

Consolidated Annual Activity Report 2016

EUROPEAN MARITIME SAFETY AGENCY (EMSA)

Adopted by the EMSA Administrative Board on 31 May 2017

CONTENTS

EMSA Administrative Board's Assessment	4
Introduction	10
The Agency in brief.....	11
The Year in brief.....	12
PART I – Achievements of the year	18
List of EMSA Activities.....	18
Maritime Transport and Surveillance - information on ships, cargoes and ship movements	20
2.1 THE UNION MARITIME INFORMATION AND EXCHANGE SYSTEM	20
a. Integrated maritime services.....	21
b. SafeSeaNet	24
c. Improving internal market and maritime transport efficiency.....	26
2.2 EU LONG RANGE IDENTIFICATION AND TRACKING (LRIT) COOPERATIVE DATA CENTRE (CDC) AND LRIT INTERNATIONAL DATA EXCHANGE (IDE).....	28
2.3 THETIS.....	30
a. THETIS and associated modules	31
b. THETIS-MRV.....	33
c. Emission inventories.....	34
2.4 MARITIME SUPPORT SERVICES.....	36
Project: COPERNICUS MARITIME SURVEILLANCE SERVICE	38
Project: FRONTEX	40
Project: Interagency cooperation with Frontex and EFCA on national Coast Guard functions	42
Visits and inspections to monitor the implementation of EU legislation	44
3.1 CLASSIFICATION SOCIETIES	44
3.2 STCW	46
3.3 IMPLEMENTATION OF THE PSC DIRECTIVE	48
3.4 MARITIME SECURITY	50
3.5 MONITORING IMPLEMENTATION OF OTHER EU MARITIME LEGISLATION	52
3.6 HORIZONTAL ANALYSIS AND RESEARCH.....	54
Providing Member States and the Commission with technical and scientific assistance and facilitating technical cooperation between Member States' Maritime Authorities and with the Commission. 56	56
4.1 PORT STATE CONTROL.....	56
4.2 ACCIDENT INVESTIGATION.....	58
4.3 TECHNICAL ASSISTANCE (TRAINING AND COOPERATION)	61
4.4 MARINE EQUIPMENT AND SHIP SAFETY STANDARDS.....	63
4.5 MARITIME INFORMATION, EQUASIS AND STATISTICS	65
4.6 PREVENTION OF POLLUTION BY SHIPS.....	67
Project: SAFEMED III	71
Project: TRACECA II	73
Pollution preparedness, detection and response	75
5.1 OPERATIONAL POLLUTION RESPONSE SERVICES	75
5.2 EARTH OBSERVATION: CLEANSEANET AND ILLEGAL DISCHARGES.....	78
5.3 COOPERATION & INFORMATION RELATING TO POLLUTION PREPAREDNESS & RESPONSE	81
Horizontal activities	84
6.5 COMMUNICATION, DOCUMENT MANAGEMENT, MISSIONS AND EVENTS SUPPORT	84
6.1, 6.2, 6.3 AND 6.4 OVERHEAD/HORIZONTAL TASKS	86

Part II – Management	92
2.1 Administrative Board	92
2.2 Major events.....	94
2.3 Budgetary and financial management.....	96
2.4 Human Resources management.....	97
2.5 Assessment by management	98
2.6 Budget implementation tasks entrusted to other services and entities	98
2.7 Assessment of audit results during the reporting year.....	99
2.7.1 IAS.....	99
2.7.2 ECA	100
2.8 Follow up of audits plans, audits and recommendations	100
2.9 Follow up of observations from the Discharge authority.....	100
Part II (b) External Evaluations	102
Part III Assessment of the effectiveness of the internal control systems	103
3.1 Risk Management	103
3.2. Compliance and effectiveness of Internal Control Standards	103
Part IV Management assurance	105
4.1 Review of the elements supporting assurance	105
4.2 Reservations	106
4.3 Overall conclusion on assurance	106
Part V Declarations of assurance	107
Annexes	109
Annex I. Core business statistics	109
EMSA Key Performance Indicators 2016	109
Operational Agreements active in 2016.....	118
Annex II. Statistics on financial management	121
Evolution of budget execution.....	121
Negotiated procedures	122
Annex III. Organisational chart	123
Annex IV. Establishment plan and additional information on Human Resources management	124
Establishment plan 2016	124
Entry level for type of post	125
Results of the screening exercise.....	126
Annex V. Human and financial resources by activity	127
Annex VI. Specific annexes related to Part II – Management	129
Annex VII. Specific annexes related to Part III - Assessment of the effectiveness of the internal control systems	130
Annex VIII. Annual accounts	131
Economic outturn account	131
Balance sheet.....	132
Annex IX. EMSA’s report on the multi-annual funding of the Agency’s pollution preparedness and response as laid down in Regulation (EU) No 911/2014.	133



EMSA Consolidated Annual Activity Report 2016

Assessment by the EMSA Administrative Board

The Administrative Board's assessment covers three main areas: strategic achievements, operational achievements and the management of the Agency. The assessment takes into account the relevant legal, strategic, and resource framework, as well the applicable annual work programme.

The Administrative Board appreciates the structure of the Consolidated Annual Activity Report 2016. Each activity is clearly linked to its legal basis and placed in strategic context through references to the relevant articles of the EMSA Founding Regulation and to the relevant objectives of the EMSA 5-year Strategy. This demonstrates the consistency of the annual activities with the tasks assigned by the legislator and the strategic outlook adopted by the Administrative Board. Furthermore, the allocation of budget and staff to each activity clarifies relative impact on resources.

The side-by-side representation of planned and actual output for each activity allows for comparison of objectives and results and assessment of the implementation of the Work Programme 2016.

a) Strategic achievements

In its assessment of the achievements of 2015, the Administrative Board welcomed the policy and legislative developments related to coastguard cooperation and functions, and looked forward to the possible implications for EMSA:

"The Administrative Board welcomes the fact that the existing capabilities, expertise and potential of the Agency, along with Frontex and EFCA, is acknowledged throughout the Commission legislative proposal issued in December 2015 for reinforcing European co-operation on the coastguard functions. Pending the positive outcome of the legislative process, the package would complement the existing activities and resources, increasing the critical mass of information and improving the maritime picture for everyone and allowing for benefits also in areas of maritime safety and prevention of pollution."

On the basis of this strong signal from the Administrative Board; of the European Parliament pilot project launched in 2016 to explore and further develop synergies between the three agencies to enhance cooperation on coastguard functions; and in view of the complementarities and synergies driving the initiative, the Agency started in 2016 to anticipate the potential extension of activities, which was in fact confirmed by the close of the year with the adoption of Regulation (EU) No. 2016/1625 amending Regulation (EC) No. 1406/2002.

Because EMSA's core tasks relate directly to six coast guard functions – Ship casualty and maritime assistance service; Maritime, ship and port security; Maritime monitoring and surveillance; Maritimes safety and vessel traffic management; Maritime environmental protection; and Maritime accident and disaster response – and Agency activities also contribute to five more – Maritime search and rescue; Maritime border control; Prevention and suppression of trafficking and smuggling and maritime law enforcement; Maritime customs activities; and Fisheries inspection control – the process of anticipating the legislative proposal was

and continues to be incremental, in the sense of extending existing activities not starting new ones, and comprehensive, in the sense of engaging all the Agency's activities not just one or two.

As hoped, together with the increasing demand for more efficient solutions for reporting and exchange of information, the additional tasks and the formalisation of the Agency's role for coastguard functions, is paving the way for very significant developments which are likely to pan out in the coming years in terms of the depth and breadth of the Agency's information services, the range of its capacity building services, and the landscape of maritime functions benefitting from them, with expected added value for maritime safety, security and pollution prevention and response in accordance with the agency's tasks and know-how.

At the close of 2016, three years into the EMSA 5-year Strategy (2014-2018), the Agency has significantly advanced its potential to fulfil the four driving ambitions:

Standards, Rules and Implementation: EMSA shall be a leading technical partner in cooperation with Member States for the development and implementation of EU safety standards and regulations in the maritime sector.

2016 was the first year of implementation of the Methodology for Visits to Member States, with the first pre-cycle workshop ahead of the new cycle of visits related to the Sulphur Directive. This opens a new chapter in the contribution of the Agency to the development and implementation of EU standards and regulations in the maritime sector, in terms of the potential for reducing the administrative burden to Member States, developing and sharing best-practices and lessons learnt, and strengthening the flow and exchange of information.

Efforts to maximise the value added to both Member States and the Commission of future EMSA visits continued in 2016 with the initiative to integrate cost-efficiency assessment into the horizontal analyses related to cycles of visits to Member States. A proposed methodology was successfully piloted on a mature directive (Port State Control) and will be integrated from the beginning of the forthcoming new cycles of visits.

These collaborative efforts demonstrate and further enhance the technical partnership between the Agency and the Member States. Furthermore, the Quality Management System for Visits and Inspections, developed in 2016 and certified at the close of the year, will reinforce this technical partnership by guaranteeing high standards in terms of the reliability of information and providing a framework for continual improvement.

The work on fire safety introduced an innovative approach, associating experts from accident investigation bodies and maritime administrations, with promising outcomes also for future analyses and development of ship safety standards.

Monitoring, Surveillance and Information sharing: EMSA shall aim to become a major provider of reliable and efficient information services for the benefit of the EU maritime cluster and, where appropriate, for the use of other communities.

The process of enriching and tailoring the maritime picture made available by EMSA to its key stakeholders continued in 2016, with the integration of new data and functionalities, and EMSA's Integrated Maritime Services were delivered to more users exercising an ever wider range of maritime functions. Efforts to support the digitalisation of maritime transport continued in 2016 with substantial progress in facilitating data exchange between relevant maritime stakeholders.

The first operational services under the Copernicus maritime surveillance project were rolled out, marking the beginning of a synergy that will sustain and boost the Agency's earth observation products and services for the years to come.

Preparations for the development and procurement of RPAS services were undertaken and will in future add to the data that the Agency can make available across its systems and for different users, from supporting the implementation of standards and rules in the environmental field and contributing to pollution prevention, to enriching the maritime picture for a range of functions in law enforcement, border and fisheries control, search and rescue and pollution response.

Environmental challenges and response: EMSA shall aim to become the main EU resource to support Member States' efforts for mitigating shipping-related environmental risks and responding to environmental accidents in the maritime and offshore sector.

The meeting of the "standards, rules and implementation" and the "environmental" volets of EMSA's tasks was signalled by the THETIS-EU and forthcoming THETIS MRV modules. These very concrete tools, addressing respectively the Sulphur and PRF directives (since 2015 and 2016), and the MRV regulation (under development since 2016), build on the original THETIS platform developed to support the implementation of the PSC Directive. The modules support the work of the Member States in the enforcement and implementation of EU legislation and standards for mitigating shipping related environmental risks.

As the developer and provider of tools and services to directly support Member State environmental enforcement effort and the expert support to the Commission at the IMO, EMSA is poised for a lead role in this sector in the future, supporting Member State efforts to implement EU and International maritime environmental legislation.

In parallel, the EMSA portfolio of services to respond to oil pollution caused by oil and gas installations was enriched with a new service, the Equipment Assistance Service, through which EMSA makes specialised stand-alone equipment available to Vessels of Opportunity.

Information, knowledge and training: EMSA shall aim to become one of the foremost knowledge providers within the maritime cluster.

By the end of 2016, the continuation of capacity building activities in neighbouring countries around the Mediterranean and the Black and Caspian seas was assured until 2021, building on the SAFEMED III and TRACECA II projects expiring in 2017 and 2016 respectively. These activities aim to contribute to the approximation of standards in maritime safety, security and increasingly also pollution prevention and response. This is a crucial element in the overall success of the EU's vision for its seas.

EMSA's function in this area - in relation to Member States, to candidate and potential candidate countries and to neighbouring countries sharing EU sea basins - has evolved with experience from a classical training function to a more innovative, collaborative, and flexible capacity building service that can be specialised and tailor-made and relies increasingly on e-learning. The mapping of the specific needs of users performing coastguard functions was launched in 2016 and will feed into EMSA's evolving service portfolio in this area.

b) Operational Achievements

In each of the strategic areas, key stakeholders benefitted from EMSA products and services.

Standards, Rules and Implementation (Activities 2.3, 3.1, 3.2, 3.3, 3.4, 3.6, 4.1, 4.2, 4.3, 4.4, 4.5):

All EU ship-safety initiatives and relevant negotiations at IMO were supported by EMSA technical assistance, while the combined effort of EMSA and Member States in the programme of visits and inspections has fed into Commission initiatives to assess and fine-tune maritime safety EU legislation in order to improve the efficiency and effectiveness of measures in place. Special emphasis was given to passenger ship safety and notably the work on fire safety.

Monitoring, Surveillance and information sharing (Activities 2.1, 2.2, 2.3, 2.4, 4.5, 5.2):

The process of data integration and incorporating new data sources and functionalities, such as enhancing Automated Behaviour Monitoring, combining fishing vessel positions and search and rescue data, and providing a mobile application, continued to add value for a growing number of end-users showing increasing interest in tailor-made services. Brought together and delivered under the heading Integrated Maritime Services, the Agency's systems are a pivotal part of Member State monitoring, information and surveillance systems, and benefit a steadily expanding list of other EU agencies and bodies where synergies with EMSA have been identified.

Support to Member States in complying with SafeSeaNet v3 was provided. The European Maritime Single Window (EMSW) prototype was developed to test the simplification and harmonisation of reporting formalities.

Environmental challenges and response (Activities 2.3, 4.6, 4.7, 5.1, 5.2, 5.3):

Services for the prevention of, preparedness and response to, pollution caused by ships as well as response to marine pollution caused by oil and gas installations have become more adaptable and flexible in order to increasingly reflect regional capacity, requirements and risk, for example with the new Equipment Assistance Services ready for mobilisation in the North and Baltic seas. On the prevention side, the ongoing dialogue on air pollution between the key stakeholders – the Member States, the Industry and the Commission – received technical support from the Agency, including the various THETIS modules being provided or under development to support the implementation of different pieces of environmental legislation.

Information, knowledge and training (Activities 2.1, 2.2, 2.3, 3.6, 4.1, 4.2, 4.3, 4.4, 4.5, 4.8, 5.1, 5.3):

Member State demand for training, e-learning or ad-hoc technical assistance from EMSA attests to the Agency's added value in this area, as does the Commission's increasing reliance on EMSA for the implementation, in the maritime safety field, of EU policies regarding candidate and potential candidate countries, and neighbouring countries, channelled through the IPA, Mediterranean, and Black and Caspian Sea projects.

c) Management

The resources (staff and budget) used by the Agency are in line with the activities as planned and developed in the Work Programme 2016. The restructuring of the Agency's budget which took effect in 2016, allowing for an overview of all project-financed activities in the Agency's portfolio addressed growth in this type of activity and reflects current needs. The revision of the Agency's mandate and the additional funds associated with the new tasks could, depending on up-coming experience, lead to further restructuring. Variations between planned and actual resources were marginal and justified, and correspond to the flexibility needed for the efficient management of resources and tasks during the course of 2016.

The Administrative Board takes note of EMSA's efforts to maintain the same level of output while continuing to reduce its staffing levels. With the further cut of 5 posts in 2016 the Agency reached the first 5 % target staff cut required of all EU Institutions, and started to anticipate the next one.

The Administrative Board in particular congratulates the Agency on the execution of its budget, 98.07 % in commitment appropriations and 97.80 % in payment appropriations. The Key Performance Indicators used by the Agency to measure the continuity and quality of the EMSA external services have met their respective targets overall. As per previous years, cases in which targets have not been met have been duly justified.

Based on information outlined in Parts II, III and IV of the CAAR2016 and on the work of the Administrative and Finance Committee throughout the year, the Administrative Board notes the Agency's exhaustive and thorough approach to the follow-up of the outcome of audits by the various auditing bodies. In particular, the Administrative Board appreciates the fact that action plans addressing issues identified in various audits performed before 2016 were formally closed by auditing bodies and that at the close of the year there were no pending actions that could have a negative influence on the risks linked to the Agency's activities.

Furthermore, the Administrative Board notes that measures are in place to maintain an appropriate risk and control environment and provide an appropriate level of assurance. Building blocks of assurance leading to the Declaration of the Authorising Officer are in place, as are measures to address any serious management and control weaknesses identified.

Conclusion

The Administrative Board of the European Maritime Safety Agency concludes that the Agency's objectives were met in accordance with the relevant annual work programme and the overall multi-annual strategic framework.

The administrative Board positively took note that the potential for EMSA to create added value in European cooperation on coast guard functions materialised with an amendment of the Agency's founding regulation in 2016. This process will be enhanced in the years to come by building up on EMSA's current capabilities in the areas highlighted by the co-legislator.

In addition the Administrative Board welcomes the growth of project financed activities in line with the existing tasks of the Agency, as another indication of the potential of EMSA to create added value in serving EU maritime policies.

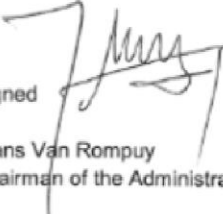
Furthermore, the promising outcome of various projects in 2016 demonstrates the Agency's potential to drive future developments in maritime surveillance to serve maritime safety, security and prevention and response to pollution.

2016 marked also an important year for the EMSA with the starting of the Agency external independent evaluation process which will be concluded in 2017 accompanied by a set of recommendations from the EMSA administrative board.

Finally, the Administrative Board would also like to highlight the excellent performance of the EMSA staff throughout 2016.

Done at Lisbon, 1 June 2017

Signed


Frans Van Rompuy
Chairman of the Administrative Board

Introduction

The framework for the activities of the European Maritime Safety Agency is shaped by the Agency's Founding Regulation, in which the legislator lays down and amends the tasks of the Agency; its 5-year Strategy, through which the governing body, the EMSA Administrative Board, and the Executive Director, provide a strategic outlook in an evolving policy context; and the programming of resources for decentralised agencies, which outlines the level of human and financial resources which may be made available to this particular Agency in order to carry out its tasks in the field of maritime safety and security, traffic monitoring, prevention of pollution by ships and response to oil pollution cause by ships and oil and gas installations.

The annual EMSA Work Programme 2016 was drawn up within the multi-annual framework outlined above. It should be noted that the latest revision of the EMSA Founding Regulation, adding interagency cooperation on coastguard functions to EMSA's mandate, was adopted in September 2016 (Regulation (EU) No 2016/1625 of 14 September 2016). The year was coloured by this legislative process in terms of planning for possible new tasks. The Agency has a responsibility to its stakeholders to prepare as much as possible, within the limits of the existing mandate and the annual programme of work, for potential new responsibilities, in order to be in a position to take them on as efficiently and effectively as possible from when they enter into force - to hit the ground running.

The Consolidated Annual Activity Report (CAAR) is an annual reporting exercise focused on the implementation of an annual programme of work, with specifically allocated resources and related annual objectives, outputs, and performance targets.

The CAAR 2016 provides a detailed account of the actions carried out to implement the Work Programme 2016 with the resources authorised for that year, in accordance with the applicable general framework. A key element of this framework has been the first 5% staff cut provided for under the Commission Communication on the programming of resources for decentralised agencies. The gradual implementation of this cut by the Agency was concluded with the earmarking of five posts in the 2015 establishment plan (207 posts) and their final cut in 2016 (202 posts).

Part I reports on the operational achievements of the year. Information is provided per activity, focusing on the added value of each activity with respect to higher level objectives. Budget and staff resources devoted to each activity are indicated, in terms of both "planned" and "actual" inputs, and performance targets and results are provided. Annex VII contains the dedicated report on the multi-annual funding of the Agency's pollution preparedness and response activities.

Parts II, III and IV focus on the management of the Agency and the building blocks of assurance.

This report demonstrates that the objectives set out for 2016 were achieved through a high level of implementation of the work programme for that year. This was possible thanks to good governance, sound management, and dedicated staff who continue to transform the opportunities and constraints of a given year into real benefits, and deliver added value to the Commission and the Member States in the maritime sector – to make it cleaner, safer and more efficient.



Markku Mylly
Executive Director

The Agency in brief

Safer seas, quality shipping, efficiency of maritime transport and cleaner environment and oceans

The idea of a European Maritime Safety Agency (EMSA) originated in the late 1990s along with a number of other important European maritime safety initiatives. EMSA was set up as the regulatory agency that would provide a major source of support to the Commission and the Member States in the field of maritime safety and prevention of pollution from ships. The Agency was established by Regulation (EC) 1406/2002 and subsequent amendments have refined and enlarged its mandate to cover, among other measures, the efficiency of maritime transport.

Tasks and working context

EMSA, as a body of the European Union (EU), sits at the heart of the EU maritime safety network and fully recognises the importance of effective collaboration with many different interests and, in particular, between European and international institutions, Member States' administrations and the maritime industry.

EMSA's activities can be broadly described as:

- providing technical and scientific assistance to the Member States and the Commission in the proper development and implementation of EU legislation on maritime safety, security, prevention of pollution by ships and maritime transport administrative simplification;
- monitoring the implementation of EU legislation through visits and inspections;
- improving cooperation with, and between, Member States in all key areas;
- at the request of the Commission, providing technical and operational assistance to non-EU countries around EU sea basins;
- providing operational assistance, including developing, managing and maintaining maritime information services related to ships, ships' monitoring and enforcement;
- carrying out operational preparedness, detection and response tasks with respect to pollution caused by ships and marine pollution by oil and gas installations.

Equally it is important to note that the Agency's working environment reflects the initiatives launched by the EU in all policy areas related to the seas in order to strengthen Europe's competitiveness and sustainable growth. In this respect, of particular relevance is the contribution to the success of the Growth and Jobs Strategy, in terms of supporting the implementation of an attractive framework for quality shipping and quality operators in Europe.

Mission, vision and values

- EMSA's mission: To ensure a high, uniform, and effective level of maritime safety, maritime security, prevention of, and response to, pollution caused by ships as well as response to marine pollution caused by oil and gas installations
- EMSA's vision: To promote a safe, clean and economically viable maritime sector in the EU
- EMSA's values: Efficiency, effectiveness, transparency, flexibility, creating added value

The Year in brief

The Work Programme 2016 was based on:

- The Agency's Founding Regulation, Regulation (EC) No 1406/2002, as amended by Regulation (EU) No 100/2013 of 15 January 2013;
- The Regulation (EU) 911/2014 on the multiannual funding for the action of the European Maritime Safety Agency in the field of response to pollution caused by ships and to marine pollution caused by oil and gas installations;
- The Commission's Communication on programming of human and financial resources for decentralised agencies 2014-2020 (COM (2013)519);
- The EMSA 5-year Strategy as approved by the Administrative Board in November 2013;
- The Action Plan on response to pollution from oil and gas installations, adopted by the Administrative Board in November 2013.

The overall priority in 2016 was to continue to deliver the core tasks of the Agency. Through sound prioritisation and by capitalising on synergies within the Agency, EMSA maintained the level of services to Member States and the Commission notwithstanding the staff cuts and the new tasks entrusted to EMSA.

Main achievements in 2016

Visits and inspections were carried out as requested by the Commission to monitor the implementation of EU legislation in the fields of maritime safety, maritime security and the prevention of pollution by ships, and to improve the efficiency and effectiveness of the measures in place.

The inspections of Recognised Organisations (ROs) were carried out as planned, using a risk based approach. There was a continued focus on the merger of two ROs and the inspections included, amongst others, visits to some smaller offices in locations where the ROs showed increased activity. In total, 21 inspections were carried out, seven of which were head offices, together with an inspection of the Quality Assessment and Certification Entity (QACE) and a visit to one ship, to verify the corrective actions taken by one RO following the Ro-pax campaign of 2010-2011 on structural fire protection. During the inspections the implementation of corrective actions taken following EMSA inspections and Commission assessments was verified. EMSA also prepared draft Commission assessments for three ROs. A workshop was held with all ROs to discuss horizontal issues including Ro-pax fire safety.

In 2016, 43 visits and inspections were carried out in different fields (Classification Societies, Standards for Seafarers (STCW), Port State Control, Vessel Traffic Monitoring and Information Systems, Accident Investigation, Port Reception Facilities, the sulphur content of marine fuels and fishing vessel safety). In addition, EMSA participated in eleven missions organised by the Commission and one by the EFTA Surveillance Authority during which a range of individual maritime security inspections were carried out.

A certified Quality **Management System for EMSA visits and inspections** was developed in 2016. The "V&I QMS" (ISO 9001:2015) and associated quality policy aim to ensure the delivery of reliable information on the effectiveness of law implementation measures, and also provide for formal review processes supporting continual improvement.

In line with the Founding Regulation, the Agency continued to analyse and assess several series of EMSA inspection and visit reports, to assist the Commission in its consideration of the effectiveness of EU maritime legislation. In 2016, two Horizontal Analyses were completed: an analysis of the truncated cycle of visits to Member States concerning the registration of persons on board passenger ships, to provide input to the Commission's REFIT exercise on EU maritime safety legislation, and an analysis of the findings from the visits to Member States related to Directive 96/98/EC on marine equipment. In addition, a pilot cost-effectiveness analysis of the PSC Directive was completed, proving the feasibility and benefits of analysing costs, effectiveness and efficiency of the measures put in place by Member States when implementing and enforcing the requirements of Union law. Two workshops took place in 2016, namely on aspects of Directive 2016/802/EU concerning the sulphur content of marine fuels, in preparation for the cycle of visits to Member States that started in the 4th quarter of 2016, and on the human element, where seafarer statistics and the role of human element in maritime accidents represented a valuable input for the discussions.

A statistical review carried out on the number of seafarers holding valid EU certificates and endorsements of recognition, representing a snap-shot of the European labour market, was published for the first time in 2016. The report was based on data extracted from certificates and endorsements registered by EU Member States up to 31 December 2014 and recorded in the STCW Information System.

In the area of **marine equipment and ship safety standards**, the Agency supported the Commission's legislative work at EU and IMO level. A technical expert group on fire safety and the parallel FİRESAFE study identified key risks and possible solutions. Results were presented at the end of the year to representatives from Member States' Accident Investigation Bodies and Maritime Administrations.

The Agency continued to provide assistance to Member States with regard to the implementation of the **third maritime safety package** through training and exchange of best practices. The Agency also assisted the Commission both in the implementation of the existing **Port Reception Facilities Directive** as well as in the work performed for its revision. With respect to the existing directive, the Agency has developed and published technical recommendations on its implementation, guidance for PRF inspections and provided technical assistance to the Commission for the development of interpretative guidelines. In relation to the forthcoming revision of the PRF Directive, the Agency has supported the Impact Assessment Support Study and finalised a study on the Management of Ship-Generated Waste.

In relation to **prevention of pollution from ships**, the Agency continued to support the Commission and the Member States in various fields. As concerns the implementation of Directive 2012/33/EU amending Council Directive 1999/32/EC as regards sulphur content of marine fuels, (now codified in Directive EU/2016/802), the Agency organised specialised training for sulphur inspectors both in-house and at national level as well as workshops, to enhance uniform implementation throughout the Union. The module in THETIS, namely **THETIS-S**, which was operational since 1st January 2015 to support the authorities responsible for inspection and sampling of fuels as required by the Directive was incorporated into **THETIS EU**. Throughout 2016, the Agency continued to provide technical and secretariat support to the European Sustainable Shipping Forum and its seven subgroups, including the two additional ones established in support of the MRV Regulation. The support entailed drafting of technical notes, minutes of the meetings, submissions to IMO and logistical support. The Agency also provided technical assistance to the Commission and the Member States for the implementation of the Ship Recycling Regulation. In this respect the Agency finalised and published guidance for the Inventory of Hazardous Materials and the control provision of Title II and organised a relevant workshop. In 2016 EMSA developed the business rules while in parallel concluded a cooperation agreement with the Commission (DG CLIMA) for the development of **THETIS-MRV** in support of the MRV Regulation. In addition EMSA developed a first draft which was welcomed by Member States and the Commission, of specific guidance provisions for Port Authorities and Administrations in relation to LNG Bunkering. The Agency also tendered a study on the use of fuel cells in shipping which was delivered at the end of 2016. Finally the Agency concluded the development of a new functionality in THETIS-EU to establish and evaluate the inventories of shipping emissions based on shipping activity data for domestic, short sea and international shipping. The activity data are the historic Automatic Identification System (AIS) data made available by the Member States through SafeSeaNet as well as LRIT data, as foreseen by the Cooperation Agreement that was signed with the Commission (DG ENV) in September 2015. In November 2016 the Agency delivered to the Commission the inventories of shipping emissions for the period 2011-2015, thus offering to the Commission and Member States quantification of the bottom-up emissions (SOx, NOx and PM) resulting from combustion of marine fuel from international and domestic shipping.

Activities to strengthen **Port State Control** in co-operation with the Paris Memorandum of Understanding (Paris MoU) remained a priority. In addition to ensuring the management of **THETIS**, the Agency continued to support the implementation of the inspection regime at national level through an extensive e-learning system, training and the provision of a specific helpdesk. In 2015 the modules forming the e-learning programme delivered through the system "MaKCs" were made available to the Caribbean Ocean MoU on PSC.

EMSA provided support for the common EU position at IMO on the risk-based damage stability of passenger vessels and the final results of the associated study (EMSA 3) was forwarded to the relevant IMO sub-committee (SDC). Extensive support was also provided in the fitness check evaluation of EU Passenger Ship Safety legislation culminating in the report and staff working document being published in October 2015. EMSA continued to coordinate an expert group of Member State administrations and Accident Investigatory bodies in a technical analysis of fire on ro-ro decks of European passenger ships, and provided support for the implementation of the new Marine Equipment Directive (Directive 2014/90/EU) by coordinating technical exchanges with the national experts.

In 2016 Member States uploaded 4702 occurrences in the Agency's **European Marine Casualty Information Platform (EMCIP)**; a 9% increase over 2015. The data in EMCIP was used to support work including the analysis of fires on board ro-ro ferries, a study by the Commission on the evaluation of Regulation 392/2009 on the Liability of Carriers of Passengers by Sea in the Events of Accidents and to publish the third Annual Overview of Marine Casualties and Incidents. During the year, preparatory work was completed for the development of a new EMCIP that will bring hosting in-house, permit more user-friendly design and provide greater assistance to the accident investigators.

A total of 24 different **training** activities took place in 2016. They were attended by a total of 634 participants and covered a wide range of topics, including training for port State control officers and accident investigators. In addition to that, the Agency continued offering training within the framework of **SAFEMED III** and 16 sessions were organised for a total of 187 participants and 11 other technical activities were implemented during the year. The Agency continued providing technical assistance within the framework of **TRACECA II** and 10 sessions were organised with participation of 91 experts and 10 other technical activities were implemented for the Eastern European Neighbouring Partners. Finally, a new agreement with the Commission for the participation of enlargement countries in the work of EMSA was signed in 2015 and implemented in 2016. In addition the Agency started focussing on capacity building, taking into consideration the growing and vast regulatory framework, as well as the need to reach different competent national authorities in charge of the implementation of the relevant *acquis communautaire*, to learn from each other and exchange best practises, and to keep in the picture the different coastguard functions falling under the remit of the Agency. As a consequence the Agency offered training more focussed on case studies, practical exercises and working groups, as well as developing further its portfolio of eLearning courses, thus reaching a wider audience. In this respect six eLearning modules tackling various EU legal acts were developed in 2016.

The Agency is also recognised as a **European platform for exchange of knowledge and best practices** between maritime safety and pollution response experts from the Commission, EU Member States, EFTA/EEA Member States and candidate as well as potential candidate countries: 50 different workshops and working groups were organised with 1426 participants from all over Europe. These included several sessions for CleanSeaNet users, ongoing SafeSeaNet group workshops, EMCIP workshops and User Group meetings, THETIS User Group meetings, PSC training review meetings, a workshop on fires on ro-ro decks involving national administrations and accident investigation bodies, Marine Equipment Experts' meeting notably on the implementation of the new MED Directive, working groups comprising LRIT National Competent Authorities and specialised groups in the field of Marine Pollution Preparedness and Response (e.g. vessel users, claims management, dispersants). Moreover, in terms of Commission Implementing Regulation (EU) n° 651/2011 of July 2011, EMSA ensured the Secretariat of the Permanent Co-operation Framework (PCF) for the Investigation of Accidents in the Maritime Transport Sector and hosted the 6th PCF meeting.

In the field of **maritime information systems**, the Agency continued to focus on delivering its operational maritime information services SafeSeaNet, CleanSeaNet, THETIS, LRIT (Long Range Identification and Tracking), IMS (Integrated Maritime Services), and information services to other EU bodies. Improving functionalities is a continuous process in dialogue, for example with the users in Member States, with a focus on the further development of Integrated Maritime Services. 12 operational training sessions on new system developments and value added services was provided to users from Member States, EU Agencies and other institutions. The central SafeSeaNet service functioned well during the course of 2016, complying with the performance and reliability requirements defined by the Interface and Functionalities Control Document (IFCD). In 2016 support was provided to those Member States still pending compatibility with SSN v.3 and their national systems. All Member States, except one, are now upgraded to SSN V.3.

A link was implemented between SSN and the Common Emergency Communication and Information System (CECIS) managed by the Commission for reporting of pollution incidents. The Central Ship Database (CSD) became operational and available to use in national systems to improve data quality on related national databases. The Shore-based Traffic Monitoring and Information Database (STMID) was developed, and will be opened to Member States pending data migration. The Central HAZMAT Database (CHD) on dangerous and polluting goods was developed and made available as a reference and verification tool to support reporting in SSN and a training session provided to MS. Furthermore a link was implemented between the CHD and the Marine Chemical Information Sheets (MAR-CIS) database, information developed for responders to chemical accidents at sea, as one of the action points under the HNS Action Plan of the Agency.

Development of a **SafeSeaNet ecosystem web interface** (SafeSeaNet Ecosystem GUI – SEG) to provide one single interface for SafeSeaNet, LRIT, CleanSeaNet and Integrated Maritime Services proceeded as planned. As part of this development common reference databases for location codes, country codes, organisation and geographical areas started to be implemented. The back-end services of the SafeSeaNet ecosystem progressed in view of offering an integrated range of ship position data processing, storage and distribution services by 2017.

As requested by the Commission and the Member States, the Agency continued to provide technical support for the implementation of the **Reporting Formalities Directive** (Directive 2010/65/EU), in particular for the development guidelines for Single Windows. EMSA has provided **technical assistance** regarding the implementation of the Directive 2010/65/EU and the development of the National Single Window on request from Member States and as approved by the EMSA Administrative Board. Peer reviews, to identify best practices and concerns in the implementation of Directive 2010/65/EU were carried out in two (Sweden and the Netherlands) of the seven Member States who volunteered for this exercise. In addition EMSA provided support to the Commission in the evaluation of Directive 2010/65/EU and the Vessel Traffic Monitoring and Information System Directive (Directive 2002/59/EC, as amended).

The **Integrated Maritime Services (IMS)** continued to be delivered during 2016, with the integration of new data and functionalities (such as the further development of Automated Behaviour Monitoring tools and algorithms and the integration of VMS (fishing vessel positioning) data in the SARSURPIC (Search and Rescue Surface Picture). In addition the IMS Mobile App became fully operational and is used by over 250 users from both Member States and EU Bodies. The number of Member States using IMS (for maritime safety, port and maritime security, marine environment protection and the efficiency of maritime traffic and maritime transport) increased to 24. The new version of the SafeSeaNet Interface and Functionalities Control Document (IFCD) reflecting the changes brought about by the revision of Annex III of Directive 2002/59/EC, as amended, was approved by the HLSG 15 in July 2016.

During 2016, cooperation with participating Member States and EU bodies continued, including provision of services to Frontex (border control), EFCA (fisheries monitoring), OLAF (customs and illegal cross border activities), MAOC-N (law enforcement - narcotics) and EUNAVFOR (anti-piracy and anti-people smuggling). Intensive consultations with users and collaboration groups (IMS Group User Consultation Meetings, ABM Workshops, training) continued. The total number of IMS users increased to more than 900.

EMSA provided in 2016 an increasing number of services to **Frontex** by fusing satellite imagery with vessel information data in support of the EU Migration Agenda. Recognising the potential of RPAS (Remotely Piloted Aircraft Systems) for maritime surveillance, the Agency has completed the procurement of services. These will be operational after a set-up phase to support, as a joint capability with Frontex and EFCA, Member States in their coast guard functions. The **Earth Observation** services of the Agency continued to evolve. After signature of the Delegation Agreement with the Commission for organising **Copernicus Maritime Surveillance Services**, the services were set up, and the first services are being delivered. The EMSA portfolio of Synthetic Aperture Radar (SAR) satellites and sensors has been expanded with the addition of the European Space Agency (ESA) managed satellite Sentinel-1 A&B as well as the TerraSar-X constellation. Additionally EMSA has access to a wide range of very high resolution optical satellites. This will enhance vessel detection, for example in support of oil spill detection services, as well as Frontex and Copernicus operational activities. **CleanSeaNet**, the near-real-time satellite-based oil spill and vessel detection service, continued to provide regular services to coastal States. The number of users increased as the service was extended to Greenland as well as the islands of the French and Dutch Caribbean. Through the Commission's SAFEMED III and TRACECA II cooperation programmes for EU Neighbouring countries, CleanSeaNet is available to the official beneficiary countries across the Mediterranean, Black and Caspian Seas in addition to the EU Member State and European Free Trade association (EFTA) users.

The **EU LRIT Cooperative Data Centre (EU LRIT CDC)** fully met the International Maritime Organization (IMO) performance requirements. The **LRIT International Data Exchange (LRIT IDE)** provided services to 57 LRIT Data Centres all over the world. Developments regarding the second modification of the LRIT system in line with IMO requirements, and for reporting Inmarsat 'speed' and 'heading' information proceeded in 2016 with all components planned to be operational at the beginning of 2017.

Throughout 2016 **THETIS** assumed new functionalities. The system is able to support Member States (and not only PSC authorities); combining port call information from Paris MoU members, inspection data from Port State Control and the ro-ro

ferry surveys, inspection data from national authorities responsible for the implementation of the Sulphur Directive, while storing information from the Recognised Organisations and accredited laboratories (for fuel sampling) at ship level. THETIS, in 2016, was extended with a stand-alone module (THETIS-EU) for inspections, reporting, monitoring and verification to support the enforcement of EU legislation not falling within the framework of PSC. Today users, depending on their access rights, are able to record and exchange data on inspections and verifications, while the system facilitates targeting, alerts and exchange of information on the basis of predefined requirements. PSC inspections will be recorded in the appropriate module of THETIS, while those required by other EU maritime legislation will be recorded in the appropriate module of THETIS-EU. Sulphur and PRF Directives are the first legal act to be tackled, as from April 2016. Data from the various supported regimes remains separated at operational level, but may be combined for analyses and statistics.

EQUASIS continued its valuable contribution to the shipping industry by providing accurate and reliable ship safety and environmentally related information. In 2016, a revised Memorandum of Understanding was formally adopted adding environmental data to the project. Furthermore the Agency in its capacity as Management Unit organised in the IMO premises a signing ceremony to celebrate the amended MoU.

At the end of 2016, 17 fully equipped and trained **Oil Spill Response Vessels** were available for mobilisation. Two vessels contracted at the end of 2015, covering the areas of southern Baltic Sea and the Canary Islands and the Madeira archipelago, successfully completed the preparation phase and entered into operational service mid-2016. After the expiration of the contract for the southern Black Sea, a new oil recovery vessel was contracted for the area at the end of 2016. The procurement for a new vessel contract in the northern Baltic Sea was not successful and no contract was awarded. Two vessel contracts covering the western and central Mediterranean Sea were renewed for an additional four-year period.

During 2016, 72 quarterly and acceptance drills were undertaken in order to ensure that quality of the service - the capability of the vessel, specialised equipment and crew - is at an appropriate level in accordance with criteria developed by the Agency. Moreover, 10 operational exercises with Member States involved mobilisation and deployment of 12 EMSA contracted vessels and equipment.

With regard to implementation of the Action Plan for Response to Marine Pollution from Oil and Gas Installations, in 2016 one contracted vessel for the southern Atlantic was upgraded with a dispersant spraying system and a stock of dispersant. At the end of 2016, four vessel arrangements were equipped for seaborne dispersant application with associated dispersant stocks of 200 tonnes each, in Malta, Cyprus, and Portugal and on the Canary Islands (Spain).

The two **Equipment Assistance Service (EAS)** arrangements in the Baltic Sea and in the North Sea went through a Preparatory Phase and became fully operational in the second half of 2016. The equipment is currently on standby, ready for mobilisation and transport at short notice, around the clock. This service provides specialised stand-alone equipment (i.e. firebooms, integrated oil containment and recovery systems) which can be used by Vessels of Opportunity.

To further support Member States tasks in the field of environmental protection, the Agency has also contracted Remotely Piloted Aircraft System (**RPAS**) services to allow for surveillance of sulphur emissions from vessels and to support oil pollution response operations in case of major spills. In 2016 the procurement process were prepared and implemented, leading to contracts at the end of the year.

The Agency also continued to provide information services in the field of **Hazardous and Noxious Substances (HNS)** in accordance with the HNS Action Plan. EMSA's information service for marine chemical emergencies (**MAR-ICE** Network) was activated two times by two different Member States and once by EMSA during an HNS table-top exercise with ITOFF. In order to enhance the accessibility and use of **MAR-CIS** information (Marine Chemical Information Sheets for pollution response to incidents involving chemicals), a web portal was released at the end of 2016. This information can also be accessed from the new Central Hazmat Database (CHD), which is part of EMSA's SafeSeaNet (SSN). The enhancement of EMSA's Dispersant Usage Evaluation Tool (**DUET**), a software tool to predict the fate and trajectory of an oil spill and the impact of dispersant application on the oil fate, was completed and distributed to the Member States following a training course. The new and enhanced version includes a model to evaluate the fate of well blowouts.

The dissemination of information on EMSA's pollution response services continued in 2016 with the 10th meeting of the **Consultative Technical Group for Marine Pollution Preparedness and Response (CTG MPPR)** in March. A workshop dedicated to inform the Member States on the work of OSINet (intergovernmental cooperation in the field of oil sampling and oil fingerprinting) preceded the CTG MPPR meeting. The outcome of the OSINet workshop was presented at the CTG MPPR meeting and the proposal to establish a correspondence Group among Member States' experts to develop practical guidelines and a training curriculum on oil spill sampling for fingerprinting was broadly accepted. Under the CTG MPPR work, EMSA also organised an EU States Claims Management workshop and the 5th Training on the Use of Surveillance Systems for Marine Pollution Detection and Assessment.

Under the **Multi-Annual Financing (MAF)** framework for the period 2014-2020, the Agency is required to provide input to a Mid-term Evaluation conducted by the Commission. In order to support this evaluation, EMSA launched procurement for an external study of the cost effectiveness and cost efficiency of the network of oil recovery vessels as the core of the Agency's oil pollution response activities. An interim report was delivered in late 2016.

Performance in 2016

Key Performance Indicators and targets are used by the Agency to measure the continuity and quality of EMSA's external services. The final scoreboard for 2016, listing indicators, targets and results, is provided in annex 1.

It should be noted that, for some of the outputs, the Agency is not the only actor involved. The Commission often plays an essential role in the preparation or in the follow-up of these outputs, or both (for instance in the case of visits and inspections). As a consequence, there may be instances in which the planned target does not coincide with the final output, for reasons that are external to the Agency.

The establishment plan execution rate (recruitment) and the budgetary execution rate have been included as general performance indicators.

The vacancy rate related to the establishment plan at the end of 2016 was 1.51% against the final target of 198 posts to be implemented by 1st January 2017 (minus 4 posts compared to 2016). From 1st January to 31st December 2016, the Agency executed € 54,105,973.11 in Commitment Appropriations (CA), representing 98.07% of the total budget for the year, and € 54,835,674.73 in Payment Appropriations (PA), amounting to 97.80% of the total budget. After taking into account automatic carry-overs of payment appropriations (C8 Funds), the Agency reaches 97.65% of payment execution.

The implementation of the Work Programme 2016, including the delivery of key outputs and the achievement of performance targets, was monitored throughout the year, drawing on a series of data and reporting including: regular unit, department, management and senior management meetings; monthly report on budget, procurement and financial management; quarterly performance scoreboard; monthly horizontal indicators; and various progress reporting exercises at unit and department level.

In addition, a comprehensive exercise to consolidate existing data and assess the overall level of implementation of the Work Programme, as well as signal potential risks, was piloted in 2016. The exercise was conducted twice, in May and in October, and the Agency remained on track towards a high level of implementation of the Work Programme 2016. This Consolidated Annual Activity Report 2016 is the final exercise and confirms a high level of implementation of the Work Programme 2016.

PART I – Achievements of the year

List of EMSA Activities

Area	ABB Code ¹	Activity	Project-financed activities	
Traffic monitoring and information on ships and cargoes	2100	Union maritime information and exchange system (Integrated maritime services; SafeSeaNet; Improving internal market and maritime transport efficiency)	<i>Pilot project - coastguard functions</i>	
	2200	EU LRIT Cooperative Data Centre and LRIT International Data Exchange		
	2300	7700	Information System for PSC (THETIS)	<i>THETIS-S²</i>
		7710		<i>THETIS-MRV</i>
		7720		<i>Emissions Inventories Project</i>
	2400	Maritime Support Services		
	7500		<i>Copernicus</i>	
	7200		<i>Frontex</i>	
Visits and inspections to monitor the implementation of EU legislation	3100	Classification Societies		
	3200	STCW		
	3300	Implementation of PSC Directives in Member States and EFTA		
	3400	Maritime Security		
	3500	Monitoring implementation of other EU maritime legislation		
	3600	Horizontal analysis and research		
Providing Member States and the Commission with technical and scientific assistance and facilitating technical cooperation between Member States' Maritime Authorities and with the Commission	4100	Port State Control		
	4200	Accident investigation		
	4300	7800	Technical assistance (training and cooperation)	<i>EU Funds for enlargement countries</i>
	4400		Marine equipment and ship safety standards (including IMO)	
	4500	7600	Maritime Information, Equasis and statistics	<i>Equasis (R0 funds)</i>
	4600		Prevention of pollution by ships	
	7100			<i>SAFEMED III</i>
	7400			<i>TRACECA II</i>

¹ This code is the ABB/ABC (Activity Based Budgeting/Activity Based Costing) code of the activity.

² THETIS-S is now incorporated into THETIS-EU.

Area	ABB Code	Activity	Project-financed activities
Pollution preparedness detection and response	5100	Operational Pollution Response Services	
	5200	7300	CleanSeaNet Greenland
		7310	CleanSeaNet Dutch Islands
	5300	Cooperation and information relating to pollution preparedness and response	
Horizontal activities	6500	Communication, Document Management, Missions & Events support	
	6100-6400	Overhead/horizontal tasks	

Human and Financial Resources per activity

The Agency implements an activity based approach to budgeting and reporting (Activity Based Budgeting). The lifecycle stretches from initial planning of the draft budget preparation which starts towards the end of year N-2 to the final presentation of actuals in the Consolidated Annual Activity Report in year N+1. Activity Based Budgeting (ABB) codes are tagged to commitments and payments, tracking the cost of both direct and indirect activities. Direct staff is allocated to one operational activity according to the prevailing function of the staff. Indirect staff and overhead and administrative costs are ventilated across operational activities, based on the number of direct staff allocated to each activity. The ABB exercise covers fresh credits (C1 funds) only. Project financed funds (R0 funds) and staff are not included.

The expected 2016 staff cuts were planned through the reservation of five posts in the 2015 establishment plan. In 2016, 202 statutory staff (AD/AST), 33 contract agents (CA) and 18 seconded national experts (SNE) were allocated to the different activities. However, the Agency delivered the activities proposed in the Work Programme 2016 with 198 statutory posts, as 4 posts were frozen for further staff cuts foreseen in 2017.

Project -financed activities have separate codes. They are presented separately when the project resources include human resources (Copernicus, Frontex, SAFEMED III, and TRACECA II). Seven project-financed contract agents were also planned for and allocated in the relevant activity tables. Project financed activities with no provision for project-financed human resources are presented as part of another activity but with a clear indication of the expected associated financial input.

Detailed information on human and financial resources per activity is available in Annex V

Maritime Transport and Surveillance - information on ships, cargoes and ship movements

2.1 THE UNION MARITIME INFORMATION AND EXCHANGE SYSTEM

In cooperation with the Member States and the Commission, the development of the Union maritime information and exchange system made good progress in 2016.

Annex III to the VTMISS Directive (2002/59/EC), as amended by Directive 2014/100/EU, underlines the role of the SafeSeaNet system as an integrated maritime information exchange platform, codifying the achievements of the Integrated Maritime Data Environment (IMDatE). The Interface and Functionalities Control Document (IFCD) was revised in consultation with Member States describing the rules for integration and distribution of data covering both web services and system to system interfaces.

Planned input		Actual input
Commitment appropriations in EUR	8,398,859	8,164,078
Payment appropriations in EUR	8,371,394	8,171,025
Staff	25 AD, 12 AST, 3 SNE, 5 CA ³	26 AD, 11 AST, 4 SNE, 1 CA
Multi-annual strategic objectives		
<ul style="list-style-type: none"> ▪ To increase the effectiveness and efficiency of EMSA's integrated maritime information services to its full potential based on existing applications such as SafeSeaNet. (B1) ▪ To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety, security and environmental protection. (B2) ▪ To continue to work to further develop the EU maritime traffic monitoring and information system. (B3) ▪ To engage in supporting other communities and enhance the Agency's role as central EU data provider of maritime related information as defined by Union law. (B4) ▪ To prepare IPA and ENP countries for association to EMSA's traffic monitoring services and for use of EMSA's pollution response services. (D3) ▪ To become a reliable source of information and statistics for the EU on maritime matters. (D4) ▪ To continue developing its role as forum for discussion of best practices. (D5) 		

³ Includes 3 CA for Copernicus financed by the EMSA budget. For clarity, these 3 CA are now highlighted under the Copernicus activity described later in this Chapter 2.1 and clearly represented in Annex V "Human and financial resources per activity" as a separate line.

a. Integrated maritime services

Integrated Maritime Services (IMS) are offered to all EU Member State authorities executing functions in the maritime domain, regardless of the governmental department/authority in which users are based (e.g. environment, transport, etc.). If users have been allocated responsibilities which necessitate and justify the use of particular maritime data, this data is provided by EMSA following the agreed access rights. The overall number of IMS users (with registered accounts) has increased steadily reaching a total of over 1,000 users. These users belong to more than 60 different authorities in 24 volunteer Member States, which use IMS services in support of their daily tasks and responsibilities. Access to IMS services is provided through both a desktop/laptop web user portal and the IMS mobile app, available for both iOS and Android mobile devices.

In addition, IMS were provided to a range of other users e.g. EFCA, whilst other services were expanded or reinforced e.g. a new Service Level Agreement with EUNAVFOR. Major steps forward were taken with regard to setting-up additional maritime data streams. The most notable being the progress made on contracting RPAS services for the maritime operational environment and the utilisation of the Copernicus Programme as a mechanism to provide data derived from earth observation satellites.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.4 (a), 2.4 (b), 2.5, 2a.2(d)

Outcome 2016

The Agency's provision of integrated maritime services to maritime authorities of Member States, EU bodies and/or third countries has continued in 2016. A single graphical user interface will be made available to SafeSeaNet, LRIT, CleanSeaNet and IMDatE users. New satellite data streams from national missions will be provided where available. The deployment of RPAS in supporting monitoring and surveillance, in particular for pollution detection, will be organised. Member States will be given the opportunity to share experiences, identify, develop and implement 'best practice' approaches based on the principles of integrating and sharing relevant maritime information.

Annual objectives 2016

- Continue the operation, delivery and development of integrated maritime services in line and in close co-operation with user requirements from maritime authorities of Member States, EU bodies and/or third countries, including provision of operational support such as training and helpdesk activities.
- Analyse new technologies and information products to enhance and complement maritime services, undertake initial testing and contribute to demonstrations and campaigns of remotely piloted aircraft systems (RPAS) operations to assess their potential suitability for maritime surveillance, safety and pollution detection, including some operations with Member States e.g. in the context of CleanSeaNet.
- Work closely with the European Space Agency (ESA) and with those Member States that have satellite Automatic Identification System (SAT-AIS) mission programmes in order to continue receiving a global feed of SAT-AIS data streams which will enable EMSA to keep offering SAT-AIS data to its users.
- Support ESA in the assessment of the user needs and services that could potentially be provided by the VDES.
- Support the Commission and Member States with EU level meetings and workshops related to maritime information systems and services.

Planned output 2016

- Provide Integrated Maritime Services for Member States and other interested governmental bodies.
- Further development of the platform for the provision of integrated maritime services, including a single graphical user interface for SafeSeaNet, LRIT, CleanSeaNet and IMS users.
- Training support for end-users and

Actual output 2016

- IMS continued to be provided to all EU/EFTA Member States and EU Bodies stakeholders throughout the year on voluntary basis. In 2016 the number of EU/EFTA Member States, EU Bodies and total users has continued to increase, reaching respectively, 25, 5 and over 1000.
- The development of the SafeSeaNet Graphical User Interface (SEG) continued steadily in 2016. The development of new overall graphical display, user navigation and service application functionalities were completed, creating a single interface for

<p>stakeholders provided as appropriate, for individual systems or combined data services.</p> <ol style="list-style-type: none"> 4. Ensure relevant documentation on integrated maritime services to Member States is up-to-date, including the Interface and Functionalities Control Document (IFCD). 5. Reception, storage and distribution of global satellite AIS data provided to EMSA through the ESA-EMSA SAT-AIS initiative or directly procured by EMSA, and of satellite AIS data provided by relevant Member States. 6. Provision and integration of image related data (including video/streamed data) for the Agency's Integrated Maritime Services. 7. Complete the integration of met-ocean data within the Integrated Maritime Services, including the provision of in-situ, sea and weather forecast (model), and remote sensing Earth Observation data. 8. Coordinate with Member States and the Commission to make best use of new technologies and information products (e.g. RPAS, VDES) to support maritime monitoring and surveillance activities. 9. Deployment of Integrated Maritime Services mobile applications to Member States 	<p>SSN, LRIT, CSN and IMS users. Changes to the back-end applications were performed to accommodate the new paradigm separating the front-end from the existing back-end applications, however due to contractual issues and delays the user/data authorisation could not be developed. This is planned, together with the SEG go-live, for 2017.</p> <ol style="list-style-type: none"> 3. EMSA hosted two training courses for IMS Member States. Training courses were provided for EU bodies MAOC-N, EFCA, OLAF, and to Frontex on Automated Behaviour Monitoring (ABM). Combined training was delivered onsite to Member States in Dublin for the Irish Coast Guard, in Riga for Baltic Member States, and in Slovenia and Croatia. Information sessions were provided to SAFEMED III and TRACECA II beneficiaries. 4. The revision of the SafeSeaNet Interface and functionality Control Document (SSN IFCD) continued during 2016 in order to address the necessary changes stemming from the revision of the Annex III of Directive 2002/59/EC as amended. The final draft was approved by the SSN High Level Steering Group and published on the EMSA website. The changes address the Integrated Maritime Services definition, the objectives of the IMS group, the IMS functionalities management and several other areas related to IMS. 5. EMSA continued to provide a global SAT-AIS data stream to its users through the ESA-EMSA SAT-AIS initiative until 31st of August 2016. After this date, a new contract with a commercial SAT-AIS data provider was put in place on 1st of September 2016 through which a global feed of SAT-AIS data continued to be provided. EMSA also continued to receive a global SAT-AIS data feed from Norway. The 4th Meeting of the EU Satellite-AIS Collaborative Forum was held in early 2016 and a new Cooperation Agreement for the exchange of SAT-AIS data between Norway and EMSA was signed by mid-2016. 6. The EMSA portfolio of satellites was increased through the addition of numerous new satellites/sensors for the provision of both SAR and optical imagery. 7. IMS services provide access to 3 types of met-ocean data: in-situ, satellite remote sensing and forecast. This data is provided via existing EU programmes such as EMODnet and the Copernicus Marine Environment Monitoring Service. In 2016 a technical interface was set-up to extend the met-ocean data portfolio to include data from both EUMETSAT and the Copernicus Atmosphere Monitoring Service. 8. To further support Member States in the field of coast guard functions, procurement for RPAS based services was undertaken, to be operational in 2017. In parallel and in the field of environmental protection, the Agency contracted RPAS services to allow for surveillance of sulphur emissions from vessels and to support oil pollution monitoring and detection. These RPAS services will become operational in 2017. On VDES, further collaboration with ESA took place on the potential of future maritime applications using VDES technology. 9. 2016 saw the IMS Mobile App application transiting into operations. The number of EU/EFTA Member States and EU Bodies users has steadily increased, reaching 250. Two new versions of the IMS Mobile App were released in 2016 and are available for both iOS (phone and tablet) and Android (tablet).
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Output Indicators		Target 2016	Result 2016
Integrated Maritime Platform Availability	percentage per year availability of platform	95%	99.74%
	hours maximum continuous downtime of IMDatE platform	12	5h15
Integrated Maritime Services Availability	percentage per year availability to Member States	95%	99.74%
	percentage per year availability to EUNAVFOR	95%	99.74%
	percentage per year availability to EFCA	95%	99.66%
	Percentage per year availability to IMS mobile application users	95%	99.85% ⁴

⁴ System operational from Q4.

b. SafeSeaNet

In 2016, the Agency continued to assist the Member States in the operation of the SafeSeaNet system and continued improving the monitoring of maritime traffic, safety and logistics (maritime transport and maritime traffic).

The central SafeSeaNet service functioned well during 2016, complying with the performance and reliability requirements defined by the Interface and Functionalities Control Document (IFCD). In 2016 support was provided to those Member States still lacking compatibility with SSN v.3 and their national systems. All Member States are now upgraded to SSN V.3 with the exception of one.

A link was implemented between SSN and the Common Emergency Communication and Information System (CECIS) managed by the Commission for reporting of pollution incidents. The Central Ship Database (CSD) became operational and available to use in national systems to improve data quality on related national databases. The Shore-based Traffic Monitoring and Information Database (STMID) was developed, and will be opened to Member States pending data migration. The Central HAZMAT Database (CHD) on dangerous and polluting goods was developed and made available as an information support tool during the HNS accidents as a reference and verification tool to support reporting in SSN. A training session for MS at EMSA on the Central HAZMAT database was also provided. Furthermore, a link was implemented between the CHD and the Marine Chemical Information Sheets (MAR-CIS) database.

The development of a single SafeSeaNet ecosystem web interface (SafeSeaNet Ecosystem GUI – SEG) to provide one single interface for SafeSeaNet, LRIT, CleanSeaNet and Integrated Maritime Services proceeded as planned. The development of the Common Management Console (CMC), which encompasses a user single access point for the SSN ecosystem, progressed with a reduced scope. The back-end services of the SafeSeaNet ecosystem were further developed in view of offering an integrated range of ship position data processing, storage and distribution services.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.2. (c), 2.3(a), 2.3(b), 2.4(a), 2.4(b), 2.4(h) and 2.4(i)

Outcome 2016

The Agency will assist Member States to continue improving the monitoring of maritime traffic, safety and logistics (maritime transport and maritime traffic).

Operational/technical training regarding existing and new functionalities will be available for Member State personnel. Member States will be given the opportunity to share experiences, identify, develop and implement “best practice” approaches based on experience operating SafeSeaNet and other maritime related information e.g. working groups and/or development and revision of guidelines.

Annual objectives 2016

- Ensure that the SafeSeaNet central service is available on a 24/7 basis, and provide operational support to all users, including necessary training and help desk activities.
- Maintain and upgrade as appropriate the central SafeSeaNet system, improving functionality and efficiency in line with Union legislation and requirements of stakeholders.
- Provide support to Member States regarding the operation of their national SafeSeaNet systems in particular the incorporation of the new message and business logics related to SafeSeaNet version 3, introduced during 2015.
- Support the Commission in any work related to preparing legislative proposals in this field.
- Provide a common Graphical User Interface, which will enable, amongst other features, the visualisation of the Shore-based Traffic Monitoring Infrastructure Database (STMID) services.
- Establish a Common (User) Management Console to support all maritime applications and services.
- Implement the ICT rationalisation activities under the STAR project.
- Offer a Central Ship Database (CSD), to be used as a reference database in national systems, e.g. the national single window, or for cross-checking data stored within national ship databases.
- Provide a Central HAZMAT Database (CHD) on dangerous and polluting goods, linked to MAR-CIS, to serve as a reference and verification tool for industry, reporting parties and Member State authorities.

- Possibly expand the portfolio of EMSA maritime information databases to support users' statistical needs (dependent on the outcome of work undertaken in 2015 in support of Eurostat).

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. SafeSeaNet is operational on a 24/7 basis to support Member States to undertake activities related to maritime monitoring. 2. Provide support to Member States regarding compatibility of national systems with SafeSeaNet and potential improvements. 3. A Central Ship Database (CSD) will be operational and available to use in national systems and improve data quality on related national databases. 4. A Central HAZMAT Database (CHD) on dangerous and polluting goods will serve users as a reference and verification tool. 5. The Graphical User Interface and Common (User) Management Console will be implemented. 6. Subject to ongoing needs, support to the Commission and Member States regarding the revision of the Directive 2002/59/EC as amended, will be provided as appropriate. 	<ol style="list-style-type: none"> 1. SafeSeaNet was operational on a 24/7 basis to support Member States. 2. EMSA provided support to those Member States still pending compatibility with SSN v.3 for aligning their national systems and supported the execution of the remaining commissioning tests. 3. The Central Ship Database (CSD) development has been split into two phases. The first phase has been successfully completed. Further developments are planned to include new database elements and web services. 4. The Central HAZMAT Database (CHD) web user interface was implemented in production in September 2016. The system to system interface was implemented in December 2016. 5. Development of a common Graphical User Interface for SafeSeaNet, LRIT, CleanSeaNet and integrated maritime services proceeded as planned. 6. Feedback was provided to the Commission regarding the evaluation of the Directive 2002/59/EC as amended.

Output Indicators		Target 2016	Result 2016
SAFESEANET			
SafeSeaNet system including requirements under the Reporting Formalities Directive (2010/65/EU): Service Operation	percentage per year availability of central SafeSeaNet system	99%	99.65%
	hours maximum continuous downtime of central SafeSeaNet system	12	11h15min ⁵
	reports per year (AIS)	1800 million	3,221,294,890
	notifications per year (Port +, Incident reports, MRS)	4.5 million	6,667,325
SafeSeaNet system including requirements under the Reporting Formalities Directive 2010/65/EU: Reporting Performance	percentage of responses to Member States' requests delivered in accordance with SafeSeaNet IFCD (time) requirements	99%	100%

⁵ In July 2016, the SSN Graphical Interfaced suffered a downtime of around 11 hours due to a technical issue related with the infrastructure that affected the system and occurred outside office hours.

c. Improving internal market and maritime transport efficiency

As requested by the Commission and the Member States, the Agency continued to provide technical support for the implementation of Directive 2010/65/EU on reporting formalities (RFD) and compiling information on its implementation status. EMSA provided assistance to Portugal regarding the implementation of the Directive 2010/65/EU and the development of the National Single Window as approved by the EMSA Administrative Board.

Peer reviews to identify best practices and concerns in the implementation of Directive 2010/65/EU, were carried out in two (Sweden and the Netherlands) of the seven Member States who volunteered for this exercise. In addition EMSA assisted the Commission for the joint evaluation of the reporting formalities Directive 2010/65/EU and the Vessel Traffic Monitoring and Information System Directive 2002/59/EC.

The eManifest pilot project, which aims at simplifying and harmonising cargo formalities, as well as linking cargo and ship information, was launched. The contents of the eManifest was defined in collaboration with the relevant Commission services (DG MOVE and TAXUD) and the Member States and industry associations which volunteered to participate to the pilot project. The European Maritime Single Window (EMSW) prototype was developed to test the simplification and harmonisation of reporting formalities including the eManifest. A first version of the prototype was tested by the pilot project participants from Member States and industry associations.

These actions provided grounds for further rationalisation and harmonisation of ship reporting formalities in an effort to reduce the administrative burden on the shipping industry and enhance efficiency. Following the decision of the High Level Steering Group (HLSG) on the content of an upgraded SafeSeaNet (revised Annex II of Directive 2000/59/EC, reporting of bunkers) EMSA initiated work on the drafting of the specifications for SSN v.4, which will continue during 2017 and 2018. This development will have consequential impacts on the information to be reported by the National Single Windows to SSN and the relay of information to THETIS-EU.

Legal Basis	
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.3, 2.2(a), 2.2(d), 2.4(i) and 2a.3(a) 	
Outcome 2016	
<p>The Agency will assist Member States to better meet the requirements of the Reporting Formalities Directive. Such support is expected to include identifying best practice approaches and reflecting this knowledge in appropriate guidelines. Based on new technological developments, EMSA will test the use of VDES and other means available to improve service quality and support the implementation of the NSW.</p> <p>The Agency will support the Commission, using its expertise in electronic data transmission and in maritime information exchange systems, to simplify reporting formalities for ships with a view to the elimination of barriers to maritime transport.</p>	
Annual objectives 2016	
<ul style="list-style-type: none"> Support the Commission and the Member States in the implementation of the Reporting Formalities Directive and to provide requested technical assistance. Assist the Commission in the revision of the Reporting Formalities Directive. Support the Commission and the Member States in identifying best practices in simplifying and harmonising reporting formalities and reflecting this knowledge in improved guidelines. Work on measures and new technologies, such as VDES, which will further achieve simplification, harmonisation and rationalisation of reporting formalities for ships, including support for the implementation of policies aimed at establishing a European maritime transport space without barriers. 	
Planned output 2016	Actual output 2016

<ol style="list-style-type: none"> 1. Support for the technical implementation of the Reporting Formalities Directive (2010/65/EU), and in particular the enhancement of the National Single Windows (NSW) of Member States. 2. Assist the Commission in the revision of the Reporting Formalities Directive and in monitoring its implementation. 3. Undertake a study on Reporting Formalities Directive (2010/65/EU) Part C (implementation). 4. Support the Commission in developing pilot projects and an enhanced NSW prototype to test the simplification and harmonisation of reporting formalities, the receipt of VDES information, the eManifest, and the exchange of information via SSN. 	<ol style="list-style-type: none"> 1. Supported the Commission during eMS meetings and other meetings with Member States and industry representatives to assess the implementation of Directive 2010/65/EU. 2. Assisted the Commission in drafting the terms of reference and questionnaires for the joint evaluation of Directives 2010/65/EU and 2002/59/EU. 3. It was decided not to carry out the study on the implementation of Part C of Directive 2010/65/EU as the National Single Windows were still not fully implemented. 4. In support of the eManifest pilot project the Agency developed the European Maritime Single Window prototype to test the simplification and harmonisation of reporting formalities, including cargo formalities from the eManifest.
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Output Indicators	Target 2016	Result 2016
SafeSeaNet system data exchange in support of the Reporting Formalities Directive (2010/65/EU)	The requirements of Reporting Formalities Directive (2010/65/EU) are integrated in the PORT+ message, and therefore covered by the SafeSeaNet indicators.	The information exchange requirements of the Reporting Formalities Directive are integrated in the PORT+ message, and therefore covered by the SafeSeaNet indicators.

2.2 EU LONG RANGE IDENTIFICATION AND TRACKING (LRIT) COOPERATIVE DATA CENTRE (CDC) AND LRIT INTERNATIONAL DATA EXCHANGE (IDE)

The Long Range Identification and Tracking (LRIT) services hosted by EMSA, consisting of the European Union LRIT Cooperative Data Centre (EU LRIT CDC), the International LRIT Data Exchange (LRIT IDE), the EU LRIT Ship Database, and LRIT Consumption Tool, were fully operational throughout the year. LRIT services continued to feed the maritime picture. The LRIT IDE and EU LRIT CDC were compliant with the International Maritime Organization (IMO) requirements in accordance with IMO MSC.263(84) Revised performance standards and functional requirements for the LRIT, MSC.1/Circ.1259 and MSC.1/Circ.1376.

The LRIT IDE provided services to 57 LRIT Data Centres all over the world covering 122 Contracting Governments and Territories. New developments regarding the second modification of the LRIT system were implemented in line with IMO requirements (The ship type was already implemented. Furthermore, Inmarsat C 'speed' and 'heading' information was included in positions from EU LRIT CDC ships).

Planned input		Actual input
Commitment appropriations in EUR	3,356,445	3,362,186
Payment appropriations in EUR	3,317,960	3,298,064
Staff	6 AD, 7 AST	6 AD, 7 AST
Outcome 2016		
The Agency will continue to operate the EU LRIT CDC and the LRIT IDE in compliance with the IMO Performance Standards in the most efficient and economical manner. The Agency will monitor the discussions at IMO regarding the eNavigation concept and improvement of the LRIT system as appropriate, as well as any relevant issues at IMSO.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.3(a), 2.4 (a) and 2.4(h) 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety, security and environmental protection. (B2) To continue to work to further develop the EU maritime traffic monitoring and information system. (B3) To continue developing its role as forum for discussion of best practices. (D5) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Continue operation and maintenance of the EU LRIT CDC in accordance with IMO performance standards. Ensure operation and maintenance of the LRIT IDE in accordance with IMO Resolution MSC.322 (89). Implement the new developments of EU LRIT CDC, LRIT IDE and LRIT Ship Database as requested in IMO MSC 95 (June 2015). Provide operational support to all users of the EU LRIT CDC and LRIT IDE, including helpdesk activities. Prepare and implement a roadmap for the phasing out of the LRIT web interface (see 2.1.b. SafeSeaNet). Provide LRIT services to new participants wishing to join the EU LRIT CDC. Organise regular meetings with relevant LRIT users. Provide training on EU LRIT CDC to LRIT users. Meet legal and financial obligations concerning the exchange of LRIT data. 		

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Continued operations and ongoing maintenance of both systems (LRIT CDC and IDE) at EMSA. 2. Perform, subject to available resources, necessary upgrading of the EU LRIT CDC and the IDE, as requested by Member States and/or IMO. 3. Support to Member States for use of the EU LRIT CDC. 4. LRIT IDE testing support to LRIT Data Centres. 5. Maintain the quality of the services. 	<ol style="list-style-type: none"> 1. New releases of the EU LRIT CDC and LRIT IDE were developed in response to requirements of the second modification of the LRIT system in compliance with IMO Performance Standards. 2. The development of the upgrades for the EU LRIT CDC and LRIT IDE were done in line with the implementation plan prepared in 2015 and approved by the IMO Sub-Committee NCSR 3. During NCSR 4, in March 2017, it was decided that the go live for these improvements will be the 18 April 2017. 3. An operational helpdesk was provided to EU LRIT CDC users. Two LRIT National Competent Authority (NCA) meetings as well as one Regional LRIT training were organised regarding the use and development of the EU LRIT CDC and LRIT Ship Database. 4. The IDE Operator provided operational and technical helpdesk, such as the validation of the testing activities carried out by LRIT Data Centres, technical support to Contracting Governments and support to the LRIT Coordinator (IMSO) in performing audits of other LRIT Data Centres. 5. The EU LRIT CDC quality of service over any month defined by IMO (99%) was slightly below the target in March and April due to an issue with a main Land Earth Station delaying messages, and in September due to a problem with the ASP platform storage. Nevertheless, the yearly average of this criterion is above 99%. For the LRIT IDE, the IMO requirements were fulfilled. The percentage of ships reporting correctly in the EU CDC continued to increase. IMSO audits were performed for both EU LRIT CDC and LRIT IDE. No findings were identified.

Output Indicators	Target 2016	Result 2016	
EU LRIT DATA CENTRE			
System operational	percentage per month availability	99%	99.80%
	hours maximum continuous downtime	4h	1h43min
EU CDC reporting performance	percentage position reports delivered in accordance with IMO requirements (periodic reports: 15 min; polls: 30 min)	99%	99.41%
Web user interface	percentage per year of availability to users	99%	99.81%
LRIT IDE			
System operational	percentage per year availability of LRIT IDE in accordance with IMO requirements	99.9%	99.97%
	hours maximum continuous downtime of LRIT IDE in accordance with IMO requirements	4h	0h40min

2.3 THETIS

THETIS is a single window information system combining port call information (from SafeSeaNet) and inspection data. The system guided Port State Control Officers (PSCOs), through a risk based approach targeting mechanism, to ships which were to be inspected and allowed the results of inspections to be recorded. Via THETIS these reports were made available to all port State control authorities in the EU and in the Paris MoU region. In 2016, around 18,000 inspections were recorded in the system by 600 authorised users from 28 connected countries (EU and Paris MoU States).

In addition the Mobile Client application provides a stand-alone version to PSCOs to allow creation of inspection reports without connection to the main system.

THETIS was operational throughout 2016 without disruption, thus ensuring the quality and continuity of the service provided, including a dedicated helpdesk. A number of workshops for end users were offered, either to foster knowledge or to present enhancements.

THETIS is an essential tool for harmonised monitoring and targeting of ships calling in EU and Paris MoU ports. THETIS has become pivotal in daily PSC operations of the Member States since it also serves as a common platform for reporting inspections and sharing information and alerts to ensure the proper implementation of the relevant international conventions and EU legal acts by ships.

Planned Input		Actual input		
Commitment appropriations in EUR		1,685,094		1,904,676
Payment appropriations in EUR		1,719,637		1,939,198
Staff		4 AD, 1 AST, 1 CA		5 AD, 1 AST, 1 CA
Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
THETIS-S ⁶	EC – DG ENV	3 years duration; € 200,000	<i>committed 40,000 paid 40,000</i>	no extra staff
THETIS-MRV	EC – DG CLIMA	2 years duration; € 500,000	<i>committed 200,000 paid 200,000</i>	no extra staff
Emissions inventories	EC – DG ENV	3 years duration; € 150,000	<i>none</i>	no extra staff
Legal Basis				
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.4 (a), 2.4 (b), 2a.2(d) 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> To maximise its support role for an efficient and expanded scope of the PSC regime. (A8) To increase the effectiveness and efficiency of EMSA's integrated maritime information services to its full potential based on existing applications such as SafeSeaNet. (B1) Subject to the provision of financial and human resources the Agency shall engage in supporting other communities and enhance its role as central EU data provider of maritime related information as defined by its Founding Regulation. (B4) To assist the Commission, Member States and the maritime industry, where appropriate, in meeting, implementing and monitoring international and European legislation and initiatives on the reduction of SOx and NOx emissions. (C1) 				

⁶ THETIS-S is now incorporated into THETIS-EU.

- To assist the Commission and the Member States in the implementation of Regulation on the monitoring, reporting and verification of emissions of carbon dioxide, from maritime transport. (C2)
- To support if necessary the Commission in setting up a Monitoring, Reporting and Verification system for emissions in line with future policy developments in this area. (C3)
- To contribute to the protection of the marine environment in the EU. (C4)
- To assist Member States in the implementation of the new rules in the field of ship related pollution. (C5)
- To become a reliable source of information and statistics for the EU on maritime matters. (D4)
- To continue developing its role as forum for discussion of best practises. (D5)

a. THETIS and associated modules

In 2016 a stand-alone module (THETIS-EU) was included in THETIS, where users, depending on their access rights, are able to record and exchange data on inspections and verifications foreseen by EU legislation and not covered by the PSC Directive. The system facilitates targeting and alerts on the basis of predefined requirements set by EU legislation. Since 1 January 2015 THETIS-EU serves as a platform to record and exchange information on the results of individual compliance verifications performed by Member States as foreseen by Directive (EU) 2016/802 on the reduction in the sulphur content of marine fuels (the THETIS-S module was incorporated in THETIS-EU), and since April 2016 it serves as a platform to record and exchange information on the results of inspections foreseen by Directive 2000/59/EC on port reception facilities. 9,256 Sulphur Inspections and 1,159 PRF inspections were recorded from national competent authorities throughout the EU in 2016.

Thanks to its modular approach, THETIS is now serving different communities in the EU responsible for targeting and inspection, such as the authorities responsible for the Sulphur Directive and PRF Directive. Those authorities that have used the system, even though it is not mandatory, have achieved a high level of uniformity in inspection (Sulphur or PRF) and fuel sampling as well as increased sharing of collected information throughout the EU.

Outcome 2016

The Agency operates the Port State Control information system in line with the Port State Control Directive (2009/16/EC) as amended, including the Implementing Acts and the Paris MoU text, the RoPax Directive (1999/35/EC), Regulation 391/2009 on common rules and standards for ship inspection and survey organisations, the BWMC (when it enters into force) and Regulation 1257/2013 on Ship Recycling.

THETIS-S, now merged into THETIS-EU, caters for the enforcement of the provisions of Directive 1999/32/EC as amended and the calculation of frequency of inspections and samples and the future targeting system.

THETIS-EU accommodates the Port Reception Facilities Directive (2000/59/EC).

THETIS-MRV will cater for the provisions of Regulation 2015/757.

Operations of THETIS and its modules are supported technically and operationally by a helpdesk. All elements of THETIS will be communicating with a dedicated tool for analysis and statistics where appropriate.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.3(a) and 2.2(b)

Annual objectives 2016

- Ensure the proper operation of THETIS, THETIS-S and other relevant modules.
- Ensure on time development to comply with new or amended International or EU legislation coming into force.
- Ensure relevant training.
- Ensure regular meetings with relevant end users.

Planned output 2016

1. Information System (THETIS): operational, maintained, and under continuous enhancement to meet new requirements.
2. Information System (THETIS-S): operational, maintained, and

Actual output 2016

1. THETIS was operational throughout the year and under continuous enhancement to meet new requirements.
2. THETIS-S was incorporated into THETIS-EU and

<p>under continuous enhancement to meet new requirements.</p> <ol style="list-style-type: none"> 3. Interface with SafeSeaNet: operational and processing the 2015 NSW changes. 4. Development of dedicated elements to cater EU legislation with PSC provisions. 5. Cooperation with Paris MoU and Member States to supervise, verify and validate the operation and further enhancement of the system. 6. Training to users. 	<p>continues to support the authorities responsible for inspection and sampling of fuels as required by the Sulphur Directive.</p> <ol style="list-style-type: none"> 3. The Interface with SafeSeaNet was operational and updated to match the NSW changes and to be able to relay immediately upon receipt the relevant PRF information available in the Central system to THETIS. This information is then stored and displayed for the concerned inspector. 4. THETIS was extended with a stand-alone module (THETIS-EU) catering for inspections and verifications foreseen by EU legislation and not covered by the PSC Directive, including targeting and alerts. The provisions of the PRF Directive are monitored through this module since April 2016. 5. Cooperation with PSC authorities in Paris MoU and Member States was ensured to supervise, verify and validate the operation and further enhancement of THETIS. Regular updates on the developments of THETIS-EU were offered to Member States through the Sulphur Committee and the ESSF PRF subgroup. 6. Training was provided to various communities (PSC, Sulphur, PRF), with a targeted approach depending on needs and access rights.
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Output Indicators		Target 2016	Result 2016
System operational	percentage per year availability	96%	99.41%
	hours maximum continuous downtime	6	2h:01m
Helpdesk Service	percentage of requests closed in less than 5 days	75%	94.53%

b. THETIS-MRV

In 2016 a cooperation agreement was concluded between the European Commission (DG CLIMA) and EMSA for the development of a new module in THETIS, namely THETIS-MRV, in support of Regulation (EU) 2015/757 for the monitoring, reporting and verification of CO2 emissions from maritime transport. EMSA developed a concept which was welcomed both by Member States and the industry, within the context of the ESSF, where, through a web-based application, all relevant parties foreseen by Regulation (EU) 2015/757 for the monitoring, reporting and verification of CO2 emissions from maritime transport (owners, managers, verifiers, Member States) will fulfil their monitoring and reporting obligations in a harmonised way. THETIS-MRV will have a mandatory and a voluntary module. Through the mandatory module automated reporting requirements in relation to Emission Reports and associated Document of Compliance will be facilitated. Through the voluntary module companies may build their monitoring plans while the system will make the latter available for verifiers' assessment.

THETIS-MRV is the first technical solution developed by EMSA that will support both the work of the Member States and the Industry, thus achieving a uniform and harmonised way of transmission of the information foreseen by Regulation (EU) 2015/757 and facilitating the work of all interested parties.

Outcome 2016
<ul style="list-style-type: none"> ▪ Templates for Emission reports and Documents of compliance. ▪ Specifications and business rules for THETIS-MRV.
Legal Basis
<ul style="list-style-type: none"> ▪ Regulation (EU) 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC
Annual objectives 2016
<ul style="list-style-type: none"> ▪ Cooperation Agreement with the Commission. ▪ Development of templates for Emission reports and Documents of compliance. ▪ Development of THETIS-MRV. ▪ Provision of technical assistance to the Commission with respect to delegated and implementing acts foreseen by the MRV Regulation.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Cooperation Agreement between EMSA and the Commission. 2. Organisation of awareness and technical workshops for competent authorities of the Member States. 	<ol style="list-style-type: none"> 1. The Agreement was signed on 30/03/2016. EMSA developed business rules on the basis of the Delegated and Implementing Acts adopted in September 2016. 2. EMSA participated at different events and used the framework of the ESSF to raise awareness.

Output Indicators		Target 2016	Result 2016
THETIS-MRV	Timely delivery of tasks foreseen by the Cooperation Agreement	Templates for Emission reports and Documents of compliance.	Yes
		Specifications and business rules for THETIS-MRV.	Yes

c. Emission inventories

Over the course of 2016, the shipping emissions modelling functionality was developed.

A final report with emission inventories attributed per Member State in their relevant sea areas (covering territorial seas, Exclusive Economic Zones, Pollution Control Zones, Sulphur Emission Control Areas, where applicable) for the period 2011-2015 was delivered to European Commission (DG ENV) in November 2016. The results will be used by the Commission to assess whether the cost-effective strategy put in place at EU level for monitoring of compliance and enforcement concretely resulted in the achievement of the environmental and health objectives of Directive 2016/802/EU.

Outcome 2016
New functionality in THETIS-S (now THETIS-EU) to evaluate the inventories of shipping emissions based on shipping activity data for domestic, short sea and international shipping.
Legal Basis
<ul style="list-style-type: none"> ▪ Regulation (EC) 2002/1406 as amended, art.2.2(c) ▪ Directive 1999/32/EC as amended, Art. 7
Annual objectives 2016
<ul style="list-style-type: none"> ▪ Implementation of the tasks defined in the relevant cooperation agreement with the Commission. ▪ Development of a model to establish inventories of shipping emissions based on shipping activity data for domestic, short sea and international shipping. ▪ Quantification of the bottom-up emissions (SO_x, NO_x and PM) resulting from combustion of marine fuel from international and domestic shipping, covered by the AIS data. ▪ Assessment, as appropriate, of the positive effect on air quality of specific measures such as the stricter sulphur requirements under Directive 1999/32/EC as amended.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Emission inventory modelling functionality, its future enhancements and results for emission inventories based on shipping activity data. 2. Organisation of awareness and technical workshops for competent authorities of the Member States. 	<ol style="list-style-type: none"> 1. The functionality was developed and a final report with emission inventories attributed per Member State in their relevant sea areas (covering territorial seas, Exclusive Economic Zones, Pollution Control Zones, Sulphur Emission Control Areas, where applicable) for the period 2011-2015 was delivered to European Commission (DG ENV) in November 2016. 2. The functionality and the report were presented to relevant services of the Commission. The dissemination with the Member States will take place in 2017.

Output Indicators		Target 2016	Result 2016
Emission Inventories	inventories of shipping emissions based on shipping activity data will have to be attributed per Member State in their relevant sea areas (EEZ (Exclusive Economic Zone),	Development of new functionality in THETIS-S to establish and evaluate the inventories of shipping emissions based on shipping activity data.	Yes

	PCZ (Preferred Conservation Zone), SECAs (Sulphur Emission Control Areas)) for the period 2012-2017	Calculation and analysis of inventories of shipping emissions for the period 2012-2015.	Yes
		Minimum of one workshop organised.	n/a ⁷

⁷ Development was ongoing during 2016.

2.4 MARITIME SUPPORT SERVICES

During 2016, the Maritime Support Services (MSS) performed well above the established KPIs, providing an uninterrupted 24/7 operational and technical helpdesk to users of all vessel traffic monitoring and surveillance systems hosted by the Agency. The MSS provided a single point of contact in case of emergencies and provided continuous monitoring of all EMSA hosted maritime applications, facilitating high availability and performance standards. Regular assessments and reporting of SafeSeaNet data quality, implementation, and performance to the SafeSeaNet National Competent Authorities have shown its effectiveness by driving improvements at Member State level.

Planned Input		Actual input
Commitment appropriations in EUR	1,836,940	1,734,156
Payment appropriations in EUR	1,836,940	1,690,445
Staff	8 AD, 2 AST, 3 SNE, 2 CA	7 AD, 2 AST, 3 SNE, 2 CA
Outcome 2016		
<p>Users of the vessel traffic and maritime information services benefit from timely and appropriate helpdesk and monitoring services.</p> <p>Users of EMSA's operational services benefit from 24/7 availability to activate and mobilise such resources during an emergency, by triggering the EMSA contingency plan.</p>		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To increase the effectiveness and efficiency of EMSA's integrated maritime information services to its full potential based on existing applications such as SafeSeaNet. (B1) 		
Annual objective 2016		
<ul style="list-style-type: none"> Ensure timely and appropriate helpdesk and monitoring services. 		

Planned output 2016	Actual output 2016
<p>1. Maritime Monitoring Services to be provided on a 24/7 basis including:</p> <ul style="list-style-type: none"> Monitoring availability and performance of EMSA maritime information systems Ensuring continuity of dataflow by data providers Verifying and reporting on quality of data in systems Maintaining ship watch reference lists (banned ships, single hull tankers, location codes, reference ship identifiers, Member State contacts or responsible authorities) Providing timely and appropriate operational and technical helpdesk to the Commission and Member State users of the maritime information services Implementing a survey assessing user perception of MSS services Refining procedures to maximise efficiency in relation to pending requests <p>2. In the event of maritime emergencies, the MSS will:</p>	<p>1. The MSS was available 24/7, without any interruption. The following services were provided:</p> <ul style="list-style-type: none"> Helpdesk support and monitoring of the applications. Supported Member States and followed up their implementation of the SafeSeaNet version 3 release. Maintained the reference lists and coordinated the update of two new versions of the UNECE list of location codes (LOCODEs) employed by the maritime applications. Verified and reported on the consistency and quality of data provided by Member States to SafeSeaNet, including new checks for the Waste and Security information. Supported Contracting Governments of the EU LRIT Data Centre regarding the integration of relevant ship data as well as monitoring the associated ship reporting requirements. Assisted in developing and revising of application monitoring procedures for various releases and new

<ul style="list-style-type: none"> ▪ Act as single point of contact ▪ Provide reporting to EMSA and the Commission on maritime accidents of EU interest in accordance with the EMSA contingency plan ▪ If appropriate, initiate the procedure of mobilising EMSA operational services in accordance with pre-defined procedures. 	<p>services (Copernicus, Central Hazmat Database, etc.) as well as undertaking the associated monitoring of their performance and availability.</p> <ul style="list-style-type: none"> ▪ The survey assessing user perception of MSS services is planned for 2017 (performed on a two-yearly basis as recommended by the IAS). <p>2. The MSS was available at all times in case of emergency. Three 'Maritime Emergency Reports' and their corresponding updates were produced for EMSA and the Commission regarding incidents of EU interest. The EMSA contingency plan was not activated during 2016.</p>
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Output Indicators		Target 2016	Result 2016
Maritime Support Services available 24/7	average time in hours for feedback or resolution of issues relating to emergencies, incidents in maritime applications or urgent helpdesk requests	<2	0h21min ⁸
	average time in hours for feedback or resolution of issues relating to non-urgent helpdesk requests or scheduled interventions	<8	0h30min
MSS Data Quality Reports	reporting on the SafeSeaNet implementation and data quality (overall and per Member State)	20 Reports	25 reports

⁸ Calculation of MSS KPIs could only be extracted until 21/11/2016 included due to the migration to the new version of FootPrints on 22/11/2016.

Project: COPERNICUS MARITIME SURVEILLANCE SERVICE

Activities related to setting up the service were initiated in May 2016 following the approval of the implementation plan. The first operational services were delivered in September to initial users in fisheries control and law enforcement (EFCA and MAOC-N respectively). Preparation activities for provision of operational services were also undertaken with a number of other new users from national administrations in the areas of maritime safety and security, customs, and law enforcement. New users are supported in an iterative process during which they define their user requirements, with the support of EMSA. EMSA then undertakes the necessary technical work to set up user accounts, and - once the service is operational - to plan, order, acquire and deliver the Copernicus services based on earth observation data and derived products.

Two training sessions were held in October 2016. A User Requirements Workshop in November 2016 was attended by 120 participants from EU/EFTA Member State administrations, European Agencies, and the Commission. It was a dynamic and interactive event which provided valuable input for the continued roll-out of the service.

Planned operational activities as well as expected service evolutions, based on user feedback, clearly demonstrate the beneficial role of earth observation in supporting a better understanding and improved monitoring of activities at sea.

Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
Implementing the Copernicus programme for maritime surveillance	EC-DG GROW	2015-2020 € 40,000,000 (expected)	<i>committed 4,454,000 paid 1,494,203</i>	No extra project-financed staff. Three CA covered by the EMSA subsidy.
Outcome 2016				
Copernicus services are offered through EMSA to stakeholders in the maritime surveillance domain in accordance with user requirements.				
Legal Basis				
<ul style="list-style-type: none"> ▪ Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.4 (a), 2.4 (b) and 2a.2(c) ▪ Regulation (EU) N° 377/2014 of the European Parliament and of the Council establishing the Copernicus Programme and repealing Regulation (EU) No 911/2010 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> ▪ To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety, security and environmental protection. (B2) ▪ To continue to work to further develop the EU maritime traffic monitoring and information system. (B3) ▪ To engage in supporting other communities and enhance the Agency's role as central EU data provider of maritime related information as defined by Union law. (B4) ▪ To become a reliable source of information and statistics for the EU on maritime matters. (D4) 				
Annual objectives 2016				

- Implement the activities defined in the Copernicus Maritime Surveillance Services Annual Implementation Plan for 2016.
- Develop EMSA's portfolio of earth observation products and services in areas relevant for Copernicus activities.
- Expand the Copernicus component to users already served by EMSA (fisheries control, law enforcement and, marine pollution⁹).
- Explore new technologies that can enhance the Copernicus service portfolio and support the Copernicus Service delivery process.
- Organise promotion, training and user up-take of Copernicus services.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Provision of Copernicus component of maritime surveillance services as part of existing Integrated Maritime Services. 2. Establishment of organisational framework for implementing the delegated Copernicus tasks. 	<ol style="list-style-type: none"> 1. Copernicus Maritime Surveillance services were provided to users through the existing Integrated Maritime Services portal. 2. Delegated Copernicus tasks were undertaken and organised in accordance with the work breakdown structure and activity plan approved as part of the annual Implementation Plan 2016.

Output Indicators		Target 2016	Result 2016
Copernicus services availability	percentage per year availability of Copernicus services	95%	95.85% ¹⁰

⁹ Border control is addressed under a separate project with Frontex (see following pages).

¹⁰ System operational only in Q4.

Project: FRONTEX

The services provided to Frontex by EMSA are based on a Service Level Agreement as renewed in May 2016 for another three-year period. Taking advantage of the Agency's Integrated Maritime Services, five different types of services / products tailored to Frontex were provided successfully as follows:

- Vessel monitoring and tracking service based on AIS and LRIT data.
- Vessel detection service based on SAR satellite imagery and correlation with IMS vessel position information.
- Anomaly detection service based on IMS Automated Behaviour Monitoring (ABMs) tools.
- Activity detection service based on high resolution optical satellite images.
- Vessel reporting service based on tracking vessels specifically identified by Frontex.

EMSA continued to provide value adding operational activities and improvements under all services.

Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
Providing integrated maritime services to Frontex	Frontex	2013-2016 € 12,000,000	<i>committed 9,503,238</i> <i>paid 5,916,156</i>	4 CA
Outcome 2016				
Integrated maritime services are offered to Frontex in accordance with their user requirements and the end user requirements of Member States.				
Legal Basis				
<ul style="list-style-type: none"> ▪ Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.4 (a), 2.4 (b), 2a.2(d) ▪ Regulation (EC) N° 1052/2013 Art. 18. (EUROSUR) 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> ▪ To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety, security and environmental protection. (B2) ▪ To continue to work to further develop the EU maritime traffic monitoring and information system. (B3) ▪ To engage in supporting other communities and enhance the Agency's role as central EU data provider of maritime related information as defined by Union law. (B4) ▪ To become a reliable source of information and statistics for the EU on maritime matters. (D4) 				
Annual objectives 2016				
<ul style="list-style-type: none"> ▪ Renewal of the Service Level Agreement (SLA) signed between EMSA and Frontex. ▪ Implementation of the SLA Annual Programme 2016. 				

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Establishment of a renewed Service Level Agreement (SLA) between EMSA and Frontex. 2. Provision of integrated maritime services under the existing and new SLA and in support of the implementation of the EUROSUR regulation. 3. Continued implementation of common operational procedures as per 2016 Annual Programme. 	<ol style="list-style-type: none"> 1. The SLA was updated and renewed in May 2016 for another 3 year period. 2. Taking advantage of the Agency's Integrated Maritime Service, 5 different types of tailored services /products were provided as previously listed. 3. The Common Operational Procedures (COP) were implemented as expected during the year. Following the renewal of SLA, the COP was revised to appropriately reflect updated provisions.

Output Indicators		Target 2016	Result 2016
Frontex service availability	percentage per year availability of services to Frontex	95%	99.82%

Project: Interagency cooperation with Frontex and EFCA on national Coast Guard functions

The pilot project "Creation of a European Coast Guard Function" focused on enhancing interagency cooperation between EMSA, Frontex and EFCA on coast guard functions. Under Task 1 'Sharing Information' of the pilot project, EMSA worked closely with EFCA and Frontex on improving existing cooperation and services related to the exchange of information for the purposes of maritime surveillance.

EMSA has provided its IMS (Integrated Maritime Service) service to EFCA, as well as a real time maritime awareness operational picture and quick access to a wide selection of maritime information. These services assisted in the detection of "Illegal, Unreported, and Unregulated fishing" (IUU). Similarly, EMSA has provided a number of services to Frontex specifically tailored to meet its needs for supporting Member States' border control activities and within the framework of Frontex Joint Operations (JO). These services include detection, identification and tracking of vessels, anomaly detection, and monitoring of departure points, thereby considerably enhancing the maritime situational awareness and reaction capability of border and coast guards.

Through Task 2 'Joint maritime surveillance services', EMSA prepared the ground work for an RPAS demonstration to test various RPAS configurations and sensors for multipurpose missions addressing the tasks of the three agencies e.g. marine pollution monitoring and detection, ship emissions monitoring, border control, fisheries control, etc. The demonstration took place in mid-May 2017. In addition, EMSA initiated the process of establishing a "Joint Maritime RPAS Service" as a joint capability with Frontex and EFCA. Tender specifications were prepared by the three agencies during 2016. Following a preparation phase of 3 months, including fit for purpose/acceptance tests, this RPAS service will provide long endurance medium size RPAS as well as vertical take-off/landing RPAS to support EU Agencies and national authorities carrying out coast guard functions.

Through Task 3 an outline of guidelines on interagency cooperation was developed, covering all aspects identified by the three agencies in the areas of operational cooperation, training, research and development and situational awareness. EMSA actively contributed to the process and hosted two dedicated workshops to jointly review and agree on the content of the guidelines and possible areas for further cooperation.

In 2016 the Agency also started preparations for the closing conference/workshop of the pilot project, scheduled for mid-2017. The event will bring together relevant Member State users and authorities, representatives from the European Coast Guards Functions Forum (ECGFF), relevant Commission services and representatives of the European Parliament and EU Council, and will address the results of the cooperation under the pilot project for the different tasks, lessons learnt and recommendations for further cooperation, including related communication activities.

Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
Implementing together with Frontex & EFCA a pilot project for enhanced cooperation of national Coast Guard bodies at EU level	EC	2016-2018	none	no extra staff
Outcome 2016				
Support is provided to the Commission and Member States for reinforcing cooperation of national Coast Guard bodies at EU level.				
Legal Basis				
<ul style="list-style-type: none"> ▪ Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.4 (a), 2.4 (b), 2a.2(d) ▪ Regulation (EC) N° 1052/2013 Art. 18. (EUROSUR) 				

Multi-annual strategic objectives

- To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety, security and environmental protection. (B2)
- To continue to work to further develop the EU maritime traffic monitoring and information system. (B3)
- To engage in supporting other communities and enhance the Agency's role as central EU data provider of maritime related information as defined by Union law. (B4)

Annual objectives 2016

- Carry out activities with Frontex and EFCA to implement the pilot project.

Visits and inspections to monitor the implementation of EU legislation

3.1 CLASSIFICATION SOCIETIES

Inspecting Recognised Organisations (ROs) is a key maritime safety task. In 2016, EMSA carried out nineteen office inspections of ROs, including seven Head Offices located in Europe, the United States of America, the Republic of Korea, Japan and China.

The location and scope of the inspections were determined on a risk-basis, taking into account, inter alia, the EMSA inspection history, results of Member States' monitoring activities, the outcome of the Commission's assessments and follow-up on corrective actions, as well as industry developments. Preparation of inspections included remote auditing techniques whereby detailed information was evaluated before the inspection, enabling a focussed approach during the inspection itself. Where possible, inspections were combined to minimise mission costs.

There was a continued focus on common issues for ships in operation (including ISM audits and ESP surveys, as well as structural fire protection on Ro-Ro passenger ships) and on newbuilding activities (application of rules and statutory requirements, development and application of software tools to support newbuilding activities, projects of Ultra Large Container Ships), as well as on internal verification activities as part of the ROs control over their survey and certification processes.

Findings were established in all inspections, triggering voluntary corrective actions in all cases, the implementation of which will be verified in the next round of inspections.

EMSA also inspected the Quality Assessment and Certification Entity (QACE) for the second time, as a follow-up of the Commission's periodic assessment of QACE of 2013.

EMSA hosted a technical workshop with all ROs where issues of common interest were discussed.

Planned input		Actual input
Commitment appropriations in EUR	1,783,557	1,882,772
Payment appropriations in EUR	1,783,557	1,823,435
Staff	10 AD, 1 AST, 1 SNE	10 AD, 1 AST, 1 SNE
Outcome 2016		
Based on the reports submitted by the Agency, the Commission should be able to make a sound assessment and, where appropriate, request corrective measures of Recognised Organisations or take decisions on withdrawal of recognition or other sanctions, in order to improve the overall quality of the certification work undertaken by those organisations.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.2 (b), 2.3(c), 2.4(h) and 3 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To increase resource effectiveness and efficiency through the development of a "risk-based" approach to inspections. (A2) To increase efficiency of the Commission's assessments of recognised organisations, in particular through a risk-based approach to inspections. (A5) To develop ideas for more effective sharing of information on inspections. (A6) To assist the Commission in verifying the correct implementation by the EU recognised organisations of the quality assessment and certification entity (QACE). (A7) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Maintain same effort in inspections as in 2015. Continue to apply a risk based approach for RO inspections. 		

- Provide assistance to the Commission and Member States as concerns the monitoring of Recognised Organisations.
- Assist the Commission in verifying the correct implementation by the EU recognised organisations of the quality assessment and certification entity (QACE).
- Provide end-of-cycle inspection and draft assessment reports to support the Commission's assessments of Recognised Organisations.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. 16-20 inspections of Recognised Organisations' offices. 2. Upon request of the Commission, initial inspections of classification societies following any new request for EU recognition. 3. Upon request of the Commission, provide technical assistance in the follow-up of the assessment of the Quality Assessment and Certification Entity set up by the Recognised Organisations in accordance with Regulation (EC) No. 391/2009 on common rules and standards for ship inspection and survey organisations. 4. End-of-cycle inspection reports and draft assessment reports and recommendations, to assist the Commission in its preparation of the assessments of Recognised Organisations and their follow-up. 5. Support to the Commission in the implementation of Regulation (EC) No. 391/2009 on common rules and standards for ship inspection and survey organisations and Directive 2009/15/EC on common rules and standards for ship inspection and survey organisations and for the relevant activities of maritime administrations as necessary. 	<ol style="list-style-type: none"> 1. In total 19 office inspections were carried out as well as one ship visit. 2. No initial inspections were carried out. 3. One inspection of the Quality Assessment and Certification Entity was carried out at the request of the Commission. 4. EMSA prepared end-of-cycle and draft Commission assessment reports of three ROs, as requested by the Commission. 5. EMSA assisted the Commission with the above mentioned activities and also, inter alia, with activities related to the COSS meetings and a workshop held with all EU ROs, where technical issues of common interest were discussed.

Output Indicators		Target 2016	Result 2016
Inspections	number of RO inspections per year	16-20 ¹¹	19
	percentage of planned inspections completed	100%	118.75%
Reports	number of reports per year	16	16
End-of-cycle inspection and draft assessment reports	number of reports per year	4-6	3 ¹²

¹¹ Visits to ships, inspection of ROs not yet recognised and initial inspections following new recognition requests, are not included in this figure.

¹² The Commission agreed on a reorganisation of the planning of RO end of cycle reports. As a result only 3 of the expected 4-6 were produced.

3.2 STCW

The Agency continued to carry out inspections of the maritime education, training and certification systems in third countries. In 2016, inspections were carried out in Egypt, Uruguay, Ecuador and Oman. In addition, the Agency continued the second cycle of visits to Member States.

EMSA prepared seven technical opinions on the corrective action plans submitted by five third countries and evaluated five responses to the Commission's assessments from three third countries. EMSA also evaluated three updates on the actions taken by another third country. The corrective actions taken by the inspected countries have led to significant improvements in their systems.

In 2016, a statistical review on the number of seafarers holding valid EU certificates and endorsements of recognition, representing a snap-shot of the European labour market, was published for the first time. The report was based on data extracted from certificates and endorsements registered by EU Member States up to 31 December 2014 and recorded in the STCW Information System. In addition, the second set of data on certificates and endorsements issued to seafarers by the Member States up to 31 December 2015 was collected. EMSA will continue to receive such data in the coming years, providing statistics and trends on potential seafaring manpower in the EU, for the benefit of policy makers and the industry.

EMSA also initiated the development of a STCW Distance Learning Programme to be completed in 2017. This programme, together with the two training courses already completed and being delivered, will allow training on STCW to reach a much wider audience.

Finally one workshop took place with focus on the human element, where seafarers statistics and the role of the human element in maritime accidents represented a valuable input for the discussions.

Planned input		Actual input
Commitment appropriations in EUR	1,298,712	1,549,396
Payment appropriations in EUR	1,298,712	1,399,278
Staff	6 AD, 2 AST, 1 SNE	6 AD, 2 AST, 1 CA, 1 SNE
Outcome 2016		
Based on the reports submitted by the Agency, the Commission should be able to take policy decisions and/or request corrective measures of third countries or Member States, in order to improve the overall quality of seafarers and the correctness of their certification in line with the STCW Convention or Directive 2008/106/EC on the minimum level of training of seafarers, as amended, respectively.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.2 (b), 2.4(e), 2.4(h) and 3 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To become a reliable source of information and statistics for the EU on maritime matters. (D4) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Similar effort of visits and inspections as in 2015. Ensure the availability of the STCW Information System. Provide any necessary technical assistance on aspects related to the certification and training of seafarers and social issues. Provide any necessary technical assistance on the REFIT evaluation of Directive 2008/106/EC and related Directive 2005/45/EC. 		

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Four-five inspections of third countries. 2. Three-four visits to Member States. 3. Maintain the STCW Information System; minimising down-time, ensuring a high level of availability and providing system support to users. 	<ol style="list-style-type: none"> 1. Four Inspections of third countries. 2. Four visits to Member States. 3. A high level of availability of the STCW Information System was ensured, above the planned minimum target. 4. A statistical review on the number of seafarers holding valid EU certificates and endorsements of recognition, representing a snap-shot of the European labour market, was published. 5. One workshop with focus on the human element was organised.

Output Indicators		Target 2016	Result 2016
Inspections and visits	number of inspections and visits per year	7-8	8
	percentage of planned inspections and visits completed	100%	114.29%
Reports	number of reports per year	7-8	7
STCW System Information	percentage per year availability	95%	99.6%

3.3 IMPLEMENTATION OF THE PSC DIRECTIVE

In 2016 EMSA performed the last two visits to Member States of the current cycle, in order to assess the level of implementation of Directive 2009/16/EC, as amended. The outcome of each visit was presented to the Member State in question and the Commission through the visit reports. In addition EMSA presented the outcome of all visits performed under the current cycle in the Paris MoU Committee meeting. Furthermore a desktop analysis was performed to verify appropriate compliance of each Member State with the foreseen inspection obligation.

The overall conclusion is that Port State Control continues to be one of the most effective instruments to verify that ships comply with international safety and pollution prevention regulations and that the relevant inspections are carried out in a harmonised way thus ensuring equivalent safety standards and avoiding the distortion of competition.

The reports provided to the Commission supported the assessment of the Member States' compliance with the relevant legislation and provided an insight into areas where the relevant provisions of the Directive might need to be revisited. The Member States used findings identified during the visits to implement corrective actions.

Planned input		Actual input ¹³
Commitment appropriations in EUR	585,065	1,223,742
Payment appropriations in EUR	585,065	1,191,419
Staff	3 AD, 1 SNE	6 AD, 2 AST, 1 SNE
Outcome 2016		
Provide information to the Commission on the implementation of the PSC Directive (2009/16/EC) as amended by Member States, enabling the Commission to assess Member States' compliance with the legislation and undertake actions where necessary. This information will be provided to the EFTA Surveillance Authority in respect of the visits to Norway and Iceland. The desktop analysis will provide an early indication of the level of implementation among the Member States. Prepare the third cycle of PSC visits (2017-2021).		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2 (b), 2.3(d) and 3 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To maximise its support role for an efficient and expanded scope of the PSC regime. (A8) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Conclusion of second cycle of PSC visits (2 visits). 		

¹³ Activities 3300 (PSC Directive) and 3500 (other EU legislation) were merged during the course of the year into a single Activity 3300 covering all EU legislation and renamed "Visits to Member States to monitor implementation of EU law". This explains the significant difference between planned and actual input.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Two visits to Member States. 2. Desktop analysis of implementation of the PSC Directive 2009/16/EC as amended at the request of the Commission. 3. Preparation of all the necessary documentation (methodology, questionnaire, matrix, format of the report, etc.) in view of the third cycle of visits. 	<ol style="list-style-type: none"> 1. Two visits to Member States. 2. A desktop analysis of implementation of the PSC Directive was performed for all Member States, in particular regarding the inspection obligation of each Member State. 3. Initial preparations were made for the third cycle of visits, which is planned to start in the first half of 2017.

Output Indicators		Target 2016	Result 2016
Visits	number of visits per year	2	2
	percentage of planned visits completed	100%	100%
Reports	number of reports per year	2	3

3.4 MARITIME SECURITY

In 2016, EMSA continued to assist the Commission in monitoring Member State implementation of Regulation (EC) No 725/2004 on enhancing ship and port facility security. Following the 2013 amendment to EMSA's Founding Regulation, EMSA's technical assistance covered the full scope of the Regulation. Additionally, EMSA continued to provide technical assistance to the EFTA Surveillance Authority in respect of ship security.

Whilst the number of inspection missions remained at a similar level as both 2014 and 2015, the number of individual inspections increased substantially compared to recent years, following the change of focus onto the inspections of ships and port facilities.

EMSA's reports highlighted observations identified during the inspections, provided recommendations and information on Member States' implementation of maritime security measures, procedures and structures. EMSA also provided technical input for future inspections in the field of ship security for the Commission's consideration.

For the first time two training courses on port facility security, mainly addressed to officers in the administrations with port and port facility security responsibilities, were developed and delivered to Member States and to SAFEMED III beneficiary countries. Additionally a ship security training course for officers in the administrations with experience and knowledge in flag/port State security aspects was delivered.

EMSA continued also to participate in the MARSEC (Maritime Security) Committee and the Stakeholders' Advisory Group on Maritime Security chaired by the Commission. Additionally, EMSA assisted the Commission in the process of accreditation for national security inspectors in the framework of the implementation of the Regulation (EC) No 725/2004.

Planned input		Actual input
Commitment appropriations in EUR	573,578	500,032
Payment appropriations in EUR	573,578	480,046
Staff	3 AD, 1 CA	3 AD

Outcome 2016

Provide technical assistance to enable the Commission and the EFTA Surveillance Authority to assess and verify the implementation of EU maritime security legislation in the Member States visited.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2 and 2.2 (b)

Multi-annual strategic objectives

- Adding value from visits and inspections (Strategic Action Area).

Annual objectives 2016

- An increased effort of missions compared to 2015, aiming at supporting the Commission for the whole scope of security inspection monitoring activity (including port facilities).
- Provide the Commission with timely advice on the level of security implementation by the Member States.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 16-18 missions to Member States including Norway and Iceland. Upon request of the Commission, contribute to the updating and enhancement of the procedures for performing maritime security inspections. Upon request of the Commission, provide assistance on the follow-up of the deficiencies identified during 	<ol style="list-style-type: none"> 12 missions, 11 to EU Member States and one to an EFTA Member State. During the missions in the EU Member States, 71 individual inspections were carried out, including 42 ships, 25 port facilities and four Member State administrations. Reports of all these inspections were submitted. EMSA participated in the working groups set up

<p>inspections.</p> <p>4. Upon request of the EFTA Surveillance Authority, provide assistance for inspections of Norway and Iceland.</p>	<p>by the Commission to discuss the methodology and procedures for certain types of inspection.</p> <p>3. No formal requests from the Commission for assistance to verify Member States' proposed action plans were received.</p> <p>4. The mission in one EFTA Member State concerned that Member State's maritime administration.</p>
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Output Indicators		Target 2016	Result 2016
Inspections	number of missions per year	16-18	12 ¹⁴
	percentage of planned missions completed	100%	75% ¹⁵
Reports	number of reports per year ¹⁶	30-35	40

¹⁴ The number and timing of maritime security inspections is decided by the Commission and the EFTA Surveillance Authority. Compared to the original planning, the Commission cancelled two inspections and the EFTA Surveillance Authority has only requested EMSA's assistance for one instead of the expected three inspections.

¹⁵ See previous footnote.

¹⁶ More than one report may be prepared by the Agency following an inspection mission, for example if more than one Member State is inspected.

3.5 MONITORING IMPLEMENTATION OF OTHER EU MARITIME LEGISLATION

EMSA continued the agreed cycles of visits to Member States to assist the Commission and the EFTA Surveillance Authority in their assessment of Member States in achieving a convergent and effective implementation of Union maritime law. In 2016, 12 visits were carried out in respect of five EU Directives: on accident investigation (Directive 2009/18/EC), Vessel Traffic Monitoring and Information Systems (Directive 2002/59/EC), sulphur content of marine fuels (Directive 2016/802/EU), port reception facilities (Directive 2000/59/EC) and fishing vessel safety (Directive 97/70/EC).

The visits related to Directive 2016/802/EU are part of a new cycle of visits launched in 2016, this being the first cycle conducted under the Methodology for visits to Member States approved by the EMSA Administrative Board in 2015. At the request of the Commission, and pending completion of the REFIT exercise on EU ship safety legislation, no further visits to verify the implementation of Directive 98/41/EC on the registration of persons sailing on board passenger ships were carried out.

Visits are conducted in full cooperation with Member States, which benefit from an impartial external view of their operational implementation and enforcement of Union law, taking into account local and regional concerns. The visits provide the Member States with an opportunity to better plan resources, assess training requirements and review any gaps and shortcomings, as appropriate, in order to optimise the level of compliance with Union law. This enhances cooperation between the Commission and Member States towards achieving consistency and meeting common targets. Furthermore, the visits generated important information for the horizontal analyses on the effectiveness of the measures in place to be conducted once a full cycle of visits has been completed.

Planned input		Actual input ¹⁷
Commitment appropriations in EUR	1,020,958	59,000
Payment appropriations in EUR	1,020,958	85,508
Staff	5 AD, 2 AST	-
Outcome 2016		
Provide advice to enable the Commission and the EFTA Surveillance Authority to assess and verify the implementation of EU maritime legislation in the Member States visited. Assist EU and EFTA Member States in their understanding of the requirements of EU legislation and the resources needed for its effective implementation.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(b) and 3 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) 		

¹⁷ Activities 3300 (PSC Directive) and 3500 (other EU legislation) were merged during the course of the year into a single Activity 3300 covering all EU legislation and renamed "Visits to Member States to monitor implementation of EU law". This explains the significant difference between planned and actual input.

Annual objectives 2016

- Sound implementation of the methodology for visits to Member States.
- Similar effort in visits as in 2015.
- Primary focus on accident investigation and passenger ships legislation.
- Verification of selected aspects of European passenger ship safety legislation.
- New cycle of visits on Directive 1999/32/EC as amended on the sulphur content of marine fuels.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. 6 visits to EU Member States to monitor the implementation of Directive 2009/18/EC on the investigation of accidents in the maritime transport sector. 2. 1-2 verifications of selected aspects of European passenger ship safety legislation. 3. 1-2 visits to EU Member States focusing primarily on the implementation of Directive 2012/33/EU amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels. 4. 1 visit to an EFTA Member State concerning the implementation of EU legislation on fishing vessels. 5. 2 follow-up visits to EFTA Member States in respect of port reception facilities under Directive 2000/59/EC. 6. Upon request of the Commission, assistance to verify the implementation of any other EU legislative acts in the field of maritime safety or ship-sourced pollution. 	<ol style="list-style-type: none"> 1. Seven visits were undertaken, including one to an EFTA Member State, and nine reports were sent, including one to the EFTA Surveillance Authority. 2. No verification visits were carried out. 3. Two visits to Member States were undertaken. 4. One visit to an EFTA Member State was undertaken and a report was sent to the EFTA Surveillance Authority. 5. One visit to an EFTA Member State was undertaken and a report was sent to the EFTA Surveillance Authority. 6. One visit to an EU Member State, in respect of vessel traffic monitoring and information systems (Directive 2002/59/EC as amended) was carried following a request by the Commission.

Output Indicators		Target 2016	Result 2016
Visits	number of visits per year	13-14	12 ¹⁸
	percentage of planned visits completed	100%	92.31% ¹⁹
Reports	number of reports per year	13-14	13

¹⁸ The projected visits to Member States in respect of Directive 98/41/EC were cancelled in view of the Commission's REFIT exercise on ship safety legislation and a follow-up visit to an EFTA Member State in respect of port reception facilities was postponed to 2017. These were only partially offset by an increase in the number of accident investigation visits.

¹⁹ See previous footnote.

3.6 HORIZONTAL ANALYSIS AND RESEARCH

When a cycle of visits or inspections has been concluded, or when deemed appropriate, such as mid-cycle, the Agency analyses its reports with a view to identifying horizontal findings and general conclusions on the effectiveness and cost-efficiency of the measures in place. These analyses are intended to facilitate discussions with the Commission and Member States, to draw relevant lessons and disseminate good working practices.

In 2016, two Horizontal Analyses were completed: an analysis of the truncated cycle of visits to Member States concerning the registration of persons on board passenger ships, to provide input to the Commission's REFIT exercise on EU maritime safety legislation, and an analysis of the findings from the visits to Member States related to Directive 96/98/EC on marine equipment.

In addition, a pilot cost-effectiveness analysis of the PSC Directive was completed, proving the feasibility and benefits of analysing costs, effectiveness and efficiency of the measures put in place by Member States when implementing and enforcing the requirements of Union law. Based on this positive outcome, a cost-effectiveness analysis will be included in all new cycles of visits to Member States started in 2016 or thereafter.

One workshop took place in 2016, namely in preparation for the cycle of visits to Member States for Directive 2016/802/EU on the sulphur content of marine fuels that started in the 4th quarter of 2016.

Planned input		Actual input
Commitment appropriations in EUR	550,578	406,438
Payment appropriations in EUR	550,578	393,008
Staff	3 AD, 1 CA	2 AD, 1 CA
Outcome 2016		
Provide advice to enable the Commission and the EFTA Surveillance Authority to assess and verify the implementation of EU maritime legislation and to identify whether and if so what changes are needed to Union law to improve the level of maritime safety and the prevention of pollution by ships in the EU.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.2(c) and 3.5 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To provide the Commission with objective, comparable audit information and generic findings based on analysis of completed inspection cycles and the whole range of related information available as well as with technical recommendations as appropriate. (A3) To enhance an effective dissemination of relevant Horizontal Analysis results not only to the Commission but also to Member States' maritime administrations, including sharing best practices. (A4) To continue developing its role as forum for discussion of best practices. (D5) To use available technical knowledge to analyse research projects with a maritime safety or environmental protection interest, where appropriate. (D7) 		

Annual objectives 2016

- Carry out horizontal analyses of cycles and part cycles of visits and inspections to identify horizontal findings and general conclusions on the effectiveness and cost-efficiency of the measures in place, including the identification of good practices.
- Hold workshops, as relevant and appropriate, with the Commission and Member States to review the horizontal analyses and provide the Member States with a forum for the sharing of lessons learnt and best practices and identifying possible future training needs.
- Support the Commission in its assessment of the results of visits and inspections, including follow-up with Member States and, when required, in any wider follow-up action (e.g. consultations with Member States, workshops on best practice, possible changes to Union law including contributions to impact assessments, etc.).
- Conduct analyses of research projects to assist the Commission, upon request, with preparatory work for updating/developing legislation.
- Analyse research instrumental to other tasks (especially in relation to environmental protection issues).

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. 2-3 Horizontal Analyses of full or part cycles or series of visits and inspections. 2. Support the Commission and the Member States by sharing the results of and knowledge gained from the Horizontal Analyses through workshops and seminars. 3. Analyses of research projects, upon request, to assist the Commission with preparatory work for updating/developing legislation. 	<ol style="list-style-type: none"> 1. Two horizontal analyses were completed. 2. One workshop was held with the Commission and Member States. 3. No requests were received. 4. One pilot cost-effectiveness analysis for the Port State Control Directive was carried out.

Output Indicators		Target 2016	Result 2016
Analyses on the basis of full or part cycles or series of visits and inspections	number of horizontal analyses per year	2-3	2
	percentage of planned analyses completed	100%	100%

Providing Member States and the Commission with technical and scientific assistance and facilitating technical cooperation between Member States' Maritime Authorities and with the Commission.

4.1 PORT STATE CONTROL

EMSA continued to support the Commission in its participation in all the structures of the Paris MoU providing technical assistance to the Commission or the Paris MoU Task Forces on the implementation of the Inspection Regime.

Technical assistance was provided to the Commission on the deliberations on the proposal for a Directive on a system of inspections for the safe operation of ro-ro ferry and high-speed passenger craft in regular service and amending Directive 2009/16/EC on port State control and repealing Council Directive 1999/35/EC. EMSA also supported the work of the Commission in the ex post evaluation of Directive 2009/16/EC on port State. In addition the Agency continued to host, support and enhance RuleCheck to support PSC Officers and the e-learning platform MaKCs, which were kept operational on a continuous uninterrupted basis. A dedicated help service for users was provided throughout the year.

Planned input		Actual input
Commitment appropriations in EUR	884,065	834,998
Payment appropriations in EUR	884,065	713,245
Staff	3 AD, 1 SNE	3 AD

Outcome 2016

The Agency will continue to support the Port State Control system in line with the PSC Directive (2009/16/EC) as amended. The support includes inter alia the maintenance and further enhancement of the information system (THETIS), the maintenance and further development of RuleCheck and MaKCs and technical assistance to the Member States and the Commission on matters related to PSC.

The Agency is working towards harmonising Port State Control in and by Member States, by developing and organising common training and common PSC tools. This will contribute to a more harmonized level of PSC in the European Union, establishing a more unified level of maritime safety.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.4(d) and 2.4(h).

Multi-annual strategic objectives

- To support the Commission and the Member States in improving ship safety. (A1)
- To maximise its support role for an efficient and expanded scope of the PSC regime.(A8)
- To assist the Commission, Member States and the maritime industry, where appropriate, in meeting, implementing and monitoring international and European legislation and initiatives on the reduction of SOx and NOx emissions (C1)
- Support EU Strategies on regional sea basins. (D1)

Annual objectives 2016

- Ensure the proper operation of RuleCheck and MaKCs (Distance Learning Package (DLP) for PSC Inspectors).
- Assist in the publication of information relating to ship inspections (PSC Directive 2009/16/EC as amended).
- Provide technical assistance as concerns the Paris MoU.
- Ensure proper operation of RuleCheck and MaKCs for SAFEMED III and TRACECA II beneficiary countries.
- Further enhance RuleCheck and MaKCs to cater for environmental maritime legislation of the Union.

Planned output 2016	Actual output 2016
1. Management and enhancement of harmonised training tools.	1. Harmonised training tools were managed and enhanced.
2. Management and elaboration of 'RuleCheck'.	2. 'RuleCheck' was managed and enhanced.
3. Keeping up-to-date the publication of banned vessels	3. The publication of banned vessels and company

<p>and company performance.</p> <ol style="list-style-type: none"> 4. Ensuring the daily publication of the list of poor performing companies. 5. Providing statistics upon request. 6. Supporting the Commission in the implementation of the PSC Directive (2009/16/EC) as amended. 7. Supporting the Commission and the Member States in the implementation of the RoPax Directive (1999/35). 8. Participation in all technical meetings and working groups of the Paris MoU. 9. Assistance to the Commission in the potential revision of Annexes of the PSC Directive (2009/16/EC) 10. RuleCheck and MaKCs shall be further developed in order to provide similar support to PSC and other competent authorities to implement legal acts of the Union not falling within the remit of the Paris MoU (Sulphur Directive, Ship Recycling Regulation). 	<p>performance was kept up-to-date.</p> <ol style="list-style-type: none"> 4. The daily publication of the list of poor performing companies was ensured. 5. Statistics were provided upon request in particular within the context of the ex post evaluation of Directive 2009/16/EC. 6. Support was provided to the Commission in the implementation of the PSC Directive (2009/16/EC). 7. Support was provided to the Commission on the proposal for a Directive on a system of inspections for the safe operation of ro-ro ferry and high-speed passenger craft in regular service and amending Directive 2009/16/EC on port State control and repealing Council Directive 1999/35/EC; support was provided to the Commission and the Member States were supported in the implementation of the RoPax Directive (1999/35). 8. Participation was ensured in all technical meetings and working groups of the Paris MoU, and certain policy meetings, on behalf of the Commission, in particular in the coordination meetings for defining the final outcome of joint ministerial meeting of Paris MoU and Tokyo MoU. 9. Technical support, including data from THETIS, was provided to the Commission in the potential revision of Annexes of the PSC Directive, 10. MAKCs and RuleCheck were further developed in order to provide support to competent authorities in the Member States beyond the remit of PSC (STCW module, Sulphur module, ENV legislation, General Maritime Legislation, BWMC, MLC).
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Output Indicators		Target 2016	Result 2016
RuleCheck system operational	percentage per year availability	85%	99.05%
RuleCheck	days maximum continuous downtime	9d	3d
RuleCheck Helpdesk Service	percentage of requests closed in less than 9 days	75%	100%
MaKCs system operational	percentage per year availability	85%	99.99%
	days maximum continuous downtime	9d	0d
MaKCs Helpdesk service	percentage of requests closed in less than 9 days	75%	93.02%

4.2 ACCIDENT INVESTIGATION

The Agency continued to manage the European Marine Casualty Information Platform (EMCIP) and coordinated a working group of Member States' experts to improve the EMCIP taxonomy. Several technical and operational documents were prepared and made available to EMCIP users, including user manuals, reporting guidelines and a data quality policy. The contract for the new EMCIP was awarded in December 2016 for deployment of the new EMCIP by mid-2018. The new application will be more user-friendly and include tools to assist investigations and analysis.

EMSA provided the Secretariat to the 6th meeting of the Permanent Cooperation Framework (PCF) and organised the 1st PCF Inter-sessional seminar on best practices for Accident Investigation. Support was also provided to PCF Working Groups on: (i) training, (ii) promulgation of Safety Recommendations, (iii) definitions relevant for accident investigation, and (iv) preparation of a booklet on best practices as a follow up of the seminar.

Training activities included a "VDR Seminar", the "Core Skills for Accident Investigators" course, an e-learning module on accident investigation legislation and the first "Train-the-trainer" course on EMCIP. Dedicated sessions were also organised for ENP Countries.

The 3rd edition of the "Annual Overview of marine casualties and incidents", providing focussed views per main ship type, was published. Data from EMCIP were used to support specific projects such as the EMSA FIRESAFE study, or evaluations and impact assessments of maritime safety legislation by the Commission.

Planned input		Actual input
Commitment appropriations in EUR	1,094,873	1,041,190
Payment appropriations in EUR	1,094,873	1,152,363
Staff	4 AD, 1 AST, 1 SNE	4 AD, 1 AST, 1 SNE
Outcome 2016		
EMSA's activities will improve the accident investigation capabilities of Member States. By collecting and comparing investigation data held in EMCIP EMSA will add value by identifying relevant lessons learned at EU level.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a) and 2.4(c) 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To develop practical solutions for providing operational support to Member States – at their request - concerning investigations related to serious and very serious maritime accidents. (A9) To support the European Commission and EU Member States to enhance maritime safety through the analysis of accident investigation reports and by producing maritime casualty statistics and analysing trends. (A10) To become a reliable source of information and statistics for the EU on maritime matters. (D4) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Ensure the proper running of EMCIP. Carry out analysis of the safety investigation reports made available to EMSA. Publish the annual overview of marine casualties and incidents on the basis of EMCIP data. Support the Permanent Cooperation Framework set-up under Art.10 of the Directive. Assist the Commission in its preparation of the required 5-yearly report to the European Parliament and the Council on the implementation of the Accident Investigation directive. 		

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Supporting the Member States and the Commission in the implementation of the Accident Investigation Directive. 2. Providing the Secretariat of the Permanent Co-operation Framework, as foreseen by Regulation (EU) No 651/2011 adopting the rules of procedure of the PCF. 3. Maintaining the current European Marine Casualty Information Platform (EMCIP). 4. Develop a modern, more efficient and user-friendly platform for the EMCIP, to be hosted at EMSA. 5. Checking EMCIP data quality through an acceptance procedure. 6. Investigating practical solutions for providing operational support, if requested by Member States, in investigations related to serious or very serious maritime accidents. 7. Analysing accident investigation reports with a view to identifying lessons to be learnt at EU level. 8. Analysing data from casualty investigations and proposing any appropriate safety recommendations to the Commission. 9. Publishing the annual overview of marine casualties and incidents on the basis of data provided by the Member States. 10. Contributing as requested, to the Commission's 5-yearly report to the European Parliament and the Council on the implementation of the Accident Investigation Directive. 11. Contributing as requested, to the Commission's evaluations and impact assessments of maritime safety legislation in the context of the new Commission Better Regulation Guidelines (May 2015), in particular using EMCIP as a source of reliable data. 	<ol style="list-style-type: none"> 1. The Agency concluded the action plan resulting from the Workshop dedicated to implementation issues with Directive 2009/18/EC, together with the Member States and the Commission. 2. The Secretariat of the Permanent Cooperation Framework (PCF) was provided, including the organisation of the 6th PCF meeting and the 1st PCF intersessional meeting. The Agency also led the Working Group on Training of Accident Investigators and participated in all other working groups established by the PCF. 3. EMCIP was maintained up and running with 388 users from 49 organisations registered. Functionalities of the system were improved in 2016 such as the ship reference database, the administrative module and a tool to report information on actions taken by any entity in connection to an occurrence. 4. The procurement process for the new EMCIP was successfully completed in December 2016. Consultation with experts from Member States through several meetings was of crucial importance for defining user specifications fitting the users' needs. 5. New procedures were implemented to monitor the data quality in EMCIP to ensure a high quality level. A new workflow was also defined to streamline the reporting process in EMCIP. 6. No request from Member States for operational support was received. 7. This task was not started in 2016 due to lack of resources. 8. Data from casualty investigations were provided following ad-hoc requests such as for the EMSA FIRESAFE project. 9. The 3rd edition of the Annual Overview was published. 10. Input was provided to the European Commission in the preparation of the ex-post evaluation study of the Directive that will also incorporate the implementation report provided by Article 23 of the Directive. 11. Data reported to EMCIP were used to support the ex-post evaluation of Regulation 392/2009 (Liability of carriers of passengers by sea in the event of accidents) and the Refit evaluation of Directives 2008/106/EC (Minimum level of training of seafarers) and 2005/45 (Mutual recognition of seafarers' certificates issued by the Member States).

Output Indicators		Target 2016	Result 2016
EMCIP meetings	number of meetings per year	2	2
Accident Database	number of occurrences notified in EMCIP during the year	3500	4702
PCF meetings	number of meetings per year	1	2

4.3 TECHNICAL ASSISTANCE (TRAINING AND COOPERATION)

Training and cooperation is one of the Agency's key tasks. In 2016 the Agency delivered 24 training sessions (including PSC seminars) in which 636 experts from the Member States, Norway and Iceland and the Paris MoU Region participated. In addition the Agency organised 20 training sessions for 150 experts from the enlargement countries. Furthermore, six eLearning modules were developed for a number of communities, related to legal acts that have recently entered or will soon enter into force. The new models covered various topics, such as General Maritime Legislation, Environmental Maritime Legislation, Sulphur Directive, Sulphur Inspectors Guidance, STCW, MLC and Ballast Water.

Through its portfolio of training and tools the Agency supported national capacity to implement the Union acquis, fostered cooperation and disseminated best practices, thus contributing to achieve uniform implementation of EU maritime legislation and a level playing field.

Planned input		Actual input		
Commitment appropriations in EUR		1,419,370	1,455,451	
Payment appropriations in EUR		1,419,370	1,307,513	
Staff		2 AD, 1 AST, 2 SNE, 1 CA	3 AD, 1 AST, 2 SNE	
Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
EC Funds for candidate and potential candidate	EC	2015-2018 € 300,000	<i>committed 211,871 paid 141,261</i>	no extra staff
Outcome 2016				
<p>To promote best practices between EU Member States and increase knowledge and awareness of solutions found, benefiting maritime safety, ship security and prevention of and response to marine pollution by ships.</p> <p>To support the process of approximation to EU maritime safety "acquis" for enlargement countries.</p>				
Legal Basis				
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.3(a), 2.3(b) and 2.5 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To become the implementing body of maritime safety related projects for IPA and ENP countries. (D2) To prepare IPA and ENP countries for association to EMSA's traffic monitoring services and for use of EMSA's pollution response services. (D3) To continue developing its role as forum for discussion of best practices. (D5) To consolidate its role as training provider including the use of modern techniques. (D6) 				
Annual objectives 2016				
<ul style="list-style-type: none"> Maintain training for Member States and enlargement countries at the same level as in 2015. Provision of training to enlargement countries (specific budget provided by the Commission). PSC training for countries taking part in the Paris MOU. 				

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Up to 14 training sessions for Member States on the range of topics covered by EMSA's mandate. 2. Up to 6 sessions for training/technical assistance for officials from enlargement countries related to EU-legislation and EMSA activities. 	<ol style="list-style-type: none"> 1. 24 training sessions for Member States were performed covering both existing and forthcoming legal acts falling within the EMSA's mandate 2. 20 training sessions for enlargement countries were performed covering both existing and forthcoming legal acts falling within the EMSA's mandate.

Output Indicators		Target 2016	Result 2016
Training for Member States	number of MS training sessions per year	up to 14	24
	number of MS experts attending per year	290	636
Training for enlargement countries	number of AC training sessions per year	up to 6	20
	number of AC experts attending per year	50	150
Customer satisfaction	level of customer satisfaction	>70%	>70%

4.4 MARINE EQUIPMENT AND SHIP SAFETY STANDARDS

In 2016, EMSA continued to support the Commission's Fitness Check of EU Passenger Ship Safety legislation by providing data and analysis on fleet profile and accidents. Three published legislative proposals are now under consideration within Parliament and Council.

In line with the conclusions of the 2015 workshop on fires on the vehicle decks of ro-ro passenger ships, EMSA coordinated an expert group (GoE) from the Member States and the Commission in order to promote discussions at a technical level. In parallel, EMSA also completed the FIRESAFE study which further analysed the key risks identified by the GoE, considered possible solutions and conducted a cost analysis. The results of both exercises were presented in a workshop in November 2016 attended by representatives from the Accident Investigation Bodies and the Maritime Administrations of the Member States.

EMSA also ensured technical support for the implementation and update of the recently revised Marine Equipment Directive (2014/90/EU). A draft of the new Commission Implementing Regulation providing a list of marine equipment standards, including application dates for the first time, was delivered in consultation with the Member States, Commission and the Industry. The Agency also followed the work of the MarED Technical Secretariat for Notified Bodies and managed the contracts for the MarED database.

Following completion of the "EMSA 3" Damage Stability study investigating passenger ship safety, EMSA provided the relevant information to the Commission and Member States. The work was the basis for an EU proposal for an increase in the damage stability requirements (i.e. Index 'R') submitted to IMO SDC 3 in 2016 and leading to a compromise which was presented for adoption at IMO MSC 97. Negotiations within IMO are expected to conclude in June 2017.

Planned input		Actual input
Commitment appropriations in EUR	1,898,937	1,787,518
Payment appropriations in EUR	1,928,509	1,729,927
Staff	7 AD, 1 AST, 2 SNE	6 AD, 1 AST, 3 SNE
Outcome 2016		
The Agency will contribute to the safety of ships and marine equipment at European level by supporting the implementation, update and development of appropriate and harmonised safety standards. It will also contribute to the functioning of the internal market by assessing individual safety problems and market distortions due to differences in application of standards.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(a), 2.2(c) and 2.4(h) 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To become a reliable source of information and statistics for the EU on maritime matters. (D4) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Assist the Commission in any development of relevant legislation arising from the fitness check (REFIT – Regulatory Fitness) initiated in 2014, of Directives 2009/45/EC on safety rules and standards for passenger ships, 2003/25/EC on specific stability requirements for ro-ro passenger ships, 1998/41/EC on the registration of persons on board and 1999/35/EC on mandatory surveys of ro-ro ferry and HSC passenger services. Follow up EMSA's study assessing the acceptable and practicable risk level of passenger ships related to damage stability. Support the Commission and the Member States in relation to the submissions and work of the technical bodies of the IMO on passenger ship safety and to the Member States' expert group meetings, with regard to matters of Union competence. Update the list of standards for marine equipment subject to flag State approval and conduct technical review of safeguard clause cases. 		

- Support the Commission in the development of the Cost Benefit Analysis for the introduction of electronic tagging for marine equipment.
- Support the Commission and the Member States in work arising from the co-ordination group of Notified Bodies, authorised by the Member States to carry out the conformity assessment procedures in accordance with the Marine Equipment Directive.
- Maintenance of the MarED database.
- Follow-up of the EU-USA Mutual Recognition Agreement and management of the alert system.
- Analysis of research projects relevant to ship safety.
- Technical support for the implementation, update in line with the development of international legislation and development of Ship Safety and Marine Equipment legislation, including technical review of notified exemptions and derogations.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Providing technical support to the Commission and the Member States on the work at IMO in the field of Maritime Safety Standards. 2. In particular, the Agency will provide technical support regarding developments on passenger ship damage stability, fire safety, the International Safety Management (ISM) code and Goal Based Standards. 3. Providing technical support to the Commission on any development and follow-up of relevant legislation following the REFIT of passenger ship safety legislation (Directive 2009/45/EC on safety rules and standards for passenger ships, Directive 2003/25/EC on specific stability requirements for ro-ro passenger ships, Directive 1998/41/EC on the registration of persons on board, and Directive 1999/35/EC on mandatory survey of ro-ro ferry and HSC passenger services). 4. Preparation of the update to the list of standards for marine equipment that is subject to flag State approval in the form of the annex to an implementing act of the new Marine Equipment Directive (yearly basis). 5. Examination of safeguard clause cases submitted under the Marine Equipment Directive. 6. Management of the alert system foreseen by the MRA signed between the EU and the USA and providing the Commission with a revised list of marine equipment and associated legislative, regulatory and administrative provisions that the EU and the USA may determine to be equivalent. 	<ol style="list-style-type: none"> 1. Technical support was provided the Commission and the Member States in IMO meetings by reviewing the meeting submissions and providing technical input for the EU coordination non-paper, particularly focused on passenger ship safety. EMSA's work on ro-ro vehicle deck fires successfully supported the case for a new item in IMO's work programme. 2. Technical support was provided for the developments on passenger ship damage stability and the draft biennial report on the implementation of the ISM code. A second workshop on fires on board ro-ro decks was organised with representatives from the Member States and the Accident Investigation Bodies, with contributions from industry experts and researchers. 3. In October 2016, the Commission published relevant legislative proposals arising from the Fitness Check of passenger ship safety legislation. EMSA provided support to the Commission for the finalisation of the proposals and the first reading of the proposal on Directives 2009/45/EC and 1998/41/EC in the Council working Party. 4. Technical support was provided to the Commission in the preparation of the Annex to the first Implementing Regulation for the Marine Equipment Directive (2014/90/EC Article 35), including consultation with the MS and a workshop with MS and industry to discuss the key issues and establish the main principles in June 2016. 5. No safeguard clause cases under the Marine Equipment Directive (2014/90/EC) were submitted to EMSA but advice was provided on some market surveillance files. 6. No issue was raised within the alert system foreseen by the MRA signed between the EU and the USA.

Output Indicators		Target 2016	Result 2016
MarED Database	percentage per year availability of MarED DB	99%	99.98%

4.5 MARITIME INFORMATION, EQUASIS AND STATISTICS

The Equasis information system presents safety and quality-related information on the world's merchant fleet with a particular focus on information on port State control inspections, class and P&I cover. The information is supplied by almost all the port State control regimes around the globe and various industry-based organisations. The data is accessible freely on the Internet. EMSA hosts the Management Unit of Equasis thus responsible for the day to day operation of the system (including help desk), preparation of biannual meetings of the Editorial Board and the Supervisory committee, the accreditation of data providers and the publication of annual statistics on the world's fleet.

In 2016 a revised MoU was prepared, adding environmentally related data for Equasis. The revised MoU was adopted by the contributing parties and was signed during a ceremony held in IMO premises in July 2016.

The Agency has also further developed the MARINFO information system, which is now incorporated into the THETIS environment and produced data and statistics to support the ex post evaluation of the Directive 2009/16/EC, the ex post evaluation and impact assessment for Directive 2000/59/EC and to support the annual frequency of inspections and samples foreseen by Directive 2016/802/EU.

Equasis was kept operational on a continuous basis. Helpdesk service was provided to the users. In addition, the scope of the project with respect to data to be included was extended.

Through MARINFO a total of 40 data requests were handled in 2016, confirming the usefulness of regular statistics and ad hoc analyses. Furthermore Equasis continued to be the sole source of free and reliable information for the shipping industry.

Planned input		Actual input		
Commitment appropriations in EUR	675,531	936,593		
Payment appropriations in EUR	675,531	925,529		
Staff	1 AD, 1 AST, 1 SNE	3 AD, 1 SNE, 1 CA		
Project financed input				
Project	Funding source	Time frame	Financial input 2016	Staff
EQUASIS	Equasis Member States	ongoing	<i>committed 586,176 paid 473,856</i>	No extra staff
Outcome 2016				
Reliable information systems that can significantly contribute towards rationalising and optimising assessment of compliance with the requirements of International and EU legislation. Reliable and compatible data to support the Agency's tasks in preparing and making use of up-to-date and validated information on maritime safety.				
Legal Basis				
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2 and 2.4(d) 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> To support the Commission and the Member States in improving ship safety. (A1) To maximise its support role for an efficient and expanded scope of the PSC regime. (A8) To contribute to the protection of the marine environment in the EU. (C4) To become a reliable source of information and statistics for the EU on maritime matters. (D4) 				
Annual objectives 2016				
<ul style="list-style-type: none"> Enhance and promote the internal Web portal for the MARINFO Project. Address complex requests through the MARINFO Helpdesk. Increase the number of data providers contributing to Equasis. 				

- Search for new signatory parties for Equasis thus decreasing the financial contribution of the existing members, including EU Member States and EMSA.
- Promote and disseminate regular maritime-related statistics (possibly a publication) with particular focus on EU ships and waters.
- Support the Commission by providing reliable statistics, in particular on the implementation of the Commission Implementing Decision 2015/253.
- Ensure proper operation of RuleCheck and MaKCs for SAFEMED III, TRACECA II beneficiary countries, EU Accident Investigation bodies and EU Flag Administrations.
- Further enhance RuleCheck for the creation of more and different User Groups by the RuleCheck system administrator in EMSA, thus offering the option of uploading folders relevant to the work of user communities (national legislation folders).
- Provide the necessary support to the India Ocean MoU for the use of MaKCs.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Management of Equasis. 2. Publishing the annual statistical report on the world merchant fleet in Equasis. 3. Production of statistical products (regular or ad hoc) from the MARINFO database, as well as analyses, services and publications, for internal and external use, as appropriate. 4. Support data analysis pilot projects. 5. Enhancement of the MARINFO database through the promotion and development of an in-house web portal. 6. Analysis of statistics, on the basis of the reports submitted by the Member States through THETIS-S, on the appropriate implementation of Directive 2012/33/EU amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels. 7. Development of RuleCheck and MaKCs to support different user communities. 	<ol style="list-style-type: none"> 1. The management of Equasis was ensured, and an amended MoU was adopted. 2. The annual statistics were published. 3. Statistical products (regular or ad hoc) from the MARINFO database were offered to support ex post evaluation of legal acts and relevant impact assessments. 4. Data analyses pilot projects were supported as relevant. 5. The MARINFO database has been incorporated into the THETIS environments and linked to Jasper thus providing enhanced statistics and supporting internal pilot projects. 6. Annual reports regarding compliance by Member States with the sulphur standards reporting as well as the annual frequency of sampling for 2017 were prepared and disseminated to Member States and European Commission. 7. MAKCs and RuleCheck were further developed in order to provide support different user communities.

Output Indicators		Target 2016	Result 2016
Equasis	percentage per year availability	99.5%	99.98%
	number of users per month	35 000	33 552 ²⁰
	number of contributing members	9-10	10

²⁰ Number of visitors to the public site of Equasis stayed slightly below expectations. Fluctuations in number of users are seen to follow media coverage of shipping related events, and reflect the economic situation in general.

4.6 PREVENTION OF POLLUTION BY SHIPS

In 2016 the Agency provided technical and scientific assistance to the European Commission and the Member States on a number of environmental legislative acts in the area of prevention of pollution by ships that were being implemented, adopted or entering into force. The assistance included the development of guidance documents (EMSA's Best Practice Guidance on the Inventory of Hazardous Materials, Guidance for Ship Inspections under the Port Reception Facilities Directive, Technical Recommendations on the Implementation of PRF Directive, draft EMSA Guidance on LNG Bunkering to Port Authorities and Administration), training (for Sulphur Inspectors), organisation of dedicated workshops (for Directive 2000/59/EC, for Directive (EU) 2016/802, for Regulation (EU) 1257/2013 and for the use of LNG as fuel in shipping), development of concept papers (for Regulation (EU) 2015/757) and support to the Commission on Evaluation reports and Impact Assessment (for Directive 2000/59/EC).

Furthermore EMSA continued the technical and administrative support to the ESSF and its seven sub groups. The support entailed preparation (drafting of technical documents), participation and follow up (minutes and reports) for 21 meetings.

Finally the Agency launched two studies (Study on the use of Fuel Cells in Shipping and Management of Ship-Generated Waste On-board Ships) whose final results were made available early 2017.

The Agency also contributed at IMO level through contributions to EU submissions and the development of the coordination papers before relevant sub-committees and committees. The Agency also participated on behalf of the Commission in the Working and Drafting Groups covering areas related to Greenhouse Gases, Ship Recycling, Air Emissions (SOx and NOx), including Alternative fuels such as LNG, and Ballast Water. Particular emphasis should be given to the work of the Agency in supporting the Commission and Member States during MEPC for the adoption of the 0.5% Sulphur cap for 2020.

Planned input		Actual input
Commitment appropriations in EUR	1,215,684	1,191,714
Payment appropriations in EUR	1,215,684	1,107,280
Staff	6 AD	5 AD
Outcome 2016		
The Agency's expertise in matters related to environmental protection assists the Commission and Member States to better tackle a variety of ship-sourced pollution and emission problems, with regard to implementation as well as new legal developments.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.2(d), 2.4(h), 2a.2(a) and 2a.2(b) 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To assist the Commission, Member States and the maritime industry, where appropriate, in meeting, implementing and monitoring international and European legislation and initiatives on the reduction of SOx and NOx emissions. (C1) To assist the Commission, Member States and the industry in the technical development related to alternative fuels for ships. (C2) To support if necessary the Commission in setting up a Monitoring, Reporting and Verification system for emissions in line with future policy developments in this area. (C3) To contribute to the protection of the marine environment in the EU. (C4) To assist Member States in the implementation of the new rules in the field of ship related pollution. (C5) 		
Annual objectives 2016		
<ul style="list-style-type: none"> Technical assistance to the Commission in monitoring compliance with the requirements relating to sulphur content in fuel. Technical assistance to the Commission in implementing the Directive on Port Reception Facilities, including reporting and monitoring of the provisions of the Directive, as well as technical recommendation to improve implementation and the development of a dedicated module for PRF in THETIS. 		

- Technical assistance to the Commission in reviewing the Directive, including work on the impact assessment of the different options for the revision of the Directive.
- Technical assistance to the Commission for further actions related to air quality (comparative study on penalties under the new Sulphur Directive, shipping emission inventories, and contributions to studies on fuel availability review).
- Assistance to Member States mainly by appropriate training of Sulphur inspectors.
- Assistance to the European Sustainable Shipping Forum (ESSF) and the relevant subgroups.
- Follow-up of international developments in IMO and technical assistance to the Commission in IMO.
- Assistance to the Commission in the implementation of the MRV legislation, including the development of a dedicated module in THETIS (THETIS-MRV) and assistance in preparing implementing and delegated acts.
- Technical assistance to the Commission and to the Member States on the availability, approval and use of abatement methods for different air pollutants.
- Technical assistance to the Commission for the implementation of Title II of the Ship Recycling Regulation.
- Support to the Commission and Member States in matters regarding maritime liability and compensation.
- Support to the Commission and Member States in the implementation of the Ballast Water Management Convention (expected to enter into force within 2016).

Planned output 2016	Actual output 2016
<p>1. Port reception facilities:</p> <ul style="list-style-type: none"> – Organising workshops for Member State experts to improve the implementation of Directive 2000/59/EC on port reception facilities (PRF Directive). – Providing technical support to the Commission to improve reporting under the PRF Directive, in particular regarding enforcement, through specific guidance as well as the development and application of the THETIS-EU module which will cater for PRF and linking that system to SSN. – Supporting the process of reviewing the PRF Directive, in particular the impact assessment to be undertaken in 2016, which will look at the different options for the revision Group. – Launching support studies to support the impact assessment process for the legislative revision and help with data collection. – Providing assistance to Member States for the uniform implementation of the Directive on the basis of the technical recommendations being developed by the Agency. – Providing assistance to the ESSF-PRF subgroup as technical secretariat. <p>2. Greenhouse gases:</p> <ul style="list-style-type: none"> – Providing technical assistance to the Commission on the implementation of Regulation (EU) 2015/757 on the monitoring, reporting and verification of emission of carbon dioxide from maritime transport, and amending Directive 2009/16/EC, in particular for the preparation of the implementing and delegated acts. – Providing technical assistance to the Commission in reviewing and assessing various voluntary and mandatory technical and market-based measures to reduce greenhouse gases from ships, depending on the regulatory choices made at international or EU level. – Providing assistance to the Commission in following international developments, notably in relation to the Energy Efficiency Design Index, its review and its extension to additional ship types. – Providing assistance to the Commission in following international developments concerning the Global Data Collection System for maritime transport covering fuel consumption and greenhouse gas emissions as well as further technical and operational measures to enhance the energy efficiency of ships. – Providing assistance to the two MRV ESSF subgroups as technical secretariat. <p>3. Air emissions:</p> <ul style="list-style-type: none"> – Providing technical assistance to the Commission in the implementation of Directive 2012/33/EU amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels. Assistance could include analysis of the reports submitted by Member States as foreseen by article 7 of the Directive and by the Commission Implementing Decision 2015/253, analysis of the data extracted from THETIS-S, calculation and monitoring of inspection and sampling obligations of Member States, contributions to studies on fuel availability review, comparative study on penalties under Directive 2012/33/EU and shipping emission inventories. – Provide feedback to Member States and the Commission on the possibilities for new technologies and information products (e.g. RPAS) to support the implementation of Directive 2012/33/EU. – Providing technical assistance to the Member States in the implementation of Directive 2012/33/EU amending Council 	<p>1. Port reception facilities:</p> <ul style="list-style-type: none"> – A workshop was organised in September 2016 where Guidance for Ship Inspections under the Port Reception Facilities Directive, Technical Recommendations on the Implementation of PRF Directive were finalised and adopted. – The PRF module of THETIS-EU is operational since April 2016 and 1159 inspections were recorded. The module is fully interactive with SSN and using the waste notification (or its absence) as an indication for a potential PRF inspection. – Support was ensured to the Commission for the Impact Assessment study. The support entailed the provision of data from Marinfo for the MARWAS model, active participation in the steering committee, provision of comments to the contractors and technical advice when requested. – A study on the Management of Ship-Generated Waste On-board Ships was launched. – Guidance for Ship Inspections under the Port Reception Facilities Directive, Technical Recommendations on the Implementation of PRF Directive were developed and published. – Two meetings of the ESSF subgroup were supported. The ESSF correspondence group on harmonising the principles of cost recovery systems was facilitated to feed into the Impact Assessment study. <p>2. Greenhouse gases:</p> <ul style="list-style-type: none"> – Technical support was provided for the finalisation of implementing and delegated acts, which were adopted in September 2016. – Technical assistance was provided to the Commission in following international developments, notably with reference to the Energy Efficiency Design Index, its review and its extension to additional ship types. Participation was ensured in the relevant discussions at IMO level. – Technical assistance was provided to the Commission in following international developments concerning the Global Data Collection System for maritime transport covering fuel consumption and greenhouse gas emissions as well as further technical and operational measures to enhance the energy efficiency of ships. Participation was ensured in the relevant discussions at IMO level. – Eight meetings of the MRV ESSF subgroups were supported by the Agency as technical secretariat. Concept papers were prepared, in particular on the mandatory and a voluntary module of the THETIS-MRV – Participation was ensured in a number of information days on THETIS-MRV, organised by DG CLIMA, ECSA and other stakeholders. <p>3. Air emissions:</p> <ul style="list-style-type: none"> – Technical assistance was provided to the Commission in the implementation of Directive (EU) 2016/802 as regards the sulphur content of marine fuels. Assistance included analysis of the reports submitted by Member States as foreseen by article 7 of the Directive and by the Commission Implementing Decision 2015/253, analysis of the data extracted from THETIS-EU, calculation and monitoring of

<p>Directive 1999/32/EC as regards the sulphur content of marine fuels. Assistance could include further enhancement of guidance manuals for control, sampling and analysis, training for sulphur inspectors and workshops for the exchange of best practices.</p> <ul style="list-style-type: none"> – Providing technical assistance to the Commission and the Member States on the development of alternative emission abatement methods such as alternative fuelling (LNG), exhaust gas cleaning systems (scrubber), biofuels and other alternative methods as required by Directive 2012/33/EU amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels. Assistance could, among others, include development of guidance on LNG bunkering, as well as organising workshops for the exchange of best practices. – Providing assistance to the Commission on organisational activities in the ESSF Plenary and its relevant Sub-Groups. – Providing technical support to the Commission within the context of the Sulphur Committee foreseen by Directive 2012/33/EU (Art.9). <p>4. Ship recycling:</p> <ul style="list-style-type: none"> – Providing technical assistance to the Commission on the implementation of the EU Ship Recycling Regulation (Regulation (EU) No 1257/2013) namely by drafting technical guidance on surveys for issuing ship inventory certificates and the inventory of hazardous materials as well as participating in IMO deliberations as technical advisor. – Supporting the Member States by preparing and submitting questionnaires to Member States on how they foresee implementation of Title II of the Ship Recycling Regulation, and analysing the responses; organizing workshops on the implementation of the Regulation and for the exchange of best practices among Member States; providing training for Member State's officers for a harmonised implementation of the Regulation. – Organising training and workshops for flag State and port State inspectors with reference to the enforcement provisions of Title II of the Ship Recycling Regulation. <p>5. Ballast water and anti-fouling systems:</p> <ul style="list-style-type: none"> – Contributing to the implementation of the IMO Convention by following and contributing to the development on various issues, notably sampling for compliance and risk assessment, ensuring consistency between regional/national approaches in Europe and helping Member States ratify or implement the Convention. – Providing technical assistance to the Commission and the Member States regarding the issue of anti-fouling systems, as appropriate. <p>6. Other:</p> <ul style="list-style-type: none"> – Monitoring and advice on international and EU developments related to other environmental issues such as maritime spatial planning and conservation and management tools in areas beyond national jurisdiction. – Provision of technical assistance and support to the Commission and Member States in the implementation of international conventions in EU law relevant for the area of liability and compensation. This will translate into participation in the IMO meetings, organisation of workshops by EMSA and conducting of relevant studies as necessary. – Provision of technical assistance and support to the Commission and Member States on the implementation of Directive 2005/35/EU on ship source pollution. This will involve work starting in the IMO on prohibiting discharges of MARPOL ANNEX II tank washings, containing high-viscosity and persistent floating products. 	<p>inspection and sampling obligations of Member States, and calculation of shipping emission inventories for the years 2011 to 2015.</p> <ul style="list-style-type: none"> – Technical assistance was provided to the Member States in the implementation of Directive (EU) 2016/802 as regards the sulphur content of marine fuels. Assistance included further enhancement of THETIS-EU to include alerts from RPAS as well as development of a risk based targeting mechanism (expected to be available by March 2017). - A draft Guidance on LNG Bunkering to Port Authorities and Administration was prepared, aiming at providing technical assistance to the Commission and the Member States on the use of alternative fuelling (LNG) in shipping as well as organised workshops for the exchange of best practices (one for Directive (EU) 2016/802 and one for LNG). – Assistance was provided to the Commission on organisational activities in the ESSF Plenary and its relevant Sub-Groups. The Agency organised, supported and followed-up 9 meetings for LNG, EGCS, Competitiveness and Implementation Sub Groups. – Technical support was provided to the Commission within the context of the Sulphur Committee foreseen by Directive 2012/33/EU (Art.9). Support entailed concept papers and relevant presentations. – A study on the use of fuel cells in shipping was published. – Contributions to IMO (study on Ethyl / Methyl, Proposed amendments to the IMO Exhaust Gas Cleaning Guidelines, etc.) were prepared and supported the Commission and the Member States in deliberations in IMO on the 0.5% Sulphur Limit for 2020. <p>4. Ship recycling:</p> <ul style="list-style-type: none"> – A Best Practice Guidance on the Inventory of Hazardous Materials was prepared and published. – A workshop on the implementation of the Ship Recycling Regulation was organised in September 2016 for the exchange of best practices among Member States; for a harmonised implementation of the Regulation in relation to Title II. – Technical support was provided to the Commission within the context of the Ship Recycling Committee. Support entailed concept papers and relevant presentations. <p>5. Ballast water and anti-fouling systems:</p> <ul style="list-style-type: none"> – An eLearning module was developed to support Member States on implementing the Convention which entered into force in September 2017. – Technical assistance was provided to the Commission on the preparation of a Draft IMO submission on cybutryne. <p>6. Other:</p> <p>No requests were received from the Commission in these areas.</p>
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Project: SAFEMED III

Technical assistance in the fields of maritime safety, security and the prevention of and response to marine pollution was provided to SAFEMED III beneficiary countries on a regional basis through training sessions, seminars, access to port State control (PSC) tools, etc. Tailor-made activities were organised to meet the specific needs of each beneficiary. In addition, project beneficiaries were involved in the implementation of two pilot projects on sharing T-AIS information for which there is limited interest and on the provision of CleanSeaNet (CSN) services, 6 beneficiary countries receive Satellite-AIS information on vessels and radar satellite images on possible oil spills in their waters.

Project beneficiaries had the opportunity to share experiences with EU Members States and to get appropriate technical support and tools to approximate EU standards, enhance their capacity to discharge responsibilities stemming from international maritime conventions, monitor maritime traffic along their coastlines and respond to oil pollution at sea.

Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
Technical assistance to SAFEMED III beneficiary countries	EC-DG NEAR	2013-2016 3,000,000	committed 1,458,697 paid 1,007,507	1.8 CA
Outcome 2016				
Through the implementation of the project the Agency contributes to improving the relevant capacities of maritime administrations in the Mediterranean partner countries in the field of maritime safety, security and prevention of marine pollution as well as preparedness and response.				
Legal Basis				
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 2.5 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> To support EU strategies on regional sea basins. (D1) To become the implementing body of maritime safety related projects for IPA and ENP countries. (D2) To prepare IPA and ENP countries for association to EMSA's traffic monitoring services and for use of EMSA's pollution response services. (D3) To consolidate its role as training provider including the use of modern techniques. (D6) 				
Annual objectives 2016				
<ul style="list-style-type: none"> Continue the implementation of the SAFEMED III project (Commission budget). Contribute to improvement of cooperation at regional level. Continuing to provide beneficiary countries with access to the EU RuleCheck; developing appropriate modules and providing access to beneficiary countries for the Distant Learning Package (DLP) for Port State Control Officers (PSCOs). Continue providing a pilot service on cooperation on AIS matters and CleanSeaNet to interested beneficiary countries, based on a dedicated version of the Integrated Maritime Data Environment (IMDatE). Organising an international exercise with the participation of an EMSA Stand-by Oil Spill Response Vessel, using the mobilisation procedure of the Emergency Response Coordination Centre (ERCC). Manage a project for the donation of oil pollution response equipment, including maintenance and training, to interested beneficiary countries. 				
Planned output 2016			Actual output 2016	
1. Up to five technical meetings per year (seminars, workshops, training sessions).			1. 11 technical meetings (seminars, workshops, and training sessions) were organised.	
2. Up to four activities per year (studies, technical			2. Technical support was provided to CSN competent	

<p>support, exercise, etc.).</p> <ol style="list-style-type: none"> 3. Provision of EU RuleCheck and DLP for PSCOs as relevant. 4. Provision of pilot service on cooperation on AIS matters and CleanSeaNet. 5. Donation of oil pollution response equipment, including maintenance and training, to interested beneficiary countries. 	<p>authorities, and to RuleCheck and DLP regional and national administrators. An anti-pollution exercise was organised in Nador (Morocco) with participation of an EMSA SOSRV and Moroccan anti-pollution means.</p> <ol style="list-style-type: none"> 3. EU RuleCheck and DLPs for PSCOs were provided to MEDMOU PSCOs including Turkish PSCOs. 4. Three beneficiaries (Jordan, Morocco and Tunisia) shared their T-AIS information through MARES; 5 beneficiaries were provided with CSN images. 5. Dismissed oil pollution response equipment was maintained and donated to Tunisia. Relevant staff of the Tunisian administration was trained on the use of such equipment.
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Output Indicators		Target 2016	Result 2016
Implementation of SAFEMED III Project	number of training sessions per year	up to 5	11
	number of activities per year	up to 4	19
	number of ENP experts attending per year	90	136
	level of customer satisfaction	>70%	>70%

Project: TRACECA II

Technical assistance in the fields of maritime safety, security and the prevention of and response to marine pollution was provided to TRACECA II beneficiary countries on a regional basis through training sessions, seminars, access to port State control (PSC) tools, etc. Project beneficiaries were involved in the implementation of a pilot project on the provision of CleanSeaNet (CSN) services. In addition, an antipollution exercise was organised in Constanta (Romania) with the participation of an EMSA SOSRV and representatives from the beneficiaries.

Project beneficiaries had the opportunity to share experiences with EU Members States and to get appropriate technical support and tools to approximate EU standards, enhance their capacity to discharge responsibilities stemming from international maritime conventions and respond to the oil pollution at sea.

Project financed input				
Project	Funding source	Time frame and envelope	Financial input 2016	Staff
Technical assistance to TRACECA II beneficiary countries	EC-DG NEAR	2014-2016 850,000	committed 409.549 paid 351,077	1.2 CA
Outcome 2016				
By providing complementary activities to those implemented by the current DG NEAR contractor the Agency contributes to achieving an improved level of quality by the beneficiary countries maritime administrations in the field of maritime safety, security and prevention of marine pollution as well as preparedness and response.				
Legal Basis				
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 2.5 				
Multi-annual strategic objectives				
<ul style="list-style-type: none"> To support EU strategies on regional sea basins. (D1) To become the implementing body of maritime safety related projects for IPA and ENP countries. (D2) To prepare IPA and ENP countries for association to EMSA's traffic monitoring services and for use of EMSA's pollution response services. (D3) To consolidate its role as training provider including the use of modern techniques. (D6) 				
Annual objectives 2016				
<ul style="list-style-type: none"> Continue to work with complementary activities in the implementation of the TRACECA II project (DG NEAR budget). Contribute to improvement of cooperation at regional level. Continue to provide beneficiary countries with access to the EU RuleCheck; developing appropriate modules and providing access to beneficiary countries for the Distant Learning Package (DLP) for PSCOs. Launch a pilot project to extend the cooperation on AIS related issues and continue the provision of CleanSeaNet services to interested beneficiary countries. Organising an international exercise with the participation of an EMSA's Stand by Oil Spill Response Network using the mobilisation procedure of the Emergency Response Coordination Centre (ERCC). 				
Planned output 2016		Actual output 2016		
<ol style="list-style-type: none"> Up to 4 technical meetings per year (seminars, workshops, training sessions). Up to 3 activities per year (studies, technical support, practical exercises etc.). Provision of EU RuleCheck and DLP for PSCOs 		<ol style="list-style-type: none"> Three technical meetings (seminars, workshops, and training sessions) were organised. Technical support was provided to CSN competent authorities, and to RuleCheck and DLP national administrators. An anti-pollution exercise was organised in Constanta Romania with the participation of an EMSA 		

<p>as relevant.</p> <p>4. Provision of a pilot project on the CleanSeaNet service.</p>	<p>SOSRV.</p> <p>3. EU RuleCheck and DLPs for PSCOs were provided to Black Sea MOU PSCOs including PSCOs from Turkey, Azerbaijan and Kazakhstan.</p> <p>4. Two beneficiaries (Azerbaijan and Georgia) were provided with CSN images.</p>
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Output Indicators		Target 2016	Result 2016
Implementation of TRACECA II Project	number of training sessions per year	Up to 4	3 ²¹
	number of activities per year	Up to 3	13
	number of ENP experts attending per year	40	30
	level of customer satisfaction	>70%	>70%

²¹ These KPIs were based on 4 training courses being held during the whole of 2016, whereas the extension of the TRACECA II project from August 2016 to January 2017 was granted for fact finding missions only.

Pollution preparedness, detection and response

5.1 OPERATIONAL POLLUTION RESPONSE SERVICES

At the end of 2016, 17 fully equipped Oil Spill Response Vessels were available for mobilisation. The two vessels contracted at the end of 2015 covering the areas of the southern Baltic Sea and of the Canary Islands and the Madeira archipelago entered into operational service. Following expiry of the South Baltic Sea contract, a new vessel was contracted in late 2016. In addition, two vessel contracts covering the western and central Mediterranean Sea were renewed for an additional four years. 72 quarterly and acceptance drills were undertaken in order to check and maintain the quality of the service at an appropriate level.

Implementation of the Action Plan for Response to Marine Pollution from Oil and Gas Installations continued in 2016 and two vessel arrangements were equipped for seaborne dispersant application, with associated dispersant stocks of 200 tonnes each, in Portugal (Sines) and Spain (Las Palmas).

The two Equipment Assistance Service (EAS) arrangements contracted in the Baltic Sea and in the North Sea became fully operational in the second half of 2016. Through this new service, EMSA provides specialised stand-alone equipment (i.e. fire booms, trawl nets, integrated oil containment and recovery systems) that can be used by Vessels of Opportunity, ready for mobilisation and transport at short notice, around the clock. Seven Equipment Condition Tests (ECTs) to assess equipment readiness and performance were conducted by EAS contractors.

In order to integrate the pollution response services into the response mechanisms of coastal States, EMSA took part in ten operational exercises with EU Member States and third countries, involving deployment of 12 EMSA contracted vessels (in two exercises two EMSA vessels participated). In addition, 12 vessel contractors and two EAS contractors were activated for participation in ten table-top exercises.

Planned input		Actual input
Commitment appropriations in EUR	17,202,395	17,959,273
Payment appropriations in EUR	19,855,127	20,600,267
Staff	11 AD, 2 AST, 1 SNE, 3 CA	10 AD, 2 AST, 1 SNE, 3 CA
Outcome 2016		
<p>The network of stand-by oil spill response vessels and equipment stockpiles offer a European tier of pollution response resources to top-up the capacities of coastal States to protect their coastlines from marine pollution caused by ships or oil and gas installations. By the end of 2016, the Agency will have extended its 'toolbox' of response methods to include some vessels equipped with dispersant spraying devices, as well as stand-alone equipment especially designed and adapted for response operations to marine pollution from oil and gas installations.</p>		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.3(d) and 2.5 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To contribute to the protection of the marine environment in the EU. (C4) To maintain pollution preparedness and response capability to assist Member States to effectively respond to marine pollutions from ships. (C6) Subject to financial and human resources availability the Agency shall extend its scope of activities to include marine pollutions from oil and gas installations. (C7) To support EU strategies on regional sea basins. (D1) To prepare IPA and ENP countries for association to EMSA's pollution response services. (D3) To continue developing its role as forum for discussion of best practices. (D5) 		

Annual objectives 2016

- Support coastal States in case of pollution caused by ships or oil and gas installations, by making available upon request via the ERCC:
 - the network of response vessels;
 - a new equipment assistance service (EAS), through the provision of specialised stand-alone equipment available in (limited) EMSA stockpiles;
 - technical expertise.
- Ensure operational integration of EMSA's pollution response services within Member State, Regional Agreement and third country response chains through participation in exercises, as well as meetings with end users.

Planned output 2016

1. Manage the current stand-by service contracts, including supervision of vessel and equipment performance as well as crew capability for oil pollution response.
2. Organise the participation of EMSA's pollution response services in regional and national ship source and offshore installation oil pollution response exercises, using the mobilisation procedure of the ERCC.
3. Following the signature of the Vessel Availability Contracts for the (South) Baltic Sea and Canary Islands in 2015, these vessels will undergo the preparation phase in 2016.
4. Award and implement a new Equipment Assistance Service (EAS) contract for the North Sea, based on the procurement procedure launched in 2015, and procurement of new equipment not available in EMSA's inventories, to strengthen the response capacity in the area of North Sea, Norwegian Sea and Iceland.
5. Award and implement a new Equipment Assistance Service (EAS) contract for the Baltic Sea, based on the procurement procedure launched in 2015, and procurement of new equipment not available in EMSA's inventories, to replace the capacity of the expiring and not renewable stand-by oil spill response service contract covering the Northern Baltic ending in 2016.
6. Renewal of three of the contracts covering the Western and Central Mediterranean as well as the one covering the Southern Black Sea for an additional 4-year period.
7. Implementing improvement projects to establish new seaborne dispersant spraying capability and stockpiles, and to adapt and/or upgrade the existing capabilities of the vessel network and equipment.
8. Replace or overhaul ageing or obsolete oil spill response equipment purchased in 2006 and 2007, in line with the 'Equipment Policy' of the Agency.
9. Coordinate the mobilisation procedures for pollution response services in case of requests for assistance.
10. Management of existing dispersant stockpiles and purchase of additional dispersant as appropriate.
11. Provision of expertise to Member States or the Commission in case of pollution incidents.

Actual output 2016

1. The network of vessels was maintained and 17 operational vessel arrangements were in place at the end of 2016. 72 quarterly and acceptance drills were performed.
2. EMSA participated in 10 operational pollution response exercises with 12 vessels as well as in 10 table-top exercises with 12 vessel contractors and 2 EAS contractors.
3. The two vessels contracted at the end of 2015 for the South Baltic Sea and Canary Islands successfully completed the preparation phase and were accepted for entry into service.
4. A new Equipment Assistance Service (EAS) arrangement for the North Sea, with specialised stand-alone anti-pollution equipment, was established in Aberdeen, UK.
5. A new Equipment Assistance Service (EAS) arrangement for the Baltic Sea, with specialised stand-alone anti-pollution equipment, was established in Gdansk, Poland.
6. The contracts for the vessels based in Algeciras (Spain) and Malta were renewed for four years. The contract for the vessel covering the southern Black Sea could not be renewed. A procurement to replace this capacity was launched, with a new contract for a vessel covering this area signed.
7. The vessel arrangement based in Sines (Portugal) was upgraded with dispersant spraying capability. Moreover, in five vessels, the high capacity skimmers were upgraded to operate in hazardous areas with flashpoints < 60°C.
8. The donation to SAFEMED III beneficiary countries of two ageing oil spill response equipment systems was finalised. Furthermore, equipment overhauling was performed on several sets of ageing equipment purchased in 2006-2007.
9. The services were maintained at a high level of readiness with the mobilisation procedures tested in a range of training activities with stakeholders.
10. Two new dispersant stockpiles, 200 tonnes each, were established in Sines (Portugal) and Las Palmas (Spain). At the end of 2016, EMSA managed four dispersant stocks of 200 tonnes each, in Malta (Valletta), Cyprus (Limassol), Portugal (Sines) and Spain (Las Palmas).
11. At all times the expert service was available. There was no request for expertise.

Output Indicators		Target 2016	Result 2016
Stand-by Oil Spill Response Vessel Network	number of fully equipped vessels for mechanical recovery	18	17 ²²
	number of fully equipped vessels for dispersant application	4-5	4
New vessels pre-fitting	number of newly contracted vessels pre-fitted	2	2
Equipment Assistance Service (EAS)	number of stockpiles	2	2
Vessel/Equipment replacement/adaptation/upgrade	number of projects completed per year	3	7
Vessel/Equipment drills and exercises	number of drills (acceptance drills and quarterly drills) per year	70	72
	number of operational exercises per year	10	12
	number of Equipment Condition Tests (ECT)	2	7
	number of notification exercises per year	10	14
Response to requests for vessel/equipment services	mobilisation time in hours	max 24	24
Dispersant stockpiles	number of stockpiles	4	4
	minimum quantity of dispersants available at any time	800 tonnes	800 tonnes

²² One contract was not renewed by the contractor.

5.2 EARTH OBSERVATION: CLEANSEANET AND ILLEGAL DISCHARGES

The service, based on the near real time analysis of Earth Observation (EO) Synthetic Aperture Radar (SAR) images, is available to 28 coastal States: all of the 23 EU coastal Member States; 2 EFTA coastal States, Norway and Iceland; and 3 candidate countries, Turkey, Montenegro and Albania. In 2016, the service was also provided to Greenland as well as islands in the French and Dutch Caribbean. Through the SAFEMED III and TRACECA II projects, CleanSeaNet was also made available across the Mediterranean, the Black Sea and the Caspian Sea to the official project beneficiary countries.

The European Space Agency's (ESA) satellite Sentinel-1A was brought into operations in CleanSeaNet in April 2016, supplementing the RadarSat-2 and TerraSAR-X/Tandem-X missions. The volume of products acquired from Sentinel increased considerably during the second half of 2016. Not only does this make the service more flexible, with a wider range of EO products available for users to choose from, but also more resilient as it increases the number of available satellites. As Sentinel licenses are available free of charge, EMSA only pays service providers the near real time acquisition and additional processing required for the provision of the service. Users also welcomed the improvements introduced in planning and ordering, facilitating reliable long-term planning for CleanSeaNet satellite acquisitions.

Planned input		Actual input
Commitment appropriations in EUR	7,205,162	5,691,287
Payment appropriations in EUR	5,254,633	4,510,610
Staff	6 AD, 1 AST	7 AD, 1 AST

Project financed input

Project	Funding source	Time frame	Financial input 2016	Staff
CSN Greenland	Denmark	ongoing	committed 382,283 paid 302,865	no extra staff
CSN Dutch Islands	Netherlands	ongoing	committed 49,350 paid 35,831	no extra staff

Outcome 2016

The Agency provides a satellite image based service to support coastal States and the Commission in their efforts to improve the identification and pursuit of ships making unlawful discharges, and to respond to large-scale marine pollution incidents. CleanSeaNet provides a sustainable service upon which users can base their activities for targeting illegal discharges in European waters.

The Earth Observation Data Centre (EODC) also supports other maritime surveillance services, such as detection of targets by satellite radar (Vessel Detection System, VDS). The EODC capabilities will be extended to match new user requirements, not only from CleanSeaNet but from across EMSA's range of maritime services, as these develop.

Legal Basis

- Regulation (EC) N° 1406/2002 as amended, Art. 1.2, 2.3(a), 2.3 (d), 2.4 (f), 2.4(g) and 2.5

Multi-annual strategic objectives

- To increase the effectiveness and efficiency of EMSA's integrated maritime information services to its full potential based on existing applications such as SafeSeaNet. (B1)
- To explore, at reasonable cost, in a sustainable and viable way, new capabilities offered by technology in the field of maritime surveillance for the benefit of the European Commission and the EU Member States with added value for maritime safety and security. (B2)
- Subject to the provision of financial and human resources the Agency shall engage in supporting other communities and enhance its role as central EU data provider of maritime related information as defined by its Founding Regulation. (B4)
- To contribute to the protection of the marine environment in the EU. (C4)
- To maintain pollution preparedness and response capability to assist Member States to effectively respond to marine pollutions from ships. (C6)
- Subject to financial and human resources availability the Agency shall extend its scope of activities to include marine pollutions from oil and gas installations. (C7)

Annual objectives 2016

- Provide the CleanSeaNet service to Member States, Commission and interested enlargement and ENP countries.
- Further utilise the Sentinel-1 mission as appropriate.
- Apply homogeneous quality management across the different data sources.
- Cooperate with existing regional arrangements related to marine pollution.
- Respond to ad hoc requests for assistance in case of pollution emergencies or threat thereof.
- Support the implementation of the Action Plan for Response to Marine Pollution from Oil and Gas Installations as appropriate.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Provide CleanSeaNet satellite images and alerts to coastal States on a regular basis for the monitoring of seas and detection of illegal discharges and polluting vessels. 2. Provide assistance to coastal States and the Commission in case of accidental spills. 3. Provide training to coastal States on CleanSeaNet. 4. Organise at least once per year meetings of the EMSA CleanSeaNet User Group. 5. Develop activities with enforcement authorities to promote effective follow-up to CleanSeaNet detections. 6. Extend the EODC capabilities to support the needs of integrated maritime services. 7. Validation of pollution detection with RPAS services in cooperation with interested Member States. 	<ol style="list-style-type: none"> 1. Satellite images and alerts were provided as planned and at the required level of quality. Overall, 3057 processed and analysed images were delivered by CleanSeaNet to coastal State users, with a total of 3168 potential spills detected. In addition, 228 services were delivered to Greenland, with 29 potential spills detected; 14 to the BES islands, with 1 spill detected; and 353 to SAFEMED and TRACECA project beneficiaries, with 569 spills detected. EMSA provided additional support to a number of aerial surveillance operations e.g. CEPCOs. 2. There were no requests for satellite services to support response to oil spill accidents or incidents during 2016. 3. Two 1.5 day training sessions on CleanSeaNet for Duty Officers was provided. The course was attended by 25 participants from 21 countries. 4. The User Group meeting was held in June 2016. 5. EMSA continued to contribute to the work of relevant groups e.g. the North Sea Network of Investigators and Prosecutors. EMSA organised and hosted the 5th edition of the CTG MPPR training on the "The Use of Surveillance Systems for Marine Pollution Detection and Assessment". 6. The EODC supported the needs of integrated maritime services; services were planned, ordered, acquired and delivered through the EODC in the scope of the successful roll-out of the Copernicus Maritime Surveillance service. 7. RPAS service contracts for marine pollution and emission monitoring operations were established, but were not yet operational at the end of 2016.

Output Indicators		Target 2016	Result 2016
Satellite images	number of images ordered and analysed per year	2000	3057
Assistance for accidental spills	percentage response rate to assistance requests	100%	100%
EODC operational availability	percentage per year availability of CleanSeaNet	97.5%	99.74%
RPAS emission/pollution monitoring	Number of campaigns	1-3	0 (Service contracts for operations were established at the end of 2016. Preparations were ongoing)

5.3 COOPERATION AND INFORMATION RELATING TO POLLUTION PREPAREDNESS AND RESPONSE

The Agency continued to provide information services in the field of Hazardous and Noxious Substances (HNS) in accordance with the HNS Action Plan. EMSA's information service for marine chemical emergencies (MAR-ICE Network) was activated three times. Following the evaluation of the service in late 2015, improvements to the Contact Form were implemented. The new webportal and link to EMSA's Central Hazmat Database (CHD) for easier access to the MAR-CIS (Marine Chemical Information Sheets) went live in December 2016.

Training on the enhanced Dispersant Usage Evaluation Tool (DUET) was provided in early 2016 and the software tool to predict the fate and trajectory of an oil spill and the impact of dispersant application was distributed to EU/EFTA coastal Member States. The new version includes a model to evaluate the fate of well blowouts.

The dissemination of information on EMSA's pollution response services continued in 2016 with the 6th Pollution Response Service User Group, which covers all EMSA's pollution response services (both oil and chemical marine pollution). Dedicated workshops on oil spill identification, claims management and marine pollution surveillance systems were organised and held at EMSA, under the CTG MPPR framework. The Agency also participated in HELCOM Response, OTSOPA, and IMO-PPR (Sub-Committee on Pollution Prevention and Response) meetings, and attended the INTERSPILL steering group meetings. Three marine pollution response expert exchanges were completed under the EMPOLLEX umbrella.

Planned input		Actual input
Commitment appropriations in EUR	1,006,181	895,966
Payment appropriations in EUR	1,203,978	833,440
Staff	4 AD, 1 SNE	4 AD
Outcome 2016		
<p>Activities of the Agency support the preparedness structures and response capabilities of Member States with regard to marine pollution incidents, as well as at disseminating best practices and promoting the exchange of information between Member States, the Regional Agreements, the IMO and other relevant international bodies.</p> <p>The Agency aims to disclose as much relevant information as possible regarding chemicals and operational response to chemical spills in the marine environment to assist Member States dealing with spills involving hazardous and noxious substances.</p>		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 1.2 and 2.3(d) 		
Multi-annual strategic objectives		
<ul style="list-style-type: none"> To contribute to the protection of the marine environment in the EU. (C4) To become a reliable source of information and statistics for the EU on maritime matters. (D4) To continue developing its role as forum for discussion of best practices. (D5) To consolidate its role as training provider including the use of modern techniques. (D6) To use available technical knowledge to analyse research projects with a maritime safety or environmental, protection interest, where appropriate. (D7) 		
Annual objectives 2016		
<ul style="list-style-type: none"> In implementing the HNS Action Plan, to ensure the proper operation and development of the MAR-ICE service and the MAR-CIS datasheets, in support of the response to maritime incidents involving hazardous and noxious substances (HNS). Cooperate with coastal States and existing relevant regional cooperation arrangements in coordination with the Commission, in order to facilitate and promote the exchange of best practice, and develop added value projects at EU-level. 		

- Provide technical assistance regarding pollution preparedness and response to coastal States and contribute to relevant work of technical bodies of the International Maritime Organization (IMO), and relevant Regional Agreements.

Planned output 2016	Actual output 2016
<p>1. Implement the HNS Action Plan:</p> <p>a. Maintain and develop the network of specialised chemical experts (MAR-ICE Network).</p> <p>b. Maintain and update datasheets of chemical substances for marine pollution response (MAR-CIS).</p> <p>2. Develop a web portal and an application for mobile devices for MAR-CIS information and link it to SafeSeaNet CHD (Central HAZMAT Database) application.</p> <p>3. Develop and update marine pollution preparedness and response related information, studies, tools, reports and inventories. Provide training and distribute the enhanced Dispersant Usage Evaluation Tool (DUET).</p> <p>4. Coordinate the CTG MPPR meetings, the Vessel User Group meeting, workshops, and expert exchange programme (EMPOLLEX), and implement the CTG MPPR Rolling Work Programme.</p> <p>5. Support activities of Regional Agreements, the IMO and other relevant bodies/organisations (including participation in the Arctic Council) where appropriate.</p> <p>6. Host a workshop on the work of the Bonn Agreement Oil Spill Identification Network.</p> <p>7. Support further cooperation with Member States regarding potential cost recovery claims associated with the deployment and use of EMSA pollution response services or assets.</p>	<p>1.</p> <p>a. The MAR-ICE service continued and was activated three times in 2016. Following the evaluation in late 2015, the contact form was revised based on feedback provided.</p> <p>b. The MAR-CIS database containing 213 datasheets was updated before the release of the MAR-CIS web portal.</p> <p>2. The new web portal for MAR-CIS including the linking to CHD was completed and went live in December 2016.</p> <p>3. Training on DUET was provided in February and the tool was subsequently provided to the members of the CTG MPPR and participants of the training in form of a specially designed memory stick.</p> <p>4. Coordination of the CTG MPPR continued and the 10th meeting of the group was held in March; the re-named Pollution Response Services User Group met in October. The new name reflects that the group addresses all EMSA pollution response services and not only the vessel network. Furthermore, a two day training workshop on surveillance was held under the umbrella of the CTG MPPR. Three EMPOLLEX exchanges were organised. The 12th InterSec meeting with participants from the Regional Agreements and DG ECHO was held in London.</p> <p>5. EMSA participated in the 3rd session of the IMO Pollution Preparedness and Response (PPR) sub-Committee. The Agency also actively contributed to three meetings of the HELCOM Response group (including two regular meetings and one dedicated to the evaluation of the regional oil pollution response capacity). Furthermore, EMSA contributed to the Bonn Agreements OTSOPA meeting and participated in the Medexpol 2016 meeting as part of the EU delegation in the framework of the Barcelona Convention.</p> <p>6. A workshop dedicated to oil identification was held back-to-back with the CTG MPPR meeting.</p> <p>7. The Claims management Working Group met and a dedicated Claims Management workshop was held.</p>

Output Indicators		Target 2016	Result 2016
HNS operational support			
Response to requests for assistance to MAR-ICE	percentage of responses within 2 hrs.	>75%	100
	percentage of responses within 4 hrs.	<25%	0
Developing datasheets	number of datasheets produced/revised	25	213 ²³
Cooperation, coordination and information			
Coordination of the CTG MPPR	number of CTG MPPR meetings and workshops	3	5
Development of decision support tools	number of decision support tools	1	2

²³ Although the target for 2016 was to revise at least 25 datasheets, all 213 datasheets were revised following the change of the underlying IMO codes, before launching the new MAR-CIS.

Horizontal activities

6.5 COMMUNICATION, DOCUMENT MANAGEMENT, MISSIONS AND EVENTS SUPPORT

Communication

EMSA's communication activities involve a variety of tasks aimed at delivering objective, reliable and easy to understand information to the public and any interested party. Day-to-day activities include: updating the website, extranet and intranet; answering external enquiries; supporting EMSA workshops and events; media relations and, where relevant, issuing press releases. Numerous cyclical and one-off publications provide accessible information to a specialised or wider public. Proactive communication at external events also helps to raise awareness of EMSA's role and tasks.

In 2016, EMSA continued to provide a responsive communication service, making user friendly, visually enhanced information available to interested parties, as well as supporting both internal and external events to promote the work of the Agency.

Document and Records Management

The EMSA Records Management Policy was restructured and aligned with the requirements of the amended Archives Regulation. The Commission's policy on records management was used as a source of inspiration. An upgrade of the existing records management system was deployed in the Agency allowing compliance with the new requirements in terms of filing and provisions related to the period after closure of an official file. EMSA was selected as a pilot Agency within the Regulatory Agencies for moving to ARES, the Commission's Advanced Record System in 2017, with the aim of creating valuable synergies and efficiency gains across EU Agencies and the Commission.

Missions

The Missions cell is in charge of the preparation and reimbursement of operational and administrative missions for EMSA staff in line with the provisions in place (Mission Guide, EMSA Financial Regulations), using an electronic missions management tool, MiMa. It continues to provide an efficient service to EMSA staff members, allowing them to fulfil their professional obligations by processing requests and claims in a timely manner.

Events support

The events cell coordinates and makes the necessary administrative, financial and logistic arrangements for meetings, trainings and other external events held at EMSA. The main tasks include: booking of meeting rooms, processing reimbursements of travel expenses, catering orders, interpretation orders and providing support for video conferences. In 2016, the events team implemented the revised reimbursement rules and experts' reimbursements for the enlargement countries project.

Planned input		Actual input
Commitment appropriations in EUR	1,529,895	1,525,507
Payment appropriations in EUR	1,529,895	1,484,075
Staff	3 AD, 5 AST, 6 CA	3 AD, 4 AST, 6 CA
Outcome 2016		
Activities should aim at giving public and interested parties objective, reliable and easily understandable information with regard to the Agency's work (Reg. 1406/2002/EC, Art. 4.2).		
Legal Basis		
<ul style="list-style-type: none">Regulation (EC) N° 1406/2002 as amended, Art. 4 and 7		

Multi-annual strategic objectives
<ul style="list-style-type: none"> ▪ To become a reliable source of information and statistics for the EU on maritime matters. (D4)
Annual objectives 2016
<ul style="list-style-type: none"> ▪ Continue to implement the communication strategy 2014-2020 aiming to build up effective communication practices. ▪ Increase EMSA's visibility in the host country. ▪ Make use of data visualisation to make our activities more easily understood. ▪ Continue supporting the organisation of events ensuring high quality standards and added value for Member States, industry and the Commission. ▪ Develop working practices and streamline procedures to allow for further efficiency gains in the field of missions management. ▪ Continue the development of the document management and archiving policy and relevant ICT tool.

Planned output 2016	Actual output 2016
<ol style="list-style-type: none"> 1. Prepare regular publications and completing/updating brochures and leaflets including the new EMSA general brochure. 2. Continue to improve internal communication through the Agency's intranet. 3. Enhance the communication role of EMSA's website through new features and functionalities in line with current developments. Continue implementing the new visual identity for EMSA. 4. Deliver presentations at meetings, exhibitions and conferences. 5. Support the organisation of events/meetings in the Agency. 6. Ensure timely organisation and reimbursement of missions. 	<ol style="list-style-type: none"> 1. Regular corporate publications, newsletters and technical reports were produced, including the Work Programme 2016 and Facts and Figures 2015, as well as a wide range of brochures, leaflets, infographics and videos on specific EMSA services and activities. 2. EMSA intranet updated regularly. 3. Timely operation of EMSA website without noticeable interruptions; social media presence continued to grow; user satisfaction surveys carried out for various maritime applications; stakeholder survey support; visual identity guidelines continue to be implemented. 4. Exhibitions & events: support for open day held aboard the OSRV Balluta Bay (Malta); support for Equasis 15 year anniversary (UK); student visits as part of World Space Week (EMSA); support for the EU Agency Forum (Brussels); support for the Coast Guard Function Forum (EMSA). 5. Provided necessary support for the organisation of a wide range of meetings, workshops and training at the Agency, including issuing 1401 expert reimbursements. 6. Preparation and reimbursement of 777 operational and administrative missions.

Output Indicators		Target 2016	Result 2016
Publications	number of publications/leaflets/brochures produced per year	16	21,75 ²⁴
Events	number of meetings/workshops organised by EMSA per year	40	54
	number of participants at EMSA meetings/workshops per year	1250	1326

²⁴ The weighting of the publication is dependent on the man hours involved in the production. This can vary from 0.33 for a one-sided A4 page layout to 1.5 for the more lengthy corporate documents.

6.1, 6.2, 6.3 AND 6.4 OVERHEAD/HORIZONTAL TASKS

Management team

The Agency's management team aims to deliver added value to EMSA's key stakeholders and to develop further in terms of competitiveness, customer orientation, and sound and resource-efficient management. In 2016 the Executive Director was directly supported in this by three Heads of Department, a Policy Advisor, the Accounting Officer, the Internal Control Coordinator and the Special Adviser on Quality Assurance.

Organisational changes were made in 2016, in order to respond in a more efficient and effective way to the evolving regulatory landscape and related business needs and services provided to the Commission and the Member States. Such changes reflected the maturity of certain areas of activity and new challenges in other areas, as well as the continuous effort to optimise the use of existing resources (see Part II.2.2).

The progressive alignment of planning and reporting procedures with the revised Financial Regulation was finalised in 2016 through EMSA's first Single Programming Document 2017-2019, which implemented the remaining articles under transitional period until 1 January 2016.

A comprehensive, periodic exercise to monitor the implementation of the work programme was piloted in 2016, grouping and formalising existing monitoring activities within the agency in order to report more explicitly on the delivery of planned outputs per activity and signal any risks thereto. SHAPE, the Agency's tool for planning and monitoring budgeted activities, including management and reporting on contracts, periodic cash flow forecast and follow-up of the financing decision, was further developed to support the drafting and fine-tuning of the draft budgets for future years.

The Agency continued to participate in various sub-networks within the EU Agencies Network, such as ICTAC (the Network of Heads of ICT of the European Agencies), the IALN (the Inter Agency Legal Network), the PDN (the Performance Development Network), and contributed to the surveys launched by the coordination to assess the implementation of and lay groundwork for the future revision of the Roadmap on the follow-up of the Common Approach on EU decentralised agencies endorsed by the European Parliament, the Council and the Commission in July 2012. In addition, the Agency actively participates and contributes to the Standing Working Party on Implementing Rules giving effect to the Staff Regulations.

Human Resources and Protocol

Following the implementation of the general provisions on the engagement of 2(f) temporary agents, a large number of internally published positions were launched aiming at potential redeployment of staff with a view to responding more effectively to both the increased work load and the staff cuts in 2016.

The Human Resources Unit continues to make efforts to automatize, digitalise and streamline procedures to enhance its efficiency and effectiveness. This has been apparent in 2016 with the changes in procedures following the adoption of new implementing rules, as well as through the development of e-personal files and electronic requests.

Training is used to strengthen EMSA staff in developing their capabilities, expanding their knowledge and their competences, in order to better achieve EMSA's objectives. A wide variety of courses were made available to staff, including e-learning and online development opportunities allowing greater flexibility and contributing to the personal and professional development of EMSA staff skills. Cooperation with the EMCDDA was further enhanced through their participation at training sessions organised by EMSA. Furthermore, new framework contracts were signed for management training and personal and professional skills training.

Protocol activities focused on assisting the Agency and its staff in the application of the EU Protocol of Privileges and Immunities and the Protocol between EMSA and the Portuguese Government. EMSA successfully worked together with the Portuguese authorities in finding solutions to apply the existing Protocol between EMSA and the Portuguese Government.

Legal and financial affairs, Facilities and Logistics

Ex-ante verification of all budgetary and legal commitments and other financial operations was carried out, thus ensuring constant legal and financial assistance and advice. Internal Rules, guidelines and templates were maintained and updated on a regular basis. In addition, helpdesk assistance and in-house training were provided. The administrative procedures

were further streamlined and electronic tools in relation to contract management and verification further enhanced, including the preparation for the creation of electronic procurement workflows in-house. More than 10,600 verification files were handled and 66 procurement procedures were initiated in 2016.

The main focus in the field of Facilities and Logistics was to further enhance safety procedures, to complete several projects related to the fitting out of EMSA premises and security, as well as to carry out projects in the area of occupational health and safety.

Operations support (ICT)

There were two non-trivial ICT Infrastructure / Corporate ICT Service incidents in 2016 which lead to about 4 hours of reduced service. Nevertheless, overall Corporate ICT Service availability was 99.8% on a 24/7 basis and overall 24/7 ICT Infrastructure and Hosting availability was 99.987% at EMSA and 99.955% at EMSA's Business Continuity Facility (BCF) in Madrid. Corporate Services ICT tools were also fully 'BCF ready' for 24/7 switch-over to the EMSA BCF in case of a major outage at EMSA.

In supporting operational Units and Maritime Applications, there were 79 production upgrades during 2016 - a 20% increase on 2015 – and about 150 pre-Production upgrades.

There were 262 ICT or maritime Application incidents handled in 2016 (136 out of business hours, 126 in business hours), all of which were smoothly handled following the updated common incident management procedures.

Staff ²⁵		Actual input
Management/bureau/horizontal tasks ²⁶	10 AD, 7 AST	10 AD, 6 AST, 1 CA
Human Resources	3 AD, 5 AST, 6 CA	3 AD, 5 AST, 6 CA
Legal and Financial Affairs, facilities and logistics	5 AD, 4 AST, 6 CA	6 AD, 4 AST, 5 CA
Operations support (ICT)	1 AD, 8 AST, 1 CA	1 AD, 8 AST, 2 CA
Outcome 2016		
The functions mentioned should further structure and facilitate the working practices and projects of the Agency to enable staff with the allocated resources to work towards meeting the objectives in an efficient and cost-effective manner in line with the Financial and Staff Regulations.		
Legal Basis		
<ul style="list-style-type: none"> Regulation (EC) N° 1406/2002 as amended, Art. 5, 6, 13.7, 15, 18 and 19 		

²⁵ Financial resources are not applicable here as already distributed across the activities.

²⁶ This number includes the Executive Director and his staff, Heads of Department and their staff, Heads of Horizontal Units as well as the ICC and accountancy functions.

Multi-annual strategic objectives

- Continuously align EMSA with the relevant institutional standards and rules.
- Obtain best value for money from the Agency's assets and from EU family joint resources (e.g. inter-institutional procurement procedures, synergies with other EU agencies).
- Achieve efficiency gains, streamline organisational structures and build flexibility, agility.
- Further develop effective, innovative and results oriented solutions.
- Ensure good corporate governance and transparency.

Annual objectives 2016

- Monitor the implementation of Work Programme and Budget 2016.
- Further implementation of remaining requirements and principles emanating from the revision of the Framework Financial Regulation, the Joint Statement of the European Parliament, the Council of the EU and the European Commission on decentralised agencies (Common Approach, Road-map), notably implementation of the Single Programming Document for planning 2017 onwards, implementation of the Fraud prevention and detection strategy, transposition of the revised Financial Regulations and Rules of Application to EMSA internal procurement and concession rules, and adopting an internal legal framework for the protection of classified information.
- Secretariat support to the High Level Steering Committee on the external evaluation of the Agency.
- Development and implementation of new Implementing Rules giving effect to the Staff Regulations, in particular in the areas of teleworking, promotion/reclassification and engagement and use of contract staff. In addition, the Agency may undertake actions with regard to 'model decisions' in the following areas: rules for setting up a Staff Committee, a revised policy on the prevention of psychological and sexual harassment as well as a policy on learning and development.
- Job screening exercise with the aim of enabling the Agency to take sound decisions on resource allocation. The exercise will contribute to better stakeholder reporting and increased transparency concerning the utilisation of jobs at EMSA, and will facilitate redeployment.
- Simplify, streamline and automatize administrative and financial procedures in order to further improve efficiency and cost effectiveness.
- Maintain good relations with the Portuguese Authorities to allow for a smooth implementation of the existing Protocol between EMSA and the Government of Portugal.
- Ensure business continuity and advanced ICT services.

Planned output 2016	Actual output 2016
<p>Management team</p> <ol style="list-style-type: none"> 1. Work programme, including staff and budget planning (Single Programming Document). 2. Action Plan for Pollution Preparedness and Response. 3. 5 year Strategy implementation. 4. Procurement procedure for the external evaluation of the Agency and secretariat support to the High Level Steering Committee. 5. Annual report (Consolidated Annual Activity Report) and accounts. 6. Preparation of meetings of the Administrative Board, decisions, minutes. 7. Regular monitoring of on-going projects. 8. Quality Management development. 9. Internal Control Standards. 10. Work Programme and budget implementation monitoring. 	<p>Management team</p> <ol style="list-style-type: none"> 1. – 3. Preparation of required programming documents (Single Programming Document and Financial Statement) in line with applicable legal basis, multi-annual resource framework (Commission Communication) and strategic framework (5-year Strategy and Action Plan for Pollution Preparedness and Response). 4. Award of the contract for the external evaluation and support to the High Level Steering Committee. 5. Timely submission of the Consolidated Annual Activity Report 2015 and accounts. 6. Effective preparation of and follow-up to Administrative Board meetings and decisions. 7. Monitoring of on-going projects through monthly reports and further development of supporting tools. 8. Ongoing control and registration of exceptions, annual risk analysis, development of the Fraud Prevention and Detection Strategy. 9. Quality Management development was focused on Visits and Inspections (V&I) activities of Department B. The V&I Quality Management System was developed and successfully implemented during the year and finally certified in December with the external certification body TUV Rheinland Portugal. 10. Continued monitoring of the implementation of the budget and work programme including launch of formal, periodic exercise to assess work programme delivery.
<p>Human resources and Protocol</p> <ol style="list-style-type: none"> 1. Management of the establishment plan (new recruits, redeployment, turnover, etc.). 2. Management of staff related budget. 3. Preparation and Implementation of rules giving effect to the Staff Regulations. 4. Implementation of rights and obligations of EMSA staff members. 5. Improvement and updating of e-HR tools. 6. Implementation and improvement of existing HR policies; Implementation of Staff Development Policy; Staff Helpdesk on HR matters and communication on staff related issues. 7. Implementation of the National Experts on Professional Training programme and traineeship policy. 8. Implementation of the Protocol Agreement and Privileges. 	<p>Human resources and Protocol</p> <ol style="list-style-type: none"> 1. During 2016, EMSA recruited 5 Temporary Agents. The occupation rate was 98.48% against a target of 198 posts for the existing establishment plan to be implemented on 01.01.17. The turnover for statutory staff for 2016 was 4.08%. 2. The executed staff related budget amounted to € 20,256,112. 3. With the amended Staff Regulations which entered into force on 01.01.14 the Agency has adopted various implementing rules in the course of 2016 and will continue to develop and adapt the existing ones. 4. The implementation of staff rights and obligations is carried out on a continual basis. 5. Further developments on the time management application were carried out. An e-personal file application was developed and staff is able to consult their own file electronically and to submit electronic requests related to their professional situation and notify changes in their personal situation. 6. Staff of the Agency carried out 588.00 days of training in 2016 (not including coaching, mentoring or language training) corresponding to an average of 2.4 days of training per staff member. 7. 2 National Experts on Professional Training came to EMSA in 2016 and 12 traineeships took place. 8. Staff and families were supported in the implementation of the Protocol Agreement.

Legal, Financial and Facilities Support

1. Verification of commitment and payments files.
2. Organising and executing transfers.
3. Budget follow-up.
4. Providing budget overviews.
5. Advising on and verifying contracts and procurement procedures.
6. Providing legal advice to the Executive Director and the units.
7. Managing facilities and support services of the Agency.

Operations support (ICT)

1. Maintaining and enhancing a state-of-the-art Data Centres to host maritime applications.
2. Providing advanced business continuity and ICT security services.
3. Maintain the Business Continuity Facility.
4. Providing 24/7 ICT Operations for hosting of maritime applications.
5. Providing technical expertise to support operational maritime applications.
6. Providing technical support to the development and rollout of new maritime applications and major upgrades to existing ones.
7. Providing Horizontal ICT Service Platforms for Maritime Applications.
8. Providing solutions to share and exchange documents more efficiently and in a secured fashion with the Commission.
9. Providing EMSA's Corporate Services Platforms (email, EDMS, file & print, etc.)
10. Providing advanced ICT desktop and mobile services to staff.

Legal, Financial and Facilities Support

1. Over 10,500 verification files and 760 helpdesk requests were handled. The number of commitments a posteriori was established at a very low level and the portion of payments carried out within time limit stabilised at a high level.
2. Budget transfers were organised and executed.
3. Publishing the Monthly Report on Budget and Financial Management that includes information on budget execution, expiring contracts, negotiated procedures, expiring bank guarantees etc.
4. Budget overviews provided on request.
5. Support provided for the initiation of 66 procurement procedures.
6. 13 training sessions on procurement were delivered.
7. Internal Rules, guidelines and templates were kept updated; legal and financial advice was provided across EMSA in various areas while ensuring external legal support, when required.
8. Management of facilities was ensured and further projects related to security, safety and fitting out of the premises were implemented. Over 1,200 helpdesk requests were handled.

Operations support (ICT)

1. – 3 Major upgrades to EMSA and BCF data centres; new backup solution, major SAN upgrade, major server upgrade, migration to VMware 6.0
Firewall upgrades, business continuity certification for email and Corporate ICT Services
4. Near carrier grade 24/7 operational availabilities: EMSA Infrastructure & Hosting - 99.987%, BCF in Madrid - 99.955%
5. 79 Mar App production release and deployments - a 20% increase on 2015. About 150 pre-production release and deployments
6. Enhancement of horizontal service platforms for Identity and Access Management, Portal, Nautical Maps, Enterprise Service Bus and database
7. Corporate ICT Services: 24/7 operational availability of 99.8%. Business continuity certification for all Corp ICT Services.
8. A secure portal was developed for delivering documents efficiently to Member States and the Commission.
9. – 10. Windows 10 pilot, Office 2016 pilot, Office 365 and Skype for Business pilot.

Output Indicators		Target 2016	Result 2016
Audit	ECA recommendations implemented in time	as close as possible to 100%	100%
	IAS recommendations implemented in time	as close as possible to 100%	100%
Planning	Implementation of the Work Programme	as close as possible to 100%	high level of implementation
Establishment plan execution rate	execution rate establishment plan (percentage of occupied posts against the Commission's 2018 proposal)	as close as possible to 100% (multi-annual target)	98.5%
Budget execution rate - commitment appropriations	execution rate commitment appropriations	as close as possible to 100%, and in any case above 95%	98%
	execution rate payment appropriations	as close as possible to 100%, and in any case above 95%	98%

Part II – Management

2.1 Administrative Board

Meetings

EMSA's Administrative Board held three meetings in 2016 and each of them was preceded by meetings of the Administrative and Finance committee where technical, financial and administrative agenda items were reviewed in detail and where opinions to the Administrative Board in accordance with its mandate were provided, allowing the Administrative Board to focus on strategic orientations for the Agency's activities and discussions on substance. The Administrative and Finance Committee's mandate was renewed without amendment at the November 2016 Administrative Board meeting.

In order to further support the Administrative Board in its tasks and in particular the technical tasks of the Administrative and Finance Committee, the Agency organised an information session for interested Board Members and relevant staff in the national administration involved in preparing technical points. The session was warmly received by the participants and the Agency was encouraged to continue the initiative.

Steering and assessing the work of the Agency

The Administrative Board continued to play its essential role in steering the work of the Agency through the consideration and adoption of the major programming and reporting documents of the Agency.

In terms of planning, the Draft Single Programming Document 2017-2019, and the associated Draft Budget 2017 and Establishment Plan 2017 were adopted at the November 2016 meeting, subject to the outcome of the budgetary procedure. This represented the conclusion of the first cycle of the new multi-annual programming requirements in line with the EMSA Financial Regulation, notably the integration in a single document of both annual and multiannual programming, as well as quantitative and qualitative information formerly included in the Multi-Annual Staff Policy Plan, and detailed financial information from the Financial Statement for the year n+1. The second cycle of the new programming approach was initiated at the same November meeting with the consideration of the very first version of the Draft Single Programming Document 2018-2020, followed by its adoption by written procedure launched in December 2016 and ending early January 2017, ahead of the transmission of the planning document to the institutions on 31 January 2017 in the context of the establishment of the budget 2018.

In relation to reporting, the Administrative Board adopted the EMSA Consolidated Annual Activity Report (CAAR) 2015, and provided a positive assessment, covering strategic and operational achievements as well as the management of the Agency.

Planning for an enlarged mandate

Having taken note of the information provided by the Commission at the March 2016 meeting on the proposal for amending Regulation (EC) n° 1406/2002 establishing a European Maritime Safety Agency on developing European cooperation on coastguard functions, the Administrative Board took a keen interest throughout the year not only in the legislative process itself but also in preparations for its outcome, in view of potential new tasks and responsibilities.

Such preparations were addressed by the Administrative Board in 2016 through the development of both the SPD 2017-2019 and the SPD 2018-2020, which respectively programmed activities and resources for: the externally financed European Parliament pilot project on coastguard functions in 2016 and 2017, aimed at preparing the ground for enhanced cooperation between the three agencies EMSA, EFCA and Frontex; for the new task assigned by the legislator to be implemented on EMSA's part by the provision of relevant RPAS, Satellite-AIS and capacity building services in 2017; and for the continuation of the new task in 2018 and onwards.

The Administrative Board focused in particular on procurement that needed to be launched already in 2016, without committing the Agency but in order for it to be in a position to provide extended services in 2017 if so requested, as well as on the draft tripartite working arrangement to be agreed between the three agencies and approved by their respective governing boards.

Monitoring ongoing operational and administrative developments

In addition to multi-annual programming for future years and assessing past performance, the Administrative Board kept abreast of the Agency's ongoing work through regular updates provided by the Agency on a wide range of activities and issues. Standard items that were also presented in 2016 included the update on vessel and equipment procurement under the Anti-Pollution Measures, in view of possible implications for future programming, and the budget updates to inform the Administrative Board of funds cashed to date for project-financed activities. The first year of operation THETIS-S to support the implementation of the sulphur Directive, ICT activities and infrastructure at EMSA and Copernicus Maritime Surveillance Services were among other updates provided by the Agency in 2016.

Conflict of Interest

In addition to the signed "Declarations of Commitment and Confidentiality", the Administrative Board Members also proceeded from 2015 to make their CVs available for publication on the Agency's website, as requested by the European Parliament within the 2013 discharge procedure, in order to enhance transparency.

Requests for Assistance

Furthermore, the Administrative Board examined and approved one new request for assistance from Member States, as referred to in Article 2(3). As a consequence, Portugal joined the list of Member States already receiving assistance linked to the National Single Window, under Activity 2.1 (c) of the Work Programme 2016 (Bulgaria, Finland, Greece, Italy, Malta, Poland and Romania).

Administrative Agreements

The Administrative Board considered and approved the following draft administrative arrangements as foreseen by Article 10(2)(cc) of the revised Founding Regulation:

- Cooperation Agreement between the European Commission, DG Climate Action (DG CLIMA) and EMSA for the support of the implementation of Regulation on the monitoring, reporting and verification of emissions of carbon dioxide, from maritime transport and amending Directive 2009/16/EC on port State control and relevant technical assistance (written procedure 3/2016 of 1 March 2016).
- Ad-hoc Grant Agreement between the European Commission, DG Maritime Affairs and Fisheries (DG MARE) and EMSA for the implementation of an Action under the pilot project „Creation of a European coast guard function“ (written procedure 7/2016 of 10 August 2016).
- EUROSTAT: Administrative Arrangement between the Statistical Office of the European Union (Eurostat) and the European Maritime Safety Agency (EMSA), regarding the technical cooperation in the field of Maritime Transport Accidents Statistics (46th ABM, 17-18 November 2016);
- EUROCONTROL: Cooperation Agreement between the European Organisation for the Safety Of Air Navigation (Eurocontrol) and the European Maritime Safety Agency (EMSA) in the area of air navigation safety for remotely piloted aircraft systems (46th ABM, 17-18 November 2016);
- NCA: Service Level Agreement between the European Maritime Safety Agency (EMSA) and the Norwegian Coastal Administration for the hosting, maintenance and operation of the North Atlantic, North Sea and HELCOM AIS Regional Servers and their connection with SafeSeaNet (SSN) (46th ABM, 17-18 November 2016).

Following the Agency's practice, these administrative arrangements were presented at the planning stage at Administrative Board meetings preceding the launch of the required four-week consultation process.

Written procedures

The Administrative Board continued to use the "written procedure" as an efficient means of consultation and decision making in relation to both Administrative Arrangements and Implementing Rules, given possible operational or administrative time constraints that are not synchronised with the actual convening of Administrative Board meetings. The Agency's practice of informing the Administrative Board of developments prior to the written procedures, in the case of Administrative Arrangements, and of providing an accompanying explanatory note in the case of Implementing Rules, continued.

Visits to Member States

The adoption of the Methodology for Visits to Member States in November 2015 set the stage for two initiatives in 2016. The first was the implementation of the e-delivery concept for making available electronically to Member States documents from EMSA, an idea which had been welcomed by the Administrative Board in 2015 as a first step towards possibly developing actual Member State profiles, a second step that was felt to present some challenges notably in terms of the workload for Member States and was put on hold in 2016 by the Administrative Board.

The second initiative concerned the proposed methodology for conducting a cost-efficiency assessment as part of the horizontal analyses related to cycles of visits to Member States on the implementation of EU legislation. The Administrative Board requested and subsequently welcomed a trial assessment on a mature Directive (Port State Control), acknowledging the benefits and added value of the analysis and expressing its support for integrating the methodology from the beginning of the forthcoming new cycles of visits.

Evaluation

Following the proposal from the Chairman at the end of 2015 to initiate the process of commissioning an independent external evaluation on the implementation of the Agency's Founding, in accordance with its Article 22, in order to complete the process and notably adopt recommendations by the Board to the Commission concerning the Regulation in 2017, only slightly ahead of the legal deadline of 2018, the Terms of Reference for the evaluation were drawn up by High Level Steering Committee, chaired by the Chairperson of the Board, and adopted at the March 2016 meeting. The draft investigation report was made available in November 2016 for the Administrative Board members to comment and formed the basis for the final report and draft recommendations discussed at the March 2017 meeting.

2.2 Major events

New tasks

The proposal for a revision of the Agency's Founding Regulation for the development of European cooperation on coastguard functions was issued by the Commission at the very end of 2015. This had a significant impact on the Agency's multi-annual programming exercises, conducted in 2016 to plan for future years, as indicated above under point 2.1 "Planning for an enlarged mandate".

The European Parliament funded pilot project aiming to explore and further develop, in 2016 and 2017, inter-agency synergies between EMSA, Frontex and EFCA to enhance cooperation on coastguard functions, helped anticipate the potential new tasks, which were in fact confirmed with the conclusion of the legislative process and adoption of the revision at the end of 2016.

Growth and consolidation through externally financed projects

The implementation of the Copernicus Maritime Surveillance Services began in earnest in 2016, following preparatory work in 2015 to set up the organisational framework, and the approval of the implementation plan in early 2016. This represents a significant consolidation and enhancement of the EMSA earth observation services portfolio. In other areas, the added value of EMSA's work was also acknowledged through the signature of new agreements to continue and further develop existing services. New projects for technical assistance and capacity building in the Mediterranean and in the Black and Caspian seas, to continue the actions provided under SAFEMED III and TRACECA II, were in place before the close of the year. The provision of Integrated Maritime Services to Frontex under an agreement in place since 2013 was renewed in 2016 for another 3 years.

Visits and Inspections Quality Management System

The initiative to develop a Quality Management System covering EMSA visits and inspections was successfully concluded in December 2016 with the certification of the "V&I QMS" (ISO 9001:2015). The associated quality policy covers the visits to MSs on behalf of the EC in accordance with the methodology established by the AB, the inspections of ROs, in accordance with Reg. (EC) 391/2009 on common rules and standards for ship inspection and survey organisations, and the inspections

on behalf of the EC regarding the STCW in third countries in accordance with Dir. 2008/106/EC. The quality policy aims to ensure the delivery of reliable information on the effectiveness of law implementation measures, and also provides for formal review processes supporting continual improvement.

Organisational changes

In 2016, the Agency continued to seek the best possible response, in terms of organisational structure, to the evolving business needs and services provided to Member States, the Commission and its stakeholders in general. Following the signature in December 2015 of the Delegation Agreement with the Commission concerning the organisation of Maritime Surveillance Services as part of the Security Services of Copernicus, and in order to avoid any planning conflicts in terms of satellite images required for different tasks, a common team was created, optimising the use of satellite data and ensuring business continuity. In the same time, in anticipation of the adoption of the legislative proposal of 15 December 2015 for the development of the European cooperation on coastguard functions, an organisational placeholder was created, in particular for the provision of monitoring services using Remotely Piloted Aircraft Systems in support of the surveillance of the external borders of the European Union. To adequately manage current and new tasks and the growth in staff, an additional unit within Department C was created, allowing for a more balanced spreading for staff. Department B has also been reorganised in order to ensure more synergies, efficiency gains and a more balanced distribution of workload: Unit B.1 became responsible for all visits to Member States falling under the Methodology for Visits to Member States adopted by the Administrative Board in November 2015 and Unit B.3 became responsible for all Capacity Building activities, including training and cooperation. The reorganisation entered into force on 1 March 2016.

Budget structure

The final phase of a two-part budget restructuring in 2014 and 2015 affecting budgetary years 2015 and 2016 respectively, was implemented for Budget 2016. The new structure was intended to better support the business needs of the Agency by isolating project financed activities and the financing earmarked for those specific actions (R0 funds),

“Anti-Pollution Measures” and the budgetary envelope earmarked for those measures, and the previously so-called “traditional” operational activities in each their own dedicated title, as follows:

- Title 1: Staff Expenditure
- Title 2: Infrastructure & Operating Expenditure
- Title 3: Operational Expenditure
- Title 4: Anti-Pollution Measures
- Title 5: Project-Financed Actions

The experience in 2016 was positive and the structure will be maintained for the time being although the revision of the Agency’s mandate and the additional funds associated with the new tasks could, depending on up-coming experience, lead to further restructuring.

2.3 Budgetary and financial management

In 2016, the Agency executed 54,105,973€ in Commitment Appropriations (CA)²⁷, representing 98.07% of the total budget of the year, and 54,835,675€ in Payment Appropriations (PA)²⁸, amounting to 97.80% of the total budget when only counting C1 Funds (appropriations voted in the current budget). After taking into account automatic carry-overs of payment appropriations (C8 Funds, appropriations carried over automatically), the Agency reached 97.65% of payment execution.

The budgetary structure of the Agency was presented in titles: Title 1 and 2 are for Administrative Expenditure and Title 3 and 4 are for Operational Expenditure and Anti-Pollution Measures respectively, covering the cost of implementation of the operational projects and activities funded by the EMSA subsidy and outlined in the Agency's annual programme of work). Actions in Title 3 and 4 can have a multi-annual dimension, extending over more than one financial year. Title 4 – Anti-Pollution Measures with its multiannual funding for the action of EMSA in the field of response to pollution caused by ships and to marine pollution caused by oil and gas installations had 21,600,000.00€ in commitment appropriations of which 95.97% were committed²⁹ and 22,500,000.00€ in payment appropriations of which 98.76% were paid. The multi-Annual Schedule of Payments and specific follow-up on Anti-Pollution Measures were regularly reported to the Administrative Board and the Commission.

Planning and monitoring tools and processes were in place to ensure a close follow-up of the activities and projects and related budget. This provided for aligning activities with objectives, streamlining costs and improving business practices, as well as consistent follow-up of work programme objectives.

Effective and efficient internal control and transparency were also in place to support sound financial management throughout the year and across the Agency. Each operation was subject to at least one ex-ante verification, and ex post verifications were organised on a sample basis using risk analysis or on an ad-hoc basis.

Transfers were kept a low level, 8 in total, and managed in line with the relevant rules (Article 27 & 28 of the EMSA Financial Regulation and Article 10 of EMSA Implementing Rules). Agency transfers were below 10% of the appropriations for the financial year of the budget line from which the transfer is made in the case of transfers from one title to another, with the exception of transfers made at year-end in line with the Administrative Board decision adopted by written Procedure N° 11/2016 on budget transfers from one title to another beyond the limit of a maximum of 10%.

The Administrative Board adopted EMSA Amending Budgets (Article 34 of EMSA Financial Regulation) in order to record extra income generated during the course of the financial year for FRONTEX Service Level Agreement, CleanSeaNet (services to Greenland and Data Access Agreement for provision of EMSA e-learning platform to members of the Indian Ocean MoU), EQUASIS, COPERNICUS, TRACECA II (recovery of small amount undue paid to experts), THETIS-EU and THETIS-MRV, the Coast Guard Cooperation Pilot Project, LRIT and Miscellaneous Revenue. These funds could only be loaded once cash payment was received by the Agency in the bank account.

A number of appropriations were carried forward to 2016, mostly related to the multi-annual operations of the Agency. Out of the 36,450,711€ of C8 funds (appropriations coming from previous years) carried forward, 54% were consumed, 2% were de-committed (reserved appropriations that were cancelled), and 43% were left as open amount to be consumed in the following years.

²⁷ Commitment appropriations cover the total cost of the legal commitments entered into during the current financial year - even if such a legal obligation extends over more than one year.

²⁸ Payment appropriations cover expenditure arising from commitments of the current year and/or earlier years, which are due for payment in the current year.

²⁹ A budgetary commitment is money reserved for payments to be executed at a future date.

66 procurement procedures were initiated; out of which 5 were special negotiated procedures referred to in points (a) to (g) of Article 134(1) of the Rules of Application. The remaining 61 encompassed, low and middle value negotiated procedures, competitive procedures with negotiations and open procedures.

2.4 Human Resources management

Implementing Rules

The Agency adopted several important Implementing Rules in the course of 2016 within the context of the amended Staff Regulations which entered into force on 1 January 2014:

- Setting up of a Staff Committee
- Promotion of officials
- Reclassification of Temporary Agents
- Reclassification of Contract Agents
- Part time work

In addition, the Agency continued to develop new Implementing Rules in close cooperation with the Standing Working Party on Implementing Rules and the EMSA Staff Committee, which will come into force in the course of 2017.

Mobility

Internal mobility was further developed in 2016 following the adoption of the general implementing rule on the engagement of 2(f) temporary agents. A significant number of positions were published internally in 2016. Redeployment has become an important part of EMSA HR policy in order to ensure that the Agency can fulfil its tasks whilst being able to meet the required staff cuts.

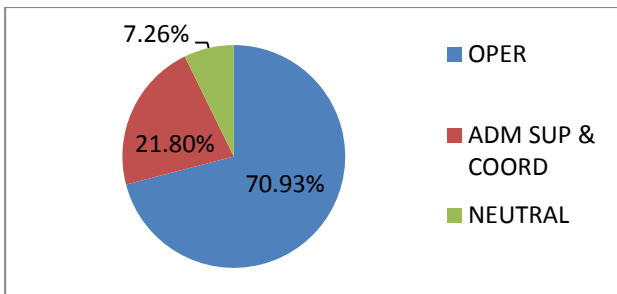
eHR Tools

The Agency carried out further developments to the IT application used to implement the recording of working hours for its flexible working time system. Furthermore, an e-personal file application was developed and all EMSA staff personal files were digitalised and uploaded to an electronic repository. Staff is able now to consult their own personal file electronically and to submit electronic requests related to their professional situation (i.e. part time work, training request, etc.) and notify changes in their personal situation (i.e. birth of a child, change of address etc.) electronically. Management and HR can now approve electronically these requests and the respective supporting documents are automatically stored in the relevant section of the personal file. This new application has resulted in time savings for both staff members and the HR team.

Benchmarking

The Framework Financial Regulation establishes the obligation for Agencies to carry out a benchmarking exercise with the aim of being able to justify administrative expenditure in a more structured way. At this stage, the implementation of these provisions consists of a job screening exercise, which is an essential element of the wider benchmarking exercise, with a focus on the ratio of jobs in the area of administration and coordination. The common screening methodology for Agencies was developed by a Working Group set up by the EU Agencies Network in close cooperation with the relevant Commission services.

In 2016 the methodology developed by the Working Group was applied for the third time to EMSA's situation in order to identify a screening type and a screening category for each EMSA post at 31/12/2016. The results broken down by screening type are as follows:



As can be seen, the total 'overheads' figure (corresponding to the 'administration and coordination category) in EMSA at 31/12/2016 is 21.80% similar to the figure reported for 2015 of 21.67% and below the figure of 22.53% for 2014.

The detailed results broken down by screening type and category can be found in Annex IV.

2.5 Assessment by management

The Agency's operational and administrative activities in 2016 were carried out in accordance with the work programme for the corresponding year, with the necessary guidance and support of the Administrative Board. Regular consultations through the Administrative Board meetings and the written procedure mechanism allowed for transparent and constructive exchange of information between the Agency and its governing body.

The Agency focused on delivering core tasks and maintaining a high level of quality alongside the implementation of the required 5% staff cut, which was concluded in 2016 with minus 5 posts on the establishment plan (202 in total) compared to 2015 (207 in total). This was achieved through efficient planning, deployment and monitoring of financial and human resources. Organisational adjustments and the new budget structure effective from 2016, in line with the business needs of the Agency, is expected to continue to have a positive impact on the Agency's performance.

The budget was implemented in accordance with the principle of sound financial management. In particular, on the basis of the cascade of declarations provided in accordance with Annex 1 of the "Procedure for drawing up the CAAR of EMSA" and of the underlying controls and control procedures performed by the staff of the Agency; and supported by the assessment of the effectiveness of the internal control systems presented under Part III, the management has reasonable assurance of the achievement of the five internal control objectives listed under Article 30.2 of the EMSA Financial Regulation:

- (a) effectiveness, efficiency and economy of operations;
- (b) reliability of reporting;
- (c) safeguarding of assets and information;
- (d) prevention, detection, correction and follow-up of fraud and irregularities;
- (e) adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned.

2.6 Budget implementation tasks entrusted to other services and entities

N/A

2.7 Assessment of audit results during the reporting year

During the reporting year the Agency's auditing bodies (IAS, the Internal Audit Service of the Commission and ECA, the European Court of Auditors) did not issue any critical audit recommendations or observations that could lead to a reservation in the annual declaration of assurance.

All recommendations and observations stemming from various audits from years before 2016 were addressed and there were no pending actions that could have a negative influence on the risks linked to the Agency's activities in 2016. More in particular, all action plans stemming from past audits were closed at 31 December 2016.

In line with EMSA's Founding Regulation and following a decision of the Administrative Board extending the mandate of the Administrative and Finance Committee to provide assistance to the Administrative Board to "monitor the findings and the recommendations stemming from various audit reports and evaluations, whether internal or external, and the EMSA follow-up", the outcome of the different audits as well as the state-of-play of the implementation of the different action plans to address detected shortcomings are reported on a regular basis to EMSA's Administrative Board.

According to the EMSA Financial Regulation the internal audit function is ensured by the Commission's internal auditor who remains the official internal auditor of the Agency.

Moreover, financial audits are performed annually by the European Court of Auditors. On average the Agency is audited 3 times per year by these auditing bodies and their audits cover all identified audit risks.

2.7.1 IAS

In line with the IAS "Strategic Audit Plan for the European Maritime Agency", during the course of 2016, IAS performed an audit on Project Financed Actions at EMSA.

The overall objective of the audit was to assess the design and the effectiveness and efficiency of the management and control systems put in place by EMSA to implement project-financed actions under the delegation agreements with the Commission and via SLAs with other cooperation partners. The scope of the audit covered the design and implementation of the procedures and workflows for managing and implementing project-financed actions. The fieldwork in EMSA was finalised in June 2016 and the final audit report was issued early 2017.

IAS concluded that the services offered by EMSA under project-financed actions comply with the applicable rules and agreements in force and EMSA delivers agreed, high-quality services to its stakeholders, which are adapted to their business needs. In addition, the IAS acknowledged that EMSA faces specific challenges as regards the agreements concluded with several Directorates-General of the European Commission, which are not harmonised and could be interpreted differently. IAS stated further that the European Commission and the decentralised Agencies have not agreed on common principles to cover and/or charge project overhead costs and to calculate these costs.

Taking into account this background, the IAS concluded that, overall, EMSA's management and control systems for project-financed actions are adequately designed and effectively and efficiently implemented. However, the IAS identified areas for improvement related to availability of management information on the planning and use of resources for project-financed actions. IAS issued three recommendations on 30/01/2017 of which one was accepted by the Agency³⁰. The Agency has prepared an action plan for the accepted recommendation.

³⁰ No critical recommendations were rejected.

2.7.2 ECA

Following its audit for the financial accounts for 2015 the European Court of Auditors issued the opinion that the Agency's annual accounts were reliable and the transactions underlying the annual accounts were legal and regular in all material aspects. The ECA did not issue any observations. There are no outstanding actions to be taken in relation to previous comments from the Court.

In accordance with Art.107 of the Agency's Financial Regulation, the audit on the Agency's financial accounts 2015 was partially performed by an external audit firm, Mazars. To this end, the Agency launched, early 2016, a tender procedure. The costs for the audit performed by the external audit firm (12.500€) were borne by the Agency.

2.8 Follow up of audits plans, audits and recommendations

The Agency has developed its own follow-up tool where relevant recommendations issued by the Internal Audit Service (IAS) and the European Court of Auditors (ECA) as well as the corresponding actions to address the detected weaknesses are recorded.

The Agency considers the follow-up on the progress of the action plan on audit recommendations as an important element of its Internal Control System. A quarterly indicator is discussed by senior management and reported to the Commission.

Equally, a detailed overview of the progress of the implementation of the action plans following the different audits is presented to the Administrative and Finance Committee of the Administrative Board, in accordance with the mandate of the Committee, at each meeting. Consequently, this information is provided to the Administrative Board.

At the end of 2016, all audit recommendations issued by 31/12/2016 and earlier had been implemented.

2.9 Follow up of observations from the Discharge authority

In reply to observations and comments made by the European Parliament in its discharge of 2014, the Agency confirmed that it has implemented all the necessary actions to address previously identified areas for improvement.

Although the Agency did not receive individual questions, the Agency provided information to the European Parliament on the following topics:

Commitment execution

The Agency explained that over the last years it did not have particular issues related to the implementation of the budget: overall budget execution has always been high and, as a result, the European Court of Auditors did not note any issues related to the implementation of the budget, cancellations or carry overs during the last years. Nevertheless, the Agency provided an explanation to the European Parliament regarding the relatively low budget execution (commitments) in 2014 below the 95% target of the Commission, resulting in the penalty applied by the Commission on the draft budget 2016: a last minute cancellation of a foreseen high value maritime vessel availability contract due to the bankruptcy of a potential contractor and the decrease in the correction coefficient for Lisbon contributed to this lower budget execution.

Prevention and management of conflict of interests and transparency

The EMSA Fraud prevention and detection strategy was adopted on 17 November 2015. In line with the action plan attached to this strategy, a number of specific actions were implemented in the course of 2016.

These actions concerned:

- The provision of training courses on Ethics and Integrity for newcomers and refresher courses for existing staff. The Agency also adjusted its policy to ensure all staff will receive a refresher course every five years. To monitor this action a new KPI (Key Performance Indicator) has been introduced.
- The adoption of a Whistleblower Policy: The Whistleblower Policy was adopted on 22 December 2016. The purpose of this policy is to provide staff with all relevant information on whistleblowing and at the same time ensure that staff who report serious wrongdoings or concerns in good faith are afforded the utmost confidentiality and greatest degree of protection against any retaliation as a result of their whistleblowing. The policy also addresses the protection of the personal information of the whistleblowers, the alleged wrongdoers, the witnesses and any other persons involved in the reported case.

The follow up regarding the European Parliament's general questions concerning all Agencies is ensured by the Coordination of Agencies.

Part II (b) External Evaluations

Following the initiative of its Chairman, the EMSA Administrative Board initiated at the end of 2015 the process of commissioning an independent external evaluation on the implementation of the Agency's Founding Regulation, in accordance with its Article 22, in order to complete the process, and notably the adoption of recommendations by the Board to the Commission concerning the Regulation, indicatively by mid-2017. The bulk of this evaluation exercise was undertaken by the contractor in the second half of 2016, during which key EMSA stakeholders were surveyed or interviewed. The evaluation report was adopted by the Administrative Board in June 2017.

Part III Assessment of the effectiveness of the internal control systems

3.1 Risk Management

EMSA adopted in 2012 a Risk Management Policy which aims to provide clear guidance on how to analyse and evaluate risks (i.e. identify and assess risks), decide on actions and controls to terminate or mitigate the risks, assign ownership and finally to implement these actions and controls and monitor and review the risk management process.

The Agency has developed a rigorous approach to risk management. This includes a risk register, which covers all identified internal and external risks related to all EMSA's activities and an action plan to reduce the potential consequence of each identified risk to an acceptable level.

The latest developments regarding risk management, implemented during the course of 2016, concerned the integration of the risk identification with the process for drawing up the multiannual planning of the Agency (ref. Single Programming Document 2017-2019) and its alignment with the newly developed Quality Management System for Visits & Inspections. In accordance with the Risk Management Policy the risk register was fully updated in 2016. The update of the Agency's risk register did not result in any major changes and no critical risks that could lead to a formal reservation to the Authorising Officer's annual declaration of assurance were identified.

During 2016 none of the previously identified risks materialised.

3.2. Compliance and effectiveness of Internal Control Standards

Since the start of its activities, and in pace with the growth of the Agency, EMSA has progressively developed and implemented a series of internal measures to ensure that its activities are subject to control and to provide reasonable assurance to management of the achievement of the Agency's objectives.

These internal control measures help to ensure that EMSA's operational activities are effective and efficient while also certifying that all legal and regulatory requirements are met, that financial and management reporting is reliable and that assets and information are safeguarded.

In order to formalise the internal control system, the Agency has implemented a full set of Internal Control Standards (ICS) and minimum requirements which were adopted by the Administrative Board (November 2009). These Internal Control Standards are based on, and fully in line with, equivalent standards established by the European Commission for its own departments.

Examples of measures already in place are: implementation of organisational structures; development of several staff policies and operational procedures; provision of training in various areas; setting of clear objectives and monitoring them through well-developed management reporting and monitoring tools including performance indicators, risk management and business continuity plan. Taken together, these measures constitute the internal control system of the Agency.

The effectiveness of the Agency's internal control system is subject to an annual assessment. To this end the Internal Control Coordinator provides a detailed report to the Executive Director.

One of the key elements of EMSA's internal control system is the control and registration of exceptions to established regulations, policies, (implementing) rules and procedures. An exception is any transaction, financial or operational, which requires an approach that deviates from EMSA's regulations, policies, (implementing) rules and procedures.

A total of 8 of such exceptions were registered during the course of 2016 (same number as in 2015), of which six ex-ante (approval for a future foreseeable deviation) and two ex-post (approval after the deviation had occurred) exceptions. The areas in which exceptions were reported concerned: Human Resources and Internal Support issues (one exception), contract management and payments (five exceptions) and exceptions related to the reimbursement of experts (two

exceptions). None of the exceptions were material and of a nature that could lead to a formal reservation to the Authorising Officer's annual declaration of assurance. Where necessary, corrective actions were carried out or clarifications were given in order to avoid similar situations occurring in the future. Besides these events, two a-posteriori commitments were reported (kept in a separate register) for a value of 2,75€ and 826,41€ respectively. As from 2017 the a-posteriori commitments are incorporated in the register of exceptions.

The Annual risk analysis carried out by the Agency's Internal Control Coordinator did not reveal any risks that could lead to a reservation in the Annual Declaration of Assurance.

The Agency continuously strives to improve its internal control systems by developing new controls, strategies, procedures or working instructions or by adapting them to the ever changing environment. Main developments during 2016 concerned following:

Fraud Prevention and detection: Following the adoption of the EMSA's Fraud prevention and detection strategy (adopted by the Administrative Board in November 2015), EMSA developed and implemented the EMSA Whistleblower Policy (adopted on 22/12/2016). Also, training courses on Ethics and Integrity for newcomers and refresher courses for existing staff were provided and the Agency adjusted its policy to ensure all staff will receive a refresher course every five years. To monitor this action a new KPI (Key Performance Indicator) has been introduced.

Document management: Further progress was also made in in the area of document management, with the implementation of the Agency's document management policy and roll out of the related ICT tool following the amendment of the European Archives Regulation in 2015.

Part IV Management assurance

4.1 Review of the elements supporting assurance

On the basis of elements of the internal control systems and the assurance they provide – the building blocks of assurance – the Executive Director was in a position to sign the Declaration of Assurance of the Authorising Officer which accompanies this Consolidated Annual Activity Report. The building blocks of assurance that are normally in place and were available to the Executive Director in 2016 are outlined below:

Monitoring and reporting – budget implementation

The monthly report on budget, procurement and financial management mentioned above provides information on budget execution per budget line for all fund sources, as well as per unit and budget line; financial and accounting information including transfers, commitments a posteriori, open invoices, guarantees and recovery orders; and procurement information including progress of planned procurement and contracts, negotiated procedures, comparison with other procedures and expiring contracts.

The annual report on budget, procurement and financial management builds on these monthly reports to provide an overview of the performance of the agency in all the above-mentioned areas.

Monitoring and reporting – programme implementation

Regular unit, department, management and senior management meetings provided ongoing monitoring of the implementation of the work programme throughout the year, drawing on a series of data and exercises including: monthly report on budget, procurement and financial management; quarterly scoreboard - Key Performance Indicators; monthly horizontal indicators; and various progress reporting exercises at unit and department level. In addition, a comprehensive exercise to consolidate existing data and assess the overall level of implementation of the Work Programme, as well as signal potential risks, was piloted in 2016. The exercise was conducted twice, in May and in October, and the Agency remained on track towards a high level of implementation of the Work Programme 2016. Annual reporting occurs at various organisational levels, and the present Consolidated Annual Activity Report was produced in line with the “Procedure for drawing up the CAAR of EMSA”.

Delegation of powers and declarations of assurance

The Executive Director delegated powers to members of the management team to sign legal acts and make commitments and payments, and the delegated staff members' in turn reported on the use of those powers. In addition, sub-delegation of other powers and responsibilities occurs by virtue of the organisational hierarchy, and the use of these powers, were also reported on.

A cascade of annual declarations, in reverse order to the delegation of powers and to hierarchical “sub-delegation” by virtue of organisational hierarchy, was established in accordance with the “Charter of tasks and responsibilities of authorising officers by delegation” and with Annex 1 of the “Procedure for drawing up the CAAR of EMSA”.

The materiality criteria for formal reservations to the annual declarations of assurance are defined in the “Procedure for drawing up the CAAR of EMSA”.

Certified Quality Management System for visits and inspections

The certification of the Visits and Inspections Quality Management System at the end of 2016 provided another level of assurance concerning one of EMSA's core tasks for the Commission and the Member States and notably the delivery of reliable, objective and evidence-based information on the effectiveness of implementation measures and proposed corrective plans.

Certification of the Agency's year-end accounts by the Accounting Officer

The Accounting Officer's certification of the provisional accounts by 1 March 2017 (Art. 98 and 99, EMSA Financial Regulation) provided reasonable assurance to the Executive Director that the accounts present a true and fair view of the financial situation of the Agency.

Other internal control tools

A series of other internal control tools contributed to the Executive Director's reasonable assurance including the assessment of audit results, follow-up and of audit plans, and the follow-up of observations from the discharge authority (as reported under 2.7, 2.8 and 2.9 respectively), reporting on risks and risk management and on the effectiveness and efficiency of the internal control systems, including the registration of exceptions and the annual review of the status of implementation of the Internal Control Standards (as reported under 3.1. and 3.2 respectively).

The work of the Internal Audit Service and the European Court of Auditors concerning the Agency in 2016 and the follow-up by the Agency is reported in section 2.7.

The Internal Control Coordinator ensures and assesses, on a yearly basis, the effectiveness of the Agency's key internal control systems, including the process carried out by implementing bodies, if any (Internal Control Standard No. 15). As part of the CAAR, the Internal Control Coordinator signs a statement to the best of his/her knowledge, on the accuracy and exhaustiveness of the information on management and internal control systems (Part V).

4.2 Reservations

There were no reservations.

4.3 Overall conclusion on assurance

The Executive Director was in a position to sign the Declaration of Assurance of the Authorising Officer which accompanies this Consolidated Annual Activity Report.

Part V Declarations of assurance

Internal Control Coordinator



Declaration of assurance

Declaration of the EMSA Internal Control Coordinator

I declare that in accordance with the Commission's communication on clarification of the responsibilities of the key actors in the domain of internal audit and internal control in the Commission, I have reported my advice and recommendations to the Executive Director on the overall state of internal control at EMSA.

I hereby certify that the information provided in Part III of the present Consolidated Annual Activity Report is, to the best of my knowledge, accurate and exhaustive.

Internal Control Coordinator

Place *Lisbon* date *10/04/2017*

Signed:

A handwritten signature in blue ink, appearing to read 'Tom Van Hees', is written over a horizontal line.

Tom Van Hees



Declaration of assurance

Declaration of the Executive Director

I, undersigned, Markku Mylly, Executive Director of the European Maritime Safety Agency, in my capacity as authorising officer,

Declare that the information contained in this report gives a true and fair view;

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions;

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of assessment of internal controls, the work of the Internal Control Coordinator, the observations of the Internal Audit Service and the Court of Auditors and the recommendations from the European Parliament's Committee for Budgets for years prior to the year of this declaration;

Confirm that I am not aware of anything not reported here which could harm the interests of the Agency and the institutions in general.

Executive Director

Place ...Lisbon

date 28.04.2017

Signed:

A handwritten signature in blue ink, appearing to read 'Markku Mylly', is written over a light blue horizontal line.

Annexes

Annex I. Core business statistics

EMSA Key Performance Indicators 2016

Activity/service/ product	Performance Indicator		2016	
			Target	Result
2.1 EU vessel traffic monitoring				
SafeSeaNet system operational, including requirements under the Reporting Formalities Directive (2010/65/EU)	1	percentage per year availability of the central SSN system	99%	99.65%
	2	hours maximum continuous downtime of the central SSN system	12h	11h15min ³¹
	3	reports per year AIS	1800 million	3,221,294,890
	4	notifications per year (Port +, Incident reports + MRS)	4.5 million	6,667,325
SafeSeaNet system reporting performance, including requirements under the Reporting Formalities Directive 2010/65/EU	5	percentage of responses to Member States' requests delivered in accordance with SafeSeaNet IFCD (time) requirements	99%	100%
IMDatE availability	6	percentage per year availability of IMDatE platform	95%	99.74%
	7	hours maximum continuous downtime of IMDatE platform	12h	5h15
Integrated Services		percentage per year availability to Member States		99.74%
	9	percentage per year availability to EU NAVFOR	95%	99.74%
	10	percentage per year availability to EFCA	95%	99.66%
	11	percentage per year availability to IMS mobile application users	95%	99.85% ³²

³¹ In July 2016, the SSN Graphical Interfaced suffered a downtime of around 11 hours due to a technical issue related with the infrastructure that affected the system and occurred outside office hours.

³² System operational from Q4.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
2.2 EU LRIT Cooperative Data Centre and LRIT IDE				
EU LRIT CDC System operational	12	percentage per year availability of EU LRIT CDC	99%	99.80%
	13	hours maximum continuous downtime of EU LRIT CDC	4h	1h43min
EU LRIT CDC reporting performance	14	percentage position reports delivered according to IMO requirement (periodic reports: 15 min; polls: 30 min)	99%	99.41%
EU LRIT CDC Web user interface	15	percentage per year of availability to users	99%	99.81%
LRIT-IDE System operational	16	percentage per year availability of LRIT IDE	99.9%	99.97%
	17	hours maximum continuous downtime of LRIT IDE	4h	0h40min
2.3 THETIS				
System operational	18	percentage per year availability of THETIS	96%	99.41%
	19	hours maximum continuous downtime	6h	2h:01m
Helpdesk	20	percentage of requests closed in less than 5 days	75%	94.53%
7.71 THETIS MRV				
THETIS MRV	21	Timely delivery of tasks foreseen by the Cooperation Agreement	Templates for Emission reports and Documents of compliance	Yes
	22		Specifications and business rules for THETIS-MRV	Yes

Activity/service/ product	Performance Indicator		2016	
			Target	Result
7.72 Emission Inventories				
Emission inventories	23	Inventories of shipping emissions based on shipping activity data will have to be attributed per Member State in their relevant sea areas EEZ (Exclusive Economic Zone), PCZ (Preferred Conservation Zone), SECAs (Sulphur Emission Control Areas) for the period 2012-2017	Development of new functionality in THETIS-S to establish and evaluate the inventories of shipping emissions based on shipping activity data	Yes
	24		Calculation and analysis of inventories of shipping emissions for the period 2012-2020	Yes
	25		Minimum of one workshop organised	n/a ³³
2.4 Maritime Support Services				
MSS 24/7 availability	26	average time in hrs for feedback or resolution of issues relating to emergencies, incidents in maritime applications or urgent helpdesk requests	<2	0h21min ³⁴
	27	average time in working hrs for feedback or resolution of issues relating to non-urgent helpdesk requests or scheduled interventions	<8	0h30min
	28	reporting on the SafeSeaNet implementation and data quality (overall and per Member State)	20 reports	25
7.5 COPERNICUS				
Copernicus services availability	29	percentage per year availability of Copernicus services	95%	99.85% ³⁵

³³ Development was ongoing during 2016.

³⁴ Calculation of MSS KPIs could only be extracted until 21/11/2016 included due to the migration to the new version of FootPrints on 22/11/2016.

³⁵ System operational only in Q4.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
7.2 FRONTEX SLA				
Integrated Maritime Services	30	percentage per year availability to Frontex	95%	99.82%
3.1 Classification societies				
Inspections	31	number of all types of RO inspections	16-20	19
	32	percentage of planned inspections and visits completed	100%	118.75%
Reports	33	number of reports per year	16	16
End-of-cycle reports	34	number of reports per year	4-6	3 ³⁶
3.2 STCW				
Inspections and visits	35	number of inspections and visits per year	7-9	8
	36	percentage of planned inspections and visits completed	100%	114.29%
Reports	37	number of reports per year	7-9	7
STCW Information System	38	percentage per year availability	95%	99.6%
3.3 Implementation of PSC Directives in Member States				
Visits	39	number of visits per year	2	2
	40	percentage of planned visits completed	100%	100%
Reports	41	number of PSC reports per year	2	3
3.4 Maritime Security				
Inspections	42	number of missions per year	16-18	12 ³⁷
	43	percentage of planned missions completed	100%	75% ³⁸
Reports	44	number of reports per year	30-35	40

³⁶ The Commission agreed on a reorganisation of the planning of RO end of cycle reports. As a result only 3 of the expected 4-6 were produced.

³⁷ The number and timing of maritime security inspections is decided by the Commission and the EFTA Surveillance Authority. Compared to the original planning, the Commission has cancelled two inspections and the EFTA Surveillance Authority has only requested EMSA's assistance for one instead of the expected three inspections.

³⁸ See footnote 7.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
3.5 Monitoring implementation of EU maritime legislation				
Visits	45	number of visits per year	13-14	12 ³⁹
	46	percentage of planned visits completed	100%	92.31% ⁴⁰
Reports	47	number of reports per year	13-14	13
3.6 Horizontal analysis and research				
Analyses on the basis of full or interim inspection cycles	48	number of horizontal analyses per year	2-3	2
	49	percentage of planned analyses completed	100%	100%
4.1 Port State Control				
RuleCheck system operational	50	percentage per year availability	85%	99.05%
	51	days maximum continuous downtime	9d	3d
RuleCheck Helpdesk service	52	percentage of requests closed in less than 9 days	75%	100%
MAKCS system operational	53	percentage per year availability	85%	99.99%
	54	days maximum continuous downtime	9	0d
MAKCS Helpdesk service	55	percentage of requests closed in less than 9 days	75%	93.02%
4.2 Accident investigation				
EMCIP meetings	56	number of meetings per year	2	2
Accident database	57	number of occurrences notified in EMCIP during the year	3500	4702
PCF meetings	58	number of PCF meetings per year	1	2

³⁹ The projected visits to Member States in respect of Directive 98/41/EC were cancelled in view of the Commission's REFIT exercise on ship safety legislation and a follow-up visit to an EFTA Member State in respect of port reception facilities was postponed to 2017. These were only partially offset by an increase in the number of accident investigation visits.

⁴⁰ See footnote 9.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
4.3 Technical assistance (training and cooperation)				
Training for Member States	59	number of MS training sessions per year	Up to 14	24
	60	number of MS experts attending per year	290	636
Training for accession countries	61	number of AC training sessions per year	Up to 6	20
	62	number of AC experts attending per year	50	150
Client Satisfaction	63	result of customer survey	>70%	>70%
4.4 Marine equipment and ship safety standards				
MARED Database	64	percentage per year availability of MARED DB	99%	99.98%
4.5 Maritime information, Equasis and statistics				
Availability of the system	65	percentage per year availability of Equasis	99.50%	99.98%
Users	66	number of users per month	35000	33552 ⁴¹
Contributors	67	number of contributing members	9-10	10
7.1 SAFEMED III				
Implementation of the SAFEMED III Project	68	number of training sessions per year	Up to 5	11
	69	number of activities per year	Up to 4	19
	70	number of ENP experts attending per year	90	136
	71	level of customers' satisfaction	>70%	>70%
7.4 TRACECA II				
Implementation of the TRACECA II Project	72	number of training sessions per year	4	3 ⁴²
	73	number of activities per year	3	13
	74	number of ENP experts attending per year	40	30
	75	level of customers' satisfaction	>70%	>70%

⁴¹ Number of visitors to the public site of Equasis stayed slightly below expectations. Fluctuations in number of users are seen to follow media coverage of shipping related events, and reflect the economic situation in general.

⁴² KPIs 72 to 74: These KPIs were based on 4 training courses being held during the whole of 2016, whereas the extension of the TRACECA II project from August 2016 to January 2017 was granted for fact finding missions only.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
5.1 Network of stand-by oil spill recovery vessels and Aerial Dispersant Application Service				
Stand-by Oil Spill Response vessel network	76	number of fully equipped vessels for mechanical recovery	18	17 ⁴³
	77	number of fully equipped vessels for dispersant application	4-5	4
New vessels pre-fitting	78	number of newly contracted vessels pre-fitted	2	2
Equipment Assistance Service (EAS)	79	number of stockpiles	2	2
Vessel equipment replacement/adaptation /upgrade	80	number of projects completed per year	3	7
Vessel Equipment drills and exercises	81	number of drills per year (acceptance and quarterly drills)	70	72
	82	number of operational exercises per year	10	12
	83	number of Equipment Assistance Service (EAS) drills per year	2	7
	84	number of notification exercises per year	10	14
Response to requests for airplane services	85	mobilisation time in hours	24h max	24
Dispersant stockpiles	86	number of stockpiles	4	4
	87	minimum quantity of dispersants available at any time (tonnes)	800	800
5.2 CleanSeaNet and illegal discharges				
Satellite images	88	number of images ordered and analysed per year	2000	3057
Assistance requests re. accidental spills	89	percentage response rate to requests for assistance	100%	100%
CSN-DC performance	90	percentage per year availability of CSN	97.50%	99.74%

⁴³ One contract was not renewed as planned by the contractor.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
RPAS emission/pollution monitoring	91	Number of campaigns	1-3	0 ⁴⁴
5.3 Cooperation, Coordination and Information				
Response to requests for assistance to MAR-ICE	92	percentage of responses within 2 hrs	>75%	100
	93	percentage of responses within 4 hrs	<25%	0
Developing datasheets	94	number of datasheets produced	25	213 ⁴⁵
Coordination of the CTG-MPPR	95	number of CTG MPPR meetings and workshops	3	5
Development of decision support tools	96	number of decision support tools	1	2
6.5 External communication, protocol and events support				
Number of publications/ leaflets/brochures produced	97	number of publications/leaflets/brochures produced per year	16	21,75 ⁴⁶
Events	98	number of meetings/workshops organised by EMSA per year	40	54
	99	number of participants at EMSA events per year	1250	1326

⁴⁴ The Agency did not succeed in setting up operational RPAS services in 2016. Procurement procedures were more complex than expected. The tenders have been a major undertaking: a business model for RPAS services was developed and all technical and organisational aspects for operations were quantified. In October 2016 the first maritime RPAS service contract was successfully concluded, but by the end of 2016 companies awarded a contract were still in the set-up phase.

⁴⁵ Although the target for 2016 was to revise at least 25 datasheets, all 213 datasheets were revised following the change of the underlying IMO codes, before launching the new MAR-CIS.

⁴⁶ The weighting of the publication is dependent on the man hours involved in the production. This can vary from 0.33 for a one-sided A4 page layout to 1.5 for the more lengthy corporate documents.

Activity/service/ product	Performance Indicator		2016	
			Target	Result
6.1, 6.2, 6.3 and 6.4 Overhead/horizontal tasks				
Audit	100	ECA recommendations implemented in time	100%	100%
	101	IAS recommendations implemented in time	100%	100%
Planning	102	Implementation of the Work Programme	as close as possible to 100%	<i>See Information on achievements</i>
Establishment plan execution rate	103	execution rate establishment plan (percentage of occupied posts against the Commission's 2018 proposal)	as close as possible to 100% (multi-annual target)	98.5%
Budget execution rate - commitment appropriations	104	execution rate commitment appropriations	as close as possible to 100%	97.80%
Budget execution rate - payment appropriations	105	execution rate payment appropriations	as close as possible to 100%	97.65%

Operational Agreements active in 2016

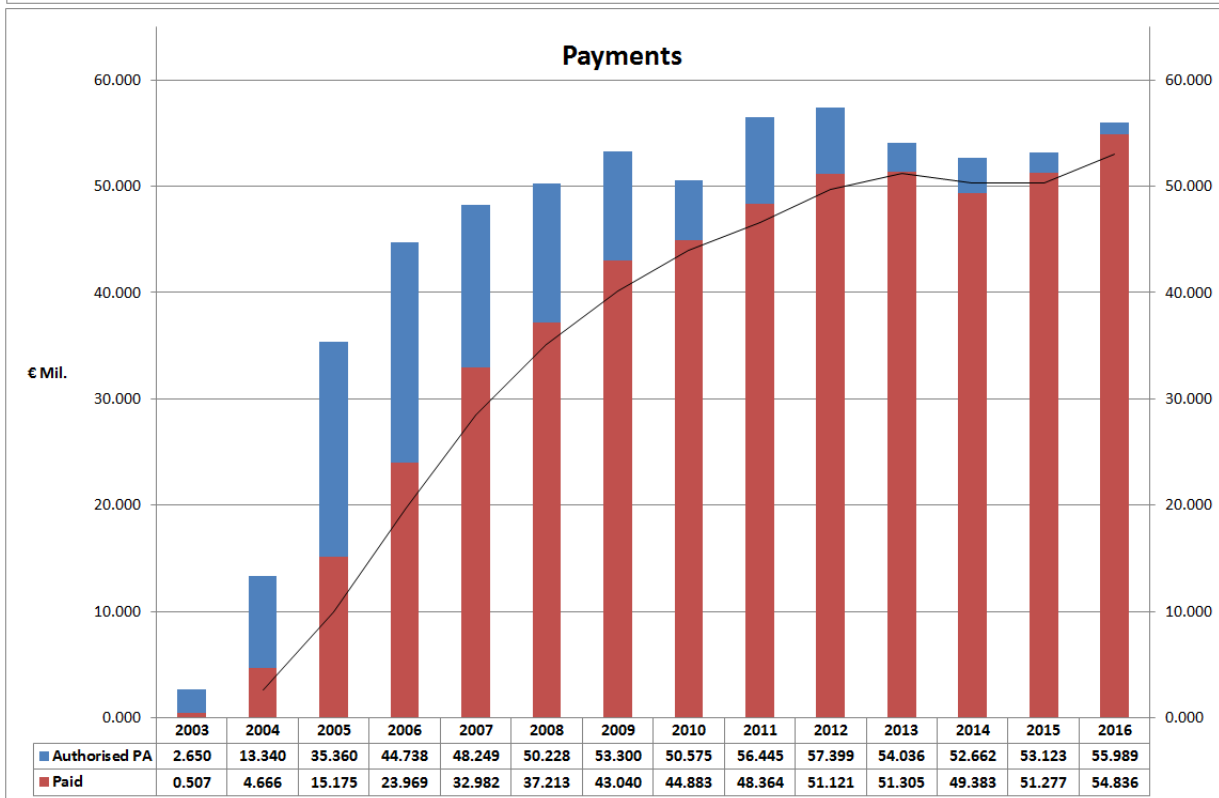
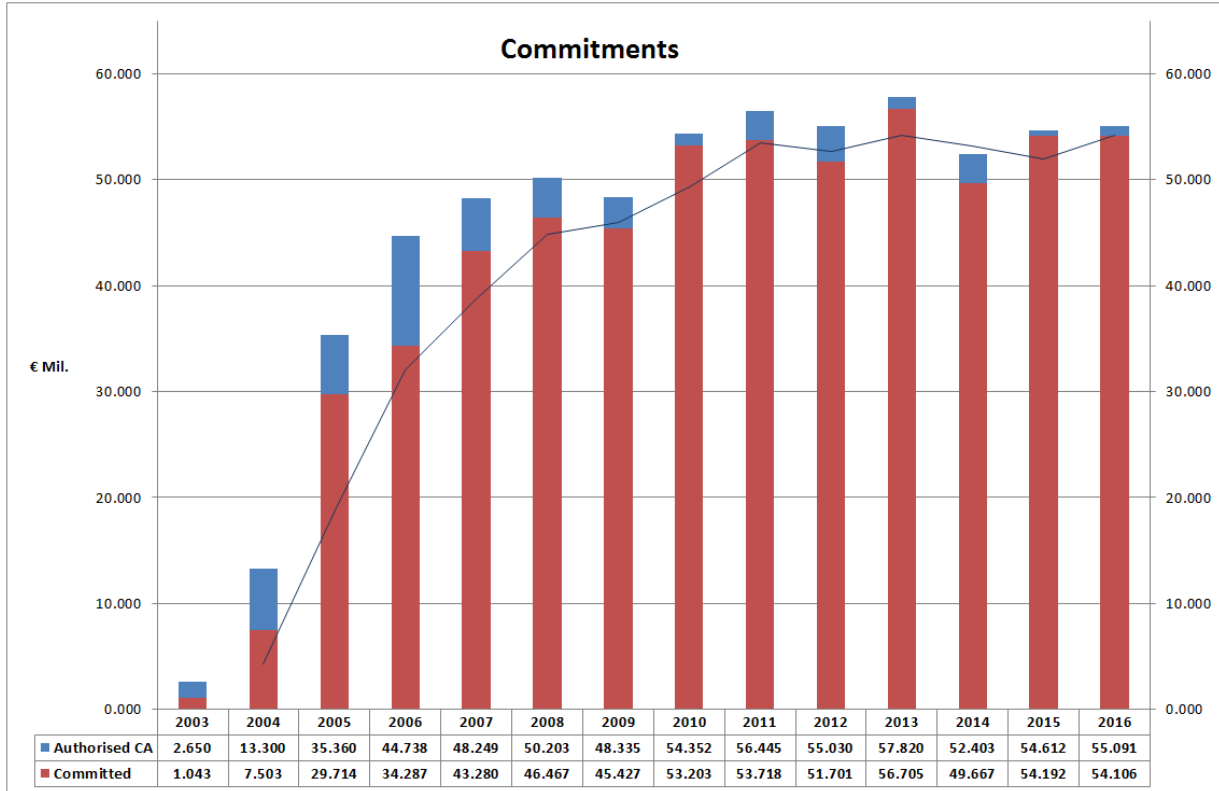
Contractor	Subject	Start Date	End Date
CEDRE - CEFIC	MAR-ICE Network	17/10/2014	16/10/2017
DG CLIMA	Support for the implementation of Regulation on the monitoring, reporting and verification of emissions of carbon dioxide, from maritime transport and amending Directive 2009/16/EC on Port State Control and relevant technical Assistance	30/03/2016	29/03/2020
DG ECHO	Cooperation in the framework of maritime emergencies, including marine pollution preparedness, monitoring and response	13/11/2014	No end date
DG ENV	Cooperation Agreement for the development of inventories of shipping emissions based on shipping activity data for domestic, short sea and international shipping through a functionality in THETIS-S including the relevant technical assistance	06/10/2015	05/10/2018
DG ENV	Cooperation Agreement for the support of the implementation of Directive 2012/33/EU as regards the sulphur content of marine fuels and relevant technical assistance	03/09/2014	02/09/2017
DG GROW	Implementation of the maritime surveillance component of the Copernicus security service	03/12/2015	31/12/2026
DG MARE	Creation of a European coastguard function	15/09/2016	31/12/2017
DG MOVE	Provision by EMSA of technical assistance for maritime security 1	29/10/2013	No end date
DG NEAR	Grant contract for the implementation of the Action "TRACECA Maritime Safety & Security II"	16/06/2014	31/01/2017
DG NEAR	Grant Contract for the implementation of the SAFEMED III Action	16/06/2013	15/03/2017
DG NEAR	Preparatory measures for the participation of enlargement countries in EMSA's work	23/10/2015	22/04/2018
DG NEAR	Maritime Safety, Security and Environmental Protection in the Black and Caspian sea Regions	01/11/2016	28/03/2021
DG NEAR	SAFEMED IV, EuroMed Maritime Safety Project	01/01/2017	21/03/2021

EFCA - European Fisheries Control Agency	EFCA MARSURV	26/06/2015	No end date
EQUASIS members	MOU on the establishment of the Equasis information system	17/05/2000	No end date
ESA - European Space Agency	Agreement concerning cooperation for the use of space based systems and data in support of maritime activities	02/07/2010	01/07/2020
ESA - European Space Agency	SAT-IAS Data Processing Centre (DPC) Block 2 software	18/02/2015	No end date
ETSI - European Telecommunications Standards Institute	MOU ETSI - EMSA for collaboration in the field of marine equipment	26/05/2014	25/05/2017
EUNAVFOR - Athena Atalanta	Delivery of an integrated maritime monitoring service	06/04/2011	No end date
EUROCONTROL	NAVIGATION SAFETY FOR RPAS		No end date
European Free Trade Association Surveillance Authority	MoU on the release of classified information in the framework of the technical cooperation in maritime security	05/02/2014	No end date
European Free Trade Association Surveillance Authority	Provision by EMSA of technical assistance for maritime security 2	05/02/2014	No end date
FRONTEX	Service Level Agreement between the European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (Frontex) and the European Maritime Safety Agency (EMSA) for the provision of surveillance tools and services in support of Frontex activities, including for the implementation of the EUROSUR framework	01/05/2016	30/04/2019
International Mobile Satellite Organization	IMSO AUDIT – EU LRIT-DC	27/05/2009	No end date
International Mobile Satellite Organization	IMSO AUDIT – LRIT-IDE	20/03/2012	No end date

Interspill LTD	Interspill Series of Conferences and Exhibitions - Memorandum of Understanding	07/02/2011	No end date
Italian Coast Guard - Comando Gen.del Corpo delle Capitanerie di Porto	SLA EMSA ICG REGIONAL SSN SERVER (16/17)	22/10/2016	21/10/2017
Italian Coast Guard - Comando Gen.del Corpo delle Capitanerie di Porto	MEDITERRANEAN REGIONAL SSN SERVER	22/10/2015	21/10/2017
JRC - Joint Research Centre	Hosting, Maintenance and Enhancement of EMCIP Platform	04/12/2013	03/12/2017
MAOC - Maritime Analysis and Operations Centre	Operational assistance and training	12/08/2014	11/08/2019
MARine Environmental and TEchnology Centre - Istituto Superior Tecnico	Cooperation agreement MARETEC-IST - EMSA Oil Spil Modelling	15/06/2014	14/06/2019
Norwegian Coastal Administration	North Atlantic AIS Regional Server	14/10/2014	01/01/2017
Norwegian Coastal Administration	SLA EMSA and NCA for hosting, maintenance and operation of North Atlantic, North Sea and HELCOM AIS Regional Servers and SSN	20/12/2016	No end date
République Française	Hosting & Development of Equasis	27/02/2009	No end date
Royal Belgian Institute of Natural Sciences	Development and implementation of an operational capability between oil spill models and CNS DC	09/12/2013	08/12/2018
Swedish Meteorological and Hydrological Institute, Gov. Agency	Develop and implement an operational capability to set to a data exchange mechanism between the oil spill model and the EMSA CDC	21/06/2013	20/06/2018

Annex II. Statistics on financial management

Evolution of budget execution

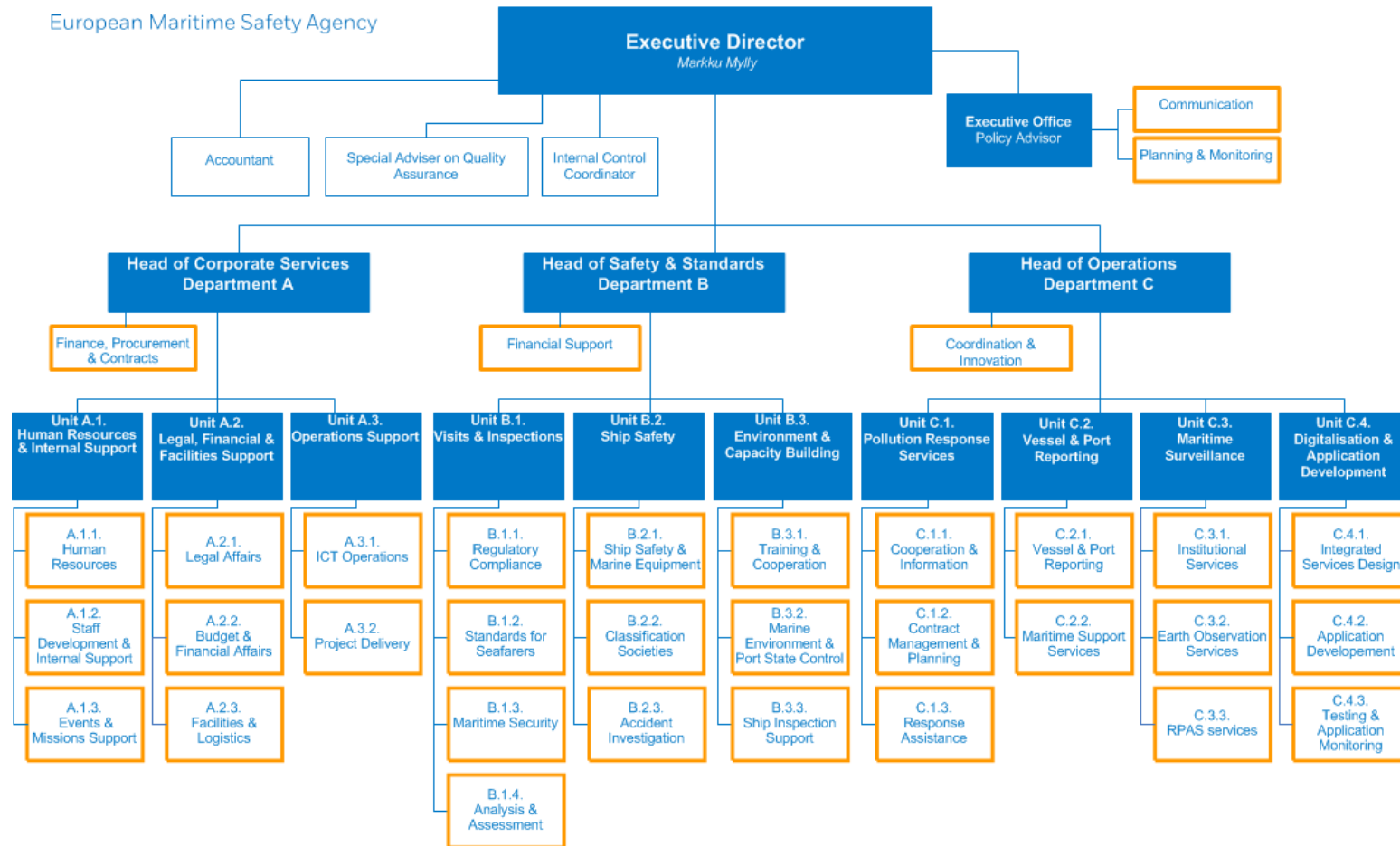


Negotiated procedures

In 2016 the following negotiated procedures based on articles 134(1) (a) to (g) of COM RAP were launched:

Reference number	Project	Status
Negotiated procedure <u>without</u> publication of Contract Notice: Art. 134(1)(a)-(g)		
NEG/06/2016	Provision of vessel detection services from TerraSAR-X/Tandem-X/PAZ Satellite images	Cancelled
NEG/07/2016	Setting-up Seaborne Dispersant capability	Cancelled
NEG/23/2016	MLC for Safemed and Traceca Training by ILO	Cancelled
NEG/26/2016	Subscription to Lloyds list 2017	Not-Awarded
NEG/39/2016	Purchase of licences for 2 users for the Lloyd's List casualty reporting service	Awarded

Annex III. Organisational chart



1 March 2016

Annex IV. Establishment plan and additional information on Human Resources management

Establishment plan 2016

Function Group and Grade	2015 Authorised		2016 Authorised	
	Permanent	Temporary	Permanent	Temporary
AD15	0	1	0	1
AD14	0	1	0	1
AD13	1	3	1	3
AD12	1	9	1	10
AD11	0	13	0	14
AD10	1	17	1	18
AD9	0	28	0	28
AD8	1	24	1	24
AD7	0	24	0	24
AD6	0	18	0	12
AD5	0	2	0	0
Total AD	4	140	4	135
AST11	0	0	0	0
AST10	0	1	0	1
AST9	0	0	0	0
AST8	0	1	0	1
AST7	0	2	0	4
AST6	0	7	0	11
AST5	0	17	0	18
AST4	0	19	0	16
AST3	0	16	0	12
AST2	0	0	0	0
AST1	0	0	0	0
Total AST	0	63	0	63
Total AD+AST	4	203	4	198
Grand Total	207		202⁴⁷	

⁴⁷ While 202 statutory posts were indicated on the Agency's Establishment Plan for 2016, the Agency delivered the activities proposed in the Work Programme 2016 with 198 statutory posts, as 4 posts were frozen for cuts foreseen in 2017.

Entry level for type of post

Key functions (examples)	Type of contract	Function group, grade of recruitment	Function is dedicated to administration support or policy (operational) or mixed
CORE FUNCTIONS			
Head of Department (level 2)	TA	AD12	Operational
Head of Unit (level 3)	TA	AD9, AD10, AD11 or AD12, related to the mandate and dimension of the Unit	Operational
Head of Sector (level 4)	TA	AD8	Operational/Support/Mixed
Senior Officer	TA	AD8	Operational
Officer	TA	AD6 or AD7 depends on the functions that will be allocated	Operational
Junior Officer	TA	AD5	Operational
Senior Assistant	TA	AST10	Operational
Junior Assistant	TA	AST1 or AST3 depends on the functions that will be allocated	Operational/Mixed
SUPPORT FUNCTIONS			
Head of Administration (Level 2)	TA	AD12	Support
Head of Human Resources (Level 3)	TA	AD9	Support
Head of Finance (Level 3)	TA	AD9	Support
Head of Communication	TA	AD8	Mixed
Head of IT (Level 3)	TA	AD10	Mixed
Senior Officer	TA	AD8	Support
Officer	TA	AD6	Support
Junior Officer	TA	AD5	Support
Webmaster- Editor	TA	AST3	Mixed
Secretary	CA	FGII	Support
Mail Clerk	CA	FGI	Support
SPECIAL FUNCTIONS			
Data Protection Officer	TA	AD8	Mixed
Accounting Officer	TA	AD8	Mixed
Internal Auditor	TA	AD8	Mixed
Secretary to the Director	TA	FG II	Mixed

Results of the screening exercise

Job type (sub) category	Year N (%)	Year N-1 (%)
Administrative support and Coordination		
<i>Administrative support</i>	16.46%	16.78%
<i>Coordination</i>	5.34%	4.89%
Operational		
<i>Top Level Operational Coordination</i>	2.28%	2.65%
<i>Programme Management & Implementation</i>	52.81%	51.86%
<i>Evaluation & Impact assessment</i>	12.10%	12.35%
<i>General Operational</i>	3.82%	4.43%
Neutral		
<i>Finance/Control</i>	7.26%	7.05%
<i>Linguistics</i>	0%	0%

Annex V. Human and financial resources by activity

Planned and Actual Resources 2016*	Planned Human Resources					Actual Human Resources					Planned Financial Resources		Actual Financial Resources	
LIST OF ACTIVITIES EMSA	MANPOWER					MANPOWER					Total allocated costs Commitments	Total allocated costs Payments	Total allocated costs Commitments	Total allocated costs Payments
	TEMPORARY AGENTS		END	CA	TOTAL	TEMPORARY AGENTS		END	CA	TOTAL				
	AD	AST				AD	AST							
2100 Union maritime information and exchange system (integrated maritime services; SafeSeaNet; Improving internal market and maritime transport efficiency)	25	12	3	5	45	26	11	4	1	42	8,398,859	8,371,394	8,164,078	8,171,025
2200 EU LRIT Cooperative Data Centre and LRIT International Data Exchange	6	7			13	6	7			13	3,356,445	3,317,960	3,362,186	3,298,064
2300 Information System for PSC (THETIS)	4	1		1	6	5	1		1	7	1,685,094	1,719,637	1,904,676	1,939,198
2400 Maritime Support Services	8	2	3	2	15	7	2	3	2	14	1,836,940	1,836,940	1,734,156	1,690,445
3100 Classification Societies	10	1	1		12	10	1	1		12	1,783,557	1,783,557	1,882,772	1,823,435
3200 STCW	6	2	1		9	6	2	1	1	10	1,298,712	1,298,712	1,549,396	1,399,278
3300 Visits to Member States to monitor implementation of Union Law Formerly "Implementation of PSC Directives in Member States and EFTA"	3		1		4	6	2	1		9	585,065	585,065	1,223,742	1,191,419
3400 Maritime Security	3			1	4	3				3	573,578	573,578	500,032	480,046
3500 Merged with 3300 Formerly "Monitoring implementation of other EU maritime legislation"	5	2			7						1,020,958	1,020,958	59,000	85,508
3600 Horizontal analysis and research	3			1	4	2			1	3	550,578	550,578	406,438	393,008
4100 Port State Control	3		1		4	3				3	884,065	884,065	834,998	713,245
4200 Accident investigation	4	1	1		6	4	1	1		6	1,094,873	1,094,873	1,041,190	1,152,363
4300 Technical assistance (training and cooperation)	2	1	2	1	6	3	1	2		6	1,419,370	1,419,370	1,455,451	1,307,513
4400 Marine equipment and ship safety standards (including IMO)	7	1	2		10	6	1	3		10	1,898,937	1,928,509	1,787,518	1,729,927
4500 Ship Inspection Support Formerly "Maritime Information, Equasis and statistics"	1	1	1		3	3		1	1	5	675,531	675,531	936,593	925,529
4600 Prevention of pollution by ships	6				6	5				5	1,215,684	1,215,684	1,191,714	1,107,280
6500 Communication, Missions & Events support	3	5		6	14	3	4		6	13	1,529,895	1,529,895	1,525,507	1,484,075
5100 Operational Pollution Response Services	11	2	1	3	17	10	2	1	3	16	17,202,395	19,855,127	17,959,273	20,600,267
5200 CleanSeaNet and illegal discharges	6	1			7	7	1			8	7,205,162	5,254,633	5,691,287	4,510,610
5300 Cooperation and information relating to pollution preparedness and response	4		1		5	4				4	1,006,181	1,203,978	895,966	833,440
6100 Management/bureau/horizontal tasks	10	7			17	10	6		1	17				
6200 Human Resources	3	5		6	14	3	5		6	14				
6300 Legal and Financial Affairs, facilities and logistics	5	4		6	15	6	4		5	15				
6400 Operations support (ICT)	1	8		1	10	1	8		2	11				
6100, 6200, 6300, and 6400 Total Overhead/horizontal tasks	19	24		13	56	20	23		14	57				
Copernicus staff financed by EMSA budget*									3					
Subtotals	139	63	18	33	253	139	59	18	33	246				
Total EMSA subsidy	202					198					55,221,879	56,120,044	54,105,973	54,835,675

* ABB methodology:

The Agency implements an activity based approach to budgeting and reporting on all activities funded by the EMSA subsidy. The lifecycle stretches from initial planning of the draft budget preparation which starts towards the end of year N-2 to the final presentation of actuals in the Consolidated Annual Activity Report in year N+1. Activity Based Budgeting (ABB) codes are tagged to commitments and payments, tracking the cost of both direct and indirect activities. Direct staff is allocated to one operational activity according to the prevailing function of the staff. Indirect staff and overhead and administrative costs are ventilated across operational activities, based on the number of direct staff allocated to each activity. For the purposes of the ABB exercise, the 3 Contract Agents foreseen for the project-financed activity Copernicus but financed by the EMSA Budget are treated as indirect staff.

Planned and Actual Resources 2016	Planned Human Resources	Actual Human Resources	Planned Financial Resources		Actual Financial Resources	
	Contract Agents	Contract Agents	Commitments	Payments	Committed	Paid
7000 IMP (Integrated Maritime Policy Project)			p.m.	p.m.	12,143	12,143
7100 SAFEMED III	1.8	1.8	p.m.	p.m.	1,458,697	1,007,507
7200 FRONTEX SLA	4	4	p.m.	p.m.	9,503,235	5,916,154
7300 CSN GREENLAND			p.m.	p.m.	382,283	302,865
7310 CSN Dutch Islands			p.m.	p.m.	49,350	35,831
7400 TRACECA II	1.2	1.2	p.m.	p.m.	409,549	351,077
7500 COPERNICUS			p.m.	p.m.	4,454,000	1,494,203
7600 EQUASIS (R0 FUNDS)			p.m.	p.m.	586,176	473,856
7700 THETIS EU (formerly THETIS-S)			p.m.	p.m.	33,829	20,089
7710 THETIS MRV			p.m.	p.m.	41,831	411
7720 Emissions Inventories Project			p.m.	p.m.	104,013	104,013
7800 EC Funds for candidate and potential candidate			p.m.	p.m.	211,871	141,261
Total Project Financed Activities	7	7			17,246,977	9,859,410

Annex VI. Specific annexes related to Part II – Management

N/A

Annex VII. Specific annexes related to Part III - Assessment of the effectiveness of the internal control systems

N/A

Annex VIII. Annual accounts

Economic outturn account

	2016	2015
Revenues from administrative operations	4,775,959	2,983,608
Other operating revenue	61,419,722	51,968,890
TOTAL OPERATING REVENUE	66,195,682	54,952,498
Administrative expenses	-32,600,639	-33,206,897
All Staff expenses	-18,809,212	-17,599,973
Fixed asset related expenses	-8,919,461	-9,358,772
Other administrative expenses	-4,871,966	-6,248,151
Operational expenses	-31,359,711	-23,910,920
TOTAL OPERATING EXPENSES	-63,960,350	-57,117,817
SURPLUS/(DEFICIT) FROM OPERATING ACTIVITIES	2,235,332	-2,165,319
Financial revenues	164	20,137
Financial expenses	-146	-365
SURPLUS/ (DEFICIT) FROM NON OPERATING ACTIVITIES	18	19,771
ECONOMIC RESULT OF THE YEAR		2,235,351

Summary of data provided by the Agency in its annual financial statement.
 These accounts are drawn up on an accrual basis and are rounded.

Balance sheet

(in EURO)

	2016	2015
NON CURRENT ASSETS	33,267,517	29,985,331
Intangible fixed assets	8,060,318	7,200,819
Tangible fixed assets	24,917,063	22,494,375
Long-term pre-financing	290,136	290,136
Long-term receivables	0	0
CURRENT ASSETS	22,312,215	23,404,626
Inventories	2,137,960	1,072,320
Short-term pre-financing	595,608	3,892,865
Short-term receivables	3,048,354	6,195,213
Cash and cash equivalents	16,530,293	12,244,228
TOTAL ASSETS	55,579,732	53,389,957
NON-CURRENT LIABILITIES	105,510	110,285
Provisions for risks and charges	0	0,00
Other long-term liabilities	105,510	110,285
CURRENT LIABILITIES	16,944,222	16,985,023
Provisions for risks and charges	0	46,000
Accounts payable	16,944,222	16,939,023
TOTAL LIABILITIES	55,579,732	53,389,957
TOTAL NET ASSETS/LIABILITIES		38,529,999

Annex IX. EMSA’s report on the multi-annual funding of the Agency’s pollution preparedness and response activities as laid down in Regulation (EU) No 911/2014.

Annex IX - EMSA's Report on the Multi-Annual Funding of the Agency's pollution preparedness and response activities as laid down in Regulation (EU) No 911/2014.

Table of contents

Chapter 1: Report Objective and Executive Summary.....	2
Chapter 2: Introduction.....	4
Chapter 3: Operational Assistance.....	5
3.1 Operational assistance: vessel network, equipment and dispersants	5
3.2 CleanSeaNet Satellite Service for Oil Spill Monitoring.....	12
3.3 Support to Coastal States and the Commission for Accidental Spills and Emergencies.....	18
3.4 Utilising State of the Art Remote Sensing Technology for Oil Spill Detection, Monitoring and Response	18
Chapter 4: Cooperation and Coordination.....	19
4.1 Introduction.....	19
4.2 Activities with regard to Cooperation	19
Chapter 5: Information.....	22
5.1 Introduction.....	22
5.2 Activities with regard to Hazardous and Noxious Substances (HNS).....	22
5.3 Activities with regard to dispersants	22
5.4 List of Member States' pollution response capacities	22
Annex: Total Expenditures for Pollution Preparedness and Response Activities	23

Chapter 1: Report Objective and Executive Summary

Regulation (EU) No 911/2014 of the European Parliament and of the Council of 23 July 2014 on multi-annual funding for the actions of the European Maritime Safety Agency in the field of response to marine pollution caused by ships and oil and gas installations states, that “In accordance with Regulation (EC) No 1406/2002, the Agency should report on the financial execution of the multi-annual funding of the Agency in its annual report.” This report is presented here.

The activities of the Agency in the field of marine pollution preparedness, detection and response caused by ships and oil and gas installations are focused on providing operational assistance and information to Member States. The main services are:

- The provision of additional response capacity through the Network of Stand-by Oil Spill Response Vessels and the Equipment Assistance Service (EAS), these services being adapted to also address spills from offshore oil and gas installations;
- CleanSeaNet: the satellite based oil spill and vessel detection and monitoring service;
- The MAR-ICE (Marine-Intervention in Chemical Emergencies) Information Service in case of chemical spills at sea;
- Cooperation and coordination with the EU Commission, EU Member States, EFTA/EEA Coastal Countries, Candidate Countries, Acceding Countries, Regional Agreements and other relevant international organisations such as the International Maritime Organization (IMO);
- The provision of information through publications and workshops.

At the end of 2016, 17 fully equipped vessels and one vessel in the preparatory phase were under contract. Following the expiration of the South Black Sea vessel contract, a new vessel was contracted late 2016. The vessels contracted at the end of 2015 to respectively replace the response capacity in South Baltic and establish new capacity in the region of the Canary Islands and the Madeira archipelago, entered into operational service. Two contracts for the western and central Mediterranean Sea were renewed for an additional 4-year period. In order to ensure a high level of preparedness 69 quarterly drills were conducted on board EMSA contracted vessels. In addition, three acceptance drills related to entrance of new contracted vessels in service and/or improvement projects were carried out.

Two Equipment Assistance Service (EAS) arrangements contracted at the end of 2015 in the Baltic Sea and in the North Sea became fully operational in the second half of 2016. This new service provides specialised stand-alone equipment (i.e. fire booms, trawl nets, integrated oil containment and recovery systems) which can be used by Vessels of Opportunity. A total of seven EAS Equipment Condition Tests (ECTs) were completed by EAS contractors and Member States were introduced to the new equipment during dedicated training seminars.

The Equipment Policy, providing a framework for the management of the EMSA oil spill response equipment was implemented through a number of actions including overhauling and/or replacement of aging equipment sets purchased in 2006-07.

To further strengthen the operational cooperation with Member States and marine pollution Regional Agreements¹, 12 EMSA contracted vessels participated in 10 Operational Exercises covering all European seas.

In addition, 10 Notification Exercises aiming at the signature of the Incident Response Contracts with 12 vessel contractors and two EAS contractors were conducted.

Implementation of the Action Plan for Response to Marine Pollution from Oil and Gas Installations continued in 2016 with the purchase of dispersant for two stockpiles (Sines, Portugal and Las Palmas, Canary Islands) and the two oil spill response vessels based in these locations were upgraded to also include dispersant spraying systems.

CleanSeaNet, the satellite oil pollution and vessel detection monitoring service, provided daily monitoring over European waters to detect and deter marine pollution. In addition, the Agency also supported periodic operations or exercises such as Coordinated Extended Pollution Control Operations (CEPCO) and 'Tour d'Horizon'² aerial operations. The inclusion of the European Space Agency's Sentinel-1A satellite in CleanSeaNet operations marked a major improvement to the availability of appropriate sensors for oil spill detection.

The Consultative Technical Group for Marine Pollution Preparedness and Response (CTG MPPR), established in 2007, continued its work in 2016 on the Rolling Work Programme. The 10th meeting of the CTG MPPR was held in March 2016, back-to-back with a dedicated workshop on oil spill identification.

The MAR-ICE (Marine-Intervention in Chemical Emergencies) Network, which provides expert information and advice during hazardous and noxious substance (HNS) spills was activated on three occasions. Following an evaluation late 2015, the MAR-ICE Contact Form was improved.

The new web portal and link to EMSA's Central Hazmat Database (CHD) for easier access to the MAR-CIS (Marine Chemical Information Sheets) went live in December 2016.

¹ 'Regional Agreements' refer to the agreements signed by countries around a particular sea area to plan for pollution preparedness and coordinate responses in case of a large-scale marine pollution incident. The EU has an official role in some, but not all, of these. Regional Agreements have been developed for all the sea areas along the European coastline: the North Sea (Bonn Agreement), the Baltic Sea (HELCOM), the Mediterranean (the Barcelona Convention), the Black Sea (Bucharest Convention for which EMSA has observer status), and the North East Atlantic (Lisbon Agreement).

² The Bonn Agreement Contracting Parties have adopted a plan for all coastal states to conduct periodic and random surveillance flights for the detection of spillages in the offshore oil and gas industry areas in the North Sea. Irrespective of the main aim, all other suspected polluters are also to be identified and reported. These surveillance flights are entitled 'Tour d'Horizon Flights'.

Funding of Actions

The Budgetary Authorities provided EMSA with EUR 21.6 million in commitment and EUR 22.5 million in payment appropriations for its pollution preparedness and response task for 2016³. In terms of budget execution, 95.97 % was achieved for commitments and 98.76% for payments.

Budget execution for Anti-Pollution Measures was challenging in 2016 due to unforeseen events outside the Agency's control. The main reasons were expiration and non-renewal of one contract for an oil spill response vessel, cancellation of an improvement project as well as the delay of contracting RPAS services.

The table below provides an overall summary of commitments and payments:

	Commitments	Payments
TOTAL allocation	21,600,000	22,500,000
TOTAL utilisation	20,729,174 (95.97%)	22,220,849 (98.76%)

Table 1 Overall summary of commitment and payment appropriations in 2016

Chapter 2: Introduction

Following the sinking of the oil tanker *Prestige*, the Agency was given, in 2004, additional tasks in the field of marine pollution preparedness and response. The initial framework for such activities was described in the Action Plan for Oil Pollution Preparedness and Response⁴ and the Action Plan for Hazardous and Noxious Substances Pollution Preparedness and Response⁵. With the adoption of Directive 2005/35/EC as amended on ship-sourced pollution⁶, the task of monitoring spills was elaborated and incorporated into the Action Plan. Furthermore, following the *Macondo* incident and with the entry into force of Regulation (EU) No 100/2013, amending the Founding Regulation (EC) No 1406/2002, EMSA's mandate for operational assistance was enlarged to also include response to marine pollution caused by oil and gas installations. The framework for this new task was

3 In addition to budget allocated in 2016 and as a consequence of clearing of a recovery order EUR 234,898 as C5 funds in CA and PA respectively.

4 EMSA Action Plan for Oil Pollution Preparedness and Response as adopted by the Agency's Administrative Board in October 2004. It can be downloaded from the EMSA website: www.emsa.europa.eu

5 EMSA Action Plan for HNS Pollution Preparedness and Response as adopted by the Agency's Administrative Board in Jun 2007. It can be downloaded from the EMSA website: www.emsa.europa.eu

6 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)

described in the Action Plan for Response to Marine Pollution from Oil and Gas Installations⁷. The activities identified and defined in the Action Plans are updated annually and approved by EMSA's Administrative Board as part of the annual Work Programme. The Agency's activities build upon existing cooperation frameworks and the mandate of Regional Agreements.

Regulation (EU) No 911/2014 reserves a financial envelope for the implementation of these tasks for the duration of the current 2014-2020 Financial Perspectives⁸. The financial execution of the Multi-annual Funding (MAF) framework program should be reported as part of the Agency's annual report. A dedicated section is to be included in the Consolidated Annual Activity Report (CAAR) detailing the Agency's pollution preparedness and response activities. This is the third time the MAF reporting is included in the CAAR as an Annex, covering the year 2016. EMSA's activities under this umbrella are presented, and described in more detail in three categories:

- Operational Assistance;
- Cooperation and Coordination;
- Information.

Chapter 3: Operational Assistance

EMSA provides four main operational assistance services to coastal States with regard to marine pollution preparedness and response:

- The network of stand-by oil spill response vessels including dispersants;
- The Equipment Assistance Service (EAS);
- CleanSeaNet, the satellite based oil spill and vessel monitoring and detection service; and
- Pollution response expertise to provide operational and technical assistance for oil and HNS incidents.

3.1 Operational assistance: vessel network, equipment and dispersants

The network of stand-by oil spill response vessels, including the establishment of dispersant spraying capacity as well as the establishment of dispersant stockpiles, has been built up and maintained through annual procurement procedures starting in 2005.

Mindful of the principle of 'subsidiarity' and the roles and responsibilities of Member States, this operational service is intended as a 'logical part' of the marine pollution response mechanism options available to coastal States requesting support, i.e. it should 'top-up' the national response capacity of the affected Member State. It is clear that Member States have the primary responsibility regarding response to pollution incidents in their waters.

7 EMSA Action Plan for Response to Marine Pollution from Oil and Gas Installations as adopted by the Agency's Administrative Board in November 2013. It can be downloaded from the EMSA website: www.emsa.europa.eu

8 A financial perspective is a seven-year spending framework of the European Union.

Consequently, the State requesting assistance will have the EMSA resources at its disposal under its operational control. Importantly, the network of pollution response vessels is provided in a cost-efficient manner. Assistance will be channelled to requesting states through the Emergency Response Coordination Centre (ERCC) of the European Commission in Brussels.⁹

There were three main activities in relation to the network in 2016, namely:

- Bringing into operation the two arrangements contracted end-2015 to establish new capacity for the Canary Islands and Madeira archipelago in the Atlantic and for replacement of the contracted capacity in the southern Baltic Sea;
- Awarding a new contract for the southern Black Sea, in order to replace the contract that expired in the same area at the end of 2016, as well as an attempt for a response vessel for the northern Baltic Sea through a public procurement procedure;
- Renewing the response arrangements for the western and central Mediterranean Sea, based in Algeciras (Spain) and Valetta (Malta) respectively, for an additional four years.

Associated activities included maintaining the service level for operational contracts, primarily through:

- Monitoring and evaluating vessel/equipment/crew performance during quarterly drills;
- Participation of the contracted vessels in operational at-sea exercises organised in cooperation with EU Member States and/or Regional Agreements;
- Identifying and implementing appropriate technical improvements to the network, and developing projects to upgrade the management of the service as a whole.

3.1.1 Network of Stand-by Oil Spill Response Vessels and Equipment Assistance Service

Vessel Network

The current network provides at-sea oil recovery services from vessels based in all the regional seas of Europe. It should be noted that all vessels are at the disposal of all Member States regardless of their actual area of operation. At the end of 2016, EMSA maintained contracts for 17 fully equipped stand-by oil spill response vessels available, upon request, to assist coastal States in oil spill recovery operations. Alternatively, four of these vessels can be used for dispersant spraying.

The map in Figure 1 shows the distribution of vessels and equipment stockpiles around Europe. More technical and operational specifications of all the contracted services are available on the Agency website www.emsa.europa.eu.

⁹ The Emergency Response Coordination Centre (ERCC) is the heart of the Community Mechanism for Civil Protection. It is operated by DG Humanitarian Aid & Civil Protection (DG ECHO) of the European Commission and accessible 24 hours a day. It plays key coordination role during emergencies.

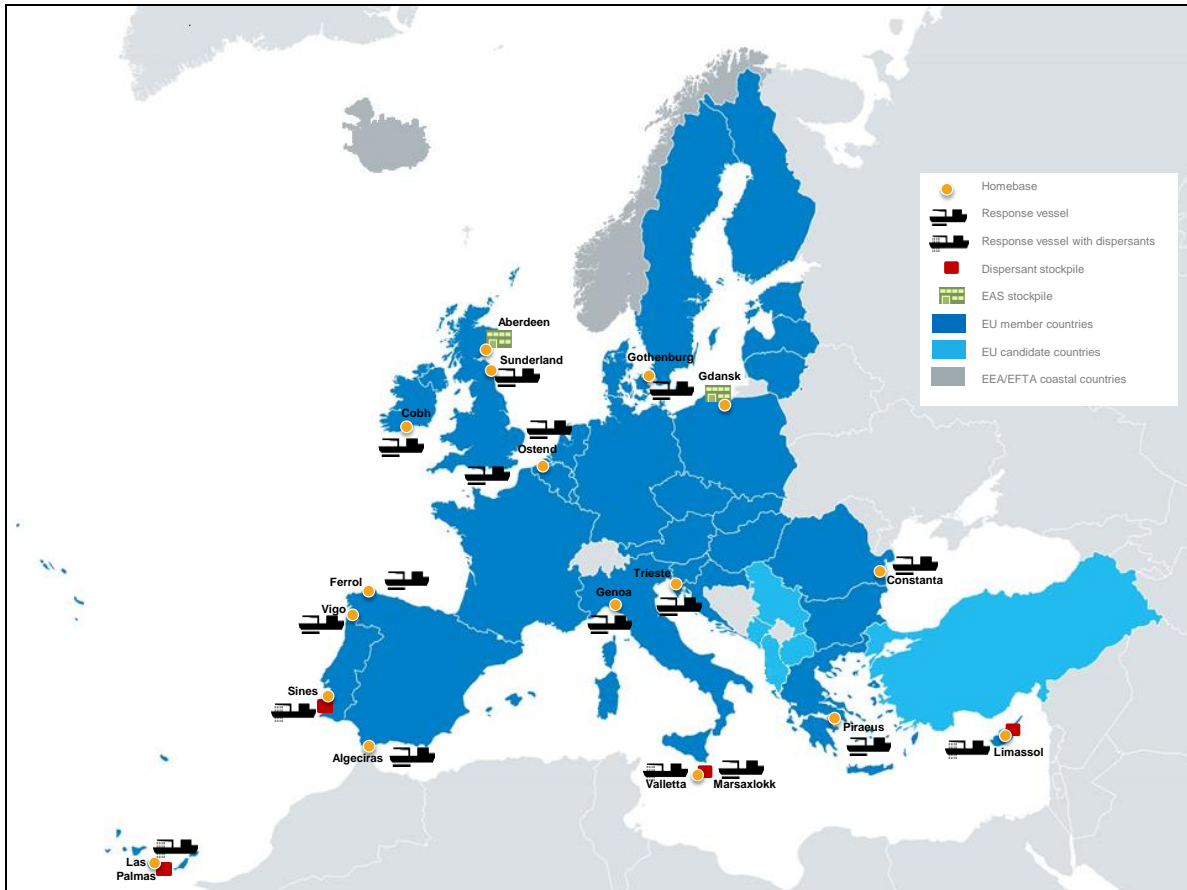


Figure 1 Distribution of EMSA's contracted vessels and EAS arrangements at the end of 2016

Two vessel contracts for the northern Baltic Sea and southern Black Sea expired in 2016. Accordingly, within the framework of the Agency's annual Work Programme, procedures following publication of a Contract Notice in the Official Journal of the European Union (OJEU) to replace the response capacity in those areas were launched. As a result, a new contract for the southern Black Sea was awarded. Regarding the northern Baltic Sea, a new contract could not be awarded and a new procurement to replace the response capacity in this area will be launched in 2017.

In parallel, two vessel arrangements contracted at the end of 2015 successfully completed the Preparatory Phase and became fully operational in 2016:

- The tanker *Norden*, based in Gothenburg, Sweden, providing replacement capacity in the southern Baltic Sea;
- The tanker *Mencey*, based in Las Palmas, Spain, providing new response capacity in the Canary Islands and Madeira archipelago. This vessel is, in addition to the standard equipment set for mechanical recovery, with equipment for dispersant application.

Moreover, taking into consideration the implementation of the Action Plan for offshore installations, the geographic distribution and/or technical adaptation of vessels was revised accordingly. At the end of 2016, of the 17 operational contracted vessels ten were 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 flashpoints < 60°C.

In addition to the two dispersant stockpiles in Malta and Cyprus (200 tonnes of dispersant each) created in 2015, two additional stockpiles were established in Sines, Portugal and Las Palmas, Canary Islands, Spain, in 2016.

Equipment Assistance Service

The new service to provide specialised stand-alone equipment (i.e. fire booms, trawl nets, integrated oil containment and recovery systems) can be used by Vessels of Opportunity. Following a request for assistance,

the equipment is ready to be shipped within twelve hours, excluding the transit time. The requesting party may choose one or more of the available stand-alone equipment sets, and can also hire technical support personnel to assist during the equipment hand-over.

Following the conclusion of procurement procedures in 2015 to establish suitable EAS contractual arrangements in the North Sea and Baltic Sea, in 2016 EMSA implemented this new service in two equipment stockpiles, one in Aberdeen, UK, and one in Gdansk, Poland. For the purchase of the equipment, the framework contracts awarded in late 2015 to several equipment manufacturers were implemented.

After the establishment of the two EAS arrangements, EMSA organised two training seminars, one for each of the two arrangements, with the purpose of presenting the EAS to the representatives of the EU Member States. The seminars took place on 15 September in Aberdeen (UK) and 5 October in Gdansk (Poland) and the general feedback was very positive on EMSA's new established service and the approach to present it through such familiarisation seminars.

Detailed information on the contracted vessels, EAS, and the areas covered at the end of 2016 can be found in the table below:

Area covered	Contractor / Contract	Vessel(s) / Assets	Vessel type / storage capacity(m ³) / dispersant stock	Service 2016
1. Contracted vessels				
Northern Baltic	Arctia Icebreaking Ltd VAC 09/NEG/01/2009 Lot 1	<i>Kontio</i>	Icebreaker / 2033	Expired on 13/04/2016
Southern Baltic	Stena Oil EMSA/NEG/1/2015 Lot 2	<i>Norden</i>	Oil Tanker / 2880	New service operational as of 03/06/2016
Northern North Sea	James Fisher Everard Ltd EMSA/NEG/1/2013 Lot 1	<i>Mersey Fisher, Thames Fisher</i>	Product Tankers / 5028 / 5028	✓
Channel and Southern North Sea	DC Industrial S.A. 2014/EMSA/NEG/1/2014 Lot 3.1	<i>Interballast 3</i>	Hopper Dredger / 1886	✓
	DC Industrial S.A. 2014/EMSA/NEG/1/2014 Lot 3.2	<i>DC Vlaanderen 3000</i>	Hopper Dredger / 2744	✓
Atlantic North	James Fisher Everard Ltd EMSA/NEG /1/2013 Lot 2	<i>Galway Fisher, Forth Fisher</i>	Product Tankers / 4754 / 4754	✓
Atlantic Coast	Remolcadores Nossa Terra S.A. EMSA/NEG/1/2014 Lot 1	<i>Ria de Vigo</i>	Offshore Supply / 1522	✓
Bay of Biscay	Ibaizabal VAC NEG/01/2012 Lot 3	<i>Monte Arucas</i>	Oil tanker / 2952	✓
Southern Atlantic Coast	Mureloil VAC NEG/1/2012 Lot 1	<i>Bahia Tres</i>	Oil Tanker / 7413 / Dispersant 200 tonnes	✓
Canary Islands and Madeira	Petrogas EMSA/NEG/1/2015 Lot 1	<i>Mencey</i>	Oil Tanker / 3500 / Dispersant 200 tonnes	New Service started on 15/07/2016
Western Mediterranean	Naviera Altube EMSA NEG/1/2011 Lot 4	<i>Monte Anaga</i>	Oil Tanker / 4096	Contract renewed on 20/03/2016
	Ciane EMSA/NEG/34/2012	<i>Brezzamare</i>	Oil Tanker / 3288	✓
Central Mediterranean	Tankship EMSA NEG/1/2011 Lot 2	<i>Balluta Bay</i>	Oil Tanker / 2800 / Dispersant 200 tonnes	Contract renewed on 15/05/2016
	SL Ship Management Ltd EMSA NEG/1/2012 Lot 2	<i>Santa Maria</i>	Oil Tanker / 2421	✓

Adriatic Sea	Castalia EMSA/NEG/1/2013 Lot 4	<i>Marisa N</i>	Oil Tanker / 1562	✓
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	✓
Eastern Mediterranean	Petronav EMSA NEG/1/2010 Lot 1	<i>Alexandria</i>	Oil Tanker / 7458 / Dispersant 200 tonnes	✓
Black Sea	Bon Marine Ltd EMSA NEG/1/2011 Lot 5	<i>Enterprise</i>	Oil Tanker / 1374	Contract expired on 20/09/2016.
Northern Black Sea	Petronav EMSA/NEG/1/2014 Lot 2	<i>Amalthia</i>	Oil Tanker / 5154	✓
2. EAS arrangements				
Baltic Sea	Labelpoland.com EMSA/NEG/8/2015 – Lot 2	10 stand-alone equipment sets	Storage area: 800m ² (<i>Gdansk, Poland</i>)	Operational as of 9 June 2016
North Sea	Sureclean / NRC EMSA/NEG/8/2015 – Lot 2	9 stand-alone equipment sets	Storage area: 600m ² (<i>Oldmeldrum, UK</i>)	Operational as of 4 August 2016

Table 2 Summary of OPR services and contractual information at the end of 2016

3.1.2 Maintaining the Service: Drills and Exercises

3.1.2.1 Drills

In order to maintain the appropriate level of readiness during the Stand-by Phase of the contracts, the companies and vessels concerned carry out different types of activities. The primary activity is the vessel/crew drills, which take place on a quarterly basis. Each drill verifies that the capability of the vessel and specialised equipment, and the skill of the crew, is at an appropriate level.

These drills are primarily an internal event between the Agency and contractors, however Member State representatives and journalists have taken part in or attended such drills, and the Agency encourages such participation.

In 2016, a total of 72 Quarterly Drills were performed by the vessels under contract to the Agency including three Acceptance Drills related to entrance of new contracted vessels in service and/or improvement projects were conducted. The Acceptance Drills are of particular importance as they are the major milestone for new vessels to enter into the Stand-by Phase of a contract.

With regard to the EAS arrangements, the drills are called 'Equipment Condition Tests' (ECTs) and the contracts have defined a maximum number of six ECTs per year. In 2016, seven ECTs were conducted by EAS contractors in order to verify readiness and performance of the newly acquired stand-alone equipment.

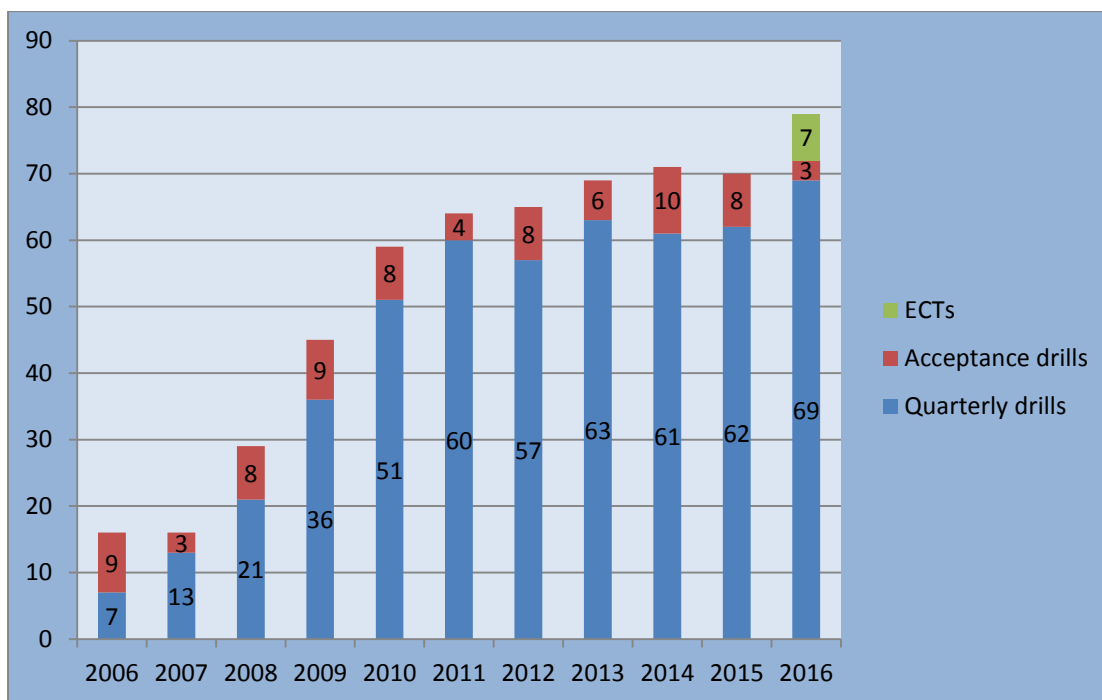


Figure 2 Number of drills 2006 - 2016

Detailed information regarding drills conducted by EMSA contracted vessels in 2015 can be found in the “Network of Stand-by Oil Spill Response Vessels - Drills and Exercises Annual Report 2015” available online at <http://emsa.europa.eu/oil-recovery-vessels/opr-documents/opr-reports.html> - [Drills and Exercises Report 2015](#).

3.1.2.2 Exercises

In addition to the abovementioned drills, a range of exercises were conducted. These types of event are, in addition to being a useful method of maintaining pollution response skills, an important tool for identifying potential areas that could be improved. At-sea operational exercises in particular greatly assist the integration of EMSA’s resources within the response mechanisms of Member States, improving the necessary coordination and cooperation of the EMSA vessels with the coastal State response units. In the course of 2016, 12 EMSA stand-by oil spill response vessels participated in 10 at-sea operational exercises, organised in cooperation with EU Member States and/or Regional Agreements as well as with SAFEMED and TRACECA projects beneficiaries, in the Baltic Sea, Bay of Biscay, Atlantic Coast, Mediterranean Sea and Black Sea.

The summary of operational exercises performed by EMSA contracted vessels during the 2016 is shown in the table below:

N°	Name	Date	Location	Participating Parties	EMSA vessel/s
1	RAMOGEPOL	27 April 2016	Monaco	Monaco, France, Italy, Spain, EMSA	<i>Brezzamare</i>
2	SIMULEX	25-27 April 2016	Nador, Morocco	Safemed III beneficiaries (Morocco host), EMSA	<i>Monte Anaga</i>
3	POLMAR	11 May 2016	Le Havre, France	France, EMSA	<i>Interballast III</i>

4	GASCOGNE	25 May 2016	Golfe of Gascogne, France	France, EMSA	<i>Monte Arucas</i>
5	TRACECA II	15 June 2016	Constanta, Romania	TRACECA II beneficiaries, Romania, EMSA	<i>Amalthia</i>
6	BREEZE	15 July 2016	Burgas Bay, Bulgaria	Bulgaria, Romania, Turkey, US, EMSA	<i>Enterprise</i>
7	COPENHAGEN AGREEMENT	20-22 September 2016	Lysekil, Sweden	Parties to the Copenhagen Agreement (Sweden host), EMSA	<i>Norden</i>
8	MALTA OPEN SHIP	4 October 2016	Valetta, Malta	Malta, EMSA	<i>Balluta Bay and equipment from Santa Maria</i>
9	NEMESIS 2016	12 October 2016	Limassol, Cyprus	Cyprus, Greece, France, UK, Egypt, US, EMSA	<i>Alexandria</i>
10	ATLANTIC POLEX.PT	20 October 2016	Portimao, Portugal	Portugal, Spain, EMSA	<i>Bahia Tres Monte Anaga</i>

Table 3 International Operational Exercises in 2016

Detailed information regarding international exercises with participation of EMSA contracted vessels can be found in the “Network of Stand-by Oil Spill Response Vessels - Drills and Exercises Annual Report 2016”, available online at <http://www.emsa.europa.eu/oil-recovery-vessels/opr-documents/opr-reports.html> - [Drills and Exercises Report 2016](#)

3.1.2.3 Improvements to the Network Service

The vessel *Bahia Tres*, contracted from Mureloil for the area of the southern Atlantic, was upgraded by installing dispersant application capability on board the vessel as well as setting-up a dispersant stock of 200 tonnes in Sines, Portugal. It should be noted, however, that for this vessel arrangement, the mechanical recovery capability will remain the primary response option.

At the end of 2016, four vessel arrangements were equipped for seaborne dispersant application with associated dispersant stocks of 200 tonnes each, in Malta (Valletta), Cyprus (Limassol), Portugal (Sines) and Spain (Las Palmas).



Dispersant tank containers on board the Bahia Tres during sea trials (on the left) and dispersant stockpile in Sines, Portugal (on the right)

Moreover, five Normar high capacity skimmers on board the vessels: *Aktea OSRV*, *Santa Maria*, *Alexandria*, *Monte Anaga* and *Norden* were upgraded in order to operate in hazardous areas with flashpoints < 60°C.

Furthermore, in 2016 the Equipment Management Policy was implemented through a number of actions on several ageing equipment sets purchased in 2006-07. This included the overhauling of the equipment arrangement of the vessel *Balluta Bay* and the conclusion of a procurement procedure for the replacement of the boom sections on board the vessel *Monte Anaga*.

3.2 CleanSeaNet Satellite Service for Oil Spill Monitoring

3.2.1 Introduction

CleanSeaNet, the European satellite based oil spill monitoring and vessel detection service, was launched in 2007. The service was set up to support Member States' actions to combat deliberate or accidental pollution in the marine environment in the framework of Directive 2005/35/EC (amended by Directive 2009/123/EC) on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences and in particular Article 10.

The service, based on a permanent monitoring of coastal waters through the near real time analysis of Earth Observation (EO) Synthetic Aperture Radar (SAR) images, is available to 28 coastal States: all of the 23 EU coastal Member States (Belgium, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden, United Kingdom); two EFTA coastal States (Norway and Iceland); and three candidate countries (Turkey, Montenegro and Albania). During 2016, the service was also provided on a project financed basis to Greenland as well as the BES islands (Bonaire, Sint Eustatius, and Saba), located in the Dutch Caribbean.

Through the SafeMed¹⁰ and Traceca¹¹ cooperation programmes, CleanSeaNet was made available across the Mediterranean, the Black Sea and the Caspian Sea to the official project beneficiary countries.

When a potential spill is detected by the service, a pollution alert is sent to national authorities. The alerts are available within 30 minutes of the satellite acquiring the image and the service supports the identification of polluters by combining EO products with vessel traffic information. After receiving this information the national authority then decides on the appropriate operational response.

In cases of accidental pollution, coastal States can request support from the service in the form of increased SAR satellite coverage over the accident area to enable the monitoring of the spill over time, thus providing support to response operations. Additionally EMSA can also provide very high resolution optical products in support to these emergency activations; these can provide an overview of the accident area and potentially help in the identification of coastal areas impacted by the spill.

3.2.2 CleanSeaNet detections in 2016

In 2016, in the 3,652 images delivered by the CleanSeaNet service as a whole (3,057 for coastal States; 228 for Greenland; 14 for the BES islands; 353 for the SafeMed and Traceca programmes), a total of 3,767 possible oil spills were detected of which 1,825 were Class A and 1,942 were Class B (see explanation below).

Given the limitations of radar detection for the identification of spills, it is important to note that CleanSeaNet does not detect 'oil spills' but 'possible oil spills'. Other substances with a similar effect include, for example, fish or vegetable oil, ice, algae, and other lookalikes.

CleanSeaNet detections are separated into two classes:

- Class A - the detected spill is most probably oil (mineral or vegetable/fish oil) or a chemical product;
- Class B - the detected spill is possibly oil (mineral/vegetable/fish oil) or a chemical product.

¹⁰ www.emsa.europa.eu/implementation-tasks/training-a-cooperation/safemed-iii.html

¹¹ www.emsa.europa.eu/implementation-tasks/training-a-cooperation/traceca-ii.html

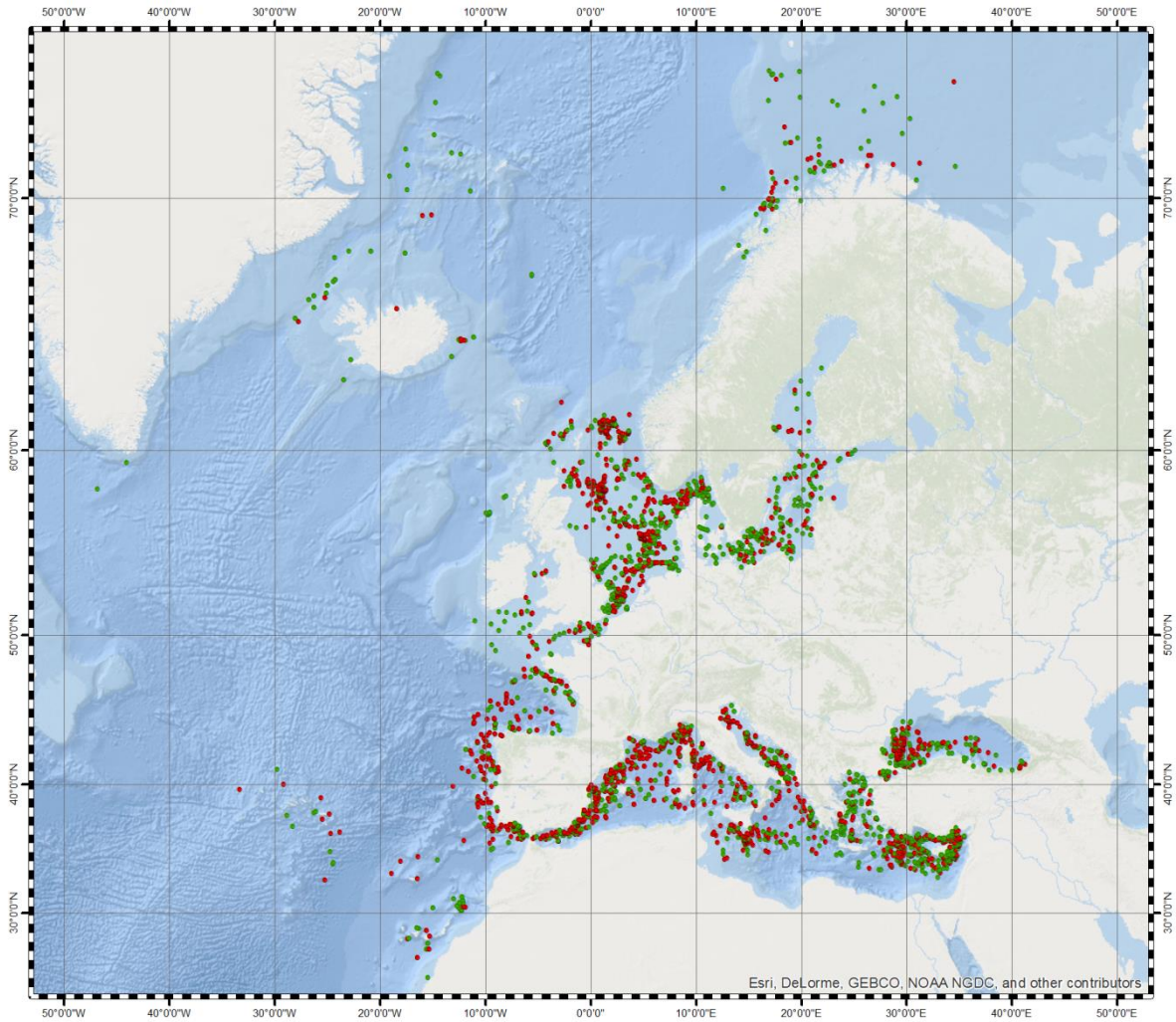


Figure 3 CleanSeaNet 2016: map of (probable and possible) spills detected in coastal States alert areas, except French Outmost Regions and BES islands (Red: Class A; Green: Class B)

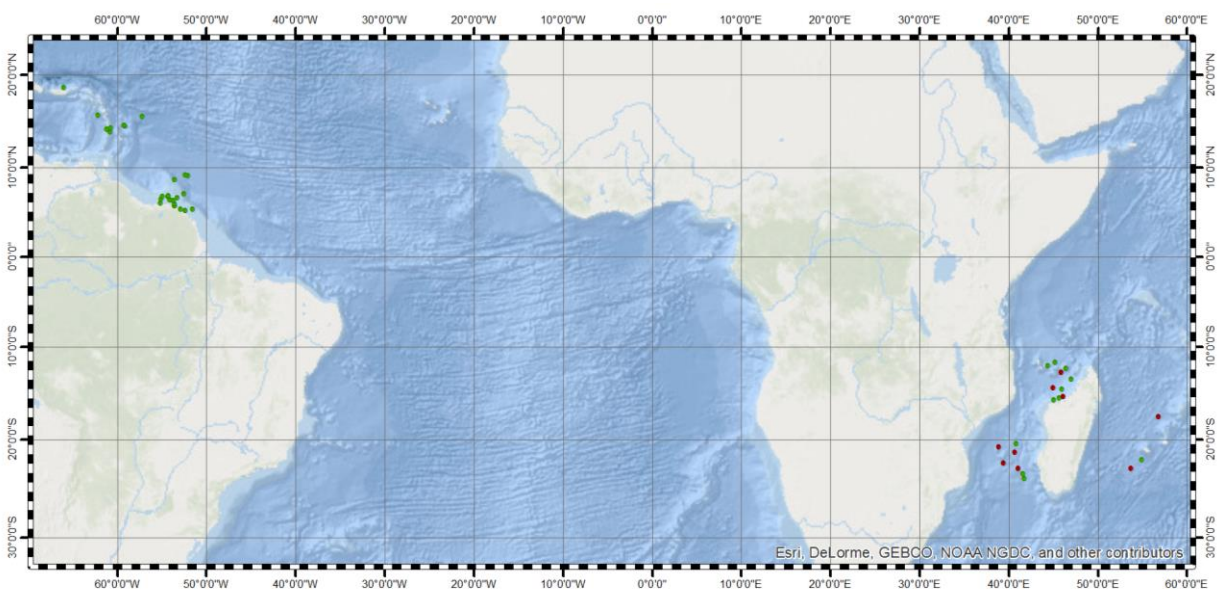


Figure 4 CleanSeaNet 2016: map of (probable and possible) spills detected in French Outmost Regions and BES islands (Red: Class A; Green: Class B)

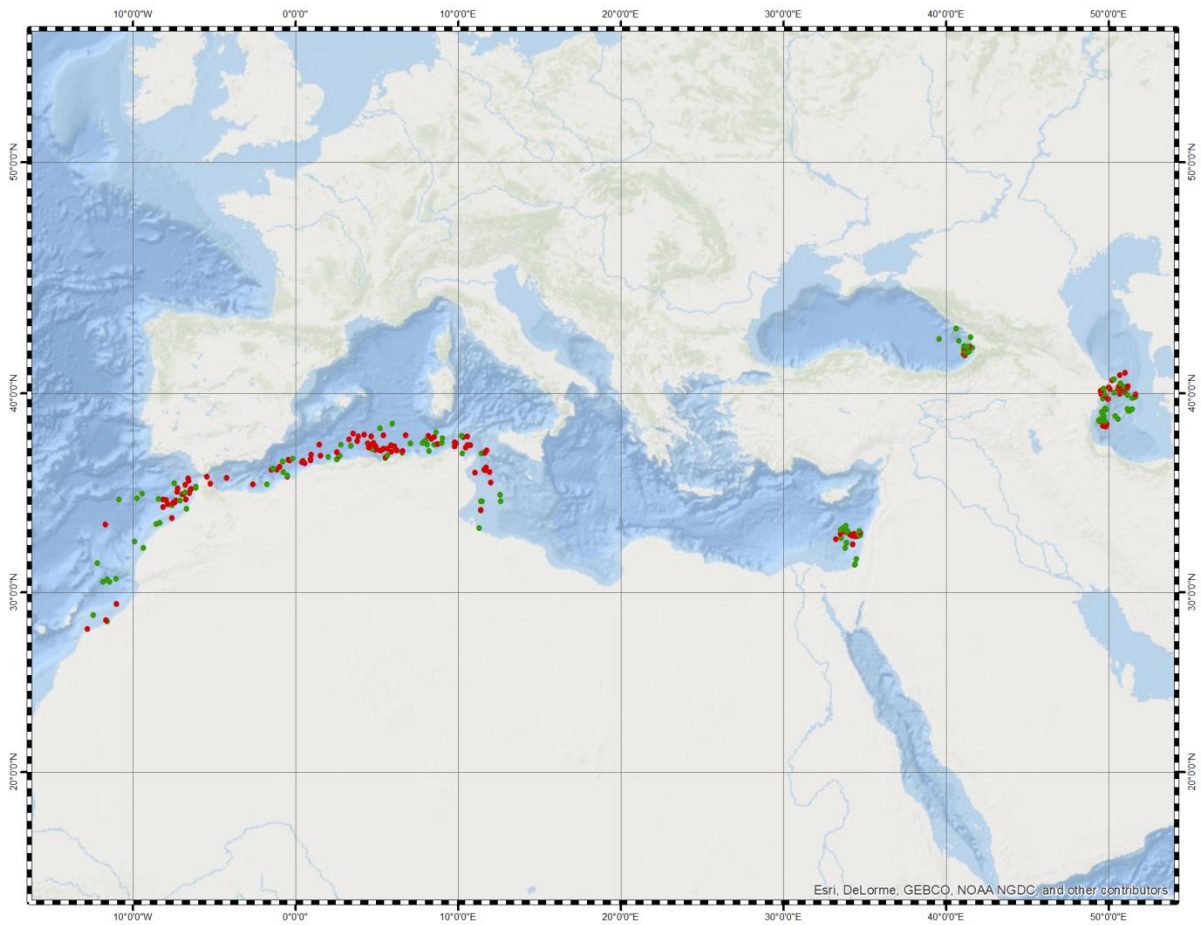


Figure 5 CleanSeaNet 2016: map of (probable and possible) spills detected in SafeMed and Traceca alert areas (Red: Class A; Green: Class B)

The overall trend over the past decade has been a year-on-year reduction in the number of possible spills detected per million km² (1,000 km x 1,000 km) monitored, though in 2016 this trend reversed, with an increase in the number of possible spills detected.

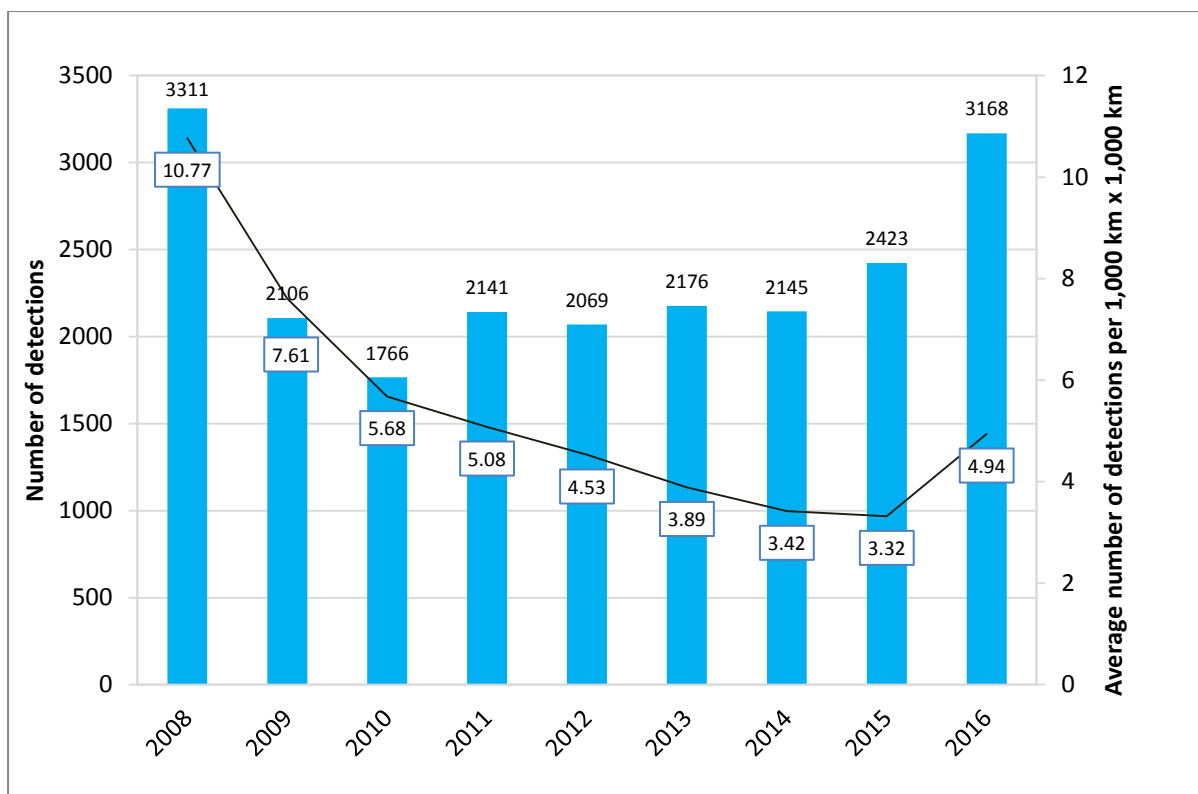


Figure 6: CleanSeaNet 2008 – 2016: trends in possible pollution detected

After a sharp decrease from 2008 to 2010 - which coincided with the economic downturn in Europe, 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 - the number of spills per million km² continued decreasing at a lower rate, and, in 2016 increased.

There are a number of possible reasons to explain the reverse in this trend:

- It is likely that the inclusion of new satellites, particularly Sentinel-1A (see section 3.3.3), may have resulted in improved detection capabilities. The spatial resolution of Sentinel-1 means that it is now possible to detect much smaller spills than before; these smaller spills are more numerous and would not have been detected previously. The average size of spills detected in 2016 was 25% smaller than in 2015. In 2015 no spills below 0.1km² were detected whereas this threshold decreased to 0.04 km² in 2016.
- Optimization of CleanSeaNet planning, due to use of new tools, increased the ratio of sea surface to land surface captured on the images in 2016.
- To a lesser extent, an increase in shipping volume could have caused the increase in detections; the Eurostat chart below shows that following a slump in 2007-2008, there has since been a gradual increase in seaborne goods handled in European ports compared to 2015, coinciding with the fact that the EMSA SafeSeaNet system registered a 5% increase in the number of ships calls from 2015 to 2016, also indicating increased traffic.

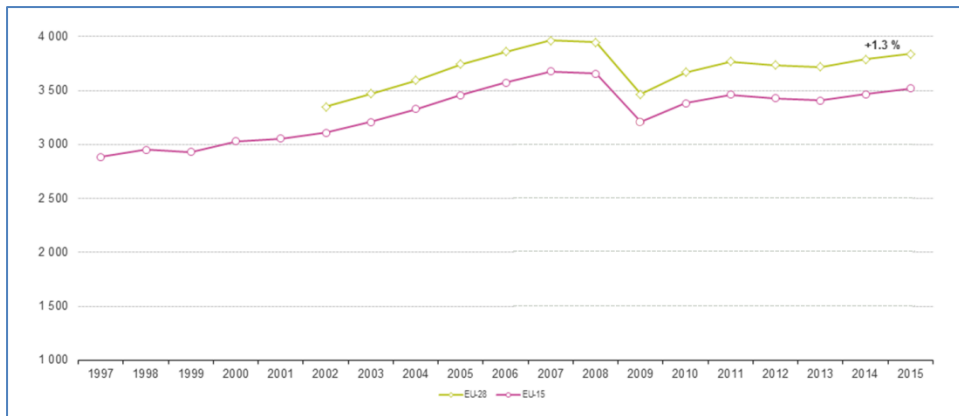


Figure 7: Gross weight of seaborne goods handled in all ports (in million tonnes) 1997-2015¹²

3.2.2.1 Support to Aerial Surveillance operations

Countries that are members of the Bonn Agreement conduct aerial surveillance operations at regular intervals to monitor oil and gas platforms in the North Sea. In 2016, EMSA supported three “Tour d’Horizon” operations; an intended fourth operation was cancelled. Eight services were delivered to the aircraft crews or national centres supporting the operations.

The Agency also provided additional satellite monitoring support during one Coordinated Extended Pollution Control Operation (CEPCO), organised by the Netherlands in September 2016, by providing one additional service. These are multilateral joint operations organised to monitor ship-source marine pollution in high-density traffic areas.

One additional operational pollution response exercise - POLMAR, organised by France over the North Atlantic in September - was supported by CleanSeaNet.

3.2.3 CleanSeaNet service improvements

In addition to RADARSAT-2, a polar orbiting SAR satellite jointly funded by the Canadian Space Agency (CSA) and MacDonald Dettwiler Associates (MDA), and Airbus’s TerraSar-X and TanDEM-X constellation, in 2016 EMSA also began delivering services from the European Space Agency (ESA) managed satellite Sentinel-1A. Based on preparations made in the previous year, Sentinel-1A was brought into operations for CleanSeaNet in April 2016. As usual when starting to use a new satellite, the initial volume of Sentinel-1A EO products ordered was low, but from the second half of 2016, ordering of these products increased considerably and it is expected to increase further in 2017.

¹² From the Eurostat website: [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Gross_weight_of_seaborne_goods_handled_in_all_ports_\(in_million_tonnes\)_1997-2015.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Gross_weight_of_seaborne_goods_handled_in_all_ports_(in_million_tonnes)_1997-2015.png)

Not only does this make the service more flexible, with a wider range of EO products available for users to choose from, but it is also more resilient as it ameliorates problems linked with reliance on an individual satellite as more missions are available. The Sentinel 1 data license is provided to EMSA free of charge; EMSA only pays service providers the near real time acquisition and additional processing required for the provision of the service.

Integrated planning software that enables the visualization of information from multiple satellites; making it i.e. it is now easier for EO planners to quickly identify acquisition opportunities with any satellite and sensor combination, improving data planning and delivery. In parallel, a number of changes to the planning approach were agreed with users, introducing a more reliable long-term planning for CleanSeaNet satellite acquisitions.

3.3 Support to Coastal States and the Commission for Accidental Spills and Emergencies

In 2016 no requests for additional support from EMSA's CleanSeaNet service were received from coastal States addressing accidental spills and emergencies.

3.4 Utilising State of the Art Remote Sensing Technology for Oil Spill Detection, Monitoring and Response

At its core, the CleanSeaNet service aims at applying state of the art technology in an efficient and effective manner to the detection of oil spills. Accordingly, EMSA is constantly following the development of new technology and its potential operational applicability. Within that framework, Remotely Piloted Aircraft Systems (RPAS) have been identified as relevant for remote sensing activities as a complementary tool to satellite imagery.

RPAS with an on-board sensor array can support 1) monitoring and detection of illegal discharges, as well as 2) at-sea response and coastal clean-up operations:

1. For monitoring and detecting illegal discharges, RPAS can provide:
 - Onsite operational information, e.g. utilising a thermal infra-red camera to identify the size and shape of a slick which is complementary to that gathered by the satellite-based CleanSeaNet service.
 - Complementary onsite identification of the source of the slick, e.g. through electro-optical/infra-red cameras and AIS transponders, to identify potential polluters and gather imagery of the slick and vessel.

The combination of the Near-Real-Time (NRT) delivery of satellite radar images to a Member State authority with subsequent RPAS overflight could provide real-time streaming of on-site operational information i.e. confirmation of an oil spill and/or identification of a potential polluter with court mandated/recognised technology. This is a cost effective solution for efficient marine pollution monitoring and the associated identification of potential polluters.

2. For supporting at-sea response and coastal clean-up operations RPAS can:
 - Identify "hot spot" areas as well as providing real time feedback on the efficiency of the clean-up activities.
 - Stream data from different sensors, i.e. thermal infra-red or electro-optical cameras or AIS information, "live" to the people responsible for coordinating the clean-up operations.

Such real time information can greatly facilitate the decision making process regarding the efficient and effective deployment of response resources.

Recognising the technological maturity of RPAS, the Agency has taken a number of important steps in making the technology available to Member States for operational usage. Following a procurement phase, EMSA has contracted towards the end of 2016 a number of RPAS service providers. Through these contracts, EMSA will organise and provide RPAS operational services to support Member States focusing on marine pollution detection and monitoring as well as ship emission monitoring as of 2017.

The RPAS service and acquired information (data flows) are provided free of charge to Member States, Iceland, Norway and the European Commission, i.e. the service is paid, via EMSA, from the EU budget.

During a deployment, the RPAS will be under the operational command of the relevant Member State. Actual flight control and management will be undertaken by qualified pilots from the RPAS service provider. The EMSA service is scalable and flexible (subject to available budget) and therefore can provide support to different Member States at the same time through the variety of service providers and RPAS contracted. This is an important aspect, as a number of Member States have already expressed their official interest in the RPAS service. Currently in the set-up phase, the service will be operational during the first half of 2017.

In parallel, an RPAS Data Centre is being developed to exploit in depth the information/data obtained through the abovementioned different operations. Of significance for the users concerned, the Data Centre will combine the RPAS data with other sources of maritime related information already available through EMSA. The RPAS Data Centre is expected to be operational during the second half of 2017.

Chapter 4: Cooperation and Coordination

4.1 Introduction

The work of the Consultative Technical Group for Marine Pollution Preparedness and Response (CTG MPPR) continued in 2016. EMSA also continued its cooperation with the pollution response experts of EU Member States, EFTA/EEA coastal Countries, EU Candidate Countries, the Regional Agreements Secretariats, the Commission (DG ECHO) and, on behalf of the Commission, with the International Maritime Organization (IMO).

4.2 Activities with regard to Cooperation

4.2.1 Pollution Response Services User Group (PRS UG ex VUG)

The 6th Pollution Response Services User Group (previously called Vessel User Group) meeting took place on 20 October 2016 at EMSA's premises in Lisbon, Portugal. Recent developments on all of EMSA's Pollution Response Services were presented and discussed in detail. Lessons learnt from recent incidents and exercises, how to enhance cooperation and other relevant developments at national level were also discussed by the group, with several follow-up actions agreed in view of the next PRS User Group Meeting, which will take place on 18 October 2017.

4.2.2 Cooperation within the Consultative Technical Group for Marine Pollution Preparedness and Response

The CTG MPPR provides an EU level platform for Member States to contribute to the improvement of preparedness and response to accidental and deliberate pollution from ships. The CTG MPPR is intended to facilitate and strengthen the exchange of information, views and opinions, share best practice and define the current and future priority actions in this field among the EU national experts, as defined in its Rolling Work Program. This is done through dedicated workshops, training, technical studies, guidelines and reports.

The status of ongoing priority actions and planned activities was reviewed at the 10th CTG MPPR meeting held on 3 March 2016. There was strong support to continue with the Group's four ongoing projects, listed below, providing added value at European level. A new proposed action with regard to establishing an expert group to address issues related to hazardous and noxious substances (HNS) was also approved by the Group. It was agreed that the next CTG MPPR meeting should be held in early 2017.

With regard to the ongoing CTG MPPR projects, the following actions were undertaken in 2016:

- Oil Spill Sampling and the work of the OSINet group of experts

Following a request at the CTG MPPR to facilitate the exchange of knowledge and best practice on oil spill sampling and oil fingerprinting, a workshop was held on 2 March 2016 in Lisbon for EU experts on "oil fingerprinting and the work of the Oil Spill Identification Network (OSINet)". Recognising the importance of oil sampling and oil fingerprinting in the oil spill response chain, a new correspondence group (CG) was established under the CTG MPPR to develop a training curriculum on oil sampling and practical Guidelines on oil spill sampling and oil identification, based on the OSINet experience and expertise. The CG began its work in 2016, under the lead of Germany.

- Claims Management

The Claims Management Working Group (CMWG) continued its work in 2016 in updating the “EU States Claims Management Guidelines”. It also organised a Claims Management workshop at EMSA’s premises on 6 October, to review these updates and to facilitate at EU level the exchange of expertise and best practices in the processes of cost recovery and claims management following maritime incidents.

- Surveillance training

EMSA organised under the CTG MPPR Framework the 5th Training course on “The Use of Surveillance Systems for Marine Pollution Detection and Assessment” on 29-30 November 2016. This training has an operational focus and is provided by experts from EU/EFTA national administrations, aiming to share national experiences among aerial surveillance operators.

- EMPOLLEX

The EMSA Marine Pollution Expert Exchange Programme (EMPOLLEX) was launched to promote the exchange of best practices and to enhance contacts, networking and cooperation between Member States in the field of marine pollution. In 2016, three exchanges took place under the EMPOLLEX Programme, with very positive feedback received from the experts undertaking the exchange, as well as from the operational centres hosting the experts.

4.2.3 Cooperation with Third Countries

From the operational perspective and through the SAFEMED and TRACECA cooperation programmes and associated dedicated budgets (not through the APM budget), CleanSeaNet was made available to the official beneficiary countries across the Mediterranean, the Black Sea and the Caspian Sea.

Under the framework of the SAFEMED III project, the Agency donated selected oil spill response equipment (one Skimmer set and one Boom set with power packs) to Tunisia after a call for interest in order to enhance the pollution response capacities in the Mediterranean Sea basin. To ensure that the donated equipment could be further used, EMSA provided through the equipment manufacturer, commissioning and training services to the relevant crew members in the beneficiary country. This project was completed in November 2016.

SIMULEX 2016 antipollution exercise took place on 25-26 April 2016 in Nador (Morocco). Within the context of SAFEMED III Project, EMSA supported Moroccan Authorities in the exercise with the deployment of the vessel *Monte Anaga*. The event included a guided visit to the EMSA’s contracted vessel for SAFEMED beneficiaries and Moroccan Authorities.

Within the context of TRACECA II Project, EMSA organised an exercise on 15-16 June 2016 in Constanta (Romania). The objective of the exercise was to give the opportunity to TRACECA beneficiaries to increase their awareness of the pollution response services offered by the Agency. The event included a seminar and a visit to the EMSA contracted vessel *Amalthia*.

Similarly in the margins of the Malta Maritime Summit, an open ship day was organised by EMSA to show the chartered oil spill response vessel *Balluta Bay*. Representatives of the Barcelona Convention Contracting Parties attended this event together with the IMO Secretary General.

4.2.4 Technical Assistance to the European Commission

The Common Emergency Communication and Information System (CECIS) for marine pollution was further developed by DG ECHO in 2016. EMSA developed the revised resource tree of CECIS for response capacities and experts, in order to make it more user friendly. In addition, the Agency regularly updates the information on its pollution response vessels, stand-alone equipment and dispersant stockpiles in the CECIS database.

EMSA supported DG ECHO and the training consortium in the development of course contents and training curricula for the Technical Expert Course for Maritime Incidents (TEC-MI). The prime objective of the TEC-MI is to prepare maritime experts for interventions and deployments in an affected country as part of a Union Civil Protection Mechanism (UCPM) Team.

4.2.5 Cooperation with Regional Agreements and the International Maritime Organization

With respect to the Regional Agreements, the Agency also provides technical support to the European Commission, and participates as part of the European Union delegation in the technical and operational meetings of these Agreements. For example, EMSA participates in the annual Operational, Technical and Scientific Questions Concerning Counter Pollution Activities (OTSOPA) meetings of the Bonn Agreement, in the HELCOM Response Group (two meetings in 2016), and is also a member of the HELCOM Informal Working Group on Aerial Surveillance (IWGAS), which meets once a year. In 2016, the Agency also participated in MEDEXPOL in the framework of the Barcelona Convention. EMSA contributes to these meetings by submitting papers, participating in discussions and also by involvement in the various operational exercises organised around Europe.

Representatives from the Bonn Agreement, HELCOM and Black Sea Commission Secretariats, REMPEC, the Lisbon Agreement, the Copenhagen Agreement, RAMOGEPOL, as well as the Chairpersons of the technical working groups OTSOPA and HELCOM Response, along with DG ECHO and EMSA representatives met in London in February 2016 for the 12th annual Inter-Secretariat meeting. These meetings focus on exchanging information on marine pollution preparedness and response activities and projects undertaken within the various Regional Agreements, while promoting the dissemination of best practices in this field.

The IMO re-organised its plenary meetings in 2013, as a result of which, the Oil Pollution Preparedness, Response and Cooperation Hazardous and Noxious Substances (OPRC-HNS) Technical Group was discontinued as a separate group. The work of the Group is now undertaken under the umbrella of the Pollution Prevention and Response subcommittee (PPR), which meets annually. EMSA participated, as part of the European Union delegation, in the third session of this subcommittee during the relevant days.

4.2.6 Cooperation with industry and other stakeholders

EMSA engaged with the International Oil Pollution Compensation Funds (IOPCF) and the International Group of Protection and Indemnity Clubs (IGPI) to develop a MoU that covers the methodology for the calculation of EMSA's vessel and equipment hire rates and charges as well as dispersant charges. It is expected that the MoU will be finalised and signed in early 2017.

The Agency continues to support the major marine pollution conference and exhibition event in Europe, INTERSPILL, as a member of the event's organising Committee¹³, recognising the importance of sharing spill response experience and disseminating best practice. In view of the 2018 INTERSPILL event, EMSA continues to be active in the Steering Committee and the Conference Programme Committee planning.

13 Since 2007, EMSA has been a party to the MoU between the event's Steering Committee members to organise the conference and exhibition on a "not-for-profit" basis.

Chapter 5: Information

5.1 Introduction

As part of its support to EU and EFTA/EEA Member States, EU Candidate Countries and the EU Commission, the Agency continued collecting and disseminating information in the field of marine pollution preparedness and response to oil and chemical spills.

5.2 Activities with regard to Hazardous and Noxious Substances (HNS)

5.2.1 MAR-ICE Network: Information Service for Chemical Emergencies

The MAR-ICE service, based on an agreement signed between the three MAR-ICE parties (Cedre, Cefic and EMSA), comprises a network of experts to support and advise Member States during the response to chemical spills. In 2016, the MAR-ICE service was activated on three occasions in the context of exercises.

5.2.2 MAR-CIS datasheets (MARine Chemical Information Datasheets)

The MAR-CIS Marine Chemical Information Sheets are datasheets of chemical substances that contain relevant information for responding to marine spills of hazardous and noxious substances (HNS). These datasheets provide concise information on the substances' physical and chemical properties, handling procedures and emergency spill response procedures, as well as maritime transport requirements for safe transport at sea.

Since December 2016, the MAR-CIS information is available through a web portal integrated in EMSA's Maritime Application Portal. In addition, the datasheets are linked to the SafeSeaNet's Central Hazmat database (CHD). The aim is to broaden the dissemination of MAR-CIS information and to facilitate the release of database updates.

5.2.3 Environmental data for predicting the trajectory and fate of oil and HNS spills

In view of maintaining the operation of modelling software for predicting the trajectories of oil and chemical spills at sea, EMSA re-acquired access to online wind and current forecast information. This data automatically feeds existing in-house modelling software. The output is commonly used as a decision support tool for drills, exercises, training and contingency planning for mobilising and optimising the deployment of pollution response means. The information is intended for EMSA management and the European Commission upon request. In 2016, the modelling software was used to predict the drifting of an oil spill detected by a CSN (CleanSeaNet) satellite image near the Shetland Islands, Scotland. The polygon of the oil slick detected by satellite image was inserted in the software and used as a spill source. In addition, during the NEMESIS Notification Exercise (11 October 2016), the oil spill modelling software was used to estimate if the spill was going to reach the Cypriot coast.

5.3 Activities with regard to dispersants

5.3.1 New version of DUET

Following the completion of the enhancement of EMSA's Dispersant Usage Evaluation Tool (DUET), hands-on training was provided to EU and EFTA coastal Member States and coastal EU Candidate Countries representatives on the tool's new features and functionalities at EMSA premises. The enhanced DUET includes an improved Graphical User Interface and a revised oil database as well as new options to simulate sub-sea releases and to simulate a well blowout at the seabed. The DUET technical documentation was also revised and updated. DUET is a numeric model that simulates oil spills and dispersant applications. It estimates the water concentrations of naturally - and chemically - dispersed oil and dissolved hydrocarbons, as well as the surface area impacted by floating oil. The DUET tool was subsequently provided to the EU/EFTA coastal state CTG MPPR contacts as well as the training participants.

5.4 List of Member States' pollution response capacities

As part of the Agency's tasks to "maintain a list of the public and, where available, private pollution response mechanisms and associated response capabilities in the various regions of the Union" as defined by Regulation

(EU) No 911/2014, EMSA published the updated information for the “*Inventory of EU Member States Oil Pollution Response Vessels*” on its website in 2016.

Annex: Total Expenditures for Pollution Preparedness and Response Activities

Total Expenditures ¹⁴ for Pollution Preparedness and Response Activities	Commitments	Payments
	(in EUR)	(in EUR)
Network of Stand-by Oil Spill Response Vessels TOTAL	9,024,626	11,371,232
Contracts 2011 (Southern Black Sea, Bay of Biscay, Central Mediterranean Sea)	0	636,381
Contracts 2012 (Bay of Biscay, Atlantic, Central Mediterranean Sea)	0	1,584,583
Contracts 2013 (Western Mediterranean Sea, Adriatic Sea, Aegean Sea, Atlantic North, Northern North Sea, North Baltic)	0	3,031,941
Contracts 2014 (Atlantic Coast, Northern Black Sea, North Sea / Channel - 2 Lots)	0	2,307,161
Contracts 2015 (Southern Baltic, Canary Islands and Madeira, renewal Eastern Mediterranean)	0	1,988,558
Contracts 2016 (Southern Black Sea, renewals Central Mediterranean Sea, Western Mediterranean)	7,653,404	1,058,392
Improvements (OPR equipment purchase, transportation, storage, overhauling and upgrade, insurance and labelling costs)	1,371,222	764,214
Equipment Assistance Service	5,550,060	5,914,826
Oil and Gas installations (dispersants and sea-borne spraying capability)	1,067,240	1,069,240

14

These figures cover fresh credits only (C4 or C5 commitment and payment appropriations are not included).

Exercises	169,882	169,882
Earth Observation Licenses and Services	3,527,593	3,059,400
Support to CleanSeaNet Users	35,000	28,377
CleanSeaNet Service Developments	771,277	279,271
Remotely Piloted Aircraft System	179,246	0
Cooperation and Coordination Meetings	150,599	58,712
HNS Information and activities	128,651	177,994
Related missions of EMSA Staff	125,000	91,915
TOTAL utilised 2016	20,729,174	22,220,849
<i>TOTAL authorised 2016</i>	<i>21,600,000</i>	<i>22,500,000</i>