

Offshore Statistics & Regulatory Activity Report 2021

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Preface

HSE is responsible for regulating health and safety matters offshore. The Health and Safety at Work etc Act 1974 (HSWA), supported by the HSWA (Application outside Great Britain) Order 2013, defines HSE's jurisdiction. HSE works with other regulators under Memorandum of Understandings and agency agreements where there are potential overlaps in responsibilities.

In July 2015, HSE and the Department of Energy and Climate Change (DECC) created the Offshore Major Accident Regulator (OMAR) (previously known as the Offshore Safety Directive Regulator (OSDR)), which is the Competent Authority (CA) responsible for implementing the requirements of the EU Directive on the safety of offshore oil and gas operations. The Department for Business, Energy and Industrial Strategy (BEIS) was created on 14 July 2016 as a result of a merger between the DECC and the Department for Business, Innovation and Skills. OMAR is therefore now a partnership jointly managed and operated by BEIS's Offshore Petroleum Regulator for Environment & Decommissioning unit (OPRED) and HSE.

The North Sea Transition Authority (NSTA) (formerly Oil and Gas Authority) became an Executive Agency of DECC on 1 April 2015 and on 1 October 2016 was incorporated as a Government Company with the Secretary of State for BEIS as the sole shareholder. The NSTA licence oil and gas exploration and extraction and operates independently from BEIS and HSE.

This Offshore Statistics & Regulatory Activity Report provides details of HSE's regulatory activity offshore during 2021 and offshore injuries, dangerous occurrences and ill health reported to HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). The data in this report is a frozen, validated snapshot of operational information from HSE systems, and is published as Official Statistics. Wherever possible, data is based on a calendar year. Data for the most recent year is marked with a 'p' for provisional to allow for minor adjustments to be made when they are released as final in the subsequent annual report. This may be necessary if there are, for example, late reports or corrections. In practice, such changes are infrequent and would usually make a negligible difference to the numbers.

General inclusions to this report

The regulatory activity information includes the following:

- Safety case assessments
- Complaints (Concerns)
- Inspections
- Investigations
- Enforcement (Notices and Prosecutions)

The RIDDOR data includes incidents occurring on:

- offshore installations
- offshore wells and activities in connection with them
- offshore pipelines, pipeline works and certain activities in connection with pipeline works
- offshore diving operations

General exclusions to this report

This Offshore Statistics & Regulatory Activity Report does not include:

- Incidents arising from marine activities that are not directly connected with offshore operations (e.g. vessels or rigs in transit). The Maritime and Coastguard Agency (MCA) has primary responsibility for maritime safety. Information on marine incidents can be found on the MCA website at www.gov.uk/government/organisations/maritime-and-coastguard-agency.
- Air transport activities (including transport to, from or between installations), except incidents involving helicopters whilst on an offshore installation. The Civil Aviation Authority (CAA) has responsibility for aircraft flight safety. HSE has responsibility to ensure that heli-decks on offshore installations are safe. Information on air transport incidents can be found on the CAA website at www.caa.co.uk.

Offshore Energies UK (OEUK) (formerly Oil & Gas UK), the leading representative body for the UK offshore industry, also produce an annual health and safety report. This can be found on their website at www.oeuk.org.uk.

Executive summary

Regulatory activity in 2021:

- There were 114 inspections undertaken at 112 offshore installations
- 66 investigations were commenced
- 23 workplace health and safety concerns were followed up
- 57 safety cases were assessed

Dutyholder performance in 2021:

- 752 non-compliance issues were raised with operators
- 28 enforcement notices were issued (all improvement notices)
- One conviction was secured

Dutyholder incidents in 2021:

- There were 198 dangerous occurrences reported
- There were 91 hydrocarbon releases

Personal safety incidents in 2021:

- There were no fatal injuries in 2021; there have been four fatalities in the last ten years
- There were 16 specified injuries, with a rate of 74 per 100,000 full-time equivalent (FTE) workers
- There were 53 over-seven-day injuries, with a rate of 244 per 100,000 FTE workers

Industry profile

The UK offshore industry operates the Vantage personnel tracking system, which records the number of nights of Persons on Board (PoB). Details can be found at www.logic-oil.com/vantagepob. Using this information, it can be determined that in 2021, 3.6 million days were spent offshore.

It is estimated that there was an offshore population of around 22,000 full time equivalent (FTE) workers in 2021, around 1,000 more than the number in 2020.

FTE is based on the assumption that each shift on average lasts 12 hours, and an FTE worker works 2000 hours annually:

$$FTE = \text{Total PoB Nights} \times 12 \div 2000$$

The assumption that a full time equivalent works 2000 hours a year is based on what other regulators do, in particular the Occupational Safety and Health Administration (OSHA), the regulatory agency of the US federal government found at www.osha.gov.

Each year, OEUK publish a report on activity in the UK Offshore Oil & Gas industry. Further Information can be found at oeuk.org.uk/business-outlook-report-2022.

Regulatory activity: HSE inspections, investigations, concerns and safety case assessments

HSE's regulatory programme for the offshore industry seeks to ensure major hazard and personal risks are properly managed in compliance with legislative requirements.

Key regulatory activities are:

- Inspecting installations
- Investigating incidents
- Following up concerns
- Assessing safety cases

More information can be found in the HSE Business Plan for 2022/23, which is available at www.hse.gov.uk/aboutus/the-hse-business-plan.

Summary of ED offshore activity in 2021

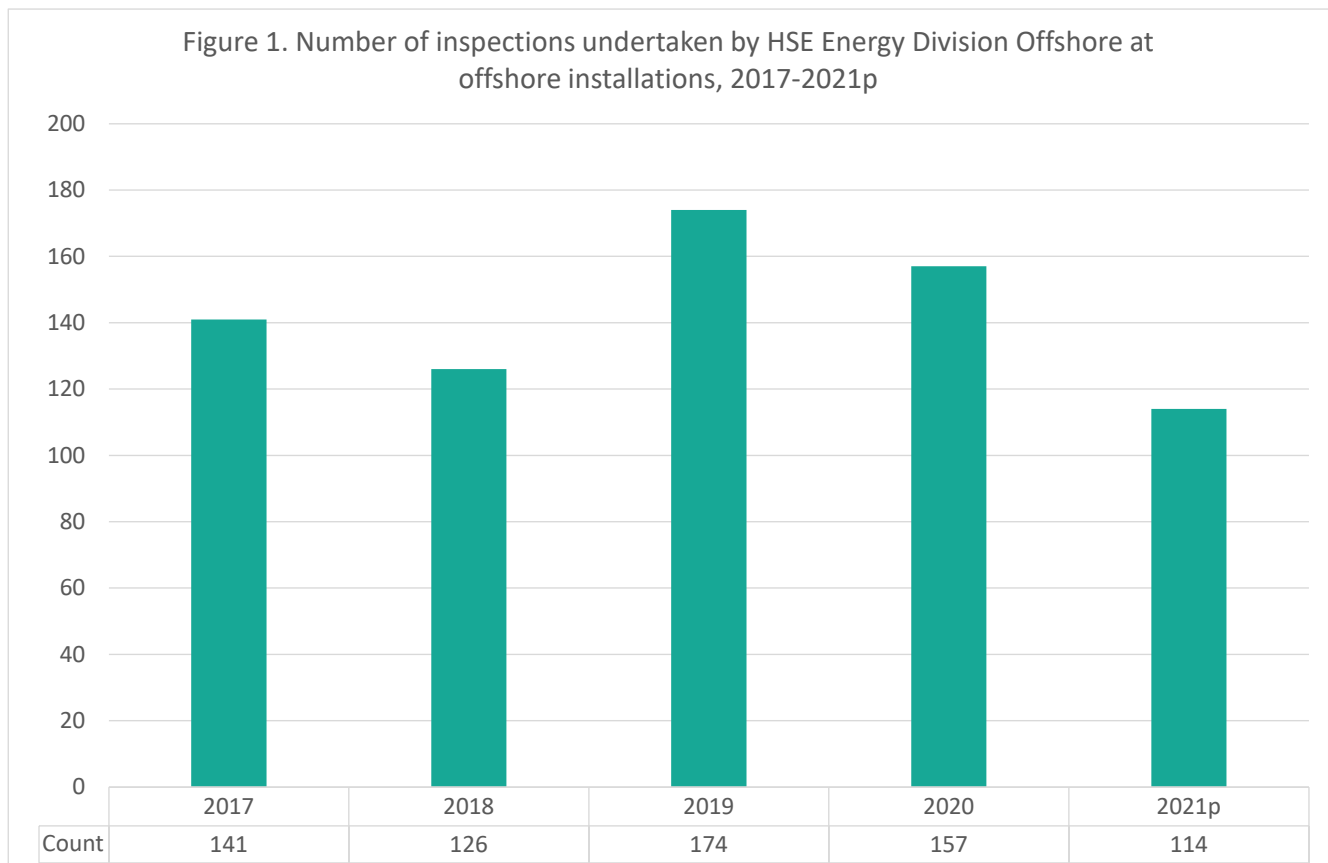
- 114 planned offshore inspections undertaken at 112 offshore installations
- 66 reported incidents met the criteria for investigation
- 23 health and safety concerns, raising 33 issues, were followed up
- 57 safety case submissions assessed

Inspections undertaken

Delivering and properly prioritising inspections is a high priority activity for HSE in ensuring it implements its major hazard strategy while supporting businesses to grow.

Therefore, HSE's Energy Division Offshore aims to ensure its regulatory activity is proportionate to the risks to people, taking into account the operator's performance in controlling risks. This means that ED Offshore will inspect higher hazard installations and operators with poorer performance with greater frequency and in greater depth than installations and operators where risks are perceived to be better managed.

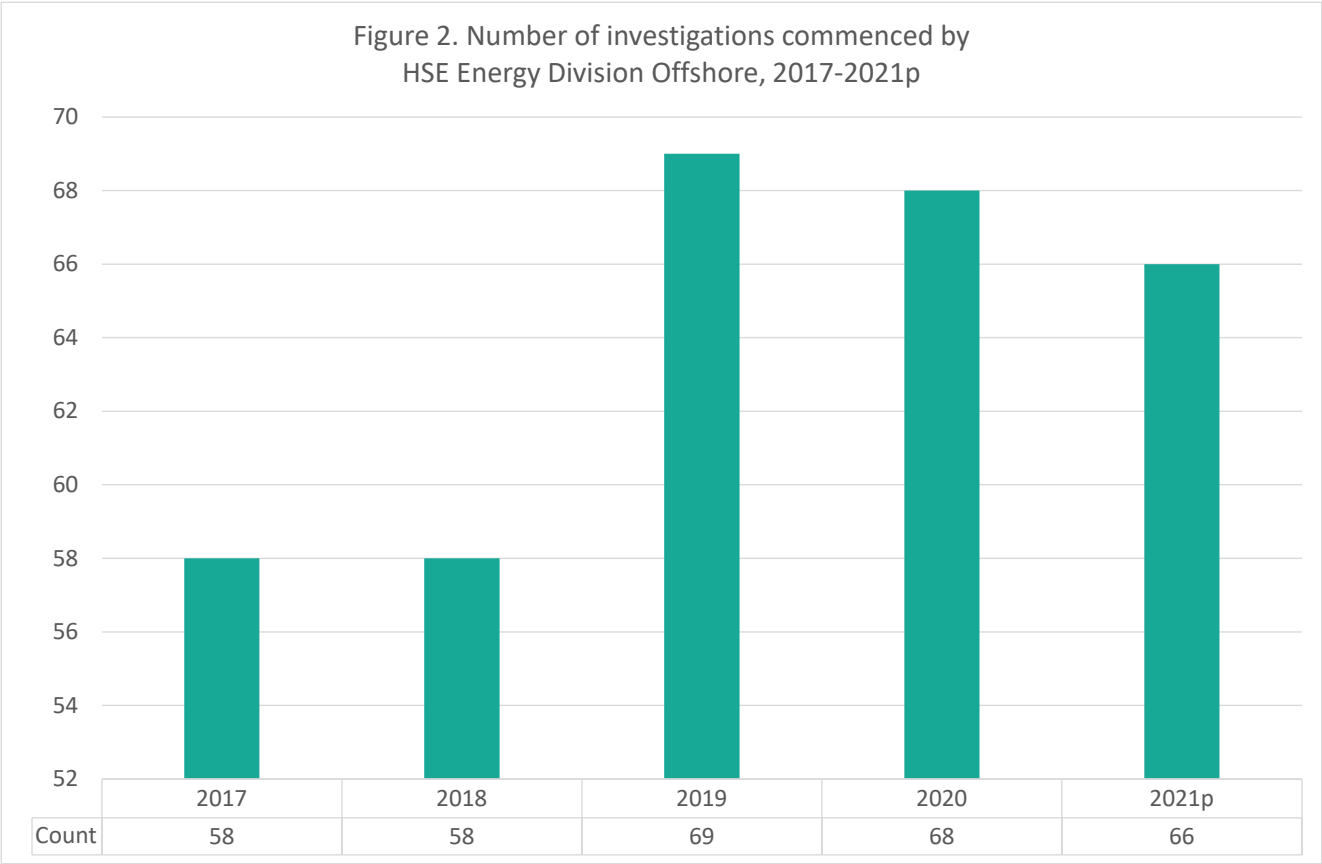
HSE's policy is to conduct inspections in accordance with its Enforcement Policy Statement at <https://www.hse.gov.uk/enforce/enforcepolicy.htm>, applying the principles set out in its Enforcement Management Model at www.hse.gov.uk/enforce/enforcement-management-model.htm to regulatory decision making.



Source: HSE operational information (p = provisional)

Investigations

HSE investigates any incidents which meet its Incident Selection Criteria. The numbers reported below reflect the number of investigations commenced. This is a change from previous reports, and should make it easier to interpret trends over time as investigations may be completed outside the reporting year.



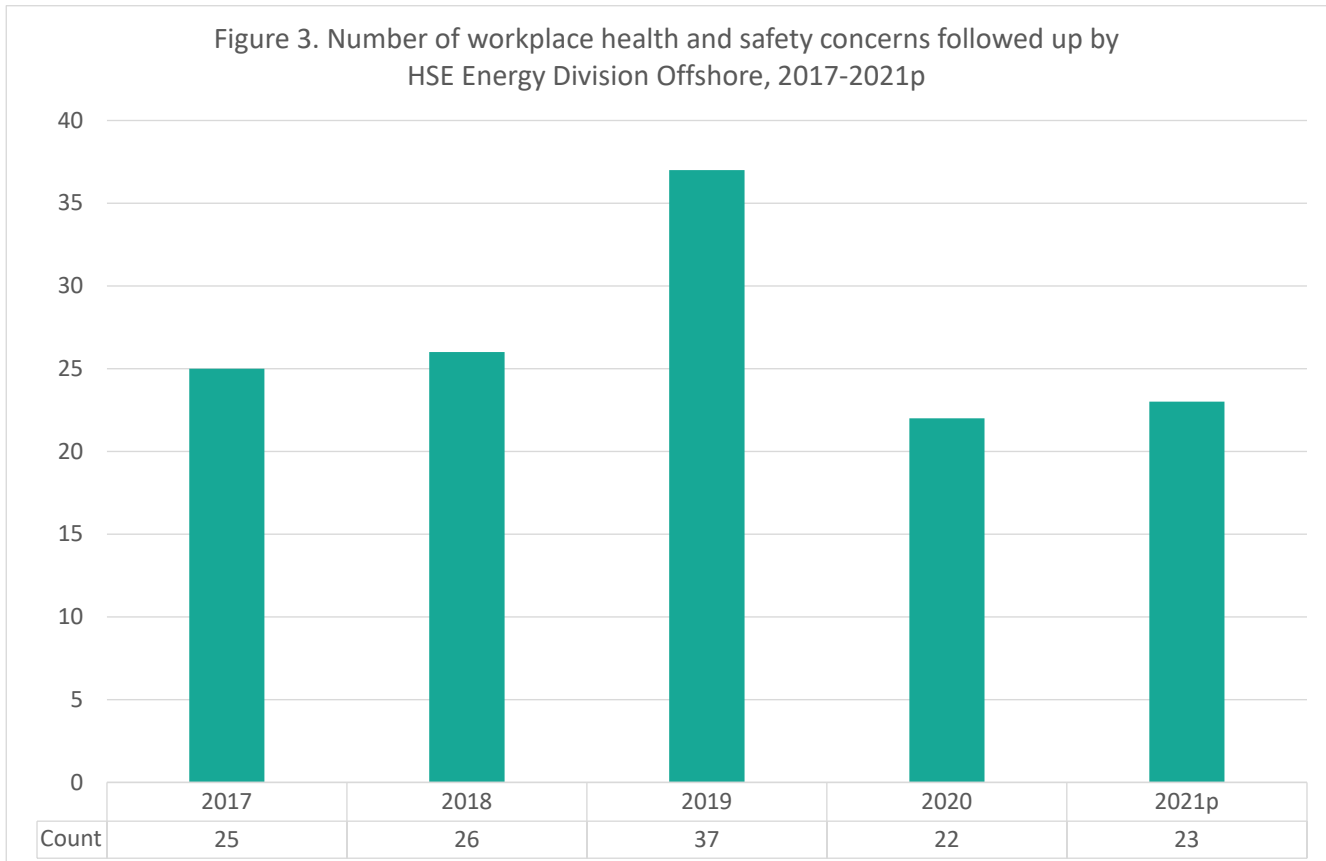
Source: HSE operational information (p = provisional)

Concerns followed up

Any employee can raise a health and safety concern with HSE if they believe that health and safety law is being broken, or minimum standards are being ignored within the workplace, and if neither the employer nor the work/safety representative can satisfactorily resolve their concern.

HSE will only take action if it relates to a work activity and the issue raised has caused or has potential to cause significant harm, alleges the denial of basic employee welfare facilities or appears to constitute a significant breach of health and safety law. More detail about the concerns process is available at www.hse.gov.uk/contact/concerns.htm.

In 2021, 23 concerns (which raised 33 separate issues) met the criteria for follow up.

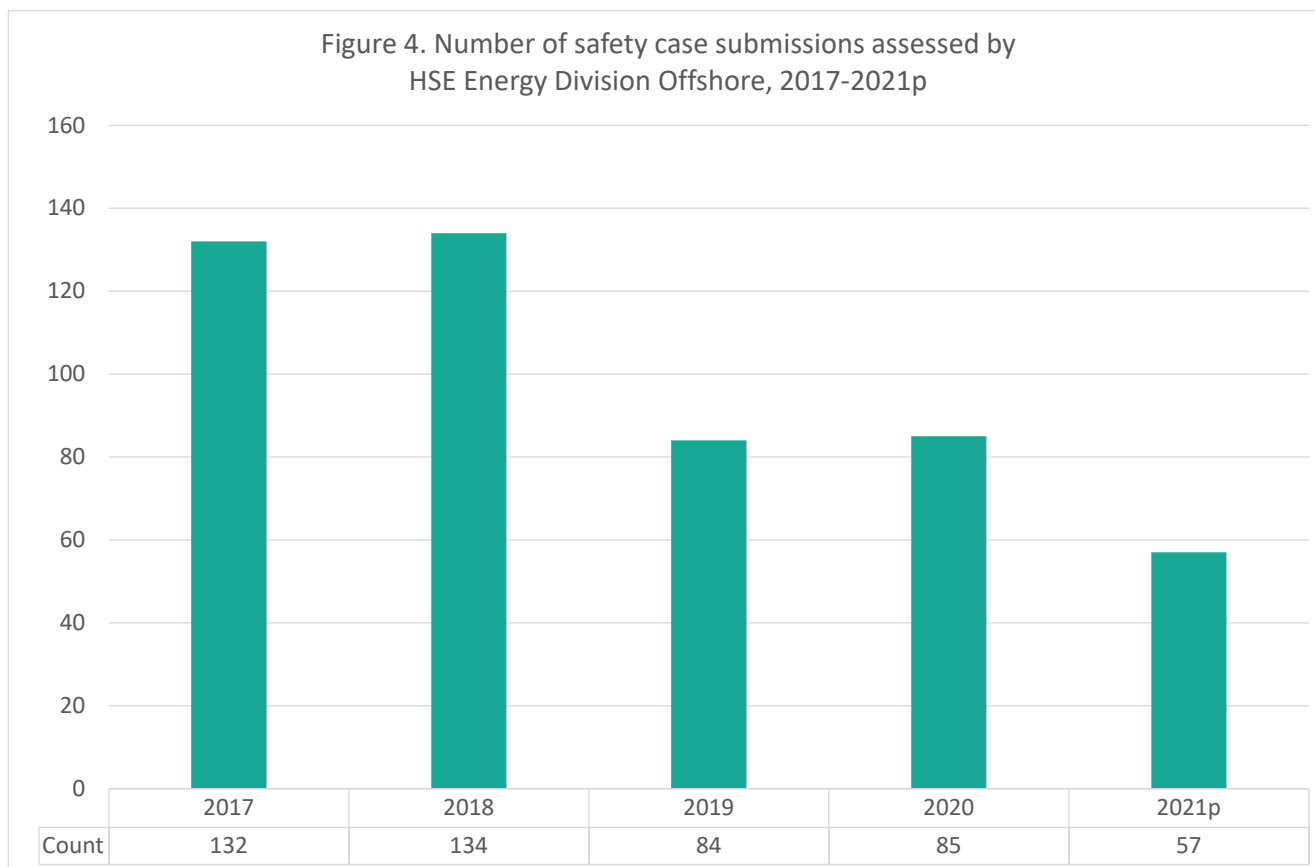


Source: HSE operational information (p = provisional)

Safety case submissions assessed

Dutyholders are required by the Offshore Installations (Offshore Safety Directive) (Safety Case etc) Regulations 2015 (SCR 2015) to submit a safety case for each installation. This is a written demonstration of safety that has to be updated whenever necessary, to reflect changing knowledge and operational conditions. HSE must accept the safety case before an installation can operate.

More detail can be found at www.hse.gov.uk/offshore/safetycases.htm. Counts are based on the total number of completed assessments in each calendar year.



Source: HSE operational information (p = provisional)

Dutyholder performance: Topic scores and non-compliance issues

During an inspection, the HSE inspector will assess the dutyholder against the selected inspection topics and award a score per topic.

They will also record any non-compliance issues identified at inspection (or during investigations) that require action by an operator, and these are normally communicated to an operator within a formal letter.

Where appropriate, HSE will also take formal enforcement action such as Notices and Prosecutions, to prevent harm and secure justice in line with its Enforcement Policy.

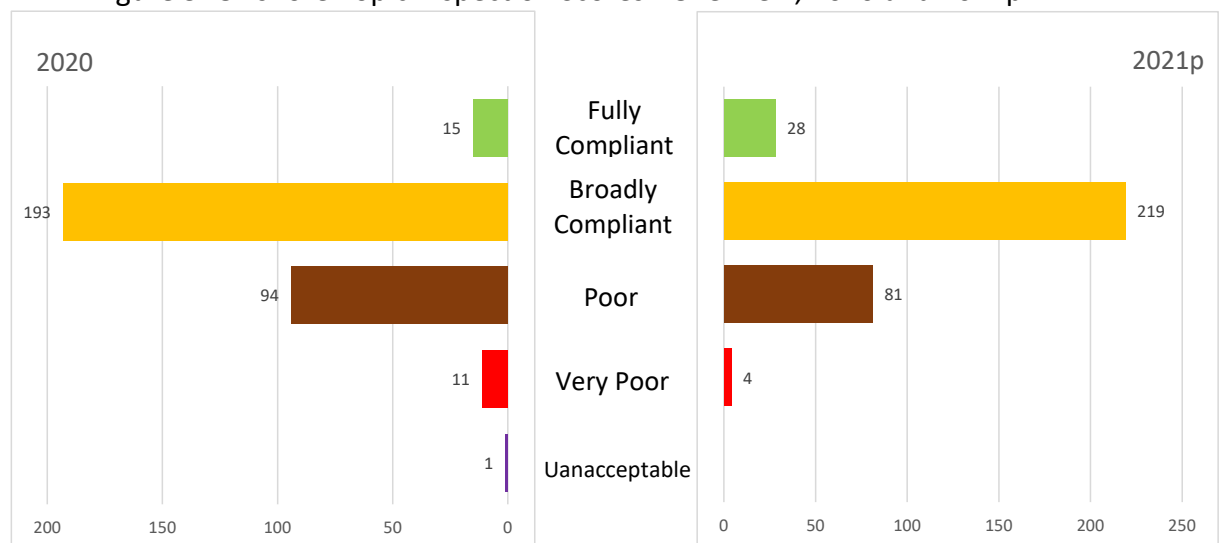
Summary of findings relating to dutyholder performance in 2021

- 332 topic inspection scores assigned, with 74% indicating broad or full compliance but the remaining 26% rated as poor, very poor, or unacceptable
- 752 non-compliance issues identified with the issues most commonly identified relating to maintenance, followed by plant integrity
- 28 improvement notices (and no prohibition notices) issued
- 1 conviction secured

Topic scores

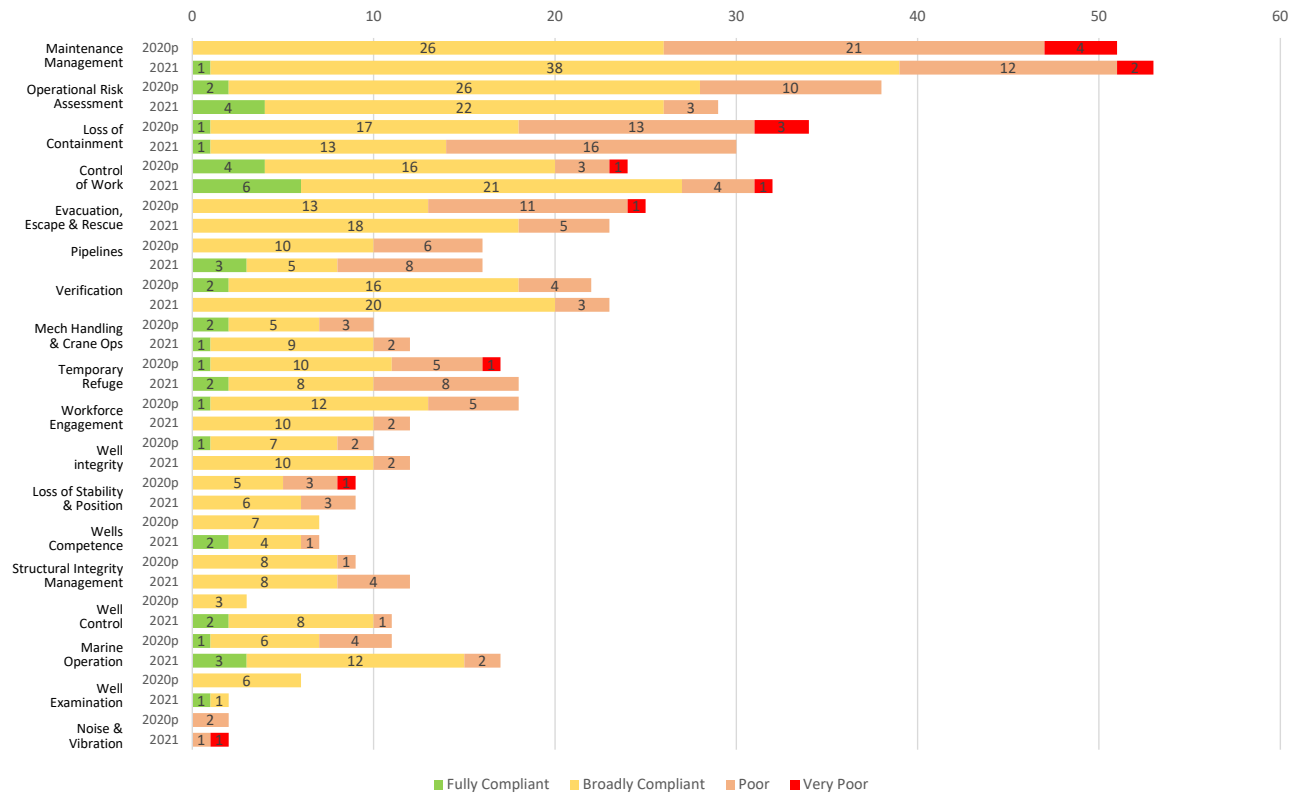
Inspectors assign scores in relation to health and safety management observed on site, in accordance with HSE's Offshore Topic Inspection Guides at www.hse.gov.uk/offshore/inspection.htm.

Figure 5: Offshore Topic Inspection Scores - Overview, 2020 and 2021p



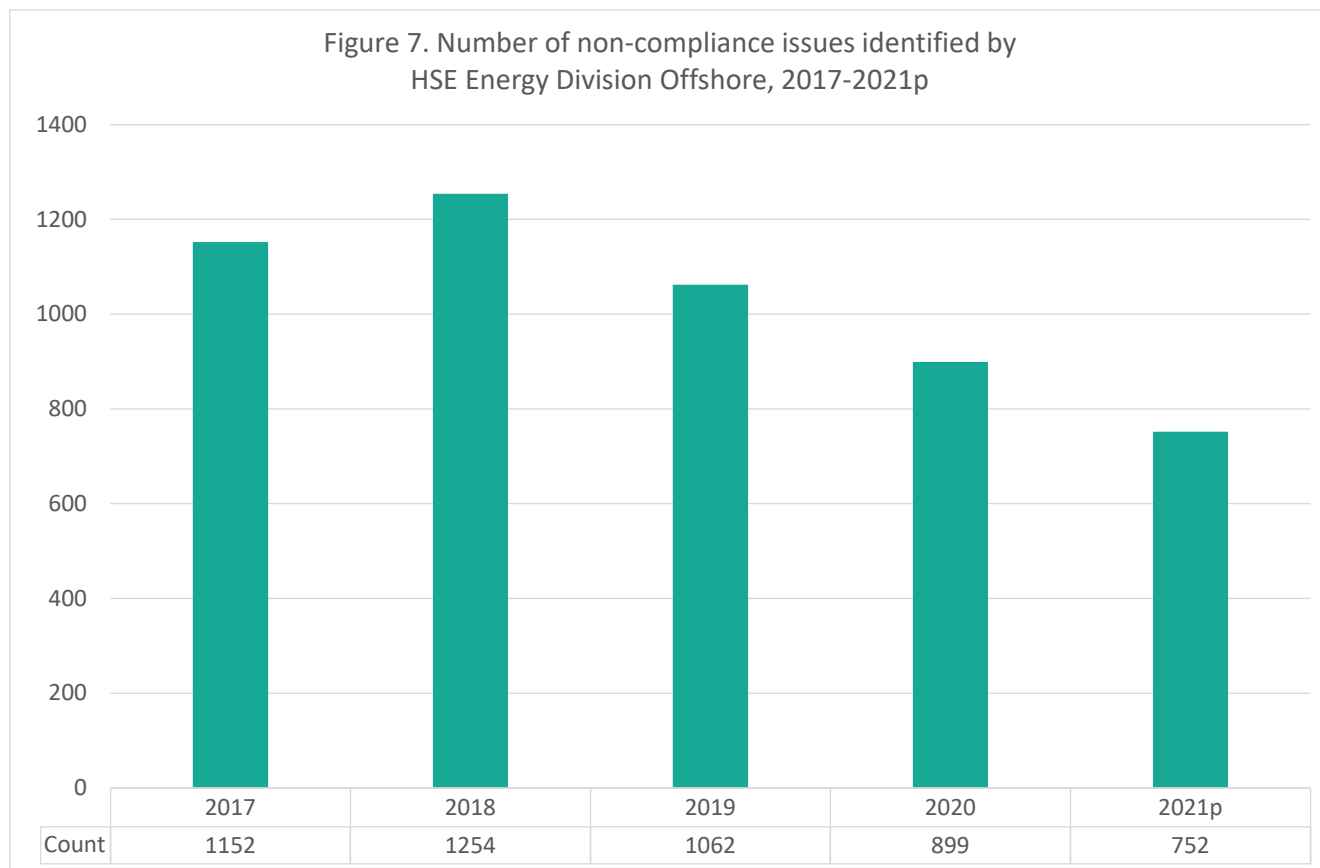
Source: HSE operational data (p = provisional)

Figure 6. Offshore Topic Inspection Scores - by Inspection Topic, 2020 and 2021p

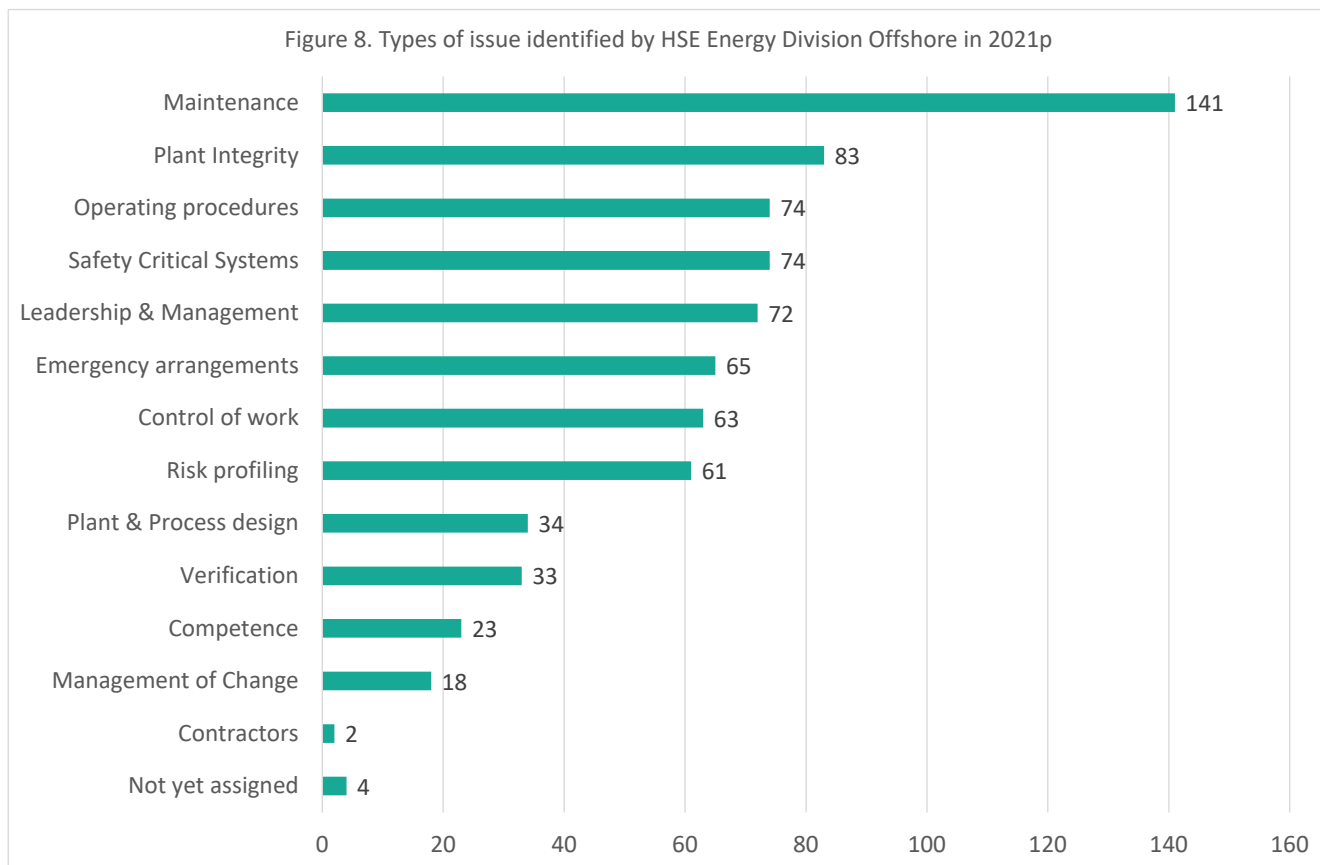


Source: HSE operational data (p = provisional)

Non-compliance issues identified



Source: HSE operational information (p = provisional)

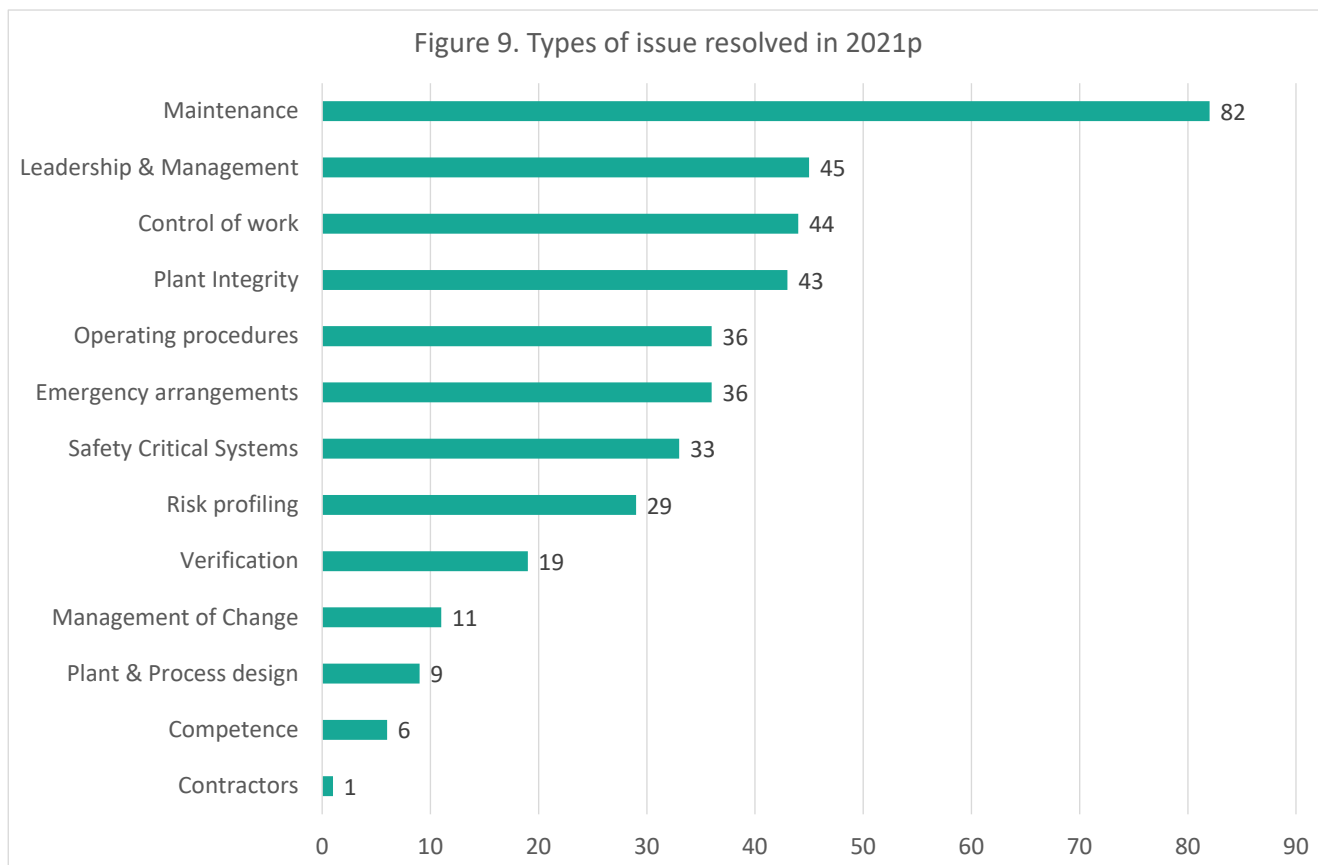


Source: HSE operational information (p = provisional)

Enforcement

While the number of issues identified over the course of a year gives an idea of dutyholder performance, the number that are resolved within a given year (which will include issues first identified in previous years) provides an indication that issues are being addressed.

In the majority of cases, where issues have been identified a letter is written to the dutyholder identifying the non-compliance and the remedial action required. An issue is not normally considered as being resolved until HSE is able to verify that the required action has been taken. Formal enforcement action is taken where there are more serious breaches.

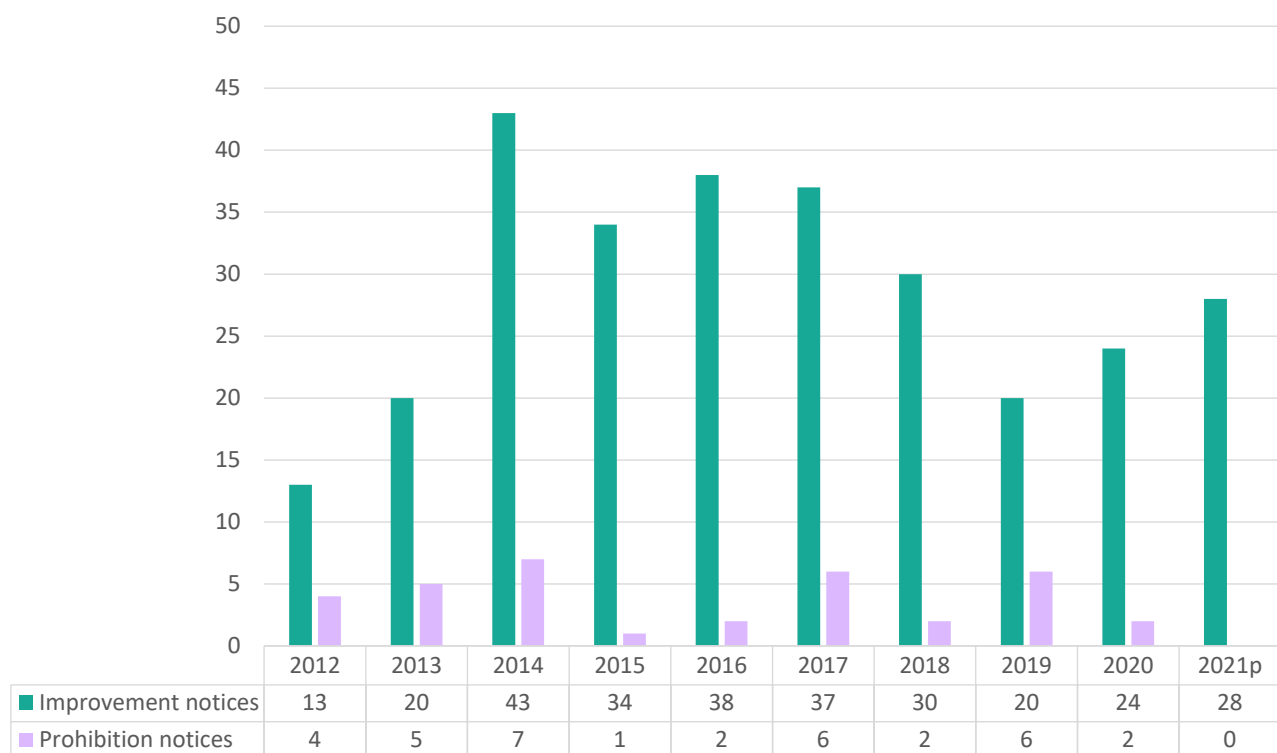


Source: HSE operational information (p = provisional)

ED Offshore applies the principles detailed in HSE's Enforcement Policy Statement which can be found at www.hse.gov.uk/enforce/enforcepolicy.htm when enforcing health and safety legislation. There are a range of tools at its disposal in seeking to secure compliance with the law and ensure a proportionate response to offences.

For more serious offences, inspectors may serve improvement notices and prohibition notices, and they may prosecute (or in Scotland, report to the Crown Office and Procurator Fiscal Service (COPFS) with a view to prosecution).

Figure 10. Number of enforcement notices issued by HSE Energy Division
Offshore, by type of notice, 2012-2021p



Source: HSE operational information (p = provisional)

Prosecutions

One conviction was secured in 2021.

Dutyholder incidents: Dangerous occurrences and Hydrocarbon releases

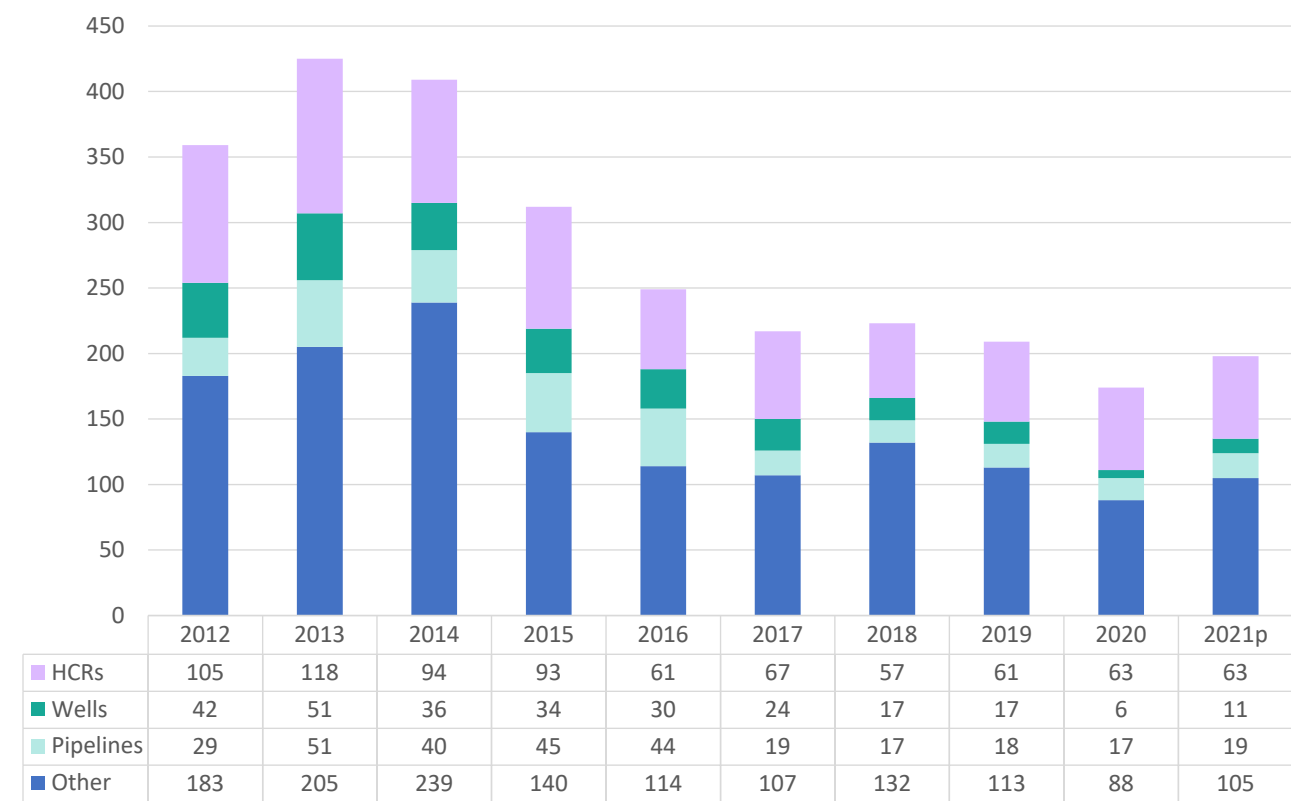
Summary of findings relating to dutyholder incidents in 2021

- There were 198 DOs reported in 2021, higher than the 172 reported in 2020 but lower than all other counts in the last ten year period
- The number of reported wells DOs increased slightly after having been previously decreasing steadily in recent years
- The total number of hydrocarbon releases reported under RIDDOR and/or EU Offshore Directive arrangements further decreased from 94 in 2020 to 91 in 2021, the lowest number in recent years
- The number of hydrocarbon releases reported under RIDDOR was the same as last year, but their proportion amongst all DOs increased slightly, with HCRs now accounting for 32% of the DOs reported under RIDDOR (63 of 198) compared to the prior 30%
- Since the introduction of the ROGI ('Reporting of Oil and Gas Incidents') form, all non-process HCRs (for example, helicopter fuel and diesel spills) reported under the EU Offshore Directive arrangements are classified in the same way and against the same criteria as process HCRs. In 2021, 28 of the 91 HCRs were reported solely under the EU Offshore Directive arrangements and did not meet the criteria to be reportable under RIDDOR.
- Non-process HCRs accounted for just under a quarter of HCR figures for 2021 (24%; 22 out of 91), lower than the 2020 figure of 31%

Dangerous occurrences

As part of the changes introduced in October 2013 following a full-scale review of RIDDOR, many defined dangerous occurrence (DO) categories changed 'type number' as well as description. For more detail on DOs that are reportable at an offshore workplace, see www.hse.gov.uk/riddor/dangerous-occurences.htm.

Figure 11. Reported dangerous occurrences (offshore), 2012-2021p



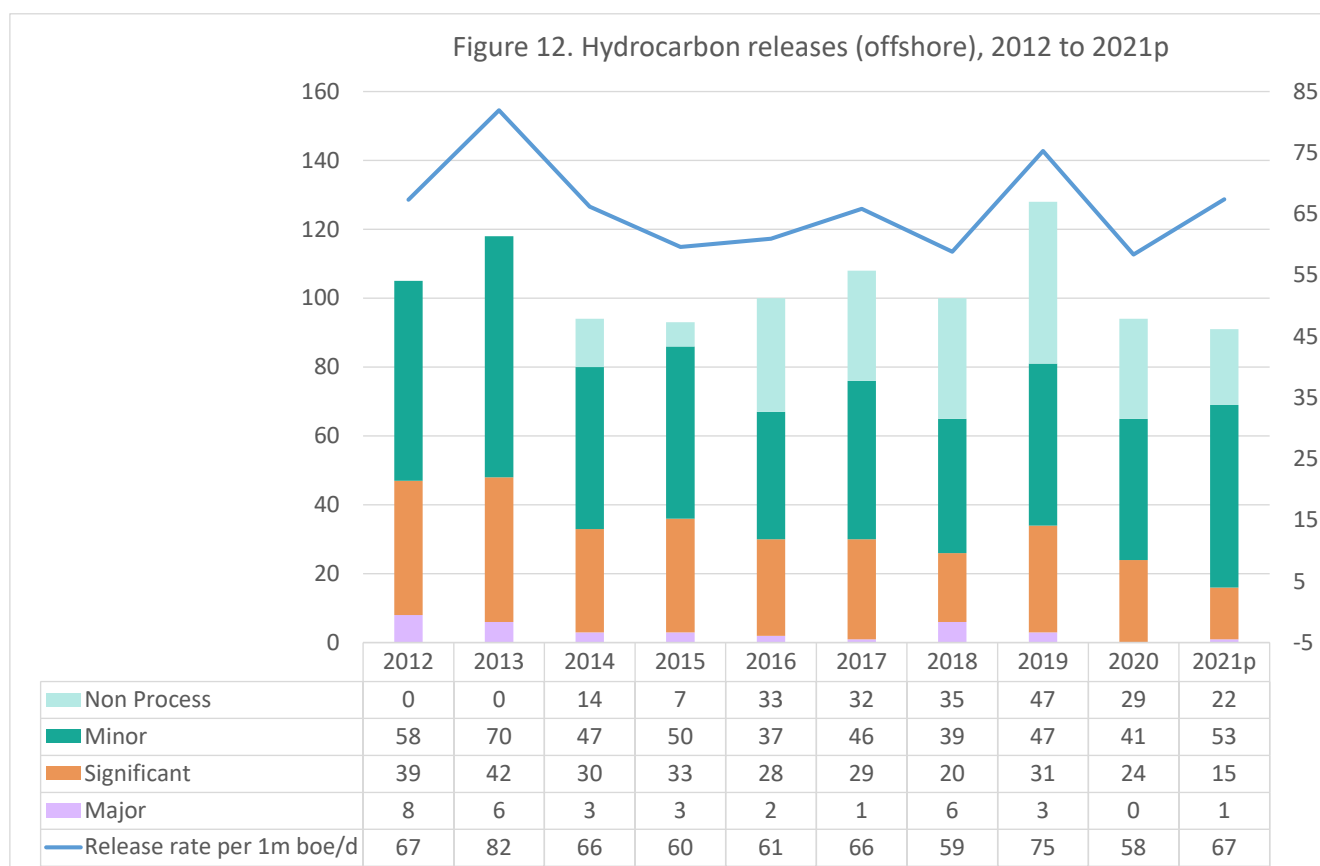
Source: RIDDOR (p = provisional)

Hydrocarbon releases

Hydrocarbon releases (HCRs) are classified as 'Minor', 'Significant', or 'Major' on the basis of their severity; these definitions have been agreed with the offshore industry. Full HCR incident data and population data from 1992 to 2016 can be found in two separate spreadsheets at www.hse.gov.uk/offshore/statistics.htm. By combining incident and population data, estimates of the frequency of loss of containment incidents for equipment and system types can be determined.

The HCR release rate is based on the level of production in million barrels of oil equivalent per day (boe/d) reported by OGUK in their annual Business Outlook Report.

As a result of the new EU Commission Implementing Regulation No. 1112/2014, some of HSE's voluntary notification scheme became mandatory. As such, from July 2015, some non-process HCRs were allocated severity classifications again and by July 2018 all non-process HCRs were classified. To maintain a consistent back series, the non-process HCRs are still presented separately in Figure 12.



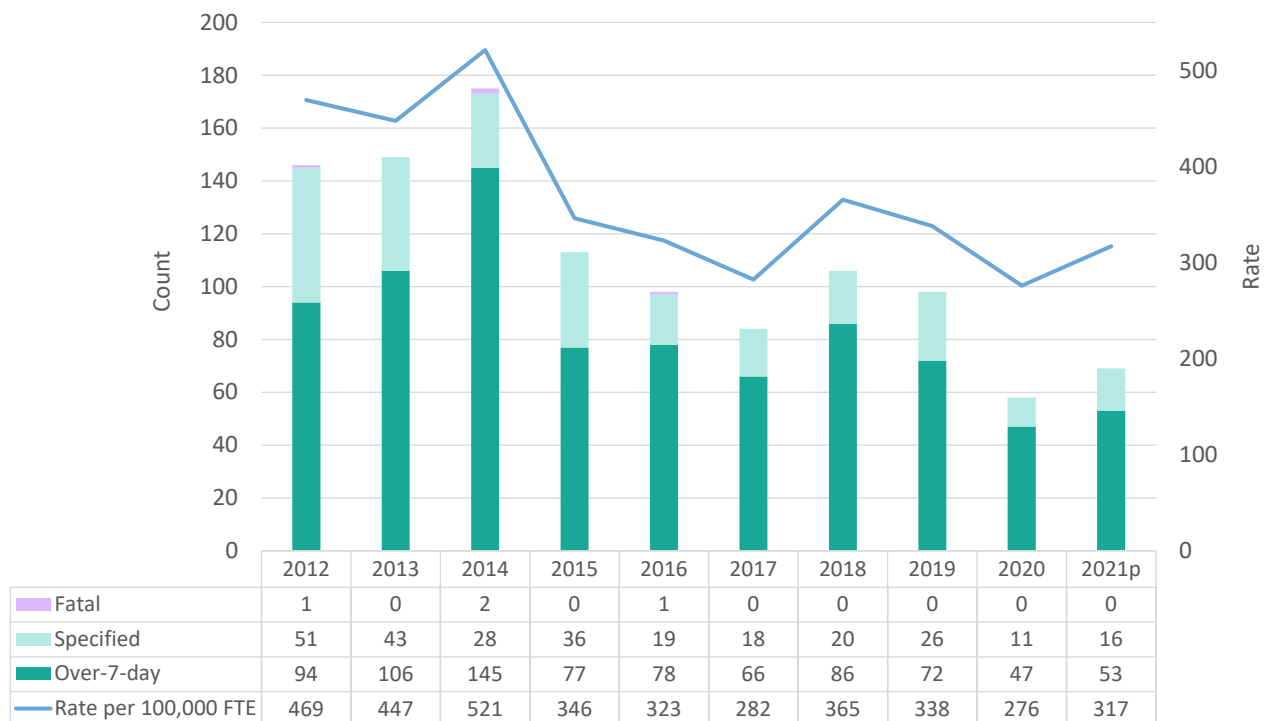
Source: HCR database

Personal safety incidents: RIDDOR reported injuries and diseases

Summary of findings relating to personal safety incidents in 2021

- There was a total of 69 injuries reported under RIDDOR, with a rate of 317 injuries per 100,000 full-time equivalent workers (FTE)
- There were no fatal injuries in 2021
- There were 16 specified injuries reported, with a rate of 74 per 100,000 FTE workers in 2021, compared to 52 per 100,000 in the previous year
- There were 53 over-7-day injuries reported, with a rate of 244 per 100,000 FTE workers in 2021, compared to 224 per 100,000 FTE workers in the previous year

Figure 13. All reported injuries (offshore) 2012-2021p



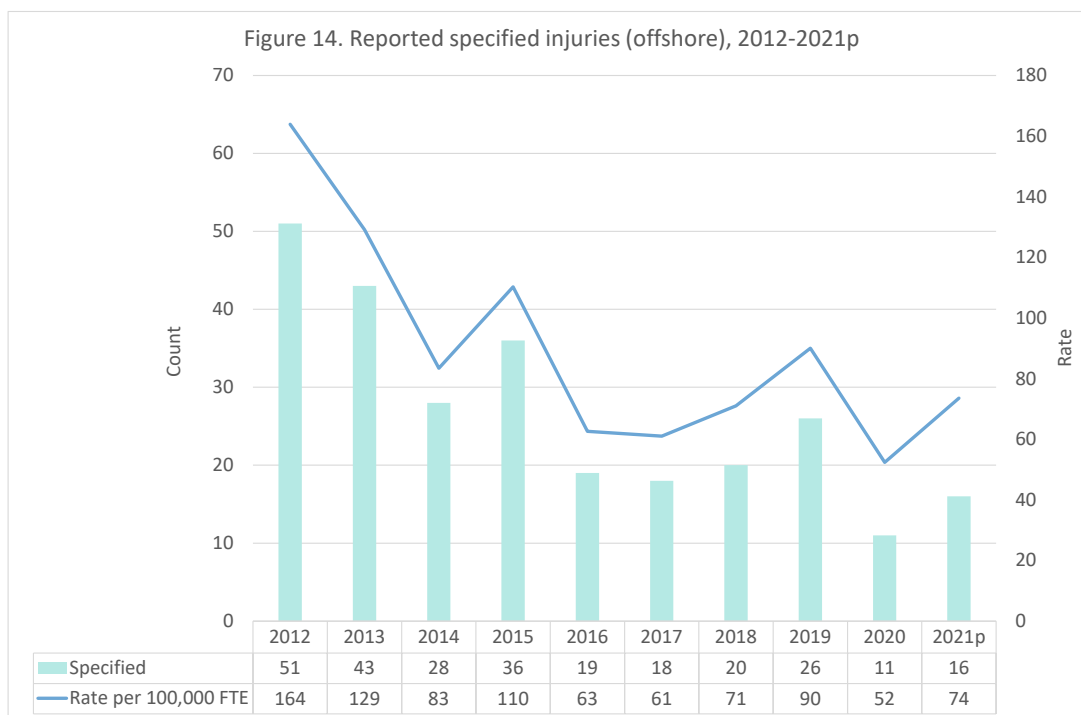
Source: RIDDOR (p = provisional)

Fatal injuries

There have been four fatalities in the last ten years, of which:

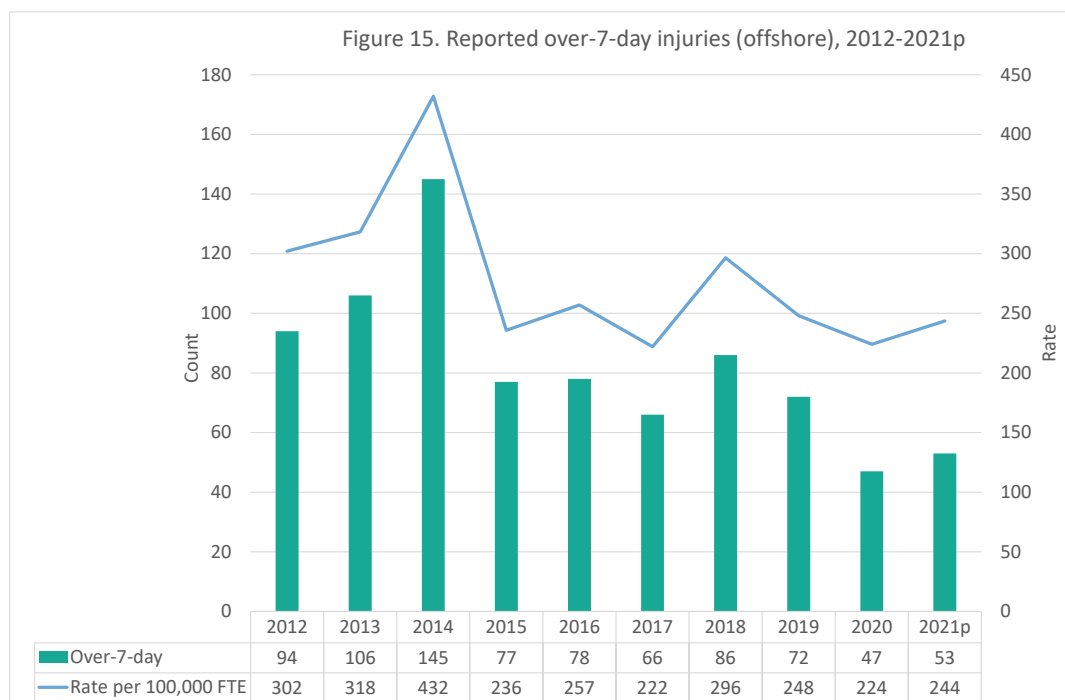
- one fatality in 2016 (involving an employee being trapped by something collapsing)
- two fatalities in 2014 (one fall from height, and one whilst conducting routine lifeboat maintenance)
- one fatality in 2012 (associated with drowning/asphyxiation)

Major/specified injuries



Source: RIDDOR (*p* = provisional)

Over-three-day/Over-seven-day injuries



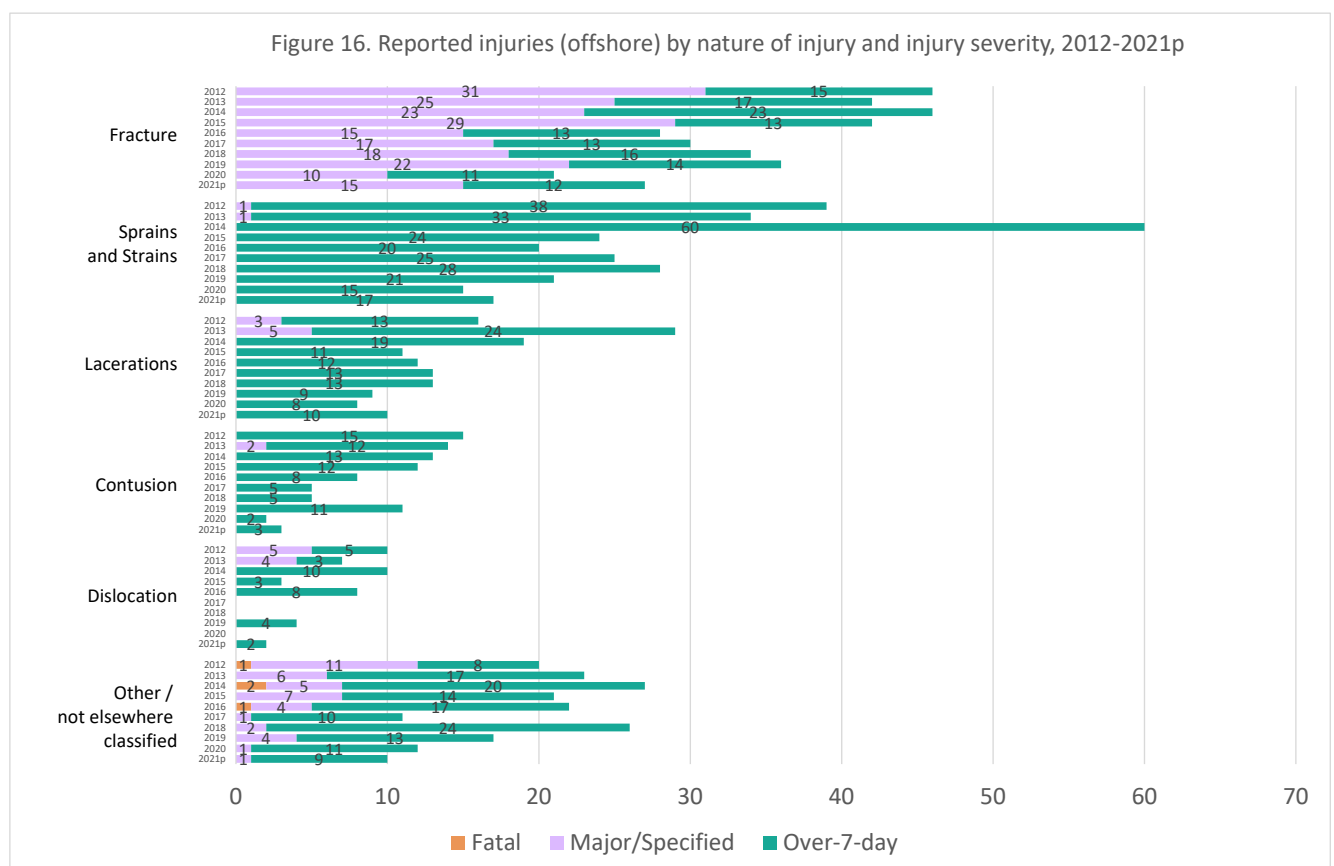
Source: RIDDOR (*p* = provisional)

Reported injury details

Some additional charts follow, that provide breakdowns by nature of injury, part of body injured, kind of accident, and injury severity, for the eight-year period 2012 to 2021.

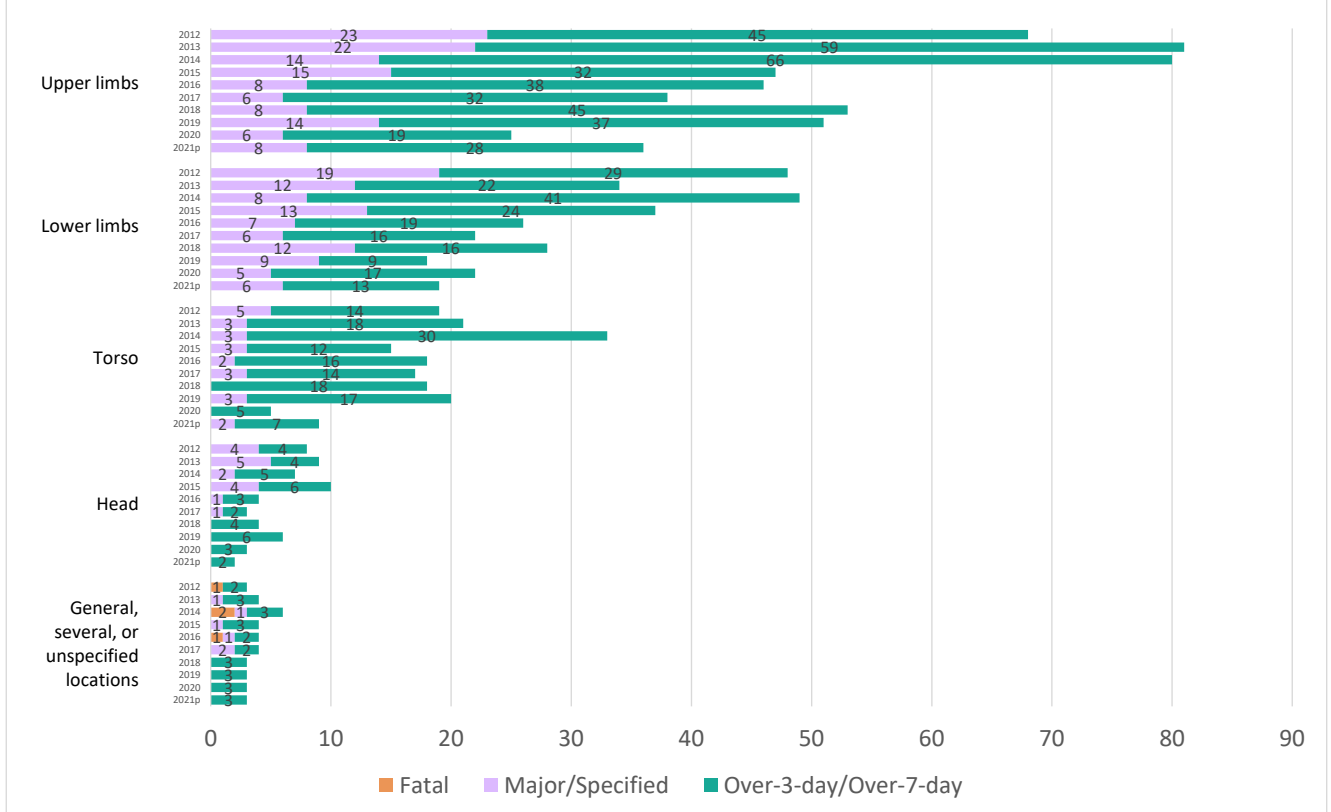
Summary of findings relating to injury details in 2021

- Fractures accounted for 94% of specified injuries reported (15 of 16)
- Sprains and strains accounted for 32% of over-7-day injuries reported (17 of 53)
- Upper limb accounted for 52% of all injuries reported (36 of 69)
- Lower limb accounted for 28% of all injuries reported (19 of 69)
- In total, injuries to limbs accounted for 88% of the specified injuries (14 of 16) and 80% of over-7-day injuries (55 of 69)
- Injuries sustained while handling, lifting or carrying were the most common injury type and accounted for 26% of all injuries reported (18 of 69). This was followed by slips, trips or falls on the same level (23%; 16 of 69). These injury kinds have been in the opposite order in recent previous years



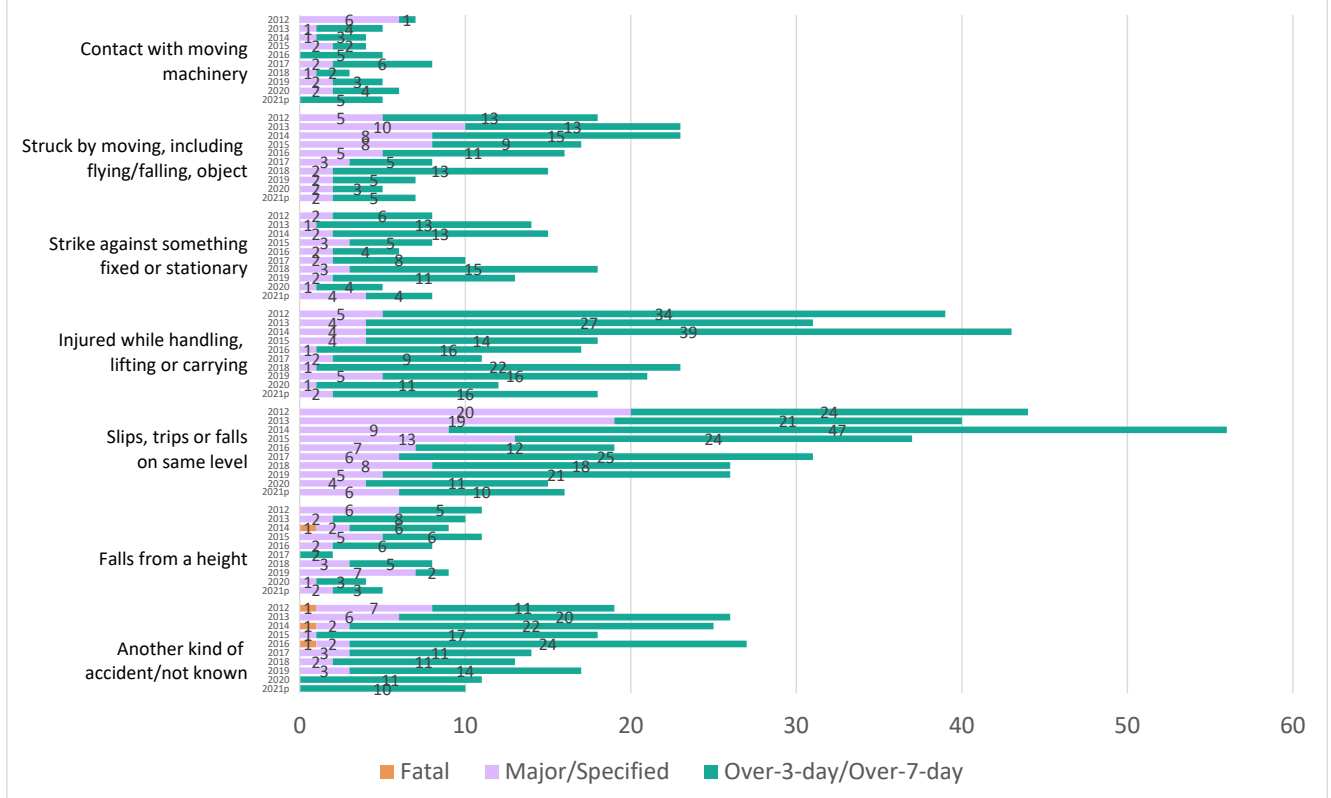
Source: RIDDOR (*p* = provisional)

Figure 17. Reported injuries (offshore) by body part injured and injury severity, 2012-2021p



Source: RIDDOR (p = provisional)

Figure 18. Reported injuries (offshore) by kind of accident and injury severity, 2012-2021p



Source: RIDDOR (*p* = provisional)

Comparison with other sectors

The rate of 317 injuries per 100,000 full-time equivalent (FTE) workers for the offshore sector cannot be compared directly with injury rates for other industry sectors. This is because the way in which the industry workforce sizes for the other sector injury rates are defined is very different from the way the offshore population can be estimated for this report.

HSE publishes sector specific RIDDOR reported injury rates at www.hse.gov.uk/statistics/tables/ridind.xlsx. These tables use Annual Population Survey estimates, with each respondent assigned to a single industry group according to the Standard Industrial Classification (SIC) code which best represents the primary activity of the workplace where they are employed.

The offshore industry is not easily defined in terms of SIC codes because of an overlap with similar onshore activities. The most closely corresponding grouping is SIC Division 06 which is defined as 'extraction of crude petroleum and natural gas'. For this industry grouping, the latest RIDIND figures for 2020/21p show a rate of 656 non-fatal injuries per 100,000 employees.

The offshore population estimate used in this report instead derives from a count of Persons on Board as described in the Industry Profile section of this report. Contributing to that count will be any individual who spent a night on board an offshore installation, regardless of whether they are employed directly in the offshore sector. This includes individuals working as contractors or for other companies whose industry classification would range across a number of sectors, for example catering, maintenance, construction or education.

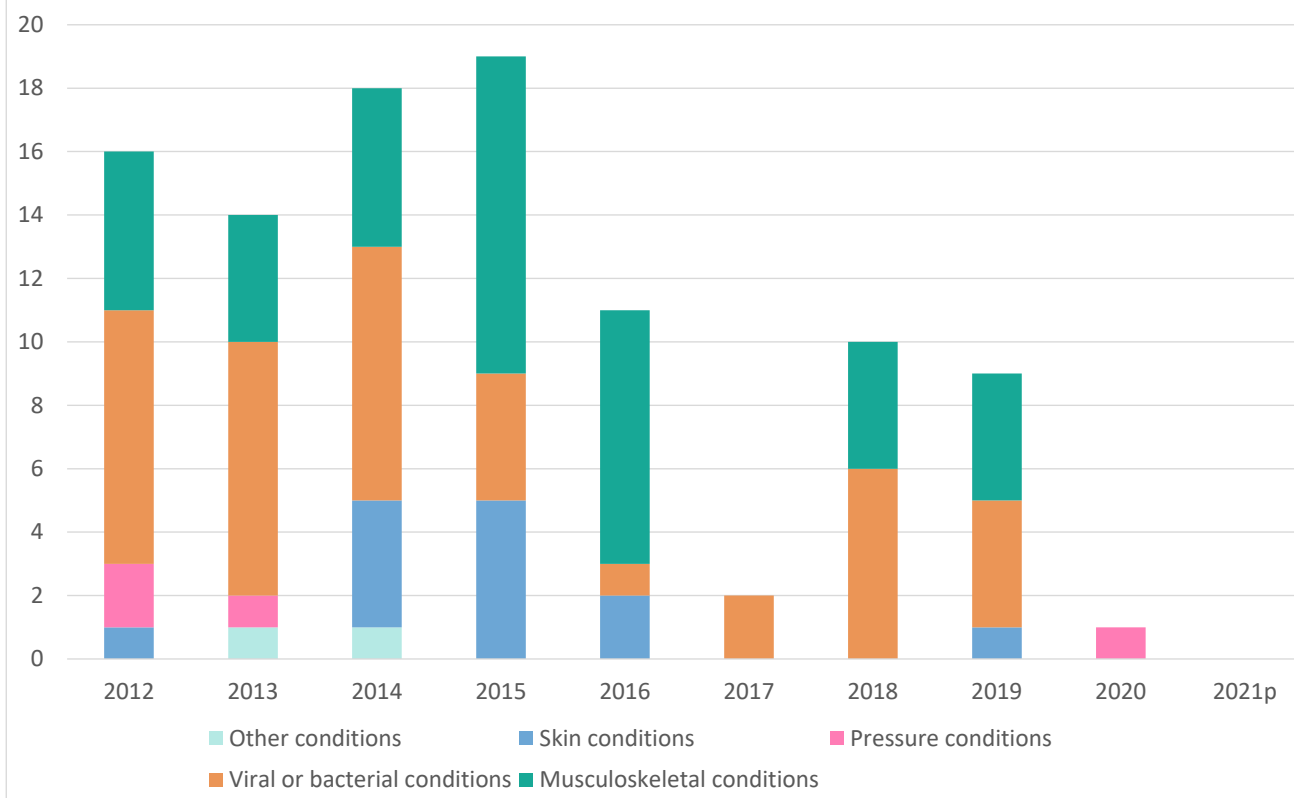
Occupational diseases, excluding COVID-19

Similar to other incidents reportable under RIDDOR, an analysis of the trend in reported diseases is difficult due to changes to the reporting legislation over recent years.

■ There were 22 incidents of ill health reported over the period 2017 to 2021 and of these:

- *viral and bacterial conditions*, such as chickenpox, had the highest number of reports (12), followed by *musculoskeletal conditions*, such as hand-arm vibration syndrome (8).

Figure 19. Reported diseases (offshore), 2012-2021p



COVID-19 cases

Where a worker has been diagnosed as having COVID-19 and there is reasonable evidence to suggest that it was caused by occupational exposure, employers are required to report the case to the enforcing authority. In the offshore industry, this can be either through a RIDDOR notification or a ROGI (Reporting of an Oil and Gas Incident) form. In total, there were 115 such cases of COVID-19 reported, where a diagnosis was made in 2021, none of which resulted in a fatality. These cases are excluded from Figure 19 to maintain consistency across the years within the chart.

Further information about the reporting of COVID-19 under RIDDOR, including counts from across all industries, can be found at www.hse.gov.uk/statistics/coronavirus/index.htm. The detailed tables, linked at the bottom of that page, include an industry breakdown by date the report was submitted. Offshore cases should be captured within SIC Group 6 (Extraction of crude petroleum and natural gas), though this group covers some onshore activity too. It should be noted that the all-industry figures presented in those tables include *all* reported worker cases, some of which on review may be assessed as non-reportable, while the above offshore figure is limited to those assessed as reportable.

Explanatory notes

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)

RIDDOR places a legal duty on employers and other specified duty holders to report certain workplace incidents to the relevant enforcing authority. A number of key changes to the reporting system and legal requirements have occurred in recent years, with some impact on the resulting statistics:

- **September 2011:** the notification system used by employers changed to a predominantly online system
- **April 2012:** a legislative change introduced the requirement to report injuries to workers that lead to absence from work or inability to do their usual job, for over seven days (over-7-day injuries). This replaced the previous 'over-3-day' legal requirement
- **October 2013:** following a full-scale review, more extensive legislative changes were introduced to simplify the reporting of workplace injuries, including the introduction of 'specified injuries' to replace the previous 'major injury' category, the revision to 'type number' and description of many defined dangerous occurrence (DO) categories, and a reduction in the list of prescribed occupational diseases. These changes occurred half-way through the 2013/14 reporting year

For more information about the coverage of RIDDOR and the effect on statistics of recent changes, see www.hse.gov.uk/statistics/sources.htm#riddor.

Injury rates

Injury rates are calculated using offshore population data from the industry's Vantage personnel tracking system. However, these rates cannot be used to compare the offshore industry with other industries; other published industry rates use a different denominator (the Annual Population Survey – APS), which is based on the Labour Force Survey (LFS).

HCRs

In these statistics, RIDDOR reportable HCRs include:

- Unintended releases of petroleum gas or liquids from an offshore installation that either result in fire or explosion or require action to prevent or limit the consequences of a potential fire or explosion if ignited, or which have the potential to cause death or major/specified injury. These are often referred to as 'process' HCRs
- The unintentional or uncontrolled release or escape of other hydrocarbons (e.g., heli-fuel) from an offshore installation which could cause a significant risk of personal injury. These are often referred to as 'non-process' HCRs
- HCRs from wells
- HCRs from pipelines within 500m of the installation

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