# Mine safety performance report

2021-22

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## Mine safety performance overview





#### 88 serious injuries

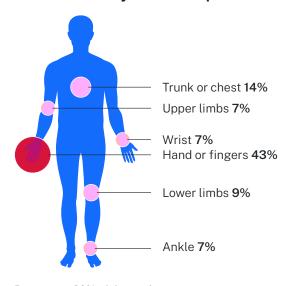
▶ Decrease from 117 in 2020–21

Overall increases were observed in serious injuries to hands, fingers and wrists due to falls, trips and slips. Refer to the main report for a detailed analysis of serious injuries and illnesses including bodily location from 2012–13 and nature, mechanism and employment type from 2019–20.



#### Fatal and serious injuries

#### Fatal and serious injuries snapshot



Represents 86% of the total

#### Mechanism

Being hit by moving objects	57%
Falls, trips and slips of a person	32%

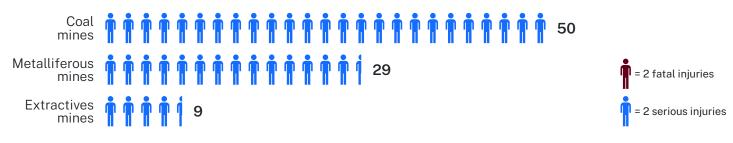
Represents 89% of the total

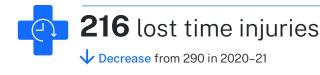
#### **Nature of injury**

Fractures	59%
Wounds, lacerations, amputations and internal organ damage	33%

Represents 92% of the total

#### Fatal and serious injuries by sector





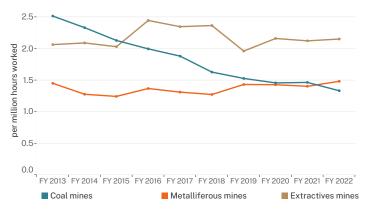


**756** total recordable injuries

Decrease from 870 in 2020–21

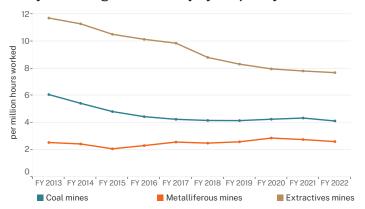


#### Five-year average serious injury frequency rate





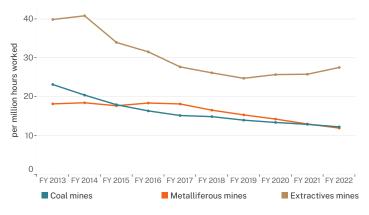
#### Five-year average lost time injury frequency rate





#### TRIFR

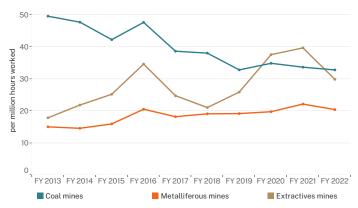
#### Five-year average total recordable injury frequency rate





#### **INFR**

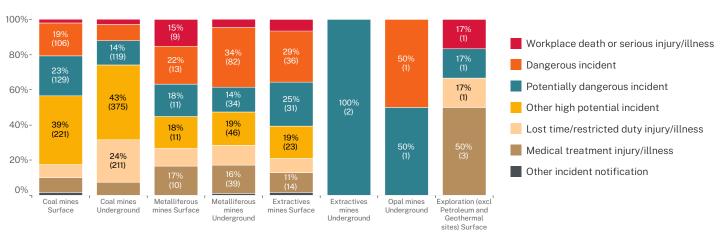
#### Annual incident notification frequency rate

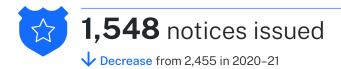




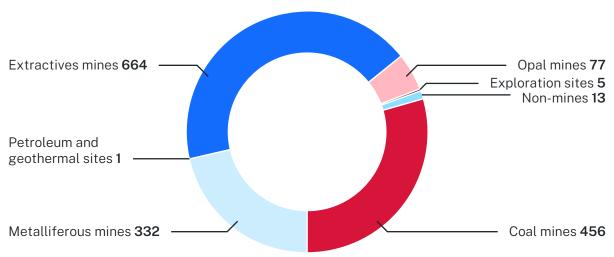
#### **1,880** incidents

#### Incident notification profile 2021-22

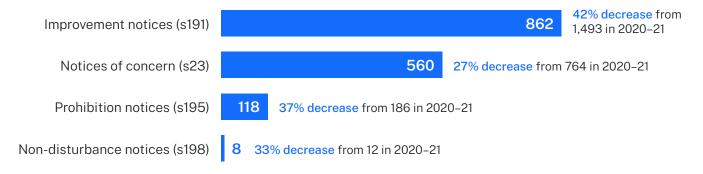




#### Notices issued by sector



#### Notices issued by type







Metalliferous mines

14.8m
hours worked

Extractives mines
4.2m
hours worked

Employees
35.9m
hours worked

Other (incl contractors)

27.1m
hours worked

#### Further information

This overview was first published in January 2023 with data current at November 2022.

Visit our website for more information.

### **Executive summary**

This report provides an overview of the NSW mining industry's health and safety performance for financial year 2021–22, as reported to the NSW Resources Regulator. It compares safety indicators over the 10 years from 2012–13 and includes details of selected regulatory activities over the same period. In this report, the NSW mining industry includes the coal, metalliferous, extractives, petroleum and geothermal, opal and exploration sectors.

For mine and petroleum site operators, this report presents measures to guide future improvements in health and safety performance and to benchmark performance against other operators in their sector. It also provides a valuable source of information on the types of injuries occurring in order to guide regulatory activity.

Work health and safety regulatory intervention has been in place in the Australian mining industry for more than a century. Significant ongoing efforts continue by the NSW mining industry and the Regulator to minimise the health and safety risks to workers. In 2021–22 there were zero fatal injuries, 88 serious injuries, 216 lost time injuries and 756 total recordable injuries reported to the Regulator.

The fatal injury frequency rate in the NSW mining industry has trended down since 2016–17, in line with a long-term downward trend in fatal injuries during the past 100 years. During the past 10 years, 'being hit by moving objects' followed by 'vehicle incidents', has been the most common hazard mechanism in fatal injuries.

The total number of serious injuries, lost time injuries and total recordable injuries has decreased, with the lowest number of both lost time injuries and total recordable injuries seen in the past 10 years. This continues a steady decline in overall industry frequency rates observed since 2012–13.

The surface metalliferous sector is an exception where increases have been observed in frequency rates for serious injuries and lost time injuries since 2019–20.

An overall downward trend was observed in the incident notification frequency rate for the combined sectors during the 10-year reporting period. The extractives sector showed a notable decrease in 2021–22 after experiencing an ongoing increasing trend in incident notification frequency rates from 2017–18.

In 2021–22, the breakdown analysis by type of incident and operation type presents a unique notification profile. Dangerous incidents have made up the highest proportion of incidents notified in the metalliferous and extractives sectors since 2017–18, while other high potential incidents were predominant in coal operations. Multiple factors including legislative framework, inherent hazards and characteristics of each sector and commodity produced has contributed to these observed differences across each of the operation types.

Since 2012–13 the proportion of mines notifying safety incidents has remained steady. On average, 6% of mines notified the Regulator of an incident every year during the 10-year reporting period–representing 63% in the coal sector, 26% in the metalliferous sector and 3% in the extractives sector.

## **Explanatory notes**

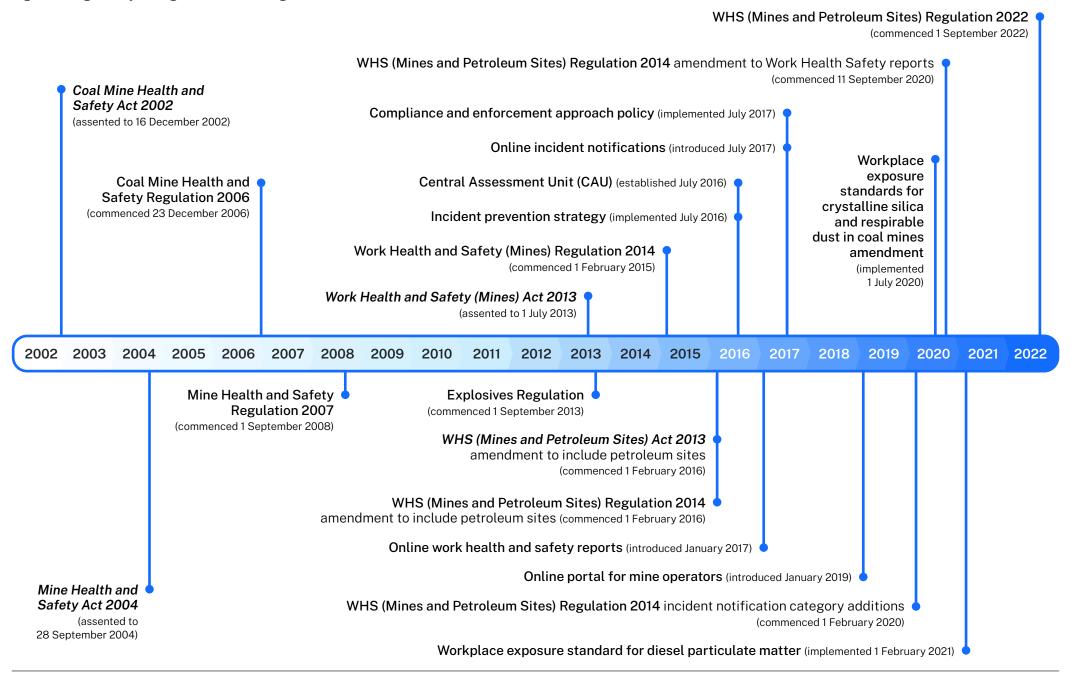
## Health and safety performance data from the NSW mining sector

This report presents data on injuries (fatal, serious, lost time and total recordable injuries), notified incidents, notices issued to mining operators and hours worked. All information presented was either reported to the Resources Regulator by the NSW mining industry through work health and safety reporting and incident notifications, or was information obtained from compliance and enforcement activities undertaken by the Regulator. Operators of non-coal mines with total worker hours of less than 10,000 hours per year, exploration sites, petroleum sites, underground small gemstone mines, opal mines and tourist mines are not required to submit work health and safety reports to the Regulator. See injury classification definitions in Appendix 1.

#### Key regulatory changes timeline

Amendments to mine safety legislation in NSW and refined compliance and enforcement practices by the Resources Regulator have impacted data in this report. The timeline in Figure 1 highlights key dates since 2002, including those in relation to notified incidents, injuries, illnesses and work health and safety reporting. While at times it may be difficult to distinguish between real changes in occurrences of an event, the implication of certain changes to the legislation or the implementation of certain strategies are clear.

Figure 1. Regulatory changes in NSW mining 2002–22



Mine safety performance report 2021–22

## Rate-based frequency measures calculated using work health and safety reports

The information provided by mine and petroleum site operators in work health and safety reports is used to generate frequency rates and total recordable injuries.

Frequency rates (per million hours worked) have been calculated for each injury and incident notification measure. Rates were based on hours worked data submitted by the coal, metalliferous and extractives sectors as part of work health and safety reporting.

Frequency rates are not available for the petroleum and geothermal, opal and exploration sectors.

Rates for injury measures were calculated using a rolling 5-year average rate. This smoothing technique shows the value for the past 5 years combined, enabling a long-term trend to be produced directly from raw data. This is particularly useful where values may vary widely from year to year. Annual rates were calculated for incident notification data. See <a href="Appendix 3">Appendix 3</a> for detailed sector level data and <a href="Appendix 4">Appendix 4</a> for data for the other sectors including petroleum and geothermal sector, opal sector and exploration sector.

It is worth noting the timeframes for mandatory work health and safety reporting:

- coal mining sector commenced 1 July 2007
- coal exploration sites –1 February 2015 to 30 June 2020
- metalliferous and extractives sectors (including exploration) –1 October 2008 to 30 June 2020
- metalliferous and extractives sectors (greater than 10,000 hours worked and excluding exploration only) commenced 11 September 2022.

Until 1 July 2007, hours worked and lost time injury data for the coal sector were sourced from Coal Services Pty Ltd. Until 1 October 2008, metalliferous and extractives hours worked and lost time injuries were compiled from several sources and included some estimation.

#### Data extraction

This report covers 10 financial years from 2012–13 to 2021–22. The rolling 5-year average rate calculation was based on 15 years of data from 2007–08 to 2021–22. The data in this report was extracted from the Resources Regulator's compliance database on 15 August 2022 (locations, incident notifications and notices), 26 September (injuries) and 29 September 2022 (hours worked, LTIs, RDIs, MTIs). All data is subject to continuous improvement due to changes to reporting requirements, internal audit and validation processes and updates from external sources. Incorrectly classified information from past reporting periods is sometimes found and reclassified in source databases. The Regulator's reporting employs the best available data at the time of data extraction, which may differ from previously published figures.

## Industry overview



Key performance measures	2021–22
O fatal injuries	88 serious injuries
216 lost time injuries	756 total recordable injuries
1,882 notified incidents	1,548 noticed issued

In the NSW mining industry in 2021–22:

- There were no work-related fatalities in 2021–22. The fatal injury frequency rate (FIFR) for the combined coal, metalliferous and extractives sectors continued to decrease from 2016–17. Overall, being hit by a moving object accounted for almost half of the 17 fatalities that occurred during the 10-year period, followed by vehicle and other incidents. Of these 17 fatal injuries, 24% were head injuries, 18% were trunk or chest injuries, and more than half affected multiple or other locations (Figures 4–9).
- A steady downward trend has been observed in the rolling 5-year average serious injury frequency rate (SIFR) for the combined coal, metalliferous and extractives sectors since 2012–13, and the number of serious injuries decreased by 25% from 117 in 2020–21 to 88 in 2021–22. The coal sector accounted for 57% of these serious injuries.
- Notable decreases were observed in serious injuries to the head or neck and lower limbs due to being hit by moving objects, as well as trunk or chest and lower limbs due to falls, trips or slips of a person. Decreases were also seen in these key breakdown agencies: environmental agencies (in injuries in multiple and other locations), materials and substances (in lower limbs injuries) and non-powered handtools, appliances and equipment (in trunk or chest injuries). Overall increases were seen in serious injuries to hands/fingers/wrists, and particularly to operator employees (Figures 10–17).
- There were 216 lost time injuries reported in the combined coal, metalliferous and extractives sectors. The combined rolling 5-year average lost time injury frequency rate (LTIFR) continues an overall downward trend observed over the 10-year reporting period. The LTIFR for the extractives sector in 2021–22 was 89% higher than the rate for all sectors combined (Figures 18–19).
- There were 756 total recordable injuries in the combined coal, metalliferous and extractives sectors, a decrease of 13% compared to 2020–21. Since 2012–13 a steady downward trend has been observed in the rolling 5-year average total recordable injury frequency rate (TRIFR) for the combined coal, metalliferous and extractives sectors (Figures 20–21).
- Notified incidents decreased by 8% compared to 2020–21, with a steady downward trend observed in the incident
  notification frequency rate (INFR) for the combined coal, metalliferous and extractives sectors over the 10-year
  reporting period. In 2021–22, the breakdown analysis by type of incident and operation type presents a unique
  notification profile. Multiple factors including legislative framework, inherent hazards and characteristics of each
  sector and commodity produced contribute to the differences observed across each sector and operation type
  (Figure 22–24 and Table 3).
- There were 1,548 notices issued to the combined coal, metalliferous and extractives sectors, a decrease of 37% from 2020–21 which saw the most notices issued in any year across the 10-year reporting period. More than 55% of notices issued in 2021–22 were improvement notices. The extractives sector received the highest proportion of notices in 2021–22 in line with 2020–21 numbers, while the coal sector has received the highest proportion over the 10-year reporting period (Figure 25–26).

Table 1. NSW coal, metalliferous and extractives comparison of key performance indicators 2020–21 and 2021–22

Key performance indicators	Coal surface		Coal underground		Coal total		Metalliferous surface		Metalliferous underground		Metalliferous total		Extractives surface		Coal, metalliferous and surface extractives total	
	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022	FY 2021	FY 2022
Active mines	76	65	42	39	118	104	47	47	46	49	93	96	2,489	2,481	2,700	2,681
Million hours worked	32.44	30.92	13.67	13.08	46.11	44.00	5.78	5.52	8.98	9.26	14.76	14.78	4.21	4.22	65.08	63.00
Full time equivalent workers	16,220	15,461	6,836	6,539	23,056	22,001	2,891	2,761	4,490	4,629	7,382	7,390	2,104	2,108	32,542	31,498
Fatal injuries	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Fatal injury 5-year average frequency rate	0.013	0.006	0.000	0.000	0.009	0.004	0.069	0.068	0.025	0.000	0.043	0.028	0.039	0.041	0.019	0.012
Permanent incapacity injuries	1	1	1	0	2	1	0	0	0	0	0	0	0	0	2	1
Lost time injuries	90	64	115	80	205	144	13	18	30	20	43	38	42	34	290	216
Lost time injury 5-year average frequency rate	2.46	2.48	8.54	7.89	4.34	4.12	1.90	2.12	3.36	2.94	2.75	2.60	7.80	7.68	4.27	4.06
Restricted duty injuries	70	56	210	193	280	249	9	12	89	67	98	79	31	34	409	362
Medical treatment injuries	37	28	32	38	69	66	10	9	30	30	47	55	52	56	168	177
Total recordable injuries	198	149	358	311	556	460	32	39	149	117	188	172	126	124	870	756
Total recordable injury 5-year average frequency rate	5.83	5.57	28.85	27.69	12.93	12.27	6.05	5.71	17.85	15.81	13.01	11.97	25.81	27.55	13.98	13.36
Serious injuries	27	21	42	29	69	50	6	10	23	19	29	29	17	9	115	88
Serious injury 5-year average frequency rate	0.72	0.68	3.14	2.84	1.47	1.33	0.52	0.75	2.04	2.00	1.40	1.48	2.12	2.15	1.51	1.43
Incident notifications	660	567	893	877	1,553	1,444	64	60	263	242	327	302	167	126	2,047	1,872
Incident notification annual frequency rate	20.34	18.34	65.31	67.06	33.68	32.82	11.07	10.87	29.29	26.14	22.15	20.43	39.69	29.89	31.45	29.72
Mines that notified an incident	59%	65%	57%	59%	58%	63%	17%	19%	39%	33%	28%	26%	4%	3%	7%	6%
Notices issued	283	151	473	305	756	456	122	71	389	261	511	332	1,049	664	2,316	1,452

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#### Hours worked

In 2021–22, hours worked in the combined coal, metalliferous and extractives sectors slightly decreased compared to 2020–21 from 65.1 to 63 million hours. In 2021–22 just under 70% of the hours were worked in the coal sector, 23% in the metalliferous sector and 7% in the extractives sector.

Over the 10-year reporting period the total number of hours worked has decreased by 13% from 72.5 million hours in 2012–13 to 63 million hours in 2021–22. This was driven primarily by variations in hours worked in the coal sector.

Exploration, petroleum and geothermal sites, underground small gemstone mines, opal mines and tourist mines are not represented in NSW hours worked figures because mining operators in these sectors are not required to submit work health and safety reports to the Regulator. See <a href="Explanatory notes">Explanatory notes</a> for more information about work health and safety reporting.

M08 70M-72.2M 67.5M 67.3M 65.1M 63.0M 60M-61.3M 61.5M 59.7M 55.4M 50M-52.9M 49.1M 48.1M 47.8M 46.1M 44.0M 43.1M 40M-42.8M 41.1M 39.7M 30M-20M-15.0M 10M-<sup>14.6M</sup> 14.6M 14.8M 14.8M 13.7M 13.4M 13.1M 12.6M 11.4M 5.8M 5.5M 5.9M 5.0M 4.2M 0M\_ 4.8M 4.8M 4.4M 4.2M 4.2M FY 2014 FY 2015 FY 2016 FY 2017 FY 2018 FY 2019 FY 2013 FY 2020 FY 2021 FY 2022 Coal mines Metalliferous mines Extractives mines

Figure 2. Coal, metalliferous and extractives hours worked by sector 2012–13 to 2021–22

■ Coal, Metalliferous and Extractives mines

#### Fatal injuries

#### Fatal injuries 2021–22

In 2021–22 there were no work-related fatalities at mines in NSW.

#### Fatal injuries in NSW mining, last 100 years

Note: Fatal injury data for all sectors became available from 1989.

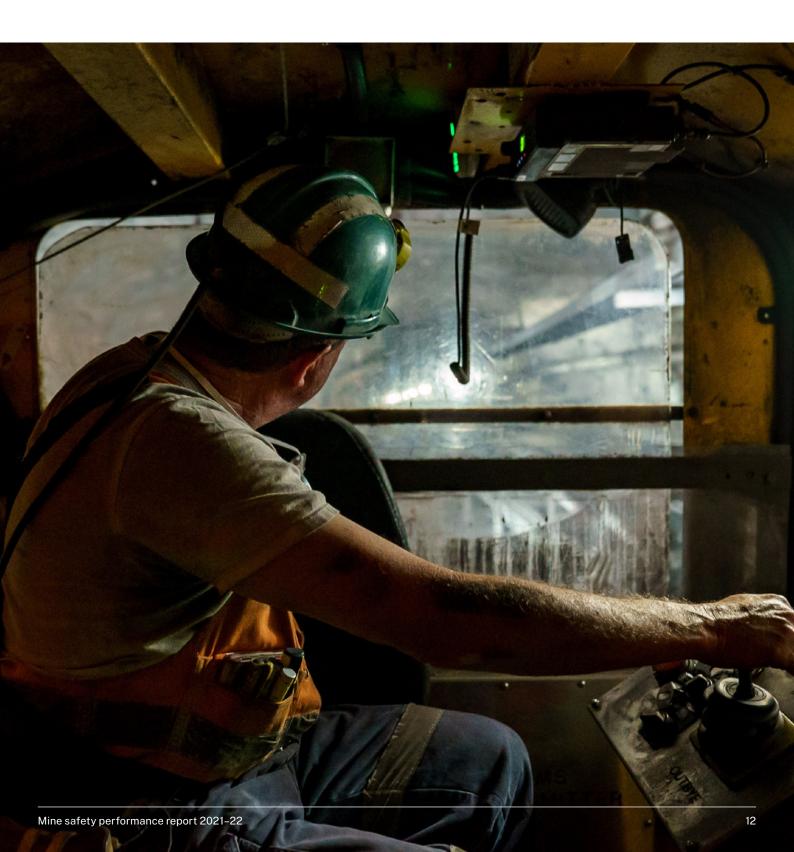
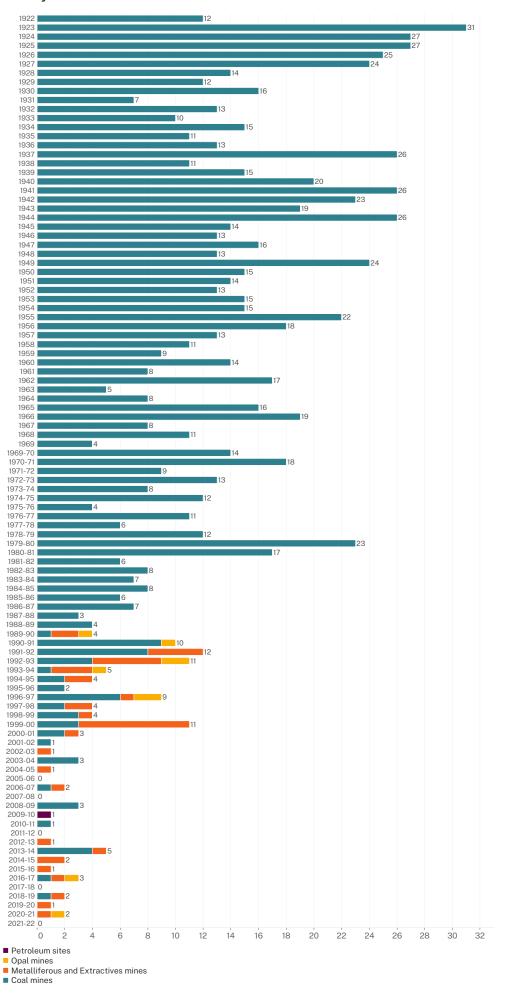
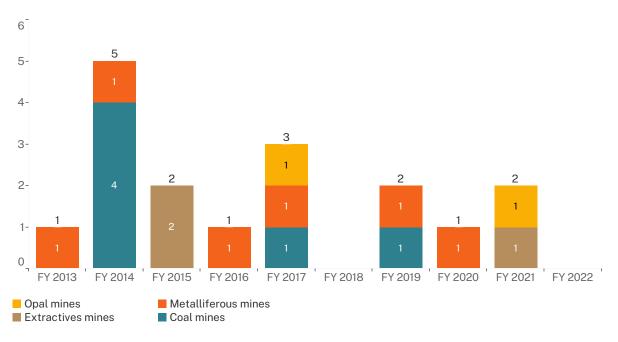


Figure 3. Fatal injuries by sector 1922 to FY 2021–22



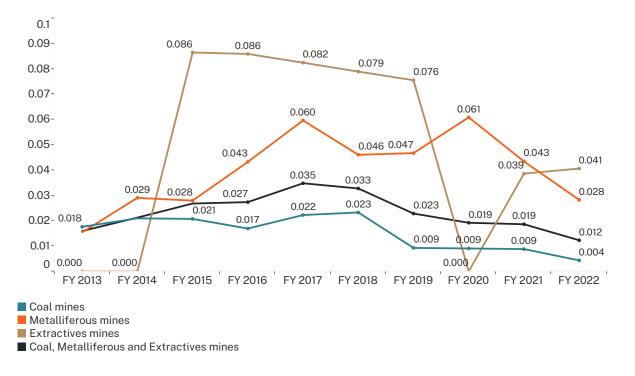
#### Fatal injuries by sector

Figure 4. Fatal injuries by sector 2012–13 to 2021–22



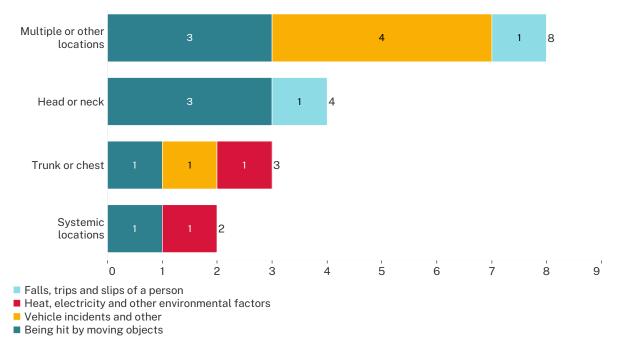
#### Fatal injury frequency rates

Figure 5. Coal, metalliferous and extractives rolling 5-year FIFR 2012–13 to 2021–22



#### Fatal injury hazard mechanism

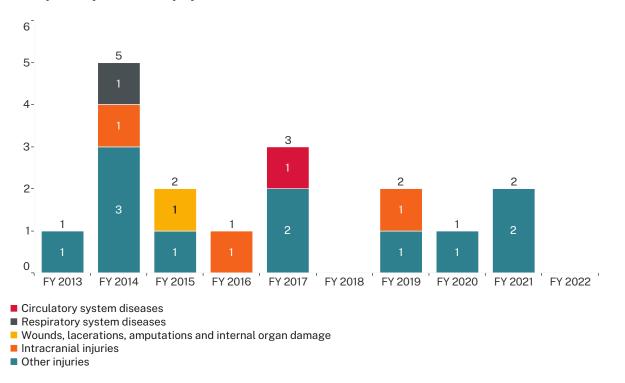
Figure 6. Fatal injuries by hazard mechanism 2012–13 to 2021–22



#### Fatal injury nature of injury

Since 2012–13, the nature of fatal injuries was most often classified as 'other injuries' (11) and 'intercranial injuries' (3). Note: 'Other injuries' includes effects of weather, exposure, air pressure and other external causes not elsewhere classified, electrocution, shock from electric current and multiple injuries.

Figure 7. Fatal injuries by nature of injury 2012–13 to 2021–22



#### Fatal injury bodily location

Figure 8. Fatal injuries by bodily location 2012–13 to 2021–22

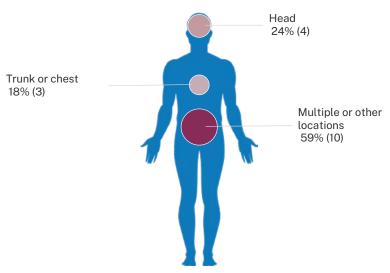
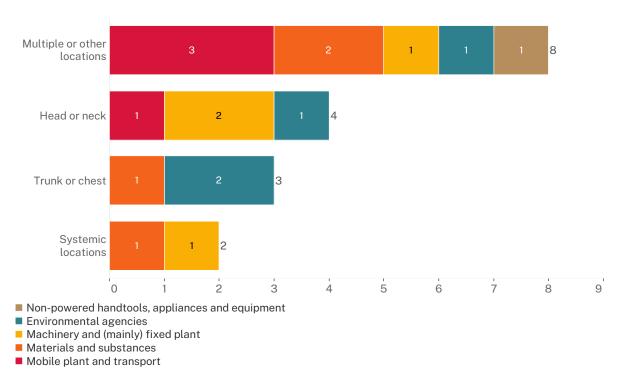


Figure 9. Bodily location of fatal injuries by breakdown agency 2012–13 to 2021–22



#### Serious injuries

Previously published Mine Safety Performance reports presented serious injury details based on definitions applicable to the legislation that was current at the time.

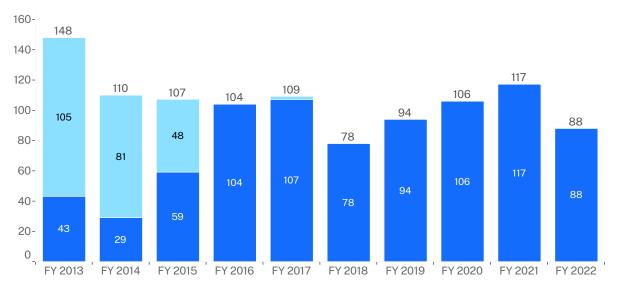
With the commencement of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 in February 2015, the definition of a serious injury was expanded to include additional injury and illness types, as well as any injury or illness, irrespective of its nature, that results in immediate treatment as an in-patient in a hospital.

To provide equivalence in serious injuries across the serious injury definitions in the previous legislation and current legislation, the serious injuries in this report consist of:

- · Injuries classified with an injury classification of 'injury, serious, work-related' or 'illness, serious, work-related'
- Any non-serious injuries with outcomes that resulted in-hospital inpatient admission and/or loss of consciousness.

Note: It is recognised that while the injuries classified under the previous legislation were recorded with hospital inpatient admission clauses, some of these may have only resulted in hospital treatment (e.g. for sutures), rather than inpatient admission.

Figure 10. Serious injuries with re-classified historical serious injuries 2012–13 to 2021–22

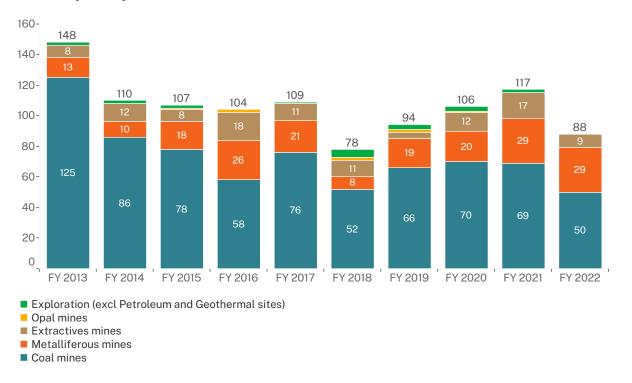


Equivalent to Serious injury/illness

Serious injury/illness

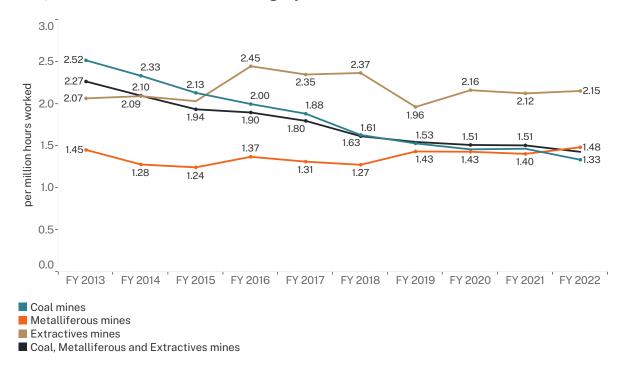
#### Serious injuries by sector

Figure 11. Serious injuries by sector 2012-13 to 2021-22



#### Serious injury frequency rates

Figure 12. Coal, metalliferous and extractives rolling 5-year SIFR 2012–13 to 2021–22



#### Serious injuries by bodily location

Bodily location has been used as a way to examine change in the severity and nature of serious injuries from 2012–13, by mechanism, breakdown agency and employment type.

Figure 13. Bodily location of serious injuries 2012–13 to 2021–22

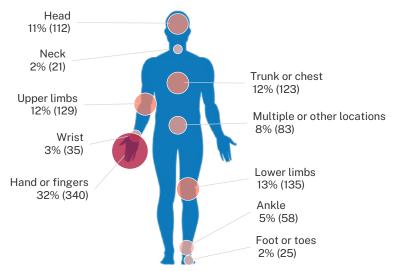


Figure 14. Bodily location of serious injuries by nature of injury 2019–20 to 2021–22

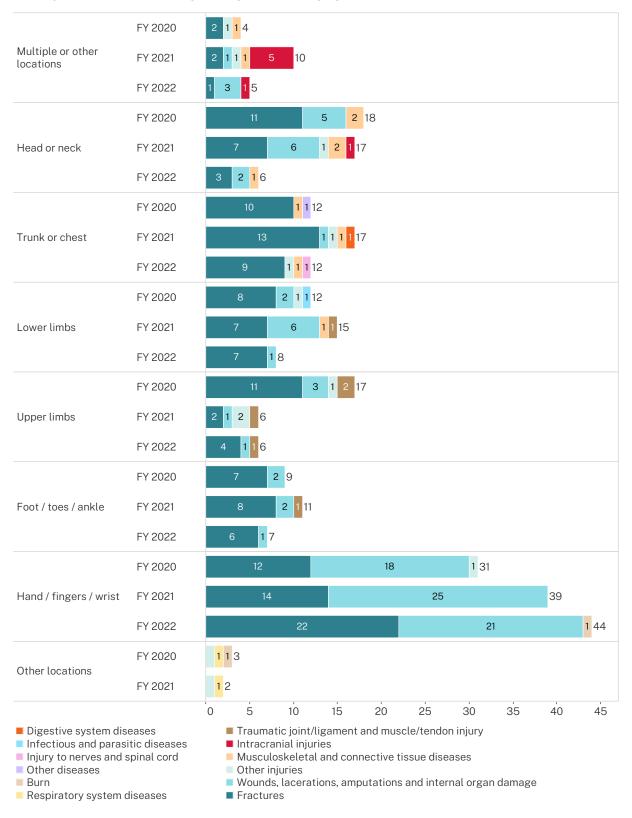


Figure 15. Bodily location of serious injuries by mechanism 2019–20 to 2021–22

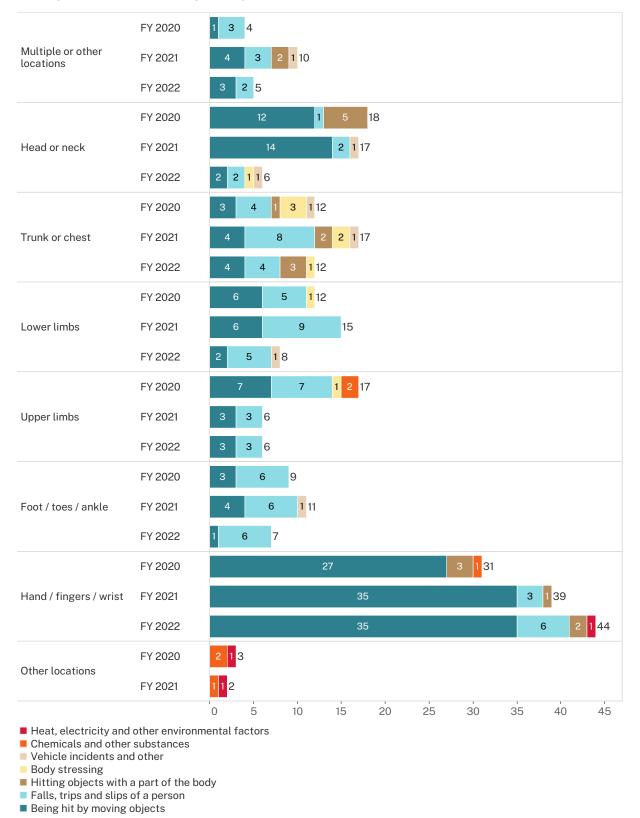


Figure 16. Bodily location of serious injuries by breakdown agency 2019–20 to 2021–22

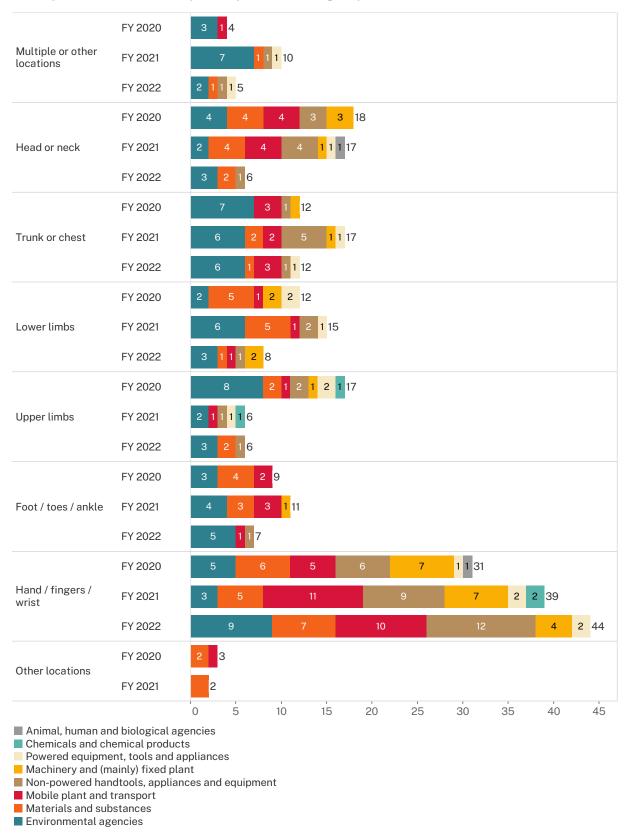
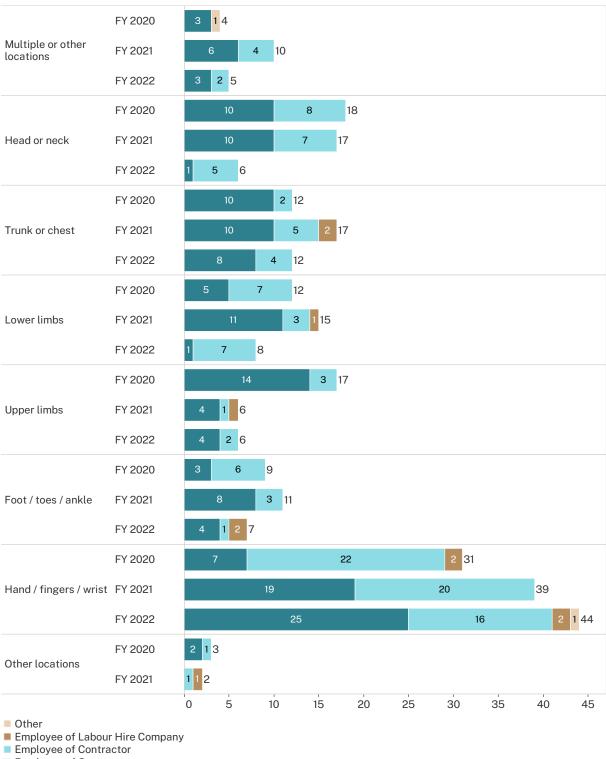


Figure 17. Bodily location of serious injuries by employment type 2019–20 to 2021–22

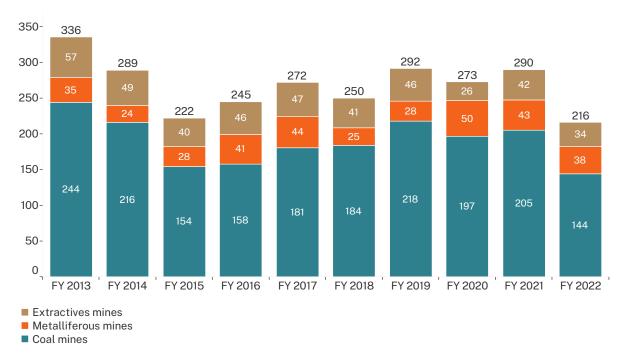


<sup>■</sup> Employee of Operator

#### Lost time injuries

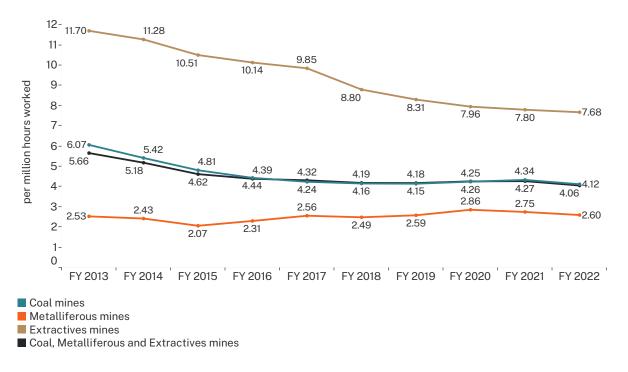
#### Lost time injuries by sector

Figure 18. Coal, metalliferous and extractives lost time injuries by sector 2012–13 to 2021–22



#### Lost time injury frequency rates

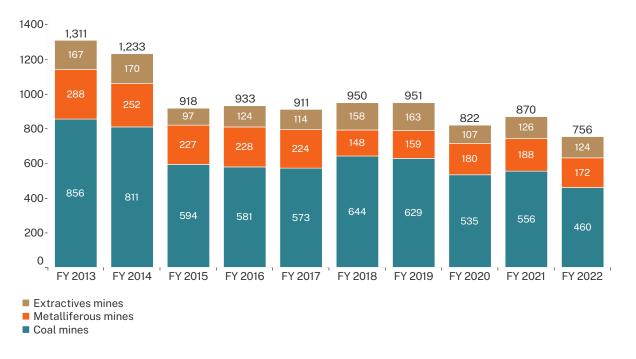
Figure 19. Coal, metalliferous and extractives rolling 5-year LTIFR 2012–13 to 2021–22



#### Total recordable injuries

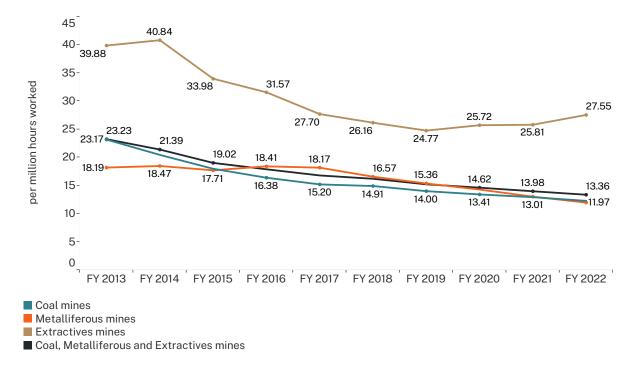
#### Total recordable injuries by sector

Figure 20. Coal, metalliferous and extractives total recordable injuries 2012–13 to 2021–22



#### Total recordable injury frequency rates

Figure 21. Coal, metalliferous and extractives rolling 5-year average TRIFR 2012–13 to 2021–22

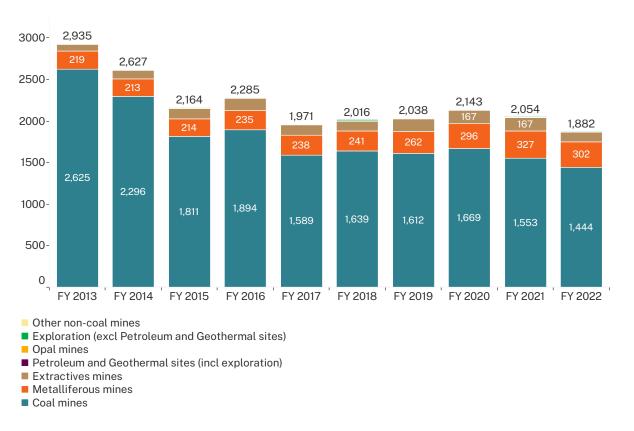


#### Notified incidents

#### Notified incidents by sector

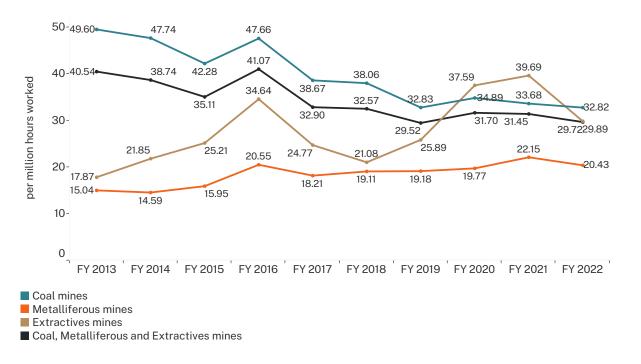
Note: Any incident notification that included multiple gas exceedances has been included as individual incident notifications in this report. See Appendix 3 for details of notified incidents by sector.

Figure 22. Notified incidents by sector 2012–13 to 2021–22



#### Incident notification rates

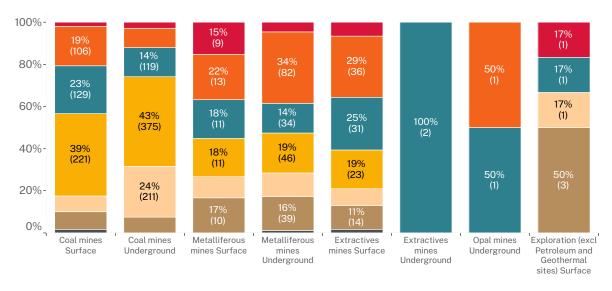
Figure 23. Coal, metalliferous and extractives sector incident notification rate 2012–13 to 2021–22



#### Incident notification reporting trends

#### Incident notification profile

Figure 24. Incident notification profile by sector and operation type 2021–22



- Workplace death or Serious injury/illness
- Dangerous incident
- Potentially dangerous incident
- Other High potential incident
- Lost time/Restricted duty injury/illness
- Medical treatment injury/illness
- Other incident notification

#### Proportion of mines notifying incidents

Since 2012–13 the proportion of mines notifying incidents has remained steady. On average, 6% of mines notified the Regulator of an incident every year during the 10-year reporting period.

The table provided below excludes the exploration sector so the numbers will be different to those previously reported. See <u>Explanatory notes</u>.

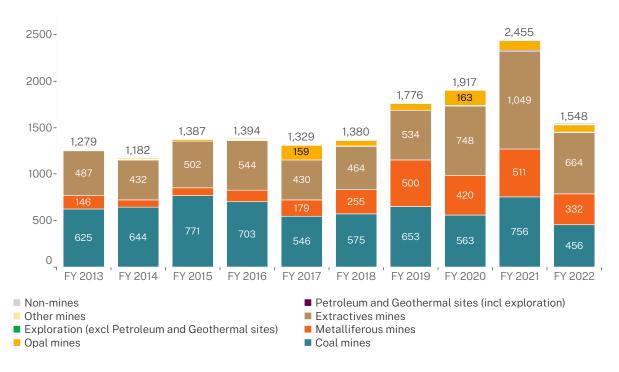
Table 2. Proportion of coal, metalliferous and extractives mines that notified an incident 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Number of notified incidents	2,929	2,613	2,152	2,275	1,963	2,003	2,027	2,132	2,047	1,872
Number of active mines	2,554	2,583	2,644	2,776	2,744	2,771	2,740	2,761	2,700	2,681
Number of mines that notified an incident	151	165	165	173	164	174	172	178	186	172
% of mines that notified an incident	6%	6%	6%	6%	6%	6%	6%	6%	7%	6%

#### Notices issued

#### Notices issued by sector

Figure 25. Notices issued by sector 2012-13 to 2021-22

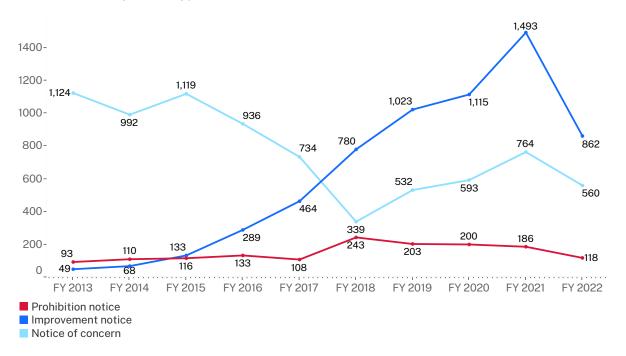


#### Notices issued by notice type

Since 2017–18, changes to the type of notices issued reflect the Regulator's renewed focus on incident prevention as outlined in its <u>Compliance and Enforcement Approach (2017)</u>. The approach sought to clearly identify matters that necessitate the issue of an improvement notice rather than a written notice of concern. Decreases were observed in all notices types for 2021–22.

Due to the small numbers of non-disturbance and explosives notices, these have not been included in the figure below.

Figure 26. Notices issued by notice type 2012–13 to 2021–22



#### Sector profiles

# NSW Resources Regulator sector reporting

#### Coal

Open cut, underground and coal preparation plants\*

#### Metalliferous

Includes metals and mineral sands\*

#### Extractives

Includes construction and industrial materials\*

<sup>\*</sup> Excluding exploration.

Refer to <u>Appendix 2</u> for definitions.

## Coal sector



# Key performance measures 2021–22 O fatal injuries 144 lost time injuries 460 total recordable injuries 1,444 notified incidents 456 noticed issued

In the coal sector in 2021-22:

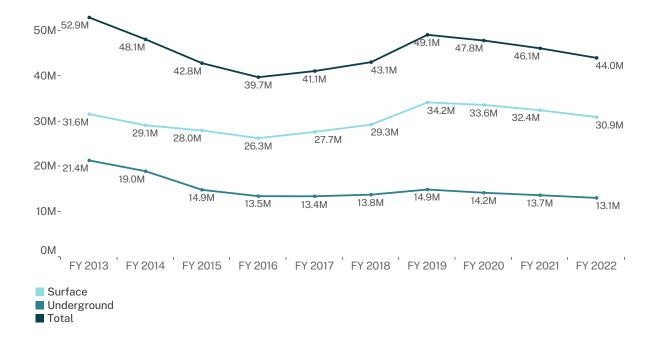
- There were no work-related fatalities. The last work-related fatality in the coal sector was in 2018–19. During the past 10 years, there have been 6 work-related mining fatalities in the NSW coal sector, 4 in surface operations and 2 in underground operations (Figure 28).
- Downward trends have been observed since 2012–13 in the frequency rates for serious injuries, lost time injuries and total recordable injuries across the coal sector (Figures 30, 32 and 34) noting the 39% reduction in hours worked in underground coal mines from 2012–13 (Figure 27).
- Serious injuries in the coal sector decreased by 28% in 2021–22. Of the 50 serious injuries notified, the majority (58%) occurred in underground coal mines. Since 2017–18, serious injuries reported in surface coal mines have increased from 13 to 21 but the SIFR has shown a small but steady downward trend since 2012–13 (Figures 29–30).
- There were 144 lost time injuries reported in 2021–22, a 30% decrease from the previous year, with 56% occurring in underground operations. The LTIFR has steadily declined and then plateaued over the reporting decade, marking an overall 32% decrease (Figures 31–32).
- There were 460 total recordable injuries, down 17% from 2020–21. In the 10 years since 2012–13, total recordable injuries in the coal sector have decreased by almost half. A downward trend in the rolling 5-year average TRIFR was observed across the coal sector, with an overall decrease since 2012–13 of 57% (Figures 33–34).
- There were 1,444 incidents notified to the Regulator by the coal sector, a 7% decrease from the previous year. In the ten years since 2012–13, incidents notified by the coal sector have decreased by 45%. Notified incidents in underground operations have decreased by 56% since 2012–13, with underground operations accounting for 61% of incidents notified in 2021–22. The overall INFR decreased slightly compared to 2020–21 (Figures 35–36).
- Other high potential incidents were the predominant incidents notified in surface and underground coal mines. Increases in dangerous incidents (36%) and potentially dangerous incidents (15%) were also observed in surface coal mines, whereas a drop of more than half was seen for lost time/restricted duty injuries. Multiple factors including legislative framework, inherent hazards and characteristics of each operation type contribute to the differences observed. While each operation type presents a distinct notification profile, comparable results were observed across the 5-year period (Figures 35–37 and Table 3).
- There were 456 notices issued in the coal sector, a decrease of 40% from 2020–21, with improvement notices accounting for 61%. Over two-thirds of notices (notices of concern, improvement notices, prohibition notices and non-disturbance notices) were issued to underground coal mines. This aligns with most previous years of the 10-year reporting period, with the exception of 2019–20 where the majority of notices were issued to surface coal mines (Figures 38–39).

See Appendix 3 for sector summary data.

#### Hours worked

In 2021–22 the total hours worked in the coal sector decreased slightly from the previous year, continuing the trend observed since 2018–19. The majority of hours worked (70%) were in surface coal operations.

Figure 27. Coal sector hours worked by operation type 2012–13 to 2021–22

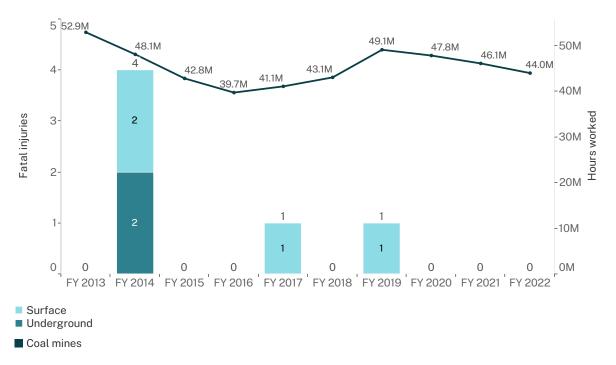


#### Fatal injuries

#### Fatal injuries and hours worked

For more information on fatal injuries in NSW coal mines for the last 100 years, refer to <u>Figure 3</u> which shows the sustained long-term decrease in coal mining fatal injuries.

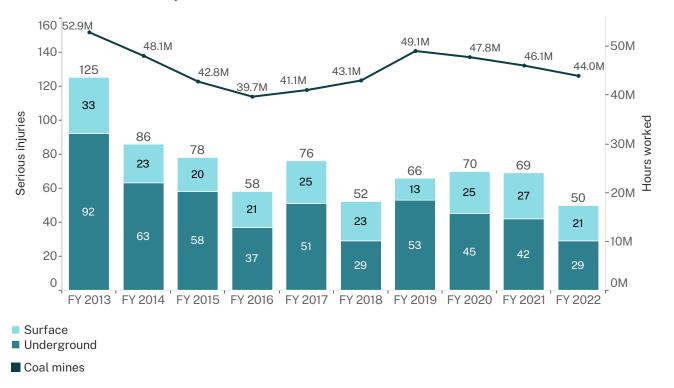
Figure 28. Coal sector fatal injuries and hours worked 2012–13 to 2021–22



#### Serious injuries

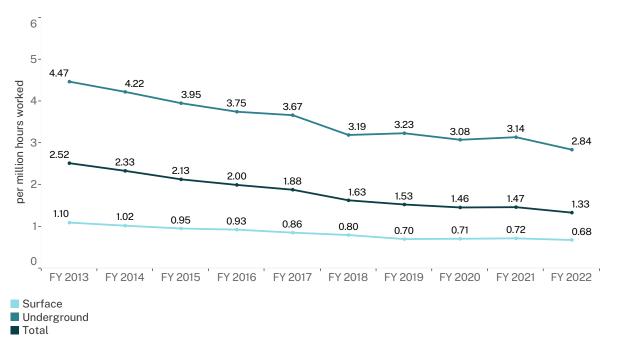
#### Serious injuries and hours worked

Figure 29. Coal sector serious injuries and hours worked 2012–13 to 2021–22



#### Serious injury frequency rates

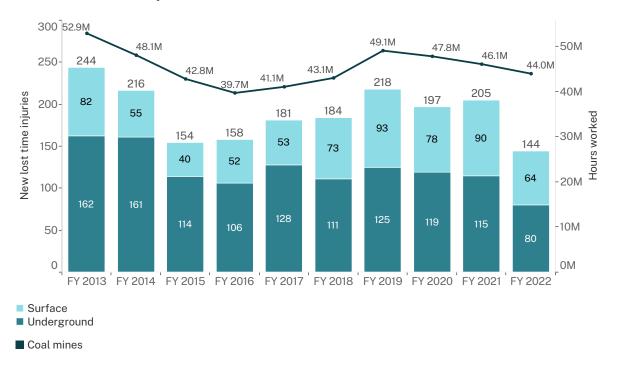
Figure 30. Coal sector rolling 5-year SIFR 2012–13 to 2021–22



#### Lost time injuries

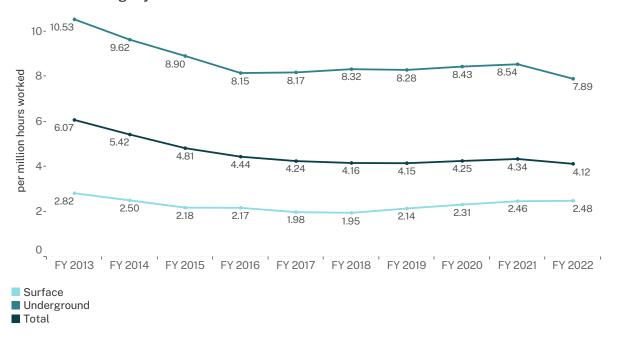
#### Lost time injuries and hours worked

Figure 31. Coal sector lost time injuries and hours worked 2012–13 to 2021–22



#### Lost time injury frequency rates

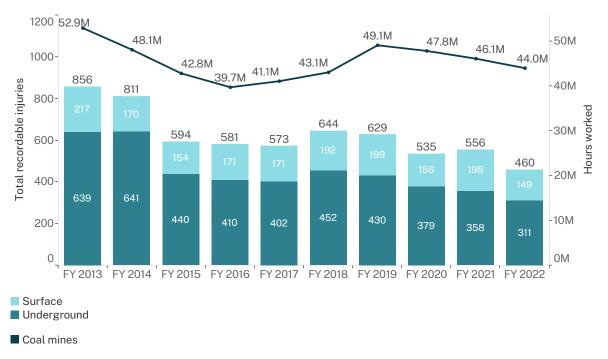
Figure 32. Coal sector rolling 5-year LTIFR 2012-13 to 2021-22



#### Total recordable injuries

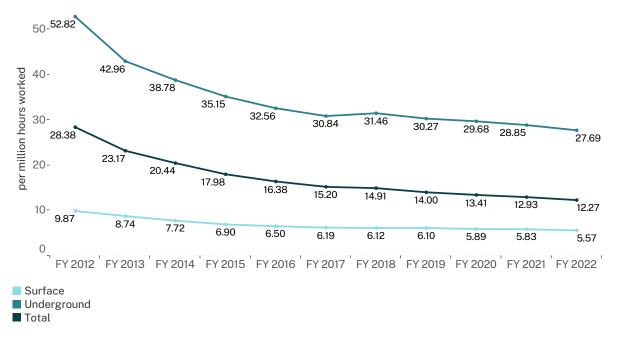
#### Total recordable injuries and hours worked

Figure 33. Coal sector total recordable injuries and hours worked 2012–13 to 2021–22



#### Total recordable injuries frequency rates

Figure 34. Coal sector rolling 5-year average TRIFR 2012–13 to 2021–22



#### **Notified incidents**

#### Notified incidents by operation type

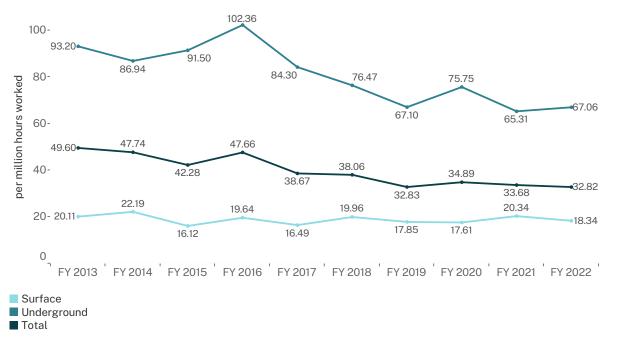
Note: Any incident notification that included multiple gas exceedances has been included as individual incident notifications in this report.

Figure 35. Coal sector notified incidents by operation type 2012–13 to 2021–22



#### Incident notification rates

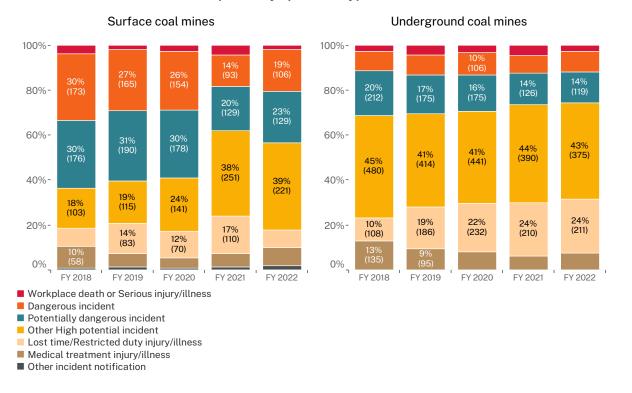
Figure 36. Coal sector incident notification rate 2012-13 to 2021-22



#### Incident notification reporting trends

#### Incident notification profile

Figure 37. Coal sector incident notification profile by operation type 2017–18 to 2021–22



#### Proportion of coal mines notifying incidents

The proportion of coal mines notifying incidents has decreased by 32% over the 10-year reporting period from 92% in 2012–13 to 63% in 2021–22. On average, 72% of coal mines notified incidents during the 10-year reporting period.

The table provided below excludes the exploration sector so the numbers will be different to those previously reported. See Explanatory notes.

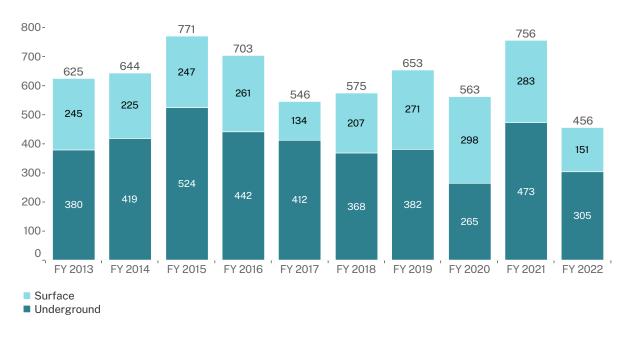
Table 3. Coal sector proportion of mines that notified an incident 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Number of notified incidents	2,625	2,296	1,811	1,894	1,589	1,639	1,612	1,669	1,553	1,444
Number of active mines	84	83	83	95	111	111	123	122	118	104
Number of mines that notified an incident	77	76	72	69	71	75	70	75	69	65
% of mines that notified an incident	92%	92%	87%	73%	64%	68%	57%	61%	58%	63%

#### Notices issued

#### Notices issued by operation type

Figure 38. Coal sector notices issued by operation type 2012-13 to 2021-22

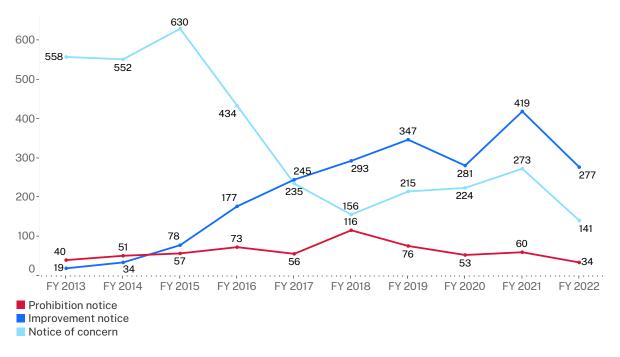


#### Notices issued by notice type

Since 2017–18, changes to the type of notices issued reflect the Regulator's renewed focus on incident prevention as outlined in its <u>Compliance and Enforcement Approach (2017)</u>. The approach sought to clearly identify matters that necessitate the issue of an improvement notice rather than a written notice of concern.

Due to the small numbers of non-disturbance and explosives notices, these have not been included in the figure below.

Figure 39. Coal sector notices issued by notice type 2012–13 to 2021–22



## Metalliferous sector



# Key performance measures 2021–22 O fatal injuries 38 lost time injuries 156 total recordable injuries 302 notified incidents 333 noticed issued

In the metalliferous sector in 2021-22:

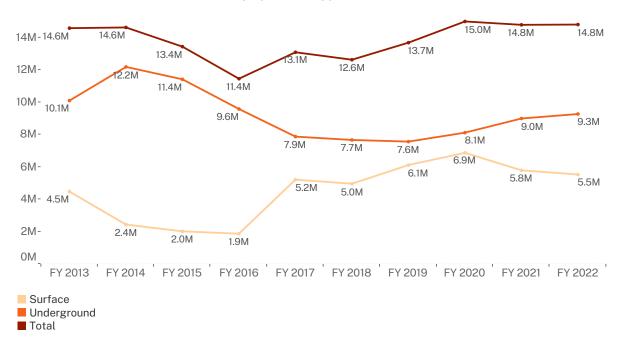
- There were no work-related fatalities. The last work-related fatality in the metalliferous sector was in 2019–20. During the past 10 years, there have been 6 work-related mining fatalities in the NSW metalliferous sector, 4 in underground operations and 2 in surface operations (Figure 41).
- The overall serious injury frequency rate increased in 2021–22, representing a slight decrease in underground mines and a 44% increase in surface mines. A downward trend was observed in the lost time injury frequency rate since 2019–20, particularly in underground mines, while the total recordable injury rate has trended down across the metalliferous sector since 2015–16 (Figures 42, 43, 45 and 47).
- Of the 29 serious injuries notified, the majority occurred in underground metalliferous mines. An upward trend in the SIFR has continued from 2014–15, representative of a 54% increase at underground operations and a 30% decrease at surface operations in that period (Figures 42–43).
- There were 38 lost time injuries reported, with a slight majority occurring in underground operations. The LTIFR in underground operations has continued to decrease from 2019–20, returning to the level observed in 2018–19. Conversely the surface operations LTIFR increased by 12% to return to 2017–18 levels (Figures 44–45).
- Total recordable injuries have remained steady from 2019–20, with the past 5 years total recordable injuries being the lowest in the 10-year reporting period. A steady downward trend has been observed in the rolling 5-year average TRIFR since 2015–16 (Figures 46–47).
- Incidents notified decreased by 8% in 2021–22, following a steady overall increase observed in the metalliferous sector since 2013–14. Since 2012–13 an upward trend has been observed in the INFR for underground operations despite a substantial reduction in reported hours worked. While in surface operations a downward trend has been observed since 2015–16 along with an increase in hours worked in the same period. Despite the short to medium term trends, in 2021–22 incidents notified by underground operations dropped to their lowest level since 2016–17 whilst surface operations remained steady from 2020–21 (Figures 40, 48–49).
- Between 2017–18 and 2021–22, the greatest proportion of incident notifications in both surface and underground operations related to dangerous incidents. Multiple factors including legislative framework, inherent hazards and characteristics of each operation type contribute to the differences observed. While each operation type presents a distinct notification profile, comparable results were observed across the 5-year period (Figures 48–50 and Table 4).
- There were 333 notices issued in the metalliferous sector, a 35% decrease from 2020–21 with improvement notices accounting for 52% of all notices issued in the year. More than three quarters of all notices were issued to underground operations in line with the 10-year reporting period (Figures 51–52).

#### Hours worked

In 2021–22 the total hours worked for the metalliferous sector showed no change overall from 2020–21, with a 3% increase seen in underground operations and a 5% decrease in surface operations. The majority of hours worked were in underground metalliferous operations.

Note: There was a change in work health and safety reporting requirements from June 2020, where non-coal mines with total worker hours of less than 10,000 hours per year became exempt from having to submit work health and safety reports to the Regulator.

Figure 40. Metalliferous sector hours worked by operation type 2012–13 to 2021–22

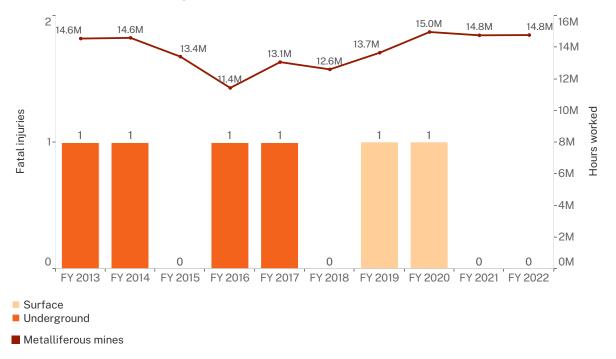


#### Fatal injuries

#### Fatal injuries and hours worked

For more information on fatal injuries in NSW metalliferous mines since 1989 refer to Figure 3.

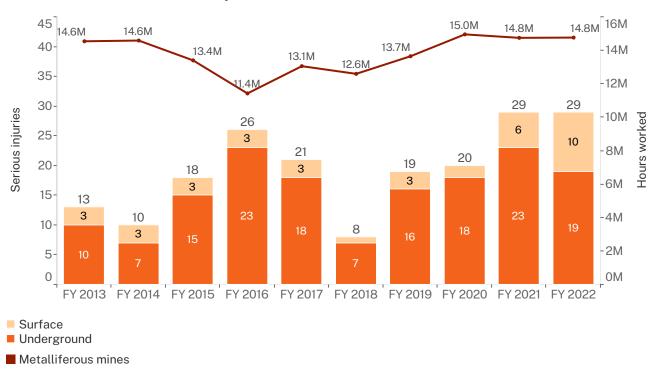
Figure 41. Metalliferous sector fatal injuries and hours worked 2012–13 to 2021–22



#### Serious injuries

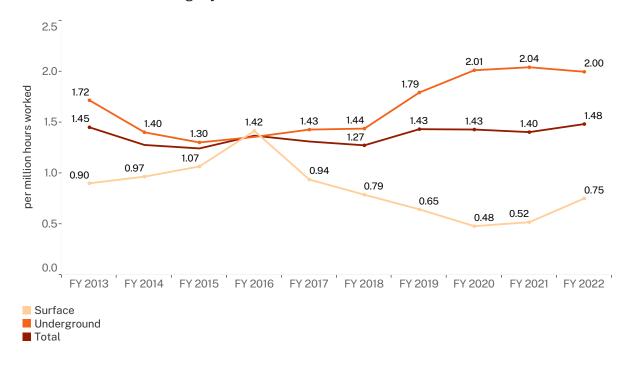
#### Serious injuries and hours worked

Figure 42. Metalliferous sector serious injuries and hours worked 2012–13 to 2021–22



#### Serious injury frequency rates

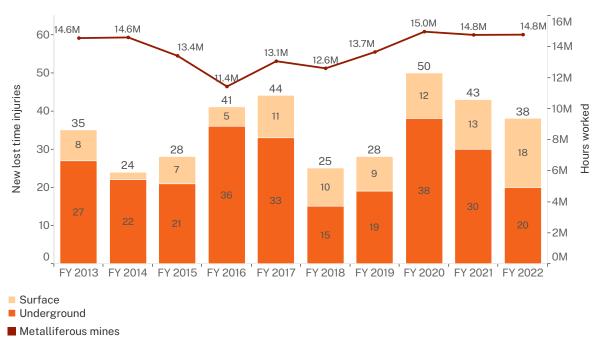
Figure 43. Metalliferous sector rolling 5-year SIFR 2012–13 to 2021–22



#### Lost time injuries

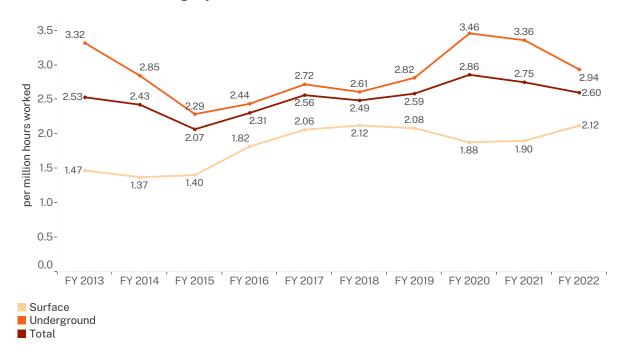
#### Lost time injuries and hours worked

Figure 44. Metalliferous sector lost time injuries and hours worked 2012–13 to 2021–22



#### Lost time injury frequency rates

Figure 45. Metalliferous sector rolling 5-year LTIFR 2012–13 to 2021–22



#### Total recordable injuries

#### Total recordable injuries and hours worked

Figure 46. Metalliferous sector total recordable injuries and hours worked 2012–13 to 2021–22



#### Total recordable injuries frequency rates

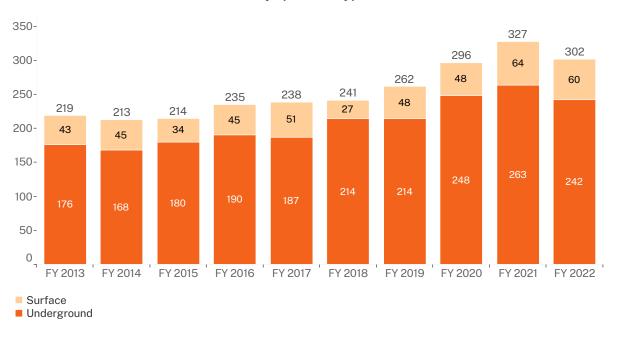
Figure 47. Metalliferous sector 5-year average TRIFR FY 2012–13 to 2021–22



#### **Notified incidents**

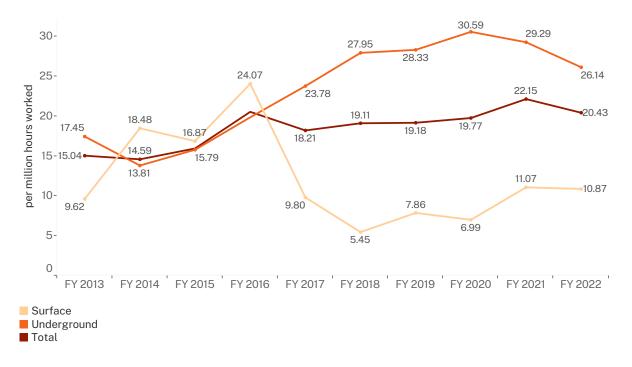
#### Notified incidents by operation type

Figure 48. Metalliferous sector notified incidents by operation type 2012–13 to 2021–22



#### Incident notification rates

Figure 49. Metalliferous sector incident notification rate 2012–13 to 2021–22



#### Incident notification reporting trends

#### Incident notification profile

Incident notification data allows the Regulator to monitor compliance and respond to sector specific reporting trends. Multiple contributing factors influence the types of incidents notified by each sector and operation type. These include, but are not limited to, the legislative framework, inherent hazards and characteristics of each sector and operation type as well as the commodity produced.

Surface metalliferous mines Underground metalliferous mines 100%-100%-13% (6) 15% (9) 34% (82) 80%-33% (21) 80%-40% (85) 34% (89) 42% (90) 50% (24) 60%-60%-14% (9) 18% (11) 13% 16% (40) 25% (53) 21% (45) 40%-40%-33% (9) 29% (14) 11% (27) 9% 20%-20%-(6) (6) 14% 0% FY 2019 FY 2021 FY 2022 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2018 FY 2020 Workplace death or Serious injury/illness Dangerous incident Potentially dangerous incident Other High potential incident Lost time/Restricted duty injury/illness ■ Medical treatment injury/illness Other incident notification

Figure 50. Metalliferous sector incident notification profile by operation type 2017–18 to 2021–22

#### Proportion of metalliferous mines notifying incidents

While the number of metalliferous mines has increased by more than 17% in the 10 years since 2012–13 (from 82 mines to 96 in 2021–22), the proportion of mines notifying incidents has remained relatively steady. On average, 26% of active metalliferous mines notified the Regulator of an incident every year within the 10-year reporting period.

The table provided below excludes the exploration sector so the numbers will be different to those previously reported. See <u>Explanatory notes</u>.

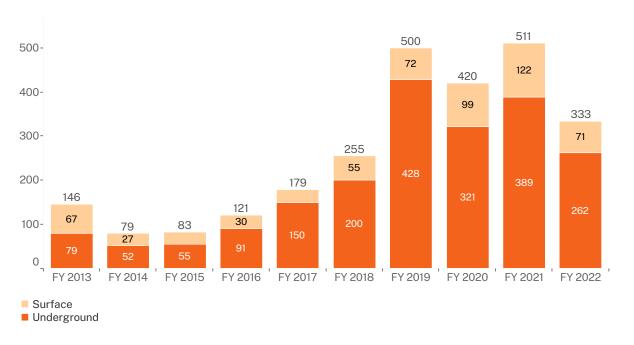
Table 4. Metalliferous sector proportion of mines that notified an incident 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Number of notified incidents	219	213	214	235	238	241	262	296	327	302
Number of active mines	82	81	85	98	109	107	116	105	93	96
Number of mines that notified an incident	20	26	25	26	23	26	23	27	26	25
% of mines that notified an incident	24%	32%	29%	27%	21%	24%	20%	26%	28%	26%

#### Notices issued

#### Notices issued by operation type

Figure 51. Metalliferous sector notices issued by operation type 2012–13 to 2021–22



#### Notices issued by notice type

Since 2017–18, changes to the type of notices issued reflect the Regulator's renewed focus on incident prevention as outlined in its <u>Compliance and Enforcement Approach (2017)</u>. The approach sought to clearly identify matters that necessitate the issue of an improvement notice rather than a written notice of concern.

Due to the small numbers of non-disturbance and explosives notices, these have not been included in the figure below.

Figure 52. Metalliferous sector notices issued by notice type 2012–13 to 2021–22



## Extractives sector



Key performance measures 2021–22				
O fatal injuries	9 serious injuries			
34 lost time injuries	124 total recordable injuries			
126 notified incidents	664 noticed issued			

In the extractives sector in 2021–22:

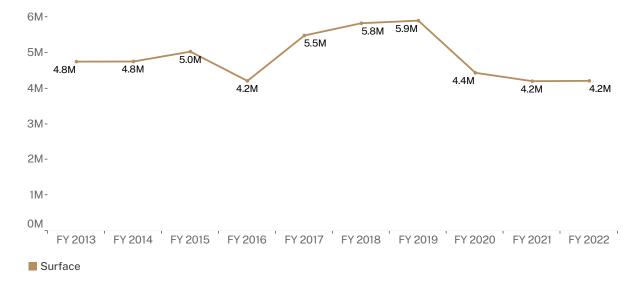
- There were no work-related fatalities. The last work-related fatality in the extractives sector was in 2020–21 (Figure 54).
- There were 9 serious injuries notified, a decrease of 47% from 2020–21. The SIFR for the extractives sector has remained steady since 2019–20 (Figures 55–56).
- There were 34 lost time injuries reported, a decrease of 19% from 2020–21. The rolling 5-year average LTIFR decreased slightly, continuing an overall downward trend since 2012–13 (Figures 57–58).
- There were 124 total recordable injuries marking a slight decrease from 2020–21. The rolling 5-year average TRIFR experienced a 7% increase compared to 2020–21, however a downward trend has been observed overall since 2013–14 (Figures 59–60).
- There were 126 incidents notified to the Regulator, a 25% decrease in the volume of incidents notified in the previous 2 years. The INFR also decreased by 25% after 3 years of increases which led in 2020–21 to the highest INFR in the 10-year reporting period (Figures 61–62).
- Between 2017–18 and 2021–22, the greatest proportion of incident notifications in the extractives sector related to dangerous incidents and potentially dangerous incidents (Figure 63 and Table 5).
- There were 664 notices issued, an overall decrease of 37% from 2020–21. Improvement notices accounted for 54% of notices issued (Figures 63–64).

#### Hours worked

In 2021–22 the total hours worked in the surface extractives sector remained steady from 2020–21.

Note: There was a change in work health and safety reporting requirements from June 2020, where non-coal mines with total worker hours of less than 10,000 hours per year became exempt from having to submit work health and safety reports to the Regulator.

Figure 53. Extractives sector hours worked by operation type 2012–13 to 2021–22



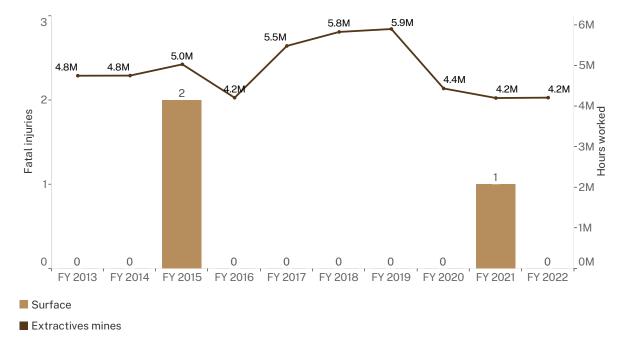
#### Fatal injuries

#### Fatal injuries and hours worked

In 2021–22 there were no mining fatalities in the extractives sector.

During the past ten years, there have been 3 work-related mining fatalities in the extractives sector. <u>Figure 3</u> presents fatal injuries in NSW metalliferous and extractives mines since 1989.

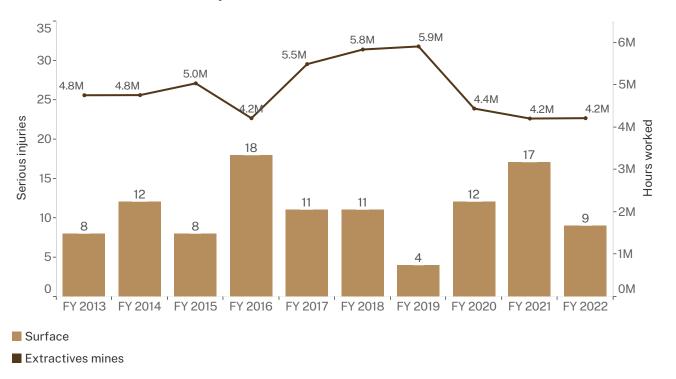
Figure 54. Extractives sector fatal injuries and hours worked 2012–13 to 2021–22



#### Serious injuries

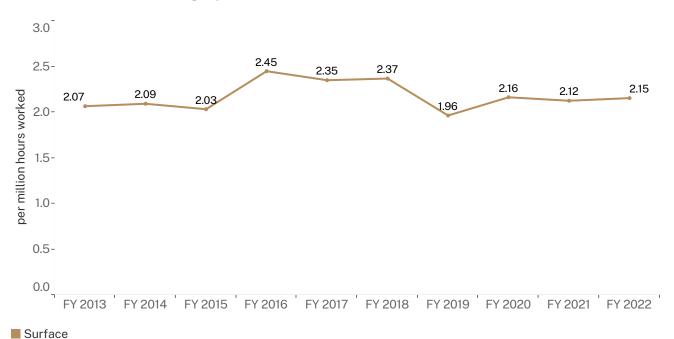
#### Serious injuries and hours worked

Figure 55. Extractives sector serious injuries and hours worked 2012–13 to 2021–22



#### Serious injury frequency rates

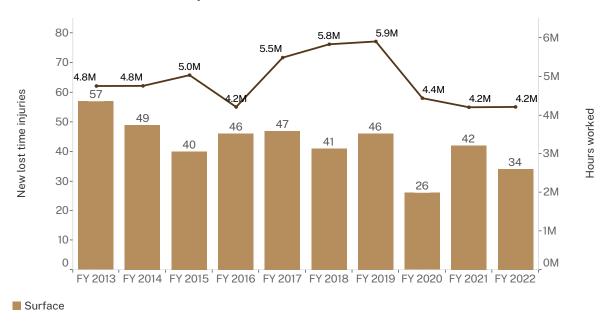
Figure 56. Extractives sector rolling 5-year SIFR 2012–13 to 2021–22



#### Lost time injuries

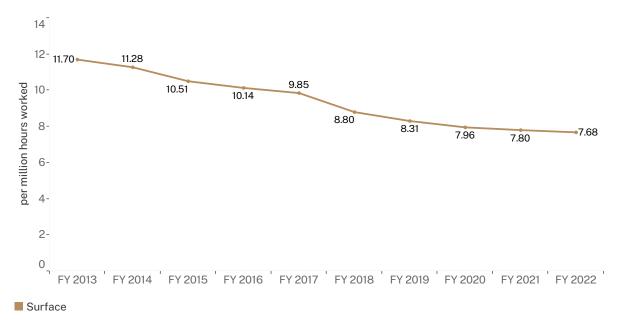
#### Lost time injuries and hours worked

Figure 57. Extractives sector lost time injuries and hours worked 2012–13 to 2021–22



#### Lost time injury frequency rates

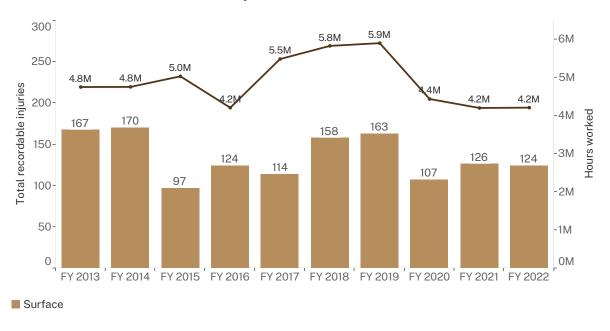
Figure 58. Extractives sector rolling 5-year LTIFR 2012–13 to 2021–22



#### Total recordable injuries

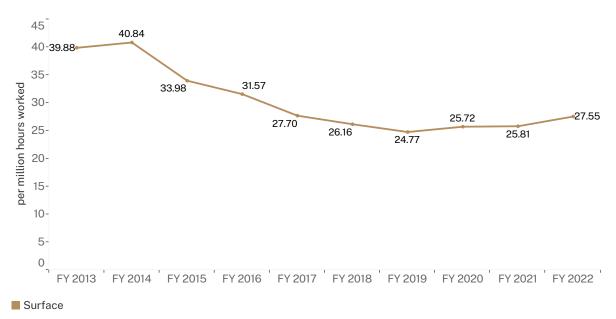
#### Total recordable injuries and hours worked

Figure 59. Extractives sector total recordable injuries and hours worked 2012–13 to 2021–22



#### Total recordable injury frequency rates

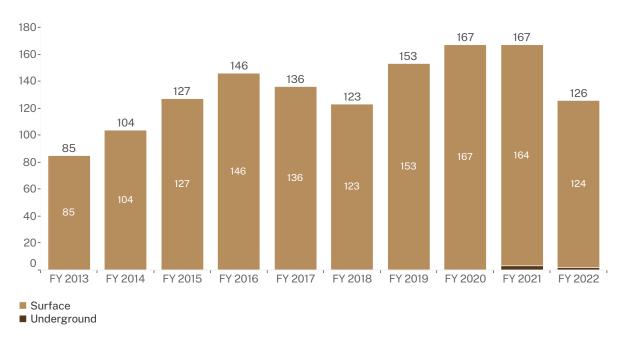
Figure 60. Extractives sector rolling 5-year average TRIFR 2012–13 to 2021–22



#### **Notified incidents**

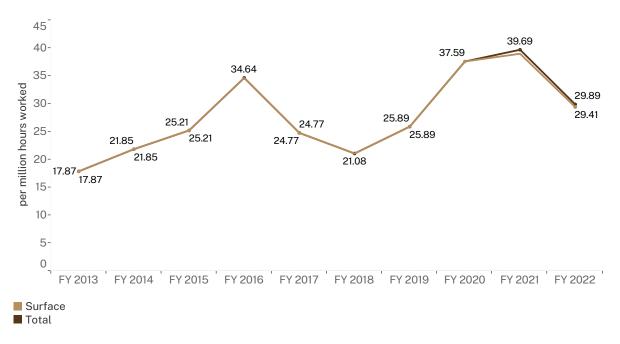
#### Notified incidents by operation type

Figure 61. Extractives sector notified incidents by operation type 2012–13 to 2021–22



#### Incident notification rates

Figure 62. Extractives sector incident notification rate 2012–13 to 2021–22



#### Incident notification reporting trends

#### Incident notification profile

Incident notification data allows the Regulator to monitor compliance and respond to sector specific reporting trends. Multiple contributing factors influence the types of incidents notified by each sector. These include, but are not limited to, the legislative framework, inherent hazards and characteristics of each operation as well as the commodity produced.

Figure 63 shows a breakdown of the types of incidents notified by the extractives sector since 2017–18, including notifications for incidents unrelated to injury and illness. Comparable results were observed across the 5-year period.

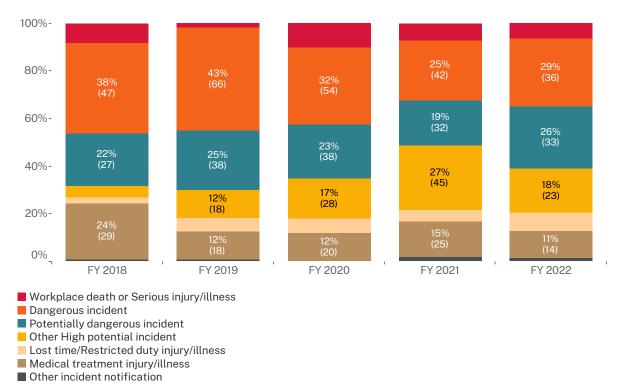


Figure 63. Extractives sector incident notification profile 2017–18 to 2021–22

#### Proportion of extractives mines notifying incidents

While the number of extractives mines notifying incidents has increased by 52% in the 10 years since 2012–13 (from 54 to 82 in 2021–22), the proportion of mines notifying incidents has remained relatively steady. On average, only 3% of active metalliferous mines notified the Regulator of an incident every year within the 10-year reporting period.

The table provided below excludes the exploration sector so the numbers will be different to those previously reported. See Explanatory notes.

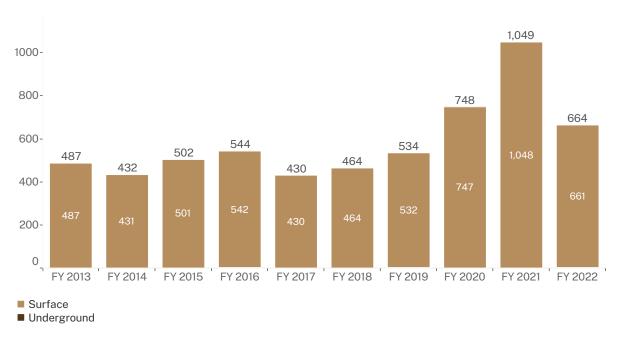
Table 5. Extractives sector proportion of mines that notified an incident 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Number of notified incidents	85	104	127	146	136	123	153	167	167	126
Number of active mines	2,388	2,419	2,476	2,583	2,524	2,553	2,501	2,534	2,489	2,481
Number of mines that notified an incident	54	63	68	78	70	73	79	76	91	82
% of mines that notified an incident	2%	3%	3%	3%	3%	3%	3%	3%	4%	3%

#### Notices issued

#### Notices issued by operation type

Figure 64. Extractives sector notices issued by operation type 2012-13 to 2021-22

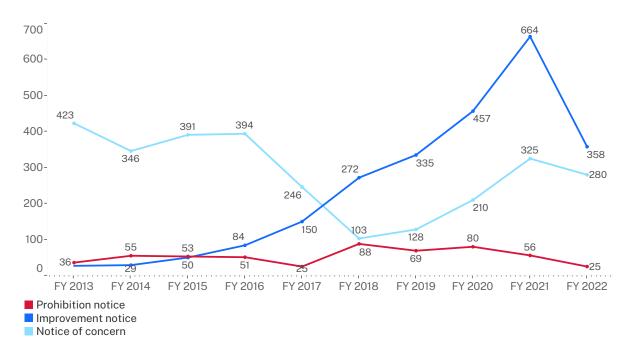


#### Notices issued by notice type

Since 2017–18, changes to the type of notices issued reflect the Regulator's renewed focus on incident prevention as outlined in its <u>Compliance and Enforcement Approach (2017)</u>. The approach sought to clearly identify matters that necessitate the issue of an improvement notice rather than a written notice of concern.

Due to the minimal numbers of non-disturbance and explosives notices, these have not been included in Figure 65.

Figure 65. Extractives sector notices issued by notice type 2012–13 to 2021–22



# Appendices



#### Appendix 1. Definitions

#### Injury type

Injury type	Definition	
Fatal injury (FI)	A work-related injury or illness that results in death.	
Permanent incapacity injury (PII)	A work-related injury or illness that resulted in permanent incapacity that occurred during the reporting period–with an upper limit of 12 months assigned to the days lost.	
Lost time injury (LTI)	A work-related injury or illness that results in a minimum of one full shift absence (AS1885.1–1990).	
Restricted duty injury (RDI)	A work-related injury or illness resulting in the affected person returning to alternative or restricted duties.	
Medical treatment injury (MTI)	A work-related injury or illness requiring medical treatment.	
Total recordable injuries (TRI)	The sum of fatal injuries, permanent incapacity injuries, lost time injuries, restricted duty injuries and medical treatment injuries.	
Serious injury (SI)	A work-related injury or illness where the nature of injury or illness is defined by the relevant legislation.	
	Serious injuries and illnesses are defined in section 178 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 (the Regulation), and include:	
	(a) an injury or illness requiring the person to have immediate treatment as an in-patient in a hospital	
	(b) an injury or illness requiring the person to have immediate treatment for amputation of any part of the body, serious head injury, serious eye injury, serious burn, separation of skin from underlying tissue (such as degloving or scalping), spinal injury, loss of a bodily function, serious lacerations	
	(c) an injury or illness requiring the person to have medical treatment within 48 hours of exposure to a substance	
	(d) a fracture to a person's bone other than hand or foot, including a finger or toe.	
	In general, a serious injury under this definition may not be directly comparable to definitions in other mining jurisdictions or SafeWork Australia.	
	Prior to commencement of the WHS (MPS) Regulation 2014 on 1 February 2015, an injury was classified as serious if it was reported under clauses 55(a)(i)-(vi) or 55(c)(v) of the Coal Mine Health and Safety Regulation 2006 (CMHSR) or clauses 145(a)(i)-(vi) or 145(c)(iv) of the Mine Health and Safety Regulation 2007 (MHSR)-these did not include injuries resulting in hospital inpatient admission or loss of consciousness.	
	If any injury–serious or non-serious–resulted in hospital inpatient admission and loss of consciousness, the applicable clauses, CMHSR 55(a)(vii) and 55(b) and MHSR 145(a)(vii) and 145(b), were recorded as injury outcomes.	
	Until the inclusion of the petroleum sector in the WHS (MPS) Regulation 2014 in February 2016, petroleum sector serious injuries were notified at a lower threshold under the Petroleum (Onshore) Schedule 1992, 301(1).	

#### Injury classifications

Fatal and serious injuries and illnesses are classified according to the Australian Safety and Compensation Council 'Type of occurrence classification system (TOOCS)' and in this report are based on the TOOCS major groups.

Note that to provide further detail of bodily locations on the fatal and serious body maps in Figures 8 and 13, 'hand or fingers' and 'wrist' are shown separately from the major group 'upper limbs', and 'foot or toes' and 'ankle' are shown separately from the major group 'lower limbs'.

Further details of the Australian Safety and Compensation Council TOOCS can be found here.

#### **Incidents**

Term	Definition
Notified incident	Mine operators must report certain types of safety incidents if they arise out of conducting business or performing any mining activities at a mine or petroleum site.
	The legislation applicable to the incident notifications in this report, and the incident notification types under the current legislation are listed below.
	Note that any multiple gas exceedances that were reported to the Regulator in a single incident notification have been included as individual incident notifications in this report.

#### Legislation applicable to incident notifications in this report

Legislation	Commenced	Status
Petroleum (Onshore) Schedule 1992	1/08/1992	Repealed
Coal Industry Act 2001	1/01/2002	Current
Explosives Regulation 2005	1/09/2005	Repealed
Coal Mine Health and Safety Act 2002	23/12/2006	Repealed
Coal Mine Health and Safety Regulation 2006		
Mine Health and Safety Act 2004	1/09/2008	Repealed
Mine Health and Safety Regulation 2007		
Explosives Regulation 2013	1/09/2013	Current
Work Health and Safety (Mines and Petroleum Sites) Act 2013	1/02/2015	Current
Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	01/02/2015	Current (as at 30/06/2022)

#### Incident notification types under current legislation (as at 30 June 2022)

Incident type		Legislation	Section or clause
Death of a perso	n	Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 14(a)
Serious injury		Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 14(b)
		Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	s 178
Dangerous incident		Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 14(c)
		Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	s 179
High potential incident	Potentially dangerous incident	Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	s 128(5)(a)
	Other high potential incident	Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	s 128(5)(b)-(v)
		Petroleum Sites) Regulation 2014	(except those notified under s 128 (5)(n) and s 128(5)(o))
	Lost time/Restricted duty	Work Health and Safety (Mines and	s 128(5)(n)
	injury/illness ≥ 7 days	Petroleum Sites) Regulation 2014	s 128(5)(o)
Medical treatme	nt injury	Work Health and Safety (Mines and Petroleum Sites) Regulation 2014	s 128(1)(a)
Other incidents	Loss or theft of explosives	Explosives Regulation 2013	cl 102
	Serious incident involving explosives		cl 103
	Event at mine rescue station	Coal Industry Act 2001	s 45

#### Work health and safety report

Under clause 130 of the Work Health and Safety (Mine and Petroleum Sites) Regulation 2014 (and relevant former legislation), mine operators are required to submit work health and safety reports to the Regulator. In accordance with Schedule 9 to the regulation, reports must contain relevant information about injuries and illness occurring in the year, as well as other information such as the total number of hours worked at the mine. This information is used for preparing key injury measures for coal, metalliferous and extractives mining sectors including frequency rates.

#### Notice categories

Notice category	Definition	Legislation and notice type		
Notice of concern	Notice raising concerns regarding health, safety or welfare to the attention of operators.	Coal Mine Health and Safety Act 2002 (repealed 1 Feb 2015)	s 150	Bringing of concerns regarding health, safety or welfare to the attention of operators
	attention of operators.	Mine Health and Safety Act 2004 (repealed 1 Feb 2015)	s 131	Bringing of concerns regarding health, safety or welfare to the attention of operators
		Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 23	Notice of concern
Improvement notice	Notice directing remedy or prevention of a contravention or	Occupational Health and Safety Act 2000 (repealed 1 Jan 2012)	s 91	Issue of improvement notices
	potential contravention.	Work Health and Safety Act 2011	s 191	Issue of improvement notices
		Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 49	Issue of improvement notices
notice carrying on activity or carrying on activity or carrying of an activit that involves involve serior to health an In an undergoment this materials are removal of whether the carrying of the carrying on activity or carrying or ca	Notice prohibiting carrying on of an	Occupational Health and Safety Act 2000 (repealed 1 Jan 2012)	s 93	Issue of prohibition notices
	of an activity in a way that involves or will involve serious risk to health and safety.	Coal Mine Health and Safety Regulation 2006 (repealed 1 Feb 2015)	cl 51	Chief Inspector may impose prohibitions or restrictions or direct evacuation or closure of coal operation
	mine this may require removal of workers from underground areas.	Mine Health and Safety Regulation 2007 (repealed 1 Feb 2015)	cl 158	Chief Inspector may impose prohibitions or restrictions or direct evacuation or closure of mine
		Work Health and Safety Act 2011	s 195	Power to issue prohibition notices
		Work Health and Safety (Mines and Petroleum Sites) Act 2013	s 50	Issue of prohibition notices
Non-disturbance notice	Notice requiring the person to preserve the site or prevent	Occupational Health and Safety Act 2000 (repealed 1 Jan 2012)	s 89	Investigation notice to stop plant or prevent disturbance of premises to allow investigation
	the disturbance of a particular site.	Work Health and Safety Act 2011	s 198	Issue of a non-disturbance notice

#### Frequency rates

Term	Definition
Fatal injury frequency rate (FIFR)	The number of fatal injuries and illnesses per, million hours worked.
Lost time injury frequency rate (LITFR)	The number of lost time injuries and illnesses, per million hours worked.
Serious injury frequency rate (SIFR)	The number of serious injuries and illnesses, per million hours worked.
Total recordable injury frequency rate (TRIFR)	The total number of fatal, lost time, medical treatment and restricted duties injuries and illnesses, per million hours worked.
Incident notification frequency rate (INFR)	The number of notified incidents per million hours worked.
Rolling 5-year rates	The total number of injuries/illnesses or incidents in 5 years divided by total hours worked in 5 years, per million hours worked.

#### Appendix 2. Mine definitions

This appendix is included to help readers understand the different types of mines and how they are classified into mining sectors. In this report exploration is included in surface operations. Both surface and underground activity occurring at an underground operation is considered as underground activity.

#### Mining sectors and mine types

Mining sector	Mine type
Coal mines	<ul><li>Coal</li><li>Declared plant - coal preparation plant</li></ul>
Metalliferous mines	<ul><li>Metals</li><li>Mineral sands</li></ul>
Extractives mines	<ul><li>Construction materials</li><li>Industrial minerals</li></ul>
Petroleum and geothermal sites	<ul><li>Petroleum</li><li>Geothermal</li></ul>
Opal mines	<ul> <li>Small scale titles</li> <li>Opal claims</li> <li>Gemstones or precious stones with operation type of opal mining (all types)</li> </ul>
Exploration sites	Excludes petroleum and geothermal sites
Other mines	<ul> <li>Gemstones or precious stones (excluding operation type of opal mining (all types))</li> <li>Readymix or bitumen</li> <li>Ancillary to mining</li> <li>Waste mining</li> <li>Treatment plant</li> </ul>

#### Mine operation types

Mining sector operation type	Mine operation type
Underground	Underground
Surface	Open cut
	• Processing
	Borrow pit
	Dredging
	Exploration
	Exploration wells
	Opal mining (all types)
	Production wells

#### **Active mines**

Active mines include mines that are:

- open
- operate intermittently
- under care and maintenance
- · open tourist mines
- planned mines

- small-scale titles that are current or pending
- petroleum and geothermal sites with a status of suspended.

#### Appendix 3. Sector data

Surface coal mines	2012-13	2013-14	2014–15	2015-16	2016–17	2017–18	2018-19	2019-20	2020-21	2021–22
Active mines	54	54	53	57	68	68	77	79	76	65
Hours worked	31,575,110	29,115,708	27,971,027	26,274,561	27,656,810	29,264,621	34,168,786	33,619,129	32,440,480	30,922,788
Full time equivalent workers	15,788	14,558	13,986	13,137	13,828	14,632	17,084	16,810	16,220	15,461
Fatal injuries	0	2	0	0	1	0	1	0	0	0
Fatal injury 5-year average frequency rate	0.000	0.014	0.014	0.014	0.021	0.021	0.014	0.013	0.013	0.006
Serious injuries	33	23	20	21	25	23	13	25	27	21
Serious injury 5-year average frequency rate	1.10	1.02	0.95	0.93	0.86	0.80	0.70	0.71	0.72	0.68
Lost time injuries	82	55	40	52	53	73	93	78	90	64
Lost time injury 5-year average frequency rate	2.82	2.50	2.18	2.17	1.98	1.95	2.14	2.31	2.46	2.48
Total recordable injuries	217	170	154	171	171	192	199	156	198	149
Total recordable injury 5-year average frequency rate	8.74	7.72	6.90	6.50	6.19	6.12	6.10	5.89	5.83	5.57
Incident notifications	635	646	451	516	456	584	610	592	660	567
Incident notification annual frequency rate	20.11	22.19	16.12	19.64	16.49	19.96	17.85	17.61	20.34	18.34
% of mines that notified an incident	83%	81%	75%	72%	62%	66%	58%	59%	59%	65%
Incident rate per notifying mine	14.11	14.68	11.28	12.59	10.86	12.98	13.56	12.60	14.67	13.50
Workplace death or serious injury/illness notifications					17	23	13	17	29	11
Dangerous Incident notifications					117	173	165	154	93	106
Potentially dangerous incident notifications					167	176	190	178	129	129
Other High Potential incident notifications					65	103	115	141	251	221
Lost time/Restricted duty injury/illness ≥ 7 days notifications					37	47	83	70	110	43
Medical treatment injury notifications					48	58	36	28	40	47
Other incident notifications					5	4	8	4	8	10
Notices issued	245	225	247	261	134	207	271	298	283	151
Notices of concern issued	220	185	196	155	63	65	78	121	107	48
Improvement notices issued	11	15	31	71	58	105	153	151	146	80
Prohibition notices issued	12	21	18	22	13	33	34	21	29	21
Non-disturbance notices issued	2	4	2	13		4	6	5	1	2

Underground coal mines	2012-13	2013-14	2014-15	2015–16	2016–17	2017–18	2018-19	2019-20	2020-21	2021–22
Active mines	30	29	30	38	43	43	46	43	42	39
Hours worked	21,350,886	18,977,766	14,863,344	13,461,814	13,439,336	13,797,079	14,932,163	14,218,301	13,672,292	13,078,213
Full time equivalent workers	10,675	9,489	7,432	6,731	6,720	6,899	7,466	7,109	6,836	6,539
Fatal injuries	0	2	0	0	0	0	0	0	0	0
Fatal injury 5-year average frequency rate	0.042	0.031	0.032	0.022	0.024	0.027	0.000	0.000	0.000	0.000
Serious injuries	92	63	58	37	51	29	53	45	42	29
Serious injury 5-year average frequency rate	4.47	4.22	3.95	3.75	3.67	3.19	3.23	3.08	3.14	2.84
Lost time injuries	162	161	114	106	128	111	125	119	115	80
Lost time injury 5-year average frequency rate	10.53	9.62	8.90	8.15	8.17	8.32	8.28	8.43	8.54	7.89
Total recordable injuries	639	641	440	410	402	452	430	379	358	311
Total recordable injury 5-year average frequency rate	42.96	38.78	35.15	32.56	30.84	31.46	30.27	29.68	28.85	27.69
Incident notifications	1,990	1,650	1,360	1,378	1,133	1,055	1,002	1,077	893	877
Incident notification annual frequency rate	93.20	86.94	91.50	102.36	84.30	76.47	67.10	75.75	65.31	67.06
% of mines that notified an incident	107%	110%	107%	74%	67%	70%	57%	65%	57%	59%
Incident rate per notifying mine	62.19	51.56	42.50	49.21	39.07	35.17	38.54	38.46	37.21	38.13
Workplace death or serious injury/illness notifications					41	30	43	37	43	24
Dangerous Incident notifications					112	90	89	106	68	82
Potentially dangerous incident notifications					212	212	175	175	126	119
Other High Potential incident notifications					538	480	414	441	390	375
Lost time/Restricted duty injury/illness ≥ 7 days notifications					147	108	186	232	210	211
Medical treatment injury notifications					83	135	95	86	56	66
Other incident notifications					0	0	0	0	0	0
Notices issued	380	419	524	442	412	368	382	265	473	305
Notices of concern issued	338	367	434	279	172	91	137	103	166	93
Improvement notices issued	8	19	47	106	187	188	194	130	273	197
Prohibition notices issued	28	30	39	51	43	83	42	32	31	13
Non-disturbance notices issued	6	3	4	6	10	6	9	0	3	2

All coal mines	2012-13	2013-14	2014–15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Active mines	84	83	83	95	111	111	123	122	118	104
Hours worked	52,925,996	48,093,474	42,834,371	39,736,375	41,096,146	43,061,700	49,100,948	47,837,430	46,112,772	44,001,001
Full time equivalent workers	26,463	24,047	21,417	19,868	20,548	21,531	24,550	23,919	23,056	22,001
Fatal injuries	0	4	0	0	1	0	1	0	0	0
Fatal injury 5-year average frequency rate	0.018	0.021	0.021	0.017	0.022	0.023	0.009	0.009	0.009	0.004
Serious injuries	125	86	78	58	76	52	66	70	69	50
Serious injury 5-year average frequency rate	2.52	2.33	2.13	2.00	1.88	1.63	1.53	1.46	1.47	1.33
Lost time injuries	244	216	154	158	181	184	218	197	205	144
Lost time injury 5-year average frequency rate	6.07	5.42	4.81	4.44	4.24	4.16	4.15	4.25	4.34	4.12
Total recordable injuries	856	811	594	581	573	644	629	535	556	460
Total recordable injury 5-year average frequency rate	23.17	20.44	17.98	16.38	15.20	14.91	14.00	13.41	12.93	12.27
Incident notifications	2,625	2,296	1,811	1,894	1,589	1,639	1,612	1,669	1,553	1,444
Incident notification annual frequency rate	49.60	47.74	42.28	47.66	38.67	38.06	32.83	34.89	33.68	32.82
% of mines that notified an incident	92%	92%	87%	73%	64%	68%	58%	61%	58%	63%
Incident rate per notifying mine	34.09	30.21	25.15	27.45	22.38	21.85	22.70	22.25	22.51	22.22
Workplace death or serious injury/illness notifications					58	53	56	54	72	35
Dangerous Incident notifications					229	263	254	260	161	188
Potentially dangerous incident notifications					379	388	365	353	255	248
Other High Potential incident notifications					603	583	529	582	641	596
Lost time/Restricted duty injury/illness ≥ 7 days notifications					184	155	269	302	320	254
Medical treatment injury notifications					131	193	131	114	96	113
Other incident notifications					5	4	8	4	8	10
Notices issued	625	644	771	703	546	575	653	563	756	456
Notices of concern issued	558	552	630	434	235	156	215	224	273	141
Improvement notices issued	19	34	78	177	245	293	347	281	419	277
Prohibition notices issued	40	51	57	73	56	116	76	53	60	34
Non-disturbance notices issued	8	7	6	19	10	10	15	5	4	4

Surface metalliferous mines	2012-13	2013-14	2014–15	2015–16	2016–17	2017–18	2018-19	2019-20	2020-21	2021-22
Active mines	44	44	46	52	68	65	69	58	47	47
Hours worked	4,470,663	2,434,795	2,015,321	1,869,538	5,206,357	4,953,219	6,108,824	6,863,880	5,782,590	5,522,305
Full time equivalent workers	2,235	1,217	1,008	935	2,603	2,477	3,054	3,432	2,891	2,761
Fatal injuries	0	0	0	0	0	0	1	1	0	0
Fatal injury 5-year average frequency rate	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.080	0.069	0.068
Serious injuries	3	3	3	3	3	1	3	2	6	10
Serious injury 5-year average frequency rate	0.90	0.97	1.07	1.42	0.94	0.79	0.65	0.48	0.52	0.75
Lost time injuries	8	2	7	5	11	10	9	12	13	18
Lost time injury 5-year average frequency rate	1.47	1.37	1.40	1.82	2.06	2.12	2.08	1.88	1.90	2.12
Total recordable injuries	36	14	14	50	47	32	29	35	32	39
Total recordable injury 5-year average frequency rate	6.26	6.36	6.18	9.51	10.06	9.53	8.53	7.72	6.05	5.71
Incident notifications	43	45	34	45	51	27	48	48	64	60
Incident notification annual frequency rate	9.62	18.48	16.87	24.07	9.80	5.45	7.86	6.99	11.07	10.87
% of mines that notified an incident	14%	16%	15%	12%	9%	12%	7%	17%	17%	19%
Incident rate per notifying mine	7.17	6.43	4.86	7.50	8.50	3.38	9.60	4.80	8.00	6.67
Workplace death or serious injury/illness notifications					2	1	6	3	4	9
Dangerous Incident notifications					23	12	22	24	21	13
Potentially dangerous incident notifications					15	9	10	14	9	11
Other High Potential incident notifications					3	2	4	3	14	11
Lost time/Restricted duty injury/illness ≥ 7 days notifications					0	0	2	0	6	6
Medical treatment injury notifications					7	3	4	3	10	10
Other incident notifications					1	0	0	1	0	0
Notices issued	67	27	28	30	29	55	72	99	122	71
Notices of concern issued	55	26	26	23	19	18	30	27	35	26
Improvement notices issued	3	1	1	6	7	26	38	56	78	40
Prohibition notices issued	9	0	1	0	3	9	4	16	9	4
Non-disturbance notices issued	0	0	0	1	0	2	0	0	0	1

Underground metalliferous mines	2012-13	2013-14	2014-15	2015-16	2016–17	2017–18	2018-19	2019-20	2020-21	2021-22
Active mines	38	37	39	46	41	42	47	47	46	49
Hours worked	10,087,458	12,166,610	11,399,868	9,567,694	7,862,909	7,656,207	7,553,978	8,107,463	8,980,662	9,257,387
Full time equivalent workers	5,044	6,083	5,700	4,784	3,931	3,828	3,777	4,054	4,490	4,629
Fatal injuries	1	1	0	1	1	0	0	0	0	0
Fatal injury 5-year average frequency rate	0.023	0.041	0.037	0.055	0.078	0.062	0.045	0.049	0.025	0.000
Serious injuries	10	7	15	23	18	7	16	18	23	19
Serious injury 5-year average frequency rate	1.72	1.40	1.30	1.36	1.43	1.44	1.79	2.01	2.04	2.00
Lost time injuries	27	22	21	36	33	15	19	38	30	20
Lost time injury 5-year average frequency rate	3.32	2.85	2.29	2.44	2.72	2.61	2.82	3.46	3.36	2.94
Total recordable injuries	252	238	213	178	177	116	130	145	149	117
Total recordable injury 5-year average frequency rate	24.02	23.13	21.38	20.70	20.71	18.95	18.48	18.31	17.85	15.81
Incident notifications	176	168	180	190	187	214	214	248	263	242
Incident notification annual frequency rate	17.45	13.81	15.79	19.86	23.78	27.95	28.33	30.59	29.29	26.14
% of mines that notified an incident	37%	51%	46%	43%	44%	43%	38%	36%	39%	33%
Incident rate per notifying mine	12.57	8.84	10.00	9.50	10.39	11.89	11.89	14.59	14.61	15.13
Workplace death or serious injury/illness notifications					17	7	11	16	15	11
Dangerous Incident notifications					73	85	90	98	89	82
Potentially dangerous incident notifications					43	53	45	40	33	34
Other High Potential incident notifications					16	35	34	38	63	46
Lost time/Restricted duty injury/illness ≥ 7 days notifications					5	3	14	34	31	27
Medical treatment injury notifications					32	30	19	22	31	39
Other incident notifications					1	1	1	0	1	3
Notices issued	79	52	55	91	150	200	428	321	389	261
Notices of concern issued	70	44	45	72	86	57	152	122	119	103
Improvement notices issued	0	2	3	12	41	117	236	172	224	132
Prohibition notices issued	6	3	2	7	19	24	39	26	44	24
Non-disturbance notices issued	3	3	5	0	4	2	1	1	2	2

All metalliferous mines	2012-13	2013-14	2014-15	2015-16	2016–17	2017-18	2018-19	2019-20	2020-21	2021–22
Active mines	82	81	85	98	109	107	116	105	93	96
Hours worked	14,558,121	14,601,405	13,415,189	11,437,232	13,069,266	12,609,426	13,662,802	14,971,343	14,763,252	14,779,692
Full time equivalent workers	7,279	7,301	6,708	5,719	6,535	6,305	6,831	7,486	7,382	7,390
Fatal injuries	1	1	0	1	1	0	1	1	0	0
Fatal injury 5-year average frequency rate	0.015	0.029	0.028	0.043	0.060	0.046	0.047	0.061	0.043	0.028
Serious injuries	13	10	18	26	21	8	19	20	29	29
Serious injury 5-year average frequency rate	1.45	1.28	1.24	1.37	1.31	1.27	1.43	1.43	1.40	1.48
Lost time injuries	35	24	28	41	44	25	28	50	43	38
Lost time injury 5-year average frequency rate	2.53	2.43	2.07	2.31	2.56	2.49	2.59	2.86	2.75	2.60
Total recordable injuries	288	252	227	228	224	148	159	180	188	172
Total recordable injury 5-year average frequency rate	18.19	18.47	17.71	18.41	18.17	16.57	15.36	14.28	13.01	11.97
Incident notifications	219	213	214	235	238	241	262	296	327	302
Incident notification annual frequency rate	15.04	14.59	15.95	20.55	18.21	19.11	19.18	19.77	22.15	20.43
% of mines that notified an incident	24%	32%	29%	27%	22%	24%	20%	26%	28%	26%
Incident rate per notifying mine	10.95	8.19	8.56	9.04	9.92	9.27	11.39	10.96	12.58	12.08
Workplace death or serious injury/illness notifications					19	8	17	19	19	20
Dangerous Incident notifications					96	97	112	122	110	95
Potentially dangerous incident notifications					58	62	55	54	42	45
Other High Potential incident notifications					19	37	38	41	77	57
Lost time/Restricted duty injury/illness ≥ 7 days notifications					5	3	16	34	37	33
Medical treatment injury notifications					39	33	23	25	41	49
Other incident notifications					2	1	1	1	1	3
Notices issued	146	79	83	121	179	255	500	420	511	332
Notices of concern issued	125	70	71	95	105	75	182	149	154	129
Improvement notices issued	3	3	4	18	48	143	274	228	302	172
Prohibition notices issued	15	3	3	7	22	33	43	42	53	28
Non-disturbance notices issued	3	3	5	1	4	4	1	1	2	3

All extractives mines	2012-13	2013-14	2014-15	2015–16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Active mines	2,388	2,419	2,476	2,583	2,524	2,553	2,501	2,534	2,489	2,481
Hours worked	4,756,896	4,760,178	5,037,677	4,214,459	5,491,300	5,836,284	5,908,653	4,442,643	4,207,195	4,216,060
Full time equivalent workers	2,378	2,380	2,519	2,107	2,746	2,918	2,954	2,221	2,104	2,108
Fatal injuries	0	0	2	0	0	0	0	0	1	0
Fatal injury 5-year average frequency rate	0.000	0.000	0.086	0.086	0.082	0.079	0.076	0.000	0.039	0.041
Serious injuries	8	12	8	18	11	11	4	12	17	9
Serious injury 5-year average frequency rate	2.07	2.09	2.03	2.45	2.35	2.37	1.96	2.16	2.12	2.15
Lost time injuries	57	49	40	46	47	41	46	26	42	34
Lost time injury 5-year average frequency rate	11.70	11.28	10.51	10.14	9.85	8.80	8.31	7.96	7.80	7.68
Total recordable injuries	167	170	97	124	114	158	163	107	126	124
Total recordable injury 5-year average frequency rate	39.88	40.84	33.98	31.57	27.70	26.16	24.77	25.72	25.81	27.55
Incident notifications	85	104	127	146	136	123	153	167	167	126
Incident notification annual frequency rate	17.87	21.85	25.21	34.64	24.77	21.08	25.89	37.59	39.69	29.89
% of mines that notified an incident	2%	3%	3%	3%	3%	3%	3%	3%	4%	3%
Incident rate per notifying mine	1.57	1.65	1.87	1.87	1.94	1.68	1.94	2.20	1.84	1.54
Workplace death or serious injury/illness notifications					11	10	3	17	12	8
Dangerous Incident notifications					51	47	66	54	42	36
Potentially dangerous incident notifications					42	27	38	38	32	33
Other High Potential incident notifications					12	6	18	28	45	23
Lost time/Restricted duty injury/illness ≥ 7 days notifications					5	3	9	10	8	10
Medical treatment injury notifications					14	29	18	20	25	14
Other incident notifications					1	1	1	0	3	2
Notices issued	487	432	502	544	430	464	534	748	1,049	664
Notices of concern issued	423	346	391	394	246	103	128	210	325	280
Improvement notices issued	27	29	50	84	150	272	335	457	664	358
Prohibition notices issued	36	55	53	51	25	88	69	80	56	25
Non-disturbance notices issued	1	2	8	15	9	1	2	1	4	1

All coal, metalliferous and extractives mines	2012-13	2013-14	2014–15	2015-16	2016-17	2017–18	2018-19	2019-20	2020-21	2021-22
Active mines	2,554	2,583	2,644	2,776	2,744	2,771	2,740	2,761	2,700	2,681
Hours worked	72,241,013	67,455,057	61,287,237	55,388,066	59,656,712	61,507,409	68,672,403	67,251,415	65,083,219	62,996,753
Full time equivalent workers	36,121	33,728	30,644	27,694	29,828	30,754	2,954	33,626	32,542	31,498
Fatal injuries	1	5	2	1	2	0	2	1	1	0
Fatal injury 5-year average frequency rate	0.016	0.021	0.027	0.027	0.035	0.033	0.023	0.019	0.019	0.012
Serious injuries	146	108	104	102	108	71	89	102	115	88
Serious injury 5-year average frequency rate	2.27	2.10	1.94	1.90	1.80	1.61	1.55	1.51	1.51	1.43
Lost time injuries	336	289	222	245	272	250	292	273	290	216
Lost time injury 5-year average frequency rate	5.66	5.18	4.62	4.39	4.32	4.19	4.18	4.26	4.27	4.06
Total recordable injuries	1,311	1,233	918	933	911	950	951	822	870	756
Total recordable injury 5-year average frequency rate	23.23	21.39	19.02	17.89	16.79	16.20	15.21	14.62	13.98	13.36
Incident notifications	2,929	2,613	2,152	2,275	1,963	2,003	2,027	2,132	2,047	1,872
Incident notification annual frequency rate	40.54	38.74	35.11	41.07	32.90	32.57	29.52	31.70	31.45	29.72
% of mines that notified an incident	6%	6%	6%	6%	6%	6%	6%	6%	7%	6%
Incident rate per notifying mine	19.40	15.84	13.04	13.15	11.90	11.51	11.72	11.98	11.01	10.88
Workplace death or serious injury/illness notifications					88	71	76	90	103	63
Dangerous Incident notifications					376	407	432	436	313	319
Potentially dangerous incident notifications					479	477	458	445	329	326
Other High Potential incident notifications					634	626	585	651	763	676
Lost time/Restricted duty injury/illness ≥ 7 days notifications					194	161	294	346	365	297
Medical treatment injury notifications					184	255	172	159	162	176
Other incident notifications					8	6	10	5	12	15
Notices issued	1,258	1,155	1,356	1,368	1,155	1,294	1,687	1,731	2,316	1,452
Notices of concern issued	1,106	968	1,092	923	586	334	525	583	752	550
Improvement notices issued	49	66	132	279	443	708	956	966	1,385	807
Prohibition notices issued	91	109	113	131	103	237	188	175	169	87
Non-disturbance notices issued	12	12	19	35	23	15	18	7	10	8

#### Appendix 4. Other sectors

# NSW Resources Regulator sector reporting

# Petroleum and geothermal

Onshore petroleum and geothermal sites including exploration

#### Opal mines

Small scale titles and opal claims, gemstones or precious stones

#### **Exploration**

Exploration sites including petroleum and geothermal

#### Petroleum and geothermal sector

#### Fatal injuries, serious injuries, notified incidents and active mines

In 2021–22 there were no incidents notified in the petroleum and geothermal sector, in line with the previous 5 years. No fatal or serious injuries have been notified in the 10 years since 2012–13.

The petroleum and geothermal sector is not required to submit work health and safety reports and so frequency rates for these measures are not able to be calculated.

In 2021–22 there were 122 active petroleum and geothermal sites, a decrease of 33% compared to 2020–21 and 70% from a peak in 2016–17.

Table 6. Petroleum and geothermal sector fatal injuries, serious injuries and notified incidents 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Fatal injuries	0	0	0	0	0	0	0	0	0	0	0
Serious injuries	0	0	0	0	0	0	0	0	0	0	0
Notified incidents	1	4	4	3	0	0	0	0	0	0	12
Active mines	270	283	258	239	405	403	267	194	181	122	N/A

#### **Notices issued**

In 2021–22 the Regulator issued one notice of concern to the petroleum and geothermal sector. This represented a decrease from 15 notices issued in the previous year.

Table 7. Petroleum and geothermal sector notices issued 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Notices issued	0	0	0	1	0	9	0	8	15	1	34

#### **Opal sector**

#### Fatal injuries, serious injuries, notified incidents and active mines

In 2021–22 there were 2 incidents notified in the opal sector, with no fatal or serious injuries notified. In the 10 years since 2012–13 there have been 2 fatal injuries, 8 serious injuries and 24 notified incidents in the opal sector.

The opal sector is not required to submit work health and safety reports so frequency rates for these measures are not able to be calculated.

In 2021–22 there were 3,448 active opal mines, an increase of 3% from 2020–21.

Table 8. Opal sector fatal injuries, serious injuries, notified incidents and number of active mines 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Fatal injuries	0	0	0	0	1	0	0	0	1	0	2
Serious injuries	0	0	1	2	0	2	2	1	0	0	8
Notified incidents	1	4	1	4	1	4	4	2	1	2	24
Active mines	3500	3500	3288	3354	3487	3478	3564	3944	3342	3448	N/A

#### **Notices issued**

In 2021–22 the Regulator issued 77 notices in the opal sector, comprising 40 improvement notices, 29 prohibition notices and 8 notices of concern. This represents a decrease of 27% from the previous year. Due to the minimal numbers of non-disturbance and explosives notices, these have not been included in Table 9.

#### Table 9. Opal sector notices issued 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Notices issued	1	3	16	1	159	63	72	163	105	77	660

#### **Exploration sector**

#### Fatal injuries, serious injuries, notified incidents and active mines

In 2021–22 there were no fatal injuries, no serious injuries and 8 notified incidents in the exploration sector. In the 10 years since 2012–13, there has been no fatal injuries, 20 serious injuries and 64 notified incidents.

From June 2020 the exploration sector has not been required to submit work health and safety reports and therefore frequency rates for these measures have not been calculated.

In 2021–22 there were 856 active exploration sites excluding petroleum and geothermal, a 2% increase from 2020–21.

Table 10. Exploration sector fatal injuries, serious injuries, notified incidents and number of active mines 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Fatal injuries	0	0	0	0	0	0	0	0	0	0	0
Serious injuries	2	2	2	0	1	5	3	3	2	0	20
Notified incidents	4	5	7	3	7	9	6	9	6	8	64
Active mines	823	872	876	822	714	715	753	785	839	856	N/A

#### **Notices issued**

In 2021–22 the Regulator issued 5 notices to the exploration sector, comprising 3 improvement notices, 1 prohibition notice and 1 notice of concern.

Table 11. Exploration sector notices issued 2012–13 to 2021–22

Measure	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Total
Notices issued	6	3	5	6	2	3	5	11	8	5	54

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