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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

**Mid-term evaluation of Regulation (EU) No 911/2014 on multiannual funding for the
action of the European Maritime Safety Agency in the field of response to marine
pollution caused by ships and oil and gas installations**

{SWD(2018) 394 final}

INTRODUCTION

In accordance with Regulation (EU) No 911/2014¹, article 7, the Commission has to report to the European Parliament and the Council on the implementation of the Regulation and to carry out a mid-term evaluation of the European Maritime Safety Agency's (EMSA) measures to respond to marine pollution caused by ships and oil and gas installations.

The report and its annex present the results of the use of the Union contribution as well as an evaluation of the Agency's ability to fulfil its responsibilities in an effective and cost-efficient manner.

These results will be useful for the Commission and the Administrative Board of EMSA to discuss any relevant reorientation regarding the allocation of resources and the activities within the annual and multiannual programming exercise of the Agency.

BACKGROUND

The marine environment, coasts and citizens have been affected by major oil spills in the past. Tankers such as the *Torrey Canyon* (1967), *Amoco Cadiz* (1978), *Erika* (1999) and *Prestige* (2002) resulted in environmental disasters. *Deepwater Horizon* (2010) in the Gulf of Mexico highlighted the major risks that are also associated with oil and gas installations and exploratory drilling. The raised awareness of the socio-economic and environmental impacts of oil spills² has promoted a significant evolution over time of preparedness and response structures in Member States and industry.

In the aftermath of the *Prestige* disaster, which highlighted the existing shortage of at sea oil recovery capacity in Europe at the time, there was a decision to take action at EU level by setting up a top-up capacity to help coastal States around Europe to respond quickly, effectively and efficiently to a major oil spill. The European Maritime Safety Agency was mandated in 2004 to provide this top-up capacity to Member States. It should not substitute national capacities (either at national level or at regional level) but provide the necessary additional capacities in case of a major incident.

Following the *Deepwater Horizon* disaster involving an offshore oil drilling rig, the same logic was applied that EMSA could intervene in case of major incident not replacing the prime responsibility of the oil and gas industry to have its own response means.

In recent years, there has not been any such major disaster in EU waters mainly as a result of the progress made in terms of prevention and safety levels being a joint effort of private stakeholders, national maritime administrations, international regulation and EU policy. The development and effective implementation of the EU maritime safety acquis, allowing uniform enforcement of strict standards was a game changer regarding potential oil spills and marine pollution in EU waters.

¹ Regulation (EU) No 911/2014 of the European Parliament and of the Council of 23 July 2014 on multiannual funding for the action of the European Maritime Safety Agency in the field of response to marine pollution caused by ships and oil and gas installations (OJ L 257, 28.8.2014)

² As an example, the study published by Fundación Barrié de la Maza on the impact of the *Prestige* spill in 2003 estimated the coastal clean-up operation as costing around €2.5 billion, with around €2.2 billion spent during the first two years. The total economic damage over ten years was estimated by various authors (Professional Economist Associations of Galicia) at around €5 billion.

However, several incidents illustrated the relevance of maintaining a diverse and effective oil spill response capability, such as the sinking of the *Agia Zoni II* tanker in Greek waters in September 2017. There is also evidence regarding continued risks associated to oil transport and offshore oil and gas activities, with the continued increase in the volume of seaborne transport and the expansion of exploratory drilling and extraction.

EMSA POLLUTION RESPONSE ACTIVITIES

According to its founding Regulation³, EMSA is tasked to:

- Support on request with additional means in a cost efficient way the pollution response mechanisms of Member States;
- Provide Member States and the Commission with technical and scientific assistance in the field of marine pollution from ships and oil and gas installations.

Oil pollution response services

The network of EMSA stand-by oil spill response vessels has been built up and maintained through annual procurement procedures starting in 2005. This service is based on the long term chartering of commercial vessels, which are adapted to become occasional oil spill response vessels. When they are not required to respond to a spill, they undertake their normal commercial activities provided that they remain within a 24 hours radius allowing them to intervene quickly in case of an emergency. The service supplements the resources and arrangements that have already been set up at national and regional levels.

Following the extension of its mandate in 2013 to respond to pollution from oil and gas installations, the Agency upgraded the response capacity of its fleet of vessels. This was done mainly by adding some dispersant spraying capacities on some arrangements in areas where this response technique is accepted by the coastal States or by improving the capacity of the vessels to deal with vaporous and explosive atmospheres⁴. EMSA made available dispersant stockpiles and seaborne dispersant application systems, which are intended primarily for use in the event of major pollution events originating from oil and gas installations, but may also be deployed in the case of ship-sourced pollution.

Another evolution of the Agency's response capacity has been the implementation of the Equipment Assistance Service programme. This programme aimed to make EMSA's pollution response toolbox more diverse through the provision of specialised stand-alone equipment. As of 2016, two stockpiles of such equipment have been established in the North Sea and the Baltic Sea.

At the end of 2016, EMSA's oil pollution response capability comprised the following arrangements:

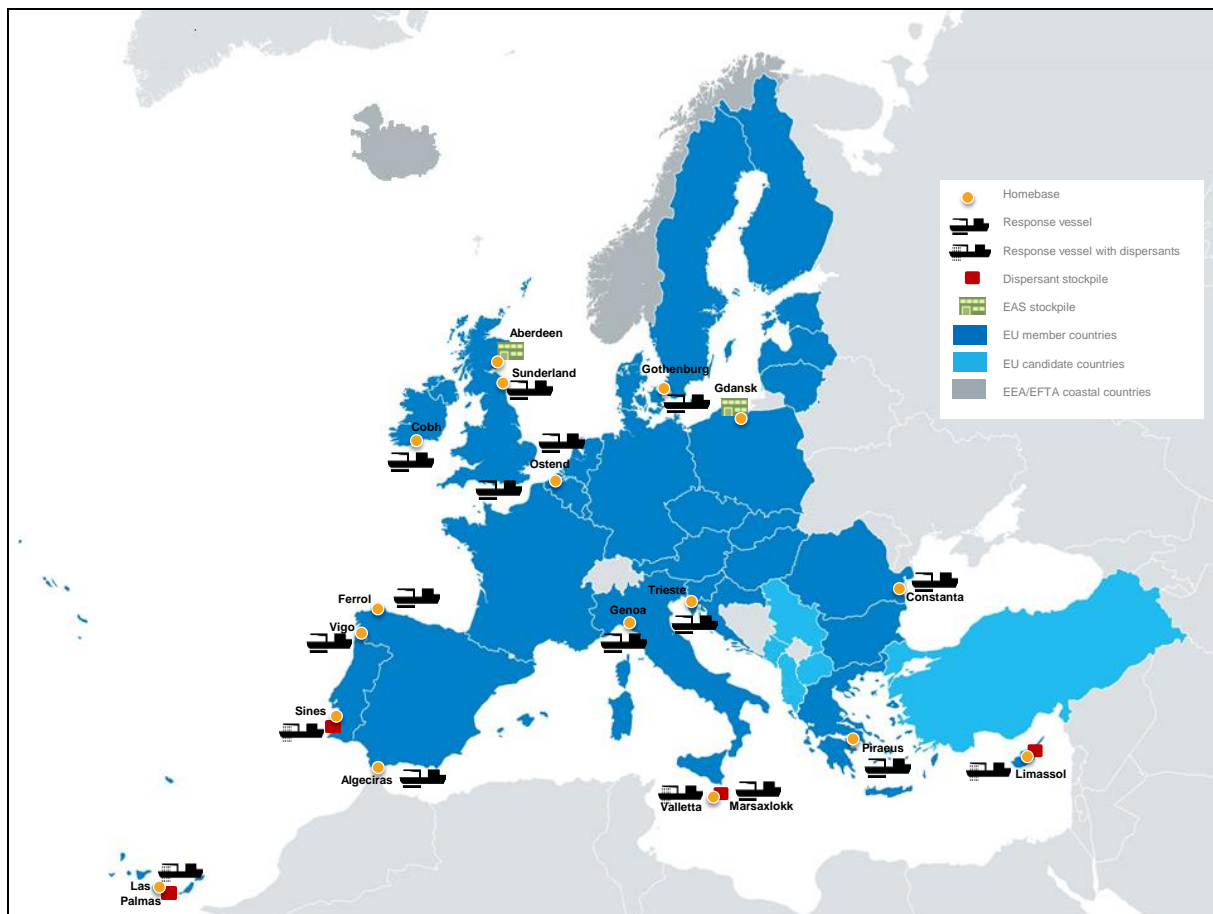
- 17 fully equipped stand-by oil spill response vessels for mechanical recovery of oil, 4 of which equipped in addition with dispersant spraying capability;
- 4 dispersant stockpiles;
- 2 Equipment Assistance Service stockpiles.

³ Regulation (EU) No 100/2013, amending the Agency's Founding Regulation (EC) No 1406/2002 establishing a European Maritime Safety Agency (OJ L 39, 9.2.2013)

⁴ Fresh and continued releases of oil from offshore installations create vaporous and explosive atmospheres. In order to be able to intervene near the source of the spill, ships and equipment need to be adapted to deal with a flashpoint below 60° and to avoid creating a hazard.

The distribution of EMSA's pollution response arrangements at the end of 2016 is shown in Figure 1.

Figure 1: Distribution of EMSA's pollution response arrangements in European waters at the end of 2016



source: EMSA

CleanSeaNet

Further to oil spills resulting from accidents, illegal, either incidental or deliberate, discharges of oil (and other substances) in the marine environment is a major source of marine pollution which is less visible but not less damageable. With the adoption of Directive (EC) No 35/2005 on ship-sourced pollution⁵, the task of detecting spills including illegal discharges at sea was incorporated into EMSA's activities as part of the response capability of the Agency. As a result, the satellite based oil spill detection and monitoring service CleanSeaNet was established in 2007.

When a possible oil spill is detected in national waters, an alert message is delivered to the relevant country. In cases of high alert level spills, EMSA Maritime Support Service may call the coastal State to ensure that the alert has been received and to offer additional support. Analysed images are available to national contact points in near real time, in less than 30 minutes after the satellite acquires the image. The service includes the identification of potential polluters by combining the image taken by the satellite with vessel traffic

⁵ Directive 2009/123/EC of 21 October 2009 amending Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements (OJ L280, 27/10/09)

information. After receiving the enriched information the national authority then decides on the appropriate operational response, for example, sending an asset such as an aircraft to check the area and verify the spill, or requesting an inspection of the vessel in the next port of call.

Activities with regard to hazardous and noxious substances

Regarding chemical pollution from ships, the need to address the risks associated with this type of pollution led to consultations with the Member States and the Commission and the decision that EMSA's intervention should focus on the rapid provision of expert information and advice on chemical substances during an emergency to support any requesting party's decision making process. The main challenge faced by responders when facing a chemical incident is indeed access to cargo data and emergency response specialized advice, including short risk assessment as chemicals beside being transported in bulk are transported in parcels and substances may interact when in contact.

PURPOSE OF REGULATION (EU) NO 911/2014

To support this set of marine pollution response actions, the Commission recognised that the Agency should be able to enter into long term financial commitments in order to offer adequate and sustainable operational support to the Commission and the Member States, using services provided by industry. Therefore, in 2005, the Commission proposed⁶ the creation of a multi-annual financial framework for the pollution response activities of the Agency. The first financial envelope for the period 2007-2013 was €154 million. The envelope for the current period 2014-2020 is €160.5 million, slightly more in order to cater for the extension of the mandate covering oil and gas installations.

The multiannual perspective set out in Regulation (EU) No 911/2014 aimed at providing legal certainty and a stable framework to allow the Agency to conclude multiannual contracts with the industry both in relation to stand-by oil-spill response vessels and for organising CleanSeaNet.

RESULTS OF THE MID-TERM EVALUATION

The analysis carried out by the Commission and supported by an external study⁷ has shown that, in line with its mandate to top-up Member States' capacities, and also taking into account the industry resources, EMSA has focussed on activities that were complementing the existing resources whilst being cost-efficient. In the specific case of risks associated to oil and gas installations, with potentially larger quantity and prolonged release of spilled oil⁸, the Agency was able to adapt its response capacity to the needs of such spills.

It should still be pointed out that the analysis has been limited by the difficulty to assess the effectiveness, efficiency, relevance and added-value of a capacity which is essentially a cover in case of major oil spill and for that reason is not activated as long as there is no such major incident.

⁶ COM(2005) 210 final/2: *Proposal for a Regulation of the European Parliament and of the Council on a multiannual funding for the action of the European Maritime Safety Agency in the field of response to pollution caused by ships and amending Regulation (EC) No 1406/2002.*

⁷ Study on the cost-effectiveness and efficiency of EMSA's oil pollution response services, Final report intended for the European Maritime Safety Agency, Contract EMSA/NEG/08/2016, April 2017.

⁸ As a comparison, *Deepwater Horizon* generated a spill of 800,000 tons of oil compared to 20,000 tons for the *Erika* and 64,000 tons for the *Prestige* accidents.

With regard to evaluating the socio-economic and ecological impact of EMSA’s action at European level, the assessment of the amount of socio-economic and ecological damage that can be avoided thanks to EMSA’s response services should be considered with utmost caution as past cases show that there is a considerable discrepancy between estimated damages and damages actually assessed and compensated⁹.

Oil pollution response services

Given the significant financing envelope allocated to the Network of Standby Oil Spill Response Vessels, which represent the larger part of EMSA pollution response budget, a particular effort was made to analyse the efficiency of that capability. The attempts made to assess the cost-effectiveness of the existing model of chartered vessels suggest that EMSA’s oil pollution response activities would be cost effective when compared to the economic consequences that would result from the absence of capacity on its part to adequately deal with an oil spill and prevent it from reaching the shoreline¹⁰. Furthermore it can be concluded that EMSA fulfils the requirements of its mandate within (and up to) the budget allocated to it for this purpose in a cost-efficient manner. This conclusion is based on the fact that the level of service currently provided by EMSA could not be replicated at lower cost using any feasible alternative model as described in the external study.

This conclusion is supported by the various evaluations of EMSA activities in this field as well as by stakeholder feedback. The added (operational) value of such a framework has been confirmed. The technical specifications of the at-sea oil recovery service provided through the Network of Standby Oil Spill Response Vessels have been recognised as being fit for purpose.

The following tables show how EMSA capability top up the capacity of the national capacities. According to its mandate, EMSA has focused on assets designed for spills of a significant amount, an investment that Member States could not have achieved at national level.

Table 1: Member States’ and EMSA’s oil pollution response vessels

| Storage Capacity | Number of vessels | | Storage capacity (m ³) | |
|--|-----------------------------|------|------------------------------------|--------|
| | Member States and EFTA (MS) | EMSA | MS | EMSA |
| < 200 m ³ | 172 | 0 | 8,861 | 0 |
| 200 m ³ - 700 m ³ | 56 | 0 | 17,311 | 0 |
| 700 m ³ - 1500 m ³ | 23 | 1 | 24,935 | 997 |
| > 1500 m ³ | 19 | 17 | 70,553 | 62,475 |

In accordance with its mandate, EMSA has contracted oil recovery vessels with large storage capacity thus ensuring less frequent need for port calls to offload recovered oil thereby optimising the at-sea recovery periods. In other words, the Agency’s 17 vessels nearly equal the storage capacity of all Member States vessels of comparable capacity.

⁹ In the *Erika* incident for instance, the overall damage resulting from the incident was estimated in various studies to € 1,370 million whereas, based on the compensation paid, the overall recognised damages are in the range of € 322.5 million.

¹⁰ In comparison to the average cost per tonne of oil recovered on-shore of € 5,744 (based on the data available on historical costs), the total costs per tonne when using of EMSA at-sea-recovery vessels is € 287- 681 / tonne, so between 20 to 8 times lower.

Table 2: Member States' and EMSA's oil pollution response equipment

| | Quantity | |
|----------------------------------|---------------|------|
| | Member States | EMSA |
| Containment and Recovery Systems | 16 | 12 |
| Weir Booms | 2 | 2 |
| Fire Booms | 1 | 8 |
| Sweeping arms | 12 | 19 |
| Dispersant (tonnes) | ~ 3,500 | 800 |

Importantly, the evaluation support study has also shown that the existence of EMSA's oil pollution response services topping up national and private resources does not seem to be having an adverse impact on the level of preparedness of the EU Member States and EFTA countries. This has remained stable over the period analysed, and appears set to follow the same trend looking ahead towards 2020.

CleanSeaNet

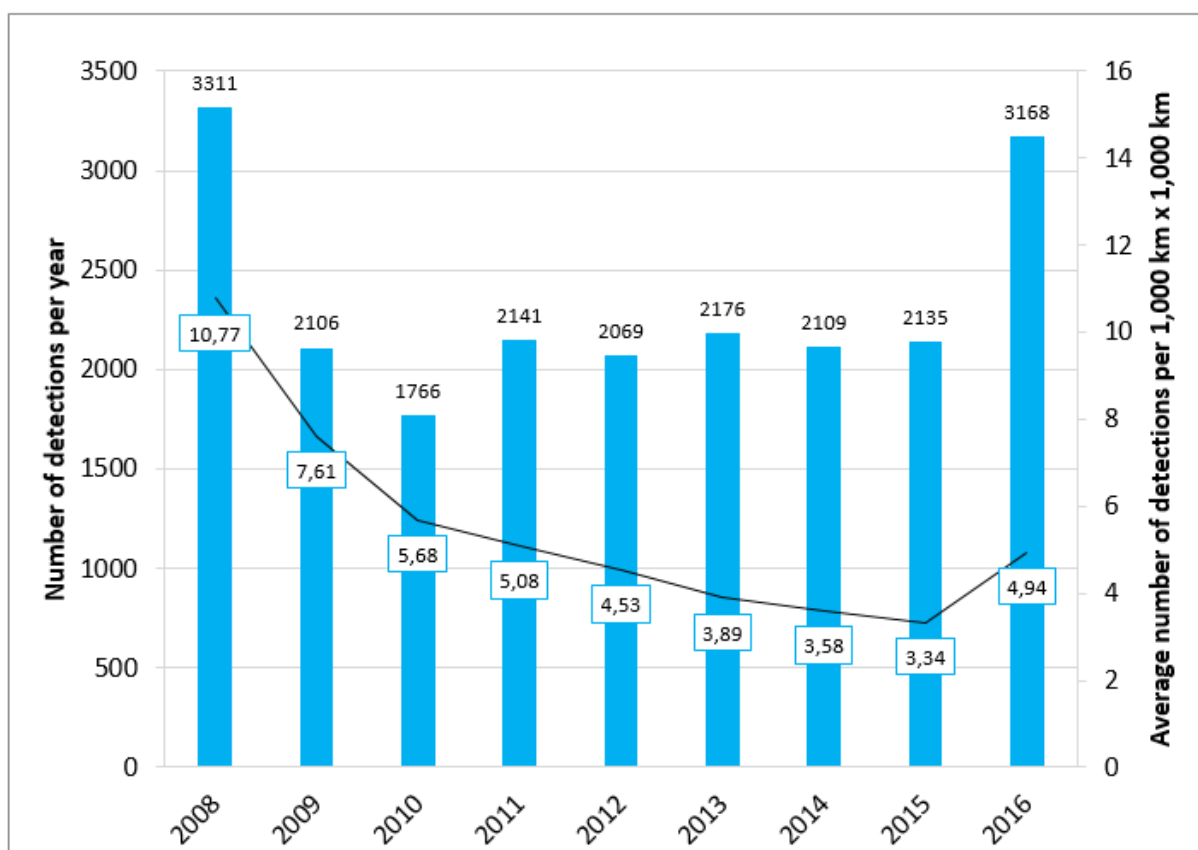
As for the satellite based oil spill detection service CleanSeaNet, the evaluation concludes that it is relevant and provides a useful tool for Member States. It is best situated at EU level, covering all European marine waters and beyond, and providing much added-value. It ensures a uniform assessment and overview of discharge trends and the deterrent effect of the spill monitoring programme. It is relevant towards the needs and current trends given the continued level of deliberate discharge or incidental spill in EU waters. Furthermore, coupled with the implementation of the earth observation Copernicus programme, it is in coherence with a broad portfolio of other EU policies in relation to maritime surveillance.

The use of European Space Agency managed satellites has brought considerable cost reductions to the service as licenses are available free of charge. Over the period 2014-2016, the costs of the service per 1,000 km² monitored decreased approximately by 22%. From the second half of 2016, EMSA has been ordering proportionally more Sentinel-1 Earth Observation products, and this is due to increase further in the coming years. By using Sentinel 1-A and 1-B, the CleanSeaNet service can provide improved satellite coverage, while simultaneously reducing the costs of the service.

Regarding the impact of the CleanSeaNet service in terms of deterrent effect, the overall trend over most of the past decade, as illustrated in figure 2, has been a year-on-year reduction in the number of possible spills detected per million km² monitored. The marked decrease per year in the period 2008-2010 coincided with the economic downturn as well as an increase in awareness of maritime pollution related issues and an improvement in the provision of port reception facilities across the continent while the decrease in the period 2010-2015 is more gradual.

In 2016, the trend reversed, with an increase in the number of possible spills detected. There are a number of possible reasons why the trend may have reversed in 2016: the introduction of the Sentinel-1 satellites, which resulted in improved detection capabilities, the optimisation of CleanSeaNet planning, and, to a lesser extent, an increase in shipping volume which could have caused the increase in detections.

Figure 2: CleanSeaNet 2008 – 2016: trends in possible pollution detected



Source: EMSA

Activities with regard to hazardous and noxious substances

For the activities related to hazardous and noxious substances, which represent a minor part of the use of the Union contribution, the evaluation concludes that although less known to the public, these activities, mostly focused on the providing of expert information to deal with a chemical emergency, are relevant and considered valuable by the Member States. On average, the latter activate the EMSA expert service five times a year.

CONCLUSIONS

Overall, the mid-term evaluation concludes that EMSA has established and maintains a comprehensive pollution detection, preparedness and response program in line with its mandate to top-up EU/EFTA coastal Member States capacities to respond to large-scale incidents. EMSA's pollution response activities have added value, and are still relevant today and coherent with preventive approaches at EU level and other EU policies, such as civil protection policy. For the latter, one area for improvement has been identified with a view to offer enhanced support to Member States in case of emergency, that is the possibility to facilitate the financing pollution response equipment transportation costs through the EU Civil Protection Mechanism¹¹.

¹¹ Decision No 1313/2013/EU

EMSA's pollution response activities certainly contribute to a better protection of the marine environment, coasts and citizens than before these measures were established. Within the given financial envelope laid out in Regulation (EU) 911/2014, the Agency was able to adapt its strategy by exploiting synergies and prioritising activities in order to cater for the extension of the mandate to cover potential spills from oil and gas installations.

Notwithstanding these positive results, EMSA will launch a further risk assessment exercise in 2018-2019, as recommended by its Administrative Board. The Agency will work with regional and national authorities to carry out a sort of stress test of existing capacities, in order to identify any longer term evolution needs regarding response options. For the future, the last revision of EMSA's mandate¹² to foster the cooperation on Coast Guard functions with the European Border and Coast Guard Agency (Frontex) and the European Fisheries Control Agency may have an impact of the implementation of EMSA's activities for pollution response. The cooperation calls in particular for exploring the possible sharing of assets. EMSA has experienced the use of several types of ships for delivering its mandate. In the context of multi-missions operations, EMSA could contribute by providing some multi-purposes vessels capable of carrying out coast guard, fisheries control and oil pollution response functions for shared use among EMSA and competent authorities.

Finally, regarding the Regulation itself ((EU) 911/2014) which indicated the available multi-annual financial envelope over the period 2014-2020 and will expire after that date, it has proven to be a useful tool for enabling the Agency to implement its activities in the field of pollution preparedness and response. The complex nature of some of these activities, combined with the need to have multi-annual contracts with industry, created the initial need for legal certainty and a longer-term financial outlook. The Regulation has allowed the Agency to benefit from one-off investments in pre-fittings vessels for oil recovery services and to create economies of scale for satellite-based services.

However, with the maturity of the activities and notably the experience gained now with the procurement process for the multi-annual contracts, the need for such a separate financial Regulation (and a separate budget line) under the next Multiannual Financial Framework (2020-2027) does not appear as essential to ensure the sustainability of the operational services.

The budget to continue financing these activities, taking into account the current and future budgetary constraints, will remain an integral part of the annual Union subsidy. The legal basis for the action is provided by the overall mandate of EMSA and the exact scope of the activities is defined through the related Action Plans and the Agency's work programme. This ensures a continuity of EMSA measures to respond to marine pollution caused by ships and oil and gas installations.

¹² Regulation (EU) 2016/1625, OJ L 251/77