

## Committee for safety of offshore operations (Pursuant to the Article 8 of the Legislative Decree 18th August 2015, n. 145) The President

# Report on the state and safety of the offshore activities in the hydrocarbon upstream sector

according to

the article 24 (paragraphs 1 and 2) and the article 25(paragraphs 1 and 2)

of the Legislative Decree 18<sup>th</sup>August 2015, n. 145

and

the Commission Implementing Regulation (EU) n. 1112/2014

Italy
Year 2021

The following symbol  $[\checkmark]$  means there is additional information in the accompanying methodological notes

#### SECTION 1

#### **PROFILE**

Information on Member State and Reporting Authority

- a. Member State: Italy
- b. Reporting period: (Calendar Year) 2021
- c. Competent Authority:

**Committee for safety of offshore operations** 

(pursuant to art. 8, Legislative Decree 18<sup>th</sup> August 2015, n. 145)

d. Designated Reporting Authority:

President of Committee for safety of offshore operations

(pursuant to art 11, Decree of the President of the Council of Ministers 27<sup>th</sup> Sept 2016)

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#### **SECTION 2**

#### **INSTALLATIONS**

**2.1. Fixed installations:** detailed list of installations for offshore oil and gas operations in Italy (on 1<sup>st</sup> January of the year 2021), including their type (i.e. fixed manned, fixed normally unmanned, floating production, fixed non-production), year of installation and location:

Table 2.1[✓a]
Installations within jurisdiction on 1<sup>st</sup>January 2021

*Type of installation:* FMI [Fixed manned installation]; NUI [(Fixed) normally unmanned]; FPI [Floating production installation]; FNP [Fixed non production installation];

Type of fluid: Oil; Gas; Condensate; Oil/Gas; Oil/Condensate.

N.	Name or ID	Type of installation	Year of installation	Type of	Number of beds	Coordina	ates [√f]
	[√b]	[√c]	[√d]	fluid	[√e]	(longitude)	(latitude)
1	Ada 2	NUI	1982	gas	0	12.591285	45.183634
2	Ada 3	NUI	1982	gas	0	12.591176	45.183361
3	Ada 4	NUI	1982	gas	0	12.590910	45.183561
4	Agostino A	NUI	1970	gas	27	12.495518	44.540180
5	Agostino A Cluster	NUI	1991	gas	0	12.496197	44.540685
6	Agostino B	NUI	1971	gas	27	12.471569	44.554372
7	Agostino C	NUI	1992	gas	0	12.494523	44.547174
8	Alba Marina	FPI	2012	oil	50	14.939078	42.201212
9	Amelia A	NUI	1971	gas	27	12.660836	44.405716
10	Amelia B	NUI	1991	gas	29	12.662218	44.407503
11	Amelia C	NUI	1991	gas	0	12.662895	44.406935
12	Amelia D	NUI	1992	gas	0	12.661276	44.407901

N.	Name or ID	Type of	Year of	Type of	Number	Coord	linates
IV.	Name of 1D	installation	installation	fluid	of beds	(longitude)	(latitude)
13	Anemone B	NUI	1999	gas	0	12.704814	44.229289
14	Anemone Cluster	NUI	1979	gas	0	12.705310	44.212786
15	Angela Angelina	FMI	1997	gas	24	12.343127	44.391172
16	Angela Cluster	NUI	1975	gas	0	12.344848	44.392973
17	Annabella	NUI	1991	gas	24	13.078865	44.228781
18	Annalisa	NUI	1999	gas	0	13.113554	44.171042
19	Annamaria B	FMI	2009	gas	19	13.407327	44.322576
20	Antares 1	NUI	1982	gas	0	12.444429	44.393988
21	Antares A	NUI	1985	gas	0	12.453493	44.390057
22	Antonella	NUI	1976	gas	19	12.776663	44.214442
23	Aquila 2	NUI	1993	oil	0	18.327114	40.930188
24	Aquila 3	NUI	1995	oil	0	18.325320	40.918159
25	Argo 1	NUI	2006	gas	0	13.821989	36.916622
26	Argo 2	NUI	2008	gas	0	13.805449	36.926058
27	Arianna A	FMI	1984	gas	19	12.628146	44.306251
28	Arianna Cluster	NUI	1992	gas	0	12.627430	44.305788
29	Armida 1	NUI	1973	gas	0	12.449540	44.475932
30	Armida A	NUI	1985	gas	19	12.453192	44.480303
31	Azalea A	NUI	1984	gas	0	12.714258	44.171769
32	Azalea B DR	NUI	1987	gas	0	12.720562	44.166817

N.	Name or ID	Type of			Number	Coordinates	
14.	Name of 15	installation	installation	fluid	of beds	(longitude)	(latitude)
33	Azalea B PROD	NUI	1987	gas	19	12.720768	44.166169
34	Barbara A	NUI	1978	gas	0	13.803467	44.047208
35	Barbara B	NUI	1983	gas	17	13.741427	44.091609
36	Barbara C	FMI	1985	gas	42	13.781867	44.076859
37	Barbara D	NUI	1986	gas	43	13.809339	44.030369
38	Barbara E	FMI	1987	gas	27	13.757562	44.086474
39	Barbara F	NUI	1988	gas	43	13.817099	44.050183
40	Barbara G	NUI	1992	gas	12	13.791530	44.063905
41	Barbara H	NUI	1992	gas	12	13.762702	44.069387
42	Barbara NW	NUI	1999	gas	0	13.648827	44.108865
43	Barbara T	NUI	1985	gas	0	13.781345	44.077277
44	Barbara T2	NUI	2000	gas	0	13.782030	44.077718
45	Basil	NUI	1983	gas	19	13.001086	44.131649
46	Benedetta 1	NUI	2006	gas	0	12.581966	44.179400
47	Bonaccia	NUI	1999	gas	18	14.359527	43.592497
48	Bonaccia Est 2	NUI	2010	gas	0	14.437581	43.578672
49	Bonaccia Est 3	NUI	2010	gas	0	14.437583	43.578614
50	Bonaccia NW	NUI	2015	gas	0	14.335723	43.599803
51	Brenda PERF	NUI	1987	gas	0	13.044925	44.116443
52	Brenda PROD	FMI	1987	gas	19	13.045114	44.115802

N.	Name or ID   ''     ''		Number	Coord	inates		
N.	Name of 1D	installation	installation	fluid	of beds	(longitude)	(latitude)
53	Calipso	NUI	2002	gas	0	13.863461	43.827416
54	Calpurnia	NUI	2000	gas	16	14.153981	43.899535
55	Camilla 2	NUI	2001	gas	0	14.246376	42.897839
56	Cassiopea 1	NUI	2008	gas	0	13.732618	36.936642
57	Cervia A	FMI	1986	gas	21	12.639005	44.294608
58	Cervia A Cluster	NUI	1992	gas	0	12.639697	44.295105
59	Cervia B	NUI	1984	gas	19	12.645428	44.288823
60	Cervia C	NUI	1992	gas	12	12.640079	44.301650
61	Cervia K	NUI	2000	gas	0	12.639076	44.295474
62	Clara Est	NUI	2000	gas	0	14.071618	43.779617
63	Clara Nord	NUI	2000	gas	0	13.976674	43.939355
64	Clara NW	NUI	2015	gas	0	14.023295	43.802145
65	Clara Ovest	NUI	1987	gas	0	13.711516	43.828681
66	Daria A	NUI	1994	gas	0	13.249138	44.067586
67	Daria B	NUI	1995	gas	12	13.249706	44.066931
68	Davide	NUI	1980	gas	0	14.017133	43.095985
69	Davide 7	NUI	2002	gas	0	14.016886	43.095755
70	Diana	NUI	1971	gas	0	12.425718	44.441373
71	Elena 1	NUI	1989	gas	0	14.210255	43.040689
72	Eleonora	NUI	1987	gas	19	14.155689	42.840158

N.	Name or ID	Type of	Year of	Type of	Number	Coord	inates
14.	Name of 15	installation	installation	fluid	of beds	(longitude)	(latitude)
73	Elettra	NUI	2014	gas	0	14.215197	43.764413
74	Emilio	NUI	2001	gas	0	14.243294	42.934945
75	Emilio 3	NUI	1980	gas	0	14.233880	42.938165
76	Emma Ovest	FMI	1982	gas	19	14.379206	42.808505
77	Fabrizia 1	NUI	1998	gas	0	14.001140	43.041377
78	Fauzia	NUI	2014	gas	0	13.554058	44.056355
79	Fratello Cluster	NUI	1979	gas	0	14.168514	42.610534
80	Fratello Est 2	NUI	1980	gas	0	14.172827	42.576845
81	Fratello Nord	NUI	1980	gas	0	14.170126	42.648861
82	Garibaldi A	NUI	1969	gas	27	12.510457	44.523023
83	Garibaldi A Cluster	NUI	1991	gas	0	12.512050	44.523727
84	Garibaldi B	NUI	1969	gas	27	12.531292	44.487009
85	Garibaldi C	FMI	1992	gas	24	12.515280	44.531601
86	Garibaldi D	NUI	1993	gas	16	12.546062	44.478183
87	Garibaldi K	NUI	1998	gas	0	12.516137	44.532077
88	Garibaldi T	NUI	1998	gas	0	12.511376	44.523311
89	Gela 1	NUI	1960	oil	19	14.269550	37.032157
90	Gela Cluster	NUI	1986	oil	0	14.269454	37.032449
91	Giovanna	NUI	1992	gas	19	14.463941	42.768002

N.	Name or ID	Type of	Year of	Type of	Number	Coord	inates
N.	Name of 15	installation	installation	fluid	of beds	(longitude)	(latitude)
92	Giulia 1	NUI	1980	gas	0	12.753326	44.131040
93	Guendalina	NUI	2011	gas	0	12.881491	44.566435
94	Hera Lacinia 14	NUI	1992	gas	0	17.165078	39.058611
95	Hera Lacinia BEAF	NUI	1998	gas	0	17.172791	39.061388
96	Jole 1	NUI	1999	gas	0	13.926435	43.040959
97	Leonis	FPI	2009	oil	49	14.637158	36.559805
98	Luna 27	NUI	1987	gas	0	17.214444	39.088056
99	Luna 40 SAF	NUI	1995	gas	0	17.204166	39.091944
100	Luna A	FMI	1976	gas	18	17.181692	39.114236
101	Luna B	FMI	1992	gas	14	17.200158	39.084925
102	Morena 1	NUI	1996	gas	0	12.482887	44.231073
103	Naide	NUI	2005	gas	0	12.745412	44.343275
104	Naomi Pandora	NUI	2000	gas	0	12.847416	44.689089
105	Panda 1	NUI	2002	gas	0	13.623818	37.006610
106	Panda W1	NUI	2003	gas	0	13.594536	37.000607
107	Pennina	NUI	1988	gas	19	14.163626	43.021356
108	Perla	NUI	1981	oil	17	14.216245	36.954193
109	Porto Corsini 73	NUI	1996	gas	0	12.579101	44.385037
110	Porto Corsini 80	NUI	1981	gas	0	12.546216	44.405640
111	Porto Corsini 80 bis	NUI	1983	gas	0	12.520281	44.423353

N.	Name or ID	Type of	Year of	Type of	Number	Coord	inates
IV.	Name of 1D	installation	installation	fluid	of beds	(longitude)	(latitude)
112	Porto Corsini C	NUI	1987	gas	19	12.560198	44.391356
113	Porto Corsini M S1	NUI	2000	gas	0	12.588897	44.348638
114	Porto Corsini M S2	NUI	2001	gas	0	12.576923	44.368807
115	Porto Corsini W A	NUI	1968	gas	0	12.359541	44.511783
116	Porto Corsini W B	NUI	1968	gas	0	12.373809	44.509278
117	Porto Corsini W C	NUI	1987	gas	19	12.372787	44.508964
118	Porto Corsini W T	NUI	1987	gas	19	12.359295	44.512380
119	Prezioso	NUI	1986	oil	19	14.045081	37.009175
120	Regina	NUI	1997	gas	0	12.840342	44.104920
121	Regina 1	NUI	1997	gas	0	12.834209	44.102781
122	Rospo Mare A	NUI	1981	oil	2	14.970746	42.203712
123	Rospo Mare B	NUI	1986	oil	4	14.946579	42.213157
124	Rospo Mare C	NUI	1991	oil	2	14.931856	42.235657
125	San Giorgio Mare 3	NUI	1972	gas	0	13.923748	43.197901
126	San Giorgio Mare 6	NUI	1981	gas	0	13.920136	43.206235
127	San Giorgio Mare C	NUI	1972	gas	0	13.901802	43.202624
128	Santo Stefano Mare 101	NUI	1987	gas	0	14.607395	42.228990
129	Santo Stefano Mare 1-9	NUI	1968	gas	0	14.592950	42.231768
130	Santo Stefano Mare 3-7	NUI	1968	gas	0	14.610729	42.219268
131	Santo Stefano Mare 4	NUI	1975	gas	0	14.675454	42.207323

N.	Name or ID	Type of	Year of	Type of	Number	Coord	inates
10.	Nume of 15	installation	installation	fluid	of beds	(longitude)	(latitude)
132	Santo Stefano Mare 8 bis	NUI	1991	gas	0	14.636563	42.216490
133	Sarago Mare 1	NUI	1981	oil	0	13.785407	43.320960
134	Sarago Mare A	NUI	1981	oil	0	13.788738	43.288851
135	Simonetta 1	NUI	1997	gas	0	14.183769	42.559691
136	Squalo	NUI	1980	gas	0	14.244378	42.715657
137	Tea	NUI	2007	gas	0	13.018813	44.501557
138	Vega A	FMI	1986	oil	75	14.625491	36.540638
139	Viviana 1	NUI	1998	gas	0	14.155051	42.656403
140	Vongola Mare 1	NUI	1985	gas	0	13.811731	43.253892

#### 2.2. Changes since the previous reporting year

a. **New fixed installations:** list of new fixed installations, entered in operation during the reporting period:

### $\mbox{Table 2.2.a } [ \mbox{$\checkmark$} \mbox{$g$} ] \\ \mbox{New fixed installations entered in operation during the reporting period} \\$

*Type of installation:* FMI [Fixed manned installation]; NUI [(Fixed) normally unmanned]; FPI [Floating production installation]; FNP [Fixed non production installation];

Type of fluid: Oil; Gas; Condensate; Oil/Gas; Oil/Condensate.

N.	Name or ID	Type of	Year of	Type of	Number	Coordinates		
14.	Nume of 15	installation	installation	fluid	of beds	(longitude)	(latitude)	
-	-	-	-	-	-	-	-	

b. **Fixed Installations out of operation:** list of installations that went out of offshore oil and gas operations during the reporting period:

## Table 2.2.b [✓h] Installations that were decommissioned during the reporting period

**Type of installation:** FMI [Fixed manned installation]; NUI [(Fixed) normally unmanned]; FPI [Floating production installation]; FNP [Fixed non production installation];

Name or ID	Type of	Year of installation	Coordinates		Temporary / Permanent	
Name of 1D	installation <sup>3</sup>		(longitude)	(latitude)		
-	-	-	-	-	-	

**2.3. Mobile installations**: list of mobile installations carrying out operations during the reporting period (MODUs and other non-production installations):

Table 2.3 Mobile installations [✓i]

**Type of installation: i.e.** Mobile offshore drilling[MODU], Other mobile non-production installation; **Geographical area of operations:** e.g. **South North Sea**, **North Adriatic** 

Name or ID	Type of	Year of	Number	G	Geographical area of operations and duration			
Name or ID	installation	construction	of beds	Area 1	Duration (months)	Area 2	Duration (months)	
Key Manhattan	MODU <sup>1</sup> (Jack-Up Drilling Unit)	1982	101	Adriatic Sea	7			

**2.4. Information for data normalization purposes** [✓I]. Total number of actual offshore working hours and total production in the reporting period:

a. Total number of actual offshore working hours for all installations: 2,240,788 h

b. Total production: 1902 kTOE

Oil production: 0.43\*106 t

Gas production: 1.87\*109 Sm3

1 MODU : Mobile Offshore Drilling Unit

#### **SECTION 3**

#### REGULATORY FUNCTIONS AND FRAMEWORK

#### 3.1. Inspections [√m]

Number of offshore inspections performed during the reporting period.

Number of offshore inspections	Man-days spent on installation (travel time not included)	Number of inspected installations
222	339	164

#### 3.2. Investigations

Number and	type of inv	estigations	performed	during the	reporting	period.
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a. following major accidents: 0

(pursuant to Article 26 of Directive 2013/30/EU)

b. following safety and environmental concerns: 0

(pursuant to Article 22 of Directive 2013/30/EU)

#### 3.3. Enforcement actions

Main enforcement actions or convictions performed in the reporting period pursuant to Article 18 of Directive 2013/30/EU.

Narrative:	
	/
	/ /

- **3.4. Major changes in the offshore regulatory framework:** major changes in the offshore regulatory framework during the reporting period (*year 2021*).
- Law no. 21 of 26 February 2021 "Conversion into law, with amendments, of Decree-Law No 183 of 31 December 2020 laying down urgent provisions on legislative deadlines, the establishment of digital links, the implementation of Council Decision (EU, EURATOM) 2020/2053 of 14 December 2020, as well as on the withdrawal of the United Kingdom from the European Union. Extension of the deadline for the conclusion of the work of the Parliamentary Commission of Inquiry on the events that occurred in the community "Il Forteto".

With art. 12-ter of the aforementioned Legislative Decree 183/2020, converted into Law 21/2021, amendments have been made to Article 11-ter of Legislative Decree no. 135 of 14 December 2018, converted, with amendments, by Law no. 12 of 11 February 2019.

The aforementioned art. 11-ter introduced the *Plan for the sustainable energy transition* of the eligible areas (PiTESAI), for the planning, on the national territory, both on land and at sea, of the activities of prospection, research and production of hydrocarbons, so that for the same the compatibility with the planning of the territory and sustainability can be verified also from a social point of view, environmental and economic.

The regulatory intervention referred to in Legislative Decree 183/2020 has only extended the approval deadline of the aforementioned PiTESAI, from 24 months - from the date of entry into force of Law no. 12/2019 - to 30 September 2021.

In implementation of this legislative provision, with the Decree of the Minister of Ecological Transition of 28 December 2021, published in the Official Gazette on 11 February 2022, PiTESAI was therefore approved. This Plan, in order to plan new activities in the field of hydrocarbons and rationalize existing ones, also with a view to european decarbonization and energy transition to renewable sources, indicates the "suitable areas" and "unsuitable" on the national territory and at sea to which reference should be made, on the basis of purely environmental criteria, in order to possibly submit requests to undertake new upstream activities; this mapping of suitable and unsuitable areas also constitutes the basis for establishing whether the mining titles and the related activities already in place are "compatible" with the territories concerned; in this case the environmental criteria are also integrated with economic and social criteria, as established by art. 11-ter, D.L. 135/2018, precisely to take into account the fact that there are already industrial activities in place with the related induced and related investments.

In summary, PiTESAI therefore provides that:

- proceedings relating to requests for prospection and research continue only if they concern gas and if submitted after 01/01/2010, provided that they fall within "suitable areas" for the submission of future applications;
- the proceedings relating to requests for concessions continue in "suitable areas", or even in "unsuitable areas" provided that in this case a mining potential exclusively of gas has been ascertained for a quantity of certain reserve exceeding 150 MSmc considered indicatively, from an economic point of view, of public interest, for the continuation of the preliminary investigation process aimed at the development of the field;
- the research permits in force continue in the activities, except those suspended in the temporal course for more than 7 years prior to the entry into force of Law 12/2019, for reasons exclusively dependent on the choices of the holder of the permit, provided that they concern only the search for gas and falling, even partially, in "suitable areas";
- concessions for the production of hydrocarbons on land and at sea continue if they have infrastructures in place or already approved in "suitable areas", except for those that have not been unproductive for more than 7 years prior to the adoption of the Plan, for reasons dependent on the choices of the concessionaire;
- concessions at sea continue even if they have one or more infrastructure in "unsuitable areas", except those that have not been unproductive for more than 5 years prior to the adoption of the Plan, for reasons dependent on the choices of the concessionaire;

- concessions on the mainland continue even if they have one or more infrastructure within "unsuitable areas" provided that they have been productive or unproductive for less than 5 years prior to the adoption of the Plan and that following the Costs Benefit Analisys (CBA) they obtain a result for which the costs of the non-extension are greater than the benefits, remaining in force and continuing to be able to be extended until the CBA analysis justifies its continuation;
- the other cultivation concessions in force which, on the date of adoption of PiTESAI will not be in one of the aforementioned cases, will remain in force until the expiry to be understood as the expiry of the title or extension also being issued without the possibility of any further extensions.
- Law 22 April 2021, n. 55 "Conversion into law, with modifications, of the decree law 1 March 2021, n. 22, containing urgent provisions on the reorganization of the powers of the Ministries".

With D.L. 22/2021, n.22 the Ministry of the Environment of the Territory and the Sea (MATTM) was renamed Ministry of Ecological Transition (MITE) and this has also been assigned competences and functions in the field of energy, previously headed by the Ministry of Economic Development, with consequent transfer of the two Directorates General involved - Directorate General for Energy Supply, Efficiency and Competitiveness (DGAECE) and Directorate General for Infrastructure and Safety of Energy and Geores Systems (DGISSEG) now renamed Directorate General for Infrastructure and Safety (DGIS) - and the related staffing.

In implementation of art. 10 of the aforementioned D.L. the D.P.C.M. was then adopted 29 July 2021, n. 128 which, in regulating the organization of the new Ministry of ecological transition, with art.9, paragraph 2, has, among other things, expressly transferred the headquarters of the Committee for the safety of offshore operations in the hydrocarbon sector, as referred to in art.8 of the Legislative Decree 18 August 2015, n. 145 implementing Directive 2013/30 / EU, from DGIS to the Directorate-General for Naturalistic Heritage and the Sea (PNM) of the MITE, remaining in the hands of DGIS, now responsible for both the issue of mining licenses for the research and production of hydrocarbons, that of royalties and safety - the sole function of support in the preparation of annual plans, publication obligations and cooperation with the competent authorities or with the contact points of the Member States, in accordance with the provisions of Legislative Decree 145/2015, in agreement with the PNM.

#### **SECTION 4**

#### INCIDENT DATA AND PERFORMANCE OF OFFSHORE OPERATIONS

#### 4.1 Incident data

Number of reportable events pursuant to Annex IX: 0

#### **4.2 Annex IX Incident Categories**

Annex IX categories	Number of events	Normalized number of events
a) Unintended releases	0	0
Ignited oil/gas releases - Fires	-	-
Ignited oil/gas releases - Explosions	-	-
Not ignited gas releases	-	-
Not ignited oil releases	-	-
Hazardous substances released	-	-
b) Loss of well control	0	0
Blowouts	-	-
Activation of BOP / diverter system	-	-
Failure of a well barrier	-	-
c) Failure of SECE's	0	0
d) Loss of structural integrity	0	0
Loss of structural integrity	-	-
Loss of stability/buoyancy	-	-
Loss of station keeping	-	-
e) Vessel collisions	0	0
f) Helicopter accidents	0	0
g) Fatal accidents (*)	0	0
(h) Serious injuries to 5 or more persons in the same accident (*)	0	0
i) Evacuations of personnel	0	0
j) Environmental accidents	0	0

<sup>(\*)</sup> only if related to a major accident

#### 4.3 Total number of fatalities and injuries [✓n] (\*\*)

	Number	Normalized value
Total number of fatalities	0	0

Total number of serious injuries [✓o]	2	0.89 *10 <sup>-6</sup>
Total number of injuries	4	1.78 *10 <sup>-6</sup>

<sup>(\*\*)</sup> a total number as reported pursuant to 92/91/EEC

#### 4.4 Failures of Safety and Environmental Critical Elements (SECEs)

SECE	Number related to major accidents
a) Structural integrity systems	0
b) Process containment systems	0
c) Ignition control systems	0
d) Detection systems	0
e) Process containment relief systems	0
f) Protection systems	0
g) Shutdown systems	0
h) Navigational aids	0
i) Rotating equipment – power supply	0
j) Escape, evacuation and rescue equipment	0
k) Communication systems	0
I) other	0

#### 4.5. Direct and underlying causes of major incidents

Causes	Number of incidents	Causes	Number of incidents
a) Equipment-related causes	0	c) Procedural / organisational error	0
Design failure	-	Inadequate risk Assessment/perception	-
Internal corrosion	-	Inadequate instruction/procedure	-
External corrosion	-	Non-compliance with procedure	-
Mechanical failure due to fatigue	-	Non-compliance with permit-to- work	-
Mechanical failure due to wear- out	-	Inadequate communication	-
Mechanical failure due to defected material	-	Inadequate personnel competence	-
Mechanical failure (vessel/helicopter)	-	Inadequate supervision	-
Instrument failure	-	Inadequate safety leadership	-
Control system failure	-	Other	-
Other	-		
b) Human error – operational failure	0	d) Weather-related causes	0
Operation error	-	Wind in excess of limits of design	-
Maintenance error	-	Wave in excess of limits of design	-
Testing error	-	Extremely low visibility in excess of system design	-
Inspection error	-	Presence of ice/icebergs	-
Design error	-	Other	-
Other	-		

## 4.6. Which are the most important lessons learned from the incidents that deserve to be shared?

Narrative:	
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#### **END OF THE REPORT**