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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 2016**

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# 1. INTRODUCTION

Directive 2013/30/EU<sup>1</sup> of the European Parliament and of the Council of 12 June 2013 on the safety of offshore oil and gas operations and amending Directive 2004/35/EC ('Offshore Safety Directive') seeks to achieve a high level of safety for carrying out these operations. The health of workers, the environment, the platforms and equipment for offshore operations and economic activities such as fishing and tourism benefit from a high safety level. The Directive's provisions, as implemented by Member States, will help to avoid major accidents, reduce the number of incidents and achieve an effective follow-up of accidents and incidents to mitigate their consequences.

The purpose of this annual report is to provide data on the number and type of installations in the European Union and to inform on incidents and the safety performance of offshore oil and gas operations. In the coming years, the series of annual reports will serve to monitor the chronological development of safety performance in Members States and regions.

Based on the reports submitted by Member States, the Commission concludes that the European offshore sector demonstrated a good safety performance in 2016.

## **Executive summary**

As required by the Offshore Safety Directive and based on annual reports from Member States, the Commission will publish an annual report on the safety of offshore oil and gas operations in the European Union.

The Commission has received data from Bulgaria, Croatia, Cyprus, Greece, the Netherlands, Denmark, Germany, Ireland, Italy, Poland, Romania, Spain and the United Kingdom. The majority of installations are located in the North Sea and the Atlantic Ocean (410), whereas 165 installations are in the Mediterranean Sea and 9 in the Black Sea.

The competent authorities have regularly inspected the offshore installations in their jurisdictions. Following serious incidents, two Member States carried out investigations during the reporting period: the United Kingdom (21 for safety and environmental concerns, 1 for a major accident) and the Netherlands (1 for a major accident).

The figures provided by Member States, specifically the number and severity of accidents reported, demonstrate that the European offshore oil and gas industry operated safely in 2016.

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<sup>1</sup> 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 to it 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:

The annual reports to be submitted by Member States pursuant to Article 25 have to 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, 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.

The deadline that Member States have for publishing the required information is 1 June of the year following the reporting period (e.g. 1 June 2017 for the year 2016).

Member States have to report using a common format provided by Commission Implementing Regulation (EU) No 1112/2014 of 13 October 2014. This Implementing Regulation determines a common format for the sharing of information on major hazard indicators by the operators and owners of offshore oil and gas installations and a common format for the publication of the information on major hazard indicators by the Member States<sup>2</sup>. A Commission Guidance Document<sup>3</sup> dated 25 November 2015 and drafted and agreed by the European Union Offshore Oil and Gas Authorities Group (EUOAG) provides further specific information on the Implementing Regulation and explains how to use the reporting format in practice.

## 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 and limited 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 operated in the EU such as the number, type, location and age. The reports from Member States must also provide the number of offshore

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<sup>2</sup> OJ L 302, 22 October 2014, p. 2.

<sup>3</sup> [https://euoag.jrc.ec.europa.eu/files/attachments/2015\\_11\\_25\\_implementing\\_regulation\\_guidance\\_document\\_final.pdf](https://euoag.jrc.ec.europa.eu/files/attachments/2015_11_25_implementing_regulation_guidance_document_final.pdf).

inspections, investigations and enforcement actions and inform about the number of incidents by categories and the number of injuries.

In addition to data on individual Member States, the Commission has assessed the safety performance of regions. For this purpose, the Commission considers Germany, Denmark, France, the United Kingdom, Ireland and the Netherlands as the ‘North Sea and Atlantic’ group; Spain, Greece, Croatia, Italy and Malta as the ‘Mediterranean’ group; Bulgaria and Romania as the ‘Black Sea’ group; and Latvia and Poland as the ‘Baltic Sea’ group.

For its annual report on safety, the Commission has used information provided by Bulgaria, Croatia, Cyprus, Greece, 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 UK, all Member States with offshore oil and gas operations provided complete data on all their installations. In contrast, the UK limited parts of its report on offshore safety to installations which were subject to a regulatory review of their risk assessment documentation (Article 42, paragraph 2 of the Offshore Safety Directive). Accordingly, information from the UK on investigations, enforcement actions, incident data and performance of offshore operations is limited to 129 installations from a total of 225 installations.

To assess the safety performance of Member States, the Commission has compared incidents and major accidents in relation to staff numbers and working hours for offshore oil and gas operations.

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

### 4.1 Installations and production

The vast majority of offshore installations in EU waters are located in the North Sea, specifically in the United Kingdom and in the Netherlands (approximately 38 % and 26 % of offshore installations in EU waters respectively). In the Mediterranean, Italy is the most active Member State followed by Croatia. In the Black Sea region, Romania has an offshore oil and gas industry and Bulgaria has commenced exploration activities for offshore oil and gas. According to the reports received from Member States with shores on the Baltic Sea, only Poland produces oil and gas offshore in this area (see Table 1).

*Table 1: Fixed installations: ‘Type of installation’, by region and Member State*

Region/Country	Type of installation (*)				
	FMI	FNP	FPI	NUI	Total
<b>Baltic Sea</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>
Poland	1	0	0	1	2

<b>Black Sea</b>		<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>9</b>
	Bulgaria	0	0	0	1	1
	Romania	8	0	0	0	8
<b>Mediterranean</b>		<b>16</b>	<b>0</b>	<b>3</b>	<b>146</b>	<b>165</b>
	Croatia	2	0	0	18	20
	Greece	1	0	0	1	2
	Italy	12	0	3	125	140
	Spain	1	0	0	2	3
<b>North Sea &amp; Atlantic</b>		<b>158</b>	<b>1</b>	<b>21</b>	<b>211</b>	<b>410</b>
	Denmark	10	0	0	19	29
	Germany	2	0	0	0	2
	Ireland	1	0	0	1	2
	The Netherlands	56	0	0	96	152
	United Kingdom	89	1	21	114	225
<b>Total</b>		<b>182</b>	<b>1</b>	<b>24</b>	<b>359</b>	<b>586</b>

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

Most of the offshore installations in EU waters were established between 1980 and 2000. Since 2010, the development of new production installations has dropped noticeably in the North Sea, the Atlantic region and the Mediterranean Sea (Table 2 and Figure 1). The report provides a detailed overview on the year of construction of installations by Member States in Annex I.

The largest part (approx. 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 large the most important contributor followed by the Netherlands and Denmark. Whereas Italy and Croatia are active producers in the Mediterranean Sea, only Romania currently has a noticeable oil and gas output in the Black Sea.

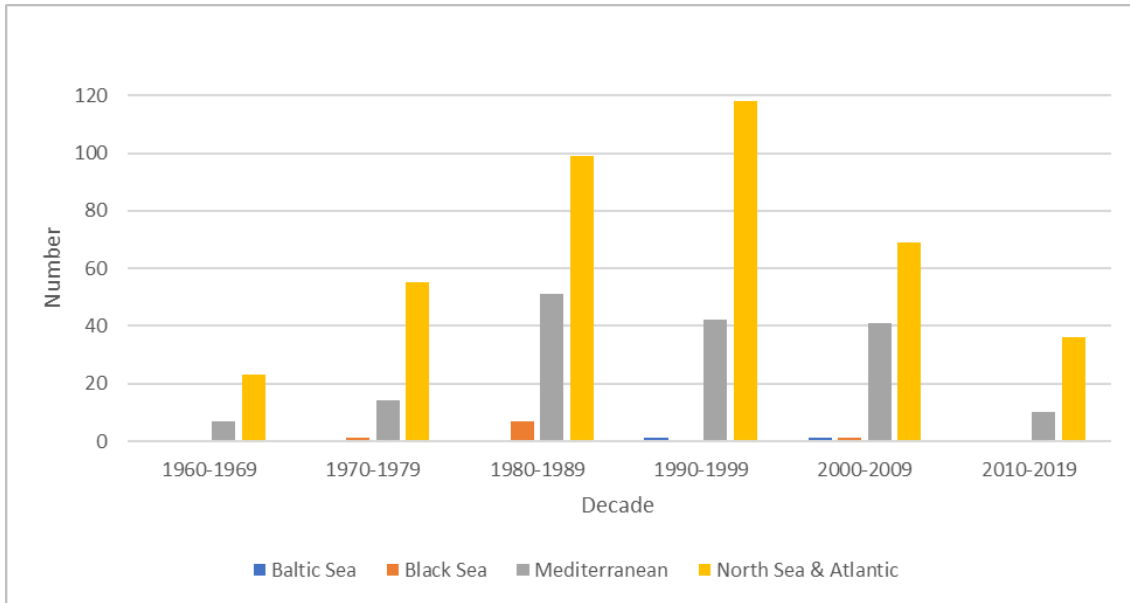
Table 2: Number of installations entering into operation, by decade, per region

Year of construction	REGION				
	Baltic Sea	Black Sea	Mediterranean	North Sea & Atlantic	EU Total
1960-1969	0	0	7	23	30
1970-1979	0	1	14	55	70

<b>1980-1989</b>	0	7	51	99	<b>157</b>
<b>1990-1999</b>	1	0	42	118	<b>161</b>
<b>2000-2009</b>	1	1	41	69	<b>112</b>
<b>2010-2019</b>	0	0	10	36	<b>46</b>
<b>EU Total</b>	2	9	165	400	<b>576</b>

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

<b>REGION</b>	<b>Country</b>	<b>ktoe</b>	<b>% of EU Total</b>
<b>Baltic Sea</b>		<b>122.91</b>	<b>0.11 %</b>
	Poland	122.91	0.11 %
<b>Black Sea</b>		<b>1558.89</b>	<b>1.34 %</b>
	Bulgaria	61.78	0.05 %
	Romania	1497.11	1.29 %
<b>Mediterranean</b>		<b>5462.40</b>	<b>4.71 %</b>
	Croatia	867.89	0.75 %
	Greece	180.51	0.16 %
	Italy	4217.00	3.63 %
	Spain	197.00	0.17 %
<b>North Sea &amp; Atlantic</b>		<b>108932.45</b>	<b>93.85 %</b>
	Denmark	11341.00	9.77 %
	Germany	1038.09	0.89 %
	Ireland	130.88	0.11 %
	The Netherlands	13853.00	11.93 %
	United Kingdom	82569.48	71.13 %
<b>Total</b>		<b>116076.65</b>	<b>100.00 %</b>



*Figure 1: New fixed installations by decade and region*

## 4.2 Offshore inspections, investigations, enforcement actions and regulatory framework

Not all Member States could establish functioning competent authorities by the deadline for implementing the Offshore Safety Directive (19 July 2015). At the beginning of the reporting period in 2016, two Member States with offshore installations had not yet completely implemented the Offshore Safety Directive and were continuing to work on this task.

Table 4 details the number of offshore inspections. Further to the analysis of formal reports on accidents, the investigations and their follow-up are the main tool to enforce safety and environmental rules and legislation in the offshore sector. The number of inspections usually increases in line with the number of installations. However, the competent authorities of Italy and Germany carried out a relatively high number of inspections in relation to the number of installations when compared with other Member States.

Article 18 of the Offshore Safety Directive establishes the power that the competent authorities of Member States have for operations and installations. They may prohibit operations and request that measures be taken to comply with the general principles of risk management to prevent accidents and ensure safe operations. Only Member States which produce oil and gas in the North Sea region have carried out these reportable enforcement actions or convictions (10 in 2016).

The competent authorities have regularly inspected the offshore installations in their jurisdictions. Following serious incidents, two Member States have carried out investigations during the reporting period: the United Kingdom (21 for safety and environmental concerns, 1 for a major accident) and the Netherlands (1 for a major accident). The count of major accidents also includes incidents with a significant potential to cause fatalities or serious personal injuries even if they did not lead to this outcome.



The United Kingdom has taken 7 enforcement actions, mainly improvement notices, for the 129 installations included in this part of its report (out of 225 installations), the Netherlands 2 (administrative fines) and Ireland 1. With the regulatory framework, Member States made further progress to enforce the Offshore Safety Directive through the implementation of national rules and regulations. Italy reported that it developed additional measures on emergency preparedness and response as part of Mediterranean cooperation.

*Table 4: Number of offshore inspections by region and Member State in 2016*

<b>REGION</b>	<b>Country</b>	<b>Inspections</b>	<b>Man-days spent on installation (travel time not included)</b>	<b>Number of inspected installations</b>
<b>Baltic Sea</b>		<b>4</b>	<b>14</b>	<b>2</b>
	Poland	4	14	2
<b>Black Sea</b>		<b>1</b>	<b>1</b>	<b>1</b>
	Bulgaria	1	1	1
	Romania	0	0	0
<b>Mediterranean</b>		<b>424</b>	<b>431</b>	<b>121</b>
	Croatia	22	22	20
	Italy	401	408	100
	Spain	1	1	1
<b>North Sea &amp; Atlantic</b>		<b>306</b>	<b>1466.5</b>	<b>257</b>
	Denmark	14	50	15
	Germany	11	11	2
	Ireland	3	11	1
	The Netherlands	68	72	49
	United Kingdom	210	1322.5	190
<b>Total</b>		<b>735</b>	<b>1912.5</b>	<b>381</b>

## 5. INCIDENT DATA AND SAFETY PERFORMANCE OF OFFSHORE OPERATIONS

Of all the Member States active in offshore oil and gas operations, the United Kingdom, the Netherlands and Denmark reported incidents:

- United Kingdom: 27 reportable events (in accordance with Annex IX of the Offshore Safety Directive), including one major accident; the UK's report covers 129 installations (out of a

total of 225). In its annual report, the UK did not submit additional details on the major accident, which was still under investigation.

- the Netherlands: 13 reportable events (in accordance with Annex IX of the Offshore Safety Directive), including one major accident. The causes of the major accident were procedural/organisational errors and an operational error.
- Denmark: 2 reportable events (in accordance with Annex IX of the Offshore Safety Directive) and no major accident.

Of the reportable events, the majority fell into the category of unintended releases (59.5 % of the total), 26.2 % concerned the loss of well control (blowout/diverter activation), 7.1 % failures of safety and environmental critical elements (SECE) and 4.8 % loss of structural integrity. One incident required the evacuation of personnel.

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

<b>Annex IX Categories</b>	<b>No. of events</b>	<b>Share (of Category Total)</b>	<b>Share (of Events Total)</b>
<b>(a) Unintended releases</b>	<b>25</b>	<b>59.5 %</b>	<b>59.5 %</b>
Ignited oil/gas releases — Fires	0	0.0 %	0.0 %
Ignited oil/gas releases — Explosions	0	0.0 %	0.0 %
Not ignited gas releases	13	52.0 %	31.0 %
Not ignited oil releases	7	28.0 %	16.7 %
Hazardous substances releases	5	20.0 %	11.9 %
<b>(b) Loss of well control</b>	<b>11</b>	<b>26.2 %</b>	<b>26.2 %</b>
Blowouts	0	0.0 %	0.0 %
Blowout / diverter activation	11	100.0 %	26.2 %
Well barrier failure	0	0.0 %	0.0 %
<b>(c) Failures of SECE</b>	<b>3</b>	<b>7.1 %</b>	<b>7.1 %</b>
<b>(d) Loss of structural integrity</b>	<b>2</b>	<b>4.8 %</b>	<b>4.8 %</b>
Loss of stability/buoyancy	0	0.0 %	0.0 %
Loss of station keeping	1	50.0 %	2.4 %
Loss of structural integrity	1	50.0 %	2.4 %
<b>(e) Vessels collision</b>	<b>0</b>	<b>0.0 %</b>	<b>0.0 %</b>
<b>(f) Helicopter accidents</b>	<b>0</b>	<b>0.0 %</b>	<b>0.0 %</b>
<b>(g) Fatal accidents<sup>(*)</sup></b>	<b>0</b>	<b>0.0 %</b>	<b>0.0 %</b>
<b>(h) Serious injuries of 5 or more persons in the same accident<sup>(*)</sup></b>	<b>0</b>	<b>0.0 %</b>	<b>0.0 %</b>
<b>(i) Evacuation of personnel</b>	<b>1</b>	<b>2.4 %</b>	<b>2.4 %</b>
<b>(j) Environmental accidents<sup>(**)</sup></b>	<b>0</b>	<b>0.0 %</b>	<b>0.0 %</b>

<b>TOTAL</b>	<b>42</b>	<b>100 %</b>	<b>100 %</b>
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*(\*) Only if related to a major accident*

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

## 6. CONCLUSIONS

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. Since this annual report is the first on this subject, a comparison with preceding years and conclusions on EU safety trends are not yet possible.

Taking into account the figures provided by Member States and taking note of the low number and low level of severity of accidents reported, the European offshore oil and gas industry appears to have demonstrated an adequate level of safety. This conclusion is in line with the assessment by national competent authorities, for example the UK, which reports a decline in dangerous occurrences and in the frequency of reportable injuries in relation to hours worked.

Specifically, the Commission takes note that no fatalities were reported for 2016. Future reports, comparisons between years and the monitoring of trends will show whether the offshore sector can maintain this level of safety or make further progress.