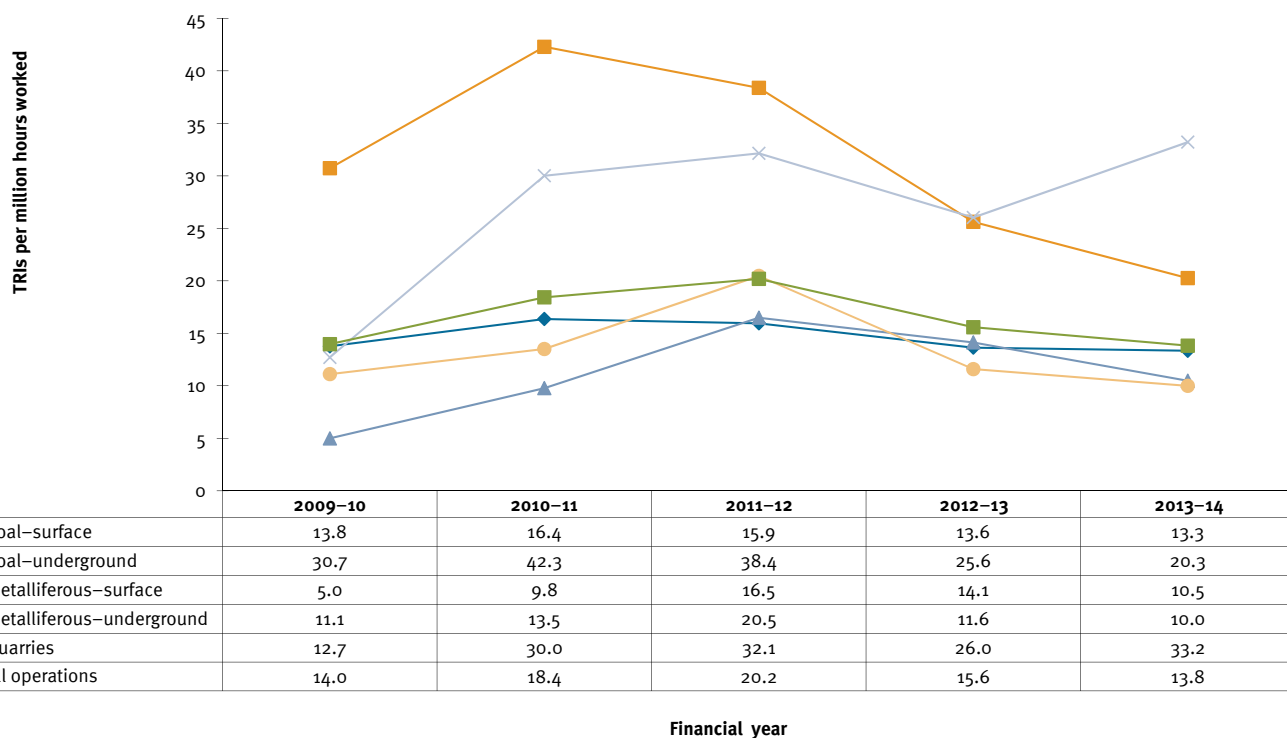




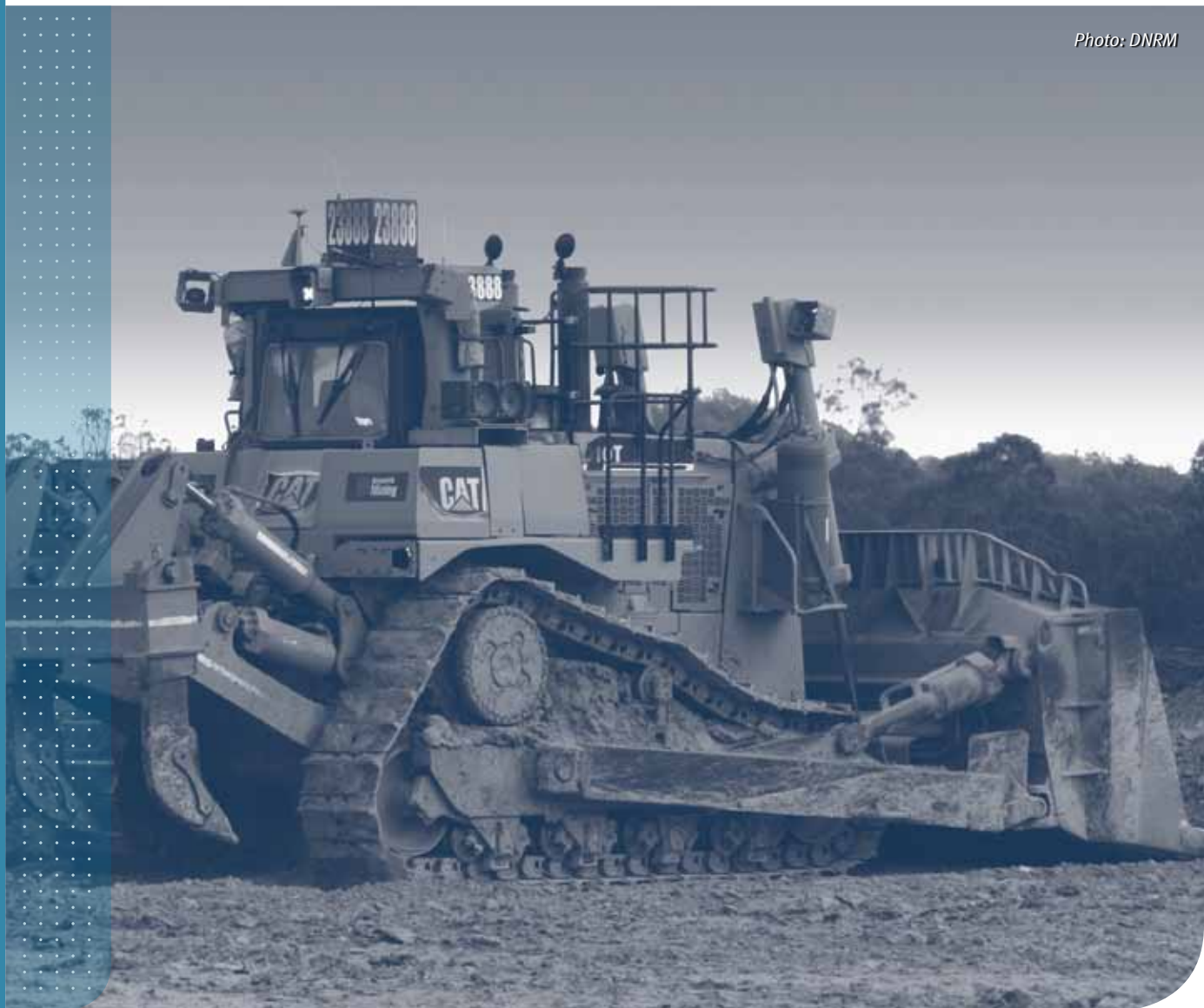
Photo: DNRM

4

CLASSIFICATION DATA

Injury classification data

Photo: DNRM



4. Injury classification data

The LTI data collected for all sectors have been classified and illustrated in the figures in this chapter. The figures and the sectors they illustrate are listed below:

- Figure 4.1: Body parts injured, 2011–14
- Figure 4.2: Nature of injury, 2011–14
- Figure 4.3: Mechanism of injury (the action, exposure or event that was the direct cause of the most serious injury), 2011–14
- Figure 4.4: Breakdown agency—equipment (the equipment that was principally involved in, or most closely associated with the injury), 2011–14
- Figure 4.5: Occurrence class of injuries—activity (the activity that was principally involved in, or most closely associated with the injury), 2011–14.

Significant results from this classification are summarised below:

- Back and hand injuries account for over 35% of injuries (Figure 4.1)
- Sprains and strains account for 40% of injuries (Figure 4.2)
- Muscular stress accounts for 16% of injuries (Figure 4.3)
- Earthmoving equipment was involved in almost 13% of injuries (Figure 4.4)
- Manual handling of equipment/material accounts for over 40% of injuries (Figure 4.5).

4.1 Age analysis of injury classification data

The breakdown of age across the coal industry, based on data collected for the Coal Mine Workers' Health Scheme, is shown in Figure 4.6. Note that the average age from 1999 to 2014 was 37 years old. The number of days lost per injury in relation to age is shown in Figure 4.7.

Figure 4.1: Body parts injured, 2011–14

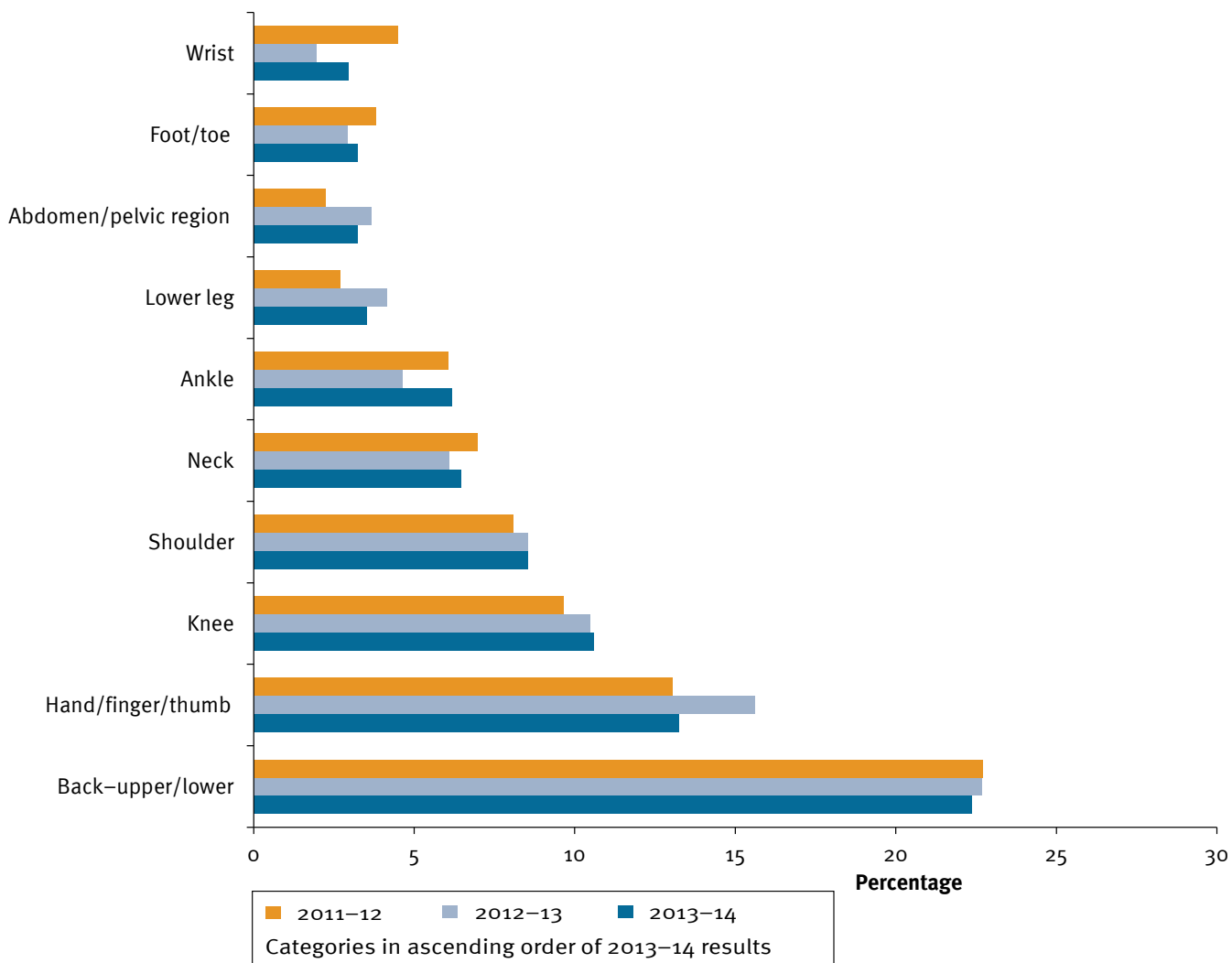


Figure 4.2: Nature of injury, 2011–14

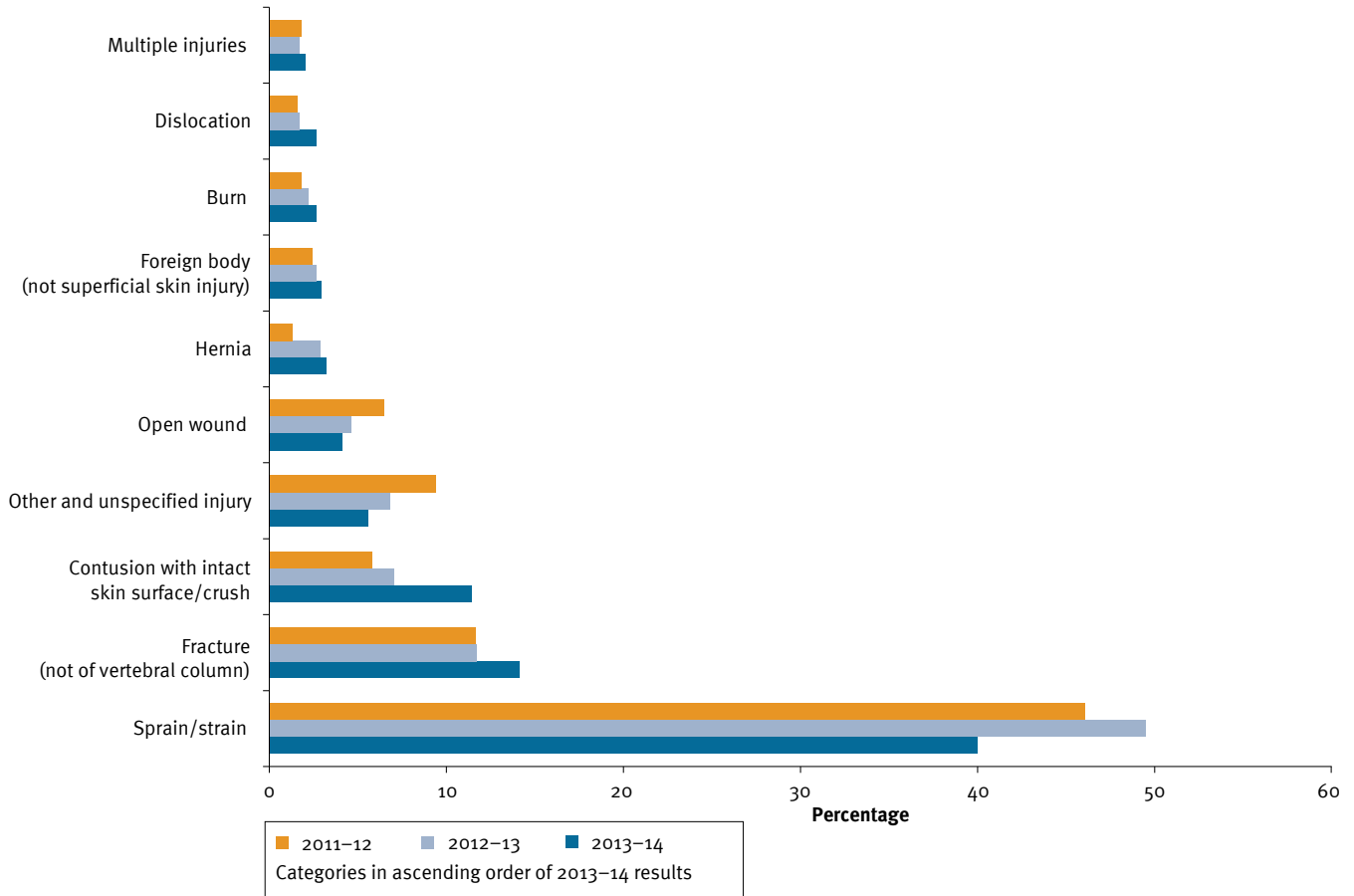


Figure 4.3: Mechanism of injury (the action, exposure or event that is the direct cause of the most serious injury), 2011–14

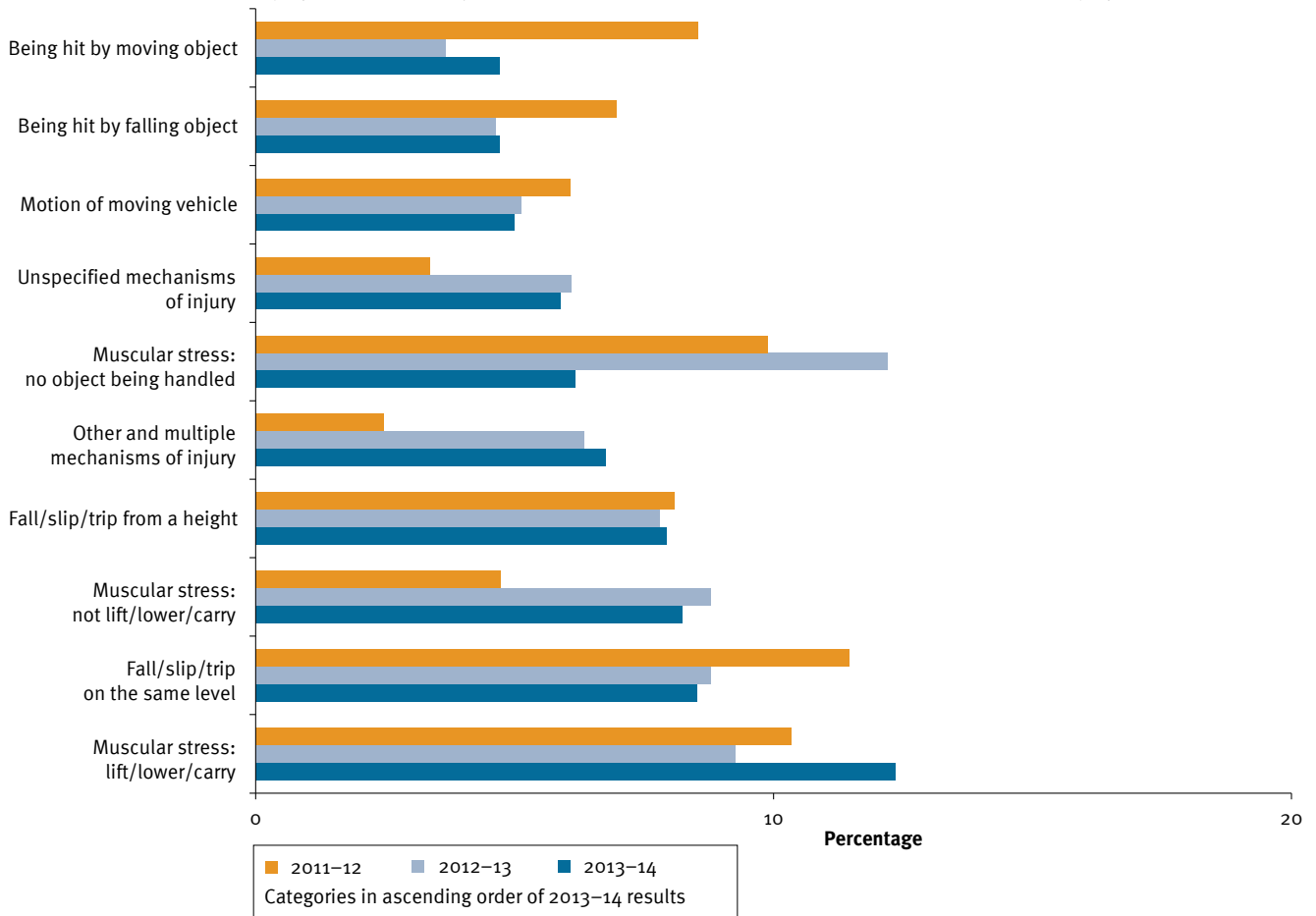


Figure 4.4: Breakdown agency: equipment (the equipment that was principally involved in, or most closely associated with the injury), 2011–14

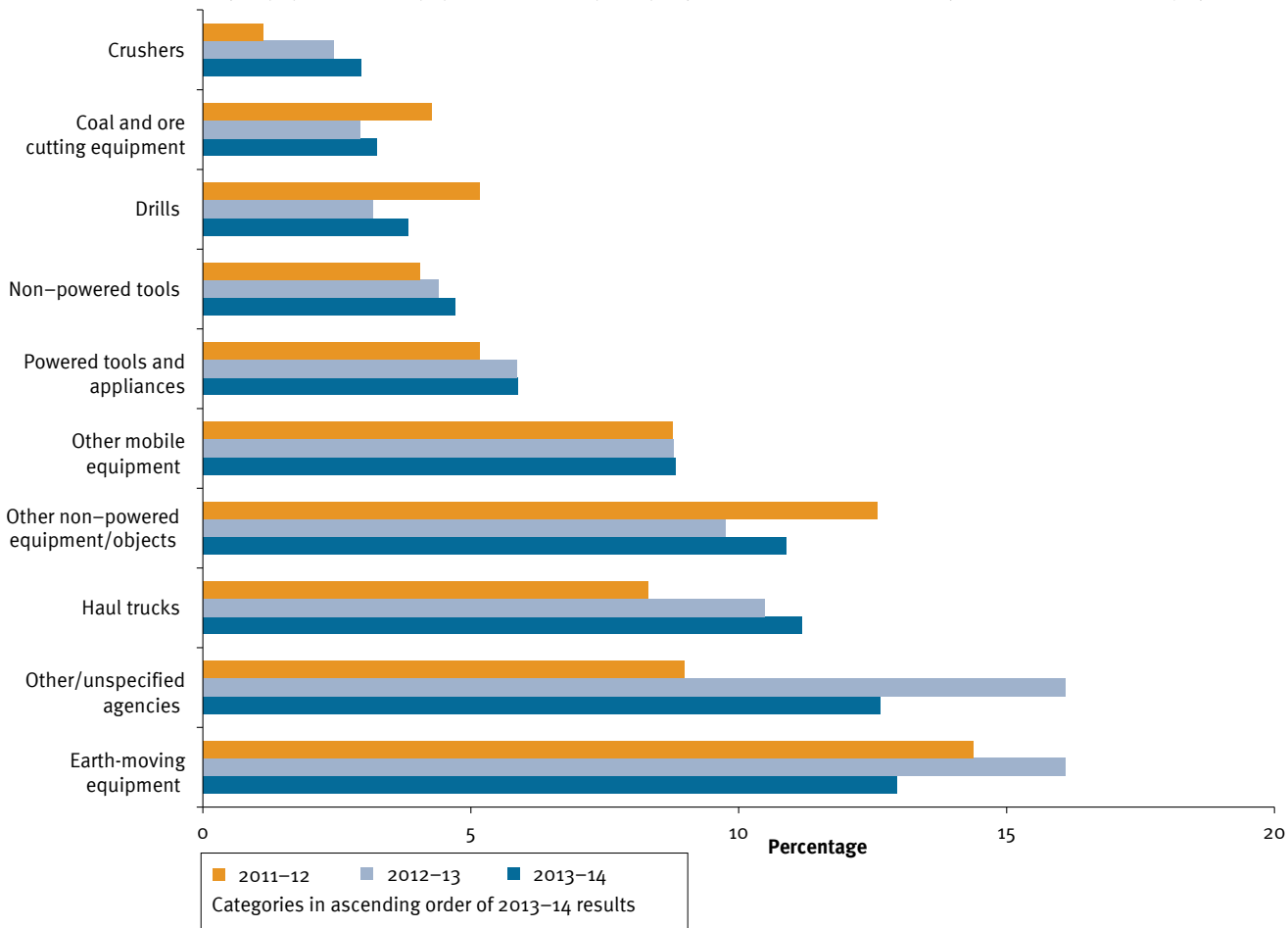


Figure 4.5: Occurrence class of injuries: activity (the activity that was principally involved in, or most closely associated with the injury), 2011–14

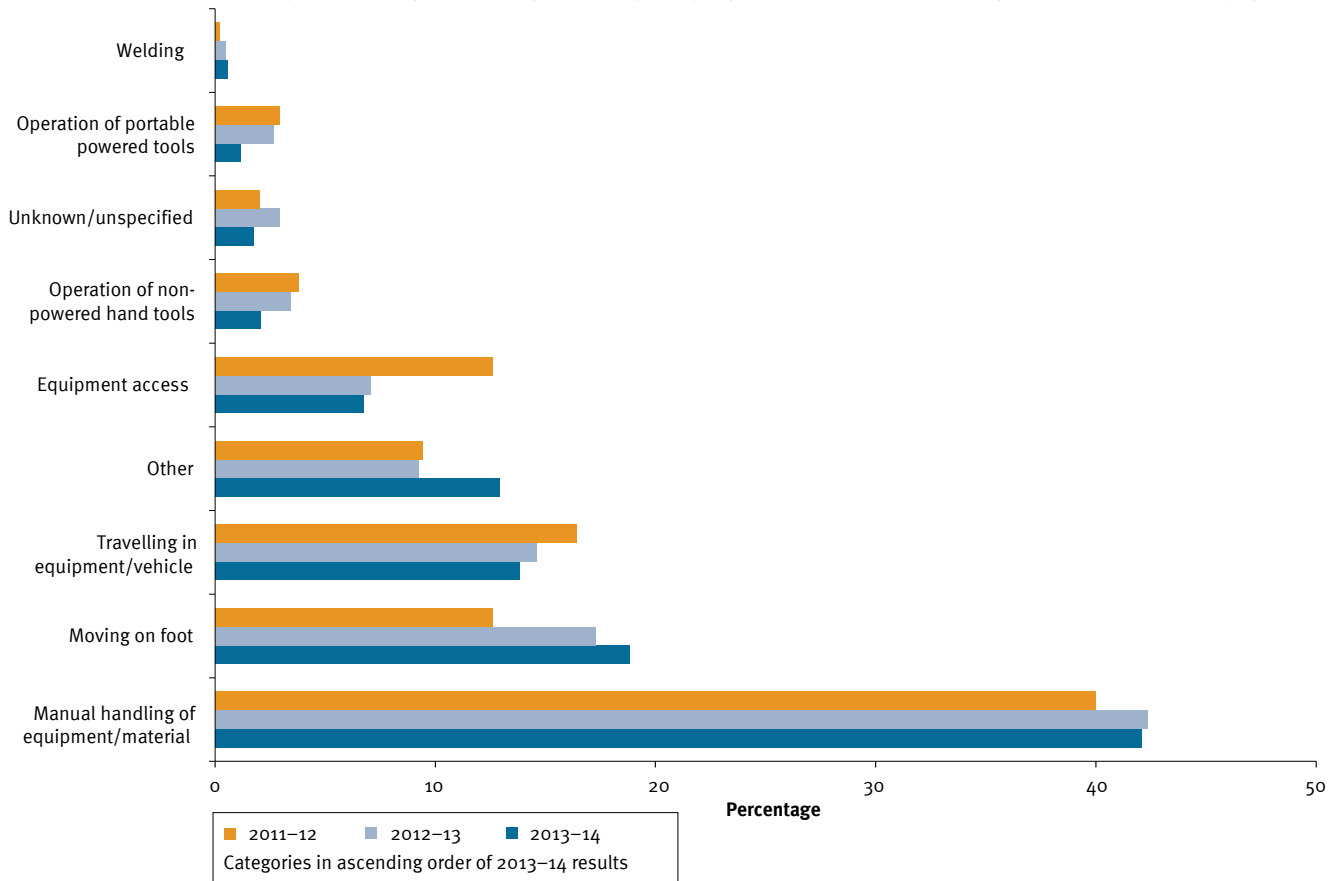


Table 4.1 provides a breakdown of Queensland mining LTIs (2004–13) across 10-year age groupings (20s, 30s, 40s and 50+).

The age-related injury profile is presented by a comparison of three classifications of injury data:

- nature of injury
- mechanism of injury
- occurrence class of injury.

The analysis identifies the highest classifications for each age group and gives an indication of which age group had the highest proportion of a single type of LTI.

Figure 4.6: Age distribution (coal industry), 1999–2014

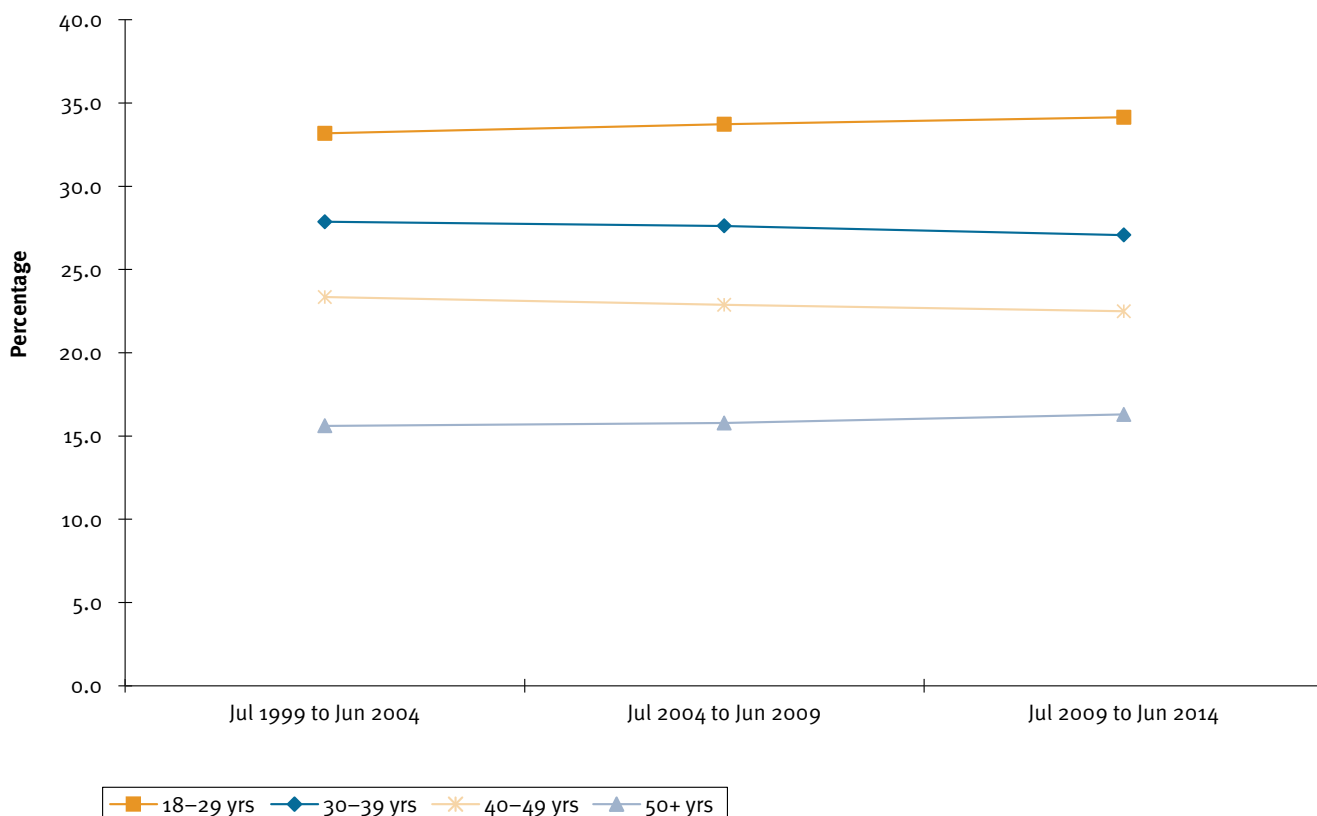


Figure 4.7: Average number of days lost per age group for lost time injuries, 2014

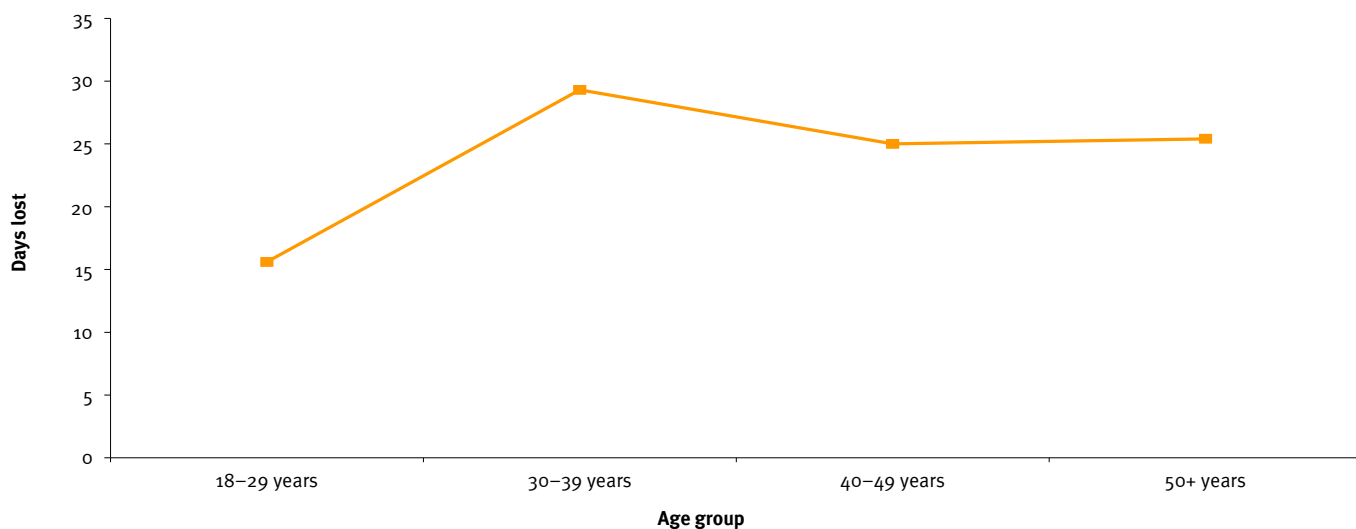


Table 4.1: Lost time injuries in all sectors—percentage of type across all groups, 2005–14

	18–29 yrs old (20s) 23.1% of all LTIs		30–39 yrs old (30s) 29.4% of all LTIs		40–49 yrs old (40s) 25.1% of all LTIs		50+ yrs old (50s) 22.4% of all LTIs		
	% in age group	% of all LTIs	% in age group	% of all LTIs	% in age group	% of all LTIs	% in age group	% of all LTIs	
Nature of injury *	Sprain/strain	35.6	8.2	47.3	13.9	46.5	11.7	48.0	10.7
	Fracture (not of vertebral column)	15.0	3.5	13.3	3.9	15.7	3.9	12.2	2.7
	Other and unspecified injury	6.5	1.5	7.0	2.1	7.4	1.9	9.3	2.1
	Open wound	9.4	2.2	5.3	1.6	5.2	1.3	6.8	1.5
	Contusion with intact skin surface/crush	7.2	1.7	7.2	2.1	6.1	1.5	5.7	1.3
	Burn	5.2	1.2	3.2	0.9	2.2	0.5	1.5	0.3
	Foreign body (not superficial skin injury)	3.6	0.8	2.8	0.8	2.2	0.5	1.1	0.3
	Disorder of muscles/tendons/other soft tissue	1.6	0.4	1.7	0.5	2.8	0.7	2.4	0.5
	Traumatic amputation	2.5	0.6	0.9	0.3	1.9	0.5	1.8	0.4
	Multiple injuries	2.4	0.5	1.2	0.4	1.0	0.3	2.1	0.5
Mechanism of injury *	Fall/slip/trip on the same level	12.3	2.8	11.4	3.3	15.5	3.9	13.8	3.1
	Muscular stress—lift/lower/carry object	8.2	1.9	11.0	3.2	9.6	2.4	9.9	2.2
	Fall/slip/trip from a height	6.0	1.4	7.8	2.3	12.2	3.1	11.9	2.7
	Being hit by moving object	10.4	2.4	7.5	2.2	7.4	1.9	7.0	1.6
	Being hit by falling object	7.9	1.8	6.7	2.0	4.9	1.2	5.9	1.3
	Muscular stress—no object being handled	6.9	1.6	7.2	2.1	7.5	1.9	7.6	1.7
	Motion of moving vehicle	3.3	0.8	5.8	1.7	5.9	1.5	6.0	1.3
	Trapped between stationary and moving object	7.2	1.7	5.9	1.7	3.6	0.9	3.9	0.9
	Muscular stress—handling object not lift/lower/carry	4.4	1.0	5.6	1.6	5.4	1.3	7.3	1.6
	Hitting stationary object	2.7	0.6	3.6	1.1	4.3	1.1	3.7	0.8
Occurrence class of injury *	Working on equipment	24.7	5.7	18.3	5.4	15.2	3.8	16.9	3.8
	Moving on foot	15.4	3.6	13.7	4.0	17.4	4.4	18.7	4.2
	Travelling in equipment/vehicle	9.0	2.1	13.3	3.9	13.0	3.3	14.1	3.2
	Other manual handling	11.2	2.6	12.0	3.5	14.2	3.6	12.8	2.9
	Other	8.8	2.0	11.1	3.3	8.3	2.1	6.5	1.5
	Other equipment access e.g. moving about	3.6	0.8	3.8	1.1	6.1	1.5	4.1	0.9
	Operation of non-powered hand tools	5.8	1.3	3.8	1.1	3.8	0.9	3.1	0.7
	Descending—ground/floor involved	2.5	0.6	3.3	1.0	4.8	1.2	3.4	0.8
	Loading/unloading from vehicles	3.1	0.7	4.3	1.3	3.6	0.9	3.7	0.8
	Operation of portable powered tools	2.7	0.6	2.6	0.8	1.7	0.4	3.3	0.7

* Only the top 10 occurring categories have been used for each injury classification

5 INDICATORS

Lead performance indicators



Photo: Glencore Xstrata

5. Lead performance indicators

Lead indicators or positive performance indicators (PPIs) are measures of pre-emptive actions or initiatives that assist in preventing workplace injury and disease. This is considered a more proactive approach than the use of lag indicators, such as lost time injuries which, by their nature, measure the event or its impact after it has occurred.

Questions in relation to PPIs have been included in the Queensland Mining and Quarrying Industry Census since 2007–08. The questions cover areas of risk management, audits, reviews and HPIs and are designed to collect data on safety and health issues concerning both employees and contractors.

The data are presented in the graphs listed below:

- Figure 5.1: Sites with a register of key hazards on site, 2011–14
- Figure 5.2: Sites where key hazards on site are identified using a formal system, 2011–14
- Figures 5.3.1–5.3.3: Sites that have undertaken formal risk assessments within the previous 12 months and the number of risk assessments performed, 2011–14
- Figures 5.4.1–5.4.3: Workers and contractors routinely involved in conducting formal risk assessments, 2011–14
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- Figure 5.9: Improvement actions resulting from investigations into high potential incidents, 2011–14
- Figure 5.10: Number of high potential incidents, 2011–14

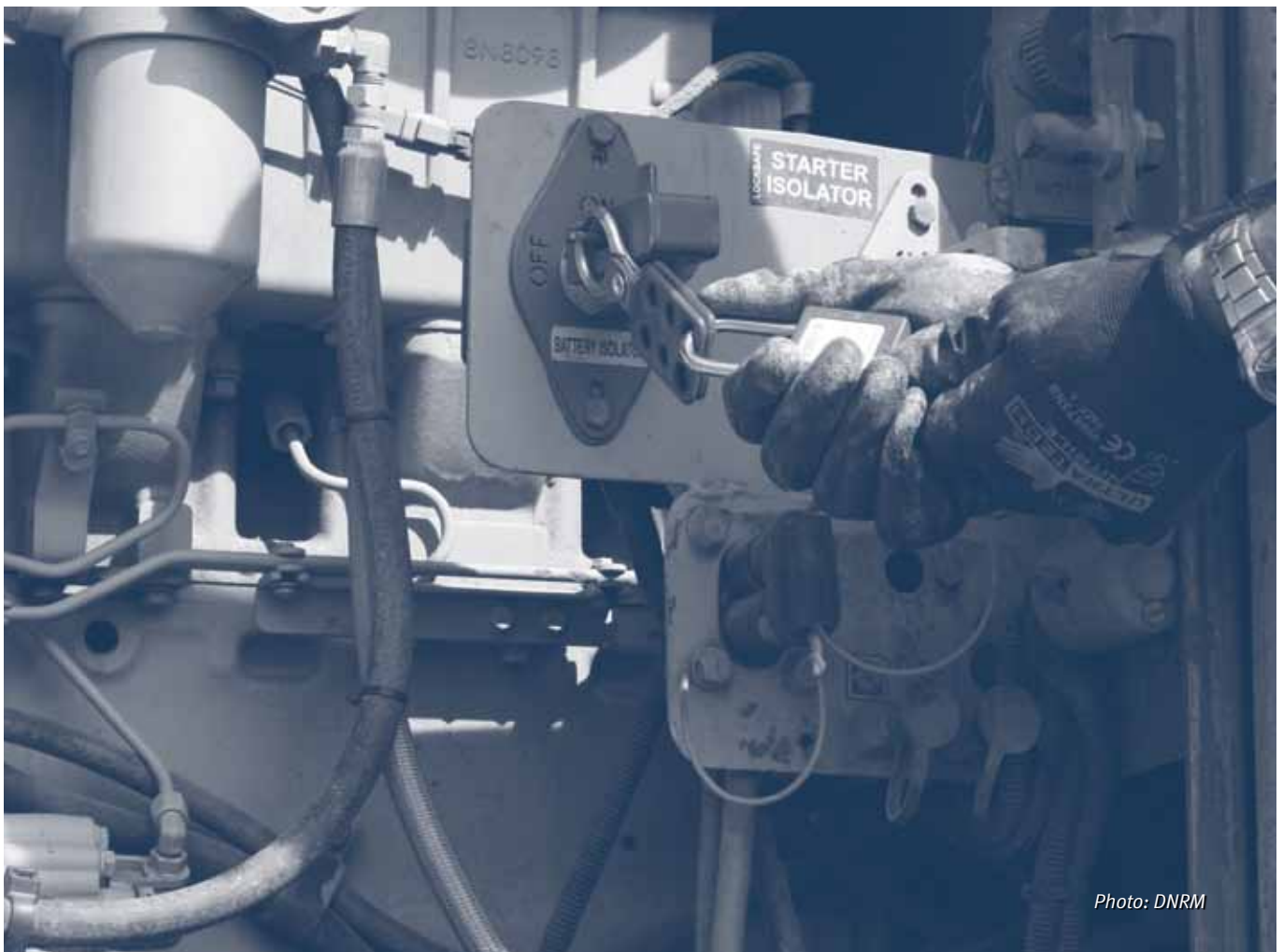


Photo: DNRM

Figure 5.1: Sites with a register of key hazards on site, 2011–14

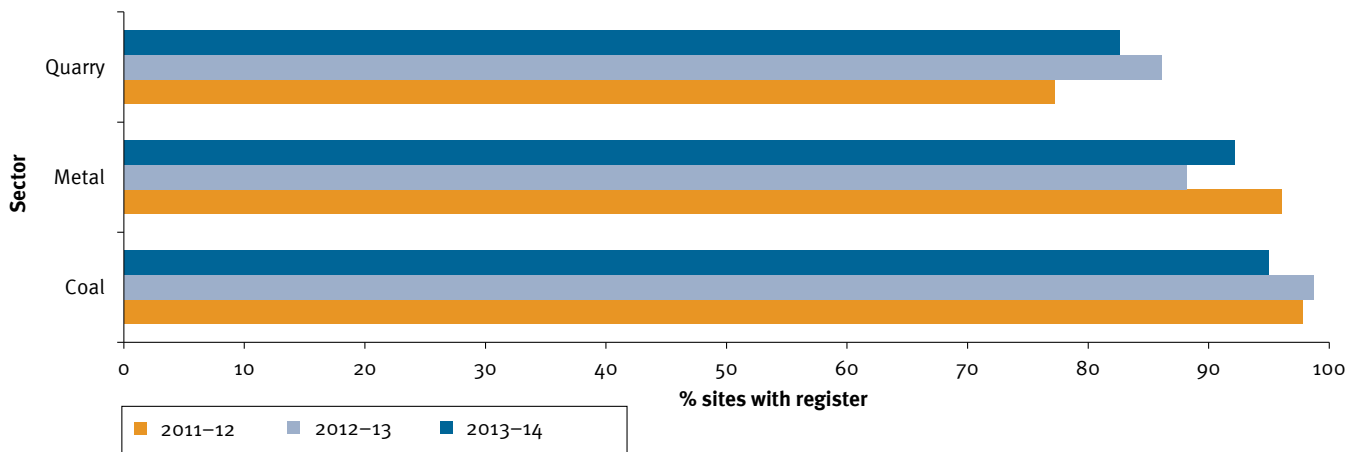


Figure 5.2: Sites where key hazards on site are identified using a formal system, 2011–14

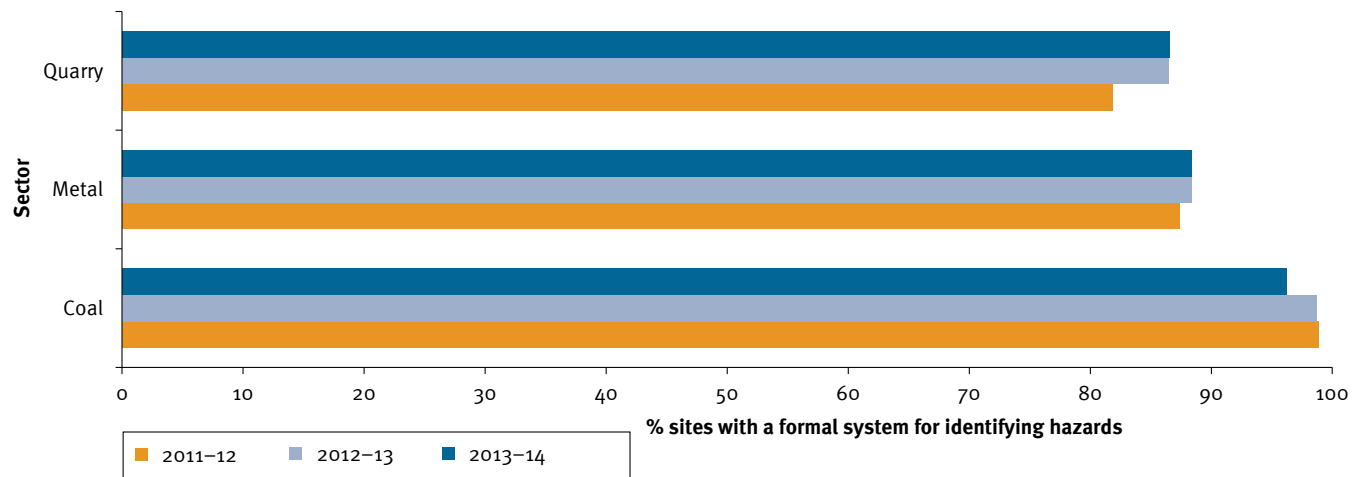


Figure 5.3.1: Coal sites that have undertaken formal risk assessments within the previous 12 months and the number of risk assessments performed, 2011–14

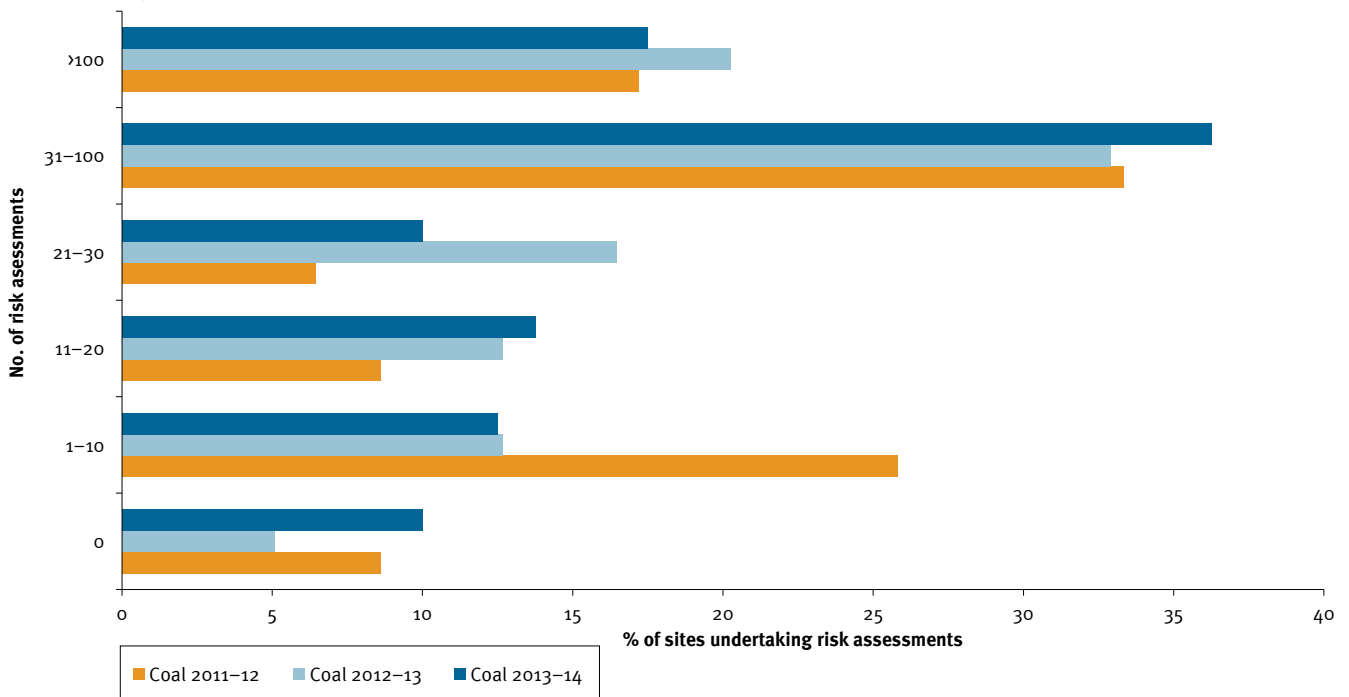


Figure 5.3.2: Metalliferous sites that have undertaken formal risk assessments within the previous 12 months and the number of risk assessments performed, 2011–14

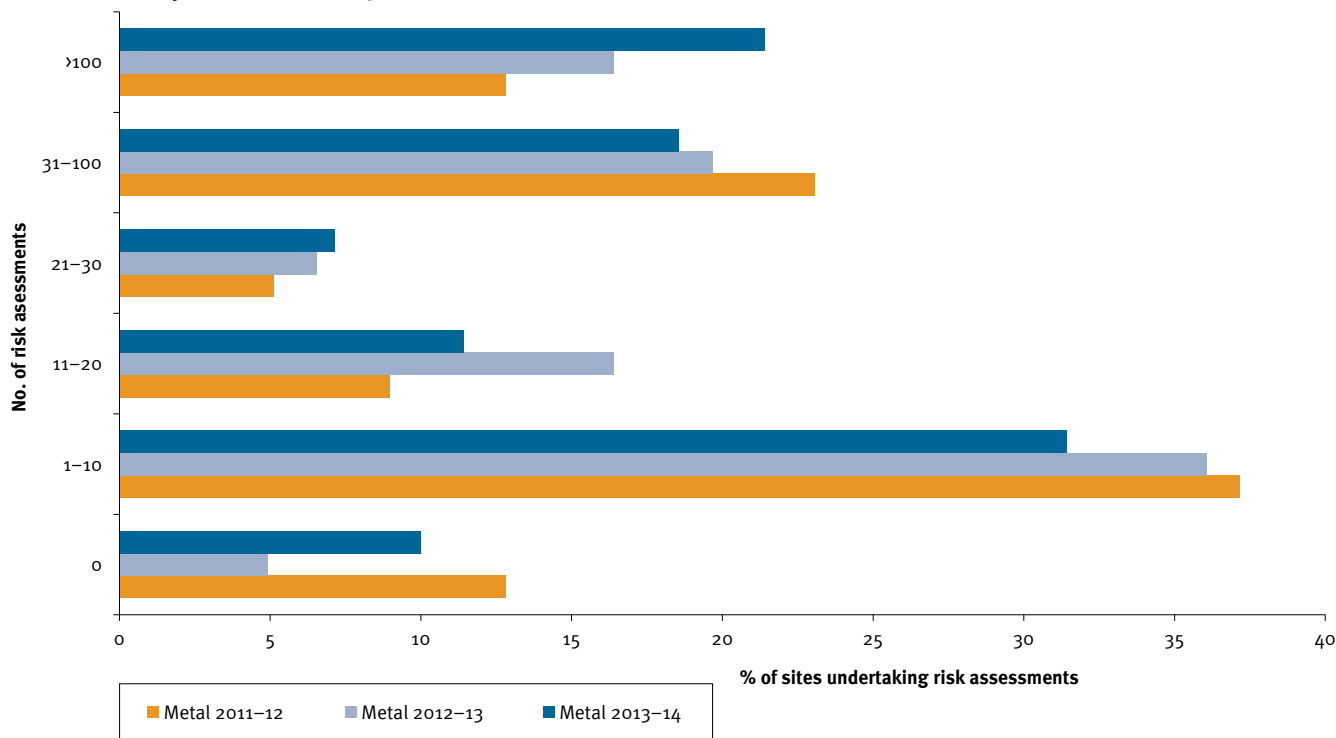


Figure 5.3.3: Quarry sites that have undertaken formal risk assessments within the previous 12 months and the number of risk assessments performed, 2011–14

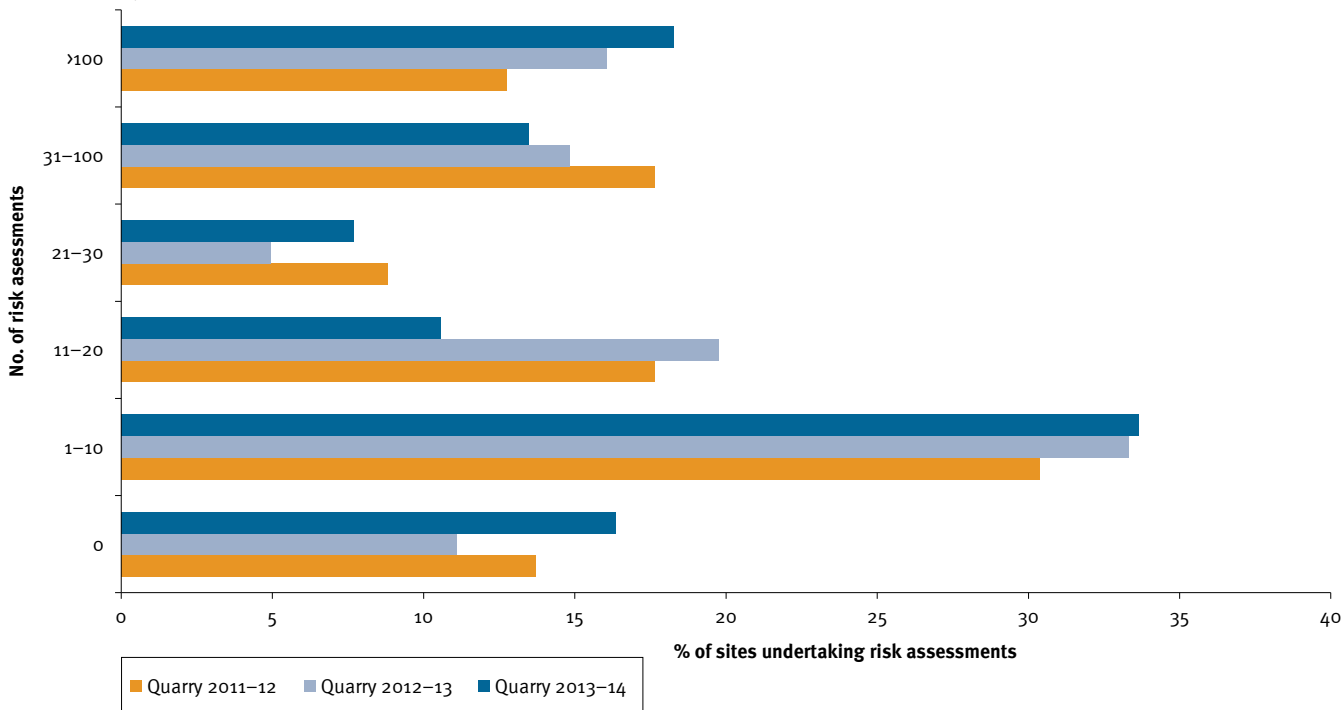


Figure 5.4.1: Coal sector workers and contractors routinely involved in conducting formal risk assessments, 2011–14

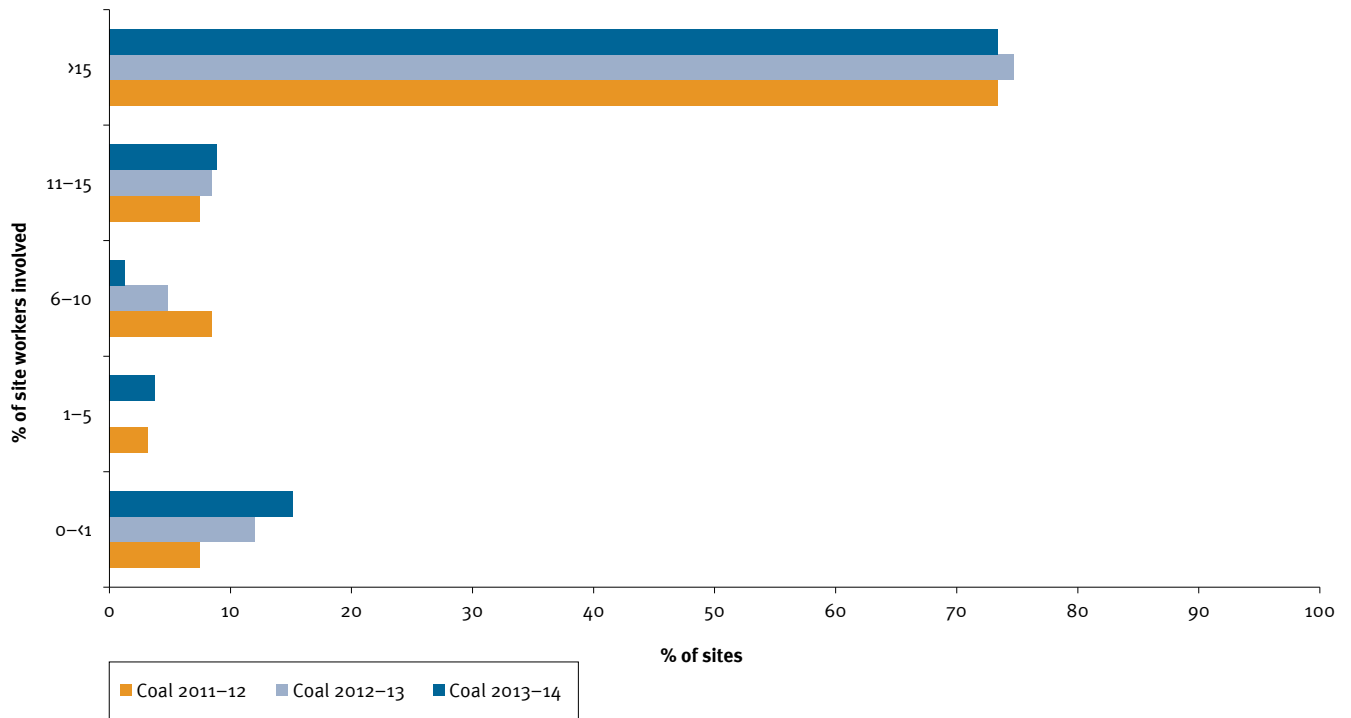


Figure 5.4.2: Metalliferous sector workers and contractors routinely involved in conducting formal risk assessments, 2011–14

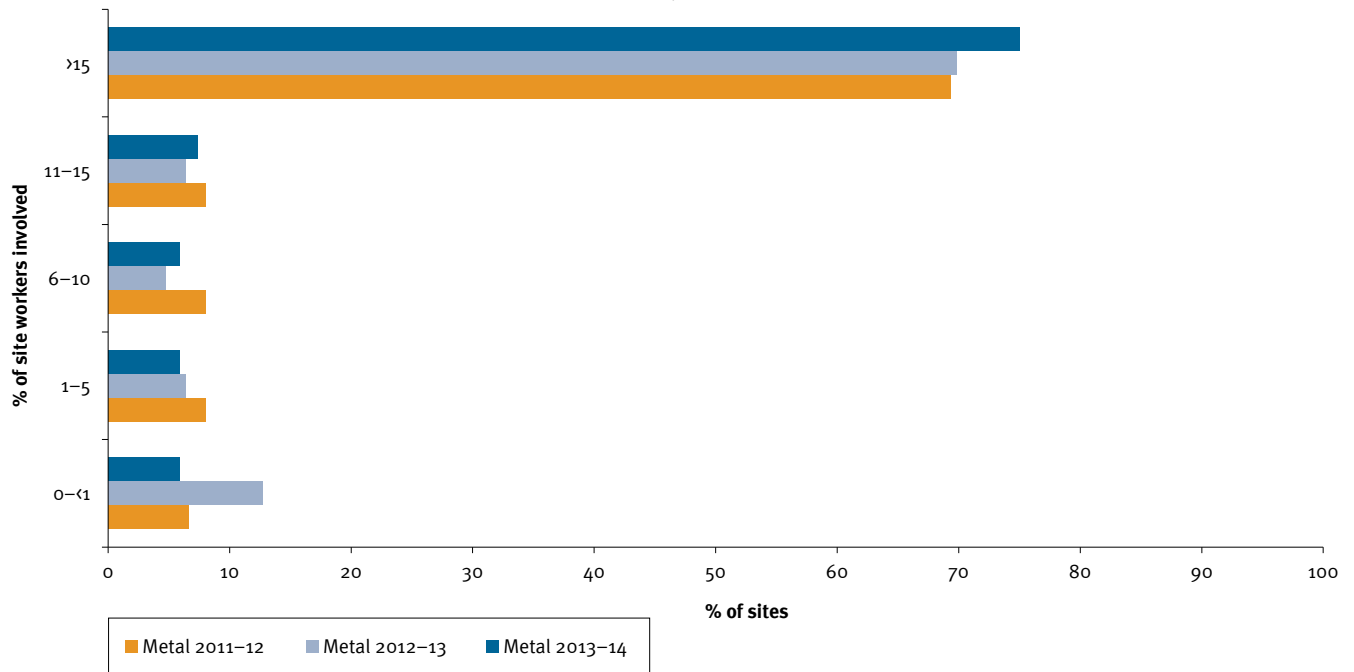


Figure 5.4.3: Quarry sector workers and contractors routinely involved in conducting formal risk assessments, 2011–14

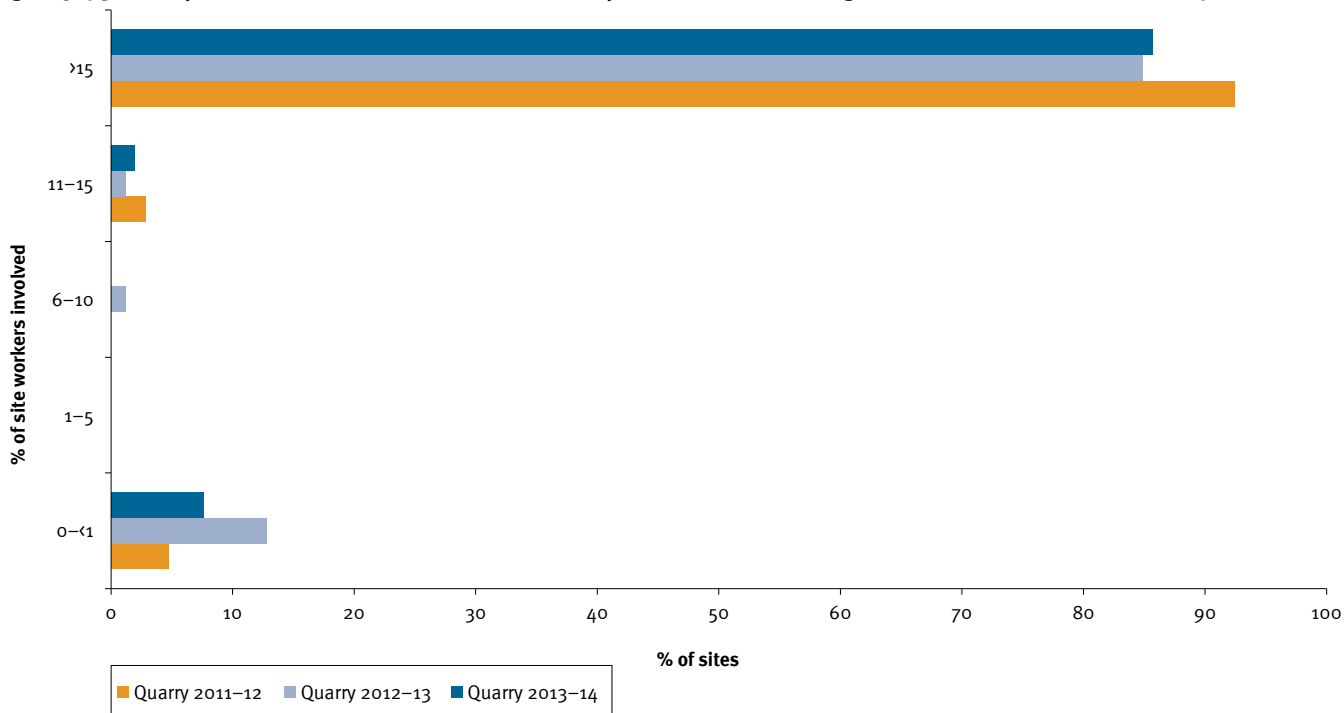


Figure 5.5.1: Coal sector audits (internal and external) conducted in the previous 12 months, 2011–14

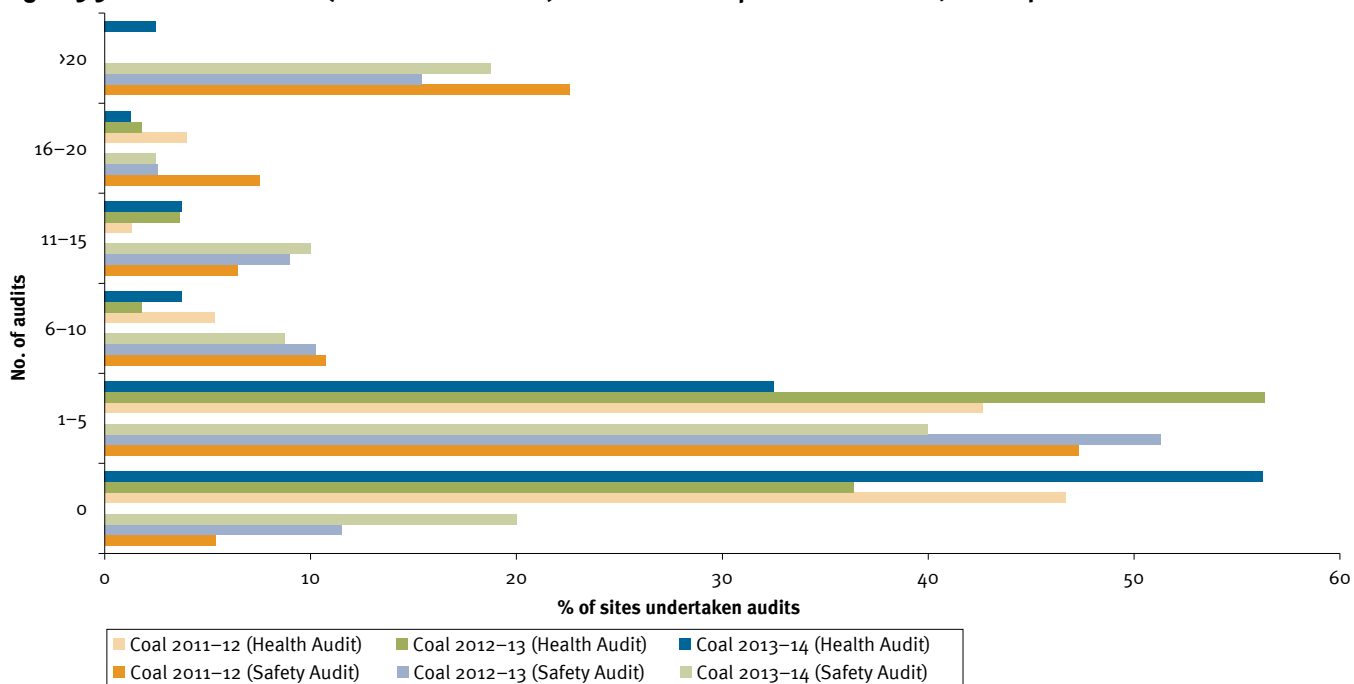


Figure 5.5.2: Metalliferous sector audits (internal and external) conducted in the previous 12 months, 2011–14

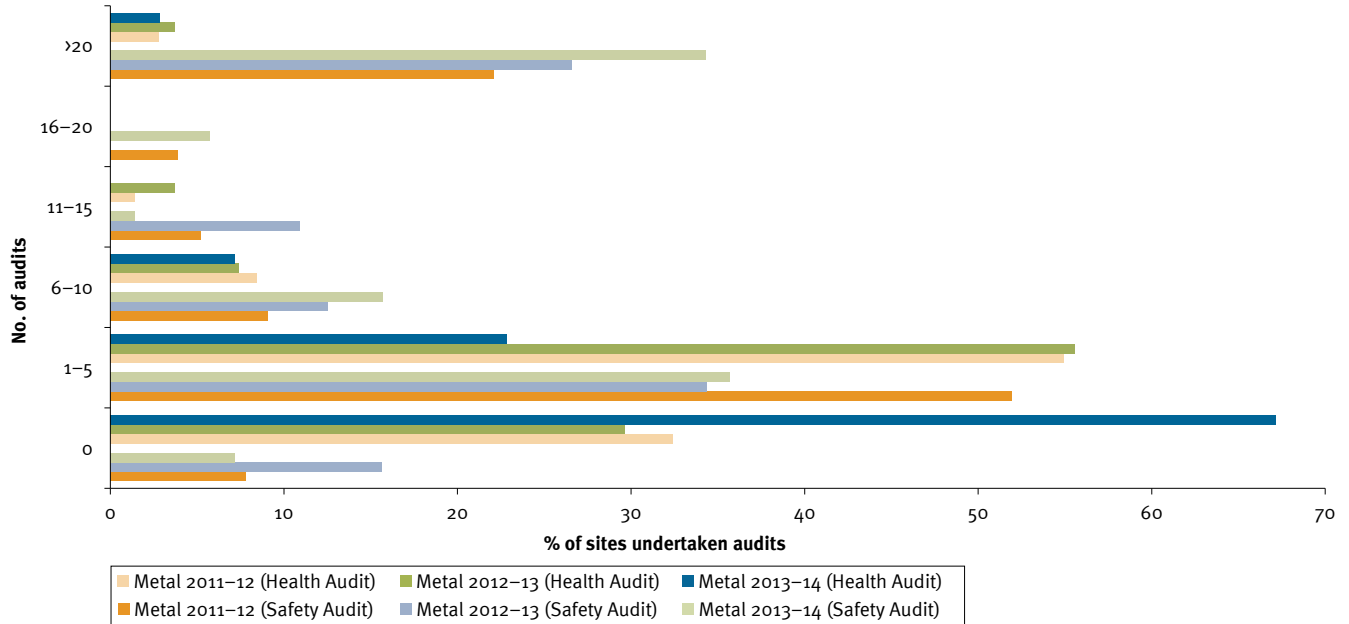


Figure 5.5.3: Quarry sector audits (internal and external) conducted in the previous 12 months, 2011–14

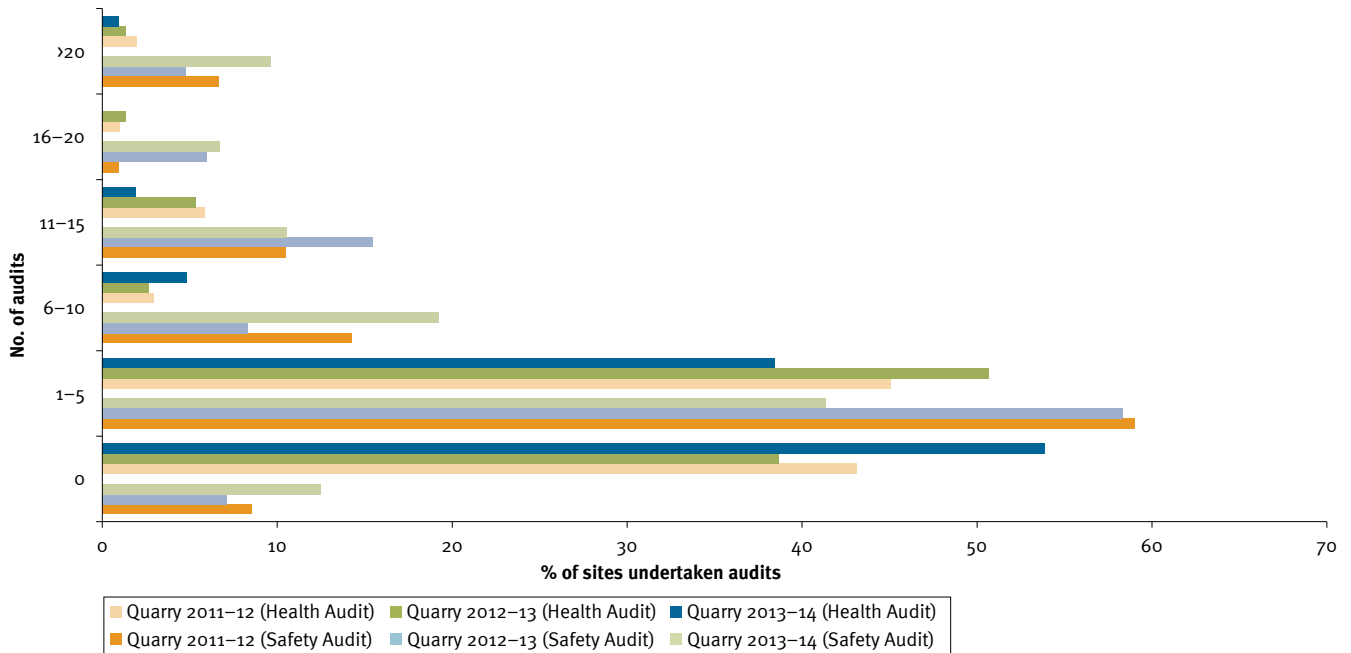


Figure 5.6: Sites with no outstanding improvement actions that came out of audits, 2011–14

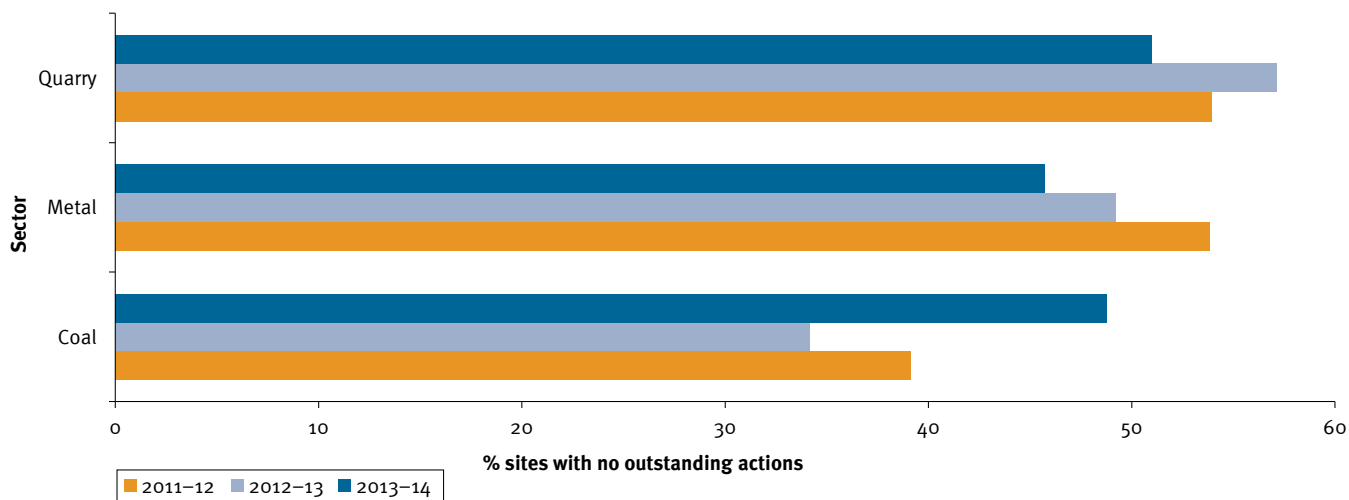


Figure 5.7.1: Coal sector workers involved as auditors in internal audits during the previous 12 months, 2011–14

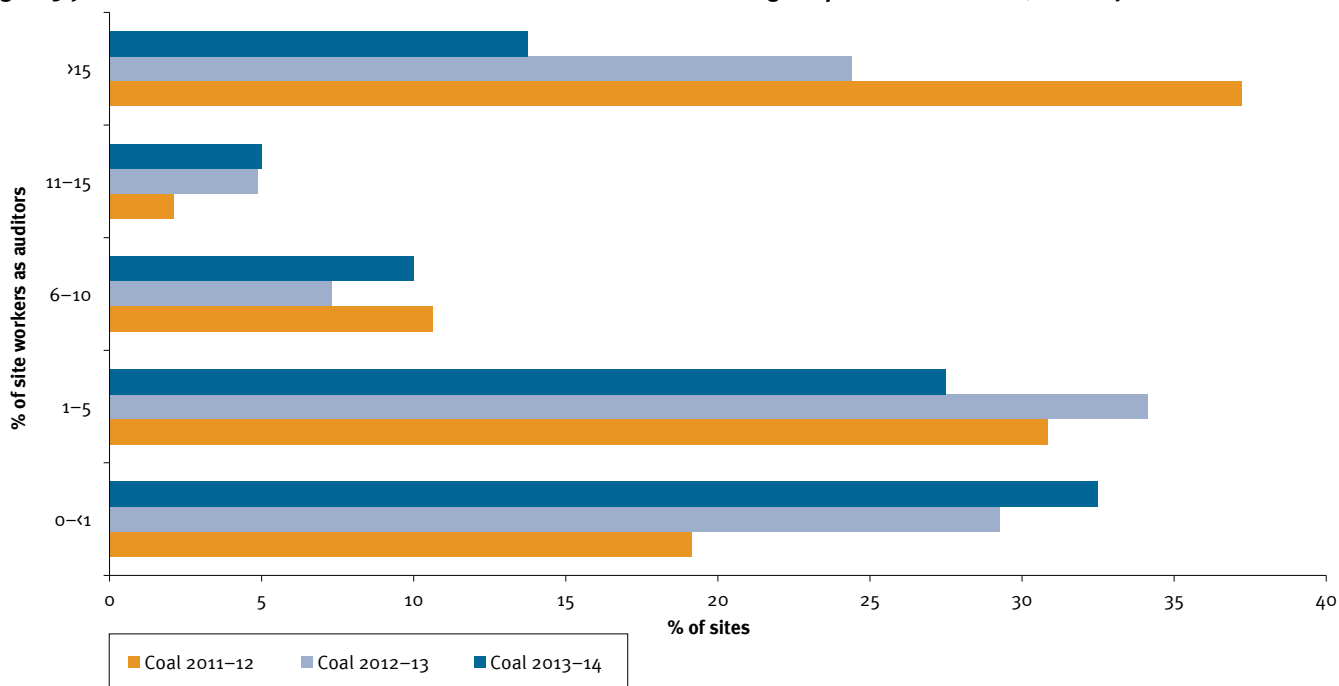


Figure 5.7.2: Metalliferous sector workers involved as auditors in internal audits during the previous 12 months, 2011–14

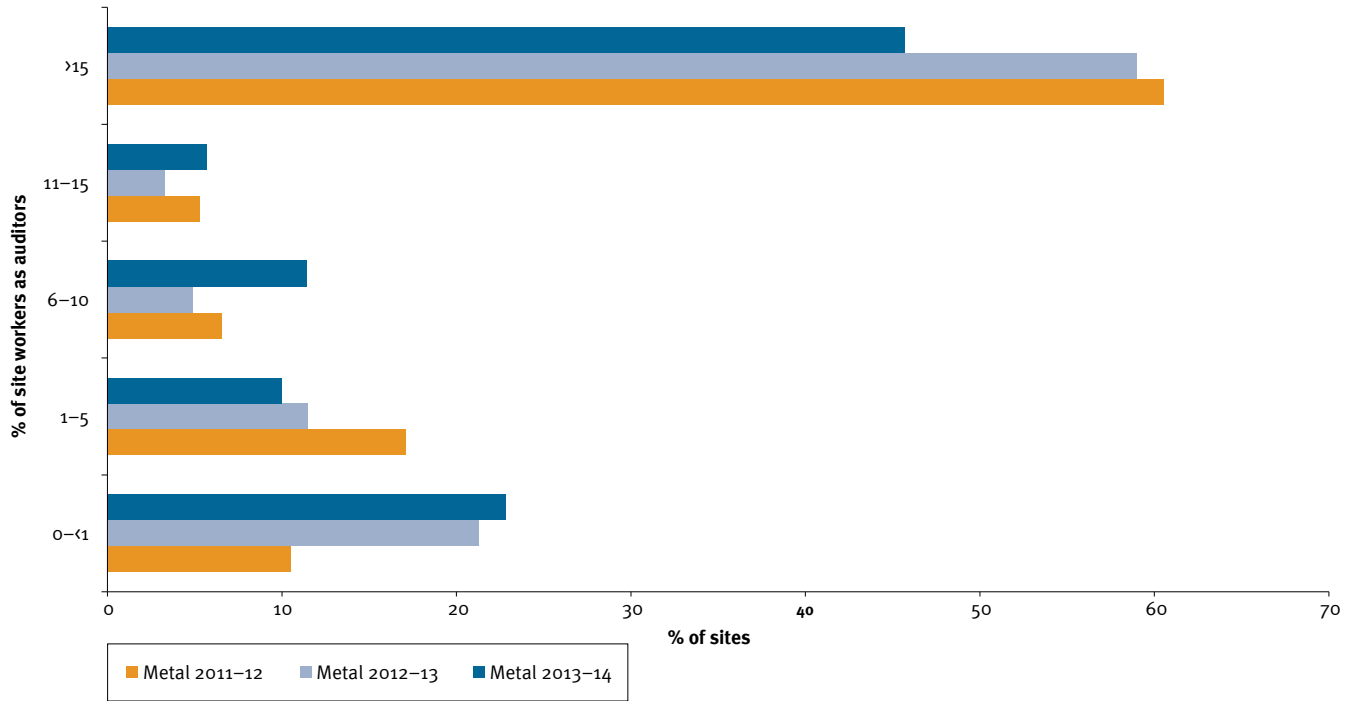


Figure 5.7.3: Quarry sector workers involved as auditors in internal audits during the previous 12 months, 2011–14

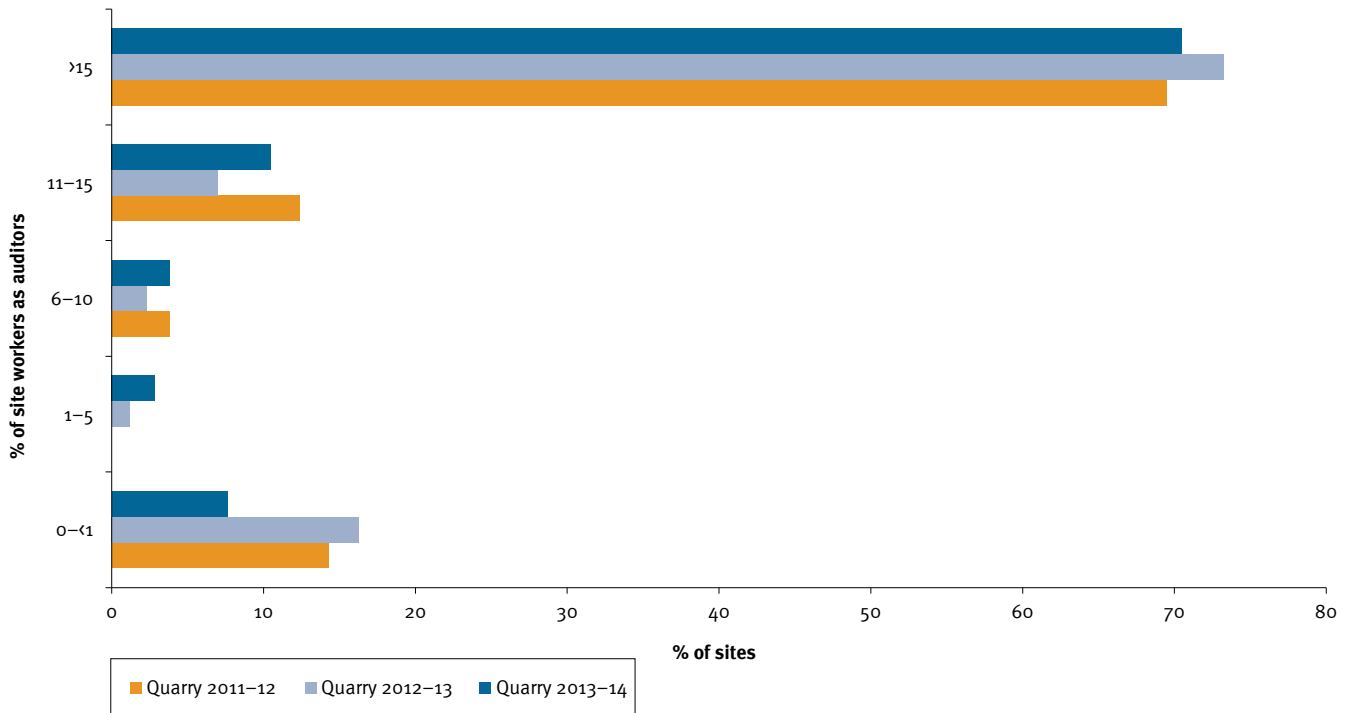


Figure 5.8: Sites with a formal reporting system for capturing and reporting high potential incidents, 2011–14

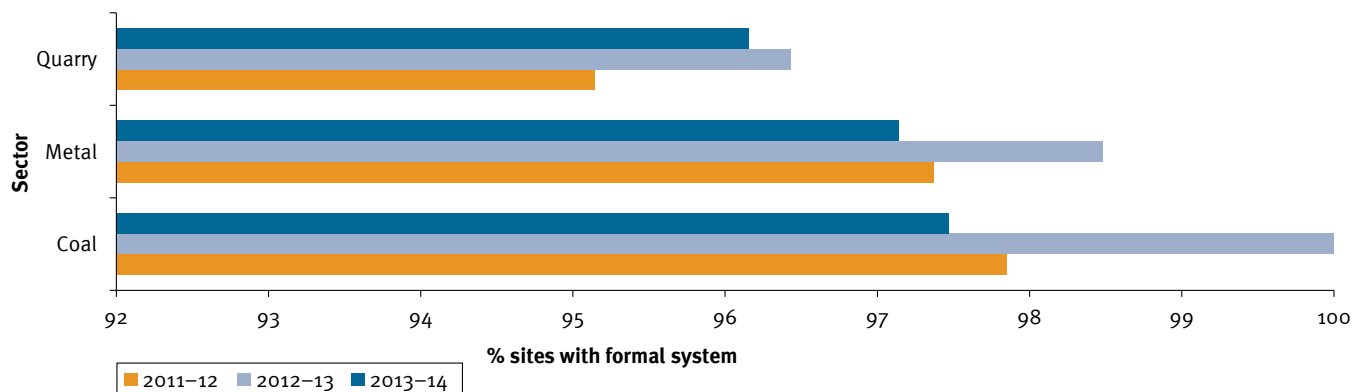


Figure 5.9: Improvement actions resulting from investigations into high potential incidents, 2011–14

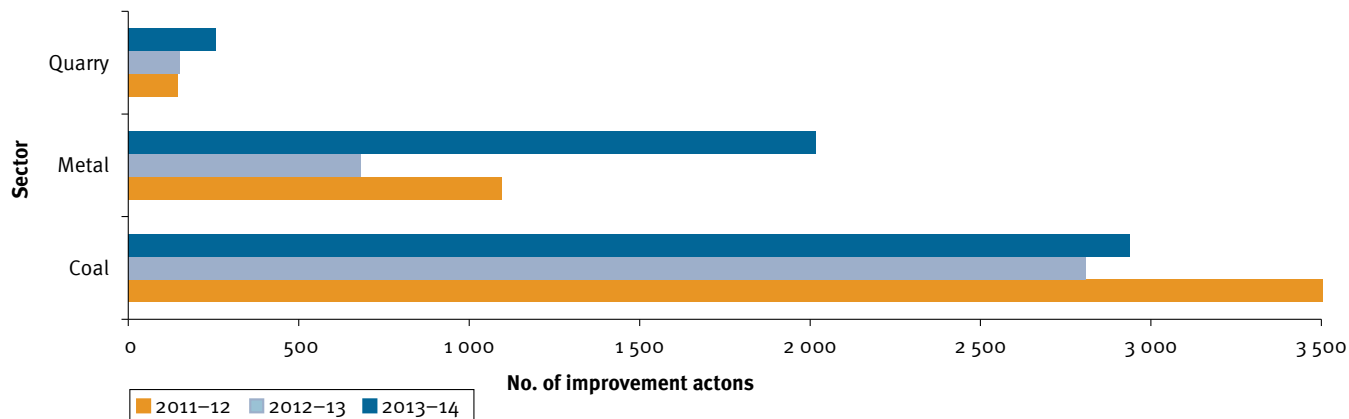
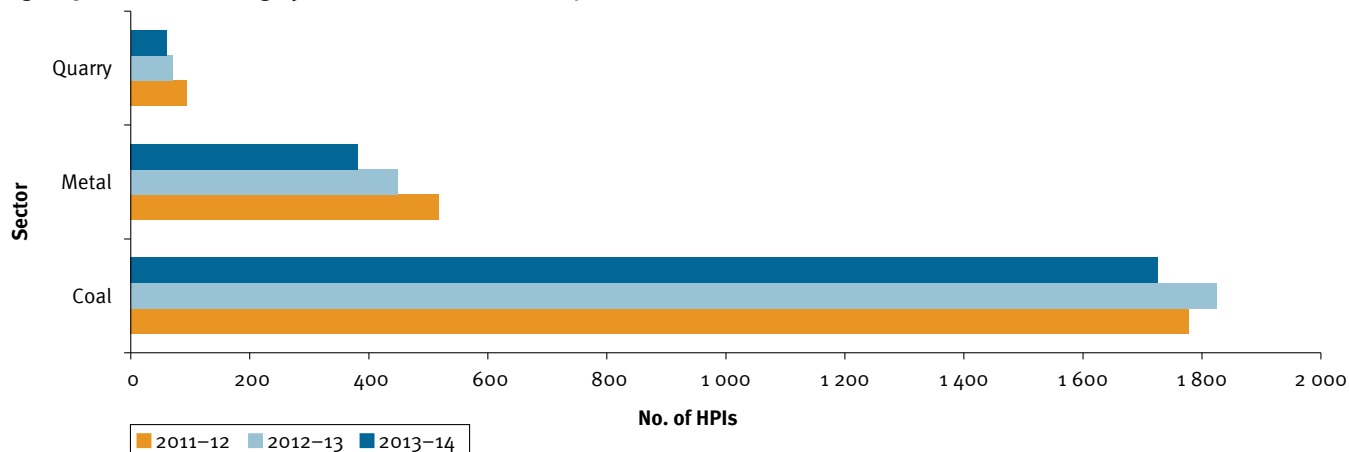


Figure 5.10: Number of high potential incidents, 2011–14



9

HEALTH REPORT

Health report

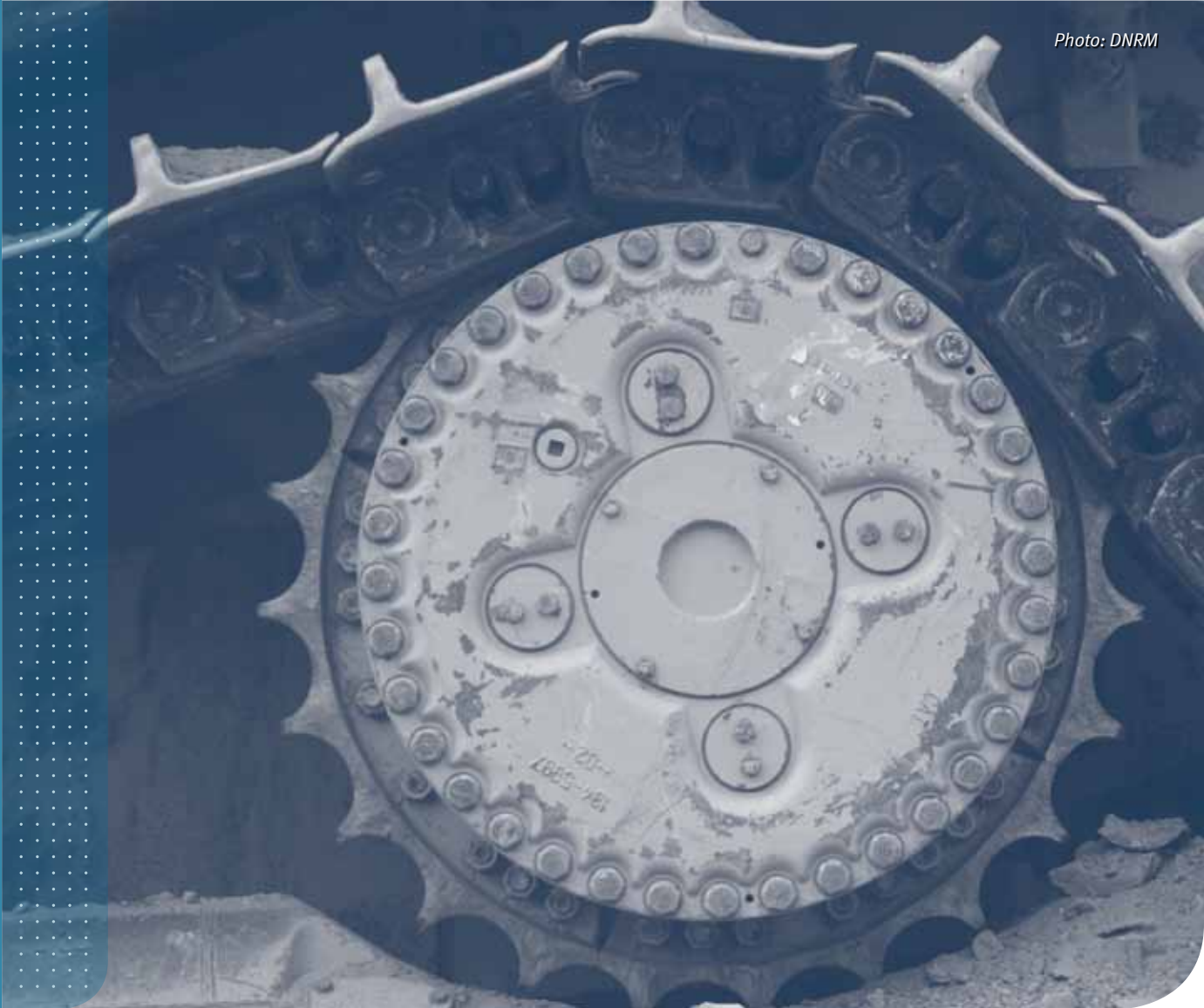


Photo: DNRM

6. Health report

6.1 Coal mine health assessments

The Coal Mine Workers' Health Scheme (CMWHS) requires that an employer must ensure a health assessment is carried out for each person who is to be employed, or is employed as a coal mine worker. The assessment is carried out by a nominated medical advisor (NMA) in accordance with the requirements of the CMWHS. The assessment must be carried out before the person commences work as a coal mine worker and periodically as decided by the NMA, but at least once every five years. At present there are over 100 000 health assessments recorded on the CMWHS database. The earliest of these health assessments dates back to 1983 under the previous legislation's Coal Board Medical Scheme. While the metalliferous and quarrying sectors are required to undertake health assessments and health surveillance, these sectors are not required to submit the health assessments to the regulator.

The most recent data regarding the CMWHS is provided in Table 6.1.

In 2013–14, the department's Health Surveillance Unit (HSU) received 22 240 health assessments from NMAs. Nearly 1500 of the assessments received were returned to NMAs because of omissions or incomplete information. The HSU manually entered 9386 health assessments into the CMWHS database and over 30 157 health assessments were scanned into pdf format. Notably, a project to use optical character recognition (OCR) software to automatically 'read' scanned health assessments into the CMWHS database was piloted in 2013–14. The trial was successful and a project will be initiated in 2014–15 to commence using the OCR software to reduce the backlog of un-entered health assessments, which currently stands at 136 566.

6.2 Obtaining copies of health assessments

Completed health assessments are the property of DNRM. The confidentiality of reports is protected by law and reports can only be released to the worker, or a representative appointed in writing by the worker.

Workers can obtain additional copies of a completed health assessment from the NMA. The NMA may charge for this service.

DNRM can also supply copies of reports to workers. The request must be made in writing. A template for making requests is available on the DNRM website at www.dnrm.qld.gov.au.

Send the request to:

Health Surveillance Unit
 Department of Natural Resources and Mines
 PO Box 467
 Goodna QLD 4300
 Telephone: 07 3818 5420
 Fax: 07 3810 6339
 HSU@dnrm.qld.gov.au

There is no charge for this service and DNRM normally provides copies within five working days.

Table 6.1: Coal Mine Workers Health Scheme, 2009–14

	2009–10	2010–11	2011–12	2012–13	2013–14
Total health assessments received from NMAs	23 873	36 422	54 030	34 483	22 240
Total health assessments returned to NMAs ¹	1 056	1 666	1 698	1 089	1 449
New industry entrant health assessments entered into Database	9 668	9 572	8 849	866	4 361
Existing worker periodic health assessments entered into Database	6 807	5 947	5 689	1 247	5 025
Total health assessments entered into Database	16 475	15 519	14 538	2 113***	9 386
Total health assessments awaiting Database entry	58 545	60 617	91 320	123 690	136 566
Total health assessments sent for scanning	•	•	•	38 000	40 280
Total health assessments scanned ²	•	•	•	23 477	30 157
Total appointed NMAs ³	103	130	182	208	219

¹ Incomplete health assessments returned to NMAs to request further information.

² To reduce the physical amount of secure storage required for over 100 000 health assessments, high-speed scanning to convert the hard-copy health assessments awaiting database entry to electronic pdf copies was commenced in 12 July 2012. In future, a pdf copy of the health assessment will be held with each database record.

³ At least one NMA must be appointed by an employer for each Queensland coal mine. There are currently 79 operating coal mines in Queensland.

* Low number of health assessments entered in 2008–09 was due to commissioning of a new health scheme database.

** Low number of health assessments entered in 2012–13 was due to a combination of slow database server response times; staff turn-over and leave; and the integration of the high speed scanning process. (Note: Server response time has been resolved by SQL upgrade and staffing levels restored to budgeted levels during 2012–13.)



Workers compensation data

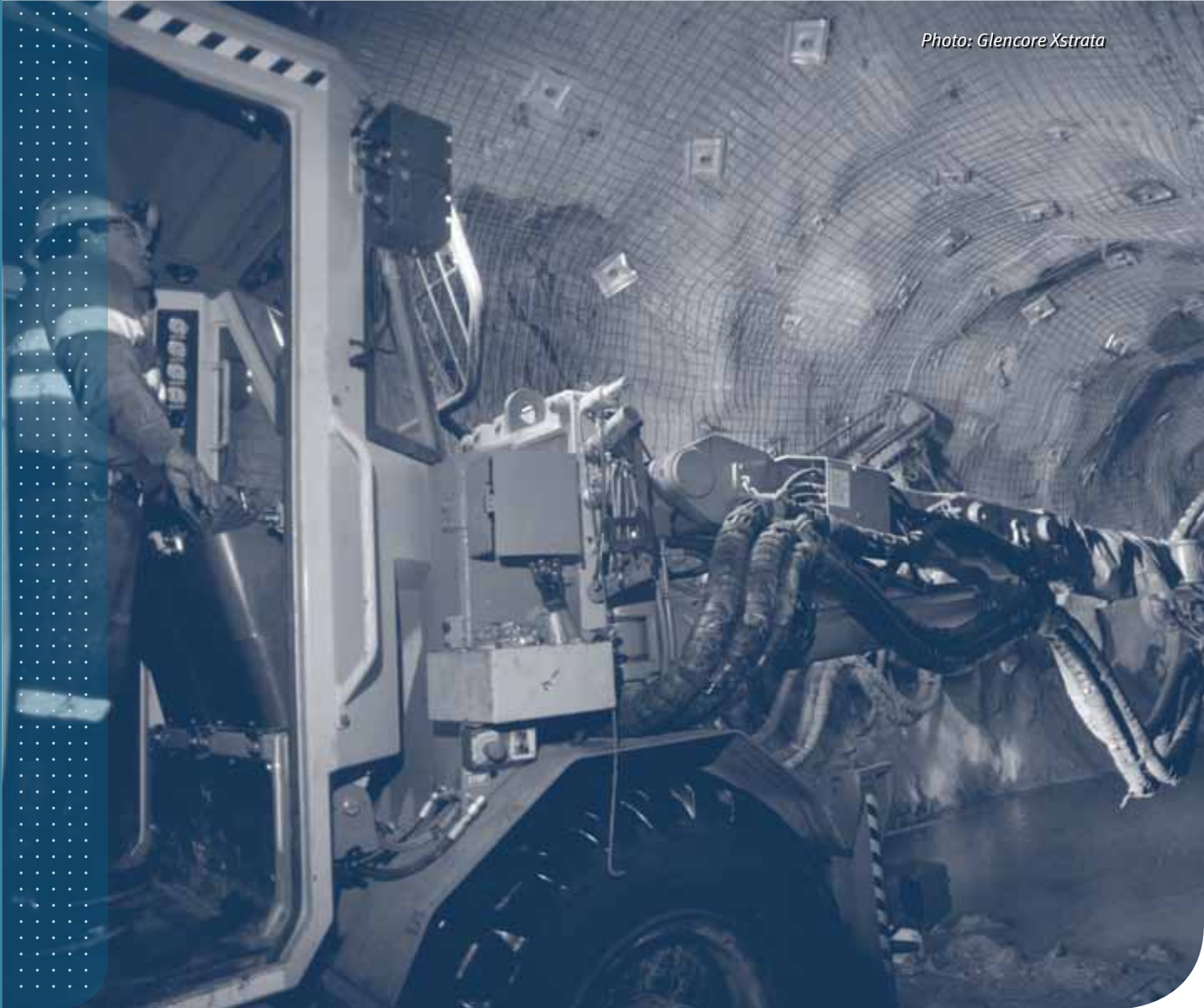


Photo: Glencore Xstrata

7. Workers compensation data

The mining industry injury compensation data are sourced from QGSO and covers the 2013–14 financial year. The data include compensation information provided by WorkCover Queensland and the self-insurers through Q-Comp. The data in this report have been aggregated for each of the coal, metalliferous and quarry sectors.

There were 1647 workers compensation claims in the mining industry for 2013–14. The sector breakdown of claims is given below:

- the coal mining sector incurred 914 claims costing \$9.8 million (\$10 749 per claim)
- the metalliferous sector had 561 claims costing \$4.2 million (\$7 521 per claim)
- the quarry sector had 172 claims costing \$1 million (\$5 918 per claim).

The number of claims and associated costs for 2013–14 can be found in Table 7.1. This data does not capture smelting operations on mine sites in Queensland. Such operations are categorised separately in the QGSO data under smelting operations, not mining.



Photo: DNRM

Table 7.1: Workers compensation data – claims and associated costs, 2013–14

Nature of Injury		Coal mining	Metalliferous mining	Quarrying	All	Cost per claim
Anxiety/Stress disorder	Payment \$	158 407	82 076	5 959	246 442	49 288
	No. of claims	2	2	1	5	
Back pain,Lumbago and Sciatica	Payment \$	540 411	86 010	685	627 106	27 265
	No. of claims	15	6	2	23	
Contusion, bruising and superficial crushing	Payment \$	371 921	320 936	29 594	722 451	5 644
	No. of claims	45	68	15	128	
Deafness	Payment \$	753 231	143 125	102 009	998 365	8 251
	No. of claims	100	17	4	121	
Disk displacement, prolapse and superficial crushing	Payment \$	281 216	49 825	0	331 041	17 423
	No. of claims	16	3	0	19	
Dislocation	Payment \$	147 664	69 422	12 076	229 162	12 061
	No. of claims	10	7	2	19	
Hernias	Payment \$	181 427	117 185	8 529	307 141	13 961
	No. of claims	13	8	1	22	
Hot burn	Payment \$	16 324	17 509	2 989	36 822	3 069
	No. of claims	4	7	1	12	
Laceration or open wound not involving traumatic amputation	Payment \$	256 661	112 031	17 821	386 513	3 451
	No. of claims	45	45	22	112	
Other fractures, not elsewhere classified	Payment \$	673 548	437 054	145 942	1 256 544	15 139
	No. of claims	42	29	12	83	
Soft tissue injuries due to trauma or unknown mechanisms with insufficient information to code elsewhere	Payment \$	361 296	371 295	79 458	812 049	9 334
	No. of claims	47	35	5	87	
Tendonitis	Payment \$	147 367	24 718	9 071	181 156	7 246
	No. of claims	15	7	3	25	
Trauma to joints and ligaments, not elsewhere classified	Payment \$	938 757	140 185	79 013	1 157 955	10 339
	No. of claims	75	22	15	112	
Trauma to joints and ligaments, unspecified	Payment \$	403 449	208 814	14 780	627 043	10 451
	No. of claims	31	24	5	60	
Trauma to muscles	Payment \$	352 850	55 728	10 396	418 974	6 758
	No. of claims	38	19	5	62	
Trauma to muscles and tendons, not elsewhere classified	Payment \$	594 590	108 558	12 756	715 904	9 178
	No. of claims	65	9	4	78	
Trauma to muscles and tendons, unspecified	Payment \$	1 472 994	856 041	197 146	2 526 181	7 563
	No. of claims	167	131	36	334	
Traumatic amputation	Payment \$	39 617	31 426	5 157	76 200	10 886
	No. of claims	3	3	1	7	
Traumatic tearing away part of the muscle/tendon structure, avulsion	Payment \$	221 595	47 233	31 015	299 843	16 658
	No. of claims	13	4	1	18	
Unspecified injuries	Payment \$	42 026	122 533	37 895	202 454	10 655
	No. of claims	9	8	2	19	
Other	Payment \$	1 869 589	817 424	215 622	2 902 635	9 643
	No. of claims	159	107	35	301	
Total	Payment \$	9 824 940	4 219 128	1 017 913	15 061 981	9 145
	No. of claims	914	561	172	1 647	

Figure 7.1: Workers compensation claims—major injury/illness types, 2009–14

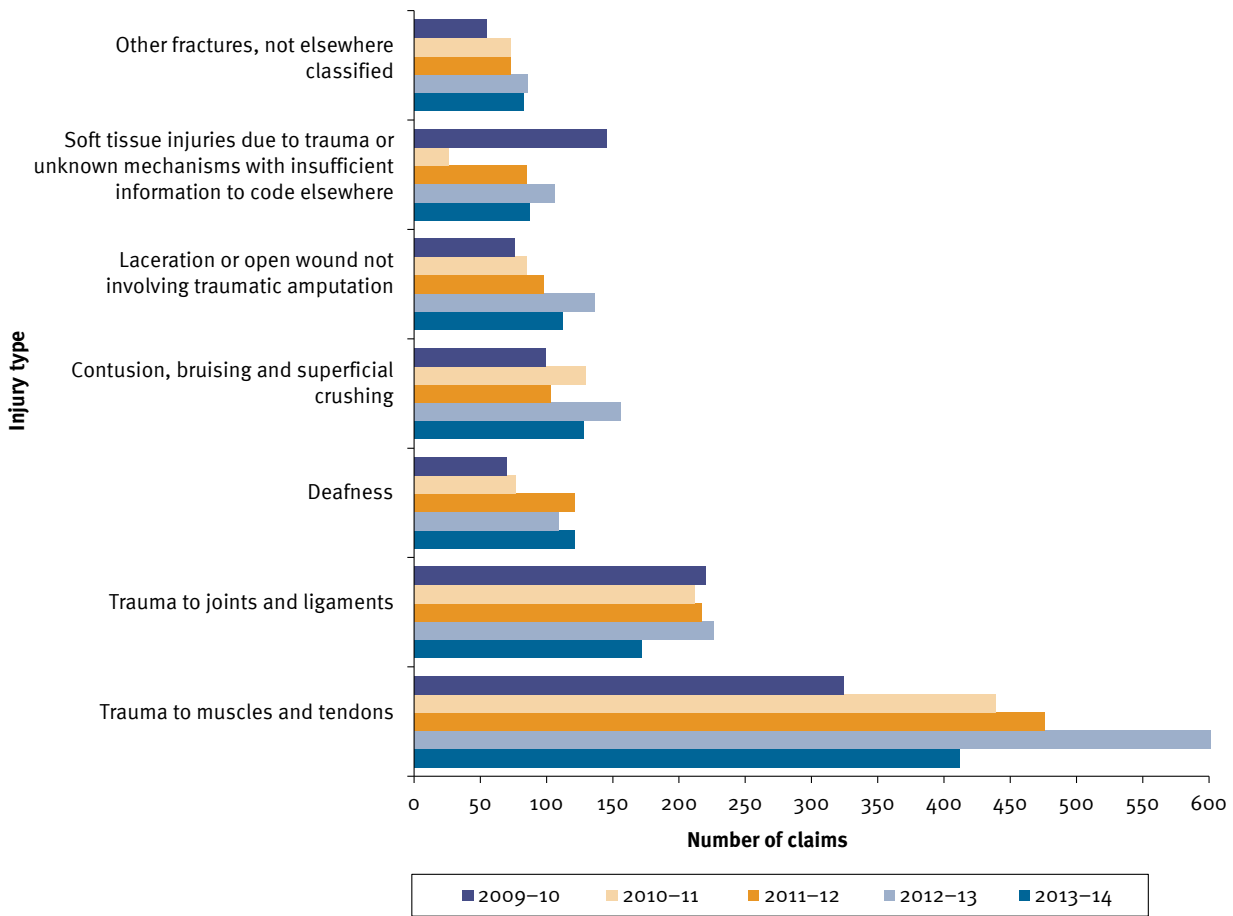
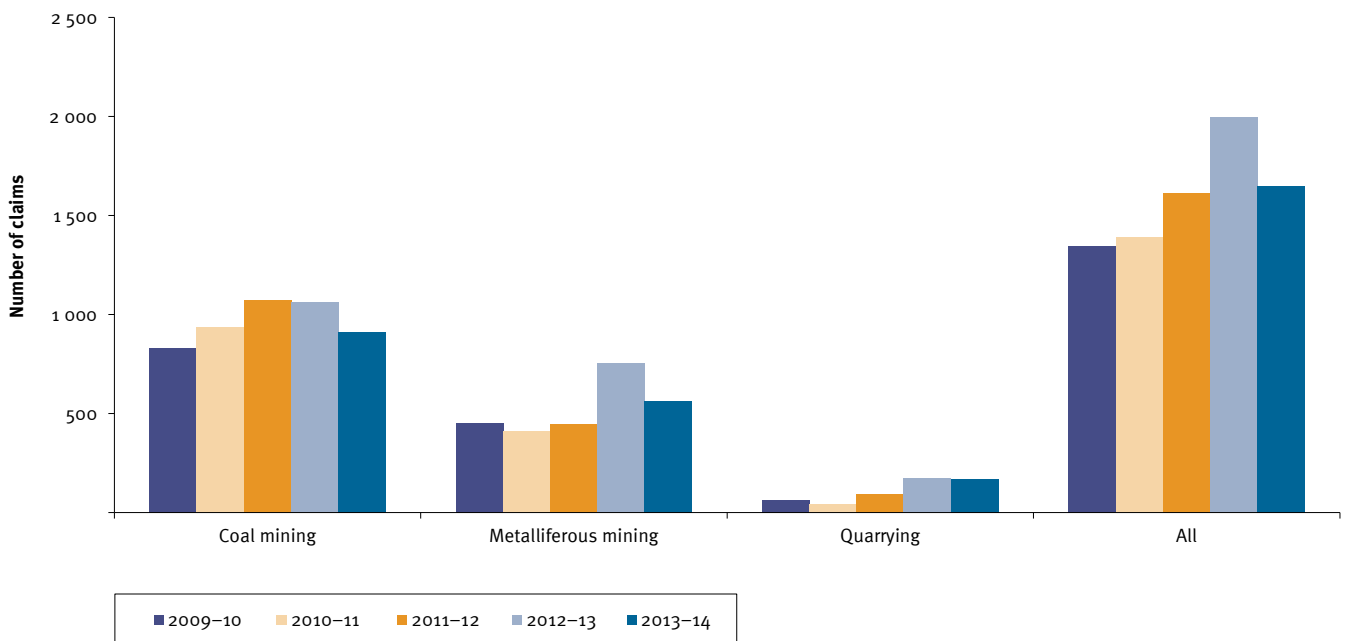


Figure 7.2: Five-year comparison of workers compensation claims per sector, 2009–14



Collection of information



Photo: DNRM

8. Collection of information

Whenever an LTI or HPI occurs, the mine or quarry operator must submit a Queensland Mining Incident Report Form to the local mines inspector.

Large mines and quarries (with 10 or more employees) also provide a monthly summary that lists new and carryover LTIs and DIs, re-opened injuries, days lost and/or on alternative duties, and hours worked during the period. Data on the number of workers in the industry are sourced through the quarterly safety and health levy submissions from industry. The levy data is used to validate the hours of work data submitted and the levy data is given preference if there is a significant difference. Nineteen consecutive years of injury/disease data for coal and metalliferous mines are now available for analysis.

Copies of this report are available on the DNRM website at www.dnrm.qld.gov.au.

More detailed analysis of injuries in the mining and quarrying industry is available from:

Mine Safety and Health
Department of Natural Resources and Mines
PO Box 467
Goodna QLD 4300
Telephone 13 25 23
minesafetystats@dnrm.qld.gov.au

Requests for information received during 2013–14 included the examples listed below:

- Information on all dozer (bottom guard) incidents over the last ten years was provided to Mining Industrial Trade Suppliers.
- Information on major equipment involved with back injuries over the last ten years was provided to assist in developing preventative strategies.
- Darling Downs & South West Hospital requested number of operating coal mines in the Darling Downs area over the last ten years related to coal and respiratory disease.
- Vehicle collision fatalities 1990 - present was provided for a thesis in collision avoidance and proximity detection systems was provided to the University of Queensland.
- A mining company requested information on fire incidents over the last ten years for a presentation.
- A Safety Advisor from a mining company requested all incidents relating to vehicle collisions in opencut mines for 2001–13 to help determine a safety factor to be applied to autonomous technology risk assessments.
- An exploration site manager requested information on drilling rig data for 2012–13.

- Information on underground coal incident data was provided for the last five years to assist safety research for the Hail Creek Underground Study.
- Information on all hydraulic injection injuries over the last 20 years was provided which was used for a presentation.

Access to the lost time accident database

Industry can be provided with selected data from the departmental lost time accident database; information that was also used in the compilation of this report. Individual mine operators can obtain their data as well as the statistical sector-wide data. Mine operators can also use this data as a benchmark in the preparation of their safety management systems. The Mines Inspectorate uses the data when planning audit programs.

To request data, contact your regional Mines Inspectorate office:

Simtars Office: 07 3818 5424
Woolloongabba (South Region): 07 3330 4272
Rockhampton (Central Region): 07 4938 4683
Mackay (Central Region): 07 4999 8511
Townsville (North Region): 07 4447 9222
Mount Isa (North Region): 07 4747 2158

This report is delivered with the intention of providing useful information to industry organisations to build better safety and health management systems and processes across operations.

The Mines Inspectorate welcomes suggestions for improvement and feedback on the report. Please call the DNRM Customer Service Centre 13 25 23 (within Australia) or +61 7 3404 6999 (outside Australia) with your comments.

Thanks are extended to the mining industry in Queensland for providing the data required to assemble this report.



