International Association of Oil & Gas Producers

REPORT
2022s

JUNE
2023

DATA SERIES

IOGP Safety performance indicators - 2022 data

Acknowledgements

IOGP thanks those companies that have participated in the data collection programme. This Report was produced by the Safety Committee.

Feedback

IOGP welcomes feedback on our reports: publications@iogp.org

Disclaimer

Copyright notice

REPORT
2022s

JUNE
2023

DATA SERIES

IOGP Safety performance indicators - 2022 data

Revision history

VERSION	DATE	AMENDMENTS
1.00	June 2023	First release

Contents

Contributing companies

The safety statistics were derived from data provided by the following companies:

2020

ADNOC
Aker BP
Assala Energy
Beach Energy
BHP
BP
BW Energy
Capricorn Energy PLC.
CCED
CEPSA EP
Chevron
Chrysaor
CNOOC
ConocoPhillips
ENI
Equinor ASA
ExxonMobil
Genel Energy
Gulf Keystone
Husky Energy
INPEX Corporation
KMG
Kosmos Energy
Kuwait Oil Company
MOL
Neptune Energy
North Oil Company
Oil Search
OMV
Pan American Energy
Petrobras
Petronas Carigali SDN BHD
PGNiG
Pluspetrol
Premier Oil
PTTEP
QatarGas
Repsol
Shell Companies
SOCAR
Sonangol
Suncor
TotalEnergies
Tullow Oil
Vår Energy
Wintershall Dea
Woodside
YPF SA

2021

ADNOC
Aker BP
Assala Energy
Beach Energy
BHP
BP
BW Energy
Capricorn Energy PLC.
CCED
Cenovus
CEPSA EP
Chevron
CNOOC
ConocoPhillips
Dana Gas
ENI
Equinor ASA
ExxonMobil
Genel Energy
Gulf Keystone
Harbour Energy
INPEX Corporation
KMG
Kosmos Energy
Kuwait Oil Company
MOL
Neptune Energy
North Oil Company
Oil Search
OMV
Pan American Energy
Petrobras
Petronas Carigali SDN BHD
PGNiG
Pluspetrol
Premier Oil
PTTEP
QatarGas
Repsol
Shell Companies
SOCAR
Sonangol
Spirit Energy
Suncor
TotalEnergies
Tullow Oil
Vår Energy
Wintershall Dea
Woodside
YPF SA

2022

ADDAX Petroleum Limited
ADNOC
Aker BP
Assala Energy
Beach Energy
BP
BW Energy
Capricorn Energy PLC.
CCED
Cenovus
CEPSA EP
Chevron
CNOOC
ConocoPhillips
Crescent Petroleum
Dana Gas
ENI
Equinor ASA
ExxonMobil
Genel Energy
Gulf Keystone
Harbour Energy
INPEX Corporation
KMG
Kosmos Energy
MOL
Neptune Energy
NOGA Holding [Tatweer]
North Oil Company
OMV
Oxy
Pan American Energy
Petrobras
Petronas Carigali SDN BHD
PGNiG
Pluspetrol
Prime Energy
PTTEP
Repsol
Shell Companies
SOCAR
Sonangol
Spirit Energy
Suncor
TotalEnergies
Trident Energy
Tullow Oil
Vår Energy
Wintershall Dea
Woodside
YPF SA

Introduction

The International Association of Oil & Gas Producers (IOGP) has been collecting safety incident data from its Member Companies globally since 1985. The data collected are entered into the IOGP safety database, which is the largest database of safety performance in the exploration and production (E&P) industry.

The principal purpose of the data collection and analysis is to record the global safety performance of the contributing IOGP Member Companies on an annual basis. The submission of data is voluntary and is not mandated by IOGP Membership. The annual reports provide trend analysis, benchmarking and the identification of areas and activities on which efforts should be focused to bring about the greatest improvements in performance.

The IOGP incident reporting system covers worldwide E&P operations, both onshore and offshore, and includes incidents involving both Member Companies and their contractor employees.

The key indicators presented are:

- number of fatalities
- fatal accident rate
- fatal incident rate
- total recordable injury rate
- lost time injury rate
- number of lost work day cases
- number of lost work days
- number of restricted duty cases
- restricted duty days, and
- number of medical treatment cases

The analysis presents contributing IOGP Members' global results for these indicators, which are then analysed by region, function and company. A code is used to preserve the anonymity of the reporting company, which will typically report its own data as well as that of its associated contractors (see Appendix C).

In 2010, data collection was initiated to capture 'causal factors' associated with fatal incidents and high potential events. These data are presented in section 2.11 of this report. Wherever practicable, results are presented graphically.

The data underlying the charts are presented in Appendix B. The causal factors and chart data are available in editable format to logged in IOGP Members.

Narrative descriptions for the fatal incidents and high potential events selected for their learning value that were reported by participating IOGP Member Companies can be found at https://data.iogp.org/Safety/FatalIncidents and https://data.iogp.org/Safety/HighPotentialEvents respectively.

Scope of reporting and data validation

The data requested from participating IOGP Member Companies are published in an annual User Guide, which contains definitions and the scope of the safety data submission. This document is available from the IOGP public website.

The safety data submission process is used for the collection of data relating to safety performance, process safety performance and motor vehicle crashes. The IOGP safety database has built-in data validation requirements and each company data submission is validated by the IOGP Secretariat and the work group (Safety Committee, Subcommittee or Expert Group) responsible for the data set in accordance with the IOGP data collection and reporting procedure. Any communication with reporting companies is conducted by the IOGP

Secretariat and any data validated by an IOGP work group is blind coded to preserve the anonymity of the reporting companies.

A self-assessment questionnaire is included within the data submission process to determine the alignment between the requested data and the company submissions. The information provided in this questionnaire is also used in the validation process. Data that appear to be incorrect and that cannot be confirmed by the submitting company as correct may be excluded from the data set at the discretion of the Secretariat.

- The fatal incident activity category "Excavation, trenching, ground disturbance" was added in 2019.
- The incident cause category of "Dropped objects" was added in 2018. The category "Caught in, under or between" was modified to exclude dropped objects.
- The incident cause category of "Aviation Accident" was introduced in 2016. Aviation accidents were previously included in the "Other" incident category.

The scope of data included within this Report is detailed in Appendix A.

Data series

Other IOGP Data Reports published annually include:

- Aviation Safety Data
- Environmental Performance Indicators
- Health Performance Indicators
- Motor Vehicle Crash Data
- Process Safety Event Data

These are available from the IOGP website http://www.iogp.org/bookstore.

Environmental Performance Indicators, Process Safety Events, Motor Vehicle Crash Data, Health Performance Indicators, and the Safety Performance Indicators published in this Report are also available in electronic format in IOGP's data website at https://data.iogp.org/.

1. Summary of 2022 results

This section summarizes the safety performance of contributing IOGP Member Companies for 2022.

The key performance indicators (KPI) used to benchmark safety performance in this section are:

- Number of fatalities
- Fatal accident rate (FAR)
- Total recordable injury rate (TRIR)
- Lost time injury rate (LTIR)

Third party fatalities are not included in this analysis.

Definitions

Fatal accident rate (FAR):

The number of company/contractor fatalities per 100 million hours worked

Lost time injury rate (LTIR):

The number of lost time injuries (fatalities + lost work day cases) per million hours worked

Total recordable injury rate (TRIR):

The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases (MTC)) per million hours worked. Note when MTC are not reported by a company for a country the associated fatalities, lost work day cases and restricted work day cases are excluded from TRIR calculations.

1.1 General

The safety performance of contributing IOGP Member Companies in 2022 is based on the analysis of 2,579 million work hours of data.

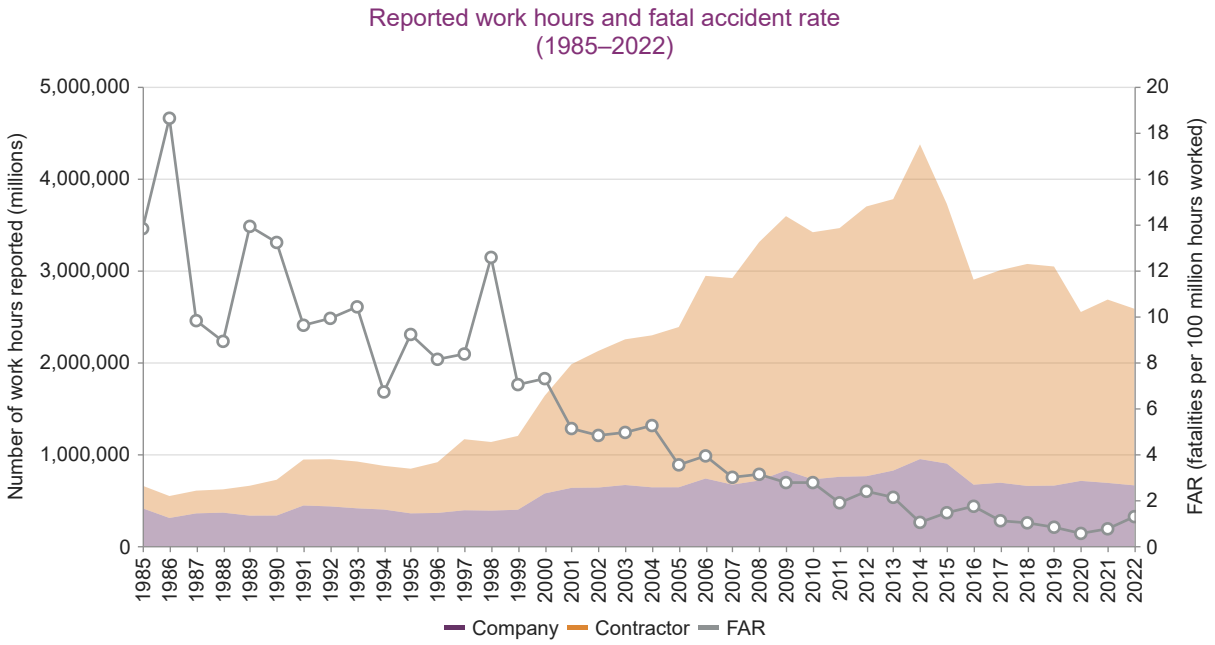
Submissions were made by 51 of the 65 operating company IOGP Members.

The data reported cover operations in 92 countries.

The resulting fatal accident rate (1.28) is 71% higher than last year's figure (0.75).

Countries and companies that are subject to international sanctions are not featured in this Report for 2022 data.

Figure 1



1.2. Fatalities

Against the background of a 4% decrease in work hours reported, the number of fatalities has increased from 20 in 2021 to 33 in 2022. The 33 fatalities occurred in 29 separate incidents. The resulting fatal accident rate (1.28) is 71% higher than last year's figure (0.75). The company and contractor FAR are 0.30 and 1.62 respectively. Onshore and offshore FAR are 1.27 and 1.29 respectively.

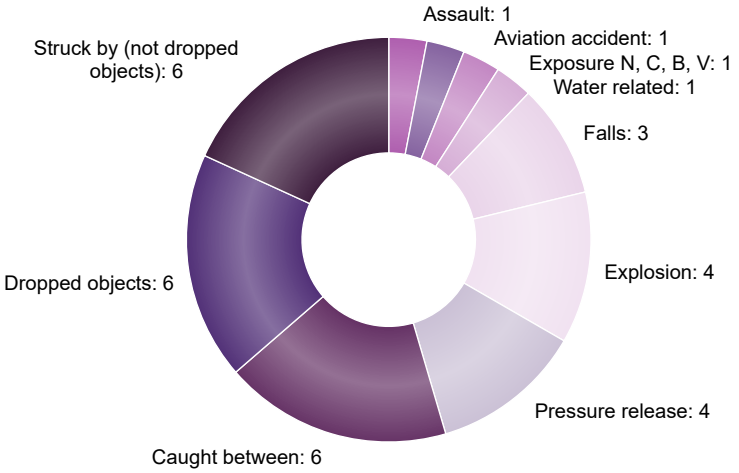
Each reported fatal incident is allocated a work activity and cause. With regard to the cause, 18% of the fatalities reported in 2022 were the result of incidents categorized as 'Struck by (not dropped object)' (6 fatalities in 6 separate incidents).

Fatalities categorized as 'Dropped objects' also accounted for 18% of the fatalities, with 6 fatalities in 6 separate incidents.

Fatalities categorized as 'Caught in, under or between (excl. dropped objects)' also accounted for 18% of the fatalities, with 6 fatalities in 5 separate incidents.

Figure 2

Number of fatalities by cause
(2022)



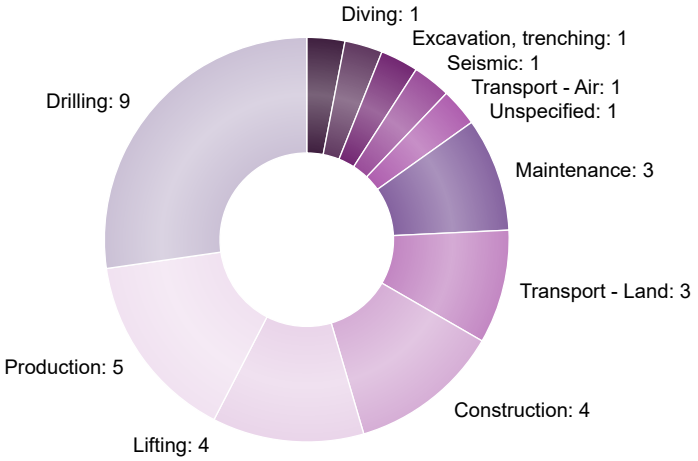
With regard to the Activity, 27% of the fatalities reported in 2022 were the result of incidents categorized as 'Drilling, workover, well operations' (9 fatalities in 8 separate incidents).

Fatalities categorized as 'Production operations' accounted for 15% of the fatalities, with 5 fatalities in 4 separate incidents.

4 fatalities were reported in 4 separate incidents in the 'Lifting, crane, rigging, deck operations' activity, and 4 fatalities were reported in 3 separate incidents in the 'Construction, commissioning, decommissioning' activity.

Figure 3

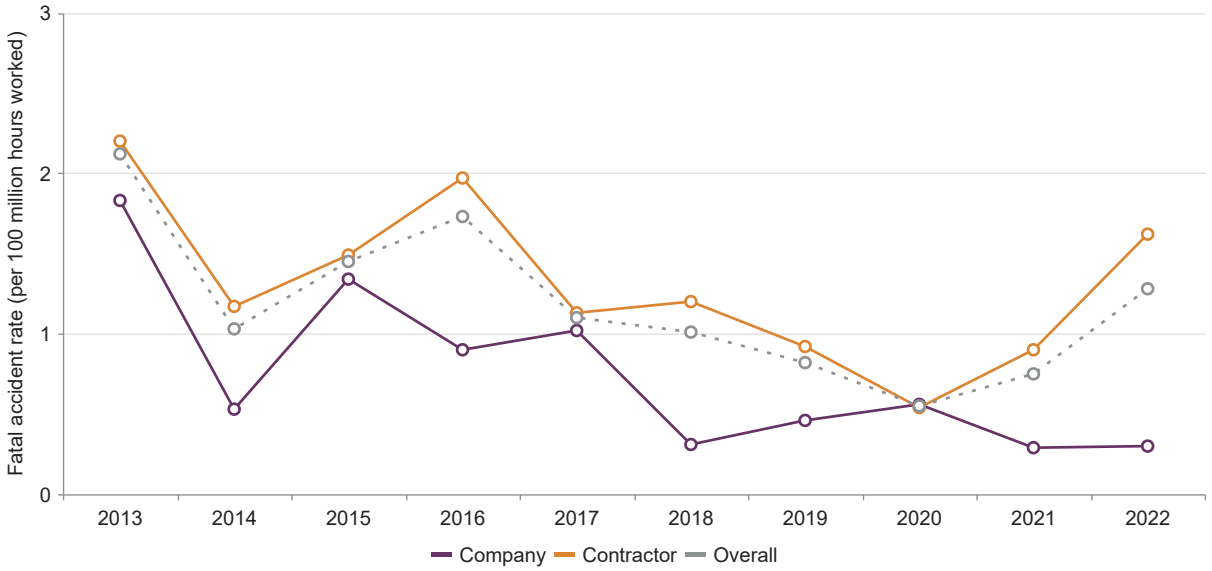
Number of fatalities by activity
(2022)



The fatal accident rate for 2022 is 1.28, 71% higher than the 2021 rate (0.75). The company-only FAR for 2022 is 0.30, 3% higher than the rate for 2021 (0.29). The Contractor-only FAR is 1.62, 80% higher than the rate for 2021 (0.90).

Figure 4

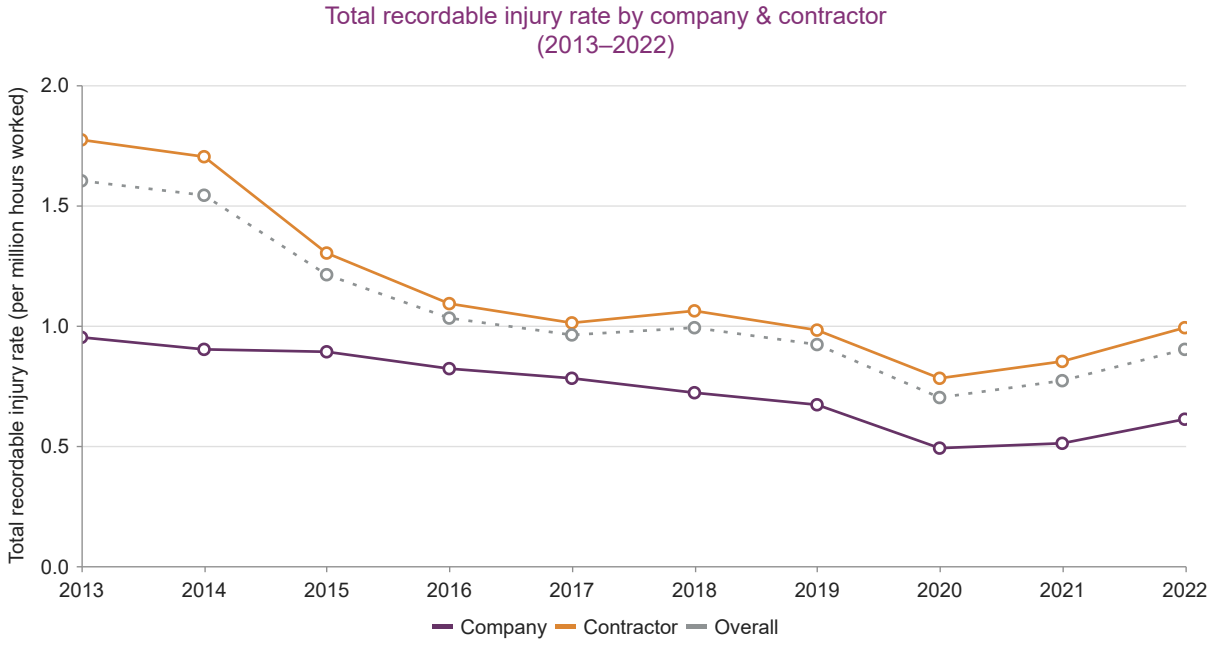
Fatal accident rate by company & contractor
(2013–2022)



1.3 Total recordable injuries

The overall total recordable injury rate (TRIR) (fatalities, lost work day cases, restricted work day cases and medical treatment cases) was 0.90, 17% higher than in 2021 (0.77).

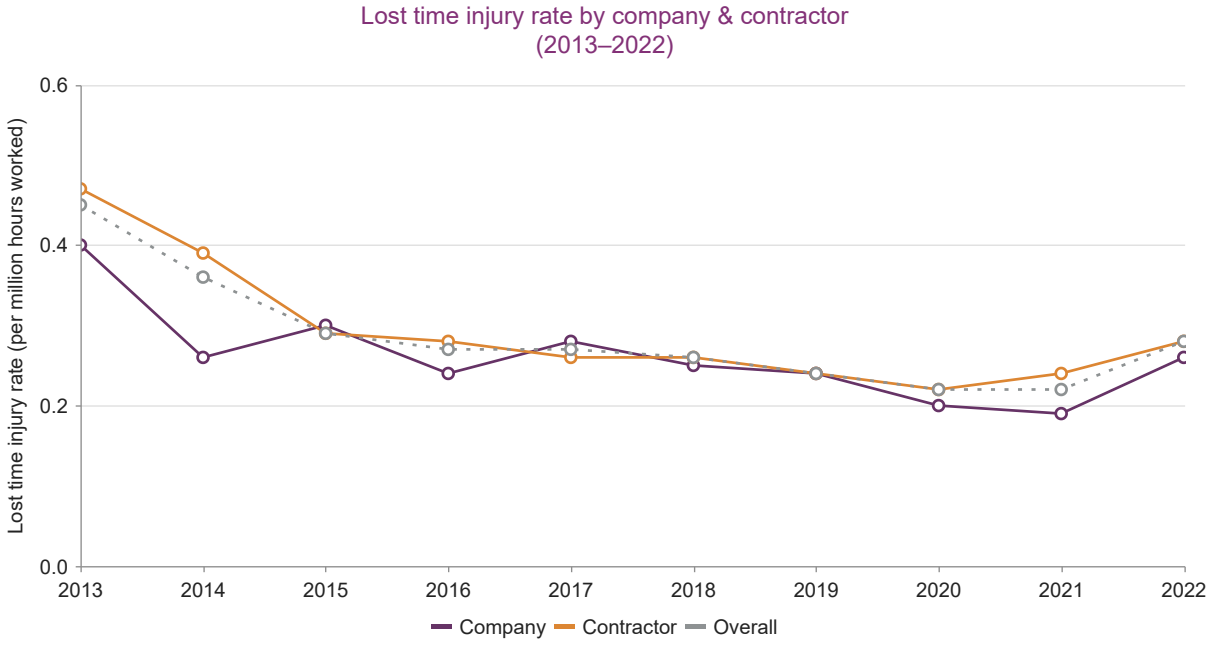
Figure 5:



1.4 Lost time injuries

The overall lost time injury rate (LTIR) (fatalities and lost work day cases) was 0.28, 27% higher than in 2021 (0.22).

Figure 6:



The participating IOGP Member Companies reported 682 lost work day cases (injuries resulting in at least one day off work);

- 514 incidents were contractor related.
- 168 incidents were company related.

Participating companies reported 21,455 days of work lost through injuries.

Figure 7 shows the percentage of LWDC by cause.

- 130 cases, 19% of the total, were categorized as 'Slips and trips (at same height)': 2021 results showed 113 cases, accounting for 19% of the total.
- 'Caught in, under or between (excl. dropped objects)' accounted for 122 cases, 18% of the total (98 cases, 17% of the total in 2021).
- 'Struck by (not dropped object)' accounted for 104 cases, 15% of the total (106 cases, 18% of the total in 2021).

Figure 7:

Percentage of LWDC by cause
(2022)

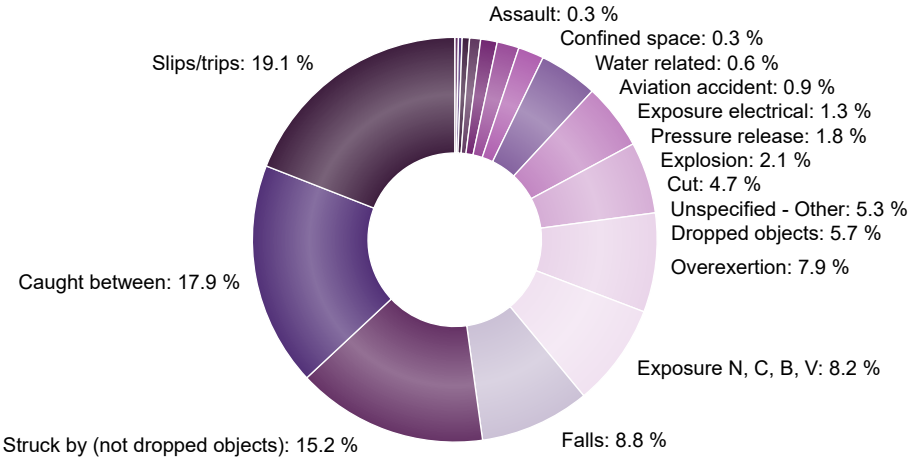
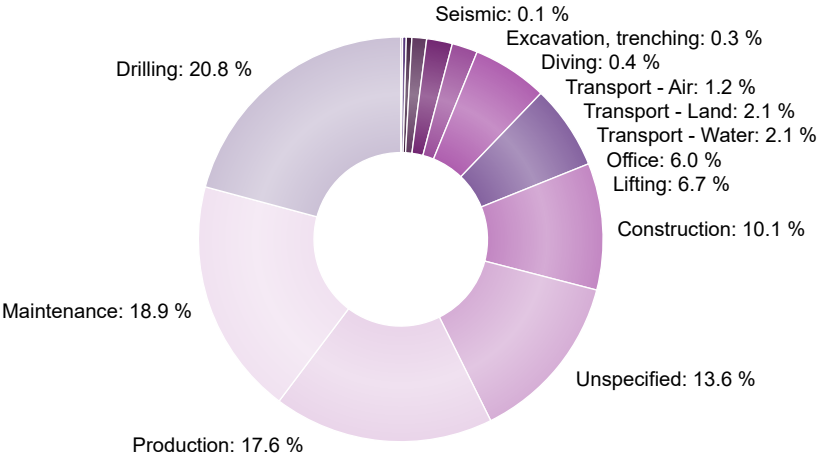


Figure 8 shows the percentage of LWDC by activity.

- 142 cases, 21% of the total, were categorized as 'Drilling, workover, well operations': 2021 results showed 101 cases, accounting for 17% of the total.
- 'Maintenance, inspection, testing' accounted for 129 cases, 19% of the total (144 cases, 25% of the total in 2021).
- 'Production operations' accounted for 120 cases, 18% of the total (100 cases, 17% of the total in 2021).

Figure 8:

Percentage of LWDC by activity
(2022)



For data tables go to Appendix B - Section 1.

2. 2022 results

In this section, the primary indicators used to measure contributing IOGP Member Companies' safety performance are:

- Number and nature of fatalities
- Total recordable injury rate (TRIR)
- Fatal accident rate (FAR)
- Fatal incident rate (FIR)
- Lost time injury rate (LTIR)

Third party incidents are not included in this report.

2.1 Fatalities

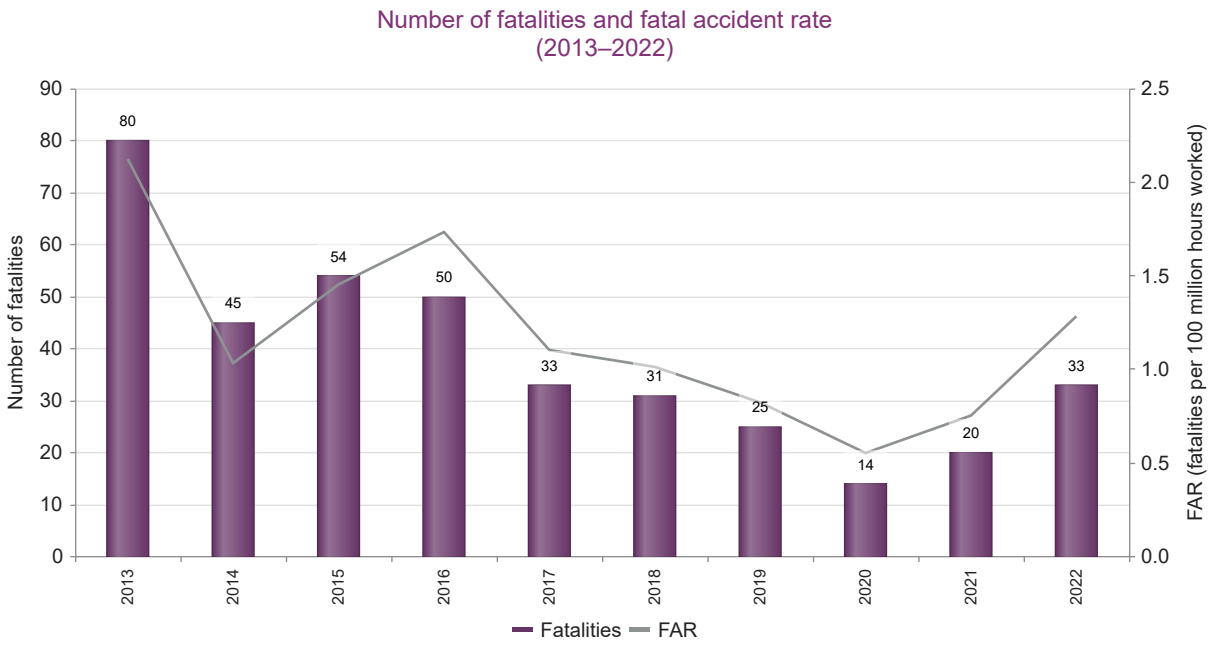
Table 1: Number of fatalities (2021 & 2022)

	2021			2022		
Company/contractor	Onshore	Offshore	Overall	Onshore	Offshore	Overall
Company	2	0	2	2	0	2
Contractor	14	4	18	22	9	31
OVERALL	16	4	20	24	9	33

33 company and contractor fatalities were reported in 2022. This is 13 more than were reported in 2021 and 19 more than in 2020.

The 33 fatalities occurred in 29 separate incidents.

Figure 9:



2.2 Fatal accident rate (FAR)

In 2022 there were 2 company fatalities (2 in 2021) as a result of 1 separate incident.

In 2022 there were 31 contractor fatalities (18 in 2021) as a result of 28 separate incidents.

Table 2: Fatal accident rate (2021 & 2022)

	Fatal accident rate (FAR)		
	2021	2022	Relative to 2021 FAR
OVERALL	0.75	1.28	71% higher
Company	0.29	0.30	3% higher
Contractor	0.90	1.62	80% higher
Onshore	0.79	1.27	61% higher
Offshore	0.61	1.29	111% higher

The difference between the onshore and offshore fatal accident rate (FAR) displays a large variation over the 10-year period shown in Figure 11. Neither is consistently lower. This is generally attributable to single "transportation", "fire and explosion", or "assault/violent act" incidents involving high numbers of fatalities.

All hours in the database were used for calculations of FAR.

Figure 10:

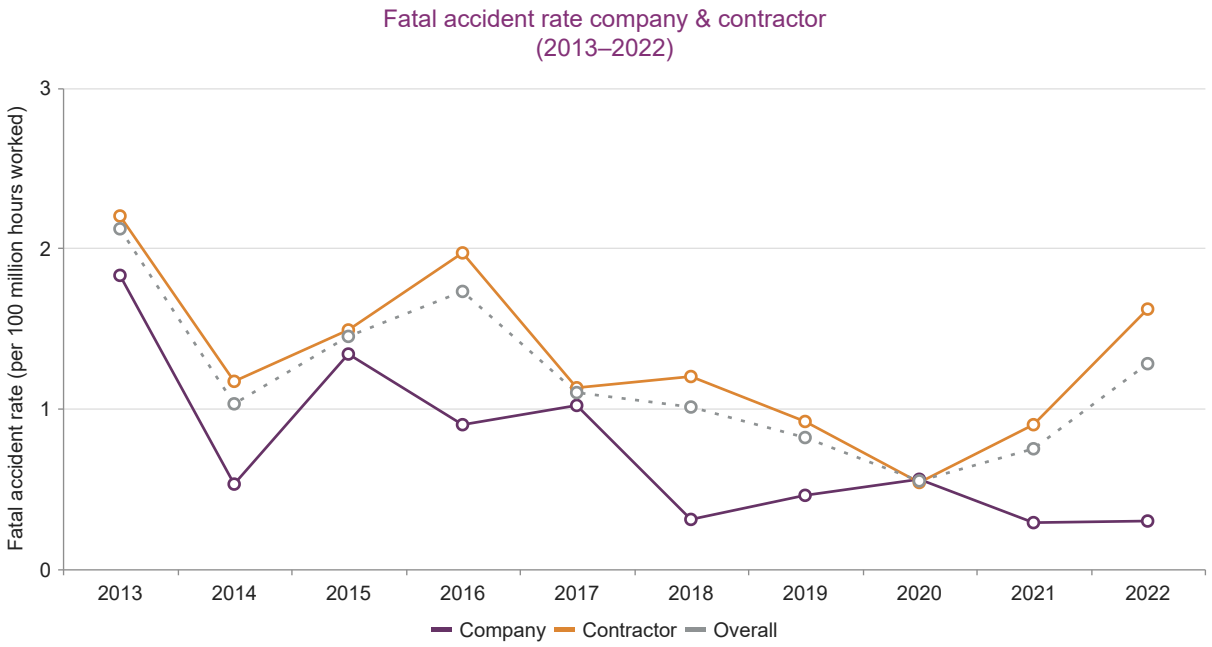
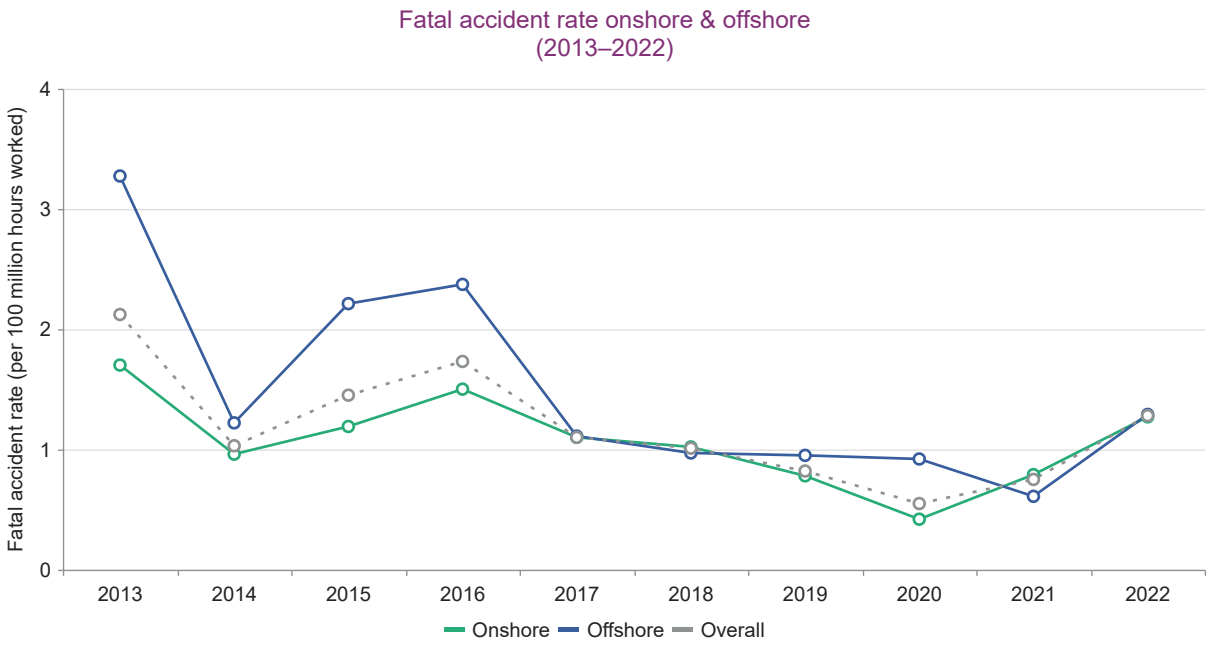


Figure 11:


Fatal accident rate onshore & offshore
(2013–2022)
Fatal accident rate (per 100 million hours worked)
4
3
2
1
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Onshore
Offshore
Overall

2.3 Fatal incident rate (FIR)

The fatal incident rate (FIR) is a measure of the rate with which fatal incidents occur, in contrast to the FAR which measures the rate of fatalities. Accordingly, for company and contractor fatalities, the FIR will be less than or equal to the FAR. Comparison of FAR and FIR gives an indication of the magnitude of the incidents in terms of lives lost.

Overall the FIR increased by 100% compared with last year (29 fatal incidents in 2022, 15 fatal incidents in 2021).

All hours in the database were used for calculations of FIR.

Table 3: Fatal incident rate (2021 & 2022)

	Fatal incident rate (FIR)		
	2021	2022	Relative to 2021 FIR
OVERALL	0.56	1.12	100% higher
Company	0.29	0.15	48% lower
Contractor	0.65	1.46	125% higher
Onshore	0.54	1.11	106% higher
Offshore	0.61	1.15	89% higher

Figure 12:

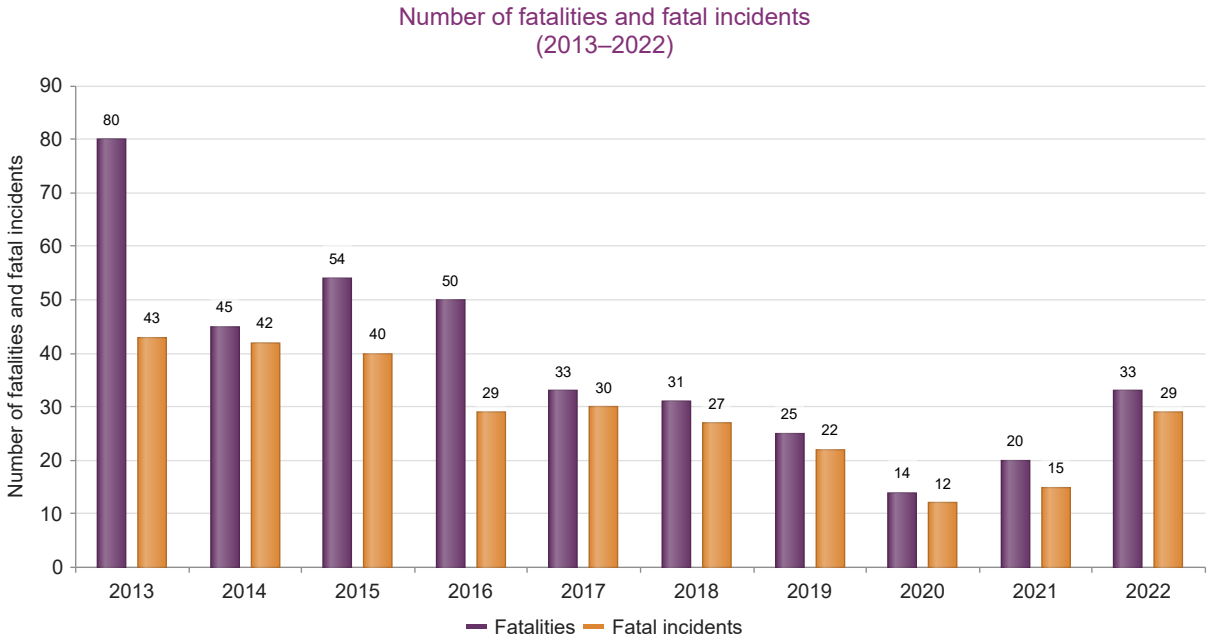


Figure 13:

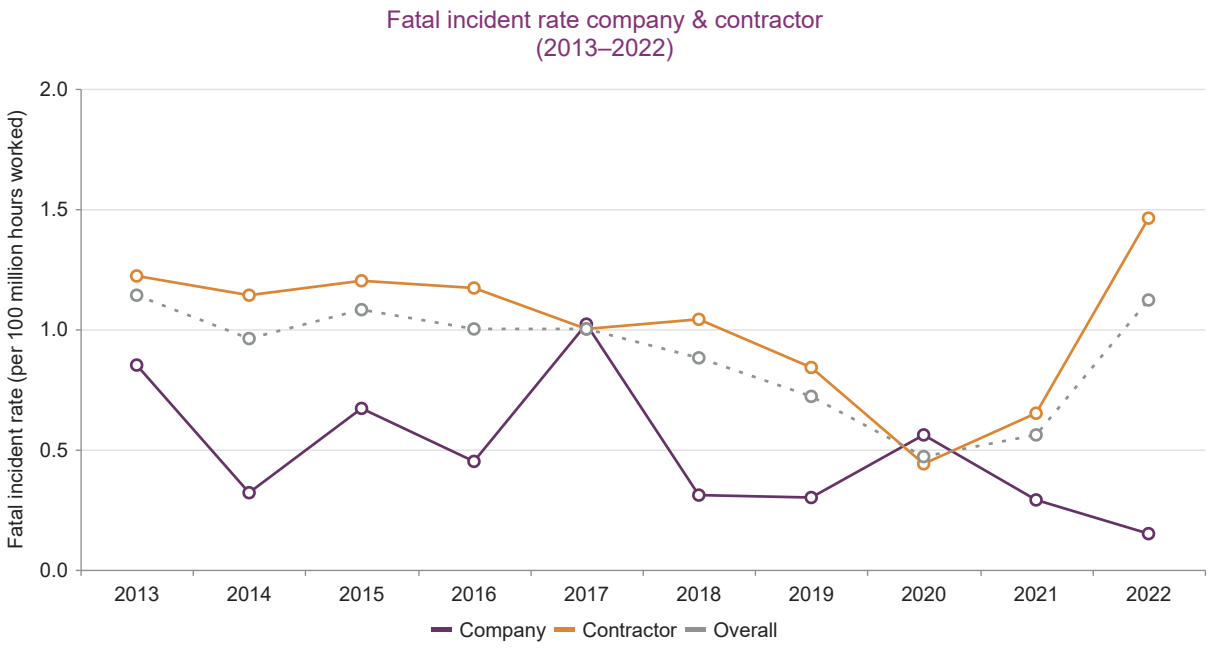
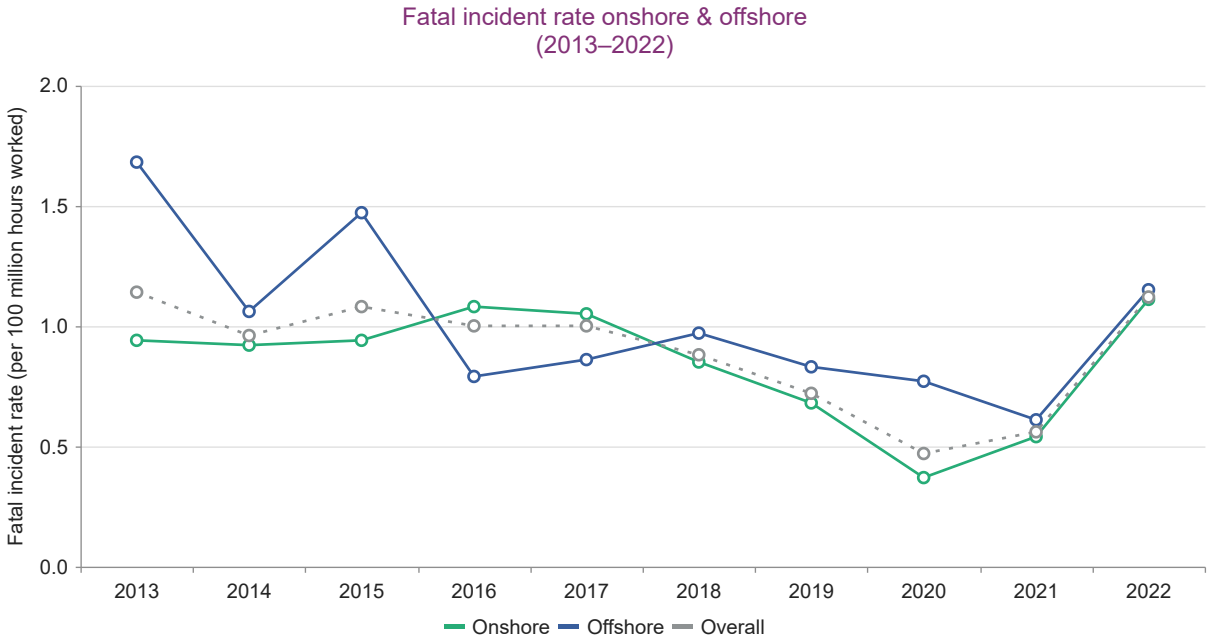


Figure 14:



2.4 Fatalities by incident cause and activity

25 of the 29 fatal incidents involved one fatality. 8 incidents involved 2 fatalities.

Table 4: Fatalities by cause and activity (2022)

Activity	Cause																
	Assault or violent act	Aviation accident	Caught in, under or between (excl. dropped objects)	Confined space	Cut, puncture, scrape	Dropped objects	Explosions or burns	Exposure electrical	Exposure noise, chemical, biological, vibration	Falls from height	Overexertion, strain	Pressure release	Slips and trips (at same height)	Struck by (not dropped object)	Water related, drowning	Other	OVERALL
Construction, commissioning, decommissioning						1						2		1			4
Diving (incl. decompression), subsea, ROV															1		1
Drilling, workover, well operations			1			2				3				3			9
Excavation, trenching, ground disturbance			1														1
Lifting, crane, rigging, deck operations						3								1			4
Maintenance, inspection, testing							1		1			1					3
Office, warehouse, accommodation, catering																	
Production operations	1						3					1					5
Seismic/survey operations			1														1
Transport - Air		1															1
Transport - Land			3														3
Transport - Water, incl. marine activity																	
Unspecified - other														1			1
OVERALL	1	1	6			6	4		1	3		4		6	1		33

Figure 15:

Number of fatalities by cause (2022)

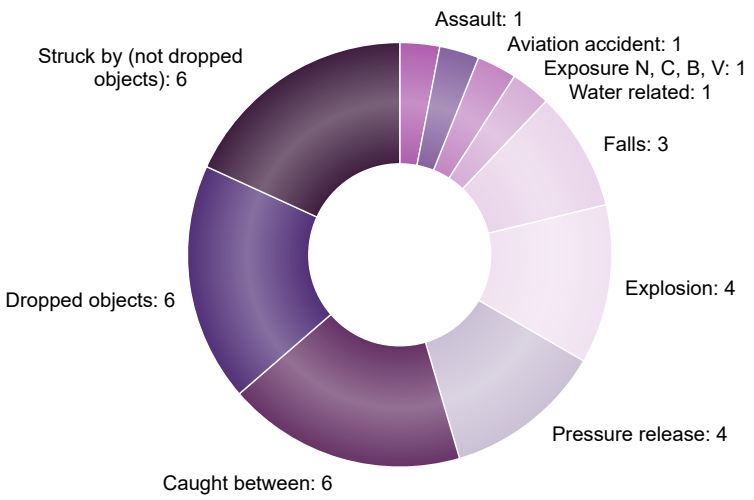


Figure 16:

Number of fatalities by activity (2022)

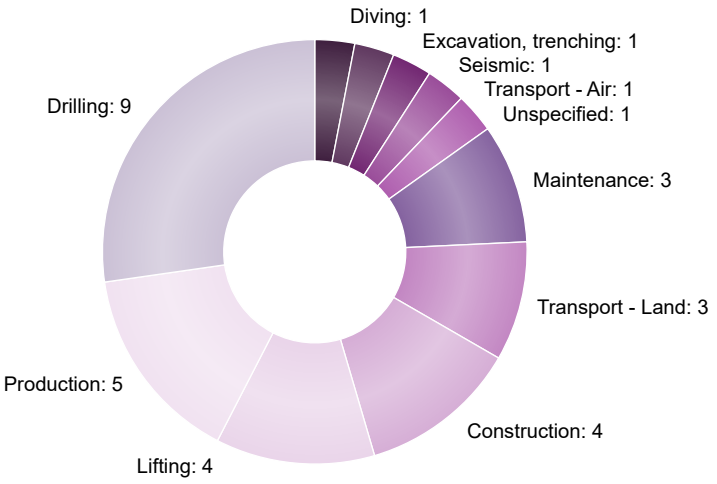


Table 5: Fatalities by cause (2018 - 2022)

Cause	Number of fatalities				
	2018	2019	2020	2021	2022
Assault or violent act	0	0	0	6	1
Aviation accident	0	0	0	0	1
Caught in, under or between (excl. dropped objects)	11	12	1	6	6
Confined space	0	0	0	0	0
Cut, puncture, scrape	0	0	0	0	0
Dropped objects	1	1	1	0	6
Explosion, fire or burns	8	0	3	0	4
Exposure electrical	1	4	2	1	0
Exposure noise, chemical, biological, vibration, extreme temperature	0	0	0	0	1
Falls from height	4	2	0	4	3
Overexertion, strain	0	0	0	0	0
Pressure release	0	0	0	0	4
Slips and trips (at same height)	0	0	0	0	0
Struck by (not dropped object)	4	3	3	2	6
Water related, drowning	2	3	4	1	1
Unspecified - Other	0	0	0	0	0
OVERALL	31	25	14	20	33

Note that dropped objects was not a cause category until 2018.

Figure 17:

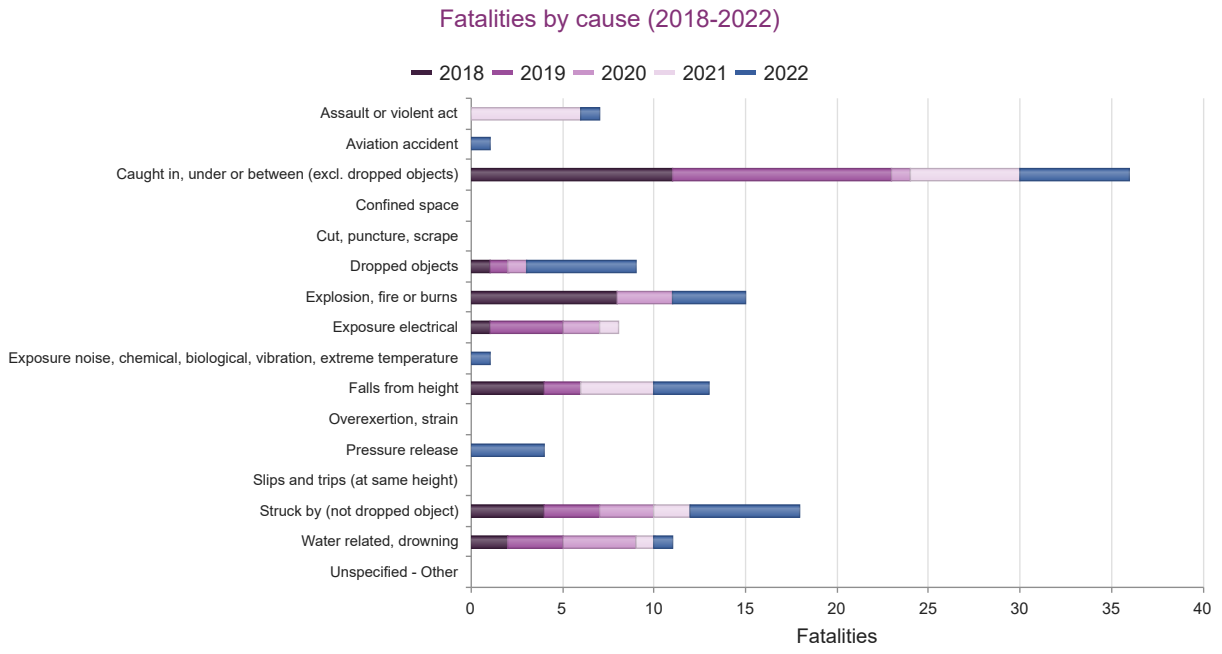
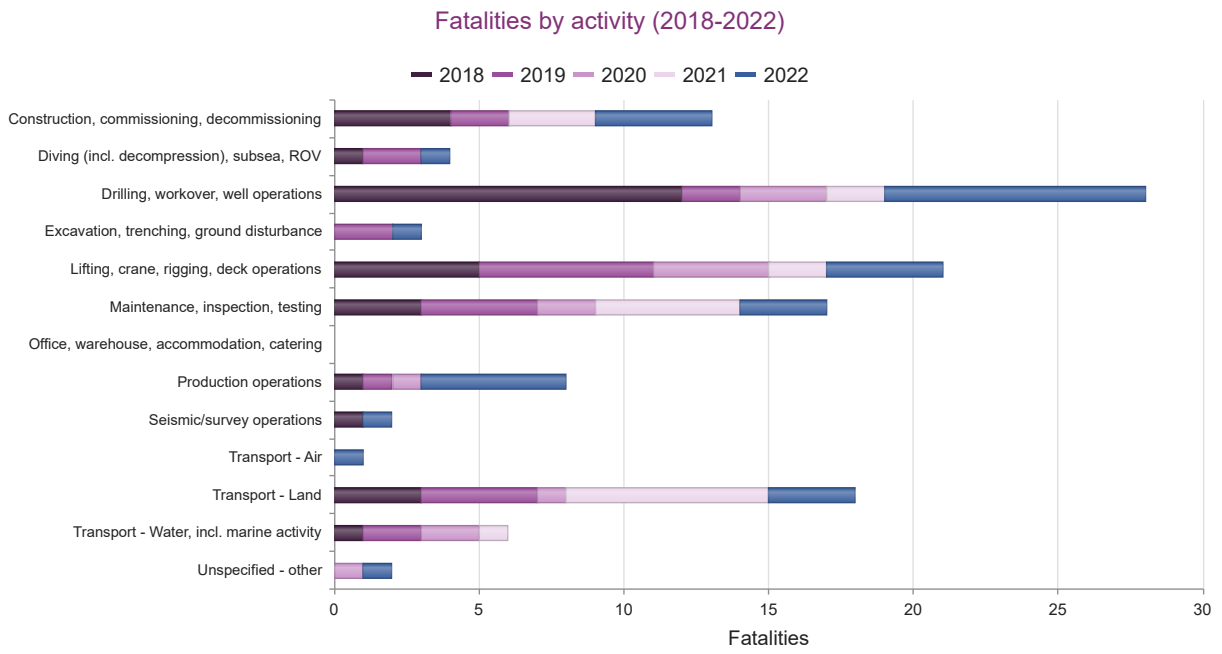


Table 6: Fatalities by activity (2018 - 2022)

Activity	Number of fatalities				
	2018	2019	2020	2021	2022
Construction, commissioning, decommissioning	4	2	0	3	4
Diving (incl. decompression), subsea, ROV	1	2	0	0	1
Drilling, workover, well operations	12	2	3	2	9
Excavation, trenching, ground disturbance	0	2	0	0	1
Lifting, crane, rigging, deck operations	5	6	4	2	4
Maintenance, inspection, testing	3	4	2	5	3
Office, warehouse, accommodation, catering	0	0	0	0	0
Production operations	1	1	1	0	5
Seismic/survey operations	1	0	0	0	1
Transport - Air	0	0	0	0	1
Transport - Land	3	4	1	7	3
Transport - Water, incl. marine activity	1	2	2	1	0
Unspecified - other	0	0	1	0	1
OVERALL	31	25	14	20	33

Note that Excavation, trenching, ground disturbance was added as an activity in 2019.

Figure 18:



2.5 Total recordable injury rate (TRIR)

Submissions without information on medical treatment cases were filtered out, leaving a dataset of 2,535 million hours, almost 98% of the database (see Scope of database submissions).

An overall increase in TRIR of 17% is seen in 2022.

Table 7: Total recordable injury rate (2021 & 2022)

	Total recordable injury rate (TRIR)		
	2021	2022	Relative to 2021 TRIR
OVERALL	0.77	0.90	17% higher
Company	0.51	0.61	20% higher
Contractor	0.85	0.99	16% higher
Onshore	0.61	0.78	28% higher
Offshore	1.23	1.21	2% lower

Figure 19:

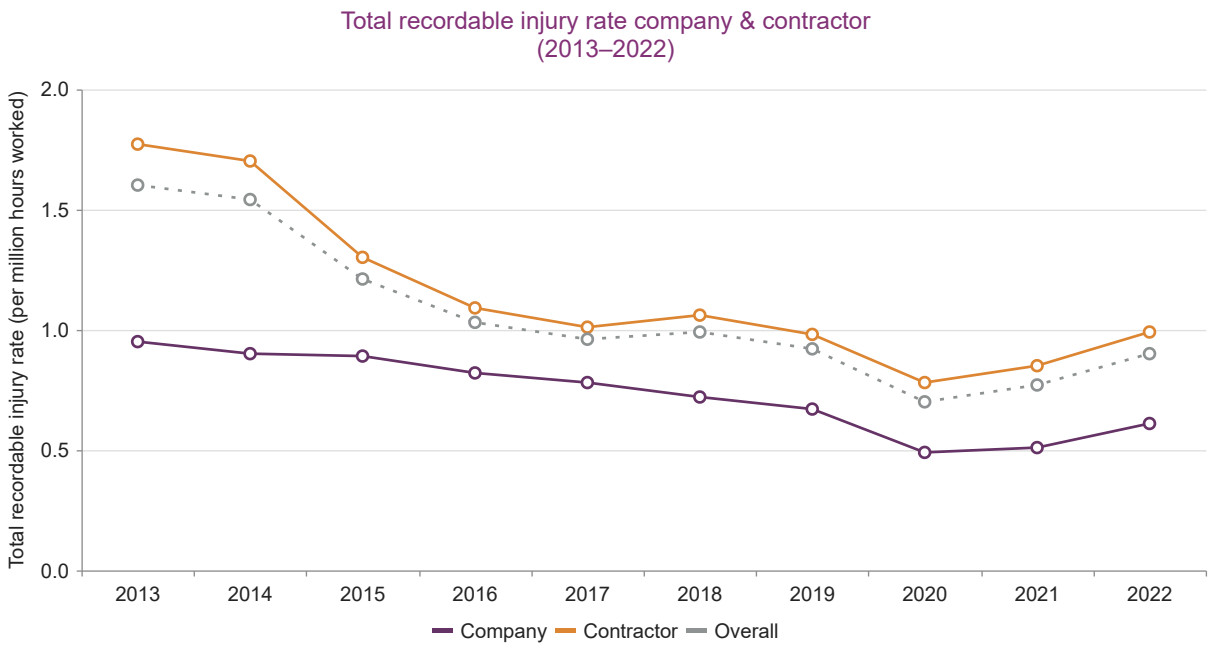
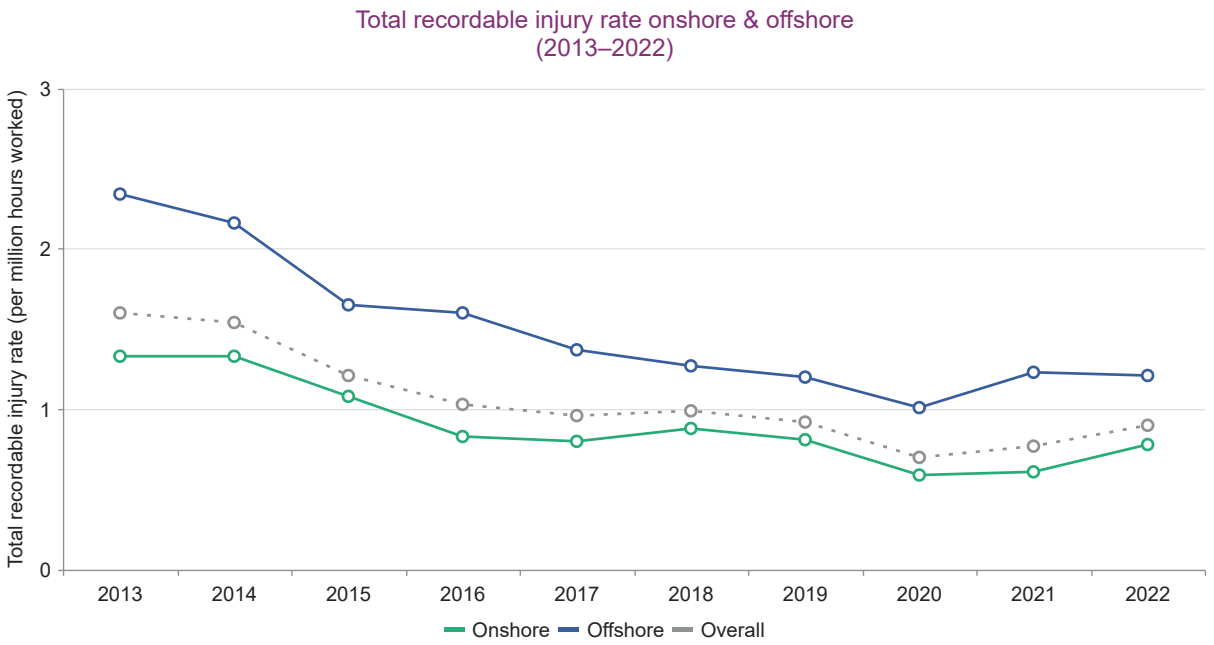


Figure 20:


Total recordable injury rate onshore & offshore
(2013–2022)
Total recordable injury rate (per million hours worked)
3
2
1
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Onshore
Offshore
Overall

2.6 Lost time injury rate (LTIR)

There were 682 reported lost work day cases resulting in at least one day off work, which equates to an average of 13 injuries resulting in at least one day off work every week of the year or 2 injuries every day of the year.

For calculations of LTIR, all hours in the database were used. See 'LWDC Severity' for further information on Lost Work Day Case severity.

Table 8: Lost time injury rate (2021 & 2022)

	Lost time injury rate (LTIR)		Relative to 2021 LTIR
	2021	2022	
OVERALL	0.22	0.28	27% higher
Company	0.19	0.26	37% higher
Contractor	0.24	0.28	17% higher
Onshore	0.17	0.22	29% higher
Offshore	0.40	0.44	10% higher

Figure 21:

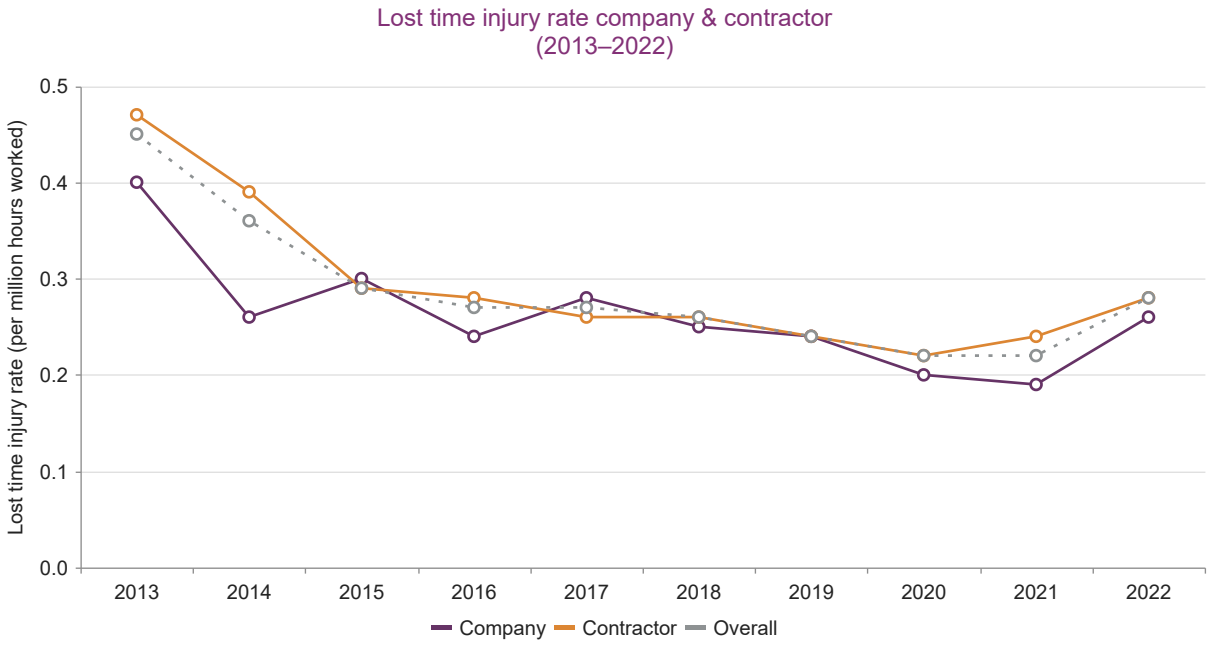
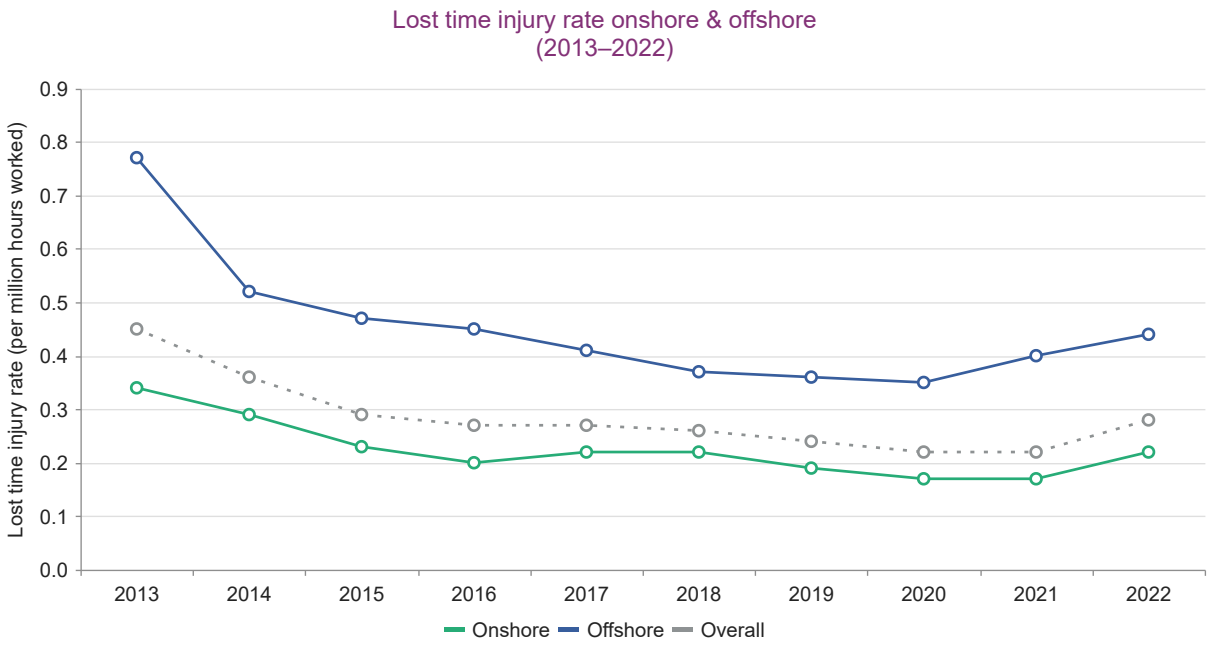


Figure 22:


Lost time injury rate onshore & offshore
(2013–2022)
Lost time injury rate (per million hours worked)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Onshore
Offshore
Overall

2.7 Lost work day case causes and activities

Table 9: Lost work day cases by cause (2022)

Cause	Number	% of total
Assault or violent act	2	0.3
Aviation accident	6	0.9
Caught in, under or between (excl. dropped objects)	122	17.9
Confined space	2	0.3
Cut, puncture, scrape	32	4.7
Dropped objects	39	5.7
Explosion, fire or burns	14	2.1
Exposure electrical	9	1.3
Exposure noise, chemical, biological, vibration, extreme temperature	56	8.2
Falls from height	60	8.8
Overexertion, strain	54	7.9
Pressure release	12	1.8
Slips and trips (at same height)	130	19.1
Struck by (not dropped object)	104	15.2
Water related, drowning	4	0.6
Unspecified - Other	36	5.3
OVERALL	682	

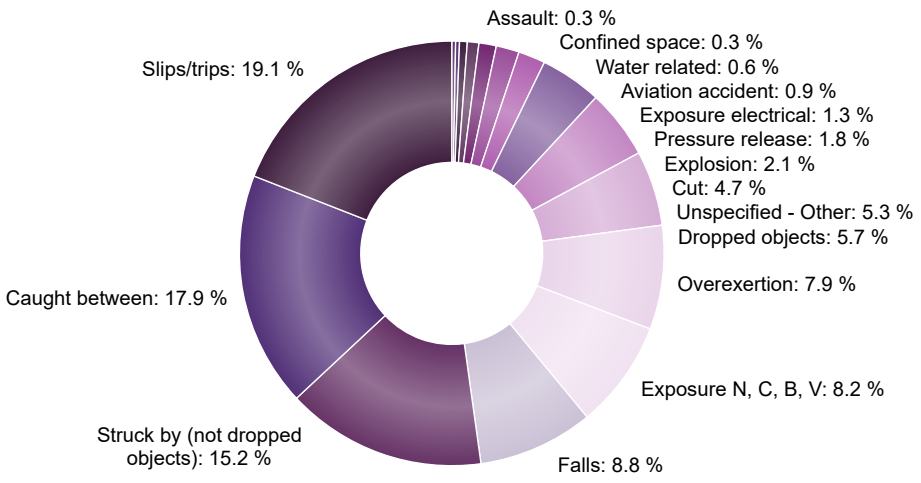
Of the 682 reported lost work day cases resulting in at least one day off work, 514 incidents (75%) were contractor-related and 168 (25%) were company-related (453 and 127 respectively for 2021).

The lost work day case cause was provided for all lost work day cases reported, although 5% of the cases were categorized as 'Other'.

The pie chart shows the percentage of LWDCs within each of the reporting categories for 2022.

Figure 23:

Percentage of lost work day cases by cause (2022)



- Slips and trips (at same height) accounted for 130 cases, 19.1% of LWDCs where the cause was given. 2021 results showed 113 cases accounting for 19.5%.
- Caught in, under or between (excl. dropped objects) accounted for 122 cases, 17.9% of the total. 2021 results showed 98 cases accounting for 16.9%.
- Struck by (not dropped object) accounted for 104 cases, 15.2% of the total. 2021 results showed 106 cases accounting for 18.3%.

In comparison with previous years the results were very similar.

Table 10: Lost work day cases by cause - company & contractor (2022)

Cause	Company	Contractor
Assault or violent act	0	2
Aviation accident	2	4
Caught in, under or between (excl. dropped objects)	22	100
Confined space	0	2
Cut, puncture, scrape	4	28
Dropped objects	8	31
Explosion, fire or burns	5	9
Exposure electrical	1	8
Exposure noise, chemical, biological, vibration, extreme temperature	21	35
Falls from height	10	50
Overexertion, strain	18	36
Pressure release	4	8
Slips and trips (at same height)	42	88
Struck by (not dropped object)	16	88
Water related, drowning	0	4
Unspecified - Other	15	21
OVERALL	168	514

Figure 24:

Percentage of lost work day cases by cause - company (2022)

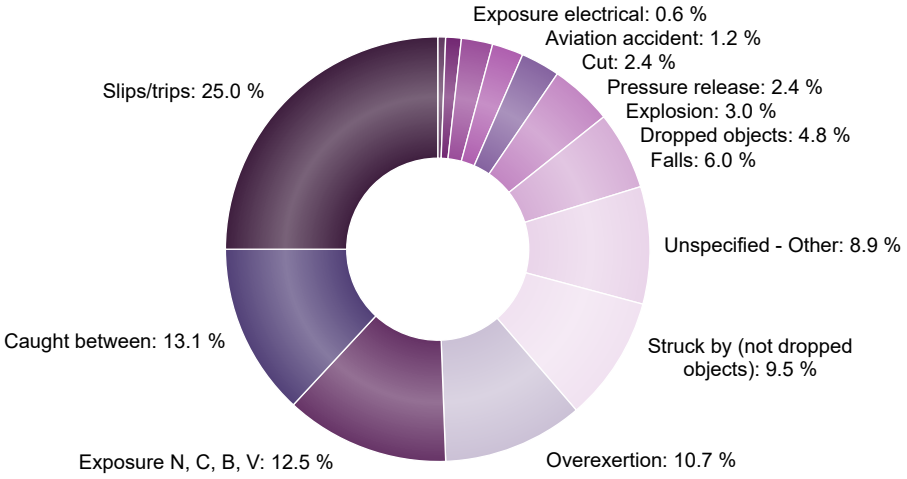


Figure 25:

Percentage of lost work day cases by cause - contractor (2022)

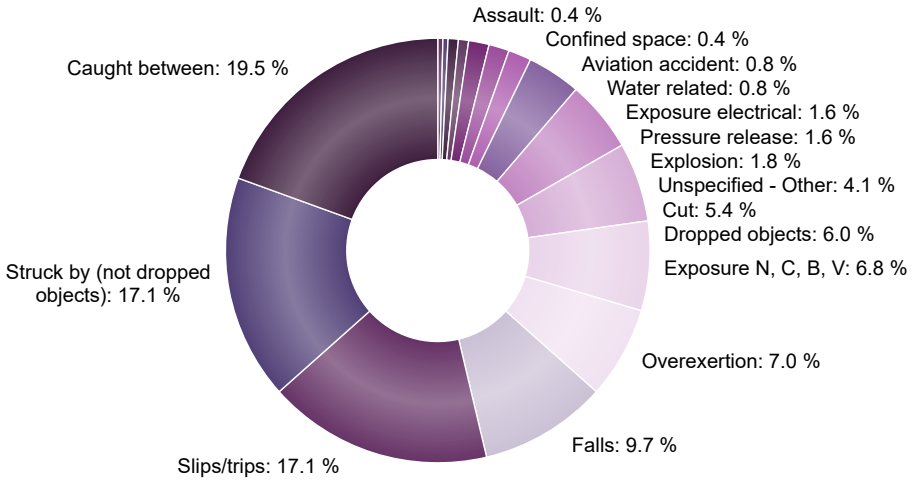


Table 11: Lost work day cases by cause - onshore & offshore (2022)

Cause	Onshore	Offshore
Assault or violent act	2	0
Aviation accident	0	6
Caught in, under or between (excl. dropped objects)	63	59
Confined space	1	1
Cut, puncture, scrape	22	10
Dropped objects	30	9
Explosion, fire or burns	6	8
Exposure electrical	5	4
Exposure noise, chemical, biological, vibration, extreme temperature	8	48
Falls from height	45	15
Overexertion, strain	26	28
Pressure release	8	4
Slips and trips (at same height)	80	50
Struck by (not dropped object)	69	35
Water related, drowning	0	4
Unspecified - Other	22	14
OVERALL	387	295

Of the 682 reported lost work day cases resulting in at least one day off work, 387 incidents (57%) were related to onshore activity and 295 (43%) were related to offshore activity (318 and 262 respectively for 2021).

Figure 26:

Percentage of lost work day cases by cause - onshore (2022)

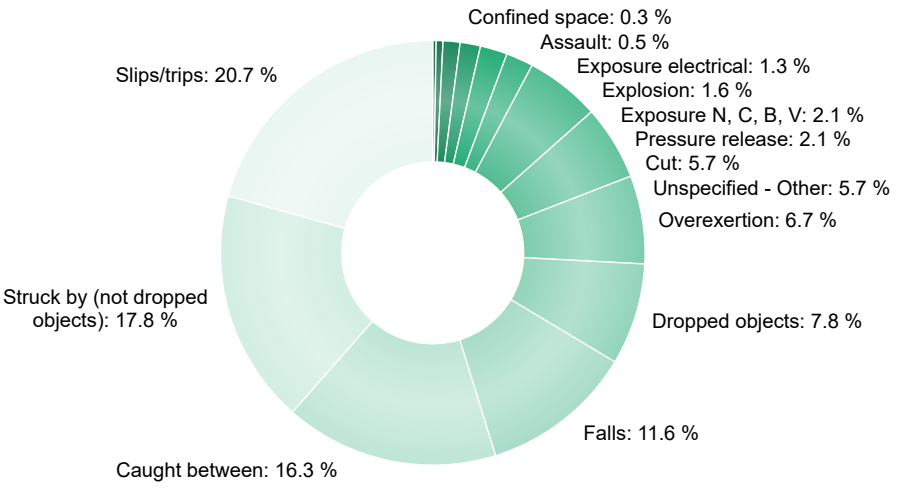
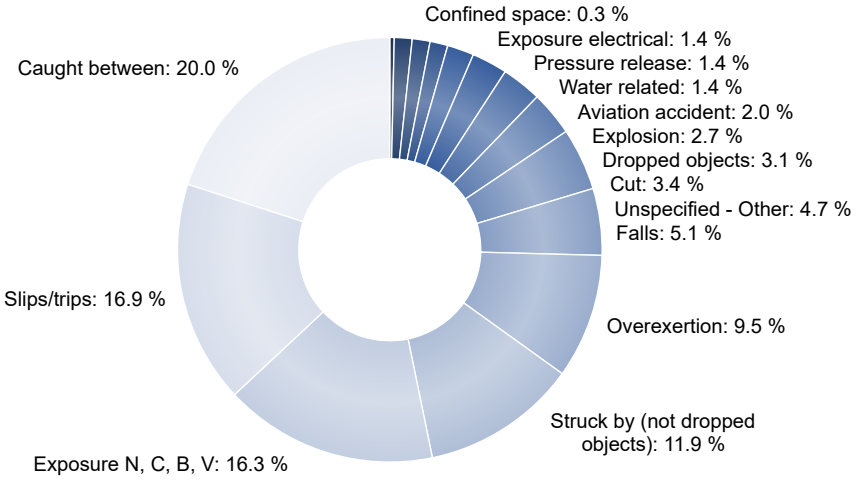


Figure 27:

Percentage of lost work day cases by cause - offshore (2022)



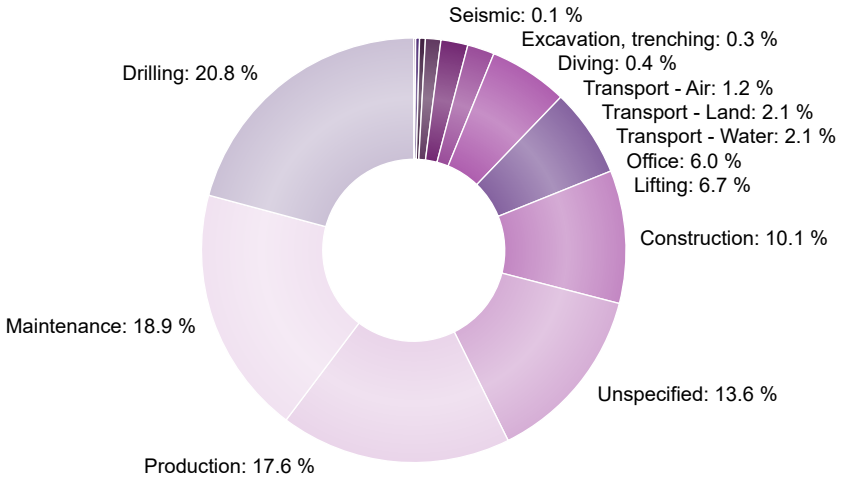
Lost work day case activities were reported for all of the 682 lost work day cases reported, although 14% of the cases were categorized as 'Unspecified - Other'.

Table 12: Lost work day cases by activity (2022)

Activity	Number	% of total
Construction, commissioning, decommissioning	69	10.1
Diving (incl. decompression), subsea, ROV	3	0.4
Drilling, workover, well operations	142	20.8
Excavation, trenching, ground disturbance	2	0.3
Lifting, crane, rigging, deck operations	46	6.7
Maintenance, inspection, testing	129	18.9
Office, warehouse, accommodation, catering	41	6.0
Production operations	120	17.6
Seismic/survey operations	1	0.1
Transport - Air	8	1.2
Transport - Land	14	2.1
Transport - Water, incl. marine activity	14	2.1
Unspecified - other	93	13.6
OVERALL	682	

Figure 28:

Percentage of lost work day cases by activity (2022)



Note that Excavation, trenching, ground disturbance was added as an activity in 2019.

Table 13: Lost work day cases by activity - company & contractor (2022)

Activity	Company	Contractor
Construction, commissioning, decommissioning	0	69
Diving (incl. decompression), subsea, ROV	0	3
Drilling, workover, well operations	13	129
Excavation, trenching, ground disturbance	1	1
Lifting, crane, rigging, deck operations	7	39
Maintenance, inspection, testing	33	96
Office, warehouse, accommodation, catering	25	16
Production operations	54	66
Seismic/survey operations	0	1
Transport - Air	3	5
Transport - Land	7	7
Transport - Water, incl. marine activity	1	13
Unspecified - other	24	69
OVERALL	168	514

Figure 29:

Percentage of lost work day cases by activity - company (2022)

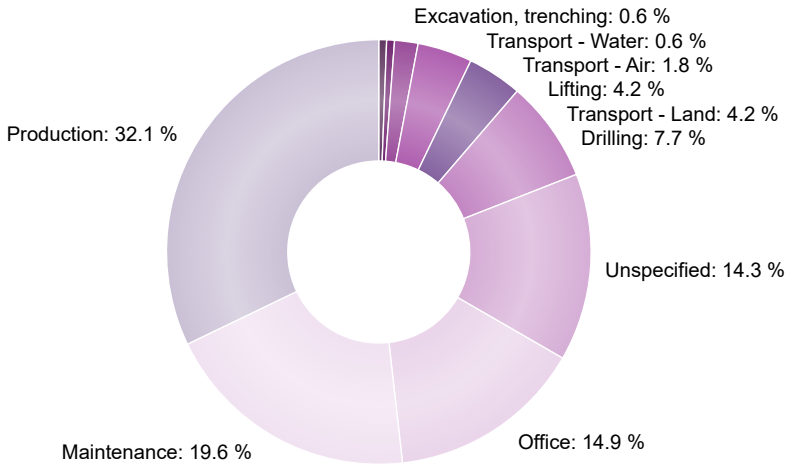


Figure 30:

Percentage of lost work day cases by activity - contractor (2022)

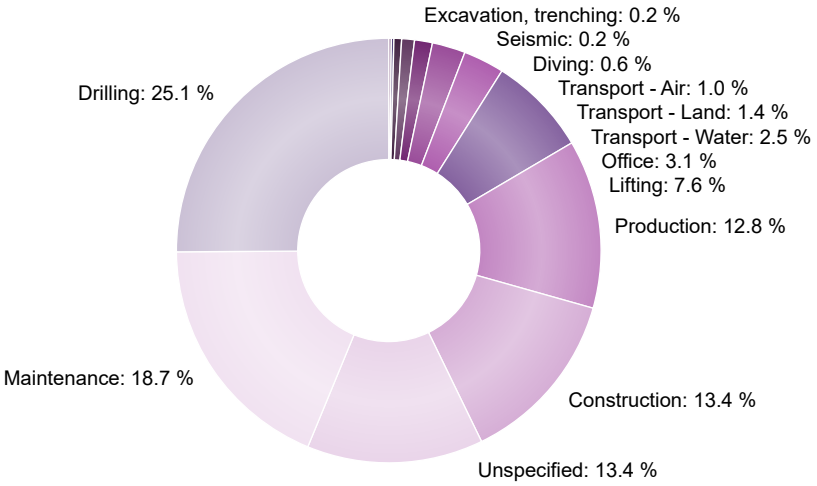


Table 14: Lost work day cases by activity - onshore & offshore (2022)

Activity	Onshore	Offshore
Construction, commissioning, decommissioning	59	10
Diving (incl. decompression), subsea, ROV	1	2
Drilling, workover, well operations	95	47
Excavation, trenching, ground disturbance	2	0
Lifting, crane, rigging, deck operations	22	24
Maintenance, inspection, testing	68	61
Office, warehouse, accommodation, catering	27	14
Production operations	65	55
Seismic/survey operations	0	1
Transport - Air	0	8
Transport - Land	13	1
Transport - Water, incl. marine activity	1	13
Unspecified - other	34	59
OVERALL	387	295

Figure 31:

Percentage of lost work day cases by activity - onshore (2022)

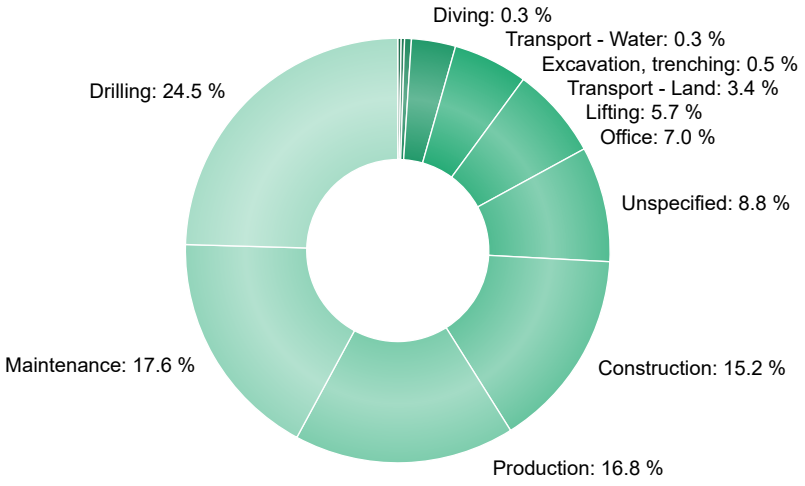
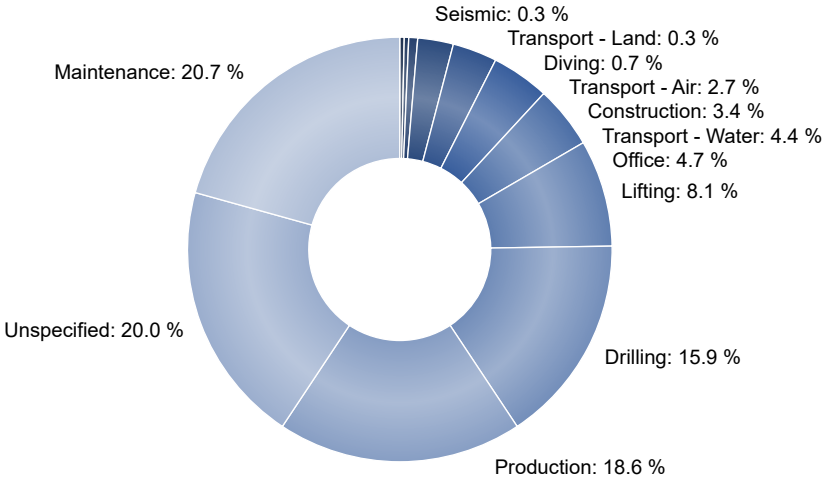


Figure 32:

Percentage of lost work day cases by activity - offshore (2022)



2.8 Severity of lost work day cases

IOGP Member Companies reported a total of 21,455 days lost (LWDC days) through injuries.

- The number of days lost was reported for 519 of the 682 lost work day cases reported, representing 80% of the total work hours.
- The offshore LWDC severity is 23% lower than onshore.
- The LWDC severity for contractors is 11% higher than for company employees.

Table 15: Severity of lost work day cases (2022 compared with 2017-2021)

	Severity of LWDC (Average days lost per LWDC)				
	2017-2021	2021	2022	2022 relative to 2017-2021	2022 relative to 2021
OVERALL	48.0	52.4	41.3	14% lower	21% lower
Company	43.9	56.4	38.3	13% lower	32% lower
Contractor	49.0	51.4	42.4	13% lower	18% lower
Onshore	48.4	53.9	45.4	6% lower	16% lower
Offshore	47.3	50.1	34.9	26% lower	30% lower

Figure 33:

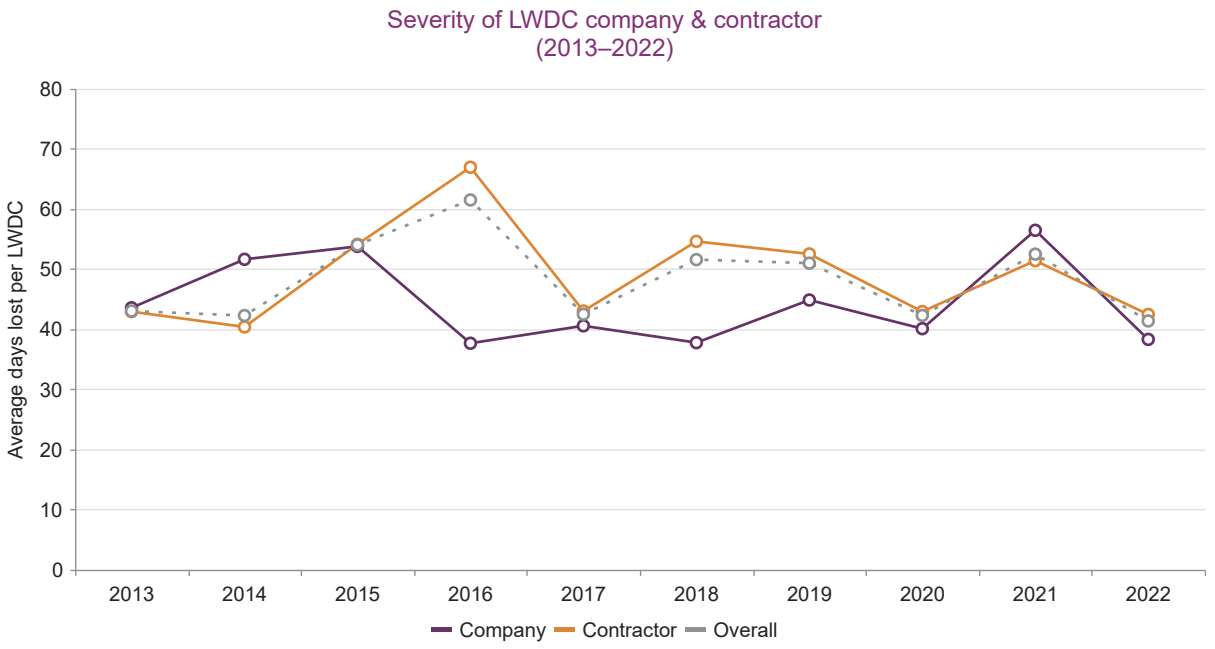
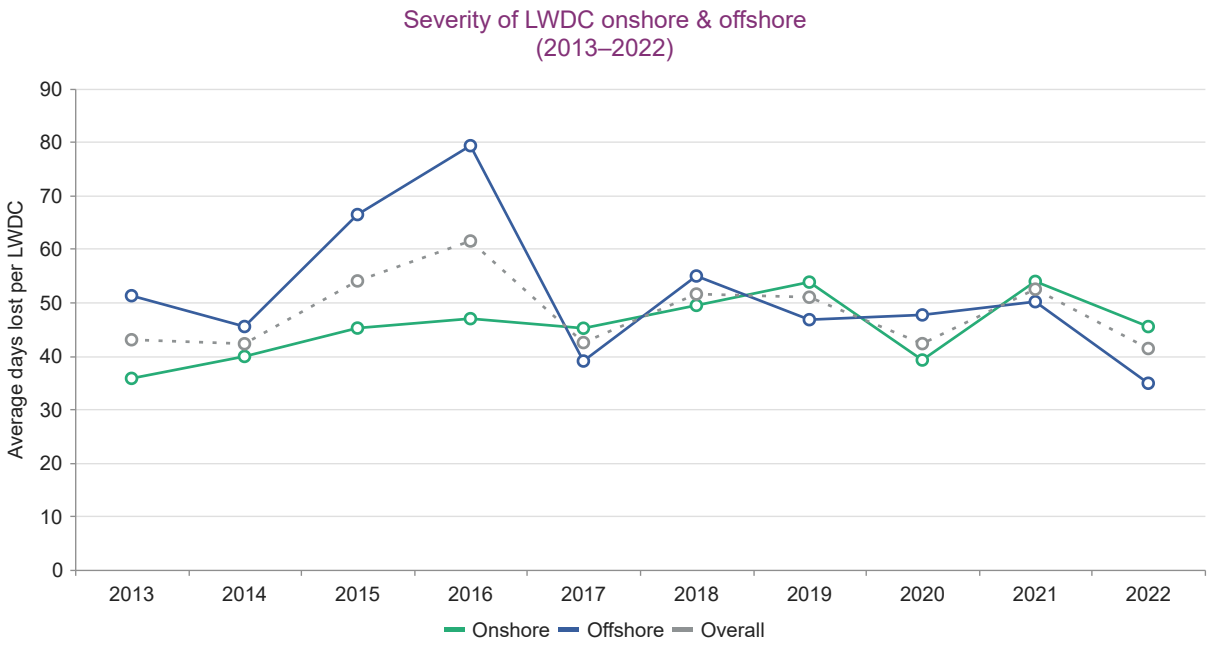
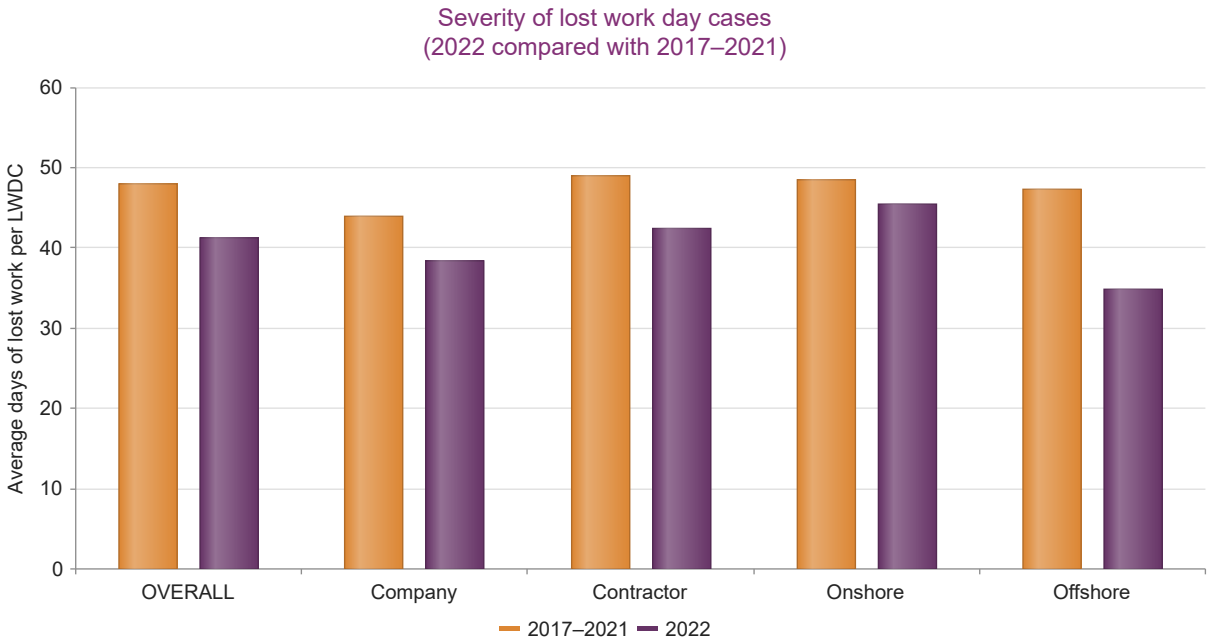


Figure 34:



The figure below shows the average number of days lost per LWDC in 2022 compared with the average for the previous five-year period. A 14% decrease is shown in overall LWDC severity when compared with the previous five-year period.

Figure 35:



2.9 Severity of restricted work day cases

In total 8,591 days were restricted (RWDC days) as a result of restricted work day cases, in the sense that normal duties could not be performed.

- The number of days lost was reported for 72% of the database. (see Appendix A and Appendix C)

Table 16: Severity of restricted work day cases (2022 compared with 2017-2021)

	Severity of RWDC (Average days restricted per RWDC)			2022 relative to 2017-2021	2022 relative to 2021
	2017-2021	2021	2022		
OVERALL	22.4	26.3	28.5	27% higher	8% higher
Company	25.1	41.2	31.8	27% higher	23% lower
Contractor	22.0	23.4	27.9	27% higher	19% higher
Onshore	23.3	26.3	27.0	16% higher	3% higher
Offshore	21.0	26.2	31.0	48% higher	18% higher

Figure 36:

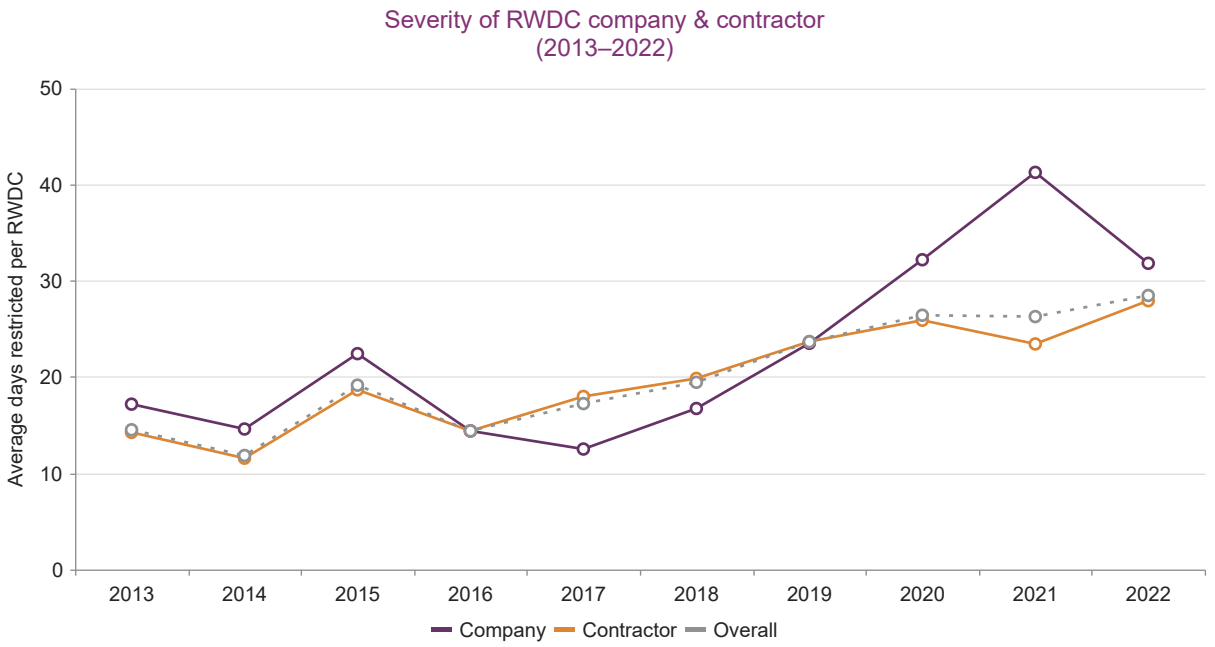
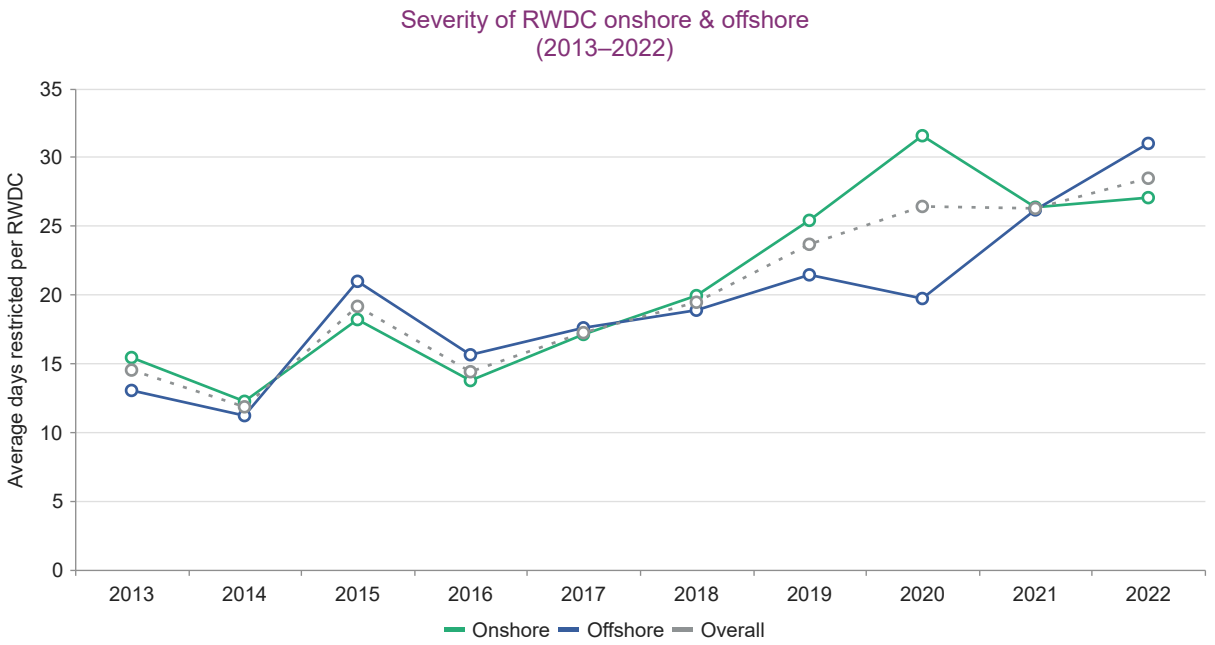
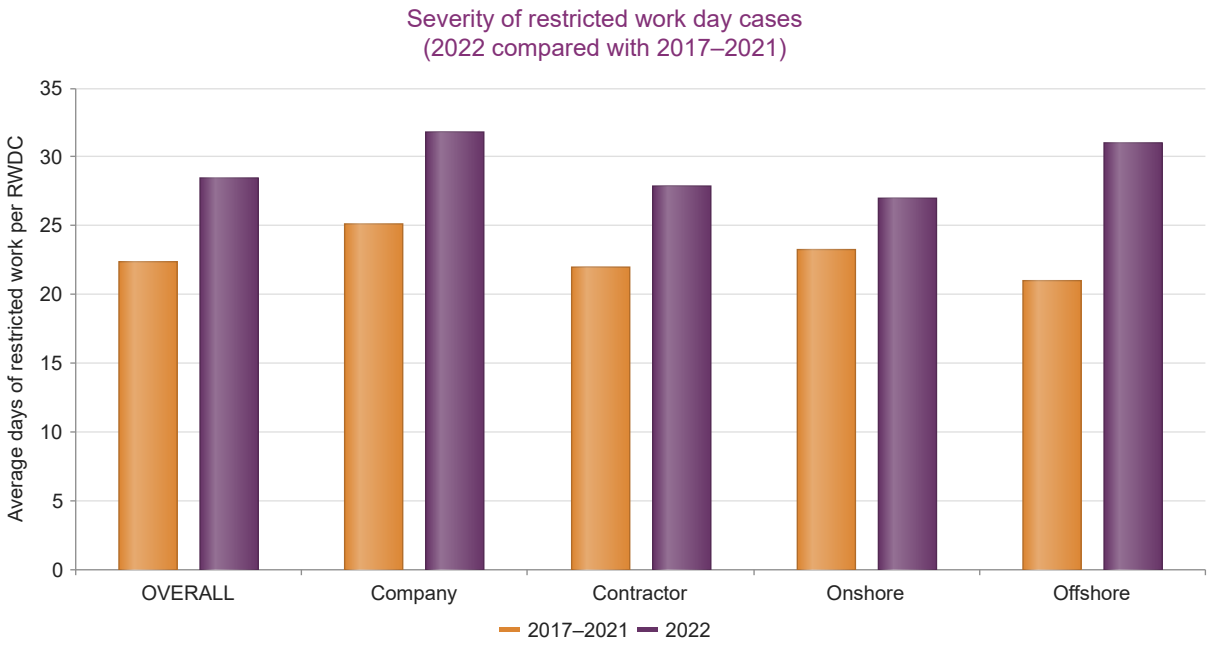


Figure 37:



The figure below shows the average number of days restricted per RWDC in 2022 compared with the average for the previous five-year period. The overall average shows an increase of 27% compared with the average for the previous five-year period.

Figure 38:



2.10 Incident triangles

In this section, the relative numbers of types of occupational injury are shown in the form of 'incident triangles'. The ratios have been corrected to account for the absence, in some data submissions, of medical treatment cases.

Table 17: Ratio of lost time injuries and recordable injuries to fatalities (2013-2022)

Year	Ratio of lost time injuries to fatalities	Ratio of total recordable injuries to fatalities
2022	22:1	69:1
2021	30:1	101:1
2020	40:1	122:1
2019	29:1	110:1
2018	26:1	98:1
2017	24:1	85:1
2016	16:1	60:1
2015	20:1	74:1
2014	35:1	134:1
2013	21:1	73:1

Definitions

Lost time injuries:

Lost work day cases and fatalities

Recordable injuries:

Fatalities, lost work day cases, restricted work day cases and medical treatment cases where medical treatment cases are reported for the data set

Ratio of lost time injuries to fatalities:

The number of lost time injuries divided by the total number of fatalities (lost time injuries/fatalities)

Ratio of total recordable injuries to fatalities:

The number of recordable injuries divided by the total number of fatalities (recordable injuries/fatalities)

Figure 39:

Incident triangles (2022)

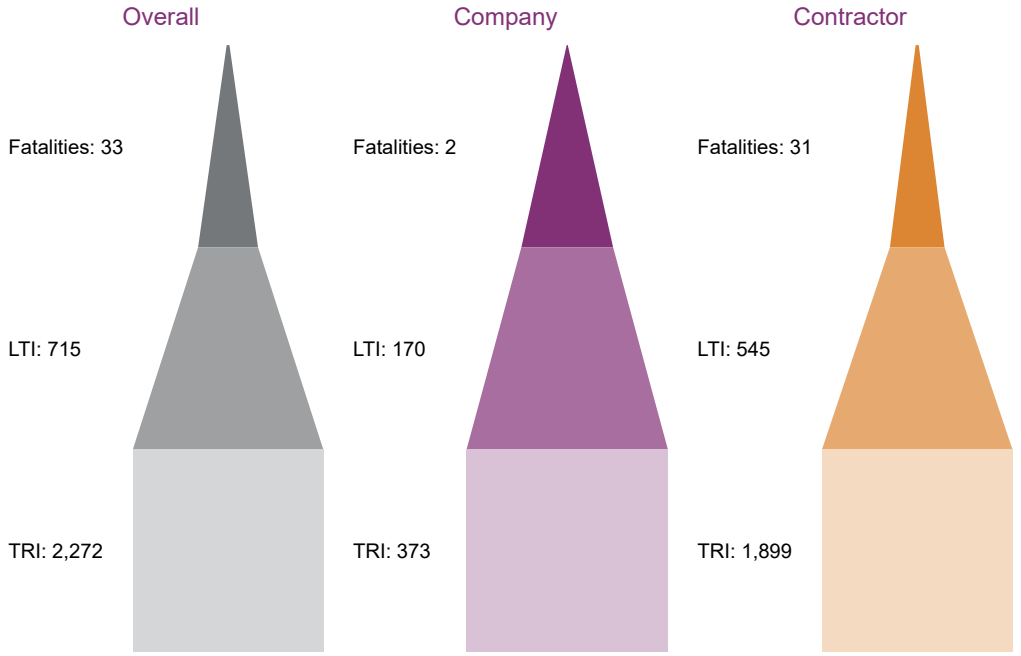
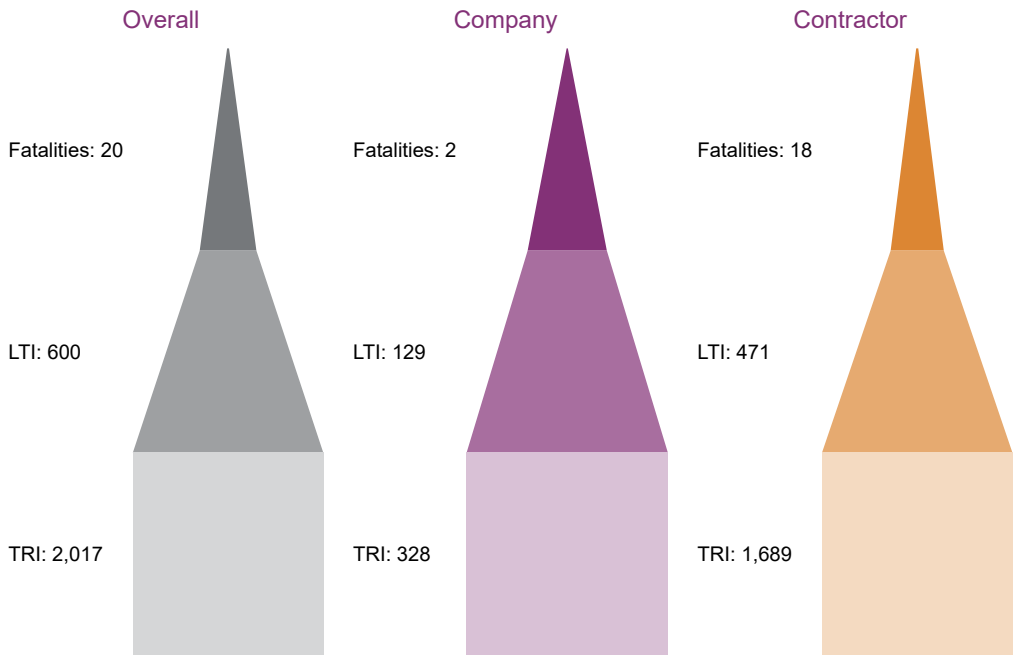


Figure 40:

Incident triangles (2021)



The varying ratio of fatalities to lost time injuries to recordable injuries for 2021-2022 challenges the traditional notion of recordable injuries and lost time injuries overall as a precursor to fatalities as shown in the incident triangles.

Table 18: Ratio of fatalities to lost time injuries by cause (2022)

Cause	LTIs (fatalities + LWDCs)	Fatalities	Ratio (LTI: Fatality)
Assault or violent act	3	1	3:1
Pressure release	16	4	4:1
Explosion, fire or burns	18	4	5:1
Water related, drowning	5	1	5:1
Aviation accident	7	1	7:1
Dropped objects	45	6	8:1
Struck by (not dropped object)	110	6	18:1
Caught in, under or between (excl. dropped objects)	128	6	21:1
Falls from height	63	3	21:1
Exposure noise, chemical, biological, vibration, extreme temperature	57	1	57:1
Slips and trips (at same height)	130	0	n/a
Overexertion, strain	54	0	n/a
Unspecified - Other	36	0	n/a
Cut, puncture, scrape	32	0	n/a
Exposure electrical	9	0	n/a
Confined space	2	0	n/a

Table 19: Ratio of fatalities to lost time injuries by activity (2022)

Activity	LTIs (fatalities + LWDCs)	Fatalities	Ratio (LTI: Fatality)
Seismic/survey operations	2	1	2:1
Excavation, trenching, ground disturbance	3	1	3:1
Diving (incl. decompression), subsea, ROV	4	1	4:1
Transport - Land	17	3	6:1
Transport - Air	9	1	9:1
Lifting, crane, rigging, deck operations	50	4	13:1
Drilling, workover, well operations	151	9	17:1
Construction, commissioning, decommissioning	73	4	18:1
Production operations	125	5	25:1
Maintenance, inspection, testing	132	3	44:1
Unspecified - other	94	1	94:1
Office, warehouse, accommodation, catering	41	0	n/a
Transport - Water, incl. marine activity	14	0	n/a

2.11 Causal factors

The allocation of 'causal factors' to fatal incidents and high potential events was requested as part of the data submission. IOGP first began recording causal factors in 2010. Users now have 12 years worth of data on this topic to use for comparisons.

To standardize the response, an IOGP list of causal factors and a glossary was provided to the Member Companies as part of the IOGP user guide. The causal factors list is divided into two sections:

- People (Acts) classifications usually involve either the actions of a person or actions which were required but not carried out or were incorrectly performed. There are four major categories of actions, with an additional level of detail under each of the major categories.
- Process (Conditions) classifications usually involve some type of physical hazard or organisational aspect out of the control of the individual. There are five major classification categories, with an additional level of detail under each of the major categories.

Definitions

High potential event

Any incident or near miss that could have realistically resulted in one or more fatalities.

2.12 Fatal incident causal factors

Causal factors are divided into two separate groups, People (Acts) and Process (Conditions), see Report 2022su Safety data reporting user guide – 2022 data and Glossary for details.

- 27 of the 29 fatal incidents reported were assigned causal factors (13 of 15 in 2021).
- 88 causal factors were assigned for the 27 fatal incidents (60 in 2021).
- Between 1 and 7 causal factors were assigned per incident (between 1 and 10 in 2021).

Table 20: Causal factors assigned to fatal incidents (2021 & 2022)

Causal factor group	2021	2022
PEOPLE (ACTS)	26	45
PROCESS (CONDITIONS)	34	43

The causal factors assigned to fatal incidents are shown in Table 21. The highlighted content indicates the top ten causal factors assigned to fatal incidents in 2022 compared with the previous 11 years. 5 of the causal factors were in the top ten for the 10 years shown, and for each of the 10 years for which data were reported.

Additional information on the fatal incidents reported by region can be found at https://data.iogp.org/Safety/FatalIncidents. The information provided includes a narrative description of the incident, the corrective actions and recommendations and the causal factors assigned by the reporting company.

Table 21: Causal factors assigned to fatal incidents (2013 - 2022)

Causal factor	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
PROCESS (CONDITIONS) : Organizational : Inadequate hazard identification or risk assessment	13	18	11	10	10	15	9	1	5	6	98
PEOPLE (ACTS) : Inattention/Lack of Awareness : Improper decision making or lack of judgment	16	13	10	13	9	14	9	2	6	4	96
PROCESS (CONDITIONS) : Organizational : Inadequate supervision	14	13	9	9	12	17	7	4	5	5	95
PEOPLE (ACTS) : Following Procedures : Improper position (in the line of fire)	12	14	6	11	7	13	7	2	3	17	92
PROCESS (CONDITIONS) : Organizational : Inadequate training/competence	21	16	11	6	4	11	3	3	3	4	82
PROCESS (CONDITIONS) : Organizational : Inadequate work standards/procedures	15	18	8	4	4	3	3	3	7	3	68
PEOPLE (ACTS) : Following Procedures : Deviation unintentional (by individual or group)	11	9	9	2	6	5	5	2	2	4	55
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective guards or protective barriers	10	6	4	2	8	4	4	0	3	4	45
PROCESS (CONDITIONS) : Organizational : Inadequate communication	8	6	6	3	1	5	3	3	2	5	42
PEOPLE (ACTS) : Use of Protective Methods : Failure to warn of hazard	6	4	5	5	5	4	4	0	2	3	38
PEOPLE (ACTS) : Use of Tools, Equipment, Materials and Products : Improper use/position of tools/equipment/materials/products	10	6	4	3	4	4	1	1	2	1	36
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate maintenance/inspection/testing	9	5	3	4	2	6	0	1	1	4	35
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate design/specification/management of change	4	4	7	1	2	3	1	1	1	6	30
PEOPLE (ACTS) : Use of Protective Methods : Personal Protective Equipment not used or used improperly	7	8	6	1	2	1	2	0	2	1	30
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate/defective tools/equipment/materials/products	9	0	5	3	5	2	1	1	2	1	29
PEOPLE (ACTS) : Inattention/Lack of Awareness : Lack of attention/distracted by other concerns/stress	4	3	4	6	4	1	4	1	0	2	29
PEOPLE (ACTS) : Use of Tools, Equipment, Materials and Products : Servicing of energized equipment/inadequate energy isolation	3	4	3	2	3	2	2	2	1	5	27
PEOPLE (ACTS) : Use of Protective Methods : Equipment or materials not secured	8	3	3	2	1	4	2	0	2	1	26
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective warning systems/safety devices	5	5	4	2	1	2	1	0	1	1	22
PROCESS (CONDITIONS) : Organizational : Poor leadership/organizational culture	6	3	2	0	6	3	0	1	1	0	22
PEOPLE (ACTS) : Following Procedures : Deviation intentional (by individual or group)	2	5	4	2	2	5	1	0	0	1	22
PEOPLE (ACTS) : Following Procedures : Improper lifting or loading	4	1	2	2	0	6	2	0	1	3	21
PEOPLE (ACTS) : Use of Protective Methods : Inadequate use of safety systems	7	2	2	1	1	4	1	1	0	0	19
PEOPLE (ACTS) : Following Procedures : Work or motion at improper speed	2	1	3	2	4	1	1	0	1	2	17
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective Personal Protective Equipment	4	0	5	0	1	0	2	0	1	0	13
PROCESS (CONDITIONS) : Organizational : Failure to report/learn from events	1	3	0	2	0	2	3	0	1	0	12
PROCESS (CONDITIONS) : Work Place Hazards : Inadequate surfaces, floors, walkways or roads	3	1	4	3	0	0	0	1	0	0	12
PROCESS (CONDITIONS) : Work Place Hazards : Congestion, clutter or restricted motion	0	0	3	1	1	2	0	0	1	3	11
PROCESS (CONDITIONS) : Protective Systems : Inadequate security provisions or systems	1	3	3	0	1	1	0	0	0	0	9
PEOPLE (ACTS) : Use of Protective Methods : Disabled or removed guards, warning systems or safety devices	3	2	0	1	0	2	0	0	1	0	9
PEOPLE (ACTS) : Inattention/Lack of Awareness : Fatigue	0	0	2	1	2	0	1	0	1	1	8
PROCESS (CONDITIONS) : Work Place Hazards : Hazardous atmosphere (explosive/toxic/asphyxiant)	2	0	1	1	1	0	0	0	0	1	6
PROCESS (CONDITIONS) : Work Place Hazards : Storms or acts of nature	2	0	1	1	1	1	0	0	0	0	6
PEOPLE (ACTS) : Following Procedures : Overexertion or improper position/posture for task	0	0	0	1	1	1	0	0	0	0	3
PEOPLE (ACTS) : Inattention/Lack of Awareness : Acts of violence	0	0	0	0	2	0	0	0	1	0	3
PEOPLE (ACTS) : Inattention/Lack of Awareness : Use of drugs or alcohol	0	0	0	0	1	0	0	0	1	0	2

Causal factors are listed in order of frequency for 2022. The top 10 causal factors assigned to fatal incidents for each year are highlighted.
2022: 5 causal factors were equal 7th with 4 assigned incidents (11 factors are highlighted)
2021: 7 causal factors were equal 8th with 2 assigned incidents (14 factors are highlighted)
2020: 9 causal factors were equal 9th with 1 assigned incidents (17 factors are highlighted)
2019: 4 causal factors were equal 9th with 3 assigned incidents (12 factors are highlighted)
2017: 5 causal factors were equal 10th with 4 assigned incidents (14 factors are highlighted)
2016: 4 causal factors were equal 10th with 3 assigned incidents (13 factors are highlighted)
2014: 3 causal factors were equal 9th with 6 assigned incidents (11 factors are highlighted)
2013: 2 causal factors were equal 10th with 9 assigned incidents (11 factors are highlighted)

2.13 High potential event causal factors

High potential events are defined as 'any incident or near miss that could have realistically resulted in one or more fatalities'. Participating companies are invited to submit a small number of high potential event reports and to select those with the greatest learning value. The data reported here therefore do not represent the total number of events for the participating companies, so care should be taken in interpreting the data presented in this section.

- 104 of the 106 high potential events reported were assigned causal factors (131 of 144 in 2021).
- 343 causal factors were assigned for the 104 high potential events (381 in 2021).
- Between 1 and 12 causal factors were assigned per event (between 1 and 11 in 2021).

Table 22: Causal factors assigned to high potential events (2021 & 2022)

Causal factor group	2021	2022
PEOPLE (ACTS)	127	120
PROCESS (CONDITIONS)	252	223

The causal factors assigned to high potential events are shown in Table 21. The highlighted content indicates the top ten causal factors assigned to high potential events in 2022 compared with the previous 11 years. 5 of the causal factors were in the top ten for the 10 years shown.

Additional information on the high potential events reported by region can be found at https://data.iogp.org/Safety/HighPotentialEvents. The information provided includes a narrative description of the incident, the corrective actions and recommendations and the causal factors assigned by the reporting company.

Table 23: Causal factors assigned to high potential events (2013 - 2022)

Causal factor	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
PROCESS (CONDITIONS) : Organizational : Inadequate hazard identification or risk assessment	52	37	66	116	54	48	60	29	35	43	540
PROCESS (CONDITIONS) : Organizational : Inadequate work standards/procedures	52	36	40	80	49	36	38	26	31	37	425
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate design/specification/management of change	38	25	30	68	40	33	24	14	38	24	334
PEOPLE (ACTS) : Inattention/Lack of Awareness : Improper decision making or lack of judgment	30	25	33	81	36	29	38	14	20	17	323
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate maintenance/inspection/testing	43	31	37	54	28	27	23	25	31	22	321
PROCESS (CONDITIONS) : Organizational : Inadequate training/competence	36	21	33	47	30	33	29	23	18	14	284
PROCESS (CONDITIONS) : Organizational : Inadequate supervision	29	26	25	44	26	28	29	16	17	21	261
PROCESS (CONDITIONS) : Tools, Equipment, Materials and Products : Inadequate/defective tools/equipment/materials/products	35	16	19	57	21	20	29	15	23	11	246
PEOPLE (ACTS) : Use of Tools, Equipment, Materials and Products : Improper use/position of tools/equipment/materials/products	25	17	21	58	23	20	22	18	19	15	238
PROCESS (CONDITIONS) : Organizational : Inadequate communication	33	27	21	39	22	15	30	18	15	17	237
PEOPLE (ACTS) : Following Procedures : Deviation unintentional (by individual or group)	13	19	25	58	18	16	21	15	11	14	210
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective guards or protective barriers	28	12	18	51	14	16	22	10	12	9	192
PEOPLE (ACTS) : Use of Protective Methods : Equipment or materials not secured	9	14	14	62	13	10	13	11	5	11	162
PEOPLE (ACTS) : Inattention/Lack of Awareness : Lack of attention/distracted by other concerns/stress	14	10	8	48	21	16	8	7	9	9	150
PEOPLE (ACTS) : Use of Protective Methods : Failure to warn of hazard	12	11	9	40	11	12	7	10	12	11	135
PEOPLE (ACTS) : Following Procedures : Improper position (in the line of fire)	9	7	12	35	8	14	10	7	6	6	114
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective warning systems/safety devices	17	9	15	17	7	10	13	7	7	6	108
PEOPLE (ACTS) : Following Procedures : Deviation intentional (by individual or group)	12	12	14	24	9	4	12	2	7	2	98
PEOPLE (ACTS) : Following Procedures : Improper lifting or loading	6	7	6	34	3	5	9	8	11	8	97
PEOPLE (ACTS) : Use of Protective Methods : Inadequate use of safety systems	9	5	10	19	7	15	6	8	5	10	94
PROCESS (CONDITIONS) : Organizational : Poor leadership/organizational culture	11	10	13	15	14	13	5	3	3	4	91
PEOPLE (ACTS) : Use of Tools, Equipment, Materials and Products : Servicing of energized equipment/inadequate energy isolation	3	2	9	19	6	10	7	5	5	6	72
PROCESS (CONDITIONS) : Organizational : Failure to report/learn from events	8	6	7	13	4	5	6	4	5	3	61
PEOPLE (ACTS) : Use of Protective Methods : Personal Protective Equipment not used or used improperly	4	5	11	9	3	4	5	2	4	3	50
PROCESS (CONDITIONS) : Work Place Hazards : Hazardous atmosphere (explosive/toxic/asphyxiant)	3	4	5	17	1	6	4	3	1	2	46
PROCESS (CONDITIONS) : Work Place Hazards : Storms or acts of nature	5	5	2	17	1	3	1	2	7	2	45
PROCESS (CONDITIONS) : Work Place Hazards : Inadequate surfaces, floors, walkways or roads	4	4	2	15	4	3	0	0	6	1	39
PROCESS (CONDITIONS) : Work Place Hazards : Congestion, clutter or restricted motion	4	0	2	11	5	4	3	1	1	2	33
PEOPLE (ACTS) : Use of Protective Methods : Disabled or removed guards, warning systems or safety devices	2	4	1	9	1	1	5	1	5	3	32
PEOPLE (ACTS) : Inattention/Lack of Awareness : Fatigue	1	2	2	5	2	3	3	1	4	2	25
PROCESS (CONDITIONS) : Protective Systems : Inadequate security provisions or systems	3	1	4	4	1	4	0	2	1	4	24
PEOPLE (ACTS) : Following Procedures : Work or motion at improper speed	2	4	2	4	3	1	1	2	2	2	23
PROCESS (CONDITIONS) : Protective Systems : Inadequate/defective Personal Protective Equipment	4	0	3	2	3	1	3	0	1	1	18
PEOPLE (ACTS) : Following Procedures : Overexertion or improper position/posture for task	2	2	1	1	2	2	1	2	2	1	16
PEOPLE (ACTS) : Inattention/Lack of Awareness : Acts of violence	0	1	2	2	0	0	0	0	0	0	5
PEOPLE (ACTS) : Inattention/Lack of Awareness : Use of drugs or alcohol	0	0	0	1	0	0	0	0	0	0	1

Causal factors are listed in order of frequency for 2022. The top 10 causal factors assigned to high potential events for each year are highlighted.
2020: 2 causal factors were equal 10th with 14 assigned events (11 factors are highlighted)
2019: 2 causal factors were equal 10th with 22 assigned events (11 factors are highlighted)
2018: 3 causal factors were equal 10th with 16 assigned events (12 factors are highlighted)
2017: 2 causal factors were equal 10th with 21 assigned events (11 factors are highlighted)

2.14 Life-Saving Rules

In 2010, IOGP released a set of 'Life-Saving Rules' (Report 459), intended for use by the oil and gas industry to mitigate risk and reduce fatalities. Each IOGP Life-Saving Rule consisted of a simple icon and descriptive text, providing clear, simple, and consistent communication about risks in the workplace.

These Rules were developed by using the fatal incident and high potential event data from the 1991 to 2010 Safety Performance Indicators reports to identify the events and activities that are the highest risk and therefore provide clear instructions on how to avoid them.

In 2018, IOGP re-examined the applicability of the 2010 Rules against the most recent fatality data. With the 2018 revision of Report 459, IOGP launched a simplified set of Life-Saving Rules (Figure 41) to provide workers in the industry with the actions they can take to protect themselves and their colleagues from fatalities. With a reduced number of rules (9 reduced from 18), but still covering a similar scope, IOGP aims to improve the level of industry-wide adoption across the global oil and gas industry.

Figure 41: Life-Saving Rules (from IOGP Report 459)

Bypassing Safety Controls

Obtain authorisation before overriding or disabling safety controls

- I understand and use safety-critical equipment and procedures which apply to my task
- I obtain authorisation before:
  - disabling or overriding safety equipment
  - deviating from procedures
  - crossing a barrier

Confined Space

Obtain authorisation before entering a confined space

- I confirm energy sources are isolated
- I confirm the atmosphere has been tested and is monitored
- I check and use my breathing apparatus when required
- I confirm there is an attendant standing by
- I confirm a rescue plan is in place
- I obtain authorisation to enter

Driving

Follow safe driving rules

- I always wear a seatbelt
- I do not exceed the speed limit, and reduce my speed for road conditions
- I do not use phones or operate devices while driving
- I am fit, rested and fully alert while driving
- I follow journey management requirements

Energy Isolation

Verify isolation and zero energy before work begins

- I have identified all energy sources
- I confirm that hazardous energy sources have been isolated, locked, and tagged
- I have checked there is zero energy and tested for residual or stored energy

Hot Work

Control flammables and ignition sources

- I identify and control ignition sources
- Before starting any hot work:
  - I confirm flammable material has been removed or isolated
  - I obtain authorisation
- Before starting hot work in a hazardous area I confirm:
  - a gas test has been completed
  - gas will be monitored continually

Line of Fire

Keep yourself and others out of the line of fire

- I position myself to avoid:
  - moving objects
  - vehicles
  - pressure releases
  - dropped objects
- I establish and obey barriers and exclusion zones
- I take action to secure loose objects and report potential dropped objects

Safe Mechanical Lifting

Plan lifting operations and control the area

- I confirm that the equipment and load have been inspected and are fit for purpose
- I only operate equipment that I am qualified to use
- I establish and obey barriers and exclusion zones
- I never walk under a suspended load

Work Authorisation

Work with a valid permit when required

- I have confirmed if a permit is required
- I am authorised to perform the work
- I understand the permit
- I have confirmed that hazards are controlled and it is safe to start
- I stop and reassess if conditions change

Working at Height

Protect yourself against a fall when working at height

- I inspect my fall protection equipment before use
- I secure tools and work materials to prevent dropped objects
- I tie off 100% to approved anchor points while outside a protected area

In 2021, IOGP released the Start Work Checks (Report 459-1), a set of standardized and simplified checklists of safeguards that workers complete at the job location immediately before work commences. The Start Work Checks are supplemental to the Life-Saving Rules (Report 459).

Assessment of the applicability of the IOGP Life-Saving Rules to fatal incident descriptions for 2022 data has shown that at least 86% of the fatal incidents reported are covered by the IOGP Life-Saving Rules and may have been prevented by the adoption of this system.

Figure 42:

Percentage of Life-Saving Rules allocated to fatal incidents where a rule was allocated (2022)

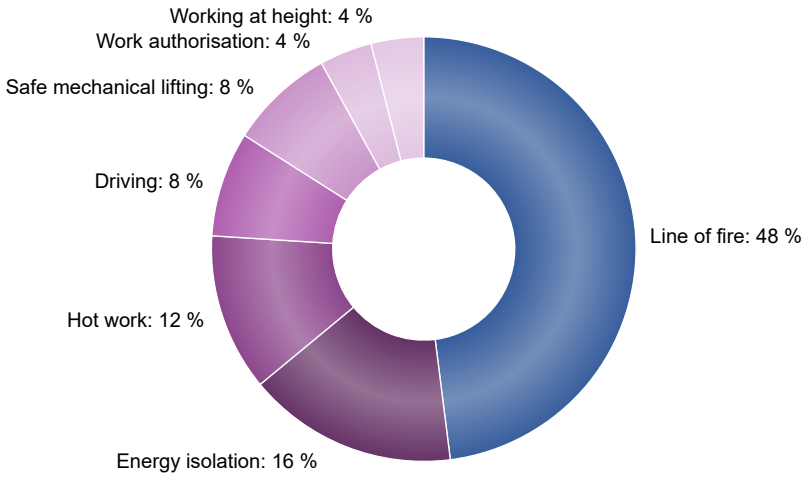
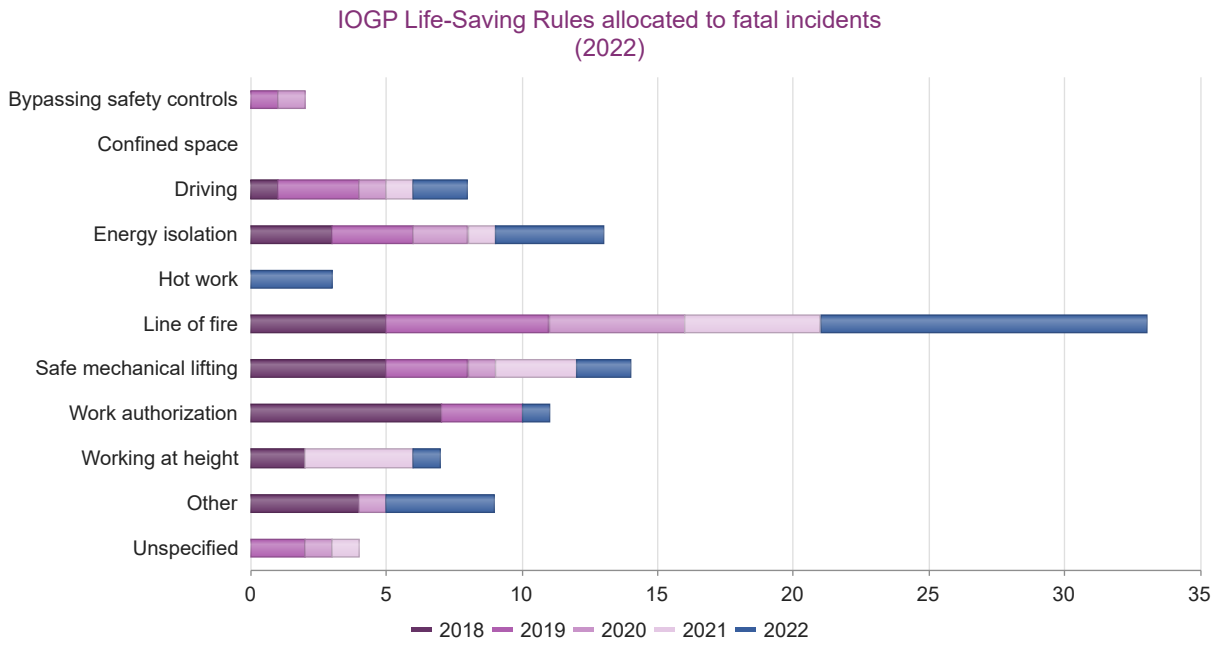


Table 24: IOGP Life-Saving Rules allocated to fatal incidents (2022)

Life-Saving Rule	Fatal incidents				
	2018	2019	2020	2021	2022
Bypassing safety controls	0	1	1	0	0
Confined space	0	0	0	0	0
Driving	1	3	1	1	2
Energy isolation	3	3	2	1	4
Hot work	0	0	0	0	3
Line of fire	5	6	5	5	12
Safe mechanical lifting	5	3	1	3	2
Work authorization	7	3	0	0	1
Working at height	2	0	0	4	1
Other	4	0	1	0	4
Unspecified	0	2	1	1	0

Figure 43:



For data tables go to Appendix B - Section 2.

3. Results by region

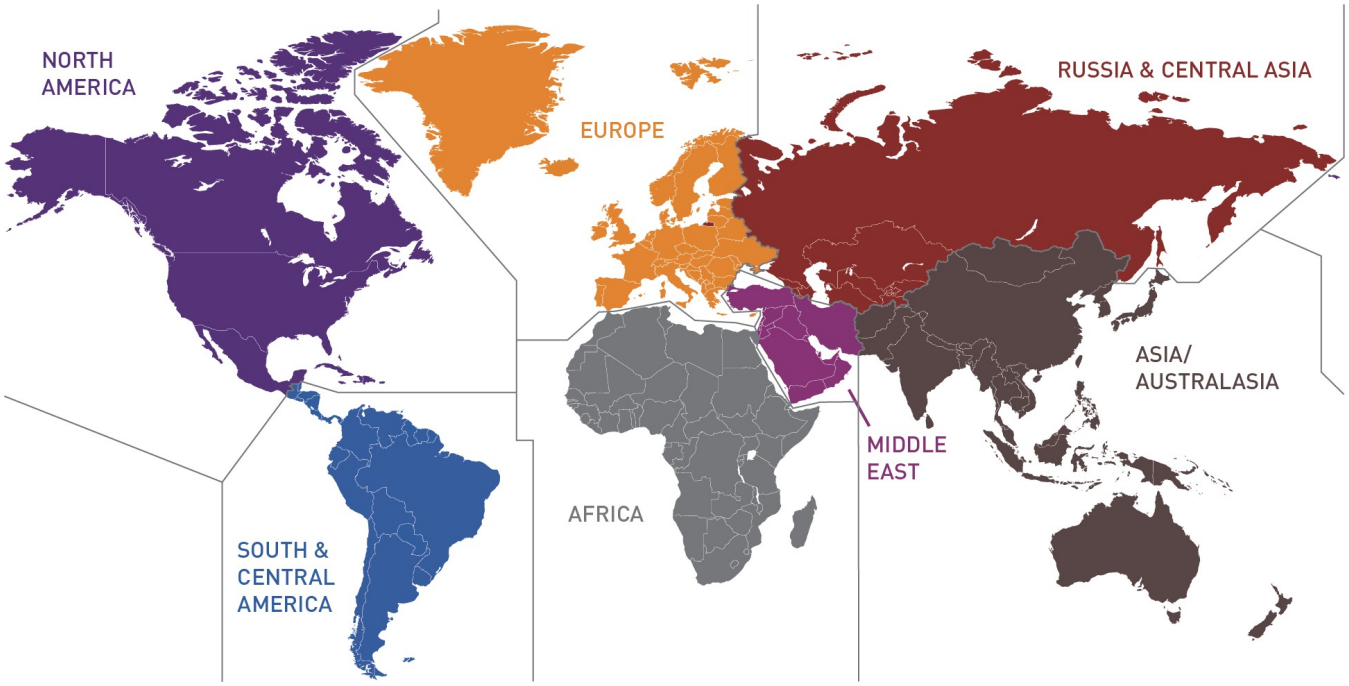
In this section, the safety performance of the contributing IOGP Members is presented for regions and individual countries within those regions.

- Number of fatalities
- Fatal accident rate (FAR)
- Total recordable injury rate (TRIR)
- Lost time injury rate (LTIR)
- FAR, TRIR and LTIR five-year rolling averages
- Severity of lost work day cases
- Individual country performance
- Incident triangles by region
- Fatalities by incident category and activity.

Third party fatalities are not included in this analysis.

Maps showing the division of countries into regions, and the work hours and number of participating companies by country, are provided in Appendix D.

Countries and companies that are subject to international sanctions are not featured in this Report for 2022 data.



Definitions

Fatal accident rate (FAR):

The number of company/contractor fatalities per 100 million hours worked

Fatal incidents per 100 million work hours (FIR):

The number of incidents that result in one or more fatalities per 100 million hours worked

Total recordable injury rate (TRIR)

The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked

Lost time injury rate (LTIR)

The number of lost time injuries (fatalities + lost work day cases) per million hours worked

Five-year rolling average

The five-year rolling average is calculated by summing the total number of incidents for the five previous years and dividing by the sum of the work hours for these years. The number series involved in the calculation is frame shifted along by one each year, e.g. 2022 will be calculated from 2018-2022 data. For example, the five-year rolling average FAR for 2022 is calculated by:

$$\frac{\text{(Number of fatalities in 2018+2019+2020+2021+2022)}}{\text{(Total work hours in 2018+2019+2020+2021+2022) / 100,000,000}}$$

Lost work day case (LWDC)

An incident resulting in at least one day off work. Fatal incidents are not included.

Severity of lost work day cases

Severity is defined as the number of days lost (where reported) for each lost work day case.

3.1 Fatalities

Table 25 shows the number of fatal incidents and fatalities in each of the seven regions into which the data are partitioned.

Table 25: Fatalities, fatal incidents and fatal accident rate by region (2021 - 2022)

Region	Fatalities		Fatal accident rate (FAR)		Fatal incidents	
	2021	2022	2021	2022	2021	2022
Africa	7	2	2.16	0.54	2	2
Asia / Australasia	0	7	0.00	1.44	0	7
Europe	2	0	0.87	0.00	2	0
Middle East	4	11	0.60	2.17	4	8
North America	1	4	0.38	1.21	1	4
Russia & Central Asia	2	3	0.60	0.94	2	2
South & Central America	4	6	1.14	1.93	4	6
OVERALL	20	33	0.75	1.28	15	29

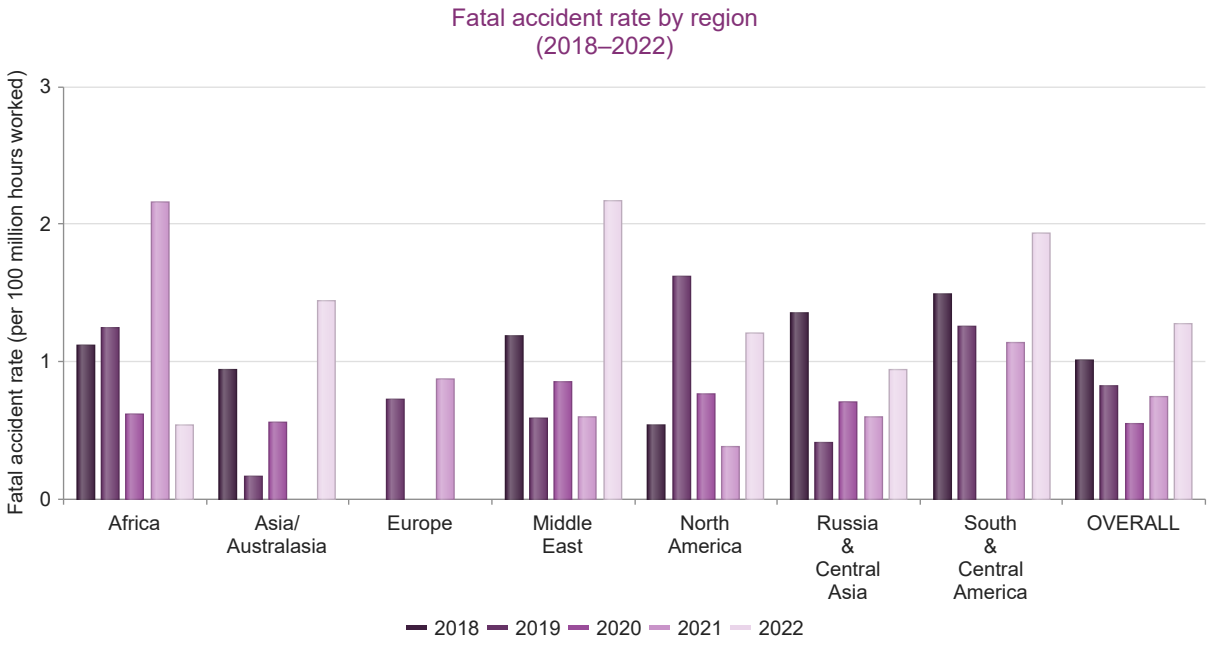
3.2 Fatal accident rate (FAR)

Further Fatal Accident Rate analysis is presented in Section 3.5, where five-year rolling averages of FAR are presented for each of the regions.

Table 26: Fatal accident rate by region (2018 - 2022)

Region	Fatal accident rate (FAR)				
	2018	2019	2020	2021	2022
Africa	1.12	1.25	0.62	2.16	0.54
Asia/ Australasia	0.94	0.17	0.56	0.00	1.44
Europe	0.00	0.73	0.00	0.87	0.00
Middle East	1.19	0.59	0.85	0.60	2.17
North America	0.54	1.62	0.77	0.38	1.21
Russia & Central Asia	1.36	0.41	0.71	0.60	0.94
South & Central America	1.49	1.26	0.00	1.14	1.93
OVERALL	1.01	0.82	0.55	0.75	1.28

Figure 44:



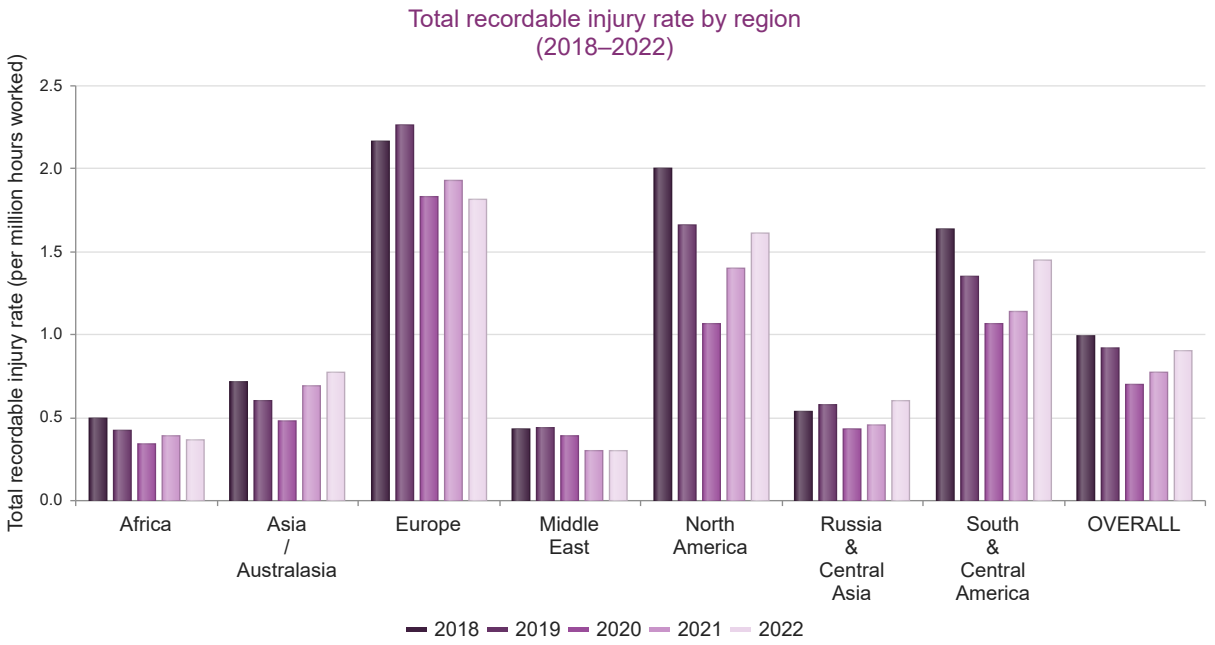
3.3 Total recordable injury rate (TRIR)

Submissions without information on medical treatment cases were filtered out, leaving a database of 2,534 million hours (98% of the database - see Appendix A).

Table 27: Total recordable injury rate by region (2018 - 2022)

Region	Total recordable injury rate (TRIR)				
	2018	2019	2020	2021	2022
Africa	0.50	0.42	0.34	0.39	0.37
Asia / Australasia	0.72	0.60	0.48	0.69	0.77
Europe	2.17	2.26	1.83	1.93	1.82
Middle East	0.43	0.44	0.39	0.30	0.30
North America	2.00	1.66	1.07	1.40	1.61
Russia & Central Asia	0.54	0.58	0.43	0.46	0.60
South & Central America	1.64	1.35	1.07	1.14	1.45
OVERALL	0.99	0.92	0.70	0.77	0.90

Figure 45:



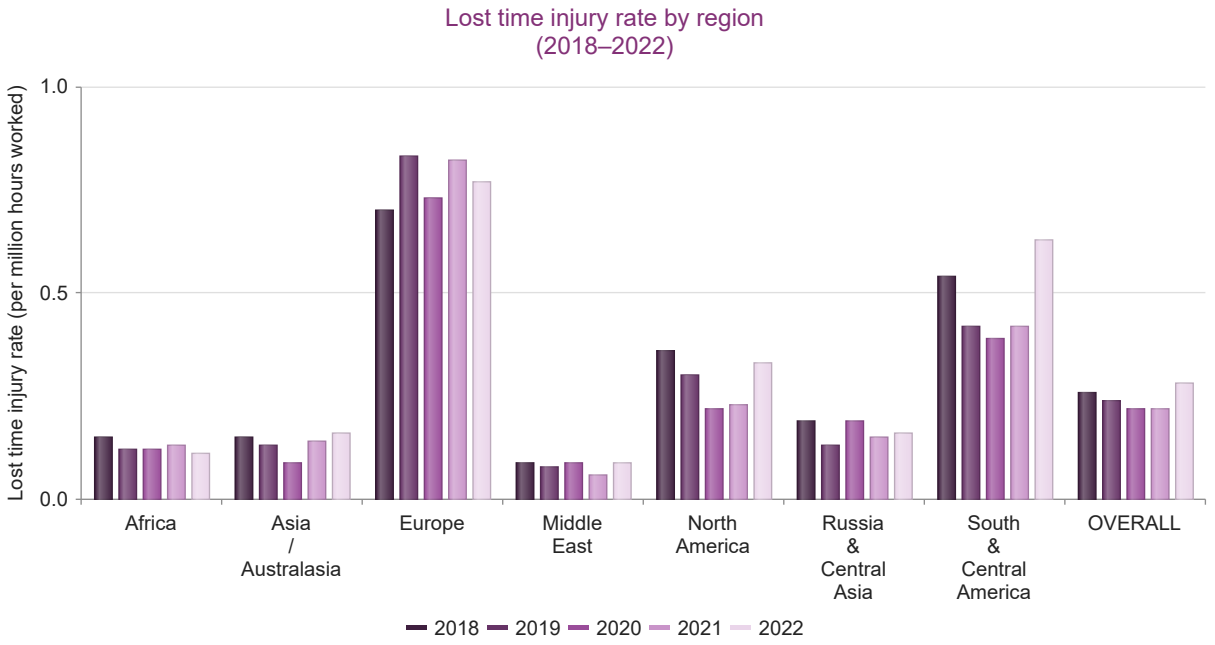
3.4 Lost time injury rate (LTIR)

Further analysis of the lost time injuries is presented in Section 3.5, where five-year rolling averages of LTIR are presented for each of the regions.

Table 27: Lost time injury rate by region (2018 - 2022)

Region	Lost time injury rate (LTIR)				
	2018	2019	2020	2021	2022
Africa	0.15	0.12	0.12	0.13	0.11
Asia / Australasia	0.15	0.13	0.09	0.14	0.16
Europe	0.70	0.83	0.73	0.82	0.77
Middle East	0.09	0.08	0.09	0.06	0.09
North America	0.36	0.30	0.22	0.23	0.33
Russia & Central Asia	0.19	0.13	0.19	0.15	0.16
South & Central America	0.54	0.42	0.39	0.42	0.63
OVERALL	0.26	0.24	0.22	0.22	0.28

Figure 46:



3.5 FAR, TRIR, and LTIR five-year rolling averages

In order to smooth out variability in the annual values for the regional FAR, TRIR, and LTIR, five-year rolling averages are computed, which should provide a more reliable indicator of performance trends.

The figures show FAR, TRIR, and LTIR 5-year rolling averages for each of the regions and includes the 'overall' curve.

Figure 47:

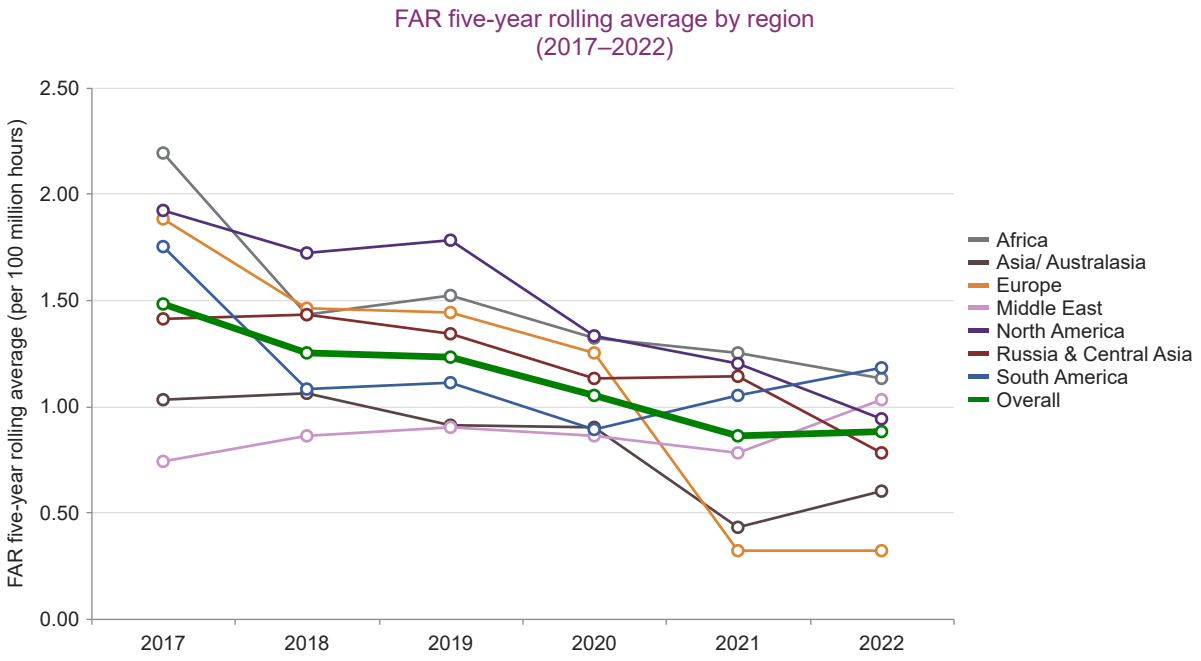


Figure 48:

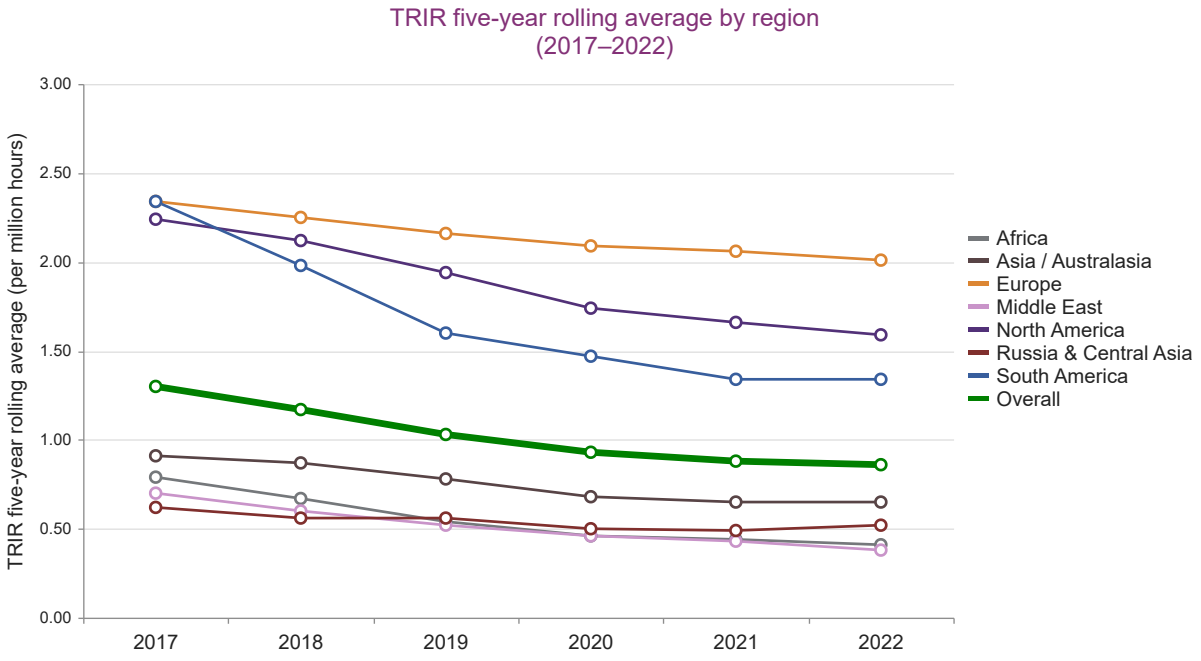
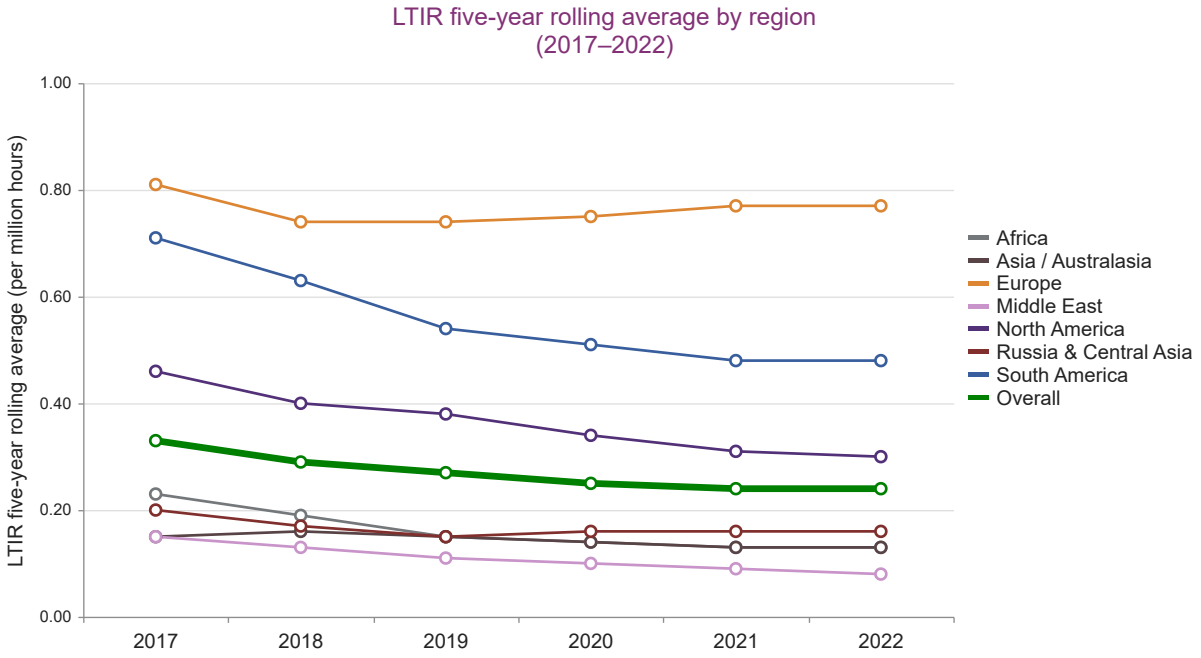


Figure 49:



Note LTIR five-year rolling averages for Africa and Asia show almost identical results for 2019 to 2022 data.

3.6 Severity of lost work day cases

The number of days lost was reported for 76% of lost work day cases.

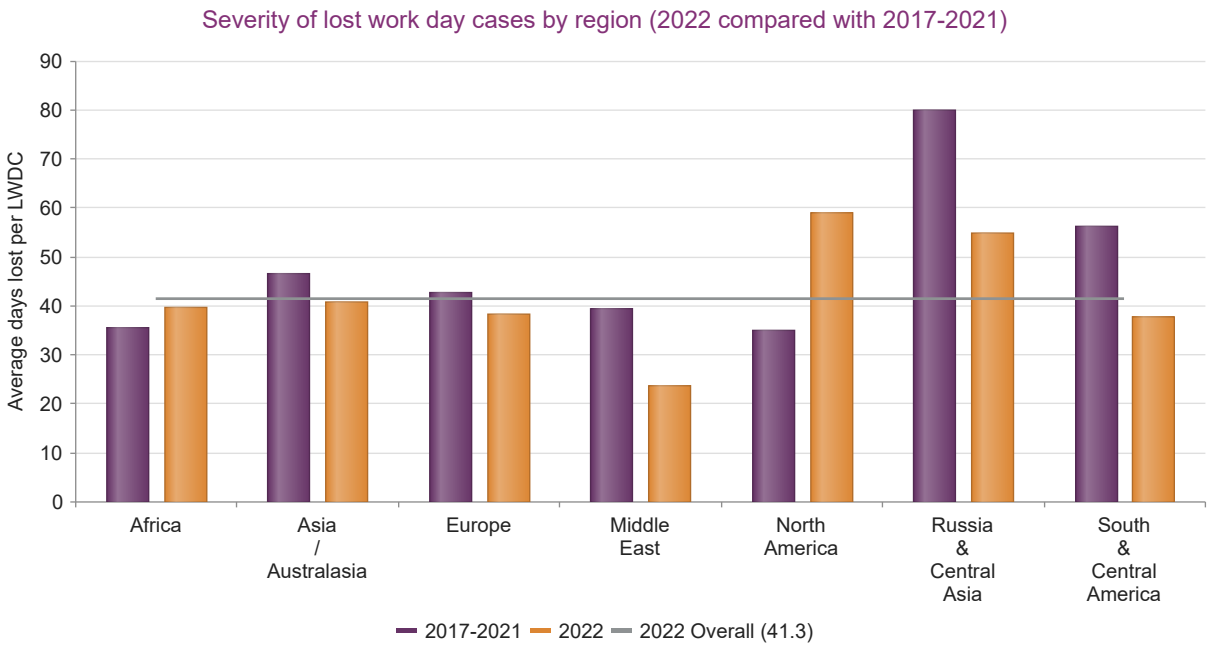
The severity of lost work day cases is the highest in the North America region (59 days lost per LWDC in 2022). This is a 68% increase compared with the average for the previous five-year period.

Data table 4 in Appendix A provides further information on the proportion of the database that can be used for lost work day case severity. 99% of the data submitted for the Middle East and 95% of the data submitted for Russia & Central Asia were usable for this metric, in comparison with only 35% of equivalent data for North America, and 64% for Europe. At least 74% of the data submitted for all other regions, were usable for this metric.

Table 29: LWDC severity by region (2018 - 2022)

Region	Average days lost per LWDC			2022 relative to 2017-2021 severity	2022 relative to 2021 severity
	2017-2021	2021	2022		
Africa	35.5	24.5	39.6	12% higher	62% higher
Asia / Australasia	46.6	59.4	40.8	12% lower	31% lower
Europe	42.8	35.9	38.3	10% lower	7% higher
Middle East	39.5	58.5	23.6	40% lower	60% lower
North America	35.1	29.5	58.9	68% higher	99% higher
Russia & Central Asia	80.1	79.3	54.8	32% lower	31% lower
South & Central America	56.3	64.9	37.8	33% lower	42% lower
OVERALL	48.0	52.4	41.3	14% lower	21% lower

Figure 50:



3.7 Individual country performance

The safety performance reported by participating IOGP Member Companies in individual countries is presented in terms of the lost time injury rate of companies jointly with contractors. To preserve the anonymity of companies, performance is only published for those countries for which at least 2 companies have reported statistics. Countries with less than 50,000 reported work hours are excluded, since results for such small populations of hours would be unrepresentative. Overall averages and regional averages include data from all countries regardless of work hours or number of contributing companies.

22 of the 92 countries for which data have been reported are excluded by these constraints.

TRIR calculations exclude data where medical treatment cases are not reported. The chart of relative TRIR performance therefore compares the 2022 performance with that of 2021 and 2020 for all of the 70 countries.

The majority of countries in Africa, Asia/Australasia, Russia & Central Asia, and the Middle East achieved a TRIR equal to or lower than the overall average TRIR (0.90). The majority of countries in Europe, North America, and South & Central America show a TRIR higher than the global average.

The chart of relative LTIR performance for the 70 countries compares the 2022 performance with that of 2021 and 2020.

The majority of countries in Africa, Asia/Australasia, Russia & Central Asia, the Middle East, and North America achieved a LTIR equal to or lower than the overall average LTIR (0.28). The majority of countries in Europe, and South & Central America show a LTIR higher than the global average.

For comparison, the 5-year rolling average FAR is shown for each of the regions. There appears to be little if any correlation between these values and the regional average LTIR and TRIR values.

Countries and companies that are subject to international sanctions are not featured in this Report for 2022 data.

Figure 51:

Total recordable injury rate by region and country (2020-2022)

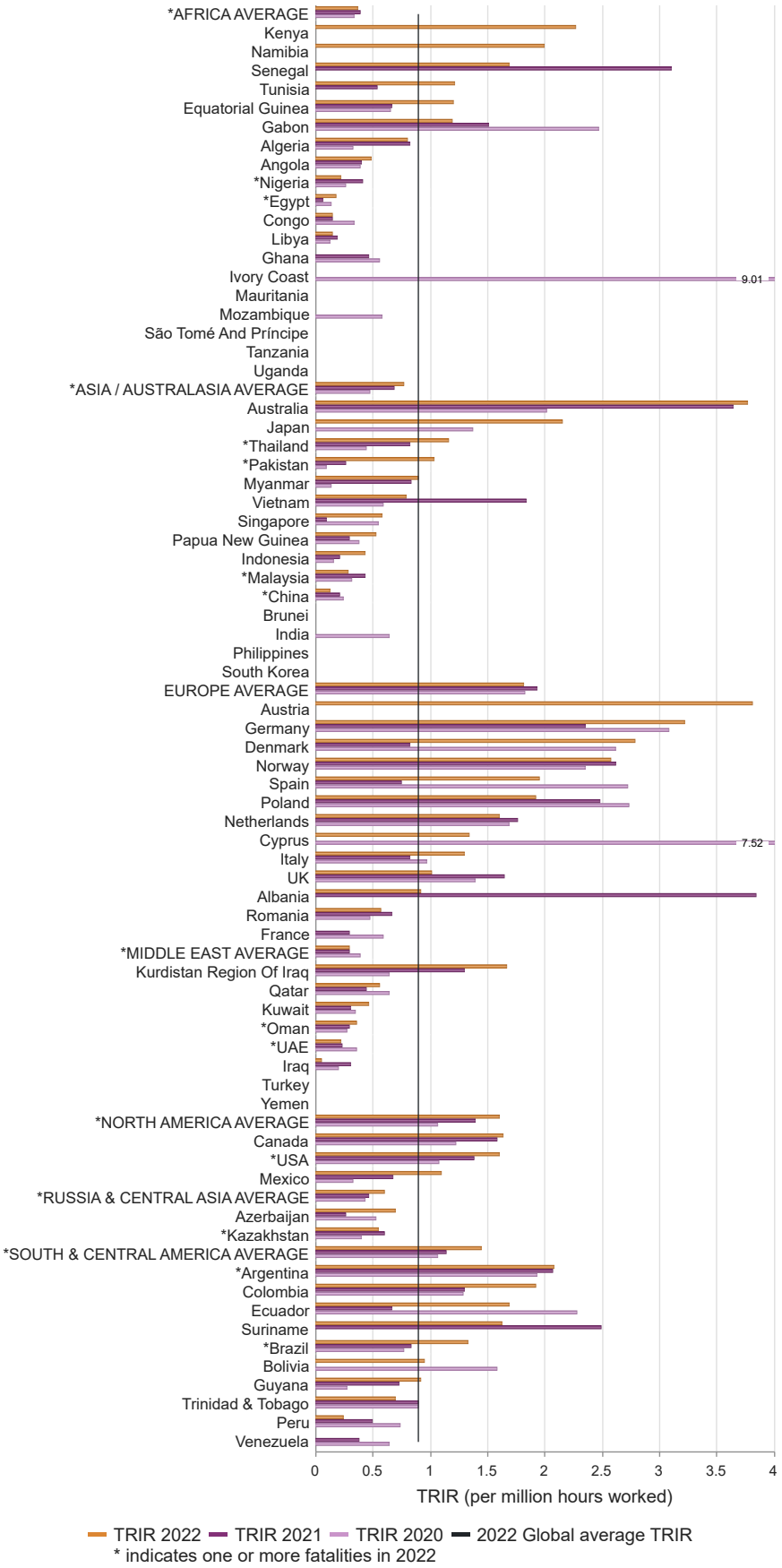
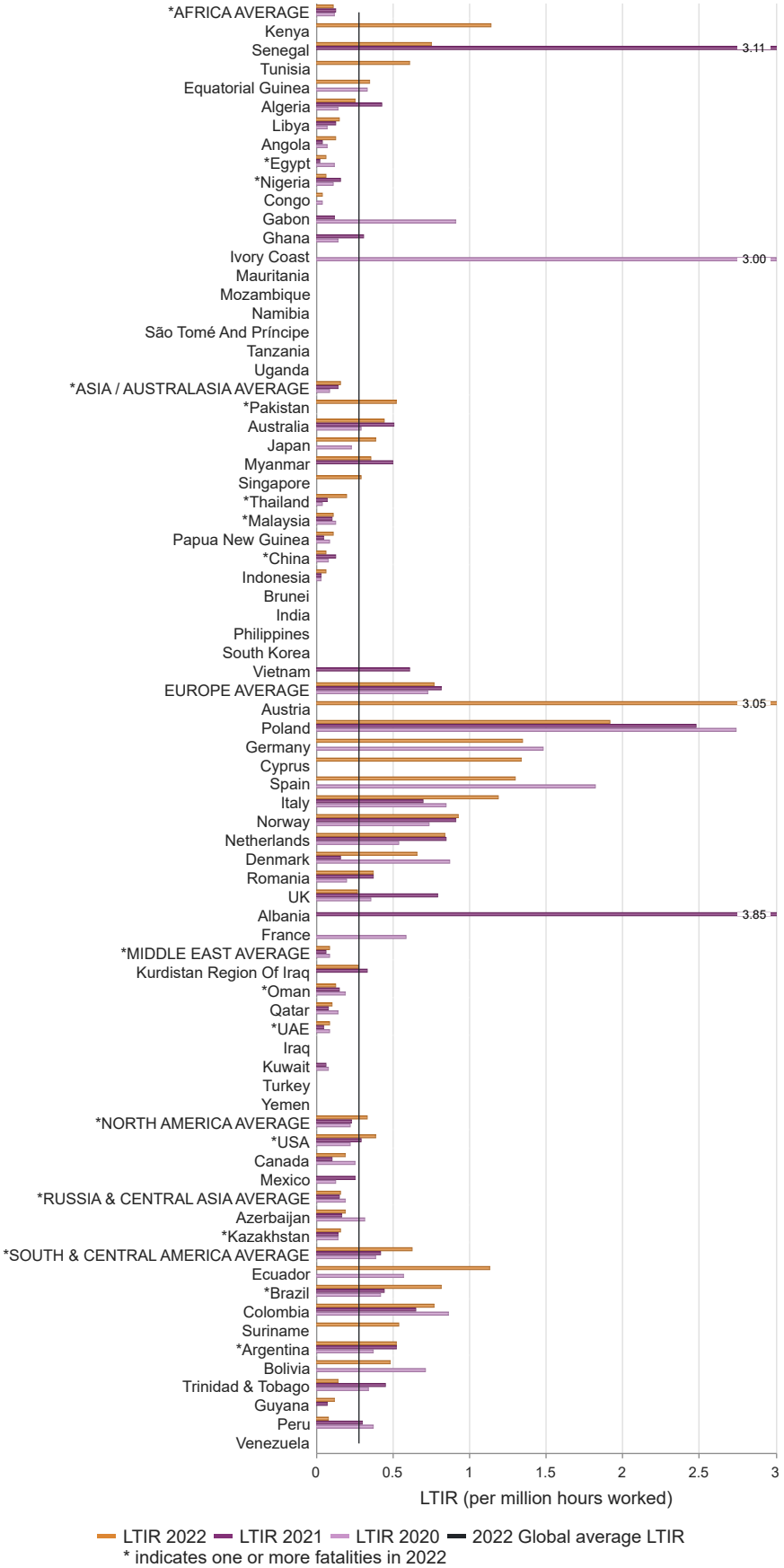


Figure 52:

Lost time injury rate by region and country (2020-2022)



3.8 Incident triangles by region

In this section, the relative numbers of types of occupational injury are shown in the form of 'incident triangles'. The ratios have been corrected to account for the absence, in some data submissions, of medical treatment cases.

Definitions

Lost time injuries:

Lost work day cases and fatalities

Recordable injuries:

Fatalities, lost work day cases, restricted work day cases and medical treatment cases where medical treatment cases are reported for the data set

Ratio of lost time injuries to fatalities:

The number of lost time injuries divided by the total number of fatalities (lost time injuries/fatalities)

Ratio of total recordable injuries to fatalities:

The number of recordable injuries divided by the total number of fatalities (recordable injuries/fatalities). Note: data are excluded from the total recordable injuries where medical treatment cases are not reported.

Table 30: Ratio of lost time injuries and recordable injuries to fatalities - Africa (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable (TRI) injuries to fatalities
2022	21:1	69:1
2021	6:1	18:1
2020	20:1	56:1
2019	9:1	34:1

Figure 53:

Incident triangles (2022) - Africa

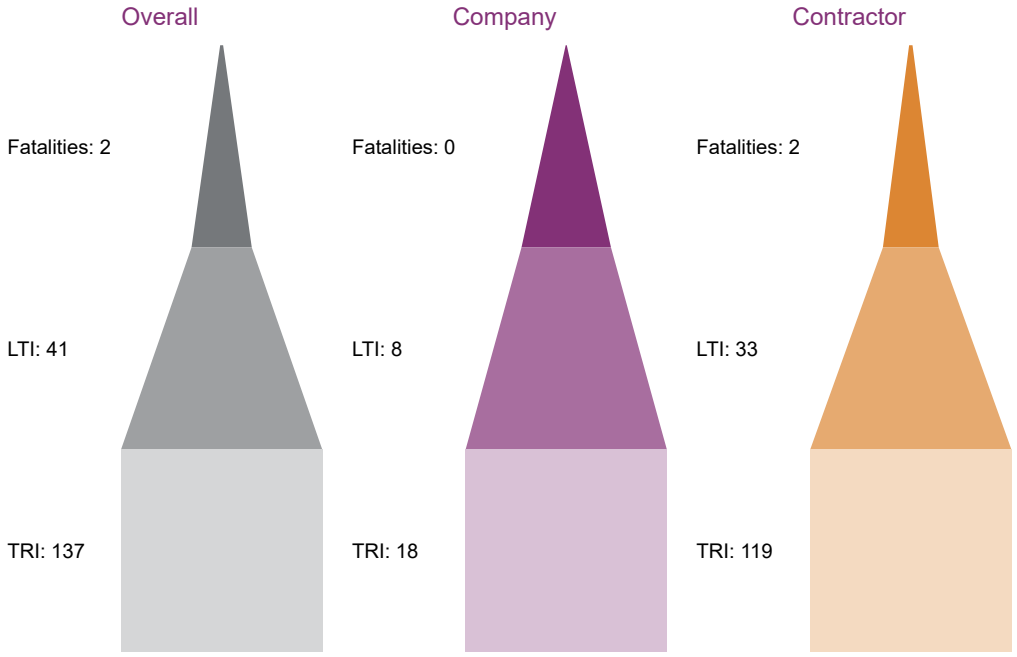


Table 31: Ratio of lost time injuries and recordable injuries to fatalities - Asia / Australasia (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable (TRI) injuries to fatalities
2022	11:1	54:1
2021	N/A	N/A
2020	17:1	77:1
2019	78:1	357:1

Figure 54:

Incident triangles (2022) - Asia / Australasia

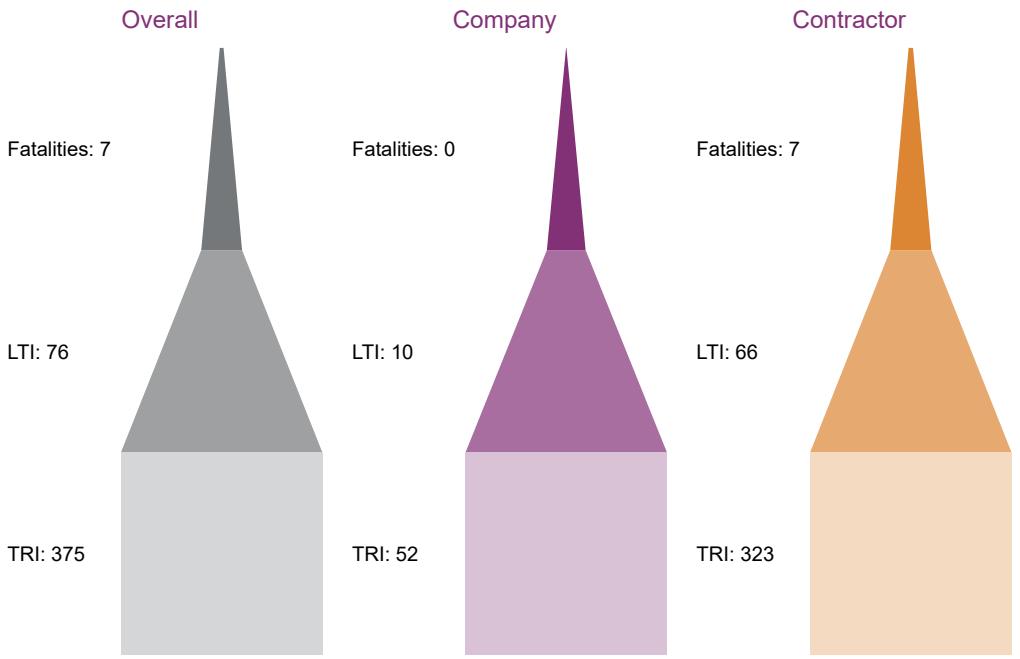


Table 32: Ratio of lost time injuries and recordable injuries to fatalities - Europe (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable (TRI) injuries to fatalities
2022	N/A	N/A
2021	95:1	224:1
2020	N/A	N/A
2019	115:1	312:1

Figure 55:

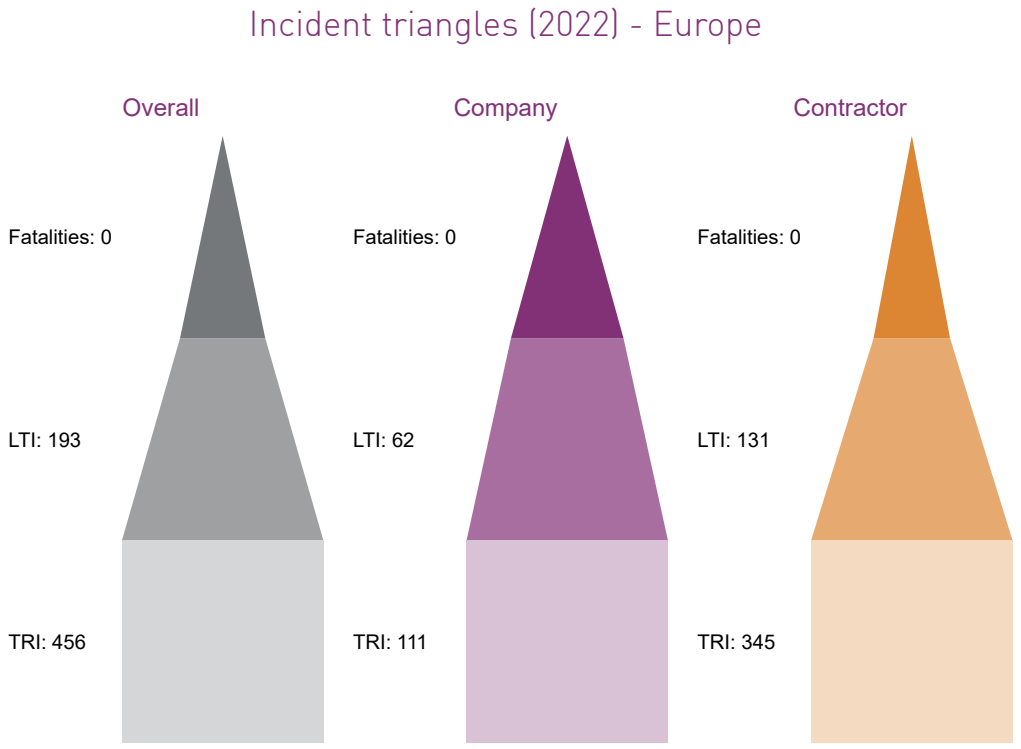


Table 33: Ratio of lost time injuries and recordable injuries to fatalities - Middle East (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable (TRI) injuries to fatalities
2022	4:1	14:1
2021	10:1	50:1
2020	11:1	45:1
2019	14:1	75:1

Figure 56:

Incident triangles (2022) - Middle East

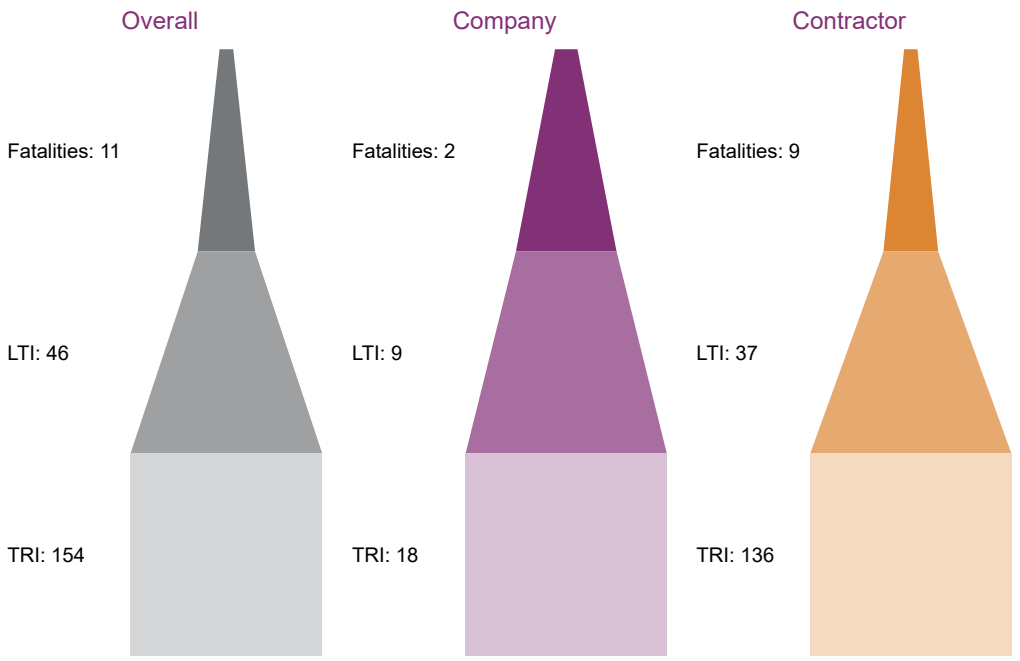


Table 34: Ratio of lost time injuries and recordable injuries to fatalities - North America (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable injuries (TRI) to fatalities
2022	28:1	133:1
2021	61:1	366:1
2020	29:1	137:1
2019	19:1	102:1

Figure 57:

Incident triangles (2022) - North America

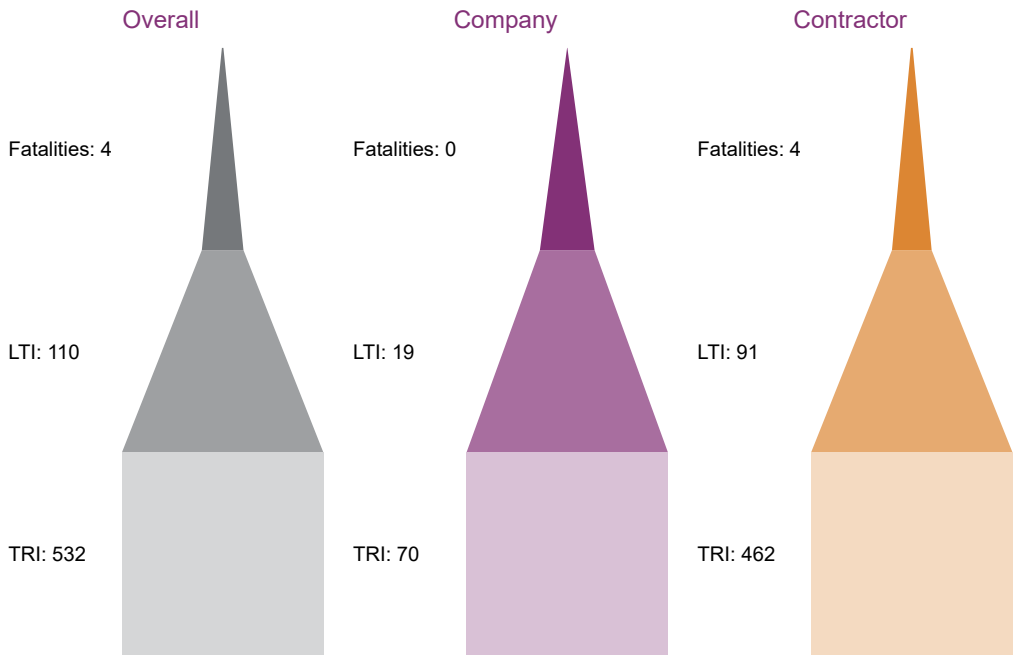
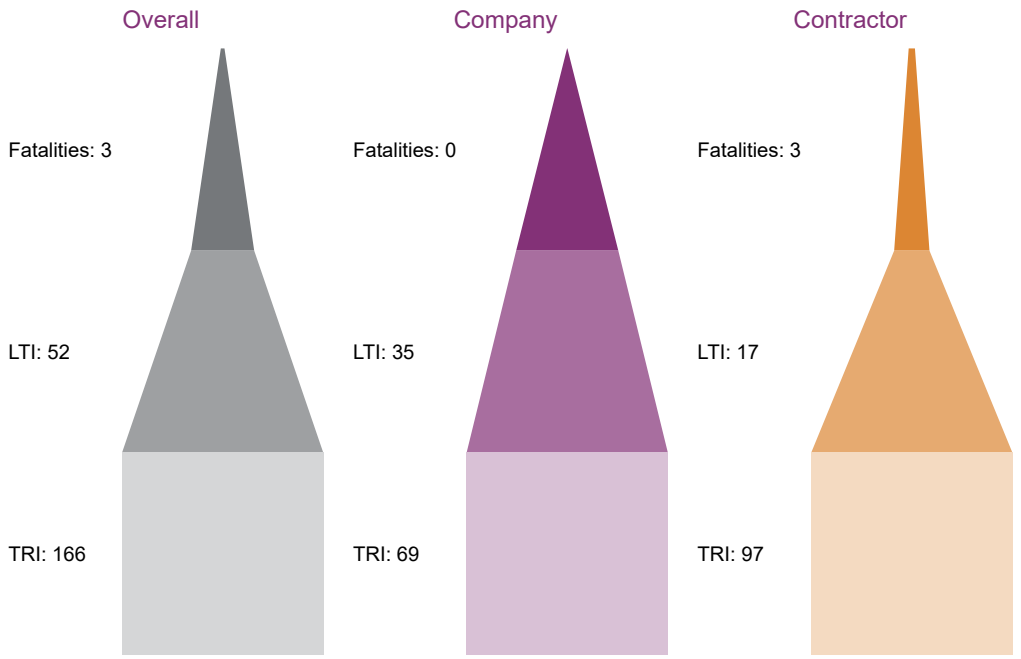


Table 35: Ratio of lost time injuries and recordable injuries to fatalities - Russia & Central Asia (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable injuries (TRI) to fatalities
2022	17:1	55:1
2021	25:1	66:1
2020	28:1	53:1
2019	31:1	120:1

Figure 58:

Incident triangles (2022) - Russia & Central Asia



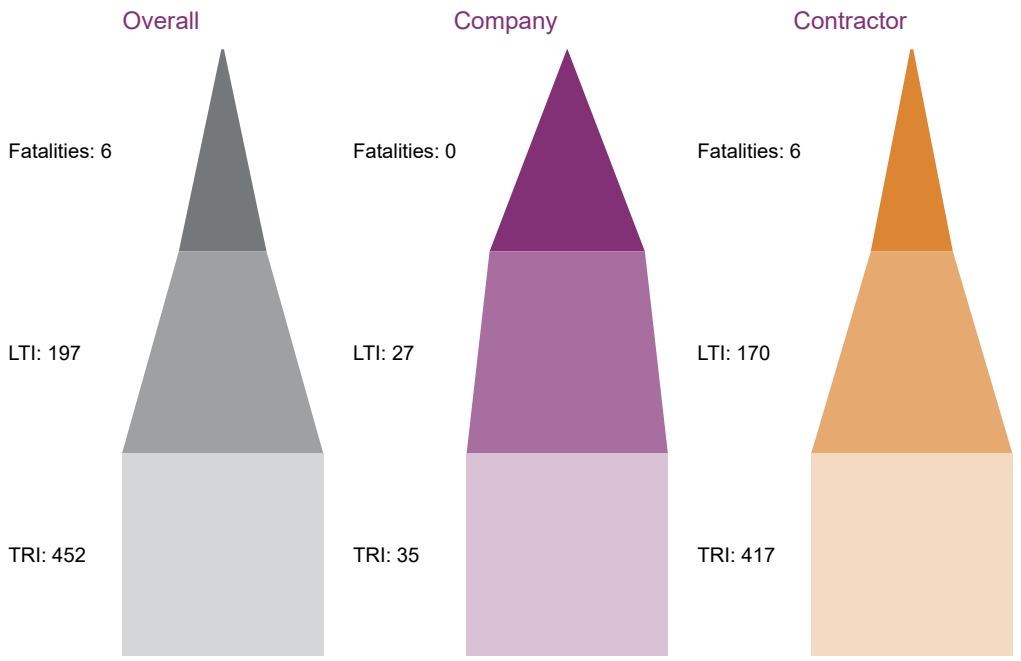
Note: data are only included in TRI where medical treatment cases are reported.

Table 36: Ratio of lost time injuries and recordable injuries to fatalities - South America (2019-2022)

Year	Ratio of lost time injuries (LTI) to fatalities	Ratio of total recordable injuries (TRI) to fatalities
2022	33:1	75:1
2021	37:1	100:1
2020	N/A	N/A
2019	33:1	105:1

Figure 59:

Incident triangles (2022) - South America



For data tables go to Appendix B - Section 3.

4. Results by function

In this section, safety performance within different functions performed in the E&P industry is presented for 2022. Functions are defined as 'exploration', 'drilling', 'production', 'construction' and 'unspecified'.

See the Glossary of Terms for definitions.

The percentage of the total work hours reported under each function has been detailed below. See Appendix B for further data.

Table 37: Percentage of total work hours reported under each function (2018-2022)

Function	% of 2018 work hours	% of 2019 work hours	% of 2020 work hours	% of 2021 work hours	% of 2022 work hours
Exploration	1.0	1.2	1.4	1.4	1.1
Drilling	12.2	13.1	12.1	12.3	12.7
Production	41.8	44.1	43.8	49.5	49.1
Construction	23.6	21.4	21.2	20.9	17.9
Unspecified	21.3	20.1	21.4	15.9	19.2

Table 37A: Total work hours reported (2018-2022)

	Work hours (thousands)				
Function	2018	2019	2020	2021	2022
OVERALL	3,066,350	3,038,352	2,544,201	2,679,026	2,579,000

Definitions

Fatal accident rate (FAR):

The number of company/contractor fatalities per 100 million hours worked

Fatal incidents per 100 million work hours (FIR):

The number of incidents that result in one or more fatalities per 100 million hours worked

Total recordable injury rate (TRIR)

The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked

Lost time injury rate (LTIR)

The number of lost time injuries (fatalities + lost work day cases) per million hours worked

Five-year rolling average

The five-year rolling average is calculated by summing the total number of incidents for the five previous years and dividing by the sum of the work hours for these years. The number series involved in the calculation is frame shifted along by one each year, e.g. 2022 will be calculated from 2018-2022 data. For example, the five-year rolling average FAR for 2022 is calculated by:

$$\frac{\text{(Number of fatalities in 2018+2019+2020+2021+2022)}}{\text{(Total work hours in 2018+2019+2020+2021+2022) / 100,000,000}}$$

Lost work day case (LWDC)

An incident resulting in at least one day off work. Fatal incidents are not included.

Severity of lost work day cases

Severity is defined as the number of days lost (where reported) for each lost work day case.

4.1 Fatalities

The distribution of company and contractor fatal incidents and fatalities between the functions is shown for the years 2018-2022.

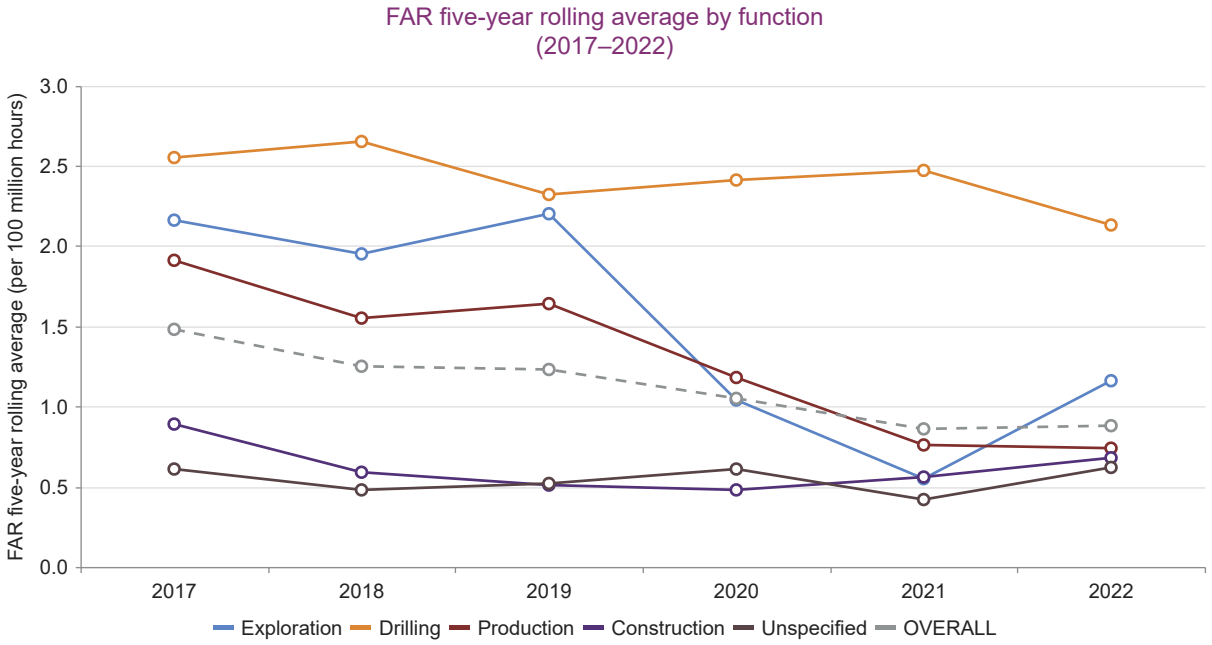
Table 38: Fatalities and fatal incidents by function (2018-2022)

	Fatal incidents					Fatalities				
Function	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Exploration	1	0	0	0	1	1	0	0	0	1
Drilling	11	4	5	7	7	12	4	6	7	8
Production	9	13	3	5	11	9	16	4	5	13
Construction	3	3	1	3	4	4	3	1	8	4
Unspecified	3	2	3	0	6	5	2	3	0	7
OVERALL	27	22	12	15	29	31	25	14	20	33

4.2 FAR, TRIR, and LTIR five-year rolling averages

In order to smooth out variability in the annual values for the Functional TRIR, FAR and LTIR, five-year rolling averages are computed which should provide a more reliable indicator of performance trends.

Figure 60:



For calculations of TRIR submissions without information on medical treatment cases were filtered out, leaving a database of 2,534 million hours, almost 98% of the database. See Appendix A for more details.

Figure 61:

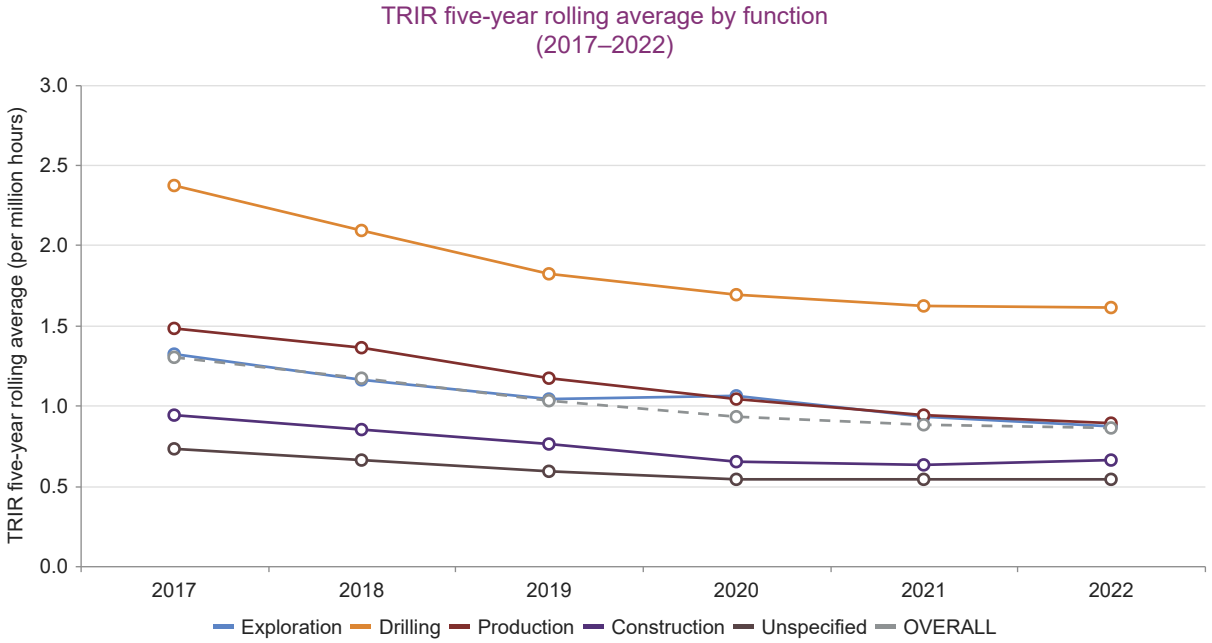
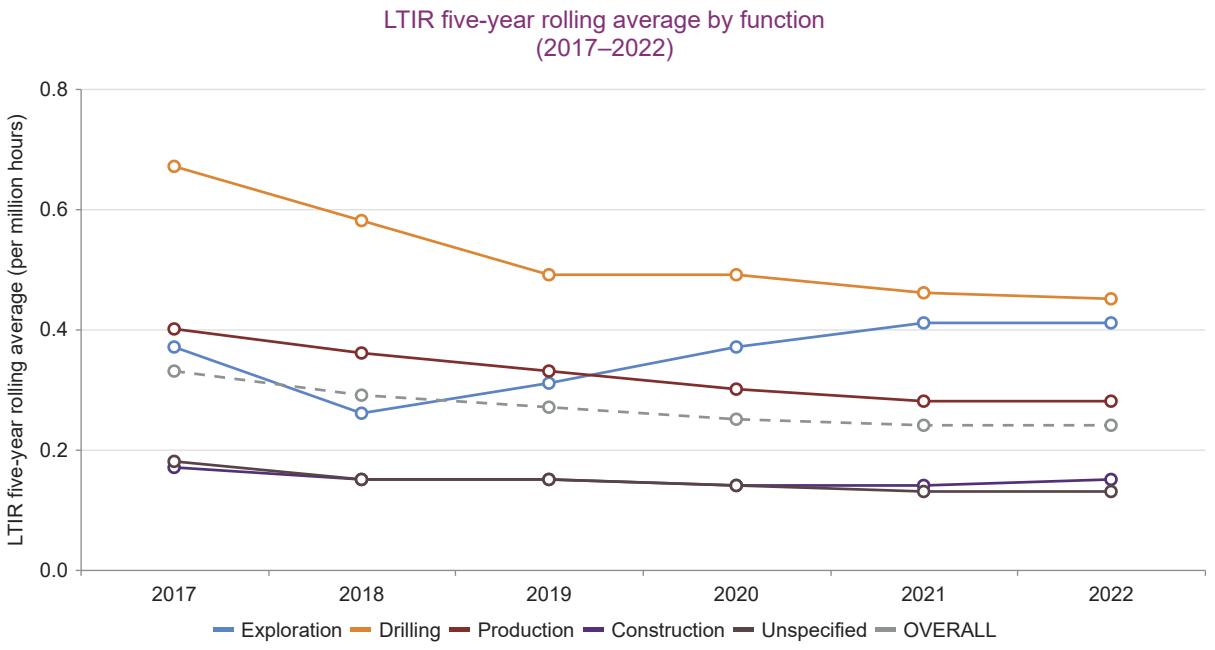


Figure 62:


LTIR five-year rolling average by function
(2017–2022)
LTIR five-year rolling average (per million hours)
0.8
0.6
0.4
0.2
0.0
2017
2018
2019
2020
2021
2022
Exploration
Drilling
Production
Construction
Unspecified
OVERALL

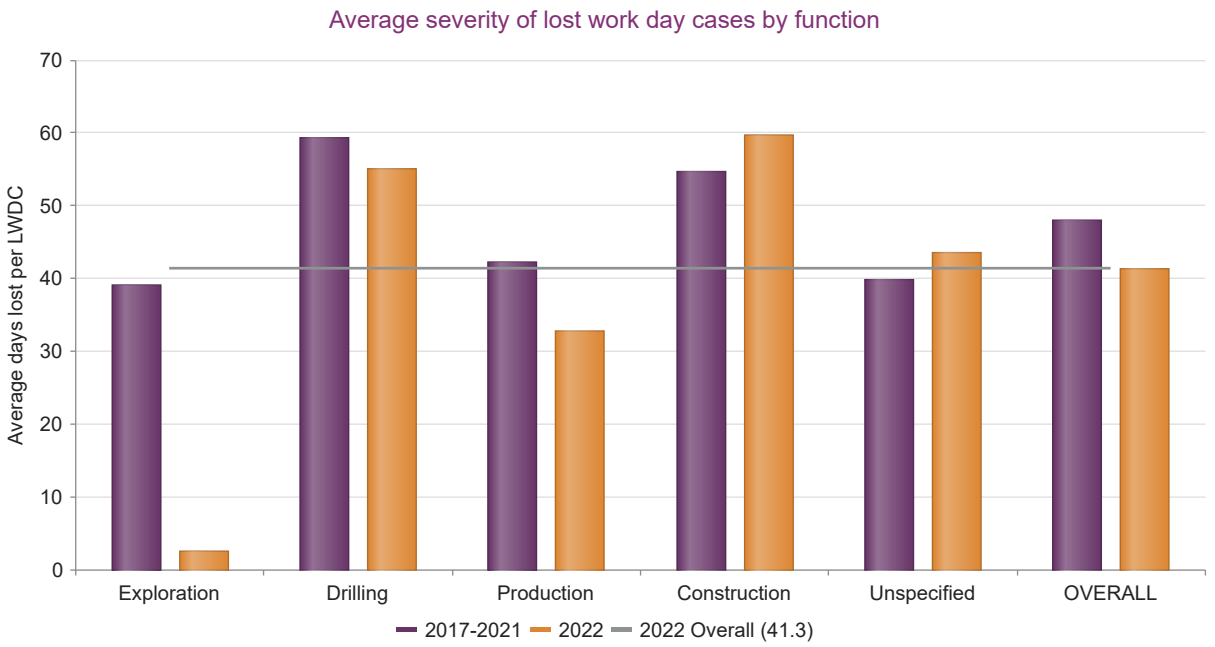
4.3 Severity of lost work day cases

The overall average number of days lost per lost work day case (LWDC) is 41.3 in 2022 (52.4 in 2021).

Offshore the LWDC severity is 34.9 days lost per LWDC compared with 45.4 days for onshore activities (50.1 and 53.9 respectively for 2021).

See Section 2.8 for additional information and Section 3.6 for LWDC severity by region

Figure 63:



4.4 Exploration performance

Total recordable injury rate – exploration

Figures 64 and 65 show the TRIR for companies and contractors for exploration related activities in different regions of the world. The 2022 result is compared with average TRIR results in the previous five-year period.

29 million work hours (100% of reported exploration work hours) were used in this analysis, of which company activities represent 41% and contractor activities represent 59%. This represents a decrease of 9 million work hours compared with 2021 (38 million work hours in 2021: 62% company, 38% contractor).

In 2022 the overall TRIR values for companies and contractors engaged in exploration activities are 0.08 and 0.41 respectively; the overall average TRIR for exploration activities is 0.27.

Further information on exploration TRIR by region is available in Appendix B Data Table B35.

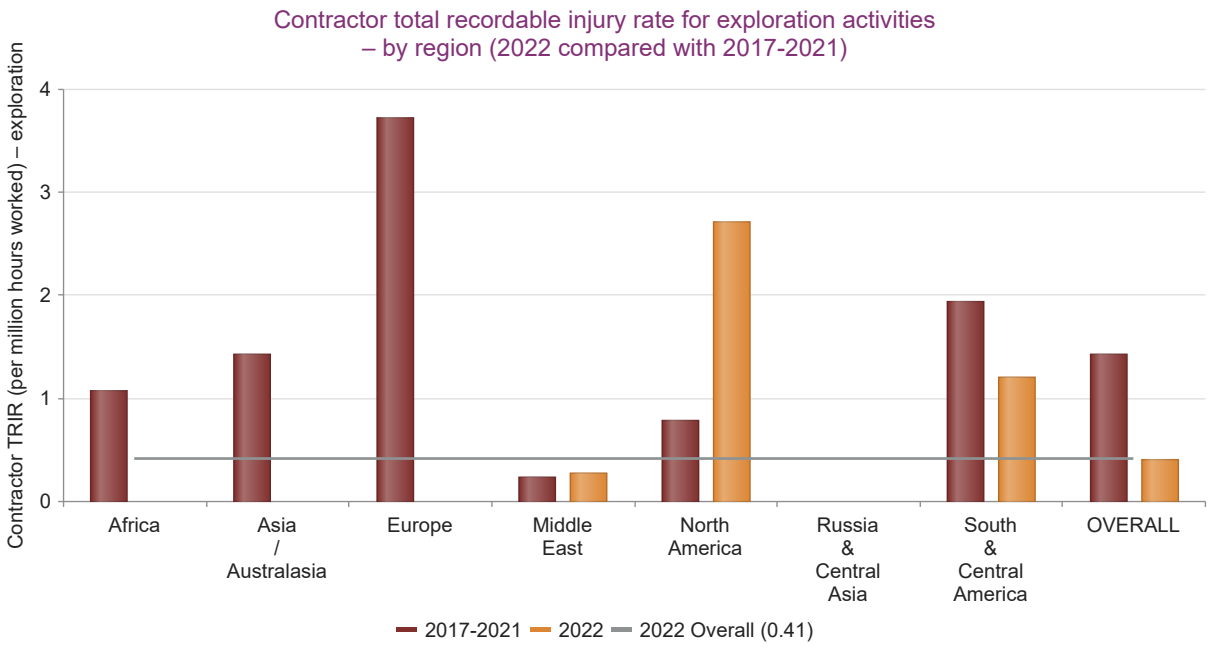
Definitions

Exploration

Geophysical, seismographic, and geological operations, including their administrative and engineering aspects, construction, maintenance, materials supply and transportation of personnel and equipment (excluding drilling).

Figure 64:

Figure 65:


Contractor total recordable injury rate for exploration activities
– by region (2022 compared with 2017-2021)
Contractor TRIR (per million hours worked) – exploration
4
3
2
1
0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.41)

Lost time injury rate – exploration

Figures 66 and 67 show the LTIR for companies and contractors for exploration related activities in different regions of the world. The 2022 result is compared with average LTIR results in the previous five-year period.

29 million work hours (100% of reported exploration work hours) were used in this analysis, of which company activities represent 41% and contractor activities represent 59% (62% company, 38% contractor in 2021). This represents a decrease of 9 million work hours compared with 2021.

In 2022 the overall LTIR values for companies and contractors engaged in exploration activities are 0.08 and 0.17 respectively; the overall average LTIR for exploration activities is 0.14.

Further information on exploration LTIR by region is available in Appendix B Data Table B36.

Figure 66:

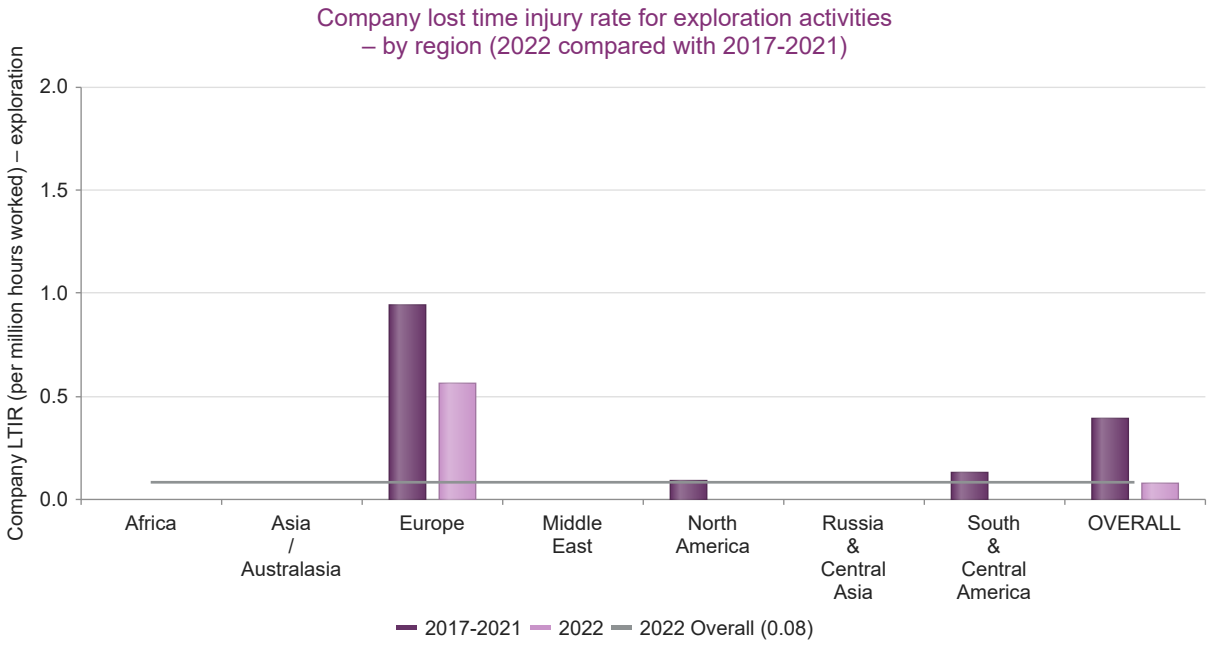
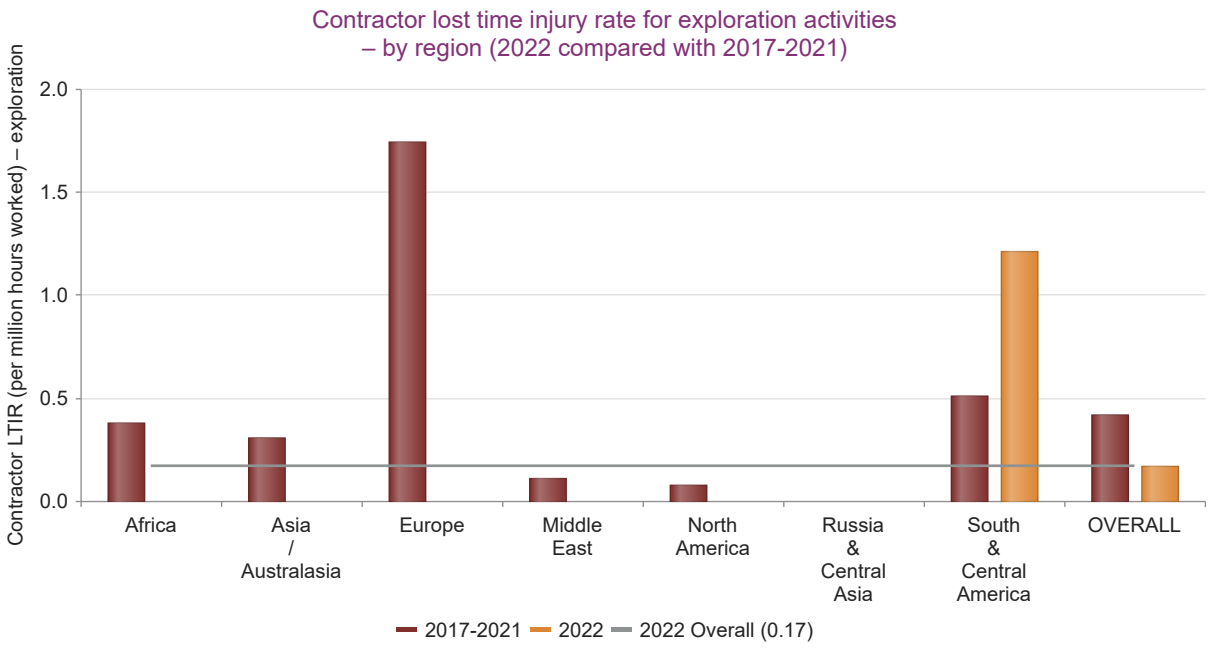


Figure 67:


Contractor lost time injury rate for exploration activities
– by region (2022 compared with 2017-2021)
Contractor LTIR (per million hours worked) – exploration
2.0
1.5
1.0
0.5
0.0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.17)

4.5 Drilling performance

Total recordable injury rate – drilling

Figures 68 and 69 show the TRIR for companies and contractors for drilling related activities in different regions of the world. The 2022 result is compared with average TRIR results in the previous five-year period.

326 million work hours (100% of reported drilling work hours) were used in this analysis, of which company activities represent 13% and contractor activities represent 87%. This represents a decrease of 2 million work hours compared with 2021 (329 million work hours in 2021: 12% company, 88% contractor).

In 2022 the overall TRIR values for companies and contractors engaged in drilling activities are 0.39 and 1.88 respectively; the overall average TRIR for drilling activities is 1.68.

Further information on drilling TRIR by region is available in Appendix B Table B.37.

Definitions

Drilling

All exploration, appraisal and production drilling, and workover as well as their administrative, engineering, construction, materials supply and transportation aspects. It includes site preparation, rigging up and down, and restoration of the drilling site upon work completion. Drilling includes all exploration, appraisal and production drilling.

Figure 68:

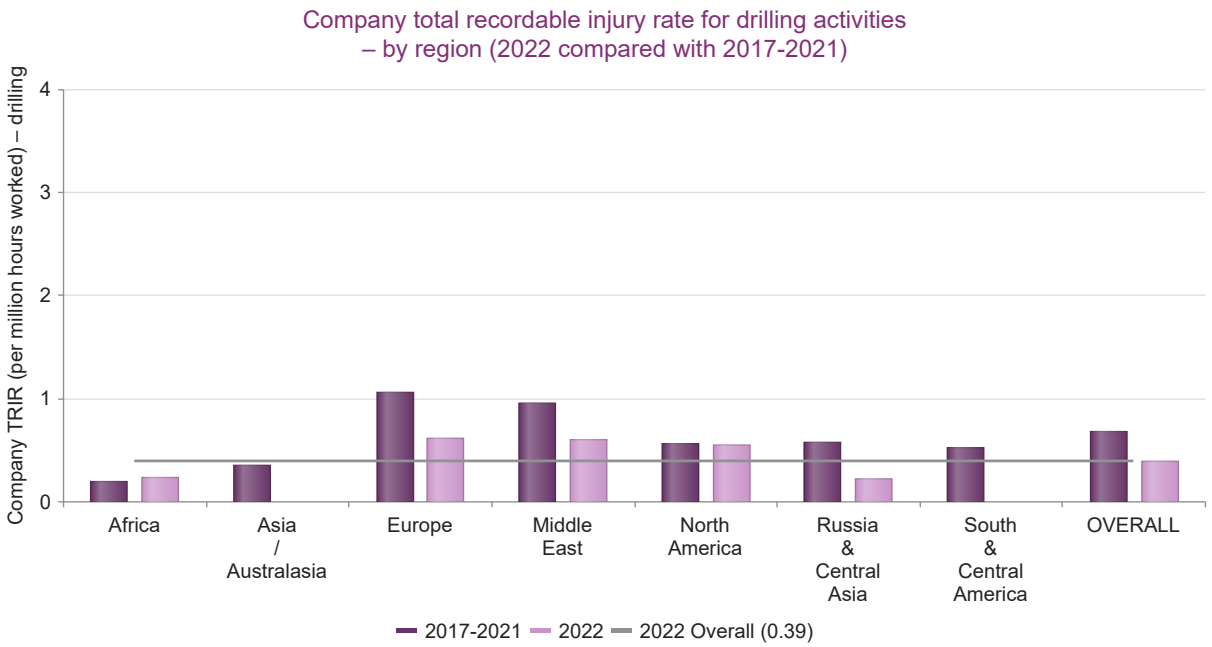
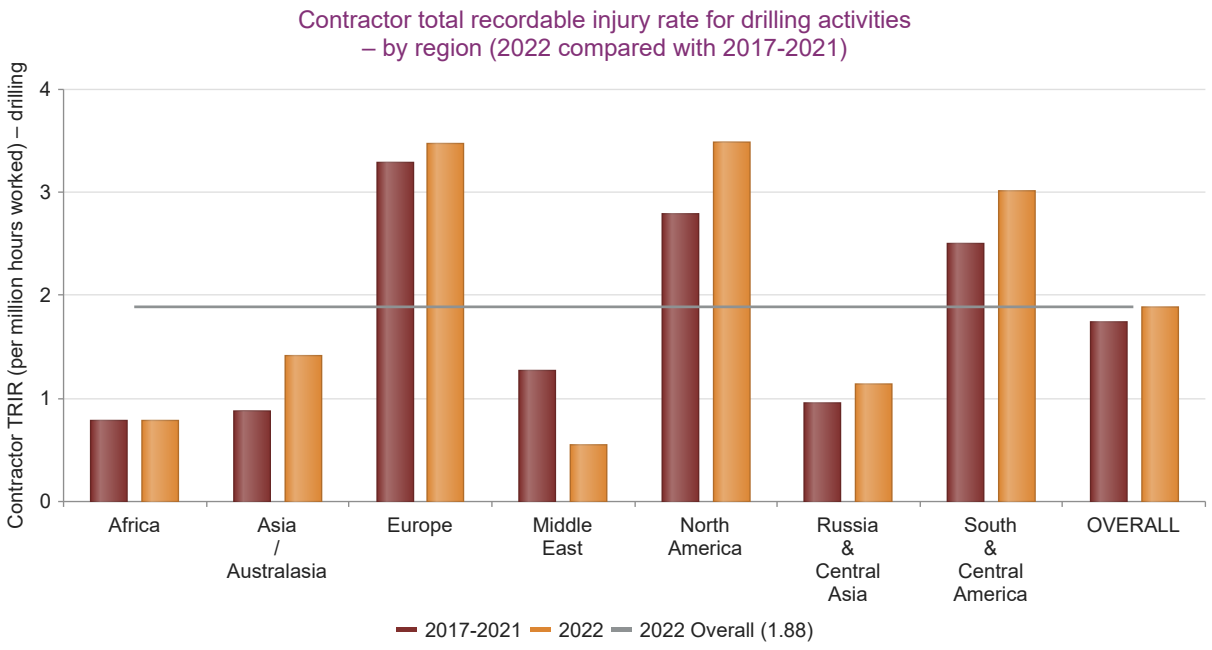


Figure 69:


Contractor total recordable injury rate for drilling activities
– by region (2022 compared with 2017-2021)
Contractor TRIR (per million hours worked) – drilling
4
3
2
1
0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (1.88)

Lost time injury rate – drilling

Figures 70 and 71 show the LTIR for companies and contractors for drilling related activities in different regions of the world. The 2022 result is compared with average LTIR results in the previous five-year period.

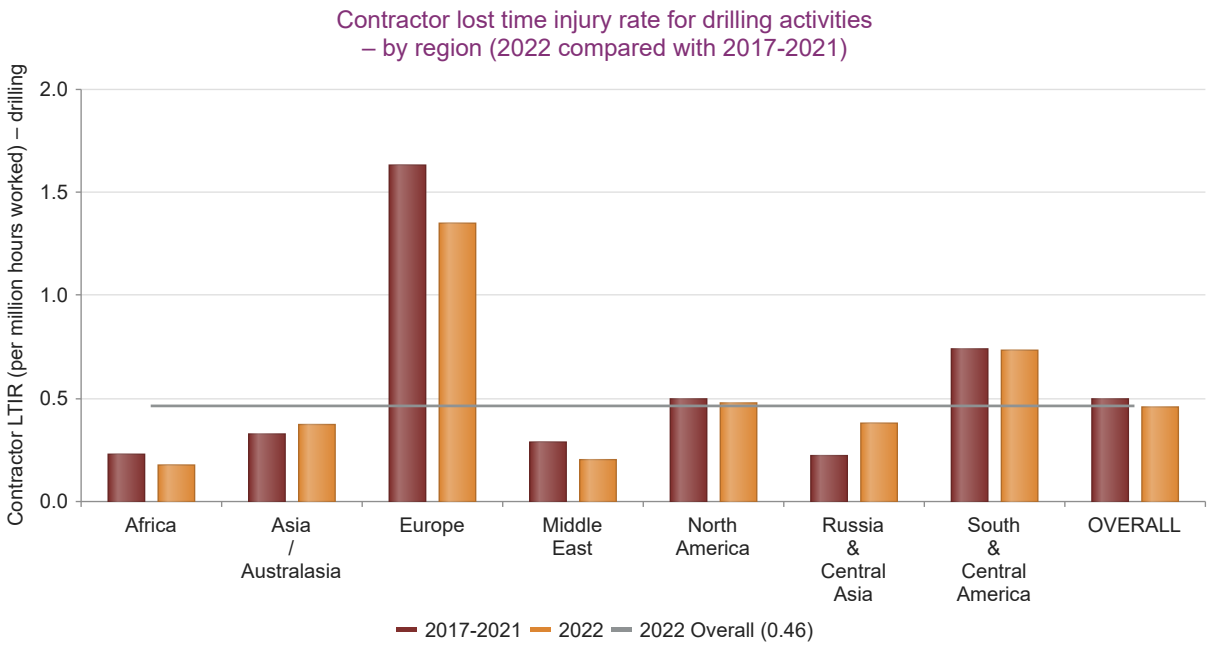
326 million work hours (100% of reported drilling work hours) were used in this analysis, of which company activities represent 13% and contractor activities represent 87% (12% company, 88% contractor in 2021). This represents a decrease of 2 million work hours compared with 2021.

In 2022 the overall LTIR values for companies and contractors engaged in drilling activities are 0.27 and 0.46 respectively; the overall average LTIR for drilling activities is 0.44.

Further information on drilling LTIR by region is available in Appendix B Table B.38.

Figure 70:

Figure 71:


Contractor lost time injury rate for drilling activities
– by region (2022 compared with 2017-2021)
Contractor LTIR (per million hours worked) – drilling
2.0
1.5
1.0
0.5
0.0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.46)

4.6 Production performance

Total recordable injury rate – production

Figures 72 and 73 show the TRIR for companies and contractors for production related activities, in different regions of the world. The 2022 result is compared with average TRIR results in the previous five-year period.

1,223 million work hours (97% of reported production work hours) were used in this analysis, of which company activities represent 27% and contractor activities represent 73%. This represents a decrease of 56 million work hours compared with 2021 (1,280 million work hours in 2021: 29% company, 71% contractor).

In 2022 the overall TRIR values for companies and contractors engaged in production activities are 0.79 and 0.86 respectively; the overall average TRIR for production activities is 0.84.

Further information on production TRIR by region is available in Appendix B Table B39.

Definitions

Production

Petroleum and natural gas producing operations, including their administrative and engineering aspects, minor construction, repairs, maintenance and servicing, materials supply, and transportation of personnel and equipment. It covers all mainstream production operations including wireline. It does not cover production drilling and workover. See Appendix E - Glossary for details.

Figure 72:

Figure 73:


Contractor total recordable injury rate for production activities
– by region (2022 compared with 2017-2021)
Contractor TRIR (per million hours worked) – production
4
3
2
1
0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.86)

Lost time injury rate – production

Figures 74 and 75 show the LTIR for companies and contractors for production related activities, in different regions of the world. The 2022 result is compared with average LTIR results in the previous five-year period.

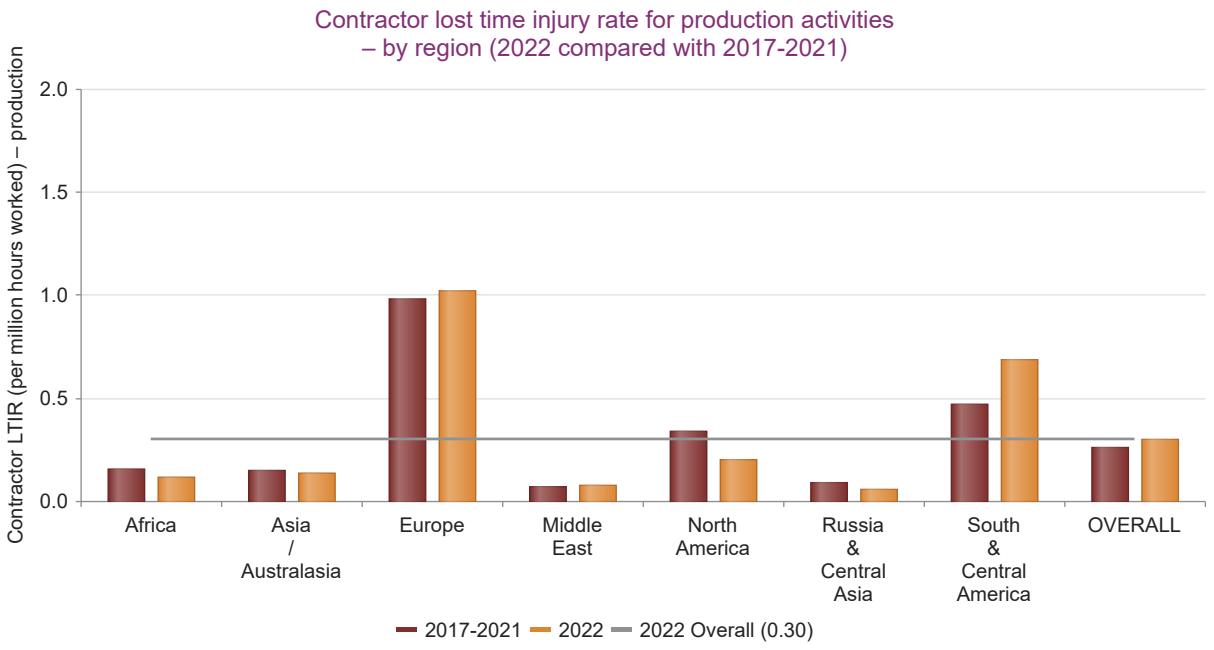
1,267 million work hours (100% of reported production work hours) were used in this analysis, of which company activities represent 30% and contractor activities represent 70% (32% company, 68% contractor in 2021). This represents a decrease of 59 million work hours compared with 2021.

In 2022 the overall LTIR values for companies and contractors engaged in production activities are 0.34 and 0.30 respectively; the overall average LTIR for production activities is 0.32.

Further information on production LTIR by region is available in Appendix B Table B40.

Figure 74:

Figure 75:


Contractor lost time injury rate for production activities
– by region (2022 compared with 2017-2021)
Contractor LTIR (per million hours worked) – production
2.0
1.5
1.0
0.5
0.0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.30)

4.7 Construction performance

The company and contractor results for 2022 construction performance are presented below.

Construction activities are predominately conducted by contractors therefore the work hours reported for contractors are much greater than those reported for company employees. Refer to Appendix B for detailed information.

Total recordable injury rate – construction

Figures 76 and 77 show the TRIR for companies and contractors for construction related activities in different regions of the world. The 2022 result is compared with average TRIR results in the previous five-year period.

461 million work hours (100% of reported construction work hours) were used in this analysis, of which company activities represent 9% and contractor activities represent 91%. This represents a decrease of 98 million work hours compared with 2021 (559 million work hours in 2021: 8% company, 92% contractor).

In 2022 the overall TRIR values for companies and contractors engaged in construction activities are 1.32 and 0.76 respectively; the overall average TRIR for construction activities is 0.81.

Further information on construction TRIR by region is available in Appendix B Table B41.

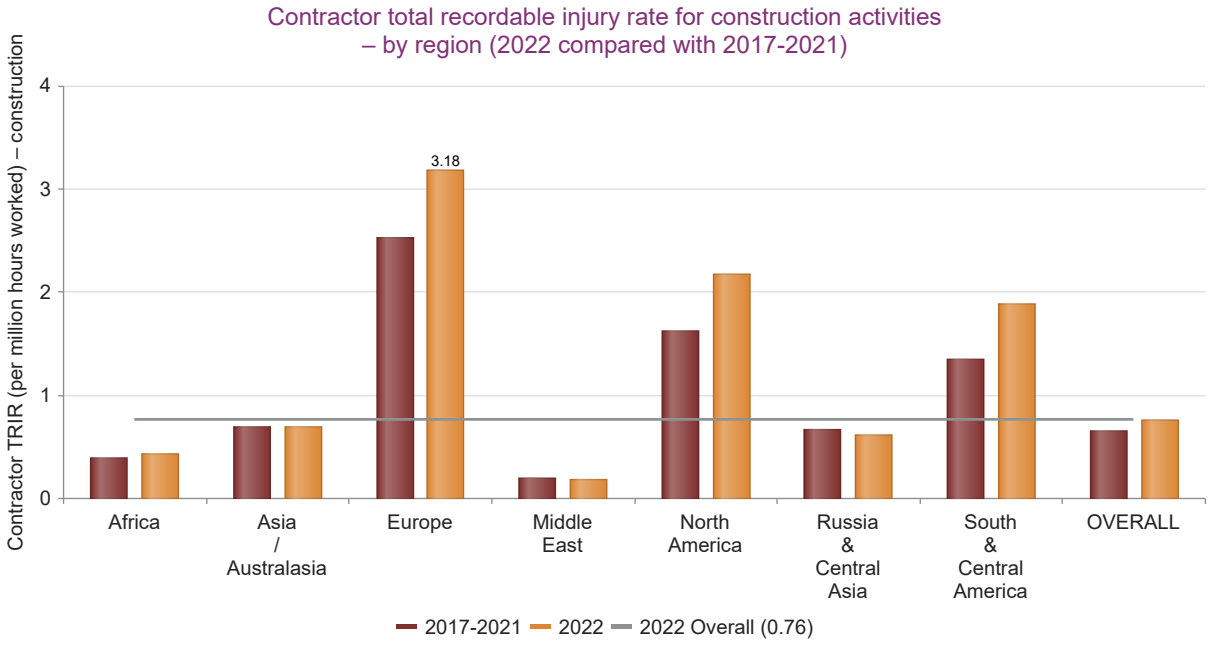
Definitions

Construction

All major construction, fabrication activities and also disassembly, removal and disposal (decommissioning) at the end of the facility life. Includes construction of process plant, yard construction of structures, offshore installation, hook-up and commissioning, and removal of redundant process facilities.

Figure 76:

Figure 77:



Lost time injury rate – construction

Figures 78 and 79 show the LTIR for companies and contractors for construction related activities in different regions of the world. The 2022 result is compared with average LTIR results in the previous five-year period.

461 million work hours (100% of reported construction work hours) were used in this analysis, of which company activities represent 9% and contractor activities represent 91% (8% company, 92% contractor in 2021). This represents a decrease of 98 million work hours compared with 2021.

In 2022 the overall LTIR values for companies and contractors engaged in construction activities are 0.17 and 0.18 respectively; the overall average LTIR for construction activities is 0.18.

Further information on construction LTIR by region is available in Appendix B Table B42.

Figure 78:

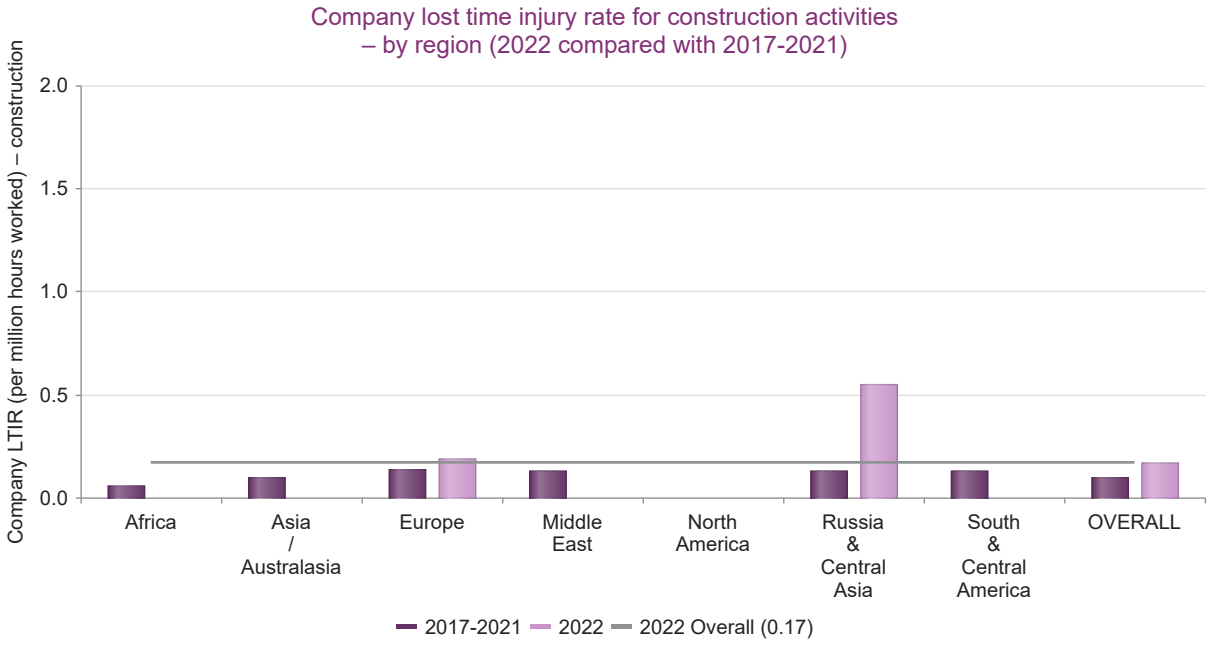


Figure 79:


Contractor lost time injury rate for construction activities
– by region (2022 compared with 2017-2021)
Contractor LTIR (per million hours worked) – construction
2.0
1.5
1.0
0.5
0.0
Africa
Asia / Australasia
Europe
Middle East
North America
Russia & Central Asia
South & Central America
OVERALL
2017-2021
2022
2022 Overall (0.18)

4.8 Unspecified performance

Total recordable injury rate – unspecified

Figures 80 and 81 show the TRIR for companies and contractors for activities categorized as 'unspecified' in different regions of the world. The 2022 result is compared with average TRIR results in the previous five-year period.

495 million work hours (almost 100% of reported unspecified work hours) were used in this analysis, of which company activities represent 38% and contractor activities represent 62%. This represents an increase of 68 million work hours compared with 2021 (427 million work hours in 2021: 36% company, 64% contractor).

In 2022 the overall TRIR values for companies and contractors engaged in activities where the work function was not specified are 0.22 and 0.90 respectively; the overall average TRIR for unspecified activities is 0.64.

Further information on unspecified TRIR by region is available in Appendix B Table B43.

Definitions

Unspecified

Unspecified is used for the entry of data associated with office personnel whose work hours and incident data cannot be reasonably assigned to the administrative support of one of the function groupings of exploration, drilling, production, or construction. Corporate overhead support personnel, such as finance or human resources staff, may be examples where work hours cannot be specifically assigned to a particular function. All other data that are not separated out by function are reported as 'unspecified'.

Note: Data for companies that did not split their data submission by work function are included in the 'unspecified' function.

Figure 80:

Figure 81:

Lost time injury rate – unspecified

Figures 82 and 83 show the LTIR for companies and contractors for activities categorized as 'unspecified' in different regions of the world. The 2022 result is compared with average LTIR results in the previous five-year period.

495 million work hours (100% of reported unspecified work hours) were used in this analysis, of which company activities represent 38% and contractor activities represent 62% (36% company, 64% contractor in 2021). This represents an increase of 68 million work hours compared with 2021.

In 2022 the overall LTIR values for companies and contractors engaged in activities where the work function was not specified are 0.11 and 0.21 respectively; the overall average LTIR for unspecified activities is 0.17.

Reported under the 'unspecified' function in 2022 were:

- 0 company and 7 contractor fatalities
- 21 company and 57 contractor lost work day cases

Reported under the 'unspecified' function from 2017 to 2021 were:

- 5 company and 7 contractor fatalities
- 95 company and 257 contractor lost work day cases

Further information on unspecified LTIR by region is available in Appendix B Table B44.

Figure 82:

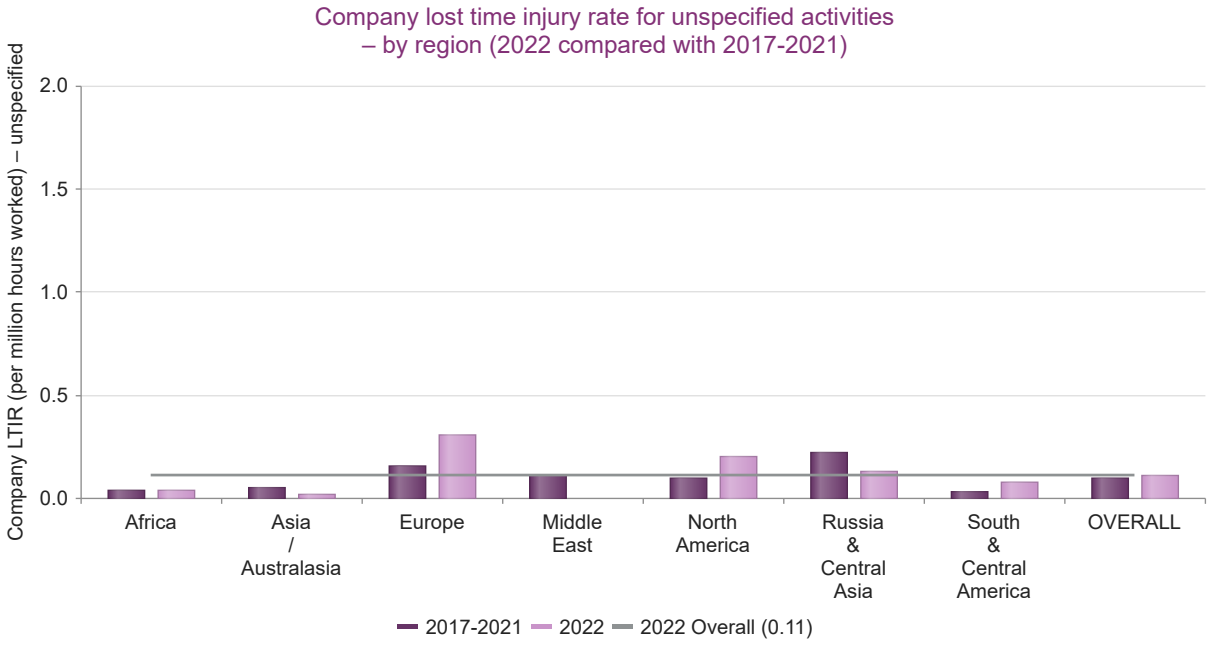
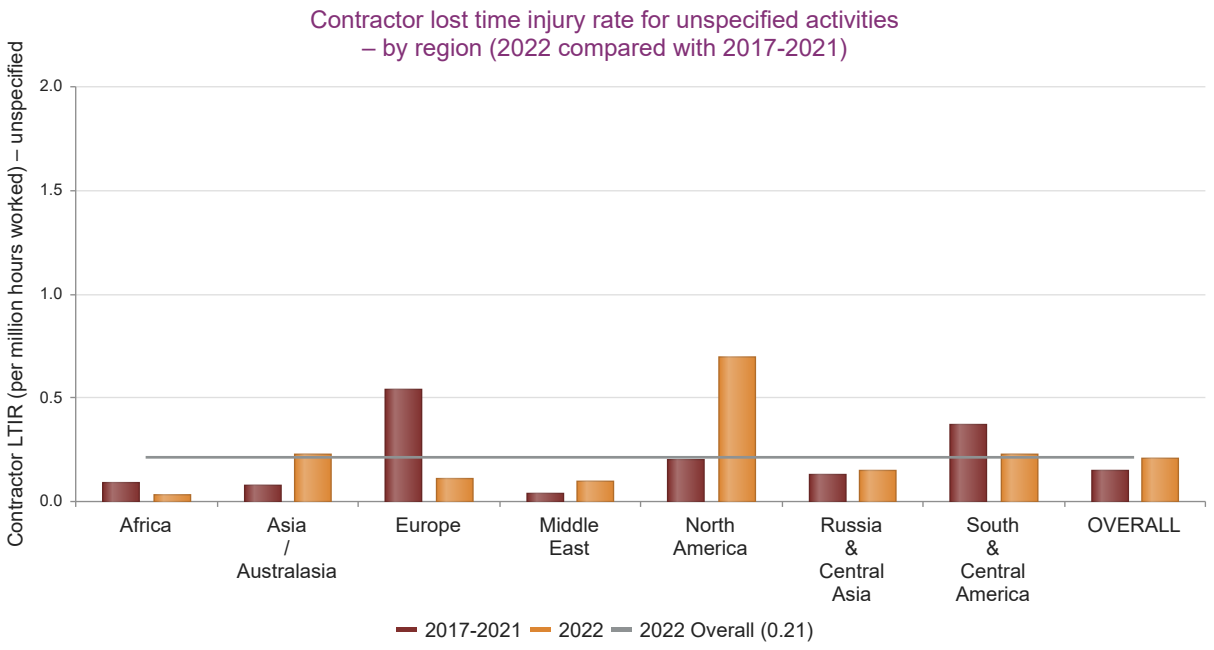


Figure 83:



For data tables go to Appendix B - Section 4.

5. Results by Company

5.1 Overall company results

This section compares the safety performance of individual companies with each other and with their performance in previous years.

For reasons of anonymity each of the companies that has contributed relevant data and is to be included in this analysis has been allocated a unique code letter (A to XX). These codes change every year in line with LTIR performance. 2 companies were excluded from this analysis because they did not report contractor data. Results for 49 of the 51 participating companies are therefore shown in this section. In 2022 IOGP Member Companies reported 31 contractor and 2 company employee fatalities.

Definitions

Fatal accident rate (FAR)

The number of company/contractor fatalities per 100 million hours worked

Total recordable injury rate (TRIR)

The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked

Lost time injury rate (LTIR)

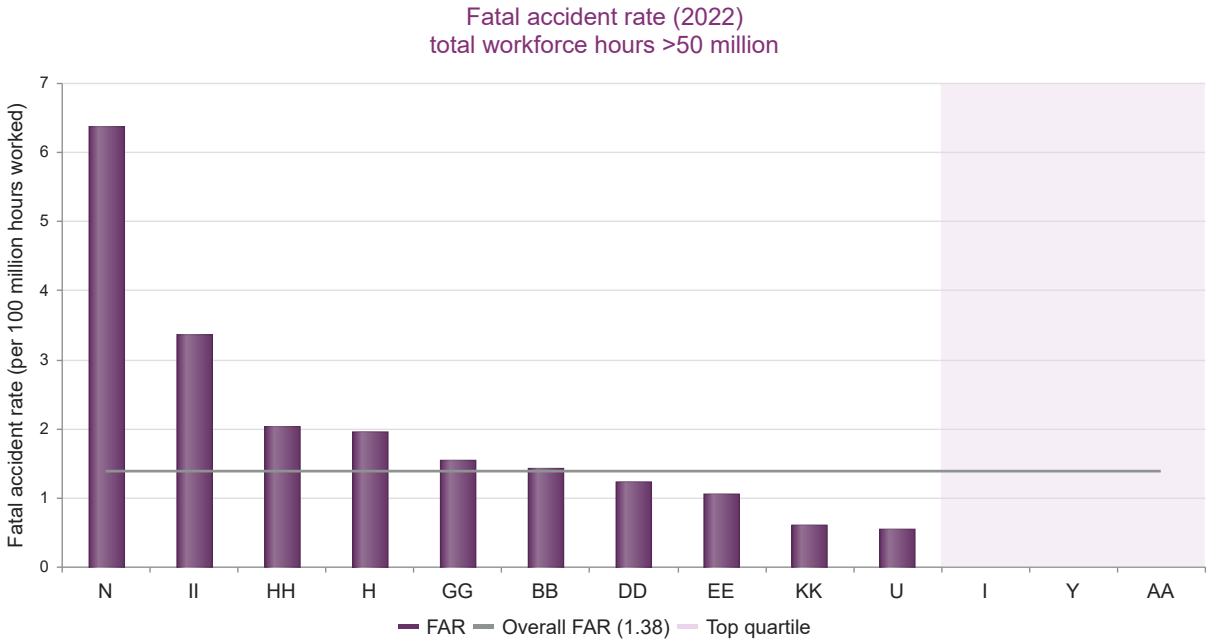
The number of lost time injuries (fatalities + lost work day cases) per million hours worked

5.11 Fatal accident rate

In the figure below the FAR is presented for those companies that, with their contractors, reported more than 50 million work hours. 13 companies met this criterion in 2022, compared with 14 companies in 2021. Companies are shown in rank order of company-with-contractor FAR.

- 7 of the 13 companies with their contractors had a lower FAR than the average for companies with contractors reporting more than 50 million work hours reported (1.38).
- 10 of the 13 companies suffered one or more fatalities.

Figure 87:



5.12 Total recordable injury rate

The TRIR for companies together with their contractors is presented below. Data are only included where Medical Treatment Cases (MTC) are reported. All 49 companies that reported both company and contractor data qualified for inclusion in this section.

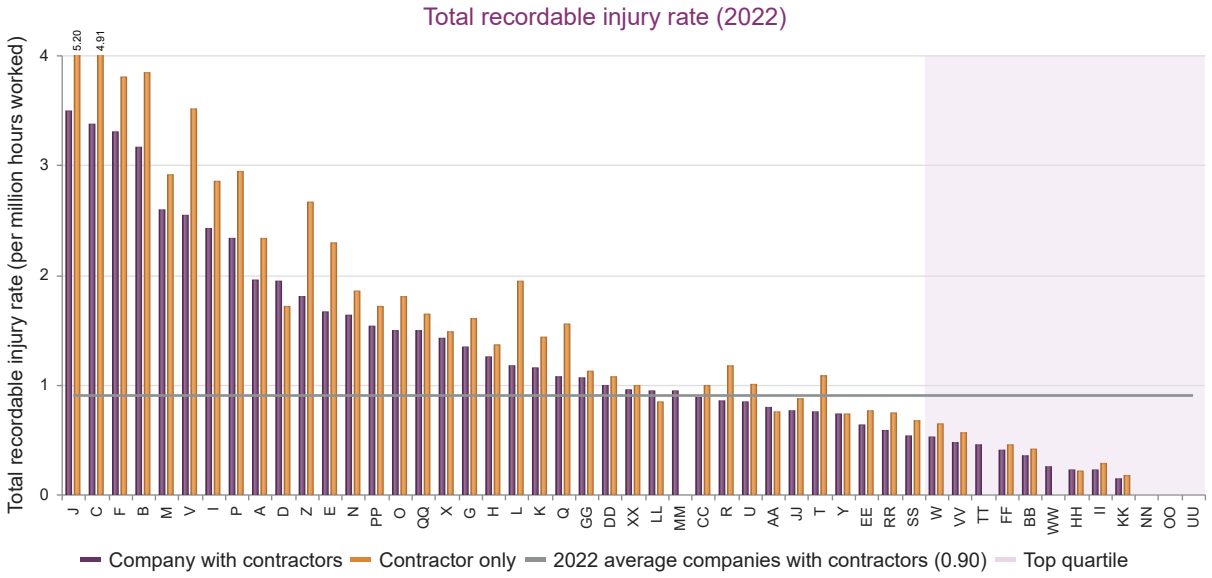
The TRIR for company alone is plotted alongside the TRIR for company and contractors jointly. Details of results are tabulated in Appendix B.

In 8 instances, contractors achieved a lower TRIR than the companies they were employed by.

Figure 88:

In Figure 89 the TRIR for contractors alone is plotted alongside the TRIR for company and contractors jointly.

Figure 89:



In figure 90 the TRIR is presented for those companies that, with their contractors, reported more than 50 million work hours reported. 13 companies met this criterion in 2022, compared with 14 in 2021. Companies are shown in rank order of the company-with-contractor TRIR, for companies alone and contractors alone vs. company-with-contractor TRIR.

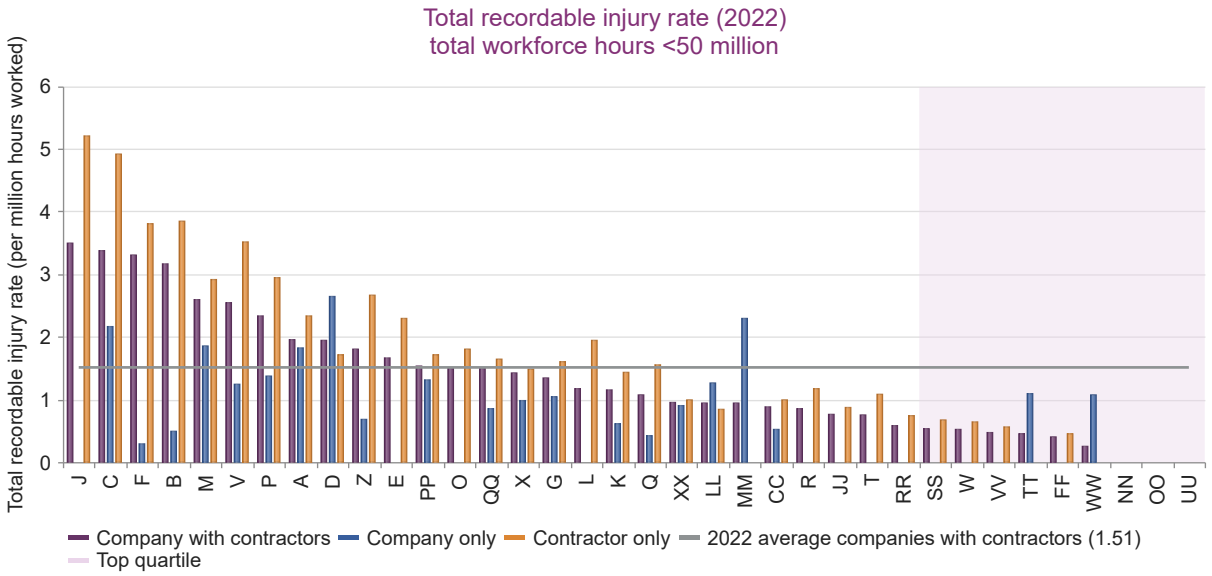
6 of the 13 companies with their contractors had a lower TRIR than the overall average for companies with their contractors reporting more than 50 million work hours (0.77).

Figure 90:

The remaining 36 companies which, with their contractors, reported less than 50 million work hours are presented below, in rank order of the company-with-contractor TRIR, for companies alone and contractors alone vs. company-with-contractor TRIR.

24 of the 36 companies with their contractors had a lower TRIR than the overall average for smaller companies with contractors (1.51).

Figure 91:



5.13 Lost time injury rate

The figure shows the LTIR in rank order for companies together with their contractors. 49 of the 51 participating companies (A to XX) contributed both company and contractor data, although not always for every country in which operations were conducted. Data for all 49 companies that submitted both company and contractor data are therefore included in this section.

The LTIR for company alone is plotted alongside the LTIR for company and contractors jointly. The incidence of a fatality in either company or contractor operations is also indicated*. Detailed results are tabulated in Appendix B

- 46 of the 49 companies with their contractors delivered a LTIR of less than 1.
- 13 of the companies presented below suffered one or more fatality.
- In 7 instances, contractors achieved a lower LTIR than the companies they were employed by.
- 13 companies reported an LTIR of zero for company and contractors combined.

Figure 92:

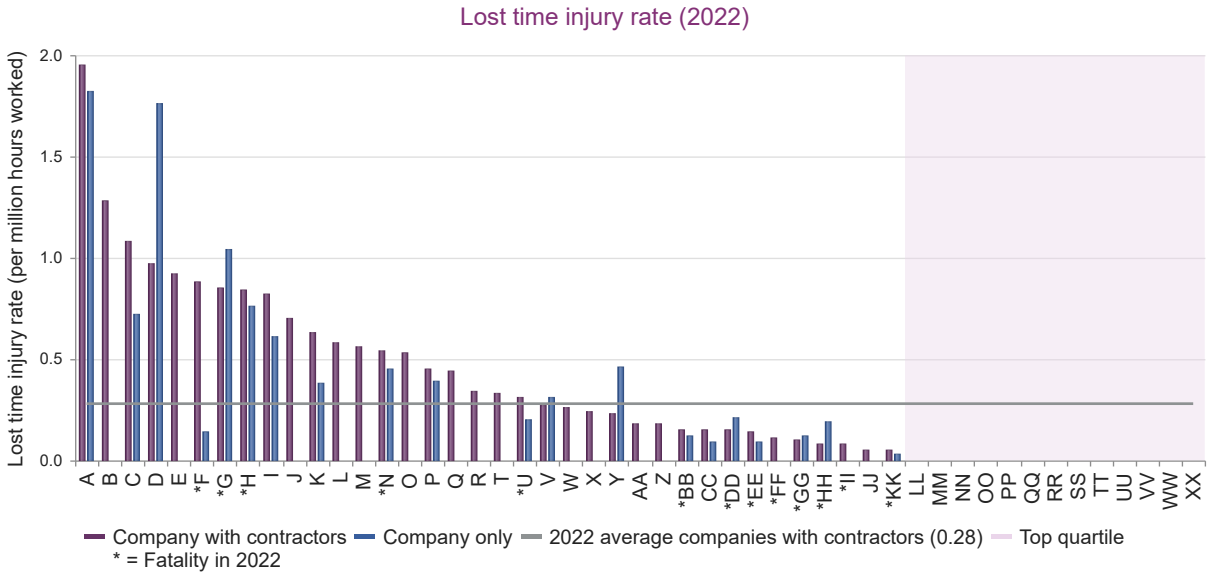
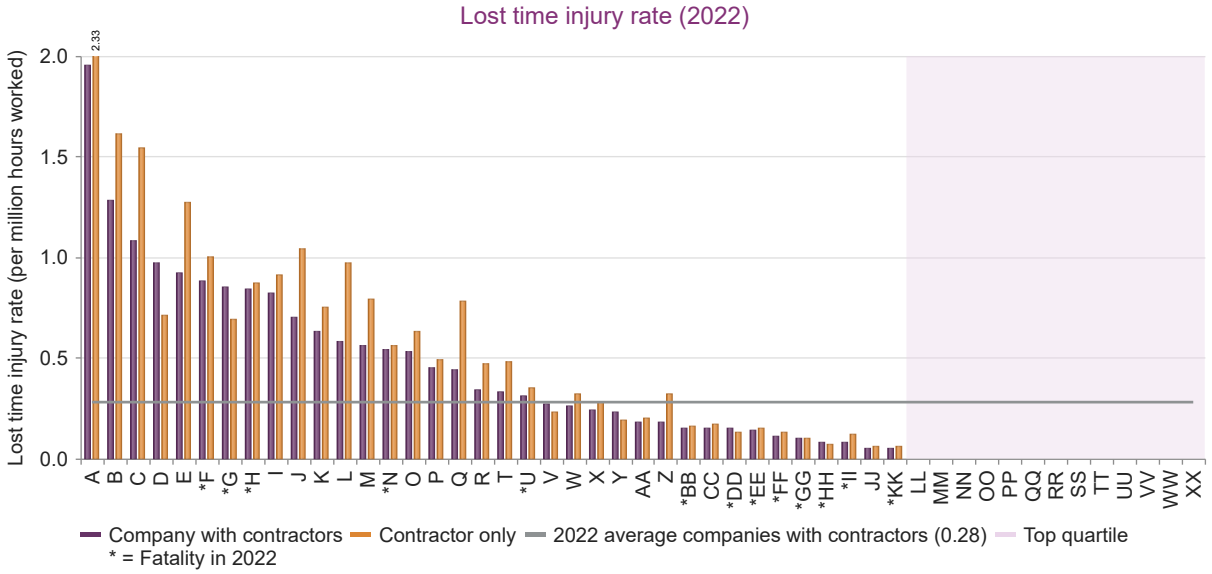


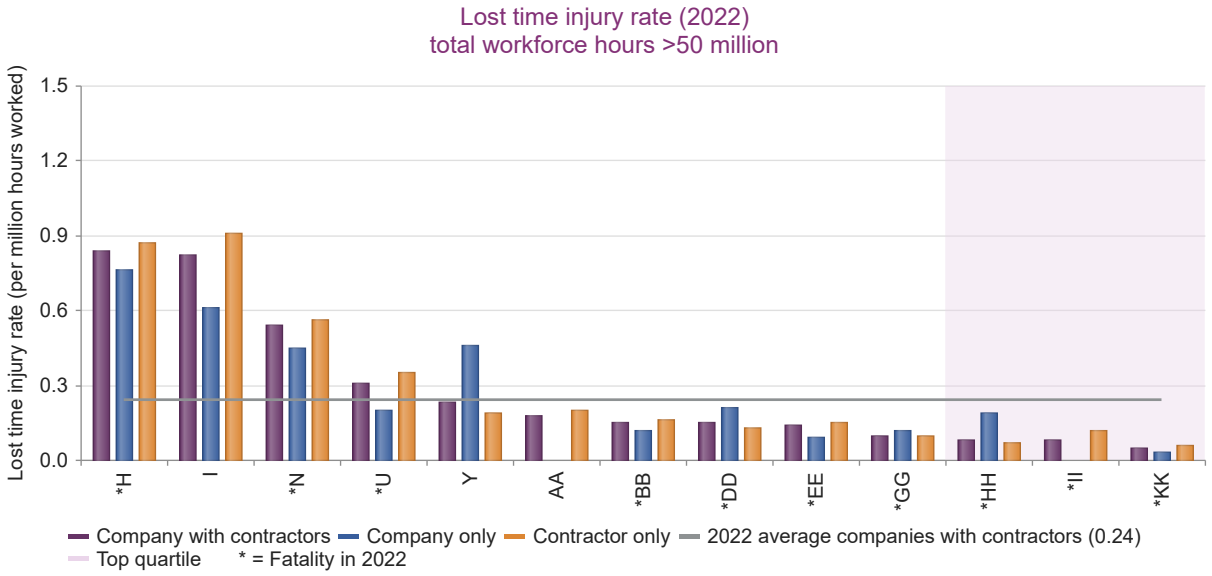
Figure 93:



In Figure 94 the LTIR is presented for those companies that, with their contractors, reported more than 50 million work hours. 13 companies met this criterion in 2022, compared with 14 in 2021.

- 9 of the 13 companies with their contractors had a lower LTIR than the overall average for companies with their contractors reporting more than 50 million work hours (0.24).
- 10 of the 13 companies suffered one or more fatalities.

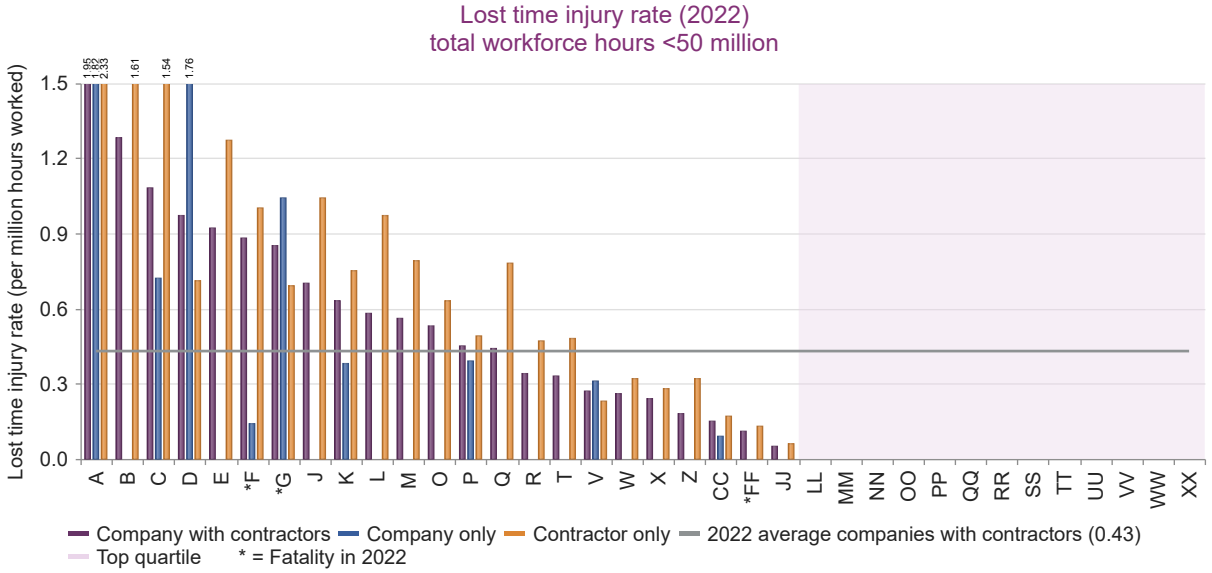
Figure 94:



The remaining 36 companies which, with their contractors, reported less than 50 million work hours are presented below, in rank order of the company-with-contractor LTIR.

- 22 of the 36 companies with their contractors had a lower LTIR than the overall average for smaller companies with contractors (0.43).
- 3 of the 36 smaller companies presented below suffered one or more fatalities.

Figure 95:



5.2 Company results by function

Results of companies, together with their contractors, have been analysed by function to allow more in-depth benchmarking between companies. The TRIR indicator has been selected, and the ranked results are shown in the following charts. Only companies that provided data by function are included, and then only those companies that reported more than 100,000 hours worked. Results against smaller numbers of hours would not have statistical significance. The company code letters are the same as used elsewhere in this section.

Exploration was the only function where the top quartile company with contractors shows a TRIR of zero.

LTIR results by function can be found in Appendix B

Figure 96:

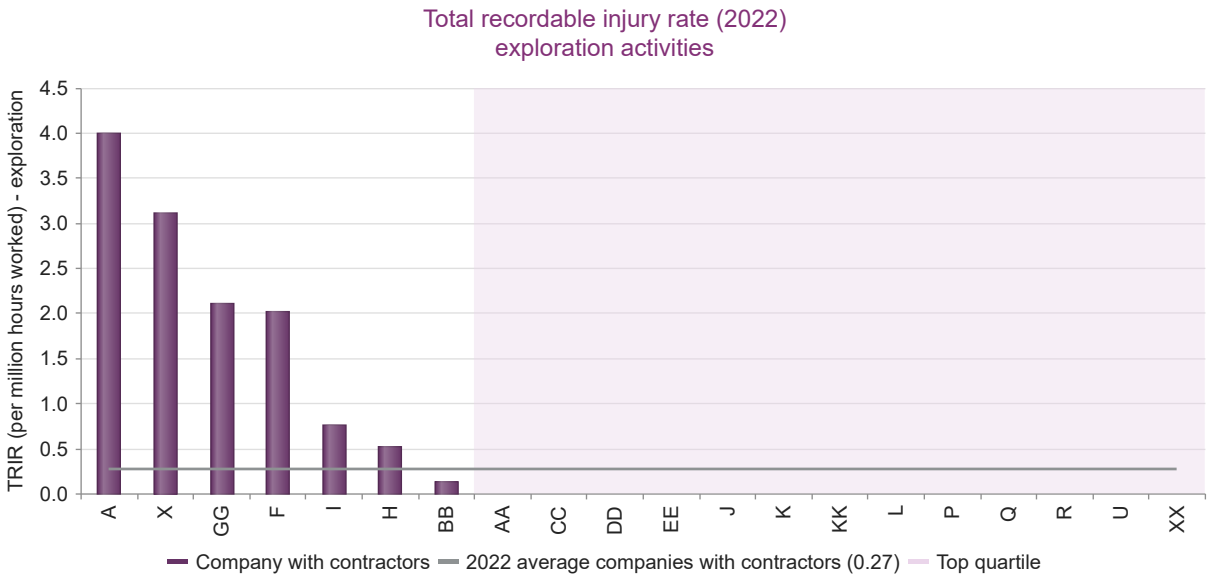


Figure 97:

Figure 98:

Figure 99:

For data tables go to Appendix B - Section 5.

Appendix A - Database dimensions

Figure A1:

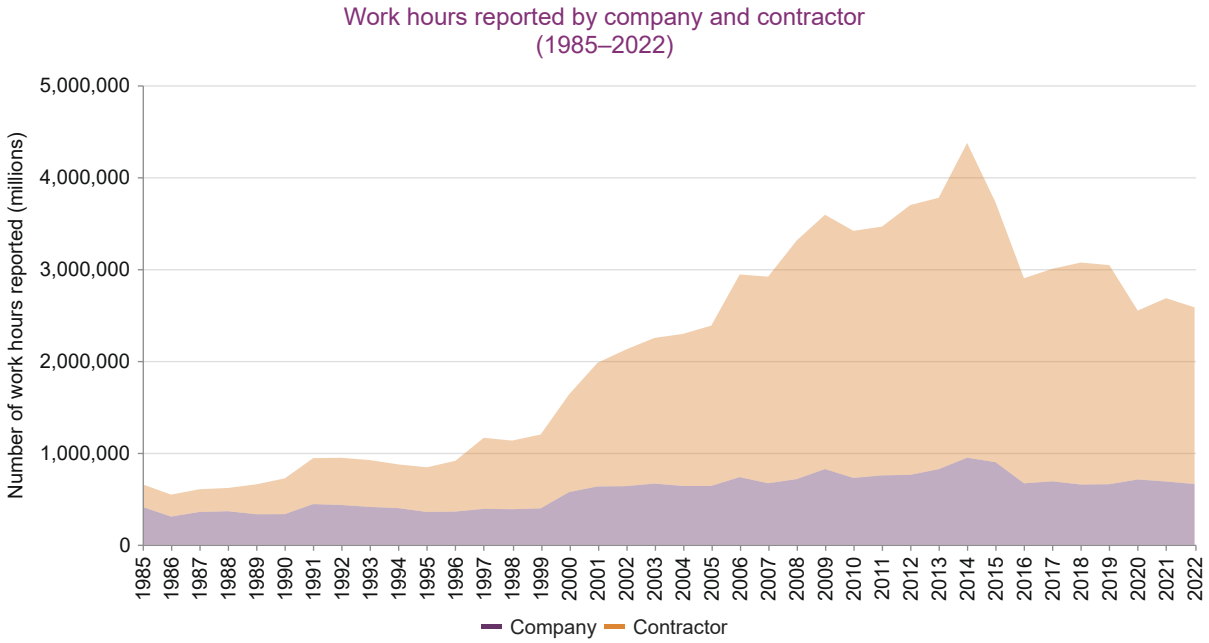


Table A.1: Work hours reported by data type and operations (2022)

Type	Work hours reported (thousands)		
	Onshore	Offshore	Overall
Company	527,025	132,692	659,717
Contractor	1,356,467	562,816	1,919,283
OVERALL	1,883,492	695,508	2,579,000

The database for the year 2022 covers 2,579,000,000 work hours reported in the upstream sector of the oil and gas industry. The database is 3% smaller than it was in 2021.

- 73% of the hours reported were associated with onshore activities, 27% with offshore activities.
- 92 countries are represented in the database, 3 fewer than in the 2021 database. Countries are listed in the 'Countries' section.
- 51 companies contributed data, of which 49 companies contributed contractor statistics, though not in every case for each country of operation.
- Of the 51 companies, 45 had contributed data in 2021 which accounted for 90% of the database in 2021 and 96% of the database in 2022. 41 of the companies submitting 2022 data had also provided data in 2020.
- 15 of the companies contributed 83% of the hours. 5 companies covered 45% of the hours, and the largest contributor accounted for 13%.
- 26% of the reported work hours were related to company personnel and 74% were related to contractors.

A summary of the key elements of the database is shown in the table at the end of this section.

Figure A2:

Percentage of work hours reported by region
(2022)

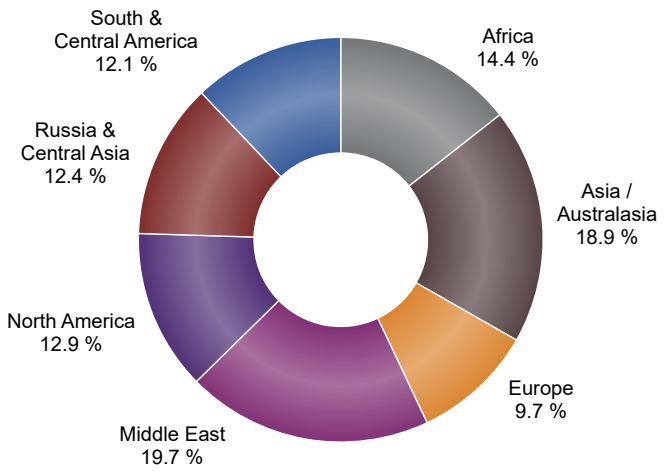
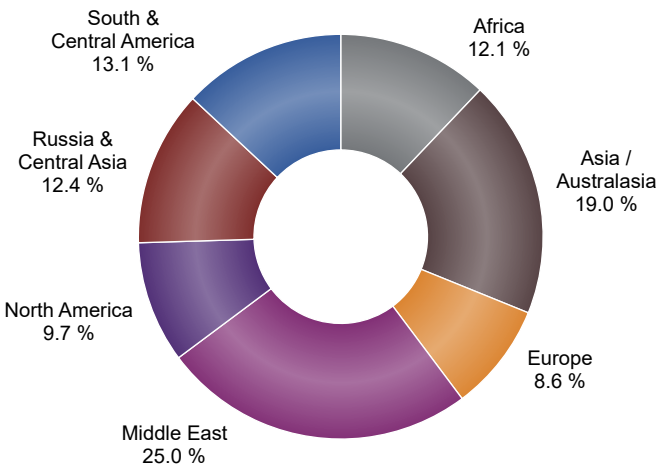


Figure A3:

Percentage of work hours reported by region
(2021)



'Unspecified (as a work function)' is used for the entry of data associated with office personnel whose work hours and incident data cannot be reasonably assigned to the administrative support of one of the function groupings of exploration, drilling, production or construction. Corporate overhead support function personnel such as finance or human resources staff may be examples where work hours cannot be specifically assigned to a particular function. All other data that are not separated out by function are reported as 'unspecified'.

Figure A4:

Percentage of work hours reported by work function (2022)

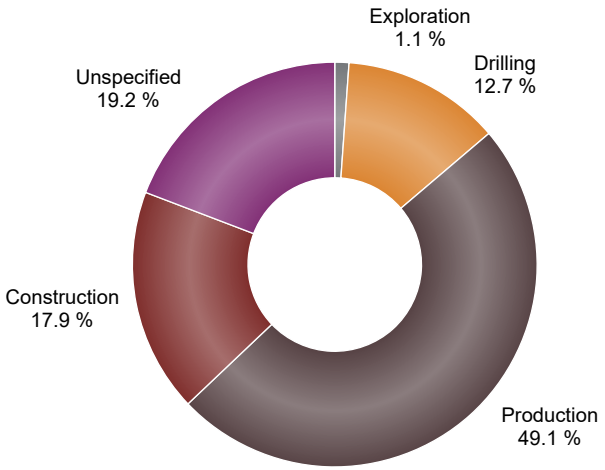
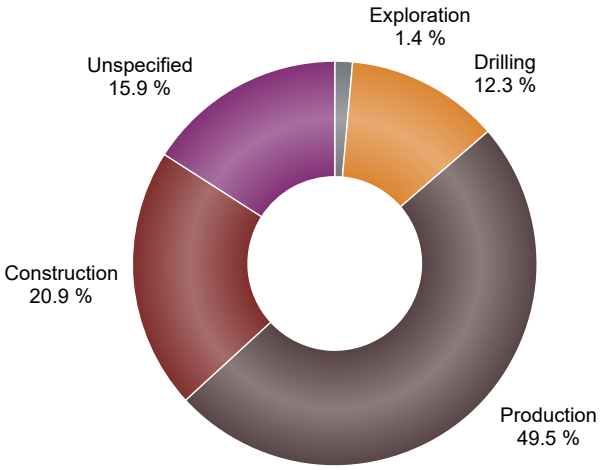


Figure A5:

Percentage of work hours reported by work function (2021)



Proportion of database used in analysis

For calculations of FAR, Fatal incidents per 100 million work hours, and LTIR:

- All hours in the database were used.

For calculations of TRIR:

- Submissions without information on medical treatment cases were filtered out, leaving a database of 2,535 million hours, 98% of the database.
- In 2021, the TRIR database was 2,632 million hours, 98% of the total database.

For calculations of lost work day case severity:

- Submissions without information on days off work were filtered out, leaving a database of 2,064 million hours, 80% of the total database.
- In 2021, this database was 2,302 million hours, 86% of the total database.

For calculations of restricted work day case severity:

- Submissions without information on days assigned to restricted activities were filtered out, leaving a database of 1,847 million hours (72% of the total database), and 302 restricted work day cases.
- In 2021 this database was 1,967 million hours, 73% of the total database.

More detailed information is shown in the data tables below.

Table A.2: Percentage of reported work hours included in analyses by region 2022

Region Name	Percentage of reported work hours included in analysis		
	TRIR	Lost work day case severity	Restricted work day case severity
Africa	100%	90%	71%
Asia / Australasia	100%	74%	73%
Europe	100%	64%	56%
Middle East	100%	99%	99%
North America	100%	35%	34%
Russia & Central Asia	86%	95%	76%
South & Central America	100%	90%	73%

Table A.3: Percentage of reported work hours included in analyses by function 2022

Work Function Name	Percentage of reported work hours included in analysis		
	TRIR	Lost work day case severity	Restricted work day case severity
Exploration	100%	87%	82%
Drilling	100%	82%	74%
Production	97%	75%	67%
Construction	100%	76%	67%
Unspecified	100%	94%	86%

Table A4: Percentage of reported RWDC included in RWDC severity calculations 2022

Category	Percentage of reported work hours included in analysis
Overall	57%
Company	41%
Contractor	61%
Onshore	56%
Offshore	60%

For data tables go to Appendix B - Database dimensions.

Appendix B - Data tables

Table B.1: Summary of 2022 data by region

Region	Data type	Operations	Hours worked (thousands)	Fatalities	LWDCs (number)	RWDCs (number)	MTCs (number)	FAR	TRIR	LTIR
Africa	Company	Onshore	63,275	0	5	4	2	0.00	0.17	0.08
Africa	Company	Offshore	11,211	0	3	1	3	0.00	0.62	0.27
Africa	Contractor	Onshore	235,859	1	18	17	36	0.42	0.31	0.08
Africa	Contractor	Offshore	61,165	1	13	10	23	1.63	0.77	0.23
Africa	SUBTOTAL	SUBTOTAL	371,510	2	39	32	64	0.54	0.37	0.11
Asia / Australasia	Company	Onshore	86,553	0	5	11	15	0.00	0.36	0.06
Asia / Australasia	Company	Offshore	29,460	0	5	10	6	0.00	0.71	0.17
Asia / Australasia	Contractor	Onshore	211,997	5	30	70	89	2.36	0.92	0.17
Asia / Australasia	Contractor	Offshore	158,284	2	29	46	52	1.26	0.81	0.20
Asia / Australasia	SUBTOTAL	SUBTOTAL	486,294	7	69	137	162	1.44	0.77	0.16
Europe	Company	Onshore	85,867	0	37	5	10	0.00	0.61	0.43
Europe	Company	Offshore	21,606	0	25	5	29	0.00	2.73	1.16
Europe	Contractor	Onshore	64,672	0	49	15	39	0.00	1.59	0.76
Europe	Contractor	Offshore	78,624	0	82	47	113	0.00	3.08	1.04
Europe	SUBTOTAL	SUBTOTAL	250,769	0	193	72	191	0.00	1.82	0.77
Middle East	Company	Onshore	58,018	2	4	6	3	3.45	0.26	0.10
Middle East	Company	Offshore	16,406	0	3	0	0	0.00	0.18	0.18
Middle East	Contractor	Onshore	310,984	5	22	23	43	1.61	0.30	0.09
Middle East	Contractor	Offshore	121,595	4	6	16	17	3.29	0.35	0.08
Middle East	SUBTOTAL	SUBTOTAL	507,003	11	35	45	63	2.17	0.30	0.09
North America	Company	Onshore	68,767	0	16	18	29	0.00	0.92	0.23
North America	Company	Offshore	6,330	0	3	2	2	0.00	1.11	0.47
North America	Contractor	Onshore	223,368	4	73	94	216	1.79	1.73	0.34
North America	Contractor	Offshore	32,941	0	14	26	35	0.00	2.28	0.43
North America	SUBTOTAL	SUBTOTAL	331,406	4	106	140	282	1.21	1.61	0.33
Russia & Central Asia	Company	Onshore	118,114	0	33	37	5	0.00	0.81	0.28
Russia & Central Asia	Company	Offshore	32,271	0	2	2	5	0.00	0.28	0.06
Russia & Central Asia	Contractor	Onshore	160,451	3	13	15	60	1.87	0.57	0.10
Russia & Central Asia	Contractor	Offshore	9,834	0	1	5	0	0.00	0.61	0.10
Russia & Central Asia	SUBTOTAL	SUBTOTAL	320,670	3	49	59	70	0.94	0.60	0.16
South & Central America	Company	Onshore	46,431	0	2	1	4	0.00	0.15	0.04
South & Central America	Company	Offshore	15,408	0	25	0	3	0.00	1.82	1.62
South & Central America	Contractor	Onshore	149,136	4	80	29	136	2.68	1.67	0.56
South & Central America	Contractor	Offshore	100,373	2	84	11	71	1.99	1.68	0.86
South & Central America	SUBTOTAL	SUBTOTAL	311,348	6	191	41	214	1.93	1.45	0.63
TOTAL	Company	Onshore	527,025	2	102	82	68	0.38	0.49	0.20
TOTAL	Company	Offshore	132,692	0	66	20	48	0.00	1.01	0.50
TOTAL	Contractor	Onshore	1,356,467	22	285	263	619	1.62	0.88	0.23
TOTAL	Contractor	Offshore	562,816	9	229	161	311	1.60	1.26	0.42
GRAND TOTAL	TOTAL	TOTAL	2,579,000	33	682	526	1,046	1.28	0.90	0.28

Table B.2: Summary of 2022 data overall

Operations	Hours worked (thousands)	Fatalities	LWDCs (number)	RWDCs (number)	MTCs (number)	FAR	TRIR	LTIR
OVERALL	2,579,000	33	682	526	1,046	1.28	0.90	0.28
Company	659,717	2	168	102	116	0.30	0.61	0.26
Contractor	1,919,283	31	514	424	930	1.62	0.99	0.28
Onshore	1,883,492	24	387	345	687	1.27	0.78	0.22
Offshore	695,508	9	295	181	359	1.29	1.21	0.44

Table B.3: Summary of 2022 data by function

Function	Data type	Operations	Hours worked (thousands)	Fatalities	LWDCs (number)	RWDCs (number)	MTCs (number)	FAR	TRIR	LTIR
Exploration	Company	Onshore	9,803	0	1	0	0	0.00	0.10	0.10
Exploration	Company	Offshore	2,043	0	0	0	0	0.00	0.00	0.00
Exploration	Contractor	Onshore	11,222	1	1	0	2	8.91	0.36	0.18
Exploration	Contractor	Offshore	6,050	0	1	1	1	0.00	0.50	0.17
Exploration	SUBTOTAL	SUBTOTAL	29,118	1	3	1	3	3.43	0.27	0.14
Drilling	Company	Onshore	28,737	2	8	2	1	6.96	0.45	0.35
Drilling	Company	Offshore	15,177	0	2	0	2	0.00	0.26	0.13
Drilling	Contractor	Onshore	153,283	4	61	67	165	2.61	1.94	0.42
Drilling	Contractor	Offshore	129,113	2	63	71	97	1.55	1.80	0.50
Drilling	SUBTOTAL	SUBTOTAL	326,310	8	134	140	265	2.45	1.68	0.44
Production	Company	Onshore	266,730	0	69	30	53	0.00	0.62	0.26
Production	Company	Offshore	109,553	0	60	19	45	0.00	1.13	0.55
Production	Contractor	Onshore	549,411	6	115	80	187	1.09	0.71	0.22
Production	Contractor	Offshore	341,410	7	143	69	156	2.05	1.10	0.44
Production	SUBTOTAL	SUBTOTAL	1,267,104	13	387	198	441	1.03	0.84	0.32
Construction	Company	Onshore	38,231	0	5	40	5	0.00	1.31	0.13
Construction	Company	Offshore	1,896	0	2	0	1	0.00	1.58	1.05
Construction	Contractor	Onshore	361,311	4	57	42	155	1.11	0.71	0.17
Construction	Contractor	Offshore	59,920	0	16	8	40	0.00	1.07	0.27
Construction	SUBTOTAL	SUBTOTAL	461,358	4	80	90	201	0.87	0.81	0.18
Unspecified	Company	Onshore	183,524	0	19	10	9	0.00	0.21	0.10
Unspecified	Company	Offshore	4,023	0	2	1	0	0.00	0.75	0.50
Unspecified	Contractor	Onshore	281,240	7	51	74	110	2.49	0.86	0.21
Unspecified	Contractor	Offshore	26,323	0	6	12	17	0.00	1.34	0.23
Unspecified	SUBTOTAL	SUBTOTAL	495,110	7	78	97	136	1.41	0.64	0.17
TOTAL	Company	Onshore	527,025	2	102	82	68	0.38	0.49	0.20
TOTAL	Company	Offshore	132,692	0	66	20	48	0.00	1.01	0.50
TOTAL	Contractor	Onshore	1,356,467	22	285	263	619	1.62	0.88	0.23
TOTAL	Contractor	Offshore	562,816	9	229	161	311	1.60	1.26	0.42
GRAND TOTAL	TOTAL	TOTAL	2,579,000	33	682	526	1,046	1.28	0.90	0.28

The following data are presented in relation to the sections where they were used.

Section 2 Overall results

Table B.4: Fatal accident rate (2013-2022)

Year	Company	Contractor	Overall	Onshore	Offshore
2013	1.83	2.20	2.12	1.70	3.27
2014	0.53	1.17	1.03	0.96	1.22
2015	1.34	1.49	1.45	1.19	2.21
2016	0.90	1.97	1.73	1.50	2.37
2017	1.02	1.13	1.10	1.10	1.11
2018	0.31	1.20	1.01	1.02	0.97
2019	0.46	0.92	0.82	0.78	0.95
2020	0.56	0.54	0.55	0.42	0.92
2021	0.29	0.90	0.75	0.79	0.61
2022	0.30	1.62	1.28	1.27	1.29

Table B.5: Fatal incident rate (2013-2022)

Year	Company	Contractor	Overall	Onshore	Offshore
2013	0.85	1.22	1.14	0.94	1.68
2014	0.32	1.14	0.96	0.92	1.06
2015	0.67	1.20	1.08	0.94	1.47
2016	0.45	1.17	1.00	1.08	0.79
2017	1.02	1.00	1.00	1.05	0.86
2018	0.31	1.04	0.88	0.85	0.97
2019	0.30	0.84	0.72	0.68	0.83
2020	0.56	0.44	0.47	0.37	0.77
2021	0.29	0.65	0.56	0.54	0.61
2022	0.15	1.46	1.12	1.11	1.15

Table B.5A: Exposure hours used in the calculation of FAR and FIR

Year	Company	Contractor	Overall	Onshore	Offshore
2013	820,856	2,949,690	3,770,546	2,760,436	1,010,110
2014	945,572	3,420,387	4,365,959	3,139,037	1,226,922
2015	896,862	2,822,454	3,719,316	2,768,347	950,969
2016	667,335	2,228,286	2,895,621	2,134,946	760,675
2017	688,779	2,310,260	2,999,039	2,184,775	814,264
2018	653,764	2,412,586	3,066,350	2,244,676	821,674
2019	657,258	2,381,094	3,038,352	2,193,257	845,095
2020	708,712	1,835,489	2,544,201	1,891,036	653,165
2021	686,668	1,992,358	2,679,026	2,021,601	657,425
2022	659,717	1,919,283	2,579,000	1,883,492	695,508

Table B.6: Fatalities by cause (2022)

Cause	Company	Contractor	Overall	Onshore	Offshore	% of total
Assault or violent act	0	1	1	1	0	3.0
Aviation accident	0	1	1	0	1	3.0
Caught in, under or between (excl. dropped objects)	0	6	6	4	2	24.2
Confined space	0	0	0	0	0	
Cut, puncture, scrape	0	0	0	0	0	
Dropped objects	0	6	6	4	2	18.2
Explosion, fire or burns	0	4	4	3	1	18.2
Exposure electrical	0	0	0	0	0	
Exposure noise, chemical, biological, vibration, extreme temperature	0	1	1	0	1	3.0
Falls from height	2	1	3	2	1	15.2
Overexertion, strain	0	0	0	0	0	
Pressure release	0	4	4	4	0	18.2
Slips and trips (at same height)	0	0	0	0	0	
Struck by (not dropped object)	0	6	6	6	0	18.2
Water related, drowning	0	1	1	0	1	3.0
Unspecified - Other	0	0	0	0	0	
OVERALL	2	31	33	24	9	

Table B.7: Fatalities by activity (2022)

Cause	Company	Contractor	Overall	Onshore	Offshore	% of total
Construction, commissioning, decommissioning	0	4	4	3	1	12.1
Diving (incl. decompression), subsea, ROV	0	1	1	0	1	3.0
Drilling, workover, well operations	2	7	9	8	1	27.3
Excavation, trenching, ground disturbance	0	1	1	1	0	3.0
Lifting, crane, rigging, deck operations	0	4	4	3	1	12.1
Maintenance, inspection, testing	0	3	3	2	1	9.1
Office, warehouse, accommodation, catering	0	0	0	0	0	
Production operations	0	5	5	4	1	15.2
Seismic/survey operations	0	1	1	1	0	3.0
Transport - Air	0	1	1	0	1	3.0
Transport - Land	0	3	3	1	2	9.1
Transport - Water, incl. marine activity	0	0	0	0	0	
Unspecified - other	0	1	1	1	0	3.0
OVERALL	2	31	33	24	9	

Table B.8: Total recordable injury rate (2013-2022)

Year	Company	Contractor	OVERALL	Onshore	Offshore
2013	0.95	1.77	1.60	1.33	2.34
2014	0.90	1.70	1.54	1.33	2.16
2015	0.89	1.30	1.21	1.08	1.65
2016	0.82	1.09	1.03	0.83	1.60
2017	0.78	1.01	0.96	0.80	1.37
2018	0.72	1.06	0.99	0.88	1.27
2019	0.67	0.98	0.92	0.81	1.20
2020	0.49	0.78	0.70	0.59	1.01
2021	0.51	0.85	0.77	0.61	1.23
2022	0.61	0.99	0.90	0.78	1.21

Table B.8A: Exposure hours used in the calculation of TRIR

Year	Company	Contractor	OVERALL	Onshore	Offshore
2013	766,874	2,898,602	3,665,476	2,698,156	967,320
2014	776,552	3,132,246	3,908,798	2,902,277	1,006,521
2015	726,781	2,589,756	3,316,537	2,566,023	750,514
2016	662,818	2,227,323	2,890,141	2,129,739	760,402
2017	639,720	2,283,689	2,923,409	2,112,668	810,741
2018	653,764	2,412,480	3,066,244	2,244,676	821,568
2019	616,171	2,375,066	2,991,237	2,146,142	845,095
2020	649,265	1,792,191	2,441,456	1,791,850	649,606
2021	639,681	1,992,358	2,632,039	1,974,614	657,425
2022	615,716	1,919,004	2,534,720	1,839,491	695,229

Table B.9: Lost time injury rate (2013-2022)

Year	Company	Contractor	OVERALL	Onshore	Offshore
2013	0.40	0.47	0.45	0.34	0.77
2014	0.26	0.39	0.36	0.29	0.52
2015	0.30	0.29	0.29	0.23	0.47
2016	0.24	0.28	0.27	0.20	0.45
2017	0.28	0.26	0.27	0.22	0.41
2018	0.25	0.26	0.26	0.22	0.37
2019	0.24	0.24	0.24	0.19	0.36
2020	0.20	0.22	0.22	0.17	0.35
2021	0.19	0.24	0.22	0.17	0.40
2022	0.26	0.28	0.28	0.22	0.44

Table B.9A: Exposure hours used in the calculation of LTIR

Year	Company	Contractor	OVERALL	Onshore	Offshore
2013	820,856	2,949,690	3,770,546	2,760,436	1,010,110
2014	945,572	3,420,387	4,365,959	3,139,037	1,226,922
2015	896,862	2,822,454	3,719,316	2,768,347	950,969
2016	667,335	2,228,286	2,895,621	2,134,946	760,675
2017	688,779	2,310,260	2,999,039	2,184,775	814,264
2018	653,764	2,412,586	3,066,350	2,244,676	821,674
2019	657,258	2,381,094	3,038,352	2,193,257	845,095
2020	708,712	1,835,489	2,544,201	1,891,036	653,165
2021	686,668	1,992,358	2,679,026	2,021,601	657,425
2022	659,717	1,919,283	2,579,000	1,883,492	695,508

Table B.10: Lost work day cases by cause (2022)

Cause	Company	Contractor	OVERALL	Onshore	Offshore	% of total
Assault or violent act	0	2	2	2	0	0.3
Aviation accident	2	4	6	0	6	0.9
Caught in, under or between (excl. dropped objects)	22	100	122	63	59	17.9
Confined space	0	2	2	1	1	0.3
Cut, puncture, scrape	4	28	32	22	10	4.7
Dropped objects	8	31	39	30	9	5.7
Explosion, fire or burns	5	9	14	6	8	2.1
Exposure electrical	1	8	9	5	4	1.3
Exposure noise, chemical, biological, vibration, extreme temperature	21	35	56	8	48	8.2
Falls from height	10	50	60	45	15	8.8
Overexertion, strain	18	36	54	26	28	7.9
Pressure release	4	8	12	8	4	1.8
Slips and trips (at same height)	42	88	130	80	50	19.1
Struck by (not dropped object)	16	88	104	69	35	15.2
Water related, drowning	0	4	4	0	4	0.6
Unspecified - Other	15	21	36	22	14	5.3
OVERALL	168	514	682	387	295	

Note: dropped objects was introduced as a LWDC cause in 2019.

Table B.11: Lost work day cases by activity (2022)

Activity	Company	Contractor	OVERALL	Onshore	Offshore	% of total
Construction, commissioning, decommissioning	0	69	69	59	10	10.1
Diving (incl. decompression), subsea, ROV	0	3	3	1	2	0.4
Drilling, workover, well operations	13	129	142	95	47	20.8
Excavation, trenching, ground disturbance	1	1	2	2	0	0.3
Lifting, crane, rigging, deck operations	7	39	46	22	24	6.7
Maintenance, inspection, testing	33	96	129	68	61	18.9
Office, warehouse, accommodation, catering	25	16	41	27	14	6.0
Production operations	54	66	120	65	55	17.6
Seismic/survey operations	0	1	1	0	1	0.1
Transport - Air	3	5	8	0	8	1.2
Transport - Land	7	7	14	13	1	2.1
Transport - Water, incl. marine activity	1	13	14	1	13	2.1
Unspecified - other	24	69	93	34	59	13.6
OVERALL	168	514	682	387	295	

Table B.12: Lost work day case severity (2013-2022)

	Average number of days lost per LWDC				
Year	Company	Contractor	OVERALL	Onshore	Offshore
2013	43.5	42.9	43.0	35.8	51.2
2014	51.6	40.3	42.2	39.9	45.5
2015	53.7	54.1	54.0	45.2	66.4
2016	37.6	66.9	61.4	46.9	79.2
2017	40.5	43.0	42.5	45.1	39.0
2018	37.7	54.6	51.5	49.4	54.9
2019	44.8	52.5	50.9	53.8	46.7
2020	40.1	42.9	42.3	39.2	47.6
2021	56.4	51.4	52.4	53.9	50.1
2022	38.3	42.4	41.3	45.4	34.9

Table B.13: Restricted work day case severity (2013-2022)

Year	Average number of days restricted per RWDC				
	Company	Contractor	OVERALL	Onshore	Offshore
2013	17.2	14.2	14.5	15.4	13.0
2014	14.6	11.6	11.8	12.2	11.2
2015	22.4	18.7	19.1	18.2	21.0
2016	14.4	14.4	14.4	13.8	15.6
2017	12.5	18.0	17.2	17.1	17.6
2018	16.7	19.8	19.4	19.9	18.9
2019	23.5	23.7	23.7	25.4	21.4
2020	32.2	25.9	26.4	31.5	19.7
2021	41.2	23.4	26.3	26.3	26.2
2022	31.8	27.9	28.5	27.0	31.0

Table B14: IOGP Life-Saving Rules allocated to fatal incidents (2022)

Life-Saving Rule	Fatal incidents				
	2018	2019	2020	2021	2022
Bypassing safety controls	0	1	1	0	0
Confined space	0	0	0	0	0
Driving	1	3	1	1	2
Energy isolation	3	3	2	1	4
Hot work	0	0	0	0	3
Line of fire	5	6	5	5	12
Safe mechanical lifting	5	3	1	3	2
Work authorization	7	3	0	0	1
Working at height	2	0	0	4	1
Other	4	0	1	0	4
Unspecified	0	2	1	1	0

Section 3 Results by region

Table B.15: Fatalities and fatal incidents by region (2018-2022)

Region	Fatalities					Fatal incidents				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Africa	6	6	2	7	2	6	5	2	2	2
Asia / Australasia	5	1	3	0	7	5	1	2	0	7
Europe	0	2	0	2	0	0	2	0	2	0
Middle East	9	4	5	4	11	7	3	4	4	8
North America	2	6	2	1	4	2	5	2	1	4
Russia & Central Asia	3	1	2	2	3	1	1	2	2	2
South & Central America	6	5	0	4	6	6	5	0	4	6
OVERALL	31	25	14	20	33	27	22	12	15	29

Table B.16: Fatal accident rate by region (2018-2022)

Region	Fatal accident rate (FAR)				
	2018	2019	2020	2021	2022
Africa	1.12	1.25	0.62	2.16	0.54
Asia/ Australasia	0.94	0.17	0.56	0.00	1.44
Europe	0.00	0.73	0.00	0.87	0.00
Middle East	1.19	0.59	0.85	0.60	2.17
North America	0.54	1.62	0.77	0.38	1.21
Russia & Central Asia	1.36	0.41	0.71	0.60	0.94
South & Central America	1.49	1.26	0.00	1.14	1.93
OVERALL	1.01	0.82	0.55	0.75	1.28

Table B.17: Total recordable injury rate by region (2018-2022)

Region	Total recordable injury rate (TRIR)				
	2018	2019	2020	2021	2022
Africa	0.50	0.42	0.34	0.39	0.37
Asia / Australasia	0.72	0.60	0.48	0.69	0.77
Europe	2.17	2.26	1.83	1.93	1.82
Middle East	0.43	0.44	0.39	0.30	0.30
North America	2.00	1.66	1.07	1.40	1.61
Russia & Central Asia	0.54	0.58	0.43	0.46	0.60
South & Central America	1.64	1.35	1.07	1.14	1.45
OVERALL	0.99	0.92	0.70	0.77	0.90

Table B.18: Lost time injury rate by region (2018-2022)

Region	Lost time injury rate (LTIR)				
	2018	2019	2020	2021	2022
Africa	0.15	0.12	0.12	0.13	0.11
Asia / Australasia	0.15	0.13	0.09	0.14	0.16
Europe	0.70	0.83	0.73	0.82	0.77
Middle East	0.09	0.08	0.09	0.06	0.09
North America	0.36	0.30	0.22	0.23	0.33
Russia & Central Asia	0.19	0.13	0.19	0.15	0.16
South & Central America	0.54	0.42	0.39	0.42	0.63
OVERALL	0.26	0.24	0.22	0.22	0.28

Table B.19: Work hours reported by region (2013-2022)

Region	Thousand work hours									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Africa	595,637	580,464	543,205	444,534	489,592	537,130	480,700	322,739	323,847	371,510
Asia / Australasia	919,063	1,077,835	924,392	745,095	595,521	531,067	594,527	531,985	510,335	486,294
Europe	399,584	385,847	343,123	273,984	248,856	250,880	275,861	233,754	231,120	250,769
Middle East	637,244	607,954	653,049	607,678	754,753	756,946	675,784	591,323	670,571	507,003
North America	590,089	1,025,254	864,115	325,869	326,804	367,241	369,476	259,026	260,595	331,406
Russia & Central Asia	239,832	247,816	249,560	166,000	235,205	220,906	246,248	283,302	332,910	320,670
South & Central America	389,097	440,789	141,872	332,461	348,308	402,180	395,756	322,072	349,648	311,348
OVERALL	3,770,546	4,365,959	3,719,316	2,895,621	2,999,039	3,066,350	3,038,352	2,544,201	2,679,026	2,579,000

Table B.20: Fatal accident rate five-year rolling average by region (2013-2022)

Region	FAR five-year rolling average									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Africa	2.87	2.59	2.29	2.50	2.19	1.43	1.52	1.32	1.25	1.13
Asia / Australasia	2.14	1.94	1.31	1.16	1.03	1.06	0.91	0.90	0.43	0.60
Europe	2.16	1.15	1.18	1.85	1.88	1.46	1.44	1.25	0.32	0.32
Middle East	1.68	1.28	1.17	1.01	0.74	0.86	0.90	0.86	0.78	1.03
North America	4.11	3.17	2.79	2.79	1.92	1.72	1.78	1.33	1.20	0.94
Russia & Central Asia	1.78	1.37	1.17	0.87	1.41	1.43	1.34	1.13	1.14	0.78
South & Central America	2.27	2.00	2.05	1.61	1.75	1.08	1.11	0.89	1.05	1.18
OVERALL	2.38	1.99	1.75	1.72	1.48	1.25	1.23	1.05	0.86	0.88

Table B.21: Total recordable injury rate five-year rolling average by region (2013-2022)

Region	TRIR five-year rolling average									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Africa	1.29	1.17	1.04	0.92	0.79	0.67	0.54	0.46	0.44	0.41
Asia / Australasia	1.24	1.18	1.11	1.01	0.91	0.87	0.78	0.68	0.65	0.65
Europe	2.88	2.72	2.57	2.44	2.34	2.25	2.16	2.09	2.06	2.01
Middle East	0.92	0.91	0.86	0.80	0.70	0.60	0.52	0.46	0.43	0.38
North America	2.88	2.73	2.59	2.40	2.24	2.12	1.94	1.74	1.66	1.59
Russia & Central Asia	1.03	0.93	0.85	0.75	0.62	0.56	0.56	0.50	0.49	0.52
South & Central America	3.05	2.98	2.96	2.69	2.34	1.98	1.60	1.47	1.34	1.34
OVERALL	1.71	1.66	1.58	1.45	1.30	1.17	1.03	0.93	0.88	0.86

Table B.22: Lost time injury rate five-year rolling average by region (2013-2022)

Region	LTIR five-year rolling average									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Africa	0.34	0.32	0.29	0.26	0.23	0.19	0.15	0.14	0.13	0.13
Asia / Australasia	0.25	0.22	0.19	0.17	0.15	0.16	0.15	0.14	0.13	0.13
Europe	1.06	0.97	0.90	0.84	0.81	0.74	0.74	0.75	0.77	0.77
Middle East	0.23	0.21	0.20	0.18	0.15	0.13	0.11	0.10	0.09	0.08
North America	0.69	0.61	0.57	0.55	0.46	0.40	0.38	0.34	0.31	0.30
Russia & Central Asia	0.31	0.29	0.26	0.23	0.20	0.17	0.15	0.16	0.16	0.16
South & Central America	0.70	0.71	0.73	0.73	0.71	0.63	0.54	0.51	0.48	0.48
OVERALL	0.45	0.43	0.40	0.38	0.33	0.29	0.27	0.25	0.24	0.24

Table B.23: Severity of lost work day cases by region (2018 - 2022)

Region	Average days lost per LWDC				
	2018	2019	2020	2021	2022
Africa	29.8	36.1	43.5	24.5	39.6
Asia / Australasia	61.8	37.5	31.7	59.4	40.8
Europe	42.7	62.5	37.1	35.9	38.3
Middle East	43.5	30.3	36.4	58.5	23.6
North America	32.5	41.8	48.6	29.5	58.9
Russia & Central Asia	90.5	85.0	69.9	79.3	54.8
South & Central America	60.7	59.4	42.9	64.9	37.8
OVERALL	51.5	50.9	42.3	52.4	41.3

Table B.24: Total recordable injury rate by country (2020-2022)

Note: data only included in TRIR calculations where medical treatment cases are reported.

Countries with less than 50,000 reported work hours or with fewer than 2 companies reporting in 2022 or the reporting year are excluded.

Iran and Russia are excluded.

Region	Country	Total recordable injury rate (TRIR)		
		2020	2021	2022
Africa	Kenya	0	0	2.27
Africa	Namibia	no data	0	2
Africa	Senegal	0	3.11	1.69
Africa	Tunisia	0	0.54	1.22
Africa	Equatorial Guinea	0.66	0.67	1.21
Africa	Gabon	2.47	1.51	1.19
Africa	Algeria	0.33	0.82	0.8
Africa	Angola	0.39	0.4	0.49
Africa	AFRICA AVERAGE	0.34	0.39	0.37
Africa	Nigeria	0.26	0.41	0.22
Africa	Egypt	0.14	0.06	0.18
Africa	Congo	0.34	0.15	0.15
Africa	Libya	0.13	0.19	0.15
Africa	Ghana	0.56	0.47	0
Africa	Ivory Coast	9.01	0	0
Africa	Mauritania	0	0	0
Africa	Mozambique	0.58	0	0
Africa	São Tomé And Príncipe	no data	no data	0
Africa	Tanzania	0	0	0
Africa	Uganda	0	0	0
Asia / Australasia	Australia	2.02	3.65	3.77
Asia / Australasia	Japan	1.37	0	2.16
Asia / Australasia	Thailand	0.44	0.82	1.16
Asia / Australasia	Pakistan	0.1	0.26	1.04
Asia / Australasia	Myanmar	0.14	0.84	0.9
Asia / Australasia	Vietnam	0.59	1.84	0.79
Asia / Australasia	ASIA / AUSTRALASIA AVERAGE	0.48	0.69	0.77
Asia / Australasia	Singapore	0.55	0.09	0.58
Asia / Australasia	Papua New Guinea	0.38	0.3	0.53
Asia / Australasia	Indonesia	0.16	0.21	0.43
Asia / Australasia	Malaysia	0.32	0.43	0.29
Asia / Australasia	China	0.24	0.21	0.13
Asia / Australasia	Brunei	0	0	0
Asia / Australasia	India	0.64	no data	0
Asia / Australasia	Philippines	no data	no data	0
Asia / Australasia	South Korea	0	no data	0
Europe	Austria	no data	no data	3.81
Europe	Germany	3.09	2.36	3.22
Europe	Denmark	2.62	0.82	2.79
Europe	Norway	2.36	2.62	2.58
Europe	Spain	2.73	0.75	1.95
Europe	Poland	2.74	2.48	1.92
Europe	EUROPE AVERAGE	1.83	1.93	1.82
Europe	Netherlands	1.69	1.77	1.61
Europe	Cyprus	7.52	0	1.34
Europe	Italy	0.97	0.82	1.3
Europe	UK	1.39	1.65	1.01
Europe	Albania	no data	3.85	0.92
Europe	Romania	0.48	0.67	0.57
Europe	France	0.59	0.3	0
Middle East	Kurdistan Region Of Iraq	0.64	1.3	1.67
Middle East	Qatar	0.64	0.44	0.56

Region	Country	Total recordable injury rate (TRIR)		
		2020	2021	2022
Middle East	Kuwait	0.35	0.31	0.46
Middle East	Oman	0.28	0.3	0.36
Middle East	MIDDLE EAST AVERAGE	0.39	0.3	0.3
Middle East	UAE	0.36	0.23	0.22
Middle East	Iraq	0.2	0.31	0.05
Middle East	Turkey	0	0	0
Middle East	Yemen	0	0	0
North America	Canada	1.23	1.58	1.64
North America	NORTH AMERICA AVERAGE	1.07	1.4	1.61
North America	USA	1.08	1.38	1.61
North America	Mexico	0.33	0.68	1.1
Russia & Central Asia	Azerbaijan	0.53	0.26	0.7
Russia & Central Asia	RUSSIA & CENTRAL ASIA AVERAGE	0.43	0.46	0.6
Russia & Central Asia	Kazakhstan	0.4	0.6	0.55
South & Central America	Argentina	1.93	2.07	2.08
South & Central America	Colombia	1.29	1.3	1.92
South & Central America	Ecuador	2.28	0.67	1.69
South & Central America	Suriname	0	2.49	1.63
South & Central America	SOUTH & CENTRAL AMERICA AVERAGE	1.07	1.14	1.45
South & Central America	Brazil	0.77	0.83	1.33
South & Central America	Bolivia	1.59	0	0.95
South & Central America	Guyana	0.28	0.73	0.92
South & Central America	Trinidad & Tobago	0.9	0.9	0.7
South & Central America	Peru	0.74	0.5	0.24
South & Central America	Venezuela	0.64	0.38	0

Table B.25: Lost time injury rate by country (2020-2022)

Note: Countries with less than 50,000 reported work hours or with fewer than 2 companies reporting in 2022 or the reporting year are excluded.

Iran and Russia are excluded.

Region	Country	Lost time injury rate (LTIR)		
		2020	2021	2022
Africa	Kenya	0	0	1.14
Africa	Senegal	0	3.11	0.75
Africa	Tunisia	0	0	0.61
Africa	Equatorial Guinea	0.33	0	0.35
Africa	Algeria	0.14	0.43	0.25
Africa	Libya	0.07	0.13	0.15
Africa	Angola	0.07	0.04	0.13
Africa	AFRICA AVERAGE	0.12	0.13	0.11
Africa	Egypt	0.12	0.02	0.06
Africa	Nigeria	0.11	0.16	0.06
Africa	Congo	0.04	0	0.04
Africa	Gabon	0.91	0.12	0
Africa	Ghana	0.14	0.31	0
Africa	Ivory Coast	3	0	0
Africa	Mauritania	0	0	0
Africa	Mozambique	0	0	0
Africa	Namibia	no data	0	0
Africa	São Tomé And Príncipe	no data	no data	0
Africa	Tanzania	0	0	0
Africa	Uganda	0	0	0
Asia / Australasia	Pakistan	0	0	0.52
Asia / Australasia	Australia	0.29	0.51	0.44
Asia / Australasia	Japan	0.23	0	0.39
Asia / Australasia	Myanmar	0	0.5	0.36
Asia / Australasia	Singapore	0	0	0.29
Asia / Australasia	Thailand	0.04	0.07	0.2
Asia / Australasia	ASIA / AUSTRALASIA AVERAGE	0.09	0.14	0.16
Asia / Australasia	Malaysia	0.13	0.1	0.11
Asia / Australasia	Papua New Guinea	0.09	0.05	0.11
Asia / Australasia	China	0.08	0.13	0.06
Asia / Australasia	Indonesia	0.03	0.03	0.06
Asia / Australasia	Brunei	0	0	0
Asia / Australasia	India	0	no data	0
Asia / Australasia	Philippines	no data	no data	0
Asia / Australasia	South Korea	0	no data	0
Asia / Australasia	Vietnam	0	0.61	0
Europe	Austria	no data	no data	3.05
Europe	Poland	2.74	2.48	1.92
Europe	Germany	1.48	0	1.35
Europe	Cyprus	0	0	1.34
Europe	Spain	1.82	0	1.3
Europe	Italy	0.85	0.7	1.19
Europe	Norway	0.74	0.91	0.93
Europe	Netherlands	0.54	0.85	0.84
Europe	EUROPE AVERAGE	0.73	0.82	0.77
Europe	Denmark	0.87	0.16	0.66
Europe	Romania	0.2	0.37	0.37
Europe	UK	0.36	0.79	0.27
Europe	Albania	no data	3.85	0
Europe	France	0.59	0	0
Middle East	Kurdistan Region Of Iraq	0	0.33	0.28
Middle East	Oman	0.19	0.15	0.13
Middle East	Qatar	0.14	0.08	0.1

Region	Country	Lost time injury rate (LTIR)		
		2020	2021	2022
Middle East	MIDDLE EAST AVERAGE	0.09	0.06	0.09
Middle East	UAE	0.09	0.05	0.09
Middle East	Iraq	0	0	0
Middle East	Kuwait	0.08	0.06	0
Middle East	Turkey	0	0	0
Middle East	Yemen	0	0	0
North America	USA	0.22	0.29	0.39
North America	NORTH AMERICA AVERAGE	0.22	0.23	0.33
North America	Canada	0.25	0.1	0.19
North America	Mexico	0.13	0.25	0
Russia & Central Asia	Azerbaijan	0.32	0.17	0.19
Russia & Central Asia	Kazakhstan	0.14	0.14	0.16
Russia & Central Asia	RUSSIA & CENTRAL ASIA AVERAGE	0.19	0.15	0.16
South & Central America	Ecuador	0.57	0	1.13
South & Central America	Brazil	0.42	0.44	0.82
South & Central America	Colombia	0.86	0.65	0.77
South & Central America	SOUTH & CENTRAL AMERICA AVERAGE	0.39	0.42	0.63
South & Central America	Suriname	0	0	0.54
South & Central America	Argentina	0.37	0.52	0.52
South & Central America	Bolivia	0.71	0	0.48
South & Central America	Trinidad & Tobago	0.34	0.45	0.14
South & Central America	Guyana	0	0.07	0.12
South & Central America	Peru	0.37	0.3	0.08
South & Central America	Venezuela	0	0	0

Section 4 Results by function

Table B.26: Fatalities and fatal incidents by by function (2018-2022)

Function	Fatal incidents					Fatalities				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Exploration	1	0	0	0	1	1	0	0	0	1
Drilling	11	4	5	7	7	12	4	6	7	8
Production	9	13	3	5	11	9	16	4	5	13
Construction	3	3	1	3	4	4	3	1	8	4
Unspecified	3	2	3	0	6	5	2	3	0	7
OVERALL	27	22	12	15	29	31	25	14	20	33

Table B.27: Exposure hours by function (2018-2022)

Function	Hours (thousands)				
	2018	2019	2020	2021	2022
Exploration	31,899	37,879	35,482	37,838	29,118
Drilling	373,205	399,030	308,914	328,583	326,310
Production	1,282,002	1,339,025	1,113,934	1,326,571	1,267,104
Construction	725,186	651,578	540,547	559,086	461,358
Unspecified	654,058	610,840	545,324	426,948	495,110
OVERALL	3,066,350	3,038,352	2,544,201	2,679,026	2,579,000

Table B.28: Fatal accident rate (FAR) five-year rolling average by function (2017-2022)

Function	FAR five-year rolling average					
	2017	2018	2019	2020	2021	2022
Exploration	2.16	1.95	2.20	1.04	0.55	1.16
Drilling	2.55	2.65	2.32	2.41	2.47	2.13
Production	1.91	1.55	1.64	1.18	0.76	0.74
Construction	0.89	0.59	0.51	0.48	0.56	0.68
Unspecified	0.61	0.48	0.52	0.61	0.42	0.62
OVERALL	1.48	1.25	1.23	1.05	0.86	0.88

Table B.29: Fatal accident rate by function (2017-2022)

Function	Fatal accident rate (FAR)					
	2017	2018	2019	2020	2021	2022
Exploration	0.00	3.13	0.00	0.00	0.00	3.43
Drilling	4.06	3.22	1.00	1.94	2.13	2.45
Production	1.13	0.70	1.19	0.36	0.38	1.03
Construction	0.27	0.55	0.46	0.18	1.43	0.87
Unspecified	0.33	0.76	0.33	0.55	0.00	1.41
OVERALL	1.10	1.01	0.82	0.55	0.75	1.28

Table B.30: Total recordable injury rate (TRIR) five-year rolling average by function (2017-2022)

Function	TRIR five-year rolling average					
	2017	2018	2019	2020	2021	2022
Exploration	1.32	1.16	1.04	1.06	0.93	0.87
Drilling	2.37	2.09	1.82	1.69	1.62	1.61
Production	1.48	1.36	1.17	1.04	0.94	0.89
Construction	0.94	0.85	0.76	0.65	0.63	0.66
Unspecified	0.73	0.66	0.59	0.54	0.54	0.54
OVERALL	1.30	1.17	1.03	0.93	0.88	0.86

Table B.31: Total recordable injury rate by function (2017-2022)

Function	Total recordable injury rate (TRIR)					
	2017	2018	2019	2020	2021	2022
Exploration	0.69	1.38	1.29	0.87	0.48	0.27
Drilling	1.71	1.70	1.80	1.47	1.33	1.68
Production	1.10	1.16	0.92	0.72	0.79	0.84
Construction	0.65	0.71	0.67	0.49	0.59	0.81
Unspecified	0.63	0.54	0.57	0.42	0.50	0.64
OVERALL	0.96	0.99	0.92	0.70	0.77	0.90

Table B.32: Lost time injury rate (LTIR) five-year rolling average by function (2017-2022)

Function	LTIR five-year rolling average					
	2017	2018	2019	2020	2021	2022
Exploration	0.37	0.26	0.31	0.37	0.41	0.41
Drilling	0.67	0.58	0.49	0.49	0.46	0.45
Production	0.40	0.36	0.33	0.30	0.28	0.28
Construction	0.17	0.15	0.15	0.14	0.14	0.15
Unspecified	0.18	0.15	0.15	0.14	0.13	0.13
OVERALL	0.33	0.29	0.27	0.25	0.24	0.24

Table B.33: Lost time injury rate by function (2017-2022)

Function	Lost time injury rate (LTIR)					
	2017	2018	2019	2020	2021	2022
Exploration	0.21	0.38	0.66	0.42	0.37	0.14
Drilling	0.51	0.47	0.47	0.47	0.40	0.44
Production	0.32	0.32	0.27	0.24	0.25	0.32
Construction	0.16	0.15	0.13	0.12	0.15	0.18
Unspecified	0.15	0.14	0.12	0.12	0.08	0.17
OVERALL	0.27	0.26	0.24	0.22	0.22	0.28

Table B.34: Severity of lost work day cases by function (2017-2022)

Function	Average days lost per LWDC					
	2017	2018	2019	2020	2021	2022
Exploration	33.0	53.7	46.3	33.3	35.2	2.7
Drilling	45.1	71.5	58.4	53.4	70.6	55.0
Production	41.9	43.1	44.2	34.0	45.6	32.9
Construction	45.1	63.2	59.8	47.4	59.6	59.8
Unspecified	36.1	31.2	54.0	44.3	40.0	43.7
OVERALL	42.5	51.5	50.9	42.3	52.4	41.3

Table B.35: Exploration TRIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

Region	TRIR				Work hours (thousands)	
	Company		Contractor		2022	
	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.00	0.00	1.07	0.00	2,290	4,449
Asia / Australasia	0.08	0.00	1.43	0.00	1,633	3,097
Europe	1.05	0.56	3.72	0.00	1,793	2,600
Middle East	0.42	0.00	0.23	0.28	627	3,543
North America	0.23	0.00	0.78	2.71	1,513	1,107
Russia & Central Asia	0.00	0.00			1,455	
South & Central America	0.26	0.00	1.94	1.21	2,535	2,476
OVERALL	0.51	0.08	1.43	0.41	11,846	17,272

Table B36: Exploration LTIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	LTIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.00	0.00	0.38	0.00	2,290	4,449
Asia / Australasia	0.00	0.00	0.31	0.00	1,633	3,097
Europe	0.94	0.56	1.74	0.00	1,793	2,600
Middle East	0.00	0.00	0.11	0.00	627	3,543
North America	0.09	0.00	0.08	0.00	1,513	1,107
Russia & Central Asia	0.00	0.00			1,455	
South & Central America	0.13	0.00	0.51	1.21	2,535	2,476
OVERALL	0.39	0.08	0.42	0.17	11,846	17,272

Table B.37: Drilling TRIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	TRIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.20	0.24	0.79	0.79	4,245	34,212
Asia / Australasia	0.36	0.00	0.88	1.42	3,564	56,292
Europe	1.06	0.61	3.28	3.47	8,255	24,480
Middle East	0.95	0.60	1.27	0.55	13,339	70,601
North America	0.56	0.55	2.79	3.48	3,669	47,664
Russia & Central Asia	0.57	0.22	0.95	1.14	4,529	7,910
South & Central America	0.52	0.00	2.50	3.01	6,313	41,237
OVERALL	0.68	0.39	1.74	1.88	43,914	282,396

Table B.38: Drilling LTIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	LTIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.10	0.00	0.23	0.18	4,245	34,212
Asia / Australasia	0.04	0.00	0.33	0.37	3,564	56,292
Europe	0.41	0.61	1.63	1.35	8,255	24,480
Middle East	0.20	0.52	0.29	0.20	13,339	70,601
North America	0.16	0.00	0.50	0.48	3,669	47,664
Russia & Central Asia	0.19	0.00	0.22	0.38	4,529	7,910
South & Central America	0.12	0.00	0.74	0.73	6,313	41,237
OVERALL	0.19	0.27	0.50	0.46	43,914	282,396

Table B.39: Production TRIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	TRIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.33	0.45	0.51	0.44	35,590	144,119
Asia / Australasia	0.60	0.70	0.71	0.63	59,626	181,750
Europe	1.62	1.54	2.98	2.41	58,574	78,742
Middle East	0.45	0.21	0.38	0.23	38,959	158,219
North America	1.80	1.47	2.14	0.96	35,941	143,472
Russia & Central Asia	0.41	0.29	0.28	0.38	68,625	31,594
South & Central America	0.81	0.92	1.29	1.36	34,967	152,925
OVERALL	0.84	0.79	0.98	0.86	332,282	890,821

Table B.40: Production LTIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	LTIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.12	0.20	0.16	0.12	35,590	144,119
Asia / Australasia	0.16	0.15	0.15	0.14	59,626	181,750
Europe	0.73	0.77	0.98	1.02	58,574	78,742
Middle East	0.10	0.05	0.07	0.08	38,959	158,219
North America	0.51	0.36	0.34	0.20	35,941	143,472
Russia & Central Asia	0.29	0.24	0.09	0.06	112,626	31,594
South & Central America	0.44	0.74	0.47	0.69	34,967	152,925
OVERALL	0.32	0.34	0.26	0.30	376,283	890,821

Table B.41: Construction TRIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	TRIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.19	0.00	0.39	0.43	4,203	39,263
Asia / Australasia	0.40	0.23	0.70	0.70	4,381	93,618
Europe	0.40	0.39	2.53	3.18	10,259	19,813
Middle East	0.41	0.58	0.20	0.18	3,429	118,650
North America	0.26	0.81	1.63	2.18	3,719	14,226
Russia & Central Asia	0.17	4.72	0.67	0.62	9,109	104,271
South & Central America	0.30	0.00	1.35	1.88	5,027	31,390
OVERALL	0.32	1.32	0.65	0.76	40,127	421,231

Table B.42: Construction LTIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	LTIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.06	0.00	0.13	0.18	4,203	39,263
Asia / Australasia	0.10	0.00	0.08	0.13	4,381	93,618
Europe	0.14	0.19	0.62	0.81	10,259	19,813
Middle East	0.13	0.00	0.04	0.03	3,429	118,650
North America	0.00	0.00	0.22	0.28	3,719	14,226
Russia & Central Asia	0.13	0.55	0.08	0.08	9,109	104,271
South & Central America	0.13	0.00	0.53	0.86	5,027	31,390
OVERALL	0.10	0.17	0.15	0.18	40,127	421,231

Table B.43: Unspecified TRIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	TRIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.17	0.04	0.35	0.16	28,158	74,981
Asia / Australasia	0.32	0.19	0.58	1.75	46,809	35,524
Europe	0.47	0.38	1.61	0.40	28,592	17,661
Middle East	0.51	0.00	0.25	0.47	18,070	81,566
North America	0.41	0.40	1.09	2.49	30,255	49,840
Russia & Central Asia	0.37	0.22	0.39	0.41	22,666	26,510
South & Central America	0.22	0.23	1.22	1.08	12,997	21,202
OVERALL	0.36	0.22	0.64	0.90	187,547	307,284

Table B.44: Unspecified LTIR by region for companies and contractors (2022 & 2017-2021) and the number of related work hours for companies and contractors for 2022 only

	LTIR				Work hours (thousands)	
	Company		Contractor		2022	
Region	2017-2021	2022	2017-2021	2022	Company	Contractor
Africa	0.04	0.04	0.09	0.03	28,158	74,981
Asia / Australasia	0.05	0.02	0.08	0.23	46,809	35,524
Europe	0.16	0.31	0.54	0.11	28,592	17,661
Middle East	0.11	0.00	0.04	0.10	18,070	81,566
North America	0.10	0.20	0.20	0.70	30,255	49,840
Russia & Central Asia	0.22	0.13	0.13	0.15	22,666	26,510
South & Central America	0.03	0.08	0.37	0.23	12,997	21,481
OVERALL	0.10	0.11	0.15	0.21	187,547	307,563

Section 5 Results by company

Table B.45: FAR, TRIR and LTIR results by company (2022)

	FAR	TRIR			LTIR		
Company code 2022	FAR total	TRIR total	Company only	Contractor only	LTIR total	Company only	Contractor only
A	0.00	1.95	1.82	2.33	1.95	1.82	2.33
B	0.00	3.16	0.49	3.84	1.28	0	1.61
C	0.00	3.37	2.16	4.91	1.08	0.72	1.54
D	0.00	1.94	2.64	1.71	0.97	1.76	0.71
E	0.00	1.66	0	2.29	0.92	0	1.27
F	4.10	3.3	0.29	3.8	0.88	0.14	1
G	12.18	1.34	1.04	1.6	0.85	1.04	0.69
H	1.96	1.25	0.85	1.36	0.84	0.76	0.87
I	0.00	2.42	1.41	2.85	0.82	0.61	0.91
J	0.00	3.49	0	5.2	0.7	0	1.04
K	0.00	1.15	0.61	1.43	0.63	0.38	0.75
L	0.00	1.17	0	1.94	0.58	0	0.97
M	0.00	2.59	1.85	2.91	0.56	0	0.79
N	6.37	1.63	0.77	1.85	0.54	0.45	0.56
O	0.00	1.49	0	1.8	0.53	0	0.63
P	0.00	2.33	1.37	2.94	0.45	0.39	0.49
Q	0.00	1.07	0.42	1.55	0.44	0	0.78
R	0.00	0.85	0	1.17	0.34	0	0.47
T	0.00	0.75	0	1.08	0.33	0	0.48
U	0.54	0.84	0.44	1	0.31	0.2	0.35
Overall	1.28	0.9	0.61	0.99	0.28	0.26	0.28
V	0.00	2.54	1.24	3.51	0.27	0.31	0.23
W	0.00	0.52	0	0.64	0.26	0	0.32
X	0.00	1.42	0.98	1.48	0.24	0	0.28
Y	0.00	0.73	0.76	0.73	0.23	0.46	0.19
AA	0.00	0.79	1.11	0.75	0.18	0	0.2
Z	0.00	1.8	0.68	2.66	0.18	0	0.32
BB	1.43	0.35	0.12	0.41	0.15	0.12	0.16
CC	0.00	0.88	0.52	0.99	0.15	0.09	0.17
DD	1.24	0.99	0.8	1.07	0.15	0.21	0.13
EE	1.05	0.63	0.22	0.76	0.14	0.09	0.15
FF	5.69	0.4	0	0.45	0.11	0	0.13
GG	1.55	1.06	0.76	1.12	0.1	0.12	0.1
HH	2.04	0.22	0.26	0.21	0.08	0.19	0.07
II	3.37	0.22	0.06	0.28	0.08	0	0.12
JJ	0.00	0.76	0	0.87	0.05	0	0.06
KK	0.60	0.14	0.05	0.17	0.05	0.03	0.06
LL	0.00	0.94	1.26	0.84	0	0	0
MM	0.00	0.94	2.29	0	0	0	0
NN	0.00	0	0	0	0	0	0
OO	0.00	0	0	0	0	0	0
PP	0.00	1.53	1.31	1.71	0	0	0
QQ	0.00	1.49	0.85	1.64	0	0	0
RR	0.00	0.58	0	0.74	0	0	0
SS	0.00	0.53	0	0.67	0	0	0
TT	0.00	0.45	1.09	0	0	0	0
UU	0.00	0	0	0	0	0	0
VV	0.00	0.47	0	0.56	0	0	0
WW	0.00	0.25	1.07	0	0	0	0
XX	0.00	0.95	0.9	0.99	0	0	0

Note: company codes are allocated according to company & contractor LTIR performance

Table B.46: TRIR by company and function (2022)

Company code	TRIR (2022)			
	Exploration	Drilling	Production	Construction
A	4	2.12	1.74	no data
B	no data	no data	3.16	no data
C	no data	6.79	4.65	no data
D	no data	no data	1.95	no data
E	no data	4.07	1.7	0
F	2.02	7.93	2.21	2.04
G	no data	no data	1.34	no data
H	0.53	1.66	1.22	2.34
I	0.77	5.22	2.93	1.46
J	0	7.65	1.7	3.66
K	0	2.49	1.12	0.14
L	0	no data	2.06	no data
M	no data	0	1.66	3.94
N	no data	no data	no data	no data
O	no data	no data	1.51	no data
P	0	4.41	2.32	3.48
Q	0	1.33	1.07	3.69
R	0	2.16	1.61	0
T	no data	1.01	0.98	2.18
U	0	2.44	0.94	0.75
Overall	0.27	1.68	0.84	0.81
V	no data	2.72	3.49	3.84
W	no data	1.24	0.57	0
X	3.12	2.63	0.7	2.21
Y	no data	no data	0.67	no data
AA	0	1.27	0.91	0.65
Z	no data	2.56	2.93	3.44
BB	0.13	0.87	0.22	0.32
CC	0	2.34	0.32	1.57
DD	0	1.57	1	1.78
EE	0	0.99	0.87	0.7
FF	no data	0	no data	0
GG	2.11	3.61	1.04	0.78
HH	no data	0.56	0.13	0.07
II	no data	no data	0.24	no data
JJ	no data	1.36	0.76	1.13
KK	0	0.35	0.11	0
LL	no data	3.05	0.65	0
MM	no data	no data	0	no data
NN	no data	no data	0	no data
OO	no data	no data	0	no data
PP	no data	no data	2.46	no data
QQ	no data	no data	1.49	no data
RR	no data	0	no data	no data
SS	no data	0.59	0.43	0.99
TT	no data	0	0.59	no data
UU	no data	no data	no data	no data
VV	no data	0	1.41	no data
WW	no data	no data	0.25	no data
XX	0	1.15	0	no data

Table B.47: LTIR by company and function (2022)

Company code	LTIR (2022)			
	Exploration	Drilling	Production	Construction
A	4	2.12	1.74	no data
B	no data	no data	1.28	no data
C	no data	1.85	1.4	no data
D	no data	no data	0.98	no data
E	no data	0	1.06	0
F	2.02	1.22	0.86	0.82
G	no data	no data	0.85	no data
H	0.53	1.07	0.83	1.59
I	0	1.67	1.19	0.34
J	0	2.19	0	0
K	0	0.83	0.79	0
L	0	no data	1.03	no data
M	no data	0	0	1.07
N	no data	no data	no data	no data
O	no data	no data	0.57	no data
P	0	0.88	0	1.74
Q	0	0.89	0	2.22
R	0	1.08	0.54	0
T	no data	0.68	0.2	2.18
U	0	0.81	0.38	0.14
Overall	0.14	0.44	0.32	0.18
V	no data	0	0.33	0
W	no data	1.24	0.24	0
X	0	0.45	0.07	0.95
Y	no data	no data	0.21	no data
AA	0	0.25	0.23	0.13
Z	no data	0.73	0.17	0
BB	0	0.26	0.11	0.16
CC	0	0.26	0.07	0.22
DD	0	0.21	0.17	0.14
EE	0	0.2	0.22	0.07
FF	no data	0	no data	0
GG	0	0.22	0.17	0.1
HH	no data	0.27	0.06	0
II	no data	no data	0.09	no data
JJ	no data	0.45	0	0
KK	0	0.18	0.02	0
LL	no data	0	0	0
MM	no data	no data	0	no data
NN	no data	no data	0	no data
OO	no data	no data	0	no data
PP	no data	no data	0	no data
QQ	no data	no data	0	no data
RR	no data	0	no data	no data
SS	no data	0	0	0
TT	no data	0	0	no data
UU	no data	no data	no data	no data
VV	no data	0	0	no data
WW	no data	no data	0	no data
XX	0	0	0	no data

Database dimensions (Appendix A)

Table B.48: Total work hours reported (1985-2022)

Year	Work hours reported (thousands)			Participating companies
	Overall	Hours company	Hours contractor	
1985	655,650	410,409	245,241	22
1986	544,053	305,637	238,416	26
1987	602,480	355,578	246,902	30
1988	616,448	363,530	252,918	35
1989	655,945	330,970	324,975	33
1990	720,652	331,986	388,666	31
1991	940,538	441,141	499,397	36
1992	944,143	431,139	513,004	33
1993	919,176	410,474	508,702	35
1994	871,973	397,258	474,715	30
1995	840,811	355,695	485,186	30
1996	911,540	360,149	551,391	36
1997	1,161,335	389,442	771,893	40
1998	1,131,229	385,619	745,610	41
1999	1,197,460	395,141	802,319	40
2000	1,633,855	571,915	1,061,940	44
2001	1,976,646	633,039	1,343,607	41
2002	2,120,829	636,414	1,484,415	35
2003	2,247,026	663,894	1,583,132	36
2004	2,290,453	638,739	1,651,714	37
2005	2,380,670	639,292	1,741,378	39
2006	2,936,974	734,425	2,202,549	41
2007	2,912,801	667,986	2,244,815	38
2008	3,304,168	712,482	2,591,686	39
2009	3,585,842	822,240	2,763,602	43
2010	3,411,144	725,673	2,685,471	42
2011	3,456,078	753,100	2,702,978	45
2012	3,691,040	759,600	2,931,440	49
2013	3,770,546	820,856	2,949,690	50
2014	4,365,959	945,572	3,420,387	52
2015	3,719,316	896,862	2,822,454	49
2016	2,895,621	667,335	2,228,286	43
2017	2,999,039	688,779	2,310,260	45
2018	3,066,350	653,764	2,412,586	46
2019	3,038,352	657,258	2,381,094	48
2020	2,544,201	708,712	1,835,489	48
2021	2,679,026	686,668	1,992,358	50
2022	2,579,000	659,717	1,919,283	51

Table B.49: Exposure hours by region (2021 and 2022)

Region	Hours (thousands)	
	2021	2022
Africa	323,847	371,510
Asia / Australasia	510,335	486,294
Europe	231,120	250,769
Middle East	670,571	507,003
North America	260,595	331,406
Russia & Central Asia	332,910	320,670
South & Central America	349,648	311,348
OVERALL	2,679,026	2,579,000

Table B.50: Exposure hours by function (2021 and 2022)

Function	Hours (thousands)	
	2021	2022
Exploration	37,838	29,118
Drilling	328,583	326,310
Production	1,326,571	1,267,104
Construction	559,086	461,358
Unspecified	426,948	495,110
OVERALL	2,679,026	2,579,000

Appendix C - Contributing companies

Table C.1 shows the size of the database in thousands of work hours reported for each contributing company and whether reported data include information on contractor statistics, breakdown by function, restricted work day cases, days lost following lost work day and restricted work day cases. All company submissions include data on numbers of fatalities and lost work day cases.

Table C.1: Contributing companies 2022

Company	Hours (thousands)	Contractor data	Data by function	RWDCs	LWDC days	RWDC days
ADDAX Petroleum Limited	2,122	yes	yes	yes	yes	yes
ADNOC	343,544	yes	yes	yes	yes	yes
Aker BP	11,251	yes	yes	yes	partly	partly
Assala Energy	6,040	yes	yes	yes	yes	partly
Beach Energy	2,868	yes	yes	yes	yes	yes
BP	96,188	yes	yes	yes	no	no
BW Energy	1,069	yes	yes	yes	yes	yes
Capricorn Energy PLC.	1,722	yes	yes	yes	yes	mostly
CCED	5,850	yes	yes	yes	yes	yes
Cenovus	45,001	yes	yes	yes	no	no
CEPSA EP	5,410	yes	yes	yes	yes	mostly
Chevron	258,213	yes	yes	yes	yes	yes
CNOOC	166,095	yes	yes	yes	yes	mostly
ConocoPhillips	102,060	yes	yes	yes	no	no
Crescent Petroleum	5,396	yes	yes	yes	yes	yes
Dana Gas	3,994	yes	yes	yes	yes	yes
ENI	210,374	yes	yes	yes	yes	mostly
Equinor ASA	103,510	yes	yes	yes	no	no
ExxonMobil	161,926	yes	yes	yes	no	no
Genel Energy	3,180	yes	yes	yes	yes	yes
Gulf Keystone	2,235	yes	yes	yes	yes	yes
Harbour Energy	12,041	yes	yes	yes	yes	mostly
INPEX Corporation	14,988	yes	yes	yes	yes	mostly
KMG	44,001	no	yes	no	yes	no
Kosmos Energy	988	yes	yes	yes	yes	yes
MOL	8,207	yes	yes	yes	yes	yes
Neptune Energy	9,284	yes	yes	yes	yes	yes
NOGA Holding [Tatweer]	17,590	yes	yes	yes	yes	yes
North Oil Company	18,443	yes	yes	yes	yes	yes
OMV	38,396	yes	yes	yes	yes	yes
Oxy	78,450	yes	yes	yes	yes	yes
Pan American Energy	26,642	yes	yes	yes	yes	yes
Petrobras	152,894	yes	yes	yes	yes	yes
Petronas Carigali SDN BHD	59,367	yes	yes	yes	yes	yes
PGNiG	11,798	yes	yes	yes	yes	yes
Pluspetrol	19,112	yes	yes	yes	yes	yes
Prime Energy	1,647	yes	yes	yes	yes	yes
PTTEP	46,845	yes	yes	yes	yes	yes
Repsol	13,280	yes	yes	yes	yes	yes
Shell Companies	186,807	yes	yes	yes	yes	yes
SOCAR	83,781	no	yes	yes	yes	mostly
Sonangol	3,143	yes	yes	yes	yes	yes
Spirit Energy	3,278	yes	yes	yes	yes	yes

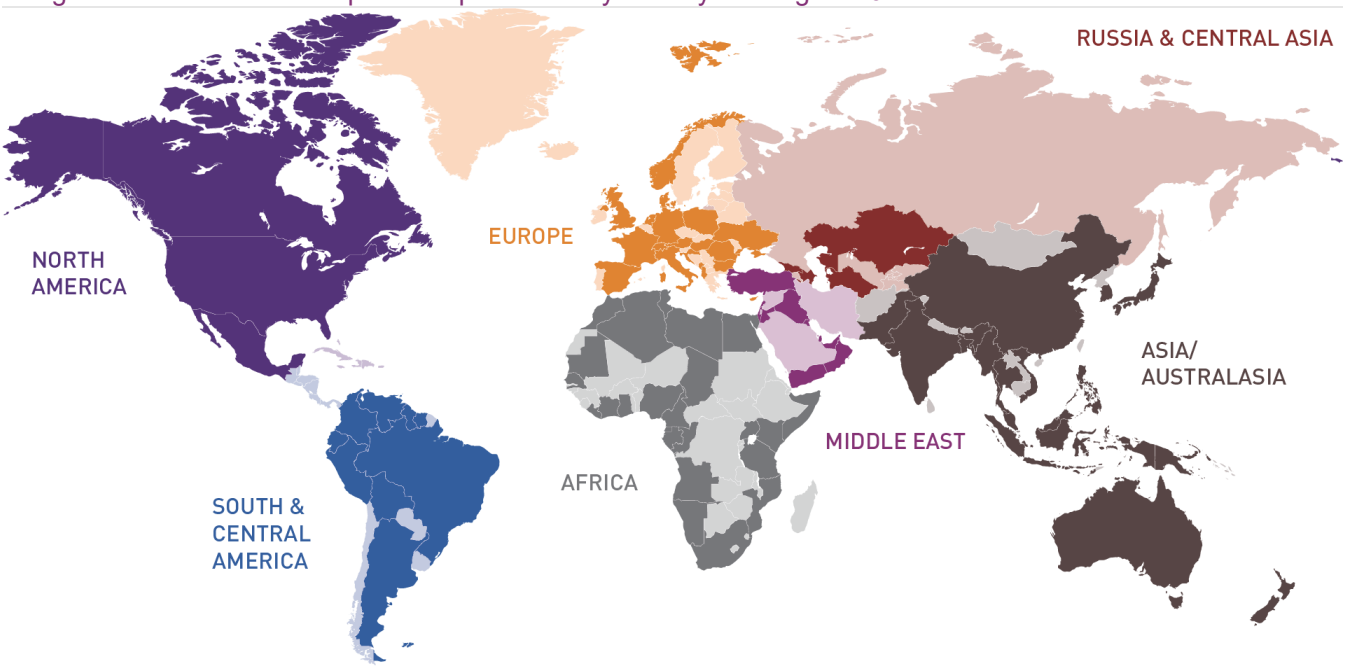
Company	Hours (thousands)	Contractor data	Data by function	RWDCs	LWDC days	RWDC days
Suncor	1,711	yes	yes	yes	yes	yes
TotalEnergies	95,119	yes	yes	yes	yes	no
Trident Energy	5,658	yes	yes	mostly	mostly	mostly
Tullow Oil	4,450	yes	yes	yes	yes	yes
Vår Energy	10,124	yes	yes	yes	yes	yes
Wintershall Dea	7,421	yes	yes	yes	yes	yes
Woodside	16,697	yes	yes	yes	yes	yes
YPF SA	48,790	yes	yes	yes	yes	mostly

Note: A data row is a single entry for a company for one country and location (one of company onshore, company offshore, contractor onshore, contractor offshore), e.g. A company, UK, company offshore.
Yes = reported for all data rows | mostly = reported for more than 50% of data rows | partly = reported for less than 50% of data rows | no = not reported at all.

Appendix D - Countries represented

The figures and table below show the breakdown of reported hours worked in regions and countries. Also shown is the number of companies reporting data in each country. They do not necessarily show all hours worked in the exploration and production sectors of the oil and gas industry in each country.

Figure D1: Number of companies represented by country and region 2022



Number of participating companies

Country represented/Not represented

AFRICA	
Algeria	8
Angola	9
Cameroon	1
Chad	1
Congo	2
Egypt	9
Equatorial Guinea	4
Gabon	5
Ghana	3
Ivory Coast	3
Kenya	2
Liberia	1
Libya	7
Mauritania	6
Morocco	1
Mozambique	3
Namibia	5
Nigeria	7
São Tomé And Principe	2
Senegal	4
Somalia	1
South Africa	2
Tanzania	2
Tunisia	3
Uganda	2

ASIA/ AUSTRALASIA	
Australia	13
Bangladesh	1
Brunei	2
China	10
India	2
Indonesia	13
Japan	3
Malaysia	8
Myanmar	6
New Zealand	1
Pakistan	2
Papua New Guinea	2
Philippines	2
Singapore	6
South Korea	3
Thailand	5
Vietnam	3

EUROPE	
Albania	2
Austria	2
Bulgaria	1
Croatia	1
Cyprus	3
Denmark	2
France	5
Germany	4
Hungary	2
Italy	3
Monaco	1
Montenegro	1
Netherlands	7
Norway	15
Poland	3
Romania	2
Spain	4
Switzerland	2
UK	18
Ukraine	1

MIDDLE EAST	
Bahrain	2
Iraq	5
Israel	1
Jordan	1
Kurdistan Region of Iraq	3
Kuwait	2
Lebanon	1
Oman	6
Qatar	4
Turkey	2
UAE	12
Yemen	2

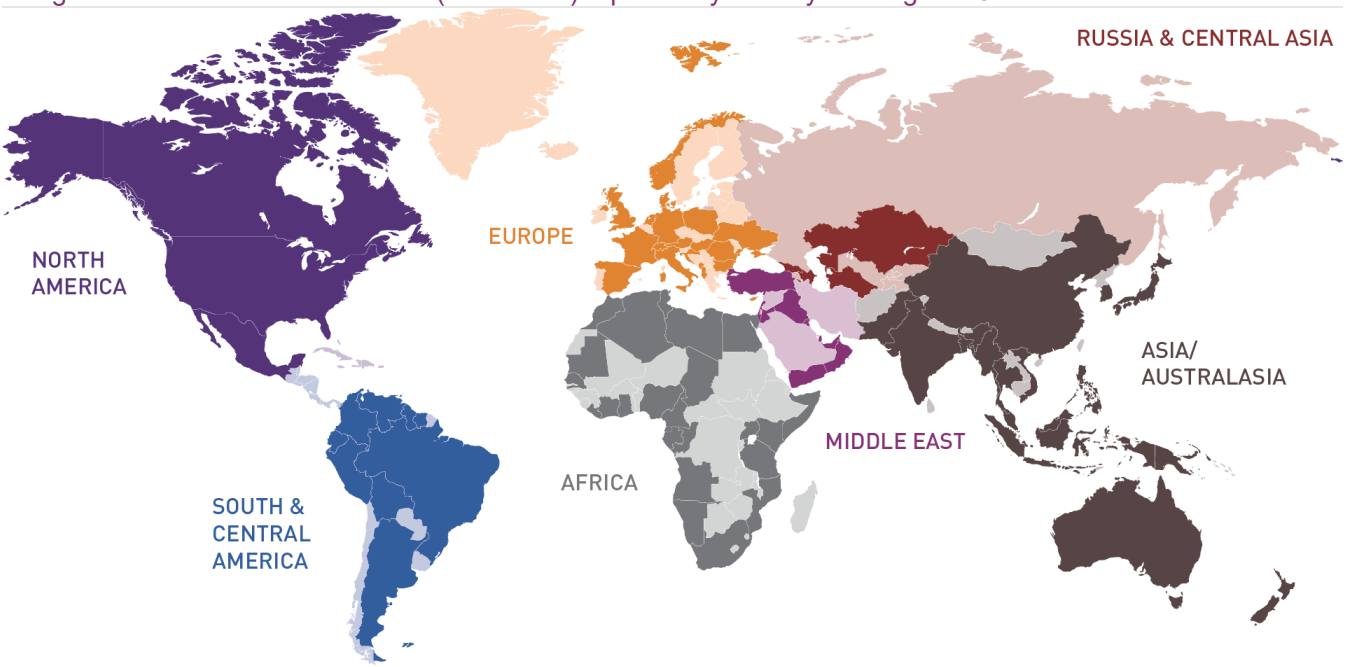
NORTH AMERICA	
Canada	12
Mexico	10
USA	14

RUSSIA & CENTRAL ASIA	
Azerbaijan	5
Georgia	1
Kazakhstan	6
Turkmenistan	2

SOUTH & CENTRAL AMERICA	
Argentina	12
Bolivia	6
Brazil	13
Colombia	5
Ecuador	2
Falkland Islands	1
Guyana	3
Peru	3
Suriname	4
Trinidad & Tobago	4
Venezuela	4

Iran and Russia excluded

Figure D2: Number of work hours (thousands) reported by country and region 2022



Number of reported work hours (thousands)

Country represented/Not represented

AFRICA	
Algeria	27,653
Angola	63,661
Cameroon	2,122
Chad	7,605
Congo	27,553
Egypt	51,153
Equatorial Guinea	5,767
Gabon	9,232
Ghana	6,670
Ivory Coast	1,136
Kenya	881
Liberia	1
Libya	20,435
Mauritania	637
Morocco	11
Mozambique	2,627
Namibia	499
Nigeria	126,053
São Tomé And Principe	328
Senegal	5,335
Somalia	48
South Africa	83
Tanzania	229
Tunisia	4,920
Uganda	6,871

ASIA/ AUSTRALASIA	
Australia	47,265
Bangladesh	4,869
Brunei	610
China	157,439
India	12,289
Indonesia	63,439
Japan	5,094
Malaysia	102,554
Myanmar	5,579
New Zealand	1,750
Pakistan	7,701
Papua New Guinea	18,889
Philippines	2,985
Singapore	3,467
South Korea	54
Thailand	51,049
Vietnam	1,261

EUROPE	
Albania	1,090
Austria	1,313
Bulgaria	15
Croatia	2,038
Cyprus	744
Denmark	7,526
France	1,873
Germany	5,909
Hungary	2,568
Italy	9,226
Monaco	22
Montenegro	77
Netherlands	16,723
Norway	101,547
Poland	11,979
Romania	24,372
Spain	1,542
Switzerland	12
UK	62,188
Ukraine	5

MIDDLE EAST	
Bahrain	17,590
Iraq	19,438
Israel	2,644
Jordan	4
Kurdistan Region of Iraq	10,763
Kuwait	10,781
Lebanon	22
Oman	53,176
Qatar	39,172
Turkey	559
UAE	349,042
Yemen	3,812

NORTH AMERICA	
Canada	88,289
Mexico	7,264
USA	235,853

RUSSIA & CENTRAL ASIA	
Azerbaijan	96,862
Georgia	2,047
Kazakhstan	218,885
Turkmenistan	2,876

SOUTH & CENTRAL AMERICA	
Argentina	89,829
Bolivia	6,309
Brazil	168,530
Colombia	2,600
Ecuador	1,770
Falkland Islands	2
Guyana	17,318
Peru	12,411
Suriname	1,844
Trinidad & Tobago	7,188
Venezuela	3,547

Iran and Russia excluded

Table D.1: Countries represented (2022)

Region	Country	Reporting companies (number)	Hours (thousands)
Africa	ALGERIA	7	27,653
Africa	ANGOLA	8	63,661
Africa	CAMEROON	1	2,122
Africa	CHAD	1	7,605
Africa	CONGO	2	27,553
Africa	EGYPT	9	51,153
Africa	EQUATORIAL GUINEA	4	5,767
Africa	GABON	5	9,232
Africa	GHANA	3	6,670
Africa	IVORY COAST	3	1,136
Africa	KENYA	2	881
Africa	LIBERIA	1	1
Africa	LIBYA	7	20,435
Africa	MAURITANIA	6	637
Africa	MOROCCO	1	11
Africa	MOZAMBIQUE	3	2,627
Africa	NAMIBIA	4	499
Africa	NIGERIA	7	126,053
Africa	SÃO TOMÉ AND PRÍNCIPE	2	328
Africa	SENEGAL	4	5,335
Africa	SOMALIA	1	48
Africa	SOUTH AFRICA	1	83
Africa	TANZANIA	2	229
Africa	TUNISIA	3	4,920
Africa	UGANDA	2	6,871
Asia / Australasia	AUSTRALIA	12	47,265
Asia / Australasia	BANGLADESH	1	4,869
Asia / Australasia	BRUNEI	2	610
Asia / Australasia	CHINA	10	157,439
Asia / Australasia	INDIA	2	12,289
Asia / Australasia	INDONESIA	13	63,439
Asia / Australasia	JAPAN	2	5,094
Asia / Australasia	MALAYSIA	8	102,554
Asia / Australasia	MYANMAR	5	5,579
Asia / Australasia	NEW ZEALAND	1	1,750
Asia / Australasia	PAKISTAN	2	7,701
Asia / Australasia	PAPUA NEW GUINEA	2	18,889
Asia / Australasia	PHILIPPINES	2	2,985
Asia / Australasia	SINGAPORE	6	3,467
Asia / Australasia	SOUTH KOREA	2	54
Asia / Australasia	THAILAND	5	51,049
Asia / Australasia	VIETNAM	3	1,261
Europe	ALBANIA	2	1,090
Europe	AUSTRIA	2	1,313
Europe	BULGARIA	1	15
Europe	CROATIA	1	2,038
Europe	CYPRUS	3	744
Europe	DENMARK	2	7,526
Europe	FRANCE	5	1,873
Europe	GERMANY	4	5,909
Europe	HUNGARY	1	2,568
Europe	ITALY	3	9,226
Europe	MONACO	1	22
Europe	MONTENEGRO	1	77
Europe	NETHERLANDS	7	16,723
Europe	NORWAY	15	101,547

Region	Country	Reporting companies (number)	Hours (thousands)
Europe	POLAND	3	11,979
Europe	ROMANIA	2	24,372
Europe	SPAIN	3	1,542
Europe	SWITZERLAND	2	12
Europe	UK	18	62,188
Europe	UKRAINE	1	5
Middle East	BAHRAIN	1	17,590
Middle East	IRAQ	4	19,438
Middle East	ISRAEL	1	2,644
Middle East	JORDAN	1	4
Middle East	KURDISTAN REGION OF IRAQ	3	10,763
Middle East	KUWAIT	2	10,781
Middle East	LEBANON	1	22
Middle East	OMAN	6	53,176
Middle East	QATAR	4	39,172
Middle East	TURKEY	2	559
Middle East	UAE	12	349,042
Middle East	YEMEN	2	3,812
North America	CANADA	12	88,289
North America	MEXICO	10	7,264
North America	USA	14	235,853
Russia & Central Asia	AZERBAIJAN	5	96,862
Russia & Central Asia	GEORGIA	1	2,047
Russia & Central Asia	KAZAKHSTAN	6	218,885
Russia & Central Asia	TURKMENISTAN	1	2,876
South & Central America	ARGENTINA	12	89,829
South & Central America	BOLIVIA	6	6,309
South & Central America	BRAZIL	12	168,530
South & Central America	COLOMBIA	5	2,600
South & Central America	ECUADOR	2	1,770
South & Central America	FALKLAND ISLANDS	1	2
South & Central America	GUYANA	3	17,318
South & Central America	PERU	3	12,411
South & Central America	SURINAME	3	1,844
South & Central America	TRINIDAD & TOBAGO	4	7,188
South & Central America	VENEZUELA	3	3,547

Note: Russia and Iran excluded.

Appendix E - Glossary of terms

Assault and violent act (as an incident/event category)

Intentional attempt, threat or act of bodily injury by a person or person(s) or by violent harmful actions of unknown intent, includes intentional acts of damage to property.

Aviation accident (as an incident/event category)

An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked or, in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

Caught in, under or between (as an incident/ event category)

Injury where injured person is crushed or similarly injured between machinery moving parts or other objects, caught between rolling tubulars or objects being moved, crushed between a ship and a dock, or similar incidents. Also includes vehicle incidents involving a rollover.

Causal factors

See IOGP Safety data reporting users' guide.

Commentary drive

A training technique whereby the driver conducts a typical journey and, while driving, explains what hazards he/she sees or can anticipate in the road ahead, including unseen hazards, and what safe driving techniques they will or would utilize to eliminate or minimize the threat from such hazards. The driver is accompanied by a qualified instructor who assesses if the driver is employing the correct defensive driving techniques and proper seeing habits to identify and avoid driving hazards. At the end of drive, the assessor provides feedback and coaching to the driver on any areas of improvement.

Commute travel

For injury/illness reporting, Commute travel begins when the worker is seated in the vehicle in preparation for departure and ends when the worker arrives at their home or worksite and the vehicle is placed in park or taken out of gear. For MVC reporting, Commute travel begins when the worker is no longer driving on company business.

Note: Travel to and from field operations locations is considered to be company business travel.

A vehicle crash is considered to have occurred during commute travel if it meets the definition above, regardless whether the event occurs while driving a company or personal vehicle or whether the employee or contract employee is being compensated during this time. Where appropriate, any vehicle crash occurring during Commute travel may be considered as asset or property damage but not as an MVC.

Note: All work-related travel performed by workers that are home-based, i.e., work from their place of residence, is considered to be company business travel.

Commuting

- Travel from home to first work site and travel from last work site to home.
- Travel between a worker's identified work location and any location for personal business, including a restaurant.
- Travel between a worker's established 'home away from home' to the first worksite or to any location for personal business, including a restaurant.
- Travel between home and a non-company event, e.g., local conference or other similar function.

Company employee

Any person employed by and on the payroll of the reporting company, including corporate and management personnel specifically involved in E&P. Persons employed under short-service contracts are included as company employees provided they are paid directly by the company.

Confined space (as an incident/event category)

Spaces that are considered confined because their configurations hinder the activities of employee who must enter, work in, and exit them. Confined spaces include, but are not limited to underground vaults, tanks, storage bins, manholes, pits, silos, process vessels and pipelines.

Construction (as a work function)

Major construction and fabrication activities as well as disassembly, removal and disposal (decommissioning) at the end of the facility life. Includes construction of process plant, yard construction of structures, offshore installation, hook-up and commissioning, and removal of redundant process facilities.

Construction, commissioning, decommissioning (as a type of activity)

Activities involving the construction, fabrication and installation of equipment, facilities or plant, testing activities to verify design objectives or specification, and also disassembly, removal and disposal (decommissioning) at the end of the facility life.

Contracted (vehicle)

See Owned, contracted or leased.

Contractor

A contractor is defined as an individual or organization performing work for the reporting company, following verbal or written agreement. Subcontractor is synonymous with contractor.

Contractor employee

Any person employed by a contractor or contractor's subcontractor(s) who is directly involved in execution of prescribed work under a contract with the reporting company.

Cut, puncture, scrape (as an incident/event category)

Abrasions, scratches and wounds that penetrate the skin.

Diving operations

The personnel, equipment and management systems to support a person who dives. A person dives if they enter water or any other liquid, or a chamber in which they are subject to pressure greater than 100 millibars above atmospheric pressure, and in order to survive in such an environment breathes air or other gas at a pressure greater than atmospheric pressure. Or for such a purpose uses a vehicle, capsule or suit where a sealed internal atmospheric pressure is maintained and where the external pressure differential is greater than 100 millibars.

Diving, subsea, ROV (as a type of activity)

Operations involving diving (see definition for diving operations), subsea equipment or activities and/or operations involving underwater remotely operated vehicles (ROV).

Drilling (as a work function)

All exploration, appraisal and production drilling, and workover as well as their administrative, engineering, construction, materials supply and transportation aspects. It includes site preparation, rigging up and down, and restoration of the drilling site upon work completion. Drilling includes all exploration, appraisal and production drilling.

Drilling/workover/well services (as a type of activity)

Activities involving the development, maintenance work or remedial treatments related to an oil or gas well.

Dropped objects (as an incident/event category)

Any item with the potential to cause injury, death, or equipment/environmental damage, that falls down or over from its previous position. Specifically excludes falls from height (people). Source: Dropped Object Prevention Scheme, Recommended Practice http://www.dropsonline.org/assets/documents/DROPS-Recommended-Practice-2017.pdf

Event

An unplanned or uncontrolled outcome of a business operation or activity that has or could have contributed to an injury or physical damage or environmental damage.

Excavation, trenching, ground disturbance (as a type of activity)

Work that involves a cut, cavity, trench or depression in the earth's surface formed by earth removal.

Exploration (as a work function)

Geophysical, seismographic and geological operations, including their administrative and engineering aspects, construction, maintenance, materials supply, and transportation of personnel and equipment (excluding drilling).

Explosion or Burn (as an incident/event category)

Burns or other effects of fires, explosions and extremes of temperature. 'Explosion' means a rapid combustion, not an overpressure.

Exposure: Electrical (as an incident/event category)

Exposure to electrical shock or electrical burns etc.

Exposure: Noise, Chemical, Biological, Vibration (as an incident/event category)

Exposure to noise, chemical substances (including asphyxiation due to lack of oxygen not associated with a confined space), hazardous biological material, vibration or radiation.

Falls from height (as an incident/event category)

A person falls from one level to another.

Fatal Accident Rate (FAR)

The number of company/contractor fatalities per 100 000 000 (100 million) hours worked.

Fatal incident rate (FIR)

The number of incidents that result in one or more fatalities per 100 million hours worked

Fatality

Involves one person who died as a result of a work-related incident.

Fatigue (as a causal factor)

Person(s) involved were mentally tired for whatever reason e.g., excessive work hours, shift patterns, staffing levels insufficient, ill-health etc. The loss of situational awareness, task fixation, distraction, and mental fatigue due to sleep loss are examples of conditions that apply to this causal factor.

First Aid Case

Cases that are not sufficiently serious to be reported as medical treatment or more serious cases but nevertheless require minor first aid treatment, e.g., dressing on a minor cut, removal of a splinter from a finger. First aid cases are not recordable incidents.

High Potential Event

A high potential event is an event which could have, under slightly different circumstances, realistically resulted in a fatal incident.

Home away from home

When travelling, workers establish a 'home away from home' when checked into a hotel, motel, or other similar temporary residence.

Travel directly to the temporary residence before check-in from the airport (train station, etc.) or rental car agency and travel direct from home to the temporary residence is considered business travel, when on work-related business.

Travel home directly from the temporary residence after checkout to the airport (train station, etc.) or rental car agency and travel direct to home from the temporary residence is considered business travel, when on work-related business.

Company mandated accommodation is not considered to be home away from home. This is considered to be a field operations location therefore travel to and from such locations is considered to be company business travel and not a commute.

Hours Worked

The actual hours worked, including overtime hours, are recorded in the case of onshore operations. The hours worked by an individual will generally be about 2,000 per year. For offshore workers, the hours worked are calculated on a 12-hour work day. Consequently, average hours worked per year will vary from 1,600 to 2,300 hours per person depending upon the on/off shift ratio. Vacations and leave are excluded.

Hours Worked in Year (thousands)

Hours are rounded to the nearest thousand.

Incident

An unplanned or uncontrolled Event or chain of Events that has resulted in at least one fatality, recordable injury, or physical or environmental damage.

Key performance indicators (KPI)

Information or data that provides evidence of a Company's performance in managing its key risks. KPIs may also be referred to as performance metrics. In the Safety Performance Indicators report, these include: number of fatalities, fatal accident and incident rates, lost time injury rate and total recordable injury rate.

Lifting, crane, rigging, deck operations (as a type of activity)

Activities related to the use of mechanical lifting and hoisting equipment, assembling and disassembling drilling rig equipment and drill pipe handling on the rig floor.

Lost Time Injury (LTI)

A fatality or lost work day case. The number of LTIs is the sum of fatalities and lost work day cases.

Lost time injury rate (LTIR)

The number of lost time injuries (fatalities + lost work day cases) incidents per 1,000,000 hours worked.

Lost Work Day Case (LWDC)

Any work-related injury, other than a fatal injury, which results in a person being unfit for work on any day after the day of occurrence of the occupational injury. "Any day" includes rest days, weekend days, leave days, public holidays or days after ceasing employment.

LWDC severity

The average number of lost days per lost work day case.

Maintenance, inspection and testing (as a type of activity)

Activities related to preserving, repairing, examining and function testing assets, equipment, plant or facilities.

Medical Cause of Death

This is the cause of death given on the death certificate. Where two types of causes are provided, such as "pulmonary oedema" caused by "inhalation of hot gases from a fire", both are recorded.

Medical Treatment Case (MTC)

Cases that are not severe enough to be reported as lost work day cases or restricted work day cases but are more severe than requiring simple first aid treatment.

Motor Vehicle Crash (MVC)

A work-related motor vehicle incident e.g., collision or other event), which resulted in vehicle damage, or vehicle rollover, or personal injury, or fatality.

Note: Contractor Motor Vehicle Crash includes any vehicle operated by a contractor or subcontractor while performing work on behalf of the company, where injuries, kilometres driven, or hours worked should be recorded (e.g., delivery/courier services are excluded).

Near Miss

An unplanned on uncontrolled event or chain of events that has not resulted in recordable injury or physical damage or environmental damage but had the potential to do so in other circumstances.

Number of days unfit for work

The sum total of calendar days (consecutive or otherwise) after the days on which the occupational injuries occurred, where the persons involved were unfit for work and did not work.

Number of Employees

Average number of full-time and part-time employees involved in exploration and production, calculated on a full-time basis, during the reporting year. For example 2 part time employees each working 20 - 30 hours per week is equivalent to 1 full time employee.

Number of Fatalities

The total number of Company employees and/or Contractor employees who died as a result of an incident. Delayed deaths that occur after the incident are included if the deaths were a direct result of the incident. For example, if a fire killed one person outright, and a second died three weeks later from lung damage caused by the fire, both are reported.

Occupational Illness

Any abnormal condition or disorder, or any fatality other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. Occupational illness may be caused by inhalation, absorption, ingestion of, or direct contact with the hazard, as well as exposure to physical and psychological hazards. It will generally result from prolonged or repeated exposure. Refer to IOGP/IPIECA Report 393 - Health Performance Indicators, published 2007.

Occupational Injury

Any injury such as a cut, fracture, sprain, amputation, etc., or any fatality, which results from a work-related activity or from an exposure involving a single incident in the work environment, such as deafness from explosion, one-time chemical exposure, back disorder from a slip/trip, insect, or snake bite.

Office, warehouse, accommodation, catering (as a type of activity)

Activities related to work conducted in offices, warehouses, workshops, accommodation and catering facilities.

Officially declared [From API RP 754]

A declaration by a recognized community official (e.g. fire, police, civil defence, emergency management) or delegate (e.g. Company official) authorized to order the community action (e.g. shelter-in-place, evacuation).

Off-road

A route used for access to places which are not accessible by a road, (see 'Road').

Offshore Work

All activities and operations that take place at sea, including activities in bays, in major inland seas, such as the Caspian Sea, or in other inland seas directly connected to oceans. Incidents including transportation of people and equipment from shore to the offshore location, either by vessel or helicopter, should be recorded as "offshore".

Onshore Work

All activities and operations that take place within a landmass, including those on swamps, rivers and lakes. Land-to-land aircraft operations are counted as onshore, even though flights are over water.

Other (as an incident/event category)

Used to specify where an incident cannot be logically classed under any other category. In the case of incident activities, includes air transport incidents.

Overexertion or Strain (as an incident/event category)

Physical overexertion, e.g., muscle strain.

Permanent Impairment (PI)

A direct work-related injury outcome that prevents a return to the person's previous (pre-incident) whole person function within 180 days as a result of an acute, single incident resulting in any of the following:

- Permanent loss of body parts
- Permanent reduction of organ's physiological function
- Permanent reduction in skin and musculoskeletal function
- Permanent reduction in psychological, social, or cognitive function

Pressure Release (as an incident/event category)

Release of gas, liquid or object under pressure from a pressurized system.

Production (as a work function)

Petroleum and natural gas producing operations, including their administrative and engineering aspects, minor construction, repairs, maintenance and servicing, materials supply, and transportation of personnel and equipment. It covers all mainstream production operations including wireline. Gas processing activities with the primary intent of producing gas liquids for sale including:

- work on production wells under pressure
- oil (including condensates) and gas extraction and separation (primary production)
- heavy oil production where it is inseparable from upstream (i.e. stream assisted gravity drainage) production
- primary oil processing (water separation, stabilization)
- primary gas processing (dehydration, liquids separation, sweetening, CO2 removal)
- floating storage units (FSUs) and sub-sea storage units
- gas processing activities with the primary intent of producing gas liquids for sale
    - secondary liquid separation (i.e. natural gas liquids [NGL] extraction using refrigeration processing)
    - liquefied natural gas (LNG) and gas to liquids (GTL) operations
- flow-lines between wells and pipelines between facilities associated with field production operations
- oil and gas loading facilities including land or marine vessels (trucks and ships) when connected to an oil or gas production process
- pipeline operations (including booster stations) operated by company E&P business.

Production excludes:
- production drilling or workover
- mining processes associated with the extraction of heavy oil tar sands
- heavy oil when separable from upstream operations
- secondary heavy oil processing (upgrader)
- refineries.

Production operations (as a type of activity)

Activities related to the extraction of hydrocarbons from source such as an oil or gas well or hydrocarbon bearing geological structure, including primary processing, storage and transport operations. Includes normal, start-up or shut-down operations.

Recordable

A type of event, incident, injury, release or other outcome which has been determined to meet or exceed definitions, criteria or thresholds for inclusion and classification in reported data.

Restricted Work Day Case (RWDC)

Any work-related injury other than a fatality or lost work day case which results in a person being unfit for full performance of the regular job on any day after the occupational injury. Work performed might be:

- an assignment to a temporary job
- part-time work at the regular job
- working full-time in the regular job but not performing all the usual duties of the job.

Where no meaningful restricted work is being performed, the incident is recorded as a lost work day case (LWDC).

Road

A thoroughfare which has a prepared, graded and levelled surface designed for the conveyance of motor vehicles (see also 'off-road'), such as:

- Asphalt, tarmac
- Concrete
- Aggregate
- Dirt/sand
- Ice

Sabotage

Deliberately destroy, damage, or obstruct (something).

Seismic/ survey operations (as a type of activity)

Activities relating to the determination of sub-surface structures for the purpose of locating oil and gas deposits including geophysical and seismic data acquisition.

Slips and Trips (at the same height) (as an incident/event category)

Slips, trips and falls caused by falling over or onto something at the same height.

Struck By (as an incident/event category)

Incidents/events where injury results from being hit by moving equipment and machinery, or by flying or falling objects. Also includes vehicle incidents where the vehicle is struck by or struck against another object.

Third Party [From API RP 754]

Any individual other than an employee, contractor or subcontractor of the Company, e.g. visitors, non-contracted delivery drivers, residents.

Total recordable injuries

The sum of fatalities, lost work day cases, restricted work day cases and medical treatment cases.

Total recordable injury rate (TRIR)

The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases (MTC)) per million hours worked. Note when MTC are not reported by a company for a country the associated fatalities, lost work day cases and restricted work day cases are excluded from TRIR calculations.

Transport – Air (as a type of activity)

Involving aircraft, either fixed wing or helicopters. Injuries caused by accidents on the ground at airports are classified in one of the other categories.

Transport – Land (as a type of activity)

Involving motorized vehicles designed for transporting people and goods over land, e.g., cars, buses, trucks. Pedestrians struck by a vehicle are classified as land transport incidents. Incidents from a mobile crane would only be land transport incidents if the crane were being moved between locations.

Transport - Water, including Marine Activity (as a type of activity)

Involving vessels, equipment or boats designed for transporting people and goods over water (including inland, marine, ice roads and marsh/swamp), e.g., supply vessels, crew boats.

Unspecified – Other (as a type of activity)

Incidents that cannot be logically classed under other headings or where the activity is unknown.

Unspecified (as a work function)

Unspecified is used for the entry of data associated with office personnel whose work hours and incident data cannot be reasonably assigned to the administrative support of one of the function groupings of exploration, drilling, production or construction. Corporate overhead support personnel, such as finance or human resources staff, may be examples where work hours cannot be specifically assigned to a particular function. All other data that are not separated out by function are reported as unspecified. NOTE: Data for companies that did not split their data submission by work function are included in the 'unspecified' function.

Unspecified (in general)

Unless otherwise defined, data are categorized as unspecified where the requested breakdown is not available. Unstated.

Water related/drowning (as an incident/event category)

Incidents/events in which water played a significant role including drowning.

Wilful damage

Wilful or malicious damage or destruction of the property of another.

Work-Related Injury

See Occupational Injury.

International Association of Oil & Gas Producers

IOGP safety performance indicators - 2022 data summarizes the safety performance of Member Companies participating in the data collection programme. 2.6 billion work hours of data from 51 companies were analysed according to the following key performance indicators:

- number of fatalities
- fatal accident and incident rates
- total recordable injury rate, and
- lost time injury rate.

https://data.iogp.org

IOGP Headquarters

City Tower, 40 Basinghall St, London EC2V 5DE, United Kingdom
T. +44 (0)20 3763 9700
E: reception@iogp.org

IOGP Americas

T: +1 713 261 0411
E: reception-americas@iogp.org

IOGP Asia Pacific

T: +61 4 0910 7921
E: reception-asiapacific@iogp.org

IOGP Europe

T: +32 (0)2 790 7762
E. reception-europe@iogp.org

IOGP Middle East & Africa

T: +20 120 882 7784
E: reception-mea@iogp.org