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REPORT FROM THE COMMISSION

Annual Report on the Safety of Offshore Oil and Gas Operations in the European Union for the Year 2018

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1. INTRODUCTION

Following the preceding reports for the yeas 2016 and 2017, this report of the European Commission covers the safety of offshore oil and gas operations in the European Union (EU) in the year 2018.

The legal basis for this report is Directive 2013/30/EU[1] of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC ('Offshore Safety Directive'). This legislation aims at achieving a high level of safety in offshore oil and gas operations, for the benefit of: workers; the environment; offshore platforms and equipment; and economic activities such as fishing and tourism. The provisions of the Directive, as implemented by Member States, will help to: (i) prevent major accidents; (ii) reduce the number of incidents; and (iii) ensure effective follow-up of accidents and incidents in order to mitigate their consequences.

As in the preceding reports, the purpose of this annual report is: (i) to provide data on the number and type of installations in the EU; and (ii) to give information about incidents and an assessment of the safety performance of offshore oil and gas operations. With every additional report the analysis of trends will become more meaningful. Futhermore the series of annual reports will serve as a record of safety performance in Member States' offshore oil and gas activities.

This report is based on annual reports and data notified by Member States as required by the Offshore Safety Directive. The Commission has received data from Bulgaria, Croatia, Cyprus, Denmark, Germany, France, Greece, Ireland, Italy, the Netherlands, Poland, Romania, Spain and the United Kingdom, which was still an EU Member State in the year 2018. Most of the installations are located in the North Sea and Atlantic Ocean (380 installations), while there are 166 installations in the Mediterranean Sea, 8 in the Black Sea and 2 in the Baltic Sea.

The competent authorities of the Member States inspected 318 offshore installations in their jurisdictions in 2018. Following certain incidents, three Member States (the United Kingdom, Denmark and the Netherlands) carried out investigations during the reporting period. The United Kingdom carried out 41 investigations for safety and environmental concerns, and 5 investigations for major accidents.. Denmark carried out 3 investigations for safety and environmental concerns (no investigation on major accidents) and the Netherlands one investigation on a major accident (no investigation on safety and environmental concerns).

The figures provided by Member States, specifically on the number and severity of accidents reported in relation to the number of installations, indicate a noticablyy lower level of safety in the European offshore sector compared to the two preceding years, which require a follow-up by the Member States' compentent authorities.

[1] OJ L 178, 28 June 2013, p. 66.

2. LEGAL BASIS

In accordance with Article 25 of the Offshore Safety Directive, the Commission is required to publish an annual report on the safety and environmental impact of offshore oil and gas operations based on information reported by Member States. Member States must submit to the Commission an annual report containing information specified in Annex IX (point 3) of the Offshore Safety Directive, by 1 June each year.

The annual reports to be submitted by Member States pursuant to Article 25 shall contain, as a minimum, the following information:

(a) the number, age and location of installations;
(b) the number and type of inspections and investigations carried out, in addition to any enforcement actions or convictions;
(c) incident data pursuant to the common reporting system required in Article 23;
(d) any major change in the offshore regulatory framework;
(e) the performance of offshore oil and gas operations.

Member States' deadline for publishing the required information is 1 June of the year following the reporting period (e.g. 1 June 2019 for the year 2018).

They shall report using a common format provided by Commission Implementing Regulation (EU) No 1112/2014 of 13 October 2014[2]. This Implementing Regulation sets a common format for the sharing of information on major hazard indicators by the operators and owners of offshore oil and gas installations. It also sets a common format for the publication of information on major hazard indicators by the Member States. A Commission Guidance Document[3] dated 25 November 2015 provides further specific information on the Implementing Regulation, and explains how to use the reporting format.

3. METHODOLOGY AND INFORMATION RECEIVED FROM MEMBER STATES

Pursuant to Annex IX (point 3) of the Offshore Safety Directive, Member States are obliged to submit clearly defined information on incidents in their offshore oil and gas sector, using the templates provided by Implementing Regulation 1112/2014. The data submitted must include information on the offshore oil and gas installations in the EU, such as number, type, location and age. Reports from Member States must also provide information on the number of: (i) offshore inspections, investigations and enforcement actions taken; (ii) incidents by category; and (iii) injuries.

[2] OJ L 302, 22 October 2014, p. 2.
[3] https://euoag.jrc.ec.europa.eu/files/attachments/2015_11_25_implementing_regulation_guidance_document_final.pdf.

In addition to data on individual Member States, the Commission has assessed the safety performance of offshore regions. For this purpose, the Commission considers: (i) Germany, Denmark, France, the United Kingdom, Ireland and the Netherlands as the North Sea and Atlantic region; (ii) Spain, Greece, Croatia, Cyprus, Italy and Malta as the Mediterranean region; (iii) Bulgaria and Romania as the Black Sea region; and (iv) Latvia and Poland as the Baltic Sea region.

For its annual report for 2018, the Commission has used information provided by Bulgaria, Croatia, Cyprus, Greece, France, the Netherlands, Denmark, Germany, Ireland, Italy, Poland, Romania, Spain and the United Kingdom. Other Member States were not active in the offshore oil and gas sector or did not submit information relevant for this report.

With the exception of the United Kingdom, all Member States with offshore oil and gas operations provided complete data on all their installations. In contrast, the United Kingdom limited parts of its report to installations, which were subject to a regulatory review of their risk-assessment documentation (see also Article 42(2) of the Offshore Safety Directive). This means that information from the United Kingdom on investigations, enforcement actions, incident data, and the safety performance of offshore operations covers a range of installations continously expanding during the first half of 2018. Installations covered started with an estimated number of 139 installations in January 2018 and ended with an estimated number of 191 from 19 July 2018. That date was the end of the transitional period for all installations.

4. THE OFFSHORE SECTOR FOR OIL AND GAS IN THE EUROPEAN UNION

4.1 Installations and production

The vast majority of offshore installations[4] in EU waters are located in the North Sea (see table 1), specifically in the exclusive economic zones of the United Kingdom and the Netherlands (approximately 34% and 28% of offshore installations in EU waters, respectively). In the Mediterranean, Italy is the most active Member State (25% of all installations in the EU waters) followed by Croatia. In the Black Sea region, Romania has an established offshore oil and gas industry, while Bulgaria has continued exploration activities for offshore hydrocarbons but provides with one installaion a very limited production. According to the reports received from Member States on the Baltic Sea, only Poland has offshore installations in this region. In total, there were 556 production and non-production installations reported in EU waters in 2018, which constitutes an increase of two installations compared to 2017, despite several decommissioned installations[5].

[4] Mobile Offshore Drilling Units (MODUs) are not part of the analysis of Section 4.1.
[5] Details see chapter 4.1.

Table 1: Fixed installations on 1st January 2018: 'Type of installation', by region and Member State

Region/Country		Type of installation(*)				
		FMI	FNP	FPI	NUI	Total
Baltic Sea		1	0	0	1	2
	Poland	1	0	0	1	2
Black Sea		7	0	0	1	8
	Bulgaria	0	0	0	1	1
	Romania	7	0	0	0	7
Mediterranean		16	0	3	147	166
	Croatia	2	0	0	18	20
	Greece	1	0	0	1	2
	Italy	12	0	3	126	141
	Spain	1	0	0	2	3
North Sea & Atlantic		143	0	23	214	380
	Denmark	10	0	0	20	30
	Germany	2	0	0	0	2
	Ireland	1	0	0	1	2
	The Netherlands	48	0	0	107	155
	United Kingdom	82	0	23	86	191
Total		167	0	26	363	556

(*) FMI — Fixed, manned installation; FNP — Fixed, non-production installation; FPI — Floating production installation; NUI — (Normally) Un-attended installation

In 2018, there were 13 installations reported as being decommissioned in EU waters: 12 in the United Kingdom and 1 in Italy. In the same year, 1 new fixed installation was reported entering into

operation in the Netherlands. Furthermore, amendments of the reporting methods of some Member States have also contributed to the change in the number of installations reported compared to the preceding year[6].

More than half of the offshore installations in EU waters entered into operation between 1980 and 2000. Since 2010, the development of new production installations has dropped noticeably in the North Sea and Atlantic region and in the Mediterranean Sea (Table 2).

Table 2: Number of installations present in EU waters, by decade of entry into operation and by region

Year of construction	**Region**				
	Baltic Sea	**Black Sea**	**Mediterranean**	**North Sea & Atlantic**	**EU Total**
1950-1959	0	0	0	4	**4**
1960-1969	0	0	7	21	**28**
1970-1979	0	0	14	41	**55**
1980-1989	0	2	53	82	**137**
1990-1999	1	3	42	119	**165**
2000-2009	1	3	40	70	**114**
2010-2019	0	0	10	43	**53**
2020-2029	0	0	0	0	**0**
EU Total	**2**	**8**	**166**	**380**	**556**

[6] Despite the decommissioning of 13 installations and the start of operation of only one new installation the total number of installations increased by two installations. If all data were accurately reported the number had to decline by 12 installations.

The largest part (approximately 94%) of the EU's domestic oil and gas is produced in the North Sea and Atlantic region (Table 3). The United Kingdom is by far the largest contributor, followed by the Netherlands and Denmark. Italy and Croatia are active producers in the Mediterranean Sea, while in the Black Sea only Romania currently has a noticeable oil and gas output.

Table 3. Offshore oil and gas production in the EU in kilo tons of oil equivalent (ktoe)

REGION	Country	ktoe	% of EU Total
Baltic Sea		**210.98**	**0.19%**
	Poland	210.98	0.19%
Black Sea		**1138.87**	**1.01%**
	Bulgaria	4.71	0.00%
	Romania	1134.16	1.01%
Mediterranean		**4139.61**	**3.69%**
	Croatia	528.20	0.47%
	Greece	211.01	0.19%
	Italy	3311.00	2.95%
	Spain	89.40	0.08%
North Sea and Atlantic		**106727.60**	**95.11%**
	Denmark	9589.00	8.55%
	Germany	915.00	0.82%
	Ireland	311.17	0.28%
	The Netherlands	11681.00	10.41%
	United Kingdom	84231.43	75.06%
Total		**112217.06**	**100.00%**

Compared to the preceding year, with less than a one per cent decline, the total production of offshore oil and gas was stable.

4.2 Offshore inspections, investigations, enforcement actions and regulatory framework

The competent authorities of the Member States have regularly inspected the offshore installations in their jurisdictions. Table 4 presents the number of offshore inspections carried out during the reporting year. The number of inspections usually increases with the number of installations in Member States.

As in 2017 the number of inspections decreased again, now from 630 in 2017 to 593 in 2018. Specifically, Italy decreased the number of inspections from 289 to 236, the Netherlands from 60 to 32, whereas the UK increased the number of inspections from 232 to 273. For the first time also Romania carried out inspections. In contrast to the decreasing number of instpections, more efforts were allocated in terms of man-days spent on insprections per installation (2817 man-days in 2018 compared to 2083 man-days in 2017).

*Table 4: Number of offshore inspections by region and Member State in 2018**

REGION	Country	Inspections	Man-days spent on installation (travel time not included)	Number of inspected installations
Baltic Sea		**3**	**6**	**2**
	Poland	3	6	2
Black Sea		**4**	**24**	**2**
	Romania	4	24	2
Mediterranean		**251**	**262**	**95**
	Croatia	10	10	4
	Cyprus	2	6	2
	Greece	1	10	1
	Italy	236	234	86
	Spain	2	2	2
North Sea & Atlantic		**335**	**2525.5**	**219**
	Denmark	19	66	19
	France	2	4	1
	Germany	6	6	2

	Ireland	3	30	3
	The Netherlands	32	23	28
	United Kingdom	273	2396.5	166
TOTAL		**593**	**2817.5**	**318**

(*)Table includes information from Member States with at least one offshore installation present in their jurisdiction in 2018.

Article 18 of the Offshore Safety Directive attributes rights and powers to the competent authorities of Member States on operations and installations in their jurisdiction. These rights and powers include the right to prohibit operations and the right to request measures for ensuring compliance with the general principles of risk management and for ensuring safe operations.

Accordingly, three Member States carried out investigations during the reporting period: the United Kingdom, Denmark and the Netherlands. The United Kingdom carried out 41 investigations for safety and environmental concerns[7], and 5 investigations for major accidents. Denmark carried out 3 investigation for safety and environmental concerns, and the Netherlands carried out 1 investigation for a major accident. Mainly due to the increase in the United Kingdom, the total number of investigations were in 2018 substantially higher (50) than in 2017 (20) and 2016 (23).

Despite the increase of investigations the total number of enforcement actions was in 2018 lower than in 2017. Whereas Member States took 47 enforcement actions in 2017 (United Kingdom 45), in 2018 only the United Kingdom reported these actions, which number was with 34 cases lower than in 2017 .

5. INCIDENT DATA AND SAFETY PERFORMANCE OF OFFSHORE OPERATIONS

Member States reported the following incidents for 2018, a total of 124, in accordance with Annex IX of the Offshore Safety Directive.

- In the United Kingdom, there were 95 reportable events, including 5 major accidents.
- In the Netherlands, there were 14 reportable events[8], including one major accidents. The causes of the major accident have not been reported, since the case is still under investigation at the time of reporting.
- In Denmark, there were 9 reportable events, and no major accident..

[7] Safety and environmental concerns is the reporting by the workforce, if they see issues in the workplace that they think might be breaking health and safety law and has the potential to cause harm.

[8] A single reportable event may lead to several incidents, e.g. an unintended release of gas may lead to the evacuation of personnel.

- In France and Ireland, there was one reportable event in each Member State, and no major accident.

The number of major accidents includes incidents with a significant potential to cause fatalities or serious personal injuries even if they did not lead to such outcomes.

Most of the failures (80 %) that happened at the reportable events fell under the category of unintended releases; 13,7% concerned the loss of well control (blowout/diverter activation); 1,6% concerned failures of safety and environmental critical elements (SECE); and 1,6% concerned the loss of structural integrity (loss of station keeping). Two incidents required the evacuation of personnel.

Table 5: Incidents by categories (Annex IX of the Offshore Safety Directive, EU level)

Annex IX categories	**No. of events**	**Share (of Category Total)**	**Share (of Events Total)**
(a) Unintended releases – Total	**99**	**100.0%**	**79,8%**
Ignited oil/gas releases – Fires	1	1,06%	0,8%
Ignited oil/gas releases – Explosions	0	0.0%	0.0%
Not ignited gas releases	56	56,5%	45,2%
Not ignited oil releases	31	31,3%	25,0%
Hazardous substances releases	11	11,1%	8,9%
(b) Loss of well – Total	**17**	**100.0%**	**13,7 %**
Blowouts	0	0.0%	0.0%
Blowout / diverter activation	8	47.1%	6,4%
Well barrier failure	9	52.9%	7,3%
(c) Failures of SECE	**2**	**100.0%**	**1,6%**
(d) Loss of structural integrity – Total	**2**	**100.0%**	**1,6%**
Loss of structural integrity	0	0.0%	0.0%
Loss of stability/buoyancy	0	0.0%	0.0%
Loss of station keeping	2	100.0%	1,6%

(e)	**Vessel collisions**	**0**	**0.0%**	**0.0%**
(f)	**Helicopter accidents**	**0**	**0.0%**	**0.0%**
(g)	**Fatal accidents(*)**	**0**	**0.0%**	**0.0%**
(h)	**Serious injuries of 5 or more persons in the same accident**	**0**	**0.0%**	**0.0%**
(i)	**Evacuation of personnel**	**2**	**100.0%**	**1,6%**
(j)	**Environmental accidents(**)**	**2**	**100.0%**	**1,6%**
Total[9]		**124**	**100.0%**	**100.0%**

(*) *Only if related to a major accident*

(**) *According to reports of Member States, the major accidents did not qualify as environmental accidents*

In the EU, the total number of incidents increased from 42 in 2016 to 59 in 2017 and further to 124 in 2018, largely due to an increased number of ´unintended releases´. The 'loss of well control' incidents increased to 17, after the number fell from 11 in 2016 to 8 in 2017. The 'failures of safety and environmental critical elements' was 2, after 3 in 2016 and 1 in 2017. There were 2 reports of failures of structural integrity in 2018 after none in 2017 and 2 such failures reported in 2016. In addition, 2 evacuations took place in 2018, whereas no evacuation of personnel was reported for 2017 and 1 evacuation was reported in 2016.

No vessel collisions were reported for 2018, compared to 3 in 2017 and none reported for 2016; there were 9 failures of well barriers compared to 2 in 2017 and none reported for 2016. In 2018 a total of 6 incidents were classified as major accidents[10], since they could have potentially caused fatalities or serious personal injury. In 2017, 4 major accidents occurred and 2 major accidents were reported in 2016.

Taking note of the increased number of accidents the Commission closely co-operates with Competent Authorities concerned to determine the causes for this development and to discuss a

[9] A single incident may appear more than once, for example: the evacuation of personal linked to the loss of well control would count for the total as two points.

[10] OJ L 178, 28 June 2013, p. 73: Article 2(1): 'major accident' means, in relation to an installation or connected infrastructure:
(a) an incident involving an explosion, fire, loss of well control, or release of oil, gas or dangerous substances involving, or with a significant potential to cause, fatalities or serious personal injury;
(b) an incident leading to serious damage to the installation or connected infrastructure involving, or with a significant potential to cause, fatalities or serious personal injury;
(c) any other incident leading to fatalities or serious injury to five or more persons who are on the offshore installation where the source of danger occurs or who are engaged in an offshore oil and gas operation in connection with the installation or connected infrastructure; or
(d) any major environmental incident resulting from incidents referred to in points (a), (b) and (c).
For the purposes of determining whether an incident constitutes a major accident under points (a), (b) or (d), an installation that is normally unattended shall be treated as if it were attended.

potential follow-up allowing a higher level of safety performance as soon as possible. Co-operation takes place bilaterally and in the context of the European Offshore Authorities Group (EUOAG).

6. CONCLUSIONS

With 556 installations in the EU (2018 includes the United Kingdom), the number of installations remained rather stable. In the preceding year it decreased from 586 in 2016 to 554 in 2017. The level of overall oil and gas production slightly decreased from 113 051 of kilotonnes of oil equivant to 112 217 kilotonnes of oil equivant in 2018.

The Commission assesses the safety of the EU's offshore oil and gas operations based on the data provided by Member States in accordance with the provisions of the Implementing Regulation on reporting. Accordingly, the accuracy of the Commission's assessment depends on the information submitted by Member States.

The number of inspections and investigations carried out was slighly lower (minus 6 %) than in the preceding year. In comparison to 2017, Member States carried out a lower number of enforcement actions.

The number of incidents sharply increased from 59 in 2017 to 124 in 2018. The phasing in of all the United Kingdom's offshore installations into the reporting system may only explain a smaller part of the increase of accidents[11]. Incidents in the UK increased from 30 to 99 and in the Netherlands from 13 to 52. In contrast, this number decreased for Denmark from 14 to 9. Major accidents increased from 4 to 6 between 2017 and 2018.

As in 2016 and 2017, no fatalities were reported in 2018 but 10 injuries and 17 serious injuries occurred. According to the reports of competent authorities, in the United Kingdom and in the Netherlands the number of accidents significantly increased, which requires both an in-depth analysis of causes and follow-up measures by competent authorities. The Commission will co-operate with Member States and seek co-operation with the United Kingdom to bring the safety performance back to the level of recent years.

[11] The effect of the phasing in may justify an estimated increase by 10 incidents, if safety peformance remainded unchanged per installation.