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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 2021**

## **Table of contents**

1. INTRODUCTION .....	2
2. LEGAL BASIS.....	3
3. METHODOLOGY AND INFORMATION RECEIVED.....	3
4. THE EU OFFSHORE OIL AND GAS SECTOR .....	4
4.1 Installations and production .....	4
4.2 Offshore inspections, investigations, enforcement actions and regulatory framework .....	7
5. INCIDENTS AND SAFETY PERFORMANCE.....	8
6. CONCLUSIONS .....	10

# 1. INTRODUCTION

Since 2016, the European Commission has published an annual report on the safety of EU offshore oil and gas operations.

The legal basis for this report is Directive 2013/30/EU<sup>1</sup> 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'). It aims to achieve a high level of safety in offshore oil and gas operations, for the benefit of:

- i. workers;
- ii. the environment;
- iii. offshore platforms and equipment;
- iv. economic activities, such as fishing and tourism.

The Directive, as implemented by Member States, helps to:

- i. prevent major accidents and incidents;
- ii. reduce the number of incidents;
- iii. ensure effective follow-up of accidents and incidents to reduce the severity of their consequences.

As past reports do, this annual report:

- i. gives the number and type of installations in the EU;
- ii. provides information on safety incidents in these installations;
- iii. assesses the safety performance of offshore oil and gas operations.

The report now covers a period of six years. It provides a record of the safety performance in Member States' offshore oil and gas activities.

This report is based on annual national reports and data submitted by Member States as required by the Offshore Safety Directive.

There are 171 offshore oil and gas installations located in the North Sea and Atlantic Ocean, 164 in the Mediterranean Sea, 8 in the Black Sea and 4 in the Baltic Sea. In 2021, the competent Member State authorities inspected the safety of 248 offshore installations in their jurisdiction. The countries reported no major accidents.

The number of incidents increased from 16 in 2020 to 26 in 2021.

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<sup>1</sup> OJ L 178, 28 June 2013, p. 66.

## 2. LEGAL BASIS

In line with Article 25 of the Offshore Safety Directive, the Commission must publish an annual report on the safety and environmental impact of offshore oil and gas operations. This report is based on individual annual reports that Member States must submit to the Commission. Annex IX(3) to the Directive sets out the minimum information the annual reports must contain:

- (a) the number, age and location of installations;
- (b) the number and type of inspections and investigations carried out, in addition to any enforcement action or convictions;
- (c) incidents that have occurred;
- (d) any major change in the offshore regulatory framework;
- (e) the performance of offshore oil and gas operations.

The deadline for Member States to publish and submit the required information is 1 June following the reporting period (e.g. 1 June 2022 for 2021).

Member States must submit the information using the templates provided in Commission Implementing Regulation (EU) No 1112/2014 of 13 October 2014<sup>2</sup>. The templates allow:

- i. operators and owners of offshore oil and gas installations to share information on major hazard indicators;
- ii. Member States to publish information on major hazard indicators.

A guidance document<sup>3</sup> provides specific information on the Implementing Regulation and explains how to use the reporting templates.

## 3. METHODOLOGY AND INFORMATION RECEIVED

Member States must submit clearly defined information on safety incidents in the offshore oil and gas sector using the templates. The data 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.

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

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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)

All Member States with offshore oil and gas operations declared they had submitted all the required information on all installations.

## 4. THE EU OFFSHORE OIL AND GAS SECTOR

### 4.1 Installations and production

Member States reported 347 installations in EU waters in 2021 (see Table 1):

- Most offshore installations<sup>4</sup> are in the North Sea and Atlantic.
- Approximately 43% are in the Dutch part of the North Sea (known as the exclusive economic zone of the Netherlands).
- In the Mediterranean Sea, Italy is the most active (with 40% of all installations in EU waters) followed by Croatia.
- In the Black Sea, Romania has a well-established offshore oil and gas industry. Bulgaria has continued offshore hydrocarbon exploration, but only has one installation and so produces very little oil and gas.
- In the Baltic Sea, only Poland has offshore installations.

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<sup>4</sup> Mobile offshore drilling units are not part of the data in section 4.1.

Table 1: Installations on 1 January 2021: type of installation by region and Member State

Region	Country	Type of installation(*)					Change compared to 2020
		FMI	NUI	FNP	FPI	Total (region/country)	
Baltic Sea		3	1	0	0	4	--
	Poland	3	1	0	0	4	--
Black Sea		5	3	0	0	8	-1
	Bulgaria	0	1	0	0	1	--
	Romania	5	2	0	0	7	-1
Mediterranean Sea		16	146	0	2	164	-1
	Croatia	2	17	0	0	19	-1
	Greece	1	1	0	0	2	--
	Italy	12	126	0	2	140	--
	Spain	1	2	0	0	3	--
North Sea and Atlantic		55	115	1	0	171	-14
	Denmark	7	11	1	0	19	-11
	Germany	1	1	0	0	2	--
	Ireland	2	0	0	0	2	--
	The Netherlands	45	103	0	0	148	-3
<b>Total (type of installation)</b>		79	265	1	2	347	-16

(\*) FMI: Fixed, manned installation; FNP: Fixed, non-production installation; FPI: Floating production installation; NUI: Normally un-attended installation.

More than half of offshore installations came into operation between 1980 and 2000; in 2021, no new fixed installations came into operation. Since 2010, the development of new production installations has dropped noticeably in the North Sea and Atlantic.

Approximately 81% of the EU's domestic oil and gas (14 710 kilotonnes of oil equivalent) is produced in the North Sea and Atlantic (see Table 2). The biggest contributors there are the Netherlands and Denmark. Italy and Croatia are the biggest producers in the Mediterranean Sea. In the Black Sea, only Romania's output is significant.

*Table 2: Offshore oil and gas production in the EU in kilotonnes of oil equivalent (ktoe )in 2021*

Region	Country	ktoe	% of EU total	% change compared to 2020
Baltic Sea		<b>267</b>	<b>1,5%</b>	<b>+7,2%</b>
	Poland	267	1.5%	+7,2%
Black Sea		<b>1 051</b>	<b>5.8%</b>	<b>-10,9%</b>
	Bulgaria	14	0.1%	-53,9%
	Romania	1 037	5.7%	-9,7%
Mediterranean Sea		<b>2 159</b>	<b>11.9%</b>	<b>-22,6%</b>
	Croatia	185	1.0%	-23,2%
	Greece	63	0.3%	-35,1%
	Italy	1902	10,5%	-21,5%
	Spain	9	0.05%	-70%
North Sea and Atlantic		<b>14 710</b>	<b>80,9%</b>	<b>-6,4%</b>
	Denmark	4 561	25,1%	-7,4%
	Germany	854	4.7%	-4%
	The Netherlands	9 295	51,1%	-5,4%
<b>Total</b>		<b>18 187</b>	<b>100 %</b>	<b>-8,8%</b>

Production increased slightly in Poland but declined in all other Member States, particularly in Bulgaria, Greece and Croatia. Compared to production in Member States in 2020, there was a 9 % loss of production (ca. 1 754 kilotonnes of oil equivalent) in 2021.

From overall production in the EU measured in kilotonnes of oil equivalent (ktoe), 70 % was gas and only 30 % oil. With 3335 ktoe Denmark was the most important producer of oil, followed by Germany (843 ktoe), Italy (430 ktoe), and the Netherlands (416 ktoe).

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

The competent authorities in the Member States regularly inspected the offshore installations in their jurisdiction in 2021 (see Table 3) – the more installations a country had, the more inspections it usually carried out.

Compared to 2020, the number of inspections, working days spent on installations for inspections and the number of inspected installations increased. In particular, inspectors spent far more time on installations than in 2020.

*Table 3: Offshore inspections by region and Member State in 2021*

Region	Country	Inspections	Working days spent on installation (travel time not included)	Number of installations inspected
<b>Baltic Sea</b>		<b>2</b>	<b>12</b>	<b>5</b>
	Poland	2	12	5
<b>Black Sea</b>		<b>11</b>	<b>54</b>	<b>7</b>
	Bulgaria	0	0	0
	Romania	11	54	7
<b>Mediterranean Sea</b>		<b>279</b>	<b>420</b>	<b>179</b>
	Croatia	51	51	9
	Cyprus	1	3	1
	Greece	2	26	2
	Italy	222	339	164
	Spain	3	1	3
<b>North Sea and Atlantic</b>		<b>66</b>	<b>163</b>	<b>57</b>
	Denmark	20	87	18
	Germany	2	4	1



	Ireland	6	42	3
	The Netherlands	38	30	35
<b>Total</b>		<b>358</b>	<b>649</b>	<b>248</b>

Article 18 of the Offshore Safety Directive gives rights and powers to the competent national authorities for operations and installations in their jurisdiction. These powers include the right to prohibit operations and to request measures ensuring both risk management compliance and safe operations.

In 2021, Croatia started one investigation of a major accident. In 2020, Denmark and Croatia conducted one investigation each.<sup>5</sup>

In 2021, no Member State took an enforcement action. The only enforcement action in 2020 was taken by Denmark.

## 5. INCIDENTS AND SAFETY PERFORMANCE

Operators and owners of installations and national authorities must report an accident or situation of serious danger (referred to as an ‘event’). However, a single event can be categorised by one or more incidents. For example, two incident categories have to be notified for the same event if there was an (a) unintended release of gas that (b) required the evacuation of staff.

Member States reported 26 events<sup>6</sup> in 2021 compared to 15 in 2020:

- Denmark – 13 events but no major accidents (8 in 2020, including 1 major accident).
- The Netherlands – 11 events but no major accidents (4 in 2020).
- Croatia – 2 events but no major accidents (3 in 2019).

Major accidents include incidents that could cause fatalities or serious injuries (even if none occurred).

Of the incidents that occurred in 2021, 77% belong to the category of unintended releases of gas and/or oil, 11,5% concerned safety and environmental critical elements failures, and 11,5% concerned the loss of structural integrity. On a positive note, no vessel collisions or helicopter accidents were reported, and none of the incidents led to the loss of life.

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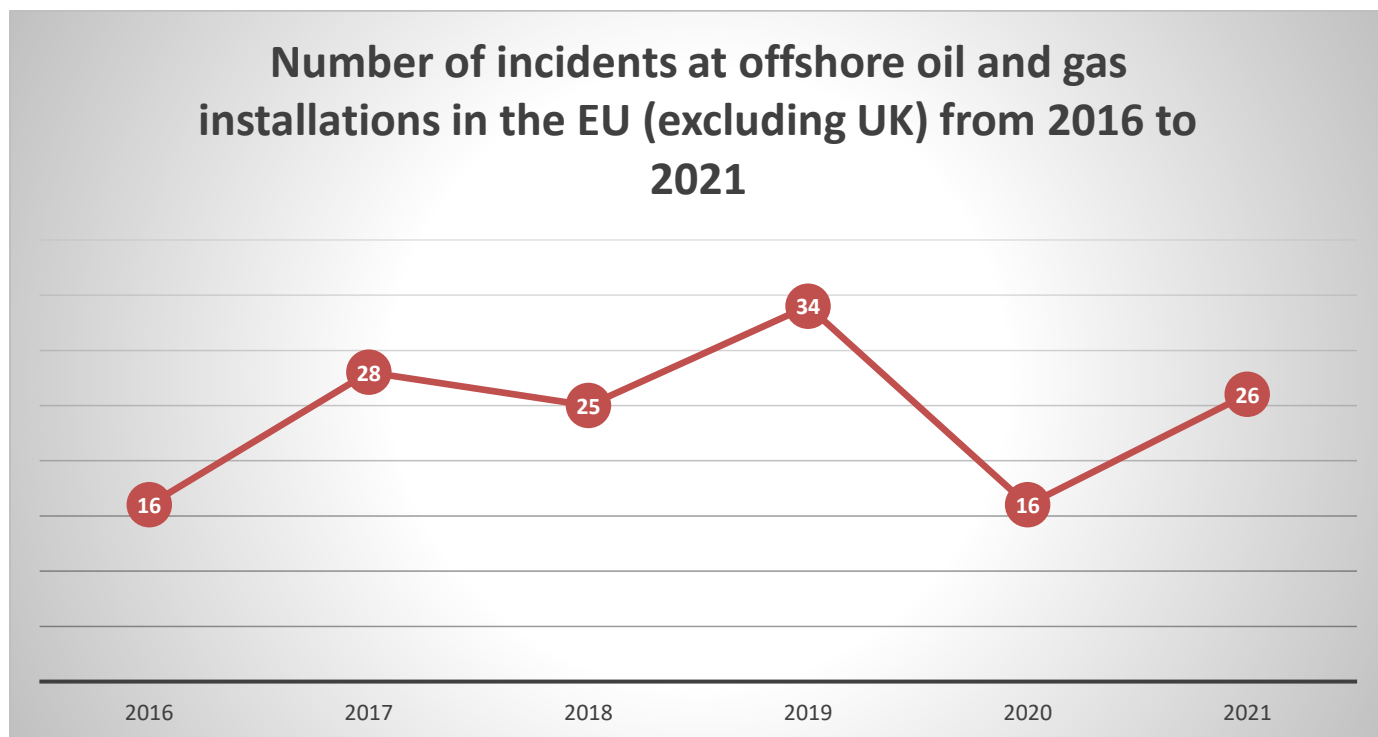
<sup>5</sup> Denmark carried out an investigation on a major accident, whereas Croatia carried out an investigation of safety and environmental concerns,

<sup>6</sup> The reporting obligation does not cover certain events (e.g. those not related to operations).

Table 4: Incidents by category (set out in Annex IX to the Offshore Safety Directive) in 2021

Category	Total	Share of category total	Share of total incidents
<b>(a) Unintended releases – total</b>	<b>20</b>	<b>100%</b>	<b>76,92%</b>
Fires caused by ignited oil/gas	1	5%	3,85%
Explosions caused by ignited oil/gas	0	0%	0%
Unignited gas	6	30%	23,08%
Unignited oil	10	50%	38,46%
Hazardous substance	3	15%	11,54%
<b>(b) Loss of wells – total</b>	<b>3</b>	<b>100%</b>	<b>11,54%</b>
Blowouts	0	0%	0%
Blowout/diverter activation	3	100%	11,54%
Well barrier failure	0	0%	0%
<b>(c) Safety and environmental critical element failure</b>	<b>3</b>	<b>100%</b>	<b>11,54%</b>
<b>(d) Loss of structural integrity – total</b>	<b>0</b>	<b>0%</b>	<b>0%</b>
Loss of structural integrity	0	0%	0%
Loss of stability/buoyancy	0	0%	0%
Loss of station keeping	0	0%	0%
<b>(e) Vessel collisions</b>	<b>0</b>		
<b>(f) Helicopter accidents</b>	<b>0</b>		
<b>(g) Fatal accidents<sup>(*)</sup></b>	<b>0</b>		
<b>(h) Serious injuries of five or more people in the same accident</b>	<b>0</b>		
<b>(i) Evacuation of personnel</b>	<b>0</b>		
<b>(j) Environmental accidents</b>	<b>0</b>		
<b>Total</b>	<b>26</b>		<b>100%</b>
<i>(*) Only if related to a major accident.</i>			

In the EU, the total number of incidents increased from 16 in 2020 (excluding the UK) to 26 in 2021 (see below). This is almost equivalent to 2018.



This increase has largely been due to a rise in unintended releases of both oil and gas. Incidents involving loss of wells increased from zero to three between 2020 and 2021. On a more positive note, no incidents were classified as major accidents in 2021, compared to two in 2020.

## 6. CONCLUSIONS

In 2021, there were 347 offshore oil and gas installations in the EU. Overall oil and gas production decreased from 19 941 kilotonnes of oil equivalent in 2020 to 18 187 kilotonnes of oil equivalent in 2021. Denmark and the Netherlands produced 76% of the EU's total offshore oil and gas.

The Commission has assessed the safety of the EU's offshore oil and gas operations based on the information provided by Member States, according to the rules of the Implementing Regulation on reporting. The accuracy of the Commission's analysis therefore depends on the accuracy of this information.

In 2021, national authorities kept up their efforts to ensure a high level of safety in offshore oil and gas operations by inspecting 248 installations (compared to 141 in 2020). No country reported an enforcement action.

There were no major accidents in 2021, compared to two in 2020. The total number of incidents (as categorised in Table 4) increased from 16 in 2020 to 26 in 2021, mainly due to an increase of incidents in the Netherlands (from 4 to 11). Member States reported 22 injuries and 4 serious injuries occurred.

In conclusion, thanks to the obligatory inspections and the remedial action taken, as stipulated by the Offshore Safety Directive, the work of Member State authorities has once more resulted in safe offshore oil and gas operations.

To maintain this high level of safety, the Commission continues to work closely with the European Union Offshore Authorities Group (EUOAG). The EUOAG promotes best practices for carrying out safely all operations, and assists national authorities represented in the group.