

Offshore Statistics & Regulatory Activity Report 2017

Full-year details and explanatory notes

Contents

Preface	2
Executive Summary	3
Industry profile	3
Analysis of incident data	4
Regulatory Activity	12
Explanatory notes	17

Preface

HSE is responsible for regulating health and safety matters offshore. The Health and Safety at Work 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 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. OSDR is therefore now a partnership jointly managed and operated by BEIS and HSE.

The Oil and Gas Authority (OGA) 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 OGA licence oil and gas exploration and extraction, and operates independently from BEIS and HSE.

This Offshore Statistics & Regulatory Activity Report provides details of offshore injuries, dangerous occurrences and ill health reported to HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), and HSE's regulatory activity offshore during 2017. 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 given a 'p' status (provisional), and will be released as final in the subsequent annual report, to take account of minor adjustments, e.g. late reports.

General inclusions to this report

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 wind farms
- offshore diving operations

The regulatory activity information includes the following

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

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

Oil & Gas UK (OGUK), 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.oilandgasuk.co.uk.

Executive Summary

Headline statistics for 2017:

- There were no fatal injuries in 2017; there have been six fatalities in the last 10 years
- There were 19 specified injuries, with a rate of 64 per 100,000 full-time equivalent (FTE) workers
- There were 65 over-7-day injuries, with a rate of 219 per 100,000 FTE workers
- There were 196 dangerous occurrences reported
- There were 110 hydrocarbon releases
- There were 141 inspections undertaken at 110 offshore installations
- 132 safety cases were assessed
- 23 investigations were completed
- 13 workplace health and safety concerns were followed up
- 914 non-compliance issues were raised with operators
- 44 enforcement notices were issued (38 improvement notices and six prohibition notices)
- There were no prosecution cases initiated in 2017

Industry profile

In 2016 BEIS (Department for Business, Enterprise and Industrial Strategy) reported that there were 302 installations in the UK Continental Shelf, of which 261 were operational and 143 were manned.

In addition there is a supporting infrastructure of 14,000 km of pipelines connecting installations to beach terminals. Industry commissioned many of these assets in the early 1970s and some are forecast to continue operating to 2030 and beyond.

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 2017, 5 million days were spent offshore.

It is estimated that there was an offshore population of 29,700 full time equivalent (FTE) workers in 2017, compared to 30,400 in 2016.

FTE is based on the assumption that each shift on average lasts 12 hours, and a 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, OGUK publish a report on activity in the UK Offshore Oil & Gas industry. Further Information can be found at <http://oilandgasuk.co.uk/businessoutlook.cfm>.

Analysis of incident data

RIDDOR data for the period 2007/08 to 2012/13 is based on fiscal year (April-March). Data from 2012 is based on calendar year (January-December).

All reported injuries

For RIDDOR, a number of changes to the reporting system and legal requirements have occurred over recent years, making comparisons difficult with previous data. For more information, see www.hse.gov.uk/statistics/riddor-notification.htm.

Key points for 2017:

- There were a total of 84 injuries reported under RIDDOR, with a rate of 282 injuries per 100,000 full-time equivalent workers (FTE)
- There were no fatal injuries in 2017

Figure 1: All reported injuries (offshore), 2007/08 – 2017p

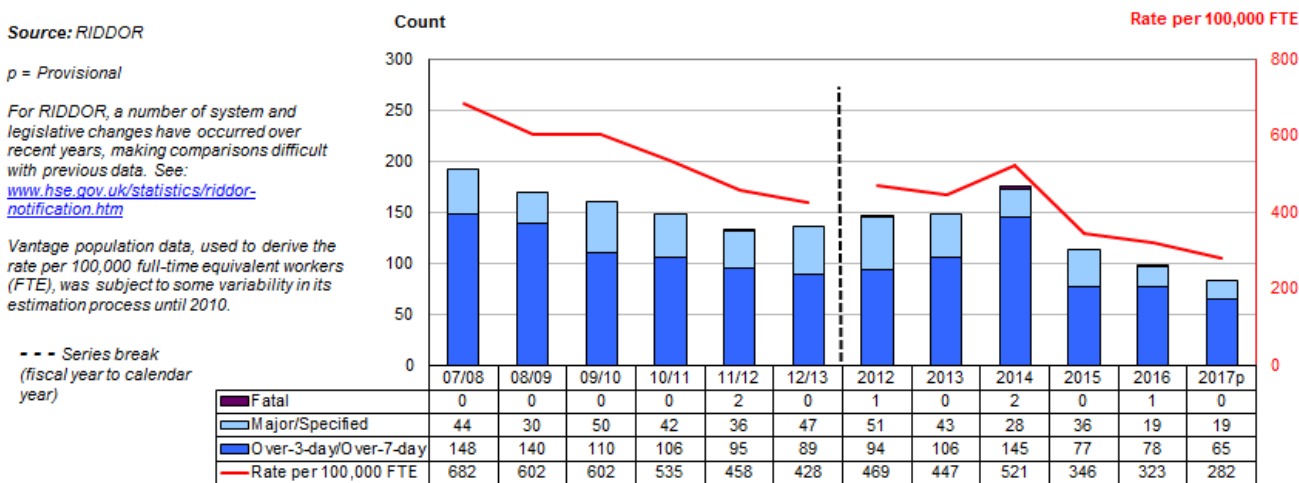
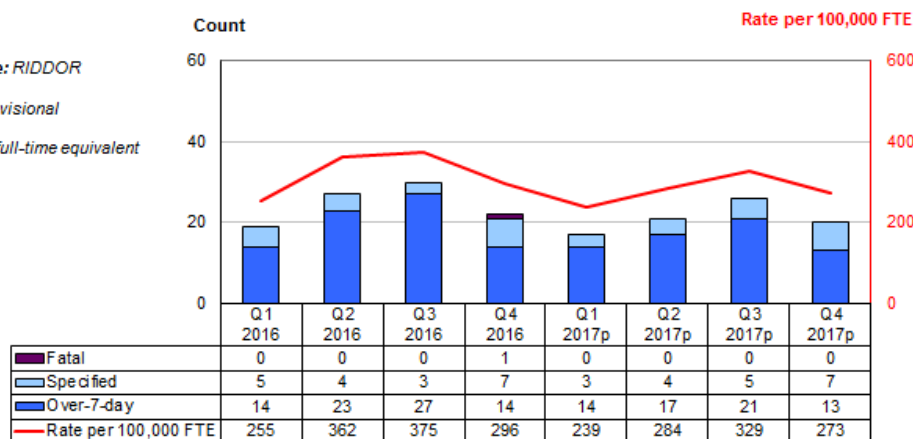


Figure 2: All reported injuries (offshore), by quarter, 2016 & 2017p



Fatal injuries

Key points for 2017:

- There were no fatal injuries in 2017
- There have been three fatalities in the last 5 years and six in the last 10 years, of which:
 - one fatality in 2016, involving an employee being trapped by something collapsing
 - two fatal injuries in 2014 (one fall from height, and one whilst conducting routine lifeboat maintenance)
 - one fatality in 2012 (associated with drowning/asphyxiation)
 - two fatalities in 2011/12 (one fall from height, and one occurring during a diving operation)

Major/Specified injuries

In October 2013, the classification of ‘major injuries’ to workers was replaced with a shorter list of ‘specified injuries’ (see www.hse.gov.uk/riddor/specified-injuries.htm for more information).

Key points for 2017:

- There were 19 specified injuries reported, the same number as in 2016
- The rate was 64 per 100,000 FTE workers in 2017, compared to 63 per 100,000 in the previous year
- Due to the recent legislative changes, major and specified counts and rates cannot be reliably compared, though it can be observed that counts and rates for previously reported ‘major injuries’ fluctuated in earlier years

Figure 3: Reported major/specified injuries (offshore), 2007/08 – 2017p

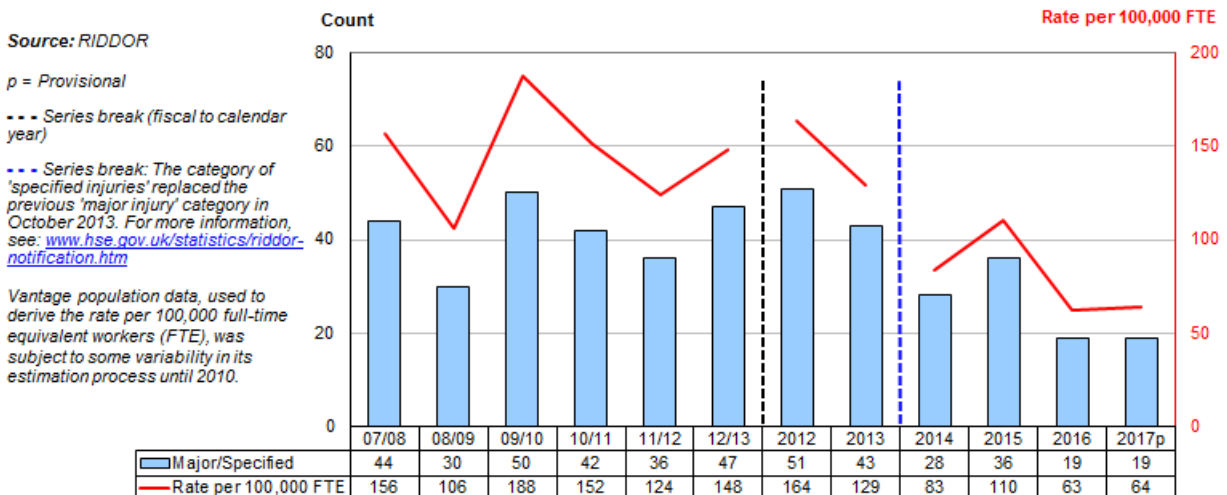
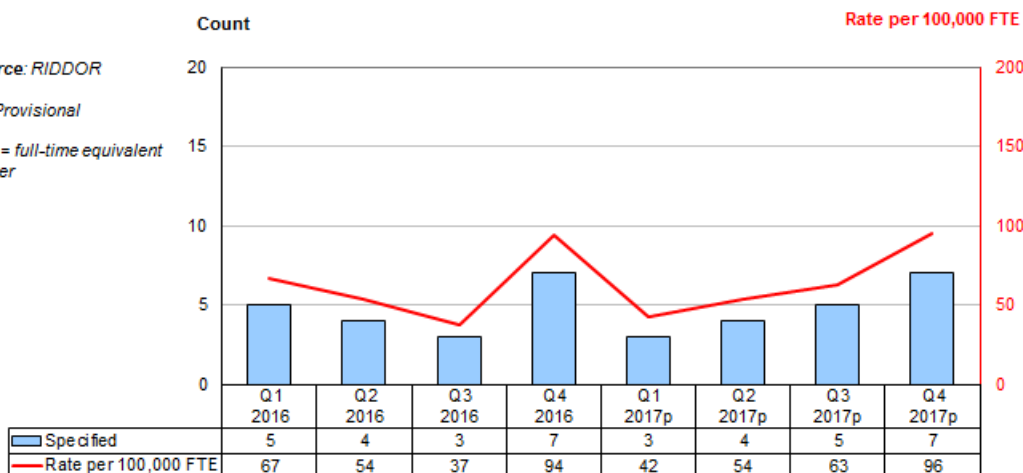


Figure 4: Reported specified injuries (offshore), by quarter, 2016 & 2017p



Over-3-day/Over-7-day injuries

In April 2012, the legal requirement to report injuries to workers resulting in more than three days absence ('over-3-day') changed to 'over-7-day'.

Key points for 2017:

- There were 65 over-7-day injuries reported, compared to 78 in 2016
- The rate was 219 injuries per 100,000 FTE workers, compared to 257 in 2016
- Due to the changes, over-3-day and over-7-day counts and rates cannot be reliably compared, though it can be observed that counts and rates for previously reported 'over-3-day' injuries fell continually in earlier years

Figure 5: Reported over-3-day/over-7-day injuries (offshore), 2007/08 – 2017p

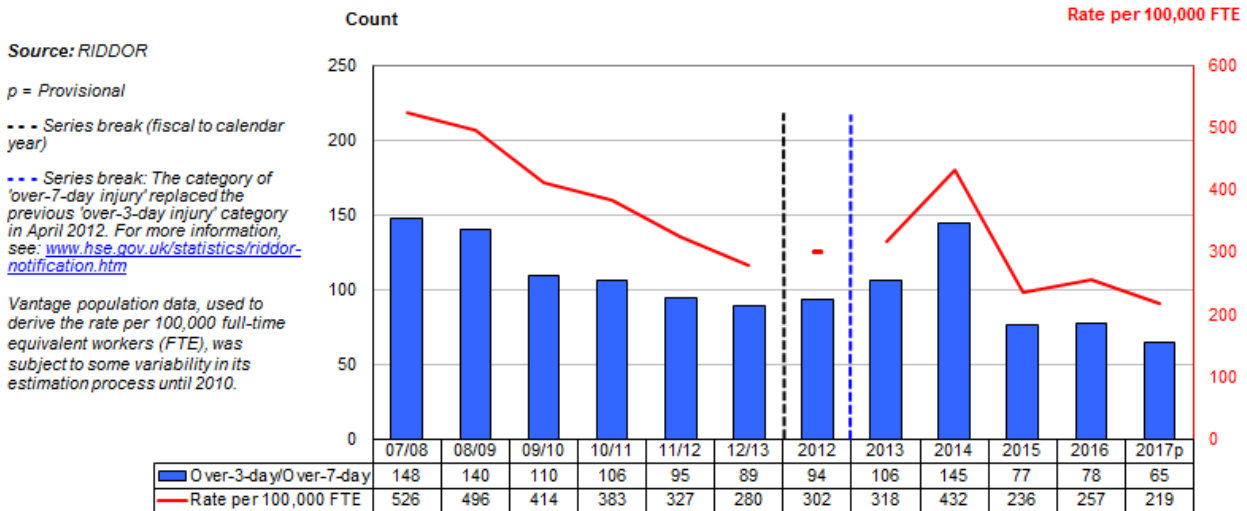
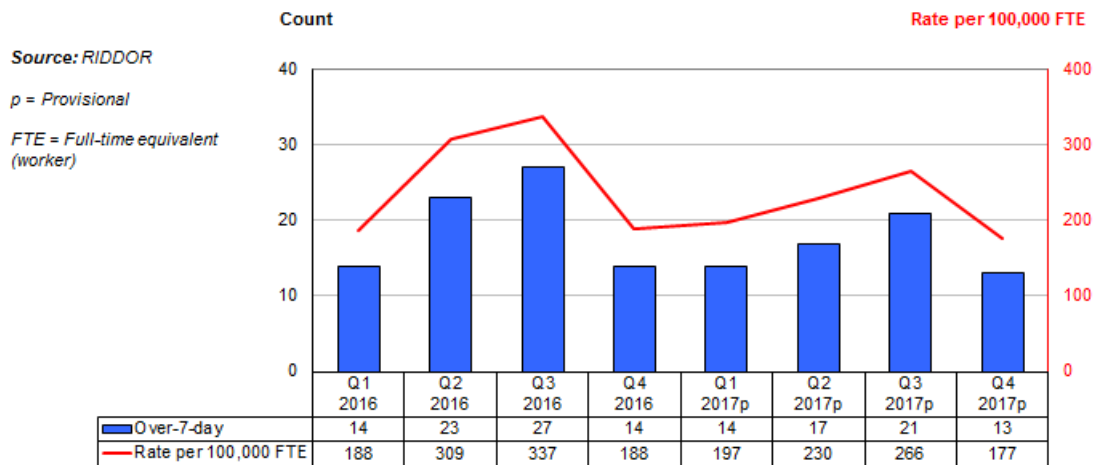
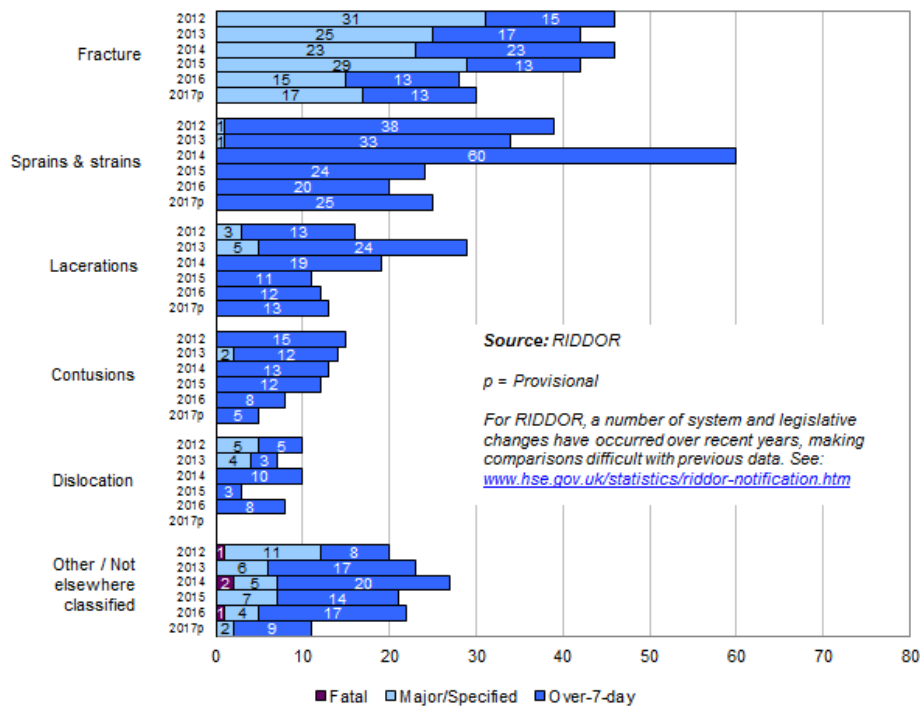


Figure 6: Reported over-7-day injuries (offshore), by quarter, 2016 & 2017p



Some additional charts follow, that provide breakdowns by nature of injury, part of body injured, kind of accident, and injury severity, for the six-year period 2012 to 2017.

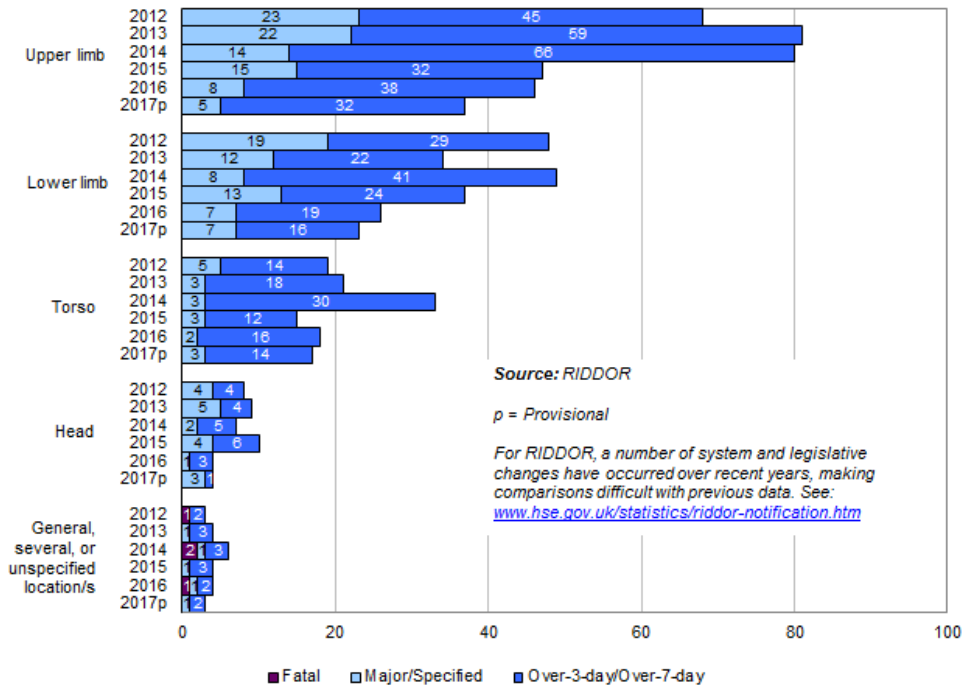
Figure 7: Reported injuries (offshore) by nature of injury and injury severity, 2012 – 2017p



Key points for 2017:

- Fractures accounted for nearly 90% of specified injuries reported (17 of 19)
- Sprains and strains accounted for 38% of over-7-day injuries reported (25 of 65)

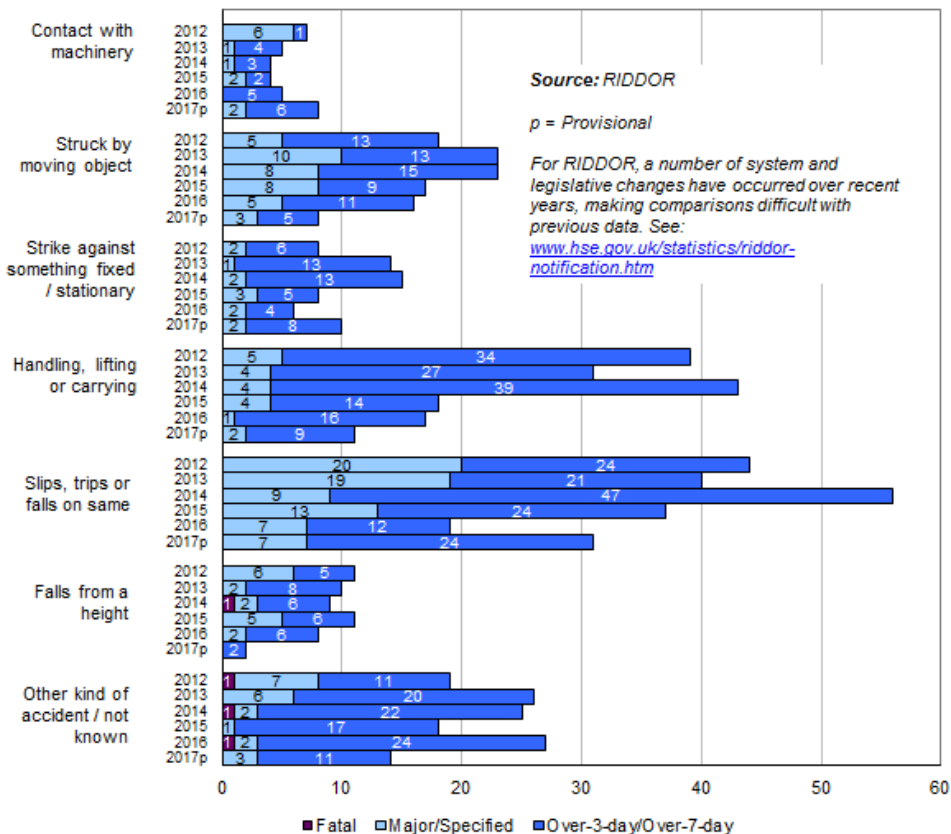
Figure 8: Reported injuries (offshore) by part of body injured and injury severity, 2012 - 2017p



Key points for 2017:

- Upper limb accounted for 44% of all injuries reported (37 of 84)
- Lower limb accounted for 27% of all injuries reported (23 of 84)
- In total, injuries to limbs accounted for 63% of specified injuries (12 of 19) and 74% of over-7-day injuries (48 of 65)

Figure 9: Reported injuries (offshore) by kind of accident and injury severity, 2012 - 2017p



Key points for 2017:

- Slips, trips or falls on same level accounted for 37% of all injuries reported (31 of 84), followed by Handling lifting or carrying (11%; 9 of 84) and Striking against something fixed or stationary (10%; 8 of 84)

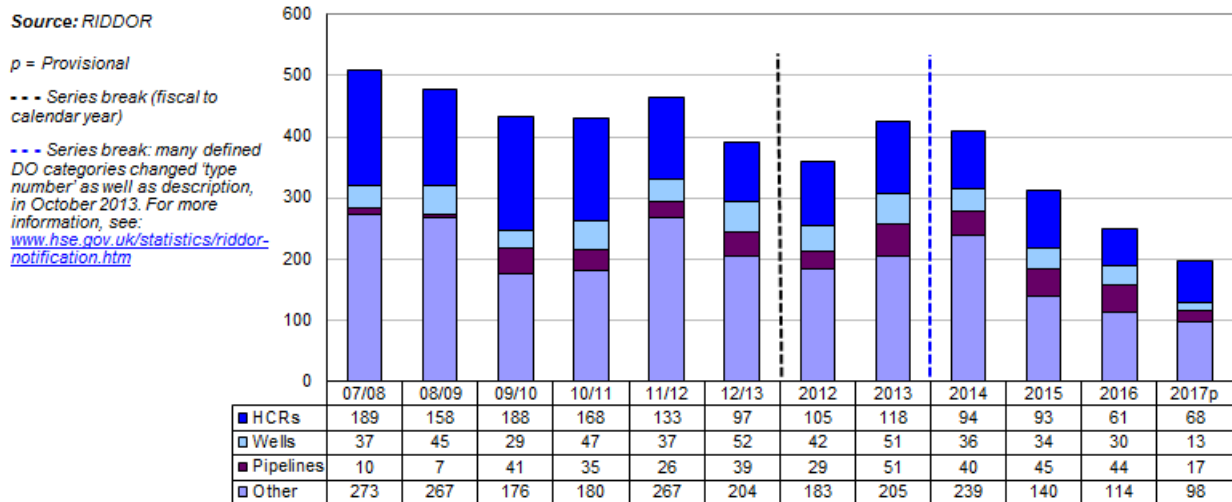
Dangerous Occurrences

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.

Key points for 2017:

- There were 196 DOs reported in 2017, compared to 249 in 2016 (and 312 in 2015); longer-term analysis of the trend in reported DOs is complicated by the above change
- Hydrocarbon releases accounted for over a third of the DOs reported under RIDDOR (35%; 68 of 196)
- The number of reported wells DOs continued to decrease and there was a large decrease in the number of pipeline DOs in 2017

Figure 10: Reported dangerous occurrences (offshore), 2007/08 - 2017p



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 2015 can be found in two separate excel 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; latest data is available at <http://oilandgasuk.co.uk/businessoutlook.cfm>.

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. By July 2017 all non-process HCRs will be classified.

Key points for 2017:

- Since the introduction of the ROGI ('Reporting of Oil and Gas Incidents') form, all non-process HCRs (e.g. heli 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
- 42 of a total of 110 HCRs were reported solely under the EU Offshore Directive arrangements, i.e. they did not meet the criteria to be reportable under RIDDOR (and see further details below).
- The HCR release rate has fluctuated over the past 10 years, but has seen a steady decrease since 2013

Figure 11: Hydrocarbon releases (offshore), 2007 - 2017p*

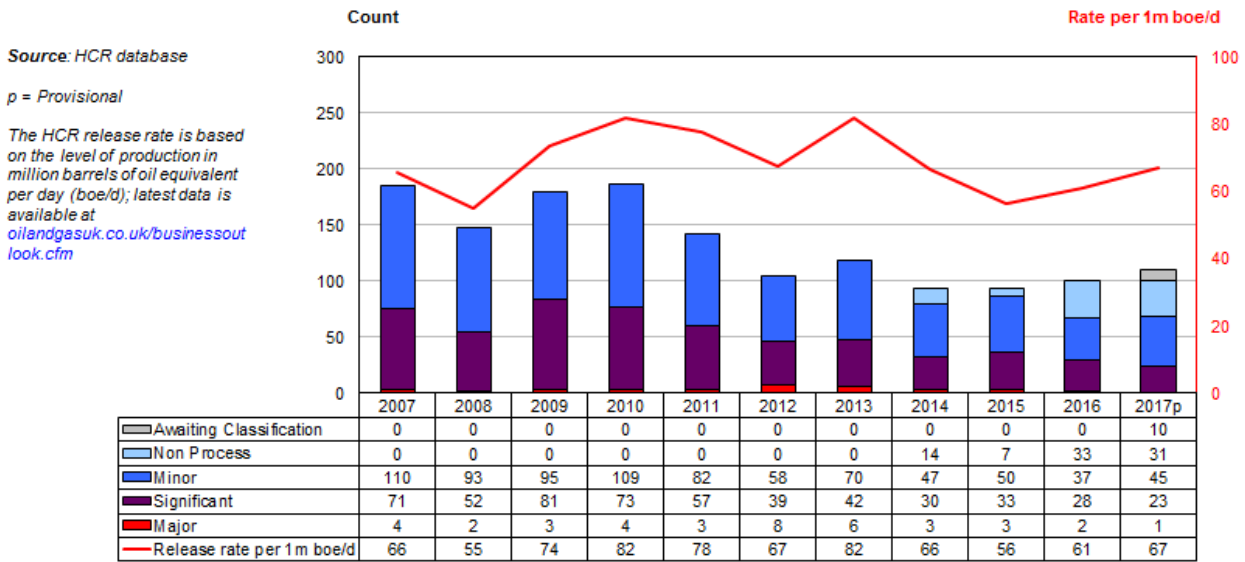
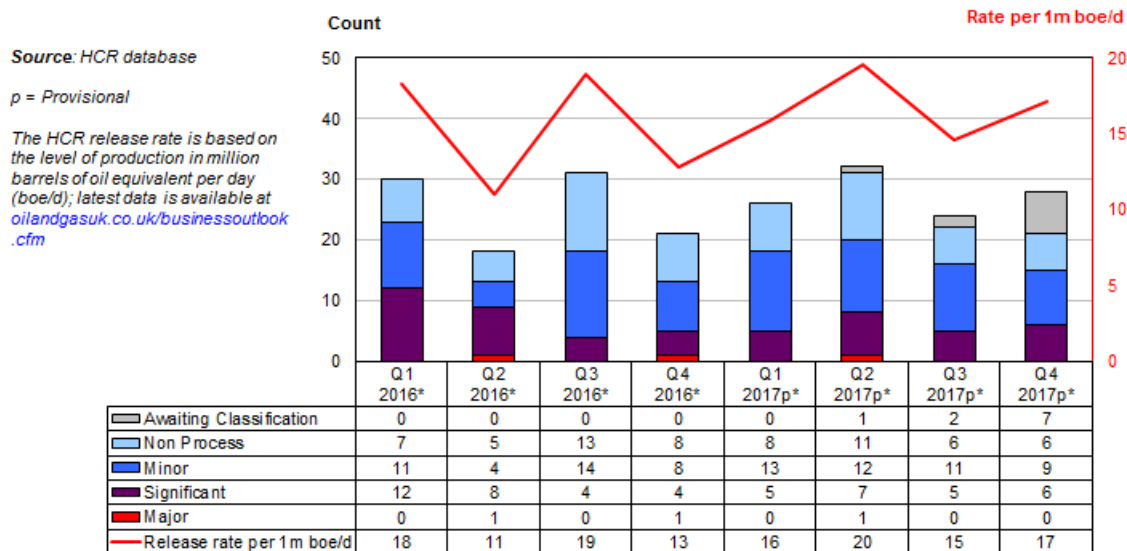


Figure 12: Hydrocarbon releases (offshore), by quarter, 2016 & 2017p*



* For 2017, 42 of the 110 HCRs detailed in Figures 11 and 12 were reported solely under the EU Offshore Directive arrangements, and did not meet the criteria to be reportable under RIDDOR. The following table provides a quarterly and annual breakdown of those HCRs, by the classification of severity assigned to them.

Severity	2017				
	Q1	Q2	Q3	Q4	Annual total
Awaiting Classification	-	-	-	1	1
Minor	1	7	2	1	11
Non-process	6	7	4	4	21
Significant	2	1	3	3	9
Total	9	15	9	9	42

Occupational diseases

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

Key points:

- There were 80 incidents of ill health reported over the period 2012 to 2017, of these:
 - *musculoskeletal conditions*, such as hand-arm vibration syndrome, had the highest number of reports (32), followed by *viral and bacterial conditions*, such as chickenpox (31), and *skin conditions*, such as reports of occupational dermatitis (12)

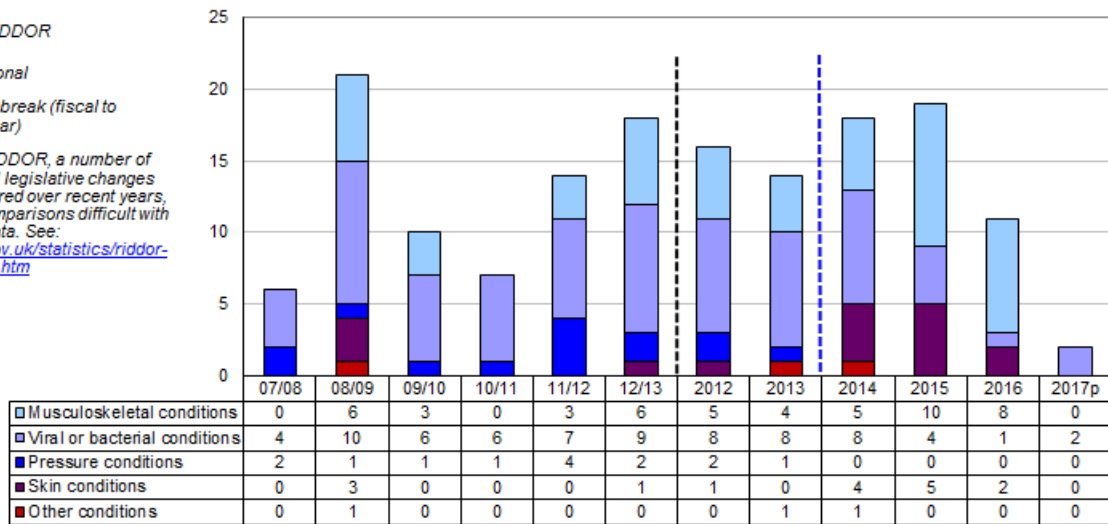
Figure 13: Reported diseases (offshore), 2007/08 – 2017p

Source: RIDDOR

p = Provisional

--- Series break (fiscal to calendar year)

--- For RIDDOR, a number of system and legislative changes have occurred over recent years, making comparisons difficult with previous data. See: www.hse.gov.uk/statistics/riddor-notification.htm



Regulatory Activity

HSE's regulatory programme for the offshore industry seeks to ensure major hazard and personal risks are properly managed in compliance with legislative requirements. Where appropriate, HSE will take formal enforcement action to prevent harm and secure justice in line with its Enforcement Policy.

Key regulatory activities are:

- Assessing safety cases
- Inspecting installations
- Investigating incidents
- Following up concerns
- Identifying non-compliance issues
- Formal enforcement

More information can be found in the HSE Business Plan for 2018/19, available at www.hse.gov.uk/aboutus/strategiesandplans/businessplans.

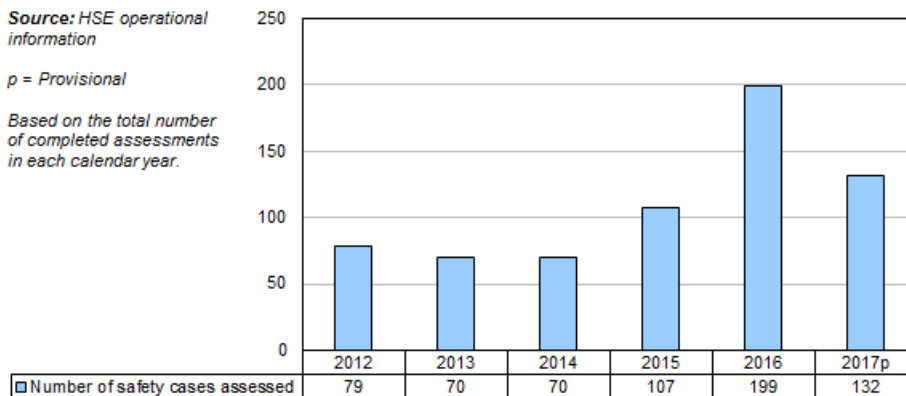
Data on regulatory activity covers the latest available five-year period.

Assessing safety cases

Key point:

- In 2017 ED Offshore assessed 132 Safety Case Submissions; lower than the previous year but still higher than previous years, i.e. prior to the 2015 Safety Case Regulations

Figure 14: Number of safety case submissions assessed by HSE Energy Division – Offshore, 2012 – 2017p



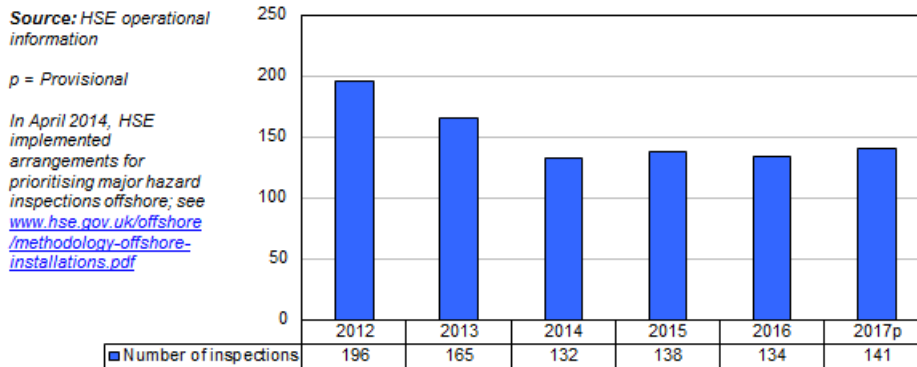
Inspecting installations

From 1st April 2014, HSE implemented arrangements for prioritising major hazard inspections offshore, see: www.hse.gov.uk/offshore/methodology-offshore-installations.pdf. The new arrangements focussed on targeting of high hazard and poor performing installations, which resulted in lower numbers of more in-depth and targeted inspections

Key point:

- In 2017 ED Offshore undertook 141 planned offshore inspections at 110 offshore installations

Figure 15: Number of inspections undertaken by HSE Energy Division – Offshore at offshore installations, 2012 – 2017p



During an inspection, the HSE inspector will assess the duty holder against the selected inspection topics and award a score per topic. The following two charts provide detail on the scores awarded as a result of inspections in 2016 and 2017.

Figure 16: Offshore Topic Inspection Scores - Overview, 2016 & 2017p

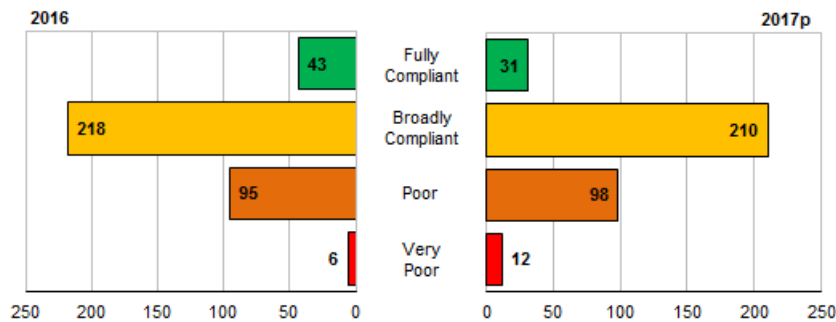
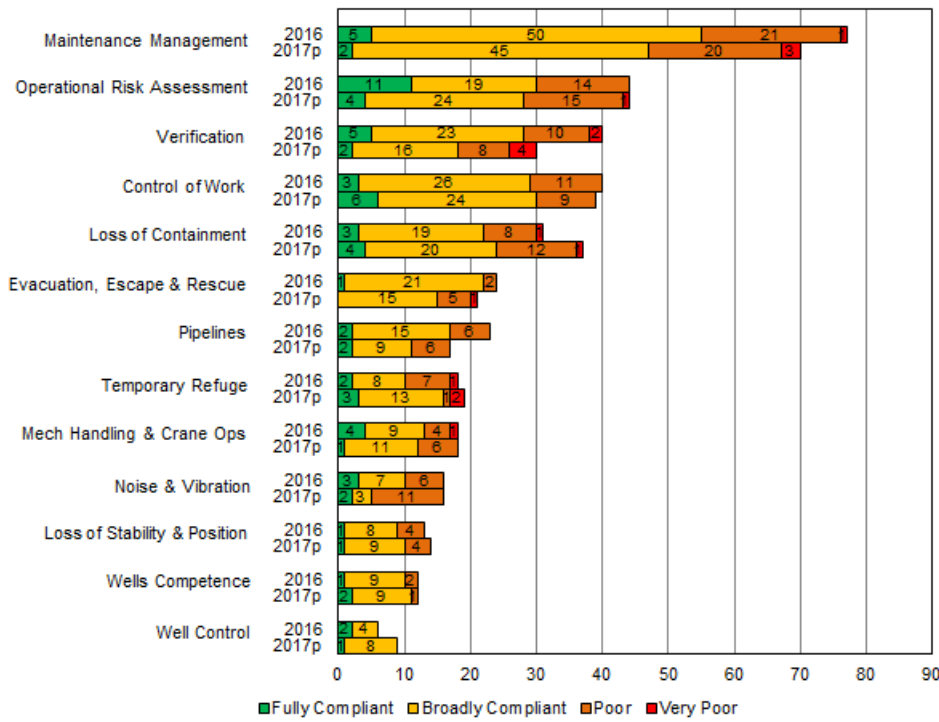


Figure 17: Offshore Topic Inspection Scores - by Inspection Topic, 2016 & 2017p



Further information is available in the Offshore Topic Inspection Guides at www.hse.gov.uk/offshore/inspection.htm.

Investigating incidents

HSE investigates incidents which meet certain criteria, see www.hse.gov.uk/enforce/incidse/crits.pdf.

Key point:

- ED Offshore completed 23 investigations in 2017

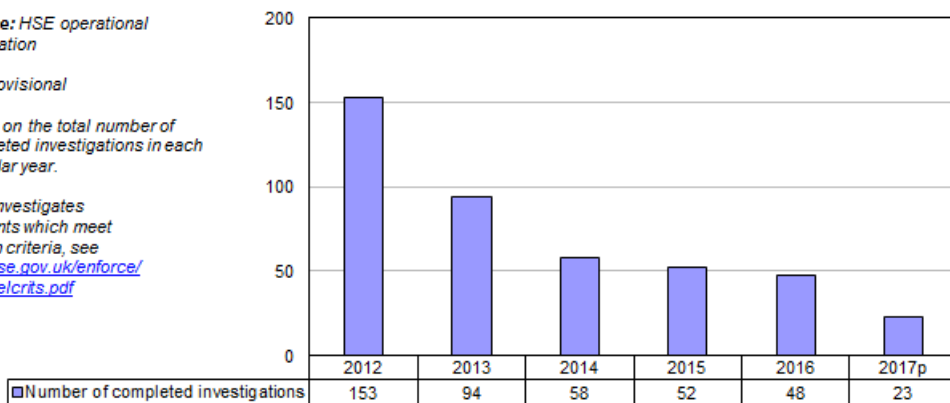
Figure 18: Number of investigations completed by HSE Energy Division – Offshore, 2012 – 2017p

Source: HSE operational information

p = Provisional

Based on the total number of completed investigations in each calendar year.

HSE investigates incidents which meet certain criteria, see www.hse.gov.uk/enforce/incidse/crits.pdf



Following up concerns

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.

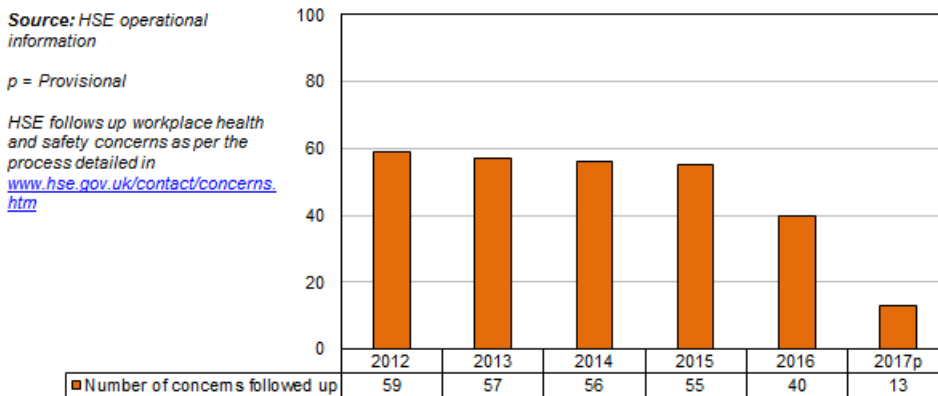
HSE will only take action if it relates to a work activity and the issue raised has caused, or has potential to cause, significant harm, or alleges the denial of basic employee welfare facilities or it appears to constitute a significant breach of health and safety law.

For more information on workplace health and safety concerns, see www.hse.gov.uk/contact/concerns.htm.

Key point:

- In 2017 ED Offshore followed up 13 health and safety concerns; a lot fewer than in recent previous years.

Figure 19: Number of workplace health and safety concerns followed up by HSE Energy Division – Offshore, 2012 – 2017p



Identifying non-compliance issues

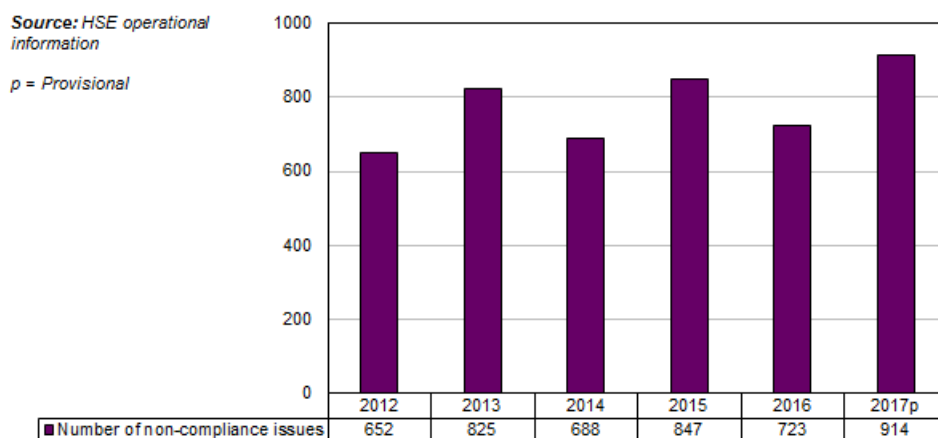
Non-compliance issues are identified at inspection (or during investigations) that require action by an operator, and are normally communicated to an operator within a formal letter.

These are in addition to other, more formal, enforcement activities, such as Notices and Prosecutions.

Key point:

- In 2017 ED Offshore identified 914 non-compliance issues

Figure 20: Number of non-compliance issues identified by HSE Energy Division - Offshore, 2012 – 2016p



Formal enforcement

ED Offshore applies the principles detailed in HSE's Enforcement Policy Statement 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).

For more information on HSE's Enforcement Policy Statement, see www.hse.gov.uk/enforce/enforcepolicy.htm.

Enforcement notices and prosecutions

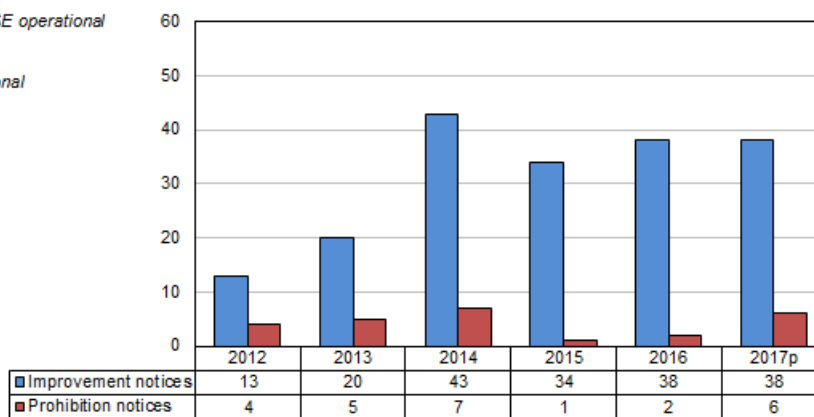
Key point:

- In 2017 there were 38 improvement notices and six prohibition notices issued

Figure 21: Number of enforcement notices issued by HSE Energy Division - Offshore, by type of notice, 2012 - 2017p

Source: HSE operational information

p = Provisional



Prosecutions

Prosecution Cases relate to those in the offshore industry instituted by HSE and, in Scotland, the Crown Office and Procurator Fiscal Service (COPFS).

Key points:

- There were no cases instituted in 2017, with the most recent one being a case which was heard in 2016 that resulted in a conviction, relating to a hydrocarbon release on an installation

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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