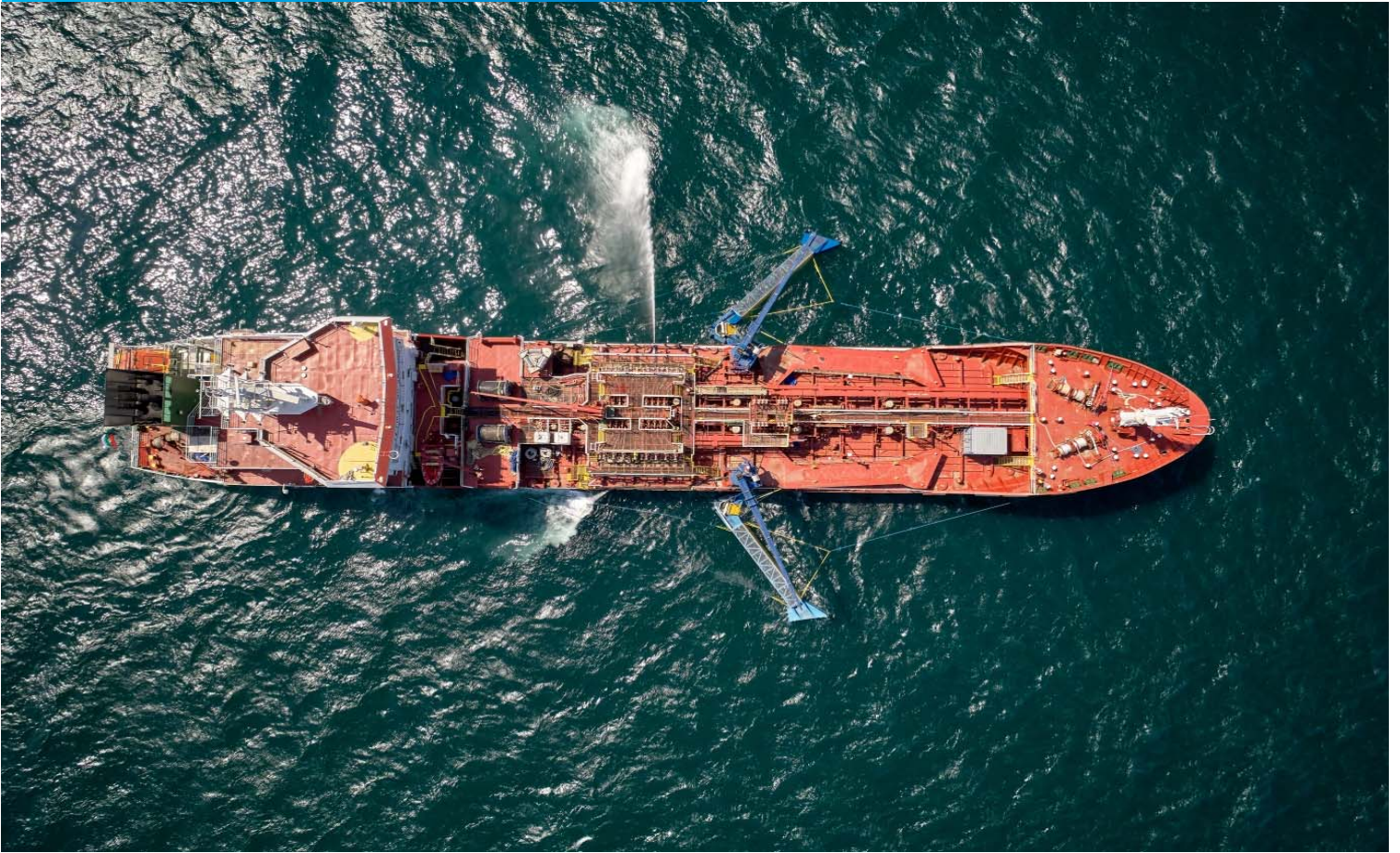




Drills & Exercises

Annual Report 2018

EMSA Pollution Response Services

Date: 11/03/2018

Summary

In order to provide additional support to the pollution response mechanisms of EU Member States in a cost efficient way, the European Maritime Safety Agency (EMSA) operates, in European waters, a range of oil pollution response (OPR) services consisting of a Network of stand-by oil spill response vessels, Equipment Assistance Service (EAS) including specialised stand-alone equipment arrangements, as well as dispersant stockpiles. The OPR services are available for responding to oil spills at sea caused by ships as well as by oil and gas installations at the request of a coastal State¹, a Private Entity², and/or the European Commission.

At the end of 2018, 17 fully equipped oil spill response vessels, 6 dispersant stockpiles and 3 EAS arrangements were available for mobilisation.

To achieve the level of performance for pollution response required by the Agency, the contracted OPR services have to perform regular training, drills, Equipment Condition Tests (ECTs) and exercises.

The evaluation of the contractors' performance during vessel drills, ECTs and exercises by the Agency's staff in line with the "Guidelines on Conducting Drills / ECTs and Exercises for the EMSA Contracted Vessels / EAS arrangements" is an effective tool to ensure that the level of preparedness of the pollution response services is adequately maintained.

Overall, the outcome of drills, ECTs and exercises carried out during 2018 demonstrated that the services are provided efficiently and in accordance with the EMSA services users expectations.

In addition to providing operational assistance in case of oil spills, the Agency is tasked to support Member States in case of marine incidents involving chemicals. Since 2009, EMSA is providing expert advice for hazardous and noxious substances (HNS) through its MAR-ICE Network. This service provides rapid information transfer regarding chemical substances involved in marine pollution emergencies 24/7 and free of charge to the EU/EFTA coastal Member States and EU Candidate Countries. In order to familiarise EU Member States and to ensure high quality of this service, several exercises of MAR-ICE are performed each year.

The figures related to the drill and exercise activities in 2018 are summarised in the table below:

Table 1 Summary of drills, ETCs and exercises carried out in 2018

Acceptance Drills: Newly Contracted / Replaced Vessels	Acceptance Drills: Improvement projects / new equipment	Quarterly Drills / ECTs	Operational Exercises Vessels/EAS	Notification Exercises Vessels/EAS	MAR-ICE Exercises
2	4	68 / 23	8 (10 vessels / 3 EAS)	14 (27 vessels / 7 EAS)	3
Total number of events	122				

¹ EU Member States, EU Candidate States, Norway and Iceland as well as those third countries sharing a regional sea basin with the European Union (Regulation (EU) 100/2013).

² Private Entity means the ship owner or oil and gas installation operator controlling the activity causing the marine pollution or the imminent threat of it, or their contractor.

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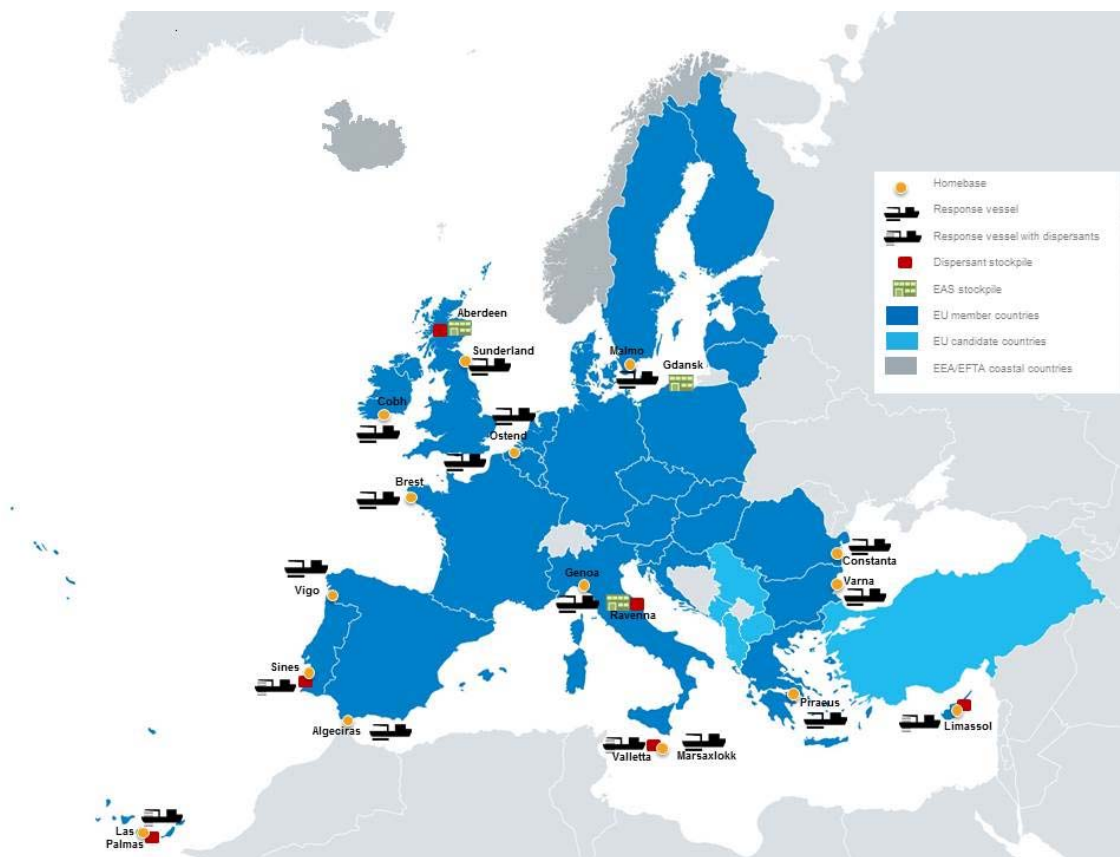
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1. Introduction

1.1 EMSA's Oil Pollution Response (OPR) Services - Overview

Through its “toolbox” of response services, EMSA offers a European tier of pollution response resources in order to top-up the capacities of coastal States for protecting their coastlines from marine pollution caused by ships and oil and gas installations. The map below provides an overview of EMSA's OPR Services and their geographical distribution.

Map 1 Distribution of EMSA's contracted vessels and EAS arrangements at the end of 2018



At the end of 2018, 17 fully equipped oil spill response vessels were available for pollution response, with 11 of these 17 vessels certified for recovery of oil with flashpoints < 60°C. All the contracted vessels based in areas with the presence of oil and gas installations are now certified for recovery of oil with flashpoint < 60°C. Main activities related to the Vessel Network in 2018 included:

- Entering into operational service of the vessel contracted at the end of 2017, covering the area of the Bay of Biscay;
- Renewal of three vessel contracts covering the Atlantic Coast, Northern North Sea and Atlantic North. The first contract was renewed for an additional 4-year period. The other two, based on negotiations with the contractor were renewed for 1 year period only with the possibility for a further extension of 3 years;
- The renewal process initiated for the vessel covering Adriatic Sea was not successful due to technical reasons. The contractor was unable to continue the contract.

Regarding the Equipment Assistance Service (EAS), a fourth arrangement was contracted in the Northern Baltic Sea. It will become fully operational in the first half of 2019. This new arrangement complements the

existing EAS stockpiles in the Baltic, North Sea and Southern Europe. This stockpile will provide specialised (focused mainly on the recovery of oil at sea in winter conditions) stand-alone equipment for Vessels of Opportunity (VOO), primarily for the Northern Baltic Sea area.

Details regarding the service of the Vessel Network and EAS arrangements in 2018 can be found in the table below.

Table 2 Summary of the OPR services and contractual information at the end of 2018

Area covered	Contractor / Contract	Vessel(s) / Assets	Vessel type / storage capacity(m³) / dispersant stock	Service 2018
1. Contracted vessels				
Southern Baltic	Stena Oil EMSA/NEG/1/2015 Lot 2	<i>Norden</i>	Oil Tanker / 2880	Whole year service
Northern North Sea	James Fisher Everard Ltd EMSA/NEG/1/2013 Lot 1	<i>Mersey Fisher,</i> <i>Thames Fisher</i>	Product Tankers / 5028 / 5028	Whole year service
Channel and Southern North Sea	DC Industrial S.A. 2014/EMSA/NEG/1/2014 Lot 3.1	<i>Interballast 3</i>	Hopper Dredger / 1886	Whole year service
	DC Industrial S.A. 2014/EMSA/NEG/1/2014 Lot 3.2	<i>DC Vlaanderen</i> <i>3000</i>	Hopper Dredger / 2744	Whole year service
Atlantic North	James Fisher Everard Ltd. EMSA/NEG/1/2013 Lot 2	<i>Galway Fisher,</i> <i>Forth Fisher,</i> <i>Corrib Fisher</i>	Product Tankers / 4754 / 4754 / 6248	Whole year service. As of 8 November 2018 <i>Forth Fisher</i> was replaced with <i>Corrib Fisher</i>
Atlantic Coast	Remolcadores Nossa Terra S.A. EMSA/NEG/1/2014 Lot 1	<i>Ria de Vigo</i>	Offshore Supply / 1522	Whole year service
Bay of Biscay	Seaowl 2017/EMSA/CPNEG/01/2017	<i>VN Partisan</i>	Offshore Supply / 1022	Entered into service on 1 September 2018
Southern Atlantic Coast	Mureloil EMSA/NEG/1/2012 Lot 1	<i>Bahia Tres</i>	Oil Tanker / 7413 / Dispersant 200 t.	Whole year service
Canary Islands and Madeira	Petrogas EMSA/NEG/1/2015 Lot 1	<i>Mencey</i>	Oil Tanker / 3500 / Dispersant 200 t.	Vessel was out of service from 31 August to 20 December due to propulsion failure
Western Mediterranean	Naviera Altube EMSA NEG/1/2011 Lot 4	<i>Monte Anaga</i>	Oil Tanker / 4096	Whole year service
	Ciane EMSA/NEG/34/2012	<i>Brezzamare</i>	Oil Tanker / 3288	Whole year service
Central Mediterranean	Tankship EMSA NEG/1/2011 Lot 2	<i>Balluta Bay</i>	Oil Tanker / 2800 / Dispersant 200 t.	Whole year service
	SL Ship Management Ltd EMSA/NEG/1/2012 Lot 2	<i>Santa Maria</i>	Oil Tanker / 2421	Whole year service
Adriatic Sea	Castalia EMSA/NEG/1/2013 Lot 4	<i>Marisa N</i>	Oil Tanker / 1562	Vessel out of service from 10 July. Contract expired on 28 November 2018.
Aegean Sea	Environmental Protection Engineering S.A. EMSA/NEG/1/2013 Lot 3	<i>Aktea OSRV</i> <i>(Aegis I as a back-up vessel)</i>	Oil Tanker / 3000 Offshore Supply / 950	Whole year service (until 3 February 2018 Aegis was contracted to EFCA)
Eastern Mediterranean	Petronav EMSA/NEG/1/2010 Lot 1	<i>Alexandria</i>	Oil Tanker / 7458 / Dispersant 200 t.	Whole year service
Northern Black Sea	Petronav EMSA/NEG/1/2014 Lot 2	<i>Amalthia</i>	Oil Tanker / 5154	Whole year service
Southern Black Sea	COSMOS 2016/EMSA/CPNEG/6/2016 – Lot1	<i>Galaxy Eco</i>	Oil Tanker / 2969	Whole year service

2. EAS arrangements				
Baltic Sea	Labelpoland.com EMSA/NEG/8/2015 – Lot 2	10 stand-alone equipment sets	Contracted storage area: 800m ² (Gdansk, Poland)	Whole year service
North Sea	Sureclean / NRC EMSA/NEG/8/2015 – Lot 1	9 stand-alone equipment sets Dispersant 200 t.	Contracted storage area: 600m ² (Oldmeldrum, UK)	Whole year service
Southern Europe	Ottavio Novella 2017/EMSA/CPNEG/38/2016	10 stand-alone equipment sets Dispersant 400 t.	Contracted storage area: 800m ² (Ravenna, Italy)	Whole year service

1.2 Purpose and types of drills and exercises

The vessels and EAS arrangements contracted by the Agency are equipped with state-of-the-art, oil containment and recovery equipment. In addition, some of the vessel arrangements have dispersant spraying capabilities with dispersant stock available. Furthermore, in-situ-burning equipment is available at the EAS stockpiles. The pollution response equipment provided by the Agency aims at achieving high recovery rates and high effectiveness of the pollution response activities.

Once the technical requirements of each contract are satisfied, the most important factors determining success of the pollution response system are the skills of the vessel's crews in the operation of the equipment, the capability of the oil spill response coordinators to lead the response action and to integrate EMSA's response assets within the pollution response mechanisms of the Member States. For the EAS the critical factor lies with the operational condition of the equipment. Therefore, regular training, drills, equipment condition tests (ECTs) and exercises are essential to achieving and maintaining the appropriate level of performance.

Every vessel and EAS contract defines the types and number of drills, ECTs and exercises to be carried out by each associated service:

- The vessels perform two types of drills: 1) acceptance drills (also referred to as acceptance tests) and 2) quarterly oil pollution response drills; and two types of exercises: 1) notification exercises and 2) at-sea operational exercises;
- With regard to the EAS arrangements, the contracts have defined a maximum number of six ECTs per year. With regard to exercises, there are the same two types of exercises as for the vessels. ECTs aim at guaranteeing that the technical support personnel is able to deploy and instruct Member State's operators on how to use the equipment, as EMSA's contractor technical support personnel does not operate the equipment during response operations.

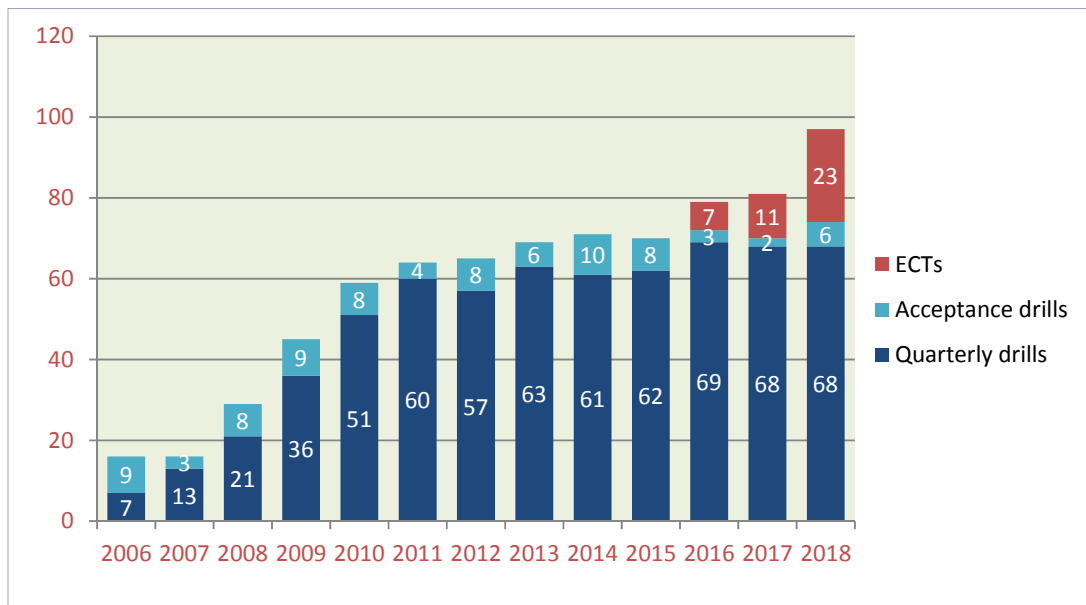
Detailed instructions on conducting drills ECTs and exercises, including their methods of evaluation are provided in the "Guidelines on Conducting Drills/ECTs and Exercises for the EMSA Contracted Vessels/EAS arrangements". These Guidelines constitute a component of all contracts. They are periodically reviewed and updated taking into account new services development, new types of equipment/services acquired and lessons learned during drills and exercises.

2. Drills & ECTs performed in 2018

In 2018, a total of 68 quarterly drills, 6 acceptance drills and 23 equipment condition tests (ECTs) were performed by the vessels and the EAS arrangements under contract to the Agency. The acceptance drills are of particular importance as they are the major milestone for new vessels, new equipment as well as the overhauled equipment to enter into the pollution response service.

A summary of drills / ECTs performed by EMSA's OPR services during the period 2006-2018 is shown in the chart below.

Chart 1 Number of drills and ECTs 2006 – 2018



2.1 Vessel drills

2.1.1 Acceptance drills

Two new vessels joined EMSA vessel network in 2018:

- The OSR vessel *VN Partisan* contracted at the end of 2017 based in Brest, France, providing replacement capacity in the Biscay Bay, successfully completed the acceptance drill and became fully operational in September 2018.
- The contractor James Fisher Everard replaced the vessel *Forth Fisher* operating under EMSA contract in the North Atlantic with the vessel *Corrib Fisher*. The *Corrib Fisher* after the successful acceptance drill joined the service in November 2018.

In 2018, six technical improvement projects on board the contracted vessels were successfully completed. These projects included:

- Installation of a new high capacity skimmer on board *Bahia Tres* stationed in Sines, Portugal. The improvement increased an oil recovery capacity in the area of the Southern Atlantic coast. The new equipment became operational in September 2018;

- Overhauling of the high capacity skimmer and the boom on board *Santa Maria* stationed in Malta covering the Central Mediterranean Sea. The overhauling brought the worn equipment back to an excellent operational condition. The improved arrangement entered into service in August 2018;
- Replacement of the boom and overhauling of the skimmer on board the *Brezzamare* stationed in Genoa, Italy, covering the Western Mediterranean Sea. The secondary oil recovery system on board *Brezzamare* was brought up to the operational condition and entered into service in May 2018;
- Boom replacement on board *Aktea* stationed in Piraeus, Greece, covering the Aegean Sea. New boom became operational in April 2018.

Summary of the acceptance drills is demonstrated in the table below.

Table 3 Vessel /equipment/ Improvement acceptance tests carried out in 2018

N°	Contract	Contractor	Vessel	Home port	Subject	Acceptance Test Date	Results
1	2017/EMSA/CPNEG/2/2017 Bay of Biscay	SeaOwl	<i>VN Partisan</i>	Brest, France	Newly contracted vessel. Replacement of the response capacity for the Bay of Biscay. Acceptance Test for pre-fitting and equipment.	30-31/08/2018	Acceptance effective from 01/09/2018.
2	EMSA/NEG/1/2013 Lot 2 North Atlantic	James Fisher Everard Ltd.	<i>Corrib Fisher</i>	Cobh, Ireland	Replacement of the <i>Forth Fisher</i> under the existing contract. Acceptance Test for pre-fitting and equipment.	07/11/2018	Acceptance effective from 08/11/2018
3	EMSA/NEG/1/2012 Lot 1 Southern Atlantic Coast	Mureloil	<i>Bahia Tres</i>	Sines, Portugal	Improvement project. Installation of the high capacity skimmer on board the vessel. Acceptance Test for pre-fitting and equipment.	18/09/2018	New equipment accepted
4	EMSA/NEG/1/2012 Lot2 Central Mediterranean Sea	Falzon	<i>Santa Maria</i>	Malta	Overhauling of the high capacity skimmer and boom. Acceptance of the overhauling projects.	29/08/2018	Overhauling projects accepted
5	EMSA/NEG/34/2012 Western Mediterranean Sea	Ciane	<i>Brezzamare</i>	Genoa, Italy	Boom replacement and overhauling of the skimmer. Acceptance of the new boom and overhauling project.	16/05/2018	New equipment and overhauling project accepted
6	EMSA/NEG/1/2013 Lot 3 Aegean Sea	EPE	<i>Aktea OSRV</i>	Piraeus, Greece	Boom replacement. Acceptance of the new boom.	19/04/2018	New equipment accepted

Fig. 1 Acceptance drill on board VN Partisan. High capacity skimmer test.



2.1.2 Quarterly drills

According to the contract, the Contractor is obliged to train the vessel's crew and to maintain the oil pollution response equipment in order to be ready to carry out oil pollution response services efficiently. To demonstrate the fulfilment of these obligations, the Contractor is obliged to carry out drills on a quarterly basis. The Agency developed guidelines describing performance standards for the vessel, crew and equipment. These guidelines are an annex to the Vessel Availability Contract. The quarterly drill can be accepted only if all required standards have been achieved. The acceptance of the Contractor's Quarterly Drill Report by the Agency is a condition for the payment of the Vessel Availability Fee by the Agency.

The attendance of the MS representatives to the quarterly drills is encouraged as it gives them first-hand experience of EMSA's assistance capabilities as well as facilitating the integration of EMSA's resources with the pollution response mechanisms of the Member States. During 2018 four quarterly drills were attended by representatives of the Member States and the European Commission.

The summary of the quarterly drills carried out in 2018 is presented in the table below.

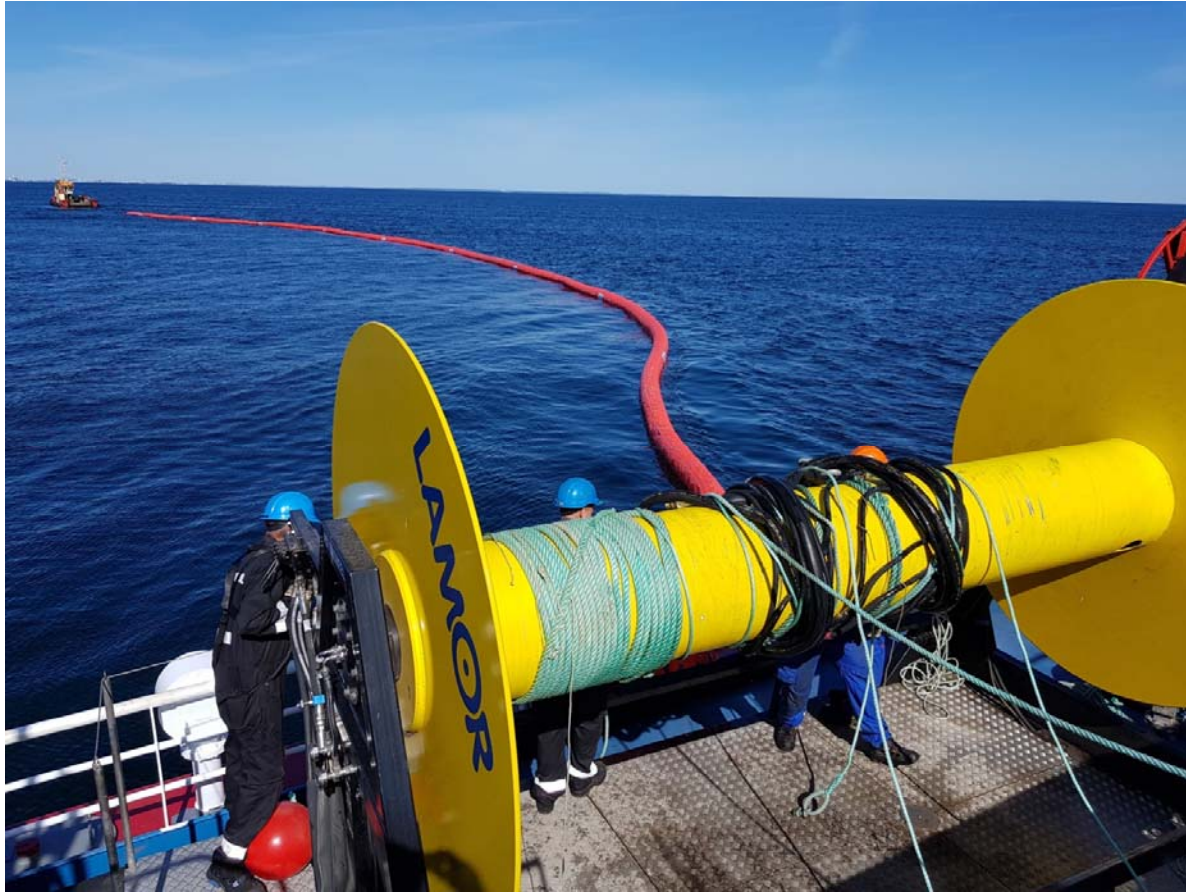
Table 4 Summary of the quarterly drills carried out in 2018

N°	Contract	Contractor	Vessel/s	Drill	Date	Results
1	EMSA/NEG/1/2015 Lot 2 Southern Baltic	Stena Oil	Norden	1Q	31/01/2018	4 drills required in 2018. All drills were conducted and accepted by EMSA.
				2Q	05/06/2018	
				3Q	26/08/2018	
				4Q	31/10/2018	
2	2014/EMSA/NEG/1/2014 Lot 3.1 Channel and Southern North Sea	DC Industrial S.A.	Interballast III	1Q	13/02/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	24/04/2018	
				3Q	07/08/2018	
				4Q	16/10/2018	
3	2014/EMSA/NEG/1/2014 Lot 3.2 Channel and Southern North Sea	DC Industrial S.A.	DC Vlaanderen 3000	1Q	13/02/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	04/06/2018	
				3Q	11/09/2018	
				4Q	16/10/2018	
4	EMSA/NEG/1/2013 Lot 1 Northern North Sea	James Fisher Everard Ltd	Mersey Fisher	1Q	18/01/2018	3 drills required in 2018 (1drill was not required due to the contract renewal). 3Q drill of <i>Thames Fisher</i> required repetition due to technical reasons. All drills were conducted and accepted by EMSA.
				3Q	17/06/2018	
				3Q	27/08/2018	
			Thames Fisher	2Q	n/a	
				4Q	26/10/2018	
5	EMSA/NEG /1/2013 Lot 2 Atlantic North	James Fisher Everard Ltd	Galway Fisher	1Q	24/04/2018	4 drills required annually. All drills were conducted and accepted by EMSA. 4Q drill conducted by Corrib Fisher which replaced Forth Fisher.
				3Q	09/10/2018	
			Forth Fisher/Corrib Fisher	2Q	13/06/2018	
				4Q	07/11/2018	
6	2014/EMSA/NEG/1/2014 Lot 1 Atlantic Coast	Remolcadores Nossa Terra S.A.	Ria de Vigo	1Q	20/02/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	07/06/2018	
				3Q	20/09/2018	
				4Q	21/11/2018	
7	2017/EMSA/CPNEG/22/2017 Bay of Biscay	SEAOWL	VN Partisan	1Q	n/a	1 drill required in 2018. The drill was conducted and accepted by EMSA. Service started on 01/09/2018
				2Q	n/a	
				3Q	n/a	
				4Q	26/10/2018	
8	VAC NEG/1/2012 Lot 1 Southern Atlantic Coast	Mureloil S.A.	Bahia Tres	1Q	31/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	02/06/2018	
				3Q	02/08/2018	
				4Q	29/11/2018	
9	EMSA/NEG/1/2015 Lot 1 Canary Islands and Madeira	Petrogas	Mencey	1Q	23/01/2018	4 drills required annually. 3 drills were conducted and accepted by EMSA. 1 drill was not performed due to technical failure of the vessel
				2Q	24/04/2018	
				3Q	-	
				4Q	27/12/2018	

10	EMSA NEG/1/2011 Lot 4 Western Mediterranean Sea	Naviera Altube S.L.	Monte Anaga	1Q	21/02/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	17/05/2018	
				3Q	11/08/2018	
				4Q	08/11/2018	
11	EMSA/NEG/34/2012 Western Mediterranean Sea	Ciane SpA	Brezzamare	1Q	20/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	16/05/2018	
				3Q	18/09/2018	
				4Q	25/11/2018	
12	EMSA/NEG/1/2013 Lot 4 Adriatic Sea	R.T.I Castalia	Marisa N	1Q	27/03/2018	3 drills required in 2018. 2 drills were conducted and accepted by EMSA. Due to the technical failure vessel was out of service since 10/07/2018. The contract expired on 28/11/2018
				2Q	28/06/2018	
				3Q	-	
				4Q	n/a	
13	EMSA NEG/1/2011 Lot 2 Central Mediterranean Sea	Tankship Ltd	Balluta Bay	1Q	08/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	04/07/2018	
				3Q	16-17/08/2018	
				4Q	16/11/2018	
14	EMSA NEG/1/2012 Lot 2 Central Mediterranean Sea	SL Ship Management Ltd	Santa Maria	1Q	16/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	31/05/2018	
				3Q	29/08/2018	
				4Q	11/10/2018	
15	EMSA/NEG/1/2013 Lot 3 Aegean Sea	Environmental Protection Engineering S.A.	Aktea OSRV	1Q	16/03/2018	6 drills required annually (4 Aktea OSRV and 2 Aegis I). All drills were conducted and accepted by EMSA.
				2Q	24/04/2018	
				3Q	01/10/2018	
				4Q	14&16/11/2018	
			Aegis I	2Q	18/06/2018	
				4Q	14/11/2018	
16	EMSA NEG/1/2010 Lot 1 Eastern Mediterranean Sea	Petronav Ship Management Ltd	Alexandria	1Q	19/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	13/06/2018	
				3Q	26/09/2018	
				4Q	05/10/2018	
17	2014/EMSA/NEG/1/2014 Lot 2 Northern Black Sea	Petronav Ship Management Ltd	Amalthia	1Q	21/03/2018	4 drills required annually. All drills were conducted and accepted by EMSA.
				2Q	20/06/2018	
				3Q	24/09/2018	
				4Q	04/12/2018	
18	2016/EMSA/CPNEG/6/2016 Lot 1 Southern Black Sea	Cosmos	Galaxy Echo	1Q	20/03/2018	4 drills required annually. All were conducted and accepted by EMSA.
				2Q	12/06/2018	
				3Q	14/09/2018	
				4Q	14-15/11/2018	
TOTAL:						68 Quarterly Drills

The outcome of the quarterly drills carried out during 2018 demonstrated that the service is operated efficiently and in accordance with EMSA expectations.

Fig. 2 2nd Quarterly drill on board Norden. Boom deployment



2.2 EAS - Equipment Condition Tests (ECTs) and other EAS related events

According to the contract, the EAS Contractors are obliged to train their staff and to maintain the equipment in a full state of readiness for carrying out oil pollution response services efficiently.

To demonstrate the fulfilment of these obligations, the Contractors are obliged to carry out ECTs. The Agency developed guidelines describing equipment performance standards. These guidelines are an integral part of the Framework Contracts. The ECT can be accepted only if all required standards have been achieved.

The summary of the ECTs carried out in 2018 is presented in the table below.

Table 5 Summary of the ECTs and other EAS related events carried out in 2018

Contractor	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Results
NRC EAS North Sea (Oldmeldrum)	ECT Speed Sweep (20/03/2018)	Training Eq. Op. & ECT Current Buster 6 (12/06/2018)		ECT Ro-Trawl (06/12/2018)	Equipment was found in a good condition. All ECTs accepted by EMSA.
	ECT Trawl Net (21/03/2018)	Training Eq. Op. & ECT Trawl Net (13/06/2018)		ECT Current Buster 6 (05/12/2018)	
	ECT Speed Sweep 2 (20/03/2018)	Training Eq. Op. & ECT Speed Sweep (14/06/2018)			
	ECT Trawl Net 2 (21/03/2018)				
LABELPOLAND.COM EAS Baltic Sea (Gdansk)		Training Eq. Op. & ECT Current Buster 6 (05/06/2018)	Exercise Balex Delta - Trawl Net (28-30/08/2018)		Equipment was found in a good condition. All ECTs accepted by EMSA.
		Training Eq. Op. & ECT Speed Sweep (06/06/2018)	Training & ECT HCS (24/07/2018)		
		Training Eq. Op. & ECT Trawl Net (07/06/2018)	ECT HDB ex-Arctia (25/07/2018)		
		ECT Artic Skimmer (ex-Arctia) (08/06/2018)	ECT Ro-Boom (26/07/2018)		
		ECT Artic Skimmer & Brush skimmer (ex-OW Tankers) (08/06/2018)			
Ottavio Novella EAS Southern Europe (Ravenna)		ECT Current Buster 6 during MS seminar (18/04/2018)	Training & ECT HCS (03/09/2018)	Exercise Maltex 2018 - Current Buster (2-3/10/2018)	Equipment was found in a good condition. All ECTs accepted by EMSA.
		Exercise Adriatic 2018 - Trawl Net (22-24/05/2018)	Training Eq. Op. & ECT Current Buster 6 (04/09/2018)		
			Training Eq. Op. & ECT Trawl Net (05/09/2018)		
			Training Eq. Op. & ECT Speed Sweep (06/09/2018)		
COSMOS Black Sea			Weir boom deployment (05/07/2018)		
TOTAL:					23 ECTs

Within the framework of the ECTs, training sessions for the Member States' equipment operators were organised in the EAS Baltic, EAS North Sea and EAS Southern Europe. The trainees were able to get familiarised and operate different equipment systems such as the Current Buster 6, the Speed Sweep or the Ro-Trawl. In total, 25 equipment operators were trained during three training sessions. With regard to the representation of the Member States in such training sessions, out of a total of 25 MS invited by EMSA, 17 different Member States were represented. EMSA will continue delivering these annual trainings aimed at team leaders or coordinators.

Fig. 3 Equipment Condition Test. Deployment of the Current Buster 6 in Oldmeldrum (EAS North Sea)



2.3 Technical Issues Record

Checking the technical status and completeness of the oil pollution response equipment on board the vessels and the EAS stockpiles is an important element of each drill / ECT attended by EMSA observers.

Both vessels and EAS contracts provide for a mandatory reporting of incidents/malfunctions. Besides this, EMSA conducts annual verification of all equipment.

During each drill, ECT and exercise attended by the Agency, the condition of the equipment was closely assessed and recorded. This record allows the Agency to obtain a broader overview of the performance of different types and brands of equipment.

Identification of the most frequent technical problems leads to prevention of failures during actual pollution response and also helps the acceptance process for equipment arrangements in the framework of the vessel tenders and improvement projects.

For both services, Vessel Network and EAS, 27 equipment technical issues (dropping down from 47 in 2017 and 84 in 2016) were recorded in 2018 as follows: 3 related to skimmers, 2 to sweeping arms, 7 to combined systems (current buster, trawl net) and 4 to booms. Decreasing total number of the equipment technical issues is related to a successful programme of the equipment overhauling and replacement as well as to increased focus on the equipment maintenance and improvement of skills of personnel deploying EAS equipment.

Booms incidents encountered were mainly due to defaults in the inflating system in one specific type of boom which has progressively been phased out from EMSA equipment. For the other types of incidents, the main difficulties encountered were lack of flotation of the device (addressed by the manufacturer) or difficulty to start the engine (on several different devices using the same type of starting device). This last issue has also been addressed by the manufacturers.

Few damages, recorded during the periodic drills and ECTs, were caused by weather conditions and/or human factor. Regular training of the personnel for the correct use of the equipment is a key component for a prompt response to offshore oil pollution and the Agency will continue to support this aspect.

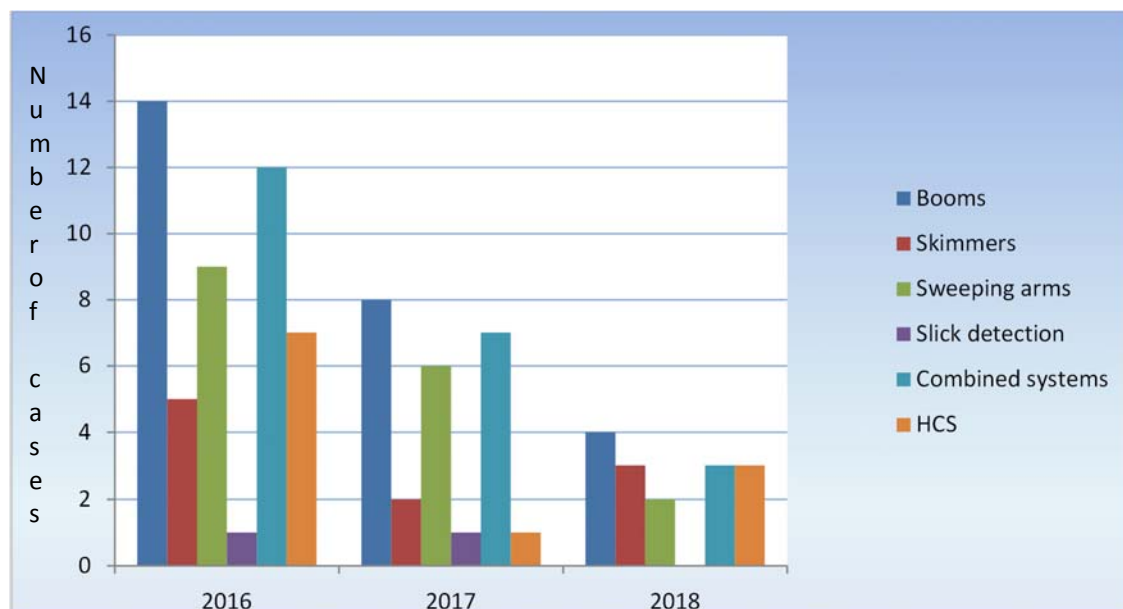
Generally, the technical issues were dealt with in an efficient and effective way and the equipment was brought back to the operational state as quickly as possible. Preventive measures, such as overhauling

and/or replacement of the aging equipment are being implemented in order to increase the reliability of the equipment and to minimise the number of failures.

Based on the equipment records, the overhauling or replacement plan is being established in order to improve services and reduce the probability of equipment failure.

In order to improve the collection of data, EMSA has developed a new incident report form which allows better monitoring of such incidents.

Chart 2 Number of Technical issues 2016 -2018



In 2018 the OPR equipment under the Vessel and EAS contracts was maintained in operational condition ready to perform service for the Member States.

It has to be noted that the service disruptions which occurred in 2018 (in the region of Canary Islands and Madeira and in the Adriatic Sea) were not related to the equipment technical issues but occurred due to the technical failures of the vessels.

3. Exercises performed in 2018

At-sea operational exercises assist the integration of EMSA's OPR services within the response mechanisms of Member States, improving the necessary coordination and cooperation of the EMSA resources with the coastal State response units. It has to be noted that, with the exception of exercises within regional Projects implemented by the Agency, EMSA does not organize exercises but participates when requested. The decision to participate takes into consideration the degree of integration of EMSA resources in the overall exercise scenario. That is why it is important that invitations to participate are accompanied by the detailed description of the exercise scenario.

In 2018 EMSA participated in 8 operational and 14 notification exercises. The Agency is implementing a procedure for the internal/external exercise coordination in order to provide the full set of services (Vessels, EAS, Mar-ICE, CleanSeaNet and others) in a harmonised manner as well as to provide/receive feedback to and from the Member States after the performance of the exercises. In 2018 EMSA modified also the response service mobilisation procedure in order to enhance and speed up the service mobilisation process. The sequence of the parties signing the contract has been reverted so the EMSA contractor

receives contract signed by the requesting party in the first place. The change is described by the figure below.

Fig. 4 Modified service mobilisation procedure



Instead of:



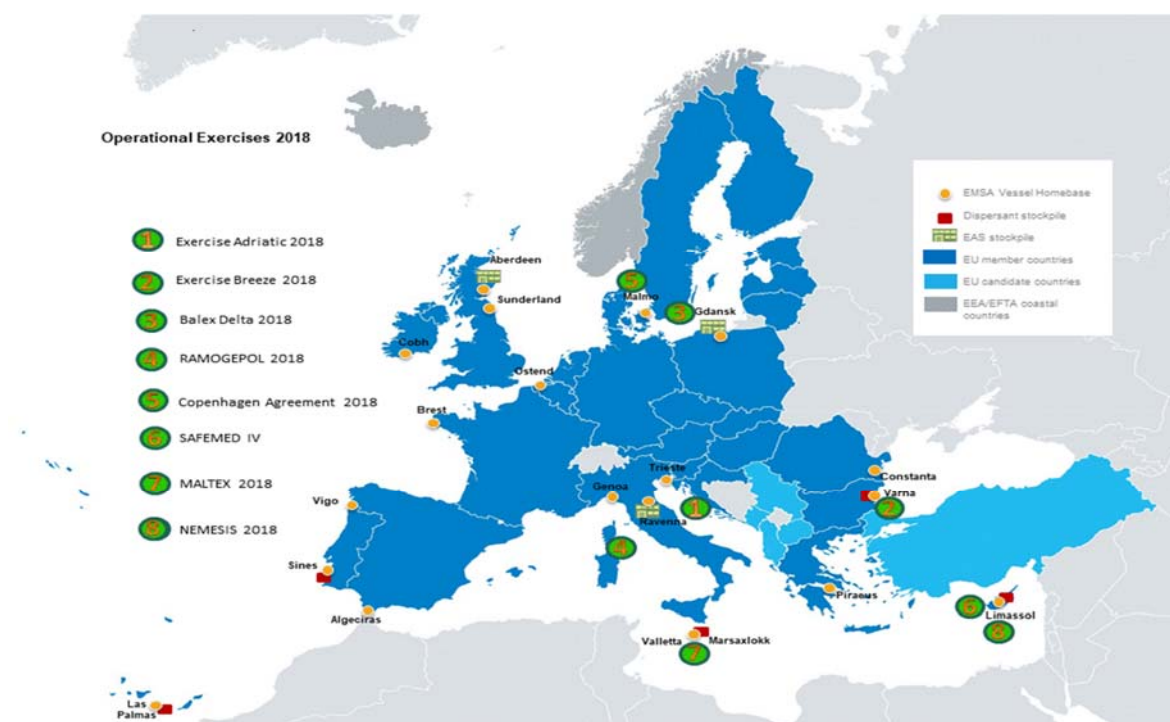
This new process is more effective and quicker as it is for the requesting party to identify which type of equipment or vessel configuration she wants before sending the contract signed to EMSA contractor.

3.1 Operational exercises

In the course of 2018, 11 EMSA Stand-by Oil Spill Response Vessels, and 2 equipment sets from the EAS Southern Europe and 1 from EAS Baltic Sea were deployed in 8 at-sea operational exercises, organised in cooperation with EU Member States and/or Regional Agreements.

The geographical spread of operational exercises in Europe with EMSA vessels participation is shown in the following map below.

Map 2 Geographical Coverage of Operational Exercises 2018



These events took place in European Regional sea basins, covering the Baltic Sea, North Sea, Mediterranean Sea and Black Sea. This year majority of exercises were performed in the Mediterranean Sea. In general, the results of these exercises showed that EMSA vessels were well integrated into the pollution response mechanisms of Member States and Regional Agreements. Reports of EMSA observers indicate that all vessels participating in the operational exercises successfully completed the tasks assigned by the pollution response command of the country hosting the exercise.

It should be noted that the operational exercises at sea are organised by the Member States within the framework of national or regional contingency plans. Each EMSA's participation to an exercise is followed by a request to the Member State to evaluate the services provided by the Agency.

The summary of operational exercises performed by EMSA contracted vessels during the 2018 is shown in the table below.

Table 6 Operational exercises at sea 2018

N°	Name of the Exercise	Exercise/date	Location	Participating Parties	EMSA vessel/s / EAS
1	Adriatic 2018	22-23 May	Kastela Bay, Croatia	Croatia, Slovenia, Montenegro, Sweden, The Netherlands, EMSA	<i>Marisa N, EAS Southern Europe (Trawl net)</i>
2	Breeze 2018	18-19 Jul	Burgas, Bulgaria	Bulgaria, EMSA	<i>Galaxy Eco, Amalthia</i>
3	BALEX DELTA 2018	27-29 Aug	Karlskrona, Sweden	Parties to the Helsinki Convention, EMSA	<i>Norden, EAS Baltic Sea (Trawl net)</i>
4	RAMOGEPOL 2018	12-13 Sept	Sardinia, Italy	Italy, France, Monaco, EMSA	<i>Brezzamare</i>
5	Copenhagen Agreement Ex. 2018	24-25 Sept	Fredrikshavn, Denmark	Parties to the Copenhagen Agreement, EMSA	<i>Norden</i>
6	SAFEMED IV	26-27 Sept	Limassol, Cyprus	SAFEMED IV beneficiary countries	<i>Alexandria</i>
7	MALTEX	3 Oct	Malta	Malta, EMSA	<i>Balluta Bay, Santa Maria, EAS Southern Europe (Current Buster)</i>
8	NEMESIS	30 Oct	Cyprus	Cyprus, Greece, France, UK, USA, Israel, EMSA	<i>Alexandria</i>
Total: 8 exercises, 10 vessels and 3 EAS equipment sets mobilised					

3.2 Notification exercises

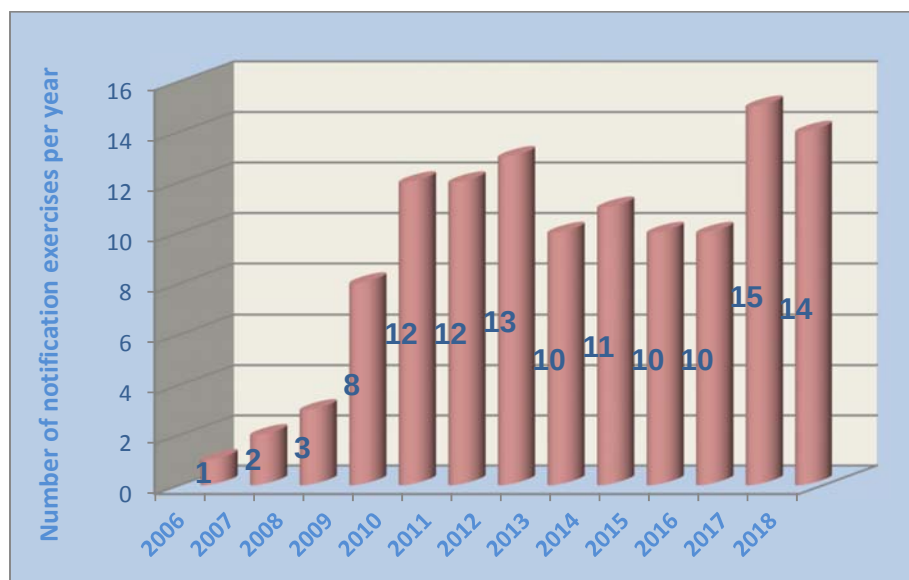
Notification exercises are usually conducted in conjunction with operational exercises. In addition, 'stand-alone' notification exercises are occasionally carried out. The aim of these exercises is to test and implement agreed procedures and lines of communication for reporting incidents and for requesting and providing assistance.

Notification exercises involve EMSA, one or more Requesting Parties³, EMSA's contractor(s) and the Emergency Response Coordination Centre (ERCC), operated by DG ECHO. The main criterion for the evaluation of the notification exercise is the time needed for the Incident Response Contract (Vessel - IRC-V or EAS - IRC-E)⁴ to be signed by both the EMSA contractor and the Requesting Party.

In 2018, the Agency participated in 14 notification exercises, involving 27 activations of EMSA vessels and 7 activations of EAS contractors.

The number of notification exercises carried annually over the years 2006-2018 is shown on the chart below.

Chart 3 Number of notification exercises 2006 – 2018



During the notification exercise, the time counting starts at the moment when the formal assistance request is received by EMSA. Taking into account variables such as the time of day, the day of the week, the contractor's location and other factors, 6 hours is considered as an acceptable target deadline for all parties to complete the mobilisation process, including signature of the Incident Response Contract (IRC). During the exercise, the Agency provides any assistance necessary to the Member State for facilitating the process of completing and signing the IRCs.

It must be noted that out of the 14 notification exercises carried out in 2018, only 7 exercises included the full procedure of EMSA Vessel and/or EAS mobilisation. This was a result comparable to that achieved in previous years. EMSA Contractors reacted immediately and in line with standards set by EMSA. However, some Member States terminated the procedure prior to the signature of the IRC Form. It has to be stressed that the mobilisation of EMSA means is based on the signing of the Incident Response Contract and its annex the IRC Form. The contract contains important provisions related to the respective obligations of the Requesting Party and the Contractor. Exercises are a good opportunity to ensure that response authorities are made aware of all clauses of this contract. It has to be reiterated that for exercises signing the IRC does not trigger the payment of any fee by the Requesting Party.

³ EMSA's OPR services can be activated by the following Requesting Parties: EU Member States, EU Candidate Countries, European Free Trade Association (EFTA)/European Economic Area (EEA) coastal Member States, Third countries sharing a regional sea basin with the Union, Private Entities and/or the European Commission.

⁴ Incident Response Contract": This contract is to be concluded between the EMSA contractor and the Requesting Party. This pre-established model contract addresses the actual response operations. It covers the terms and conditions of the service and includes the associated daily hire rates. Following a request for assistance, EMSA will activate or even pre-mobilise the vessel / equipment to facilitate the operation. The command and control during an incident rests with the affected coastal State using the vessel / equipment.

A description of the notification exercises carried out in 2018 can be found in the table below.

Table 7 Notification exercises carried out in 2018

No.	Exercise name/date	Participating parties: MS / Service mobilised	Results
1	UK Shen / 27-28 Feb	UK, EMSA / Mersey Fisher, DC Vlaanderen, Interballast III, Norden / EAS Aberdeen net)	The procedure of signing the IRC-V and IRC-E was not fully completed. The exercise was stopped at the stage of delivery of signed contracts to the Member State requesting assistance. Time from the request of assistance to forwarding signed contracts to MS by EMSA contractor was 4 h 30 min. Time from acceptance of the assistance offer to initiation by EMSA of the IRC signature procedure was 2 h.
2	Adriatic 2018 / 22 May	Croatia, Slovenia, Montenegro, Sweden, The Netherlands, EMSA / Marisa N / EAS Ravenna (Trawl net)	Procedure of signing the IRC-V was fully completed. IRC-V was signed by both parties 5 h after submission assistance request in CECIS. Signature of the IRC-E took 4,5 h.
3	Atlantic Polex pt.2018 / 27 Jun	Portugal, EMSA / Mencey, Bahia Tres	The exercise lasted for around 4 hours. Within that time out of requested 2 vessels and 3 pieces of equipment (EAS) the full mobilisation procedure was completed only for 1 vessel. The mobilisation procedure for the remaining assets was initiated but not completed because of early termination of the exercise.
4	Breeze 2018 / 17 Jul	Bulgaria, EMSA / Galaxy Eco, Amalthia	Procedure of signing the IRC-V was fully completed. Requesting MS received the IRCs in 50 minutes from requesting assistance in CECIS. Time from request of assistance in CECIS (2 vessels) until MS signed the forms and sent them to EMSA contractors was 2h 07m. Contracts signed by EMSA contractors were returned to MS within 2 h 29 min.
5	BALEX DELTA 2018 / 22 March	Parties to the Helsinki Convention, EMSA / Mersey Fisher, DC Vlaanderen, Interballast III, Norden / EAS Gdansk (Trawl net)	The procedure of signing the IRC-V and IRC-E was not completed. Time from acceptance of assistance offer to IRC contracts forwarded to MS was 40 min. The exercise was terminated before signature of the contracts.
6	BALEX DELTA 2018 / 4 April	Parties to the Helsinki Convention, EMSA / Norden / EAS Gdansk (Trawl net)	The procedure of signing the IRC-V and IRC-E was not completed. Time from acceptance of assistance offer to IRC contracts forwarded to MRCC: 35 min (Norden), 30 min (Brush skimmer). The exercise was terminated before signature of the contracts.
7	BALEX DELTA 2018 / 10 Aug	Sweden and other Parties to the Helsinki Convention, EMSA / Norden / EAS Gdansk (Trawl net)	Procedures of signing the IRC-V and IRC-E were fully completed. Timing from the submission of the assistance request in CECIS was as follows: EMSA assistance offer placed in CECIS -1 h; Acceptance of the offer by the requesting MS - 3h; IRC-V signed by both Parties – 9 h; IRC-E signed by both Parties – 9 h 20 min.
8	Copenhagen Agreement Ex. 2018 / 12 Sept	Denmark, Parties to the Copenhagen Agreement, EMSA / Norden	The procedure of signing the IRC-V and IRC-E was not completed. EMSA reaction time was satisfactory. It took 2 h 29 min from sending the request through CECIS by the MS country to EMSA offer of assistance including 1 vessel and equipment from the EAS. MS didn't react to the assistance offer.
9	MALTEX 2018 / 02 Oct	Malta, EMSA / Balluta Bay, Santa Maria / EAS Ravenna (Current Buster)	Procedure of signing the IRC-V was fully completed. It took 1h 3m from the request in CECIS to EMSA's offer of assistance including 2 oil spill response vessels, dispersants and 1 equipment set from EAS. Reaction of MS was also very fast with all offers accepted in ~12 minutes. All IRC forms were sent, filled-in, signed and counter-signed in an average time of 1h 39m. The total time from the first information in CECIS until the last email with the IRC countersigned took 2h 57m.
10	DMS 18 / 04 Oct	Cyprus, EMSA / Alexandria	Procedure of signing the IRC-V was fully completed. Good reaction time of EMSA and EMSA contractor. The offer of assistance submitted within 1 h 30 min from the request. The IRC-V was signed by the MS and send to EMSA contractor around 7 hours from the request of assistance.

11	NEMESIS 2018 / 30 Oct	Cyprus, Greece, France, UK, USA, Israel, EMSA / Alexandria	Procedure of signing the IRC-V was fully completed. Time from submission of the assistance request by MS in CECIS to signature of the IRC-V by MS and EMSA contractor was 4h 34 min.
12	Tomassos / 13 Nov	Bulgaria, EMSA / Alexandria, Aktea	The procedure of signing the IRC-V was not completed. Due to the complicated procedure for providing assistance to 3 rd country (including consultations with the interested MS) the offer of assistance was provided with the significant delay of 9 h. EMSA contractors reacted timely and adequately.
13	Melnik-1 / 20 Nov	Israel, REMPEC, EMSA / Galaxy Eco	Procedure of signing the IRC-V was fully completed. Time from submission of the assistance request by MS in CECIS to signature of the IRC-V by MS and EMSA contractor was 2 h 35 min.
14	EU Pace / 21 Nov	Sweden, EMSA / Thames Fisher, DC Vlaanderen, Interballast III, Norden/ EAS Baltic	The procedures of signing the IRC-V and IRC-E were not completed. The exercise was terminated after submission by EMSA of the assistance offer in CECIS. The EMSA offer was submitted within 1 h from the request.
TOTAL		EXERCISES: 14 VESSELS: 27 EAS: 7 IRCs SIGNED BY EMSA CONTRACTORS: 11 (Vessels and EAS)	

4. MAR-ICE activations for drills and exercises

The MAR-ICE network of chemical experts was established in October 2008 between EMSA, Cefic (European Chemical Industry Council) and Cedre (Centre de Documentation de Recherche et d'expérimentation sur les pollutions accidentelles des eaux). It became fully operational in January 2009. In 2017, the MAR-ICE Cooperation Agreement was amended extending the service through 2022.

The MAR-ICE network offers a 24 hours service to EU Member States, Coastal EFTA States and EU Candidate Countries providing information, documentation and expert advice on chemicals involved in marine spills to national authorities in charge of response operations. The information provided is based on product specific characteristics and on advice from companies experts obtained through the ICE database.

In 2018, the network was activated for exercises on three occasions by Poland, Spain and Portugal. Details are presented in the table 7.

Table 8 MAR-ICE drills and exercises carried out in 2018

MAR-ICE DRILLS / EXERCISES				
1	4/4/2018	Poland, MSARS	- MAR-ICE Contact Form was used; - Exercise scenario involved the collision of an oil tanker with a container vessel; Product: 5 t of UN 1749 (Chlorine Trifluoride). Request focused on: potential danger to humans and the physical and chemical properties.	MAR-ICE Contact Point provided: - ERICARD, MSDS, extract from CANUTEC and CHEMINFO within 30 minutes of request, and - Prioritisation of hazards - CHEMMAP modelling was possible as the substance is not included. Instead, the simulation was run with HCL.
2	25/4/2018	Spain, SASEMAR, MRCC Madrid	- MAR-ICE Contact Form was used; - Exercise scenario involved a fire on board of vessel; - 2000 t Anilin (UN 2312) and 1000 t (1547 including spills of 1 t anilin and 1 t phenol. - Request focused on: physical and chemical properties; needed PPE and drift simulation.	MAR-ICE Contact Point provided: - datasheets from MAR-CIS and HNS MS provided within 30 minutes; - Spill modelling provided: CHEMMAP provided within 90 minutes.
3	8/5/2018	Portugal, DPCM	- MAR-ICE Contact Form was used; - Scenario: collision and release of Release of 10000t CAS 141-32-2 (Butyl Acrylate).	MAR-ICE Contact Point provided: - MAR-CIS datasheet (within 30 minutes); - Substance trajectory and fate modelling; (CHEMMAP model was run & info about gas drifting/trajectory, mass balance and dissolved and atmospheric concentrations were provided).

In all exercises, the communication between the requesters and the MAR-ICE Contact Point went well and the requested information was provided well within the established timelines.

5. Conclusions / Highlights

- In general the outcome of the oil pollution drills, ECTs and exercises carried out during 2018 demonstrated that the service is operationally ready in accordance with EMSA requirements. There were 2 exceptions: disruption of service in the region of Canary Islands and Madeira and in the Adriatic Sea due to a vessel technical failure. These events could be neither envisaged nor prevented;
- The evaluation of oil pollution drills, ECTs and exercises, either based on assessment by EMSA staff or on the contractors' reports, as well as feedback from the Member States is providing lessons learned with regard to the technical condition of the equipment and performance of the crew/staff. Lessons learned in 2018 allowed determining actions aiming at the improvement of EMSA pollution response services including pollution response capacity improvements, equipment overhauling or replacement, crew/staff performance parameters improvement, as well as the improvements/updates of the service mobilisation procedures;
- Checking the technical status and completeness of the oil pollution response equipment on board the vessels and the EAS stockpiles is an important element of each drill / ECT and exercise attended by EMSA observers. Both vessels and EAS contracts provide for a mandatory reporting of incidents/malfunctions. Besides this, EMSA conducts annual verification of all equipment. In order to improve the collection of data, in 2018 EMSA has developed and implemented a new incident report form which allows better monitoring of equipment incidents.
- Identification during drills ECTs and exercises of the most frequent technical problems leads to prevention of failures during actual pollution response and also helps the acceptance process for equipment arrangements in the framework of the vessel tenders and improvement projects. For both services, Vessel Network and EAS, the number of equipment technical issues dropped down from 84 in 2016 to 27 in 2018. Significant decrease of the total number of the equipment technical issues is related to a successful programme of the equipment overhauling and replacement (in line with the equipment policy of the Agency) as well as to increased focus on the equipment maintenance and improvement of skills of personnel deploying EAS equipment.
- Participation of Member States representatives in vessel drills, ECTs and exercises makes them more familiar with the operational capabilities of the Vessel Network and EAS equipment sets. In 2019, EMSA will continue promoting this approach in order to enhance the integration of EMSA's pollution response services in the Member States response mechanisms;
- The use by MS of EMSA vessels and full equipment potential during the exercises is currently limited. During many exercises EMSA vessels are tasked only with deployment of the sweeping arms system. Parties organising exercises could consider use of the wider scope of EMSA services (e.g. involvement of other equipment options including dispersants and EAS). In order to address these issue EMSA developed a "Quick Guide on EMSA Services in Exercises"- a brochure with practical information on the use of EMSA services during oil or chemical spill response exercises, including a short description of each service, of any associated implications or costs for the MS and information on how to request the service for exercises;
- Recently, the Agency reviewed the internal procedure for the exercise co-ordination putting more importance to the exercise assessment and including EMSA feedback to the exercise organiser. In 2018 EMSA implemented the reviewed procedure especially focusing on the requesting and analysing feedback from the Member States regarding the performance of the EMSA services provided during exercises. Having a proper and structured de-briefing between EMSA and the exercise-coordinating MS after each exercise where EMSA's services are activated or requested, could be a good way forward. To this effect, the existing Exercise Evaluation Forms (one for EMSA and one for the MS to fill-in) should potentially be used;

- EAS is intended to be used on board of the Vessels of Opportunity (non-dedicated pollution response vessels (VOO)). Pollution response potential of the EAS depends directly on the availability of such vessels. The Agency is taking an effort to collect information from Member States on the available VOO in Europe. One of the aims of this data collection is to involve VOO in future exercises with EAS;
- Considering the positive feedback from MS, EMSA will continue in 2019 with the EAS training programme with dedicated training sessions on equipment deployment and operation for equipment operators from the Member States;
- Increase of the number of activations of MAR-ICE for drills and exercises would be beneficial for the MS preparedness to HNS incidents. Some Member States are quite used to this service whereas many others never tried it for exercising.

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