

Performance Audit

Malta's level of preparedness to deal with oil pollution at sea

Report by the Auditor General

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oil pollution at sea

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List of Abbreviations

AFM	Armed Forces of Malta
CECIS	Common Emergency Communication and Information System
CPD	Civil Protection Department
CSD	Cleansing Directorate
EC	European Commission
EEA	European Economic Area
EMSA	European Maritime Safety Agency
ERCC	Emergency Response Control Centre
EU	European Union
GDP	Gross Domestic Product
GVA	Gross Value Added
IMO	International Maritime Organisation
IPIECA	International Petroleum Industry Environmental and Conservation Association
ITOPF	International Tankers Owners Pollution Federation Limited
MEPA	Malta Environment and Planning Authority
MSPPC	Maritime Safety and Pollution Prevention Committee
M.V.	Malta Vessel
NMPCP	National Marine Pollution Contingency Plan
NSO	National Statistics Office
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
OPRM	Oil Pollution Response Module
OSR	Oil Spill Response
PIRU	Pollution and Incident Response Unit
POLREP	Marine Pollution Report
PPP	Polluter Pays Principle
REMPEC	Regional Marine Pollution Emergency Response Centre
TM	Transport Malta
VTS	Vessel Traffic Service

Glossary

Baseline studies	An analysis of the present situation, where the current conditions are identified and recorded to provide a point of comparison for evaluation
Bunkering	The process of fuelling a ship
Bunker barge	The vessel supplying fuel to other ships
Coastal protection plans	These type of plans build on the baseline studies, outlining local vulnerable resources and providing response strategies
Contiguous zone	<p>Extends to twenty-four nautical miles from the baselines from which the breadth of the territorial waters is measured. The State shall have such jurisdictions and powers as are recognised in respect of such zone by international law and in particular may exercise therein the control necessary -</p> <p>(a) to prevent any contravention of any law relating to customs, fiscal matters, immigration and sanitation, including pollution, and</p> <p>(b) to punish offences against any such law committed within Malta or in the territorial waters of Malta (CAP. 226)</p>
Continental shelf	<p>The sea bed and subsoil of the submarine areas adjacent to the coast of Malta but outside territorial waters, to a depth of two hundred metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; so however that where in relation to states of which the coast is opposite that of Malta it is necessary to determine the boundaries of the respective continental shelves, the boundary of the continental shelf shall be that determined by agreement between Malta and such other state or states or, in the absence of agreement, the median line, namely a line every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial waters of Malta and of such other state or states is measured (CAP. 194). Changes to CAP.194 have been recently proposed to better align the provisions of this Act with the United Nations Convention on the Law of the Sea</p>
Contingent valuation method reports	Reports based on estimates of the value of non-market goods such as the price of the environment

Fisheries conservation and management zone	The territorial waters of Malta shall, with respect to the exercise of sovereign rights for the purpose of exploring and exploiting, conserving and managing the living and, or non-living natural resources therein, extend to all other parts of the open sea within twenty-five nautical miles from the baselines from which the breadth of the territorial waters is measured, and, for the purposes aforesaid, jurisdiction shall extend accordingly (CAP. 226)
Gross Value Added	A measure of the value generated in production of goods and rendering of services. Like the Gross Domestic Product (GDP) it measures the contribution of each sector to the economy. To deduce the GDP figure one has to add taxes and reduce subsidies from the Gross Value Added
Internal waters	Any harbour, port, bay, cove, creek or seashore (CAP. 499)
Malta channel	The stretch of sea between Malta and the southern coast of Sicily
Oil slick	The mass of floating oil
Oil spill	The release of liquid petroleum hydrocarbon in the marine environment
Oil Spill Response assets	These encompass all OSR equipment, vessels and dispersants
Oil Spill Response equipment	This includes booms, skimmers, pumps, storage tanks and other ancillary apparatus
Ramsar sites	Wetlands of international importance, designated under the Ramsar Convention
Territorial waters	All parts of the open sea within twelve nautical miles of the coast of Malta measured from low-water mark on the method of straight baselines joining appropriate points. (CAP. 226)

Executive summary

Executive summary

1. This performance audit sought to determine the extent to which Malta is adequately prepared to deal with oil pollution incidents at sea. Towards this end, this audit assessed the status of the National Marine Pollution Contingency Plan (NMPCP) and the degree to which national entities are in a position to implement effectively the operational procedures highlighted therein.
2. Oil pollution incidents may have serious repercussions on Malta's marine and coastal environment, which in turn could destabilise Malta's social and economic development. In 2012, the maritime sector contributed 10.8 per cent of the Gross Value Added. This figure is significantly higher than the European Union average. Moreover, oil pollution can cause health related problems and has a negative impact on marine based infrastructure such as reverse osmosis and power generation plants. The major oil pollution risks emanate from the shipping and oil production industries.
3. Transport Malta (TM) has been designated the role of the Competent Authority and is entrusted to ensure that Malta is adequately prepared to deal with oil pollution in Maltese waters, harbours and ports. TM's mandate, as the Competent Authority, extends to oil spills below those declared as national disasters. Other key players entrusted with a supporting role in this function are the Armed Forces of Malta (AFM), Civil Protection Department (CPD) and Malta Environment and Planning Authority (MEPA).
4. Against this backdrop, the objectives of the performance audit were to determine the degree to which:
 - adequate contingency plans based on robust risk assessments are in place;
 - mechanisms to alert authorities as soon as an oil spill is detected are effective;
 - Maltese authorities are adequately trained and equipped to respond to oil pollution; and
 - mechanisms to assign and enforce liability on polluters are in place.
5. Unless otherwise indicated, all the issues and conclusions presented in this Report relate to the period 2010 to 2013.

6. The Contingency Plan aims to provide logistical and operational guidelines in cases of significant oil pollution incidents, but excludes instances that have been declared as national disasters. In the latter circumstances, the overall command of the pollution incident is transferred from TM to CPD.
7. The Plan is intended to provide a solid foundation to enable national entities to launch an expedient initial response. However, the following issues impinge on the implementation of the NMPCP:
 - i. The procedures outlined in the Plan address various oil pollution risks. However, the scope of the commissioned risk assessments extended only to four nautical miles from the shoreline.
 - ii. In the absence of baseline studies, the commissioned risk assessment reports were constrained to base their conclusions on qualitative rather than quantitative evaluations.
 - iii. This state of affairs is limiting the development of policies on the use of dispersants and pollution emergency zones. The development of a dispersant policy framework is also being hindered due to mandate, role and jurisdiction issues of various stakeholders.
 - iv. The Plan is not supported with the legal and administrative back-up required to ascertain top-down direction, clear responsibility demarcation lines and cooperation from all the involved players. Such a situation materialised as the Plan was not enacted into a legal notice and the Maritime Safety and Pollution Prevention Committee (MSPPC) did not convene during the period February 2011 to November 2013.
 - v. Over 90 per cent of the Emergency Response Control Centre (ERCC) roles outlined in the Plan have not been identified. As yet unidentified key roles include: On-Scene Commander (Shore-line Operations), Salvage Master, Financial Manager and Oil Spill Response advisor.
 - vi. The inventory listed in the Plan was not continuously updated to reflect changes in the serviceability status of the Oil Spill Response (OSR) equipment. In these circumstances, TM is constrained to place heavy reliance on the limited offshore equipment under its charge.
8. The cause of the foregoing is mainly attributable to insufficient funds to enable Maltese entities to fully implement the Plan and ensure its ongoing development in line with Government policy. To this end, the Competent Authority estimated that an annual additional budget of €950,000 is required. A significant proportion of the forecasted expenditure by the Competent Authority was earmarked to strengthen oil spill surveillance mechanisms.
9. The timely detection of oil spills is critical for launching an effective response and mitigating the ensuing effects of pollution incidents. Moreover, robust detection mechanisms facilitate the collation of the appropriate evidence from the affected site to pursue liability claims. The detection function as executed by national entities may be supported through the obligations conferred on third party air and sea craft in accordance with international conventions to report possible oil spills and provide assistance to national entities.

10. Detection of oil spills outside ports and harbours is heavily dependent on satellite images provided every four days through the CleanSeaNet mechanism pertaining to the European Maritime Safety Agency (EMSA). However, satellite images are subject to various limitations. These include the frequency of reporting, the limited coverage of the CleanSeaNet Alert Region, the accuracy of the images, as well as the narrow time-window within which verification of the alleged oil spill can take place.
11. The limitations associated with satellite images clearly show the need for Maltese entities to supplement the information received through CleanSeaNet with other surveillance initiatives. A Position Paper presented in 2010 estimated that a substantial annual budget is required for an additional 27-hour air and sea patrols weekly, which are to be conducted by the AFM as the Maltese coastguard.
12. Oil spill detection and verification of alleged pollution within the CleanSeaNet Alert Region were subject to the following limitations:
 - i. Nearly half of the potential oil spills reported by satellite images were not verified. AFM noted that prevailing weather conditions and other priorities prohibited any action in this regard.
 - ii. Confirmation of CleanSeaNet alerts relating to potential oil spills within the three-hour timeframe advised by EMSA was attained in around a third of the cases verified by AFM.
13. Over the years, resource constraints have restricted the Competent Authority from developing a strategic plan based on a training needs assessment, which takes into account all the national entities involved in OSR operations. In the absence of a strategic plan, training provided by national entities to their personnel mainly focused on the respective core functions, rendering oil spill related exercises as incidental. TM is currently compiling a strategic plan following the allocation of the European Economic Area funds. This project is expected to be concluded by end 2015.
14. The most significant coordinated training initiative undertaken is the annual oil spill simulation exercise directed by the Competent Authority. For the past seven years, TM has carried out a number of exercises in order to test various oil pollution scenarios. These mainly included collisions and possible grounding of vessels, unattached spills, as well as, accidental discharge during oil bunkering operations. However, a number of issues diminish the effectiveness of this annual training initiative, as outlined hereunder:
 - i. During the period 2010 to 2013, up to 40 per cent of the key players declined TM's invitation to participate in the annual training event. Such a situation diminishes the potential benefits of this initiative. This also illustrates that the absent players are not in a position to implement the function assigned to them through the Contingency Plan, as advocated by Cabinet Memo OPM 4076/99. One of the key players, MEPA, contended that the Authority's role within the ERCC was more focused on preparatory work to ensure that actions taken have limited environmental impacts, rather than providing direct input during the response event itself, which is mainly of an operational nature.
 - ii. Logistical constraints tend to restrict the zones where the annual simulation exercise takes place. The North-West side of the Maltese Islands poses the

highest oil pollution risks due to the heavy vessel traffic in the area as well as oil production risks from neighbouring countries. However, an exercise in this zone has not been carried out due to the potential disruptions of shipping lanes as well as the expenses involved to deploy assets and personnel in this region. Moreover, exercises to date have not simulated an incident in this zone. Nevertheless, the Competent Authority contends that response operations do not differ much from one area to another since communication and coordination capabilities, as well as, the deployment of OSR equipment are still tested.

- iii. As intended, simulation exercises consistently reveal operational and logistical concerns or gaps. Most of these are rectified and do not reoccur in subsequent training events. An exception to this pertains to the communication of public information through the media, in cases of major incidents. To date, the scope of simulation exercises did not encompass media involvement.

15. A critical component of an effective response to oil pollution incidents at sea relates to the availability of fully functional OSR vessels and equipment. The CPD and TM are the two main entities responsible for OSR vessels and equipment. Additionally, other vessels and equipment, which were under the charge of the former Oil Pollution Response Module (OPRM), are currently either partly managed through a lease agreement or stored by the Ministry of Tourism.

16. In major incidents, Malta can also supplement its inventory through agreements in place with local suppliers and may seek international assistance, primarily from EMSA. It is to be noted that logistical issues may hinder the immediate availability of resources from third parties, which further emphasise the importance of maintaining fully serviceable as well as readily available national vessels and equipment.

17. However, a number of issues have raised concerns on the status of nationally held OSR vessels and equipment:

- i. Over the years, the condition of most of the nationally held assets deteriorated as a result of improper maintenance and storage facilities. This led to an OSR vessel being declared as beyond economic repair significantly before its typical lifetime. A similar situation led to the accelerated deterioration of OSR equipment, such as skimmers and booms.
- ii. Administrative and technical capacity issues, coupled with insufficient funding were the major contributory factors leading to the situation discussed in the preceding paragraph. To mitigate the further deterioration of assets, which include vessels and other OSR equipment, the former OPRM and CPD opted to lease the remaining inventory to third parties. The opportunity, however, to maximise revenue from these agreements was not fully exploited.
- iii. The lack of a clear direction on the disposal of dispersants resulted in Government incurring an additional expenditure of around €118,271 for its storing for a minimum of six years after its shelf-life had expired. It is to be noted that national entities still hold two other batches of expired stocks of dispersants at their premises.

Implementation of the Polluter Pays Principle

18. A comprehensive OSR operation does not only comprise an effective clean-up intervention at sea, but also entails the ensuing reinstatement of the site in question and the application of the Polluter Pays Principle (PPP). The latter constitutes a key element of the EU environmental policy.
19. Malta, generally, has the appropriate legal framework to implement the PPP. However, this is not fully supported by the adequate mechanisms to manage and enforce this critical function, which includes having the appropriate organisational structures and administrative capacity in place. In this context, the Competent Authority is still in the process of appointing a Financial Manager and a Claims Coordinator, who constitute two of the 25 ERCC key roles, as identified in the NMPCP.
20. Furthermore, in the absence of comprehensive incident reports portraying case details together with the relative evidence, such as photographs and samples of the polluted waters, the Competent Authority endeavours to compile a solid case against polluters and pursue liability claims would be rendered more complex.
21. Currently, national entities are not in a position to quantify the various environmental, economic and social impacts caused by the spilled oil. This would ensure that the fines imposed are not only related to the clean-up costs, but cater for all of the damage caused by the oil pollution, and for which the polluter is liable.

Overall conclusions

22. The operational and logistical concerns raised in this Report, to varying degrees, may impinge on Malta's level of preparedness to deal with major oil spill incidents at sea. This Report identified gaps in the national Contingency Plan, noted deficiencies in detecting oil spills, as well as raised concerns about the availability of trained personnel and the serviceability status of nationally held assets. Moreover, the mechanisms to determine and enforce polluters' liability are not fully in place.
23. Historically, insufficient funds were allocated to enable national entities to strengthen their capabilities, in terms of organisational structures, operational processes, technical and administrative capabilities as well as oil combating assets. Financial resources to support this function were mainly derived through foreign funding mechanisms.
24. Insufficient funds coupled with the wide remit of the national entities involved in oil spill response resulted in the latter function being consistently allocated a lower priority. Moreover, top down direction and monitoring was minimal since the coordinating body – the MSPPC, did not convene for more than two years.
25. The Contingency Plan allocates significant importance to the role of Competent Authority, performed by TM. However, the Competent Authority has, in practice, minimal influence over the input and contribution to the oil pollution response function by the other key players indicated in the NMPCP. Over the years the Competent Authority has, at times, experienced difficulties in securing the commitment of other entities, particularly as the latter are not in a position to commit their already stretched resources. This has rendered coordination of the OSR function an even more complex endeavour.
26. Asset management weaknesses brought about the accelerated deterioration of Government owned OSR vessels and equipment. Apart from the absence of maintenance programmes and storage facilities, the responsible entities also lacked the technical capabilities to monitor and maintain these assets in a constant state of readiness for immediate deployment.

27. The Competent Authority and most of the key players are generally aware of the situation depicted by this Report. To this effect, a number of initiatives, led by TM have commenced. These projects seek to address many of the concerns, particularly those related to the legal and administrative framework, the risks posed by the oil production industry and training of key personnel.
28. While the critical importance of these programmes are acknowledged, they must be within a framework where the oil pollution response function is allocated a significantly higher priority through the support of the appropriate resources and where the commitment of all key players is ascertained. Raising the profile and investing in this area is seen as improving Malta's level of preparedness to safeguard its environment from oil pollution incidents at sea. The opportunity cost of such a premium would be the rapid deterioration of Malta's socio-economic status and marine environment in the unfortunate event of a major oil spill.
29. This Report has shown that national entities, for various reasons, are experiencing practical difficulties to implement the NMPCP in accordance with the organisational set-up stipulated therein. These issues, which are influencing the level of coordination between them, related to jurisdiction, mandate and roles of national entities. The foregoing is indicative that the current set-up indicated in Cabinet Memo OPM 4076/99 and the NMPCP needs to be revisited.
30. In view of the audit concerns and conclusions highlighted by this performance audit, the NAO proposes the following recommendations:
- i. National entities are to carry out further in-depth risk assessments, in line with the recommendations made by the Competent Authority's commissioned studies. These evaluations will enable better planning of Malta's response in the eventuality of an oil pollution incident. Such assessments will also serve as baseline information - a critical element when determining the ensuing environmental and socio-economic degradation for the purpose of evaluating and pursuing liability claims. Additionally, these studies will also facilitate the development of guidelines with respect to the use of dispersants and the designation of pollution emergency zones.
 - ii. Action is to be expedited to issue the legal notice supporting the implementation of the NMPCP. While recognising that a Cabinet decision has already been taken in this regard, the legal notice will ensure the commitment of all the players identified in the Plan. Furthermore, the legal notice will empower the Competent Authority to monitor that existing marine terminals, facilities and offshore platforms develop their respective pollution plans. Additionally, it will give these operators a specific and enforceable deadline by when such plans are to be referred to the Competent Authority.
 - iii. The appropriate level of resources are to be made available to national entities to enable the implementation of the Contingency Plan in accordance with Cabinet direction. The allocation of human and financial resources will permit national entities to strengthen their organisational structures as well as their administrative and technical capabilities relating to the duties outlined in the NMPCP.
 - iv. Efforts are to be stepped-up to ascertain that the NMPCP is continuously updated to reflect changes in operational and logistical procedures. To further enhance coordination between the key players involved, consideration is to be given to

Recommendations

review the current organisational set-up outlined in the Plan. Such a review should take into consideration issues related to the jurisdiction, mandate, roles and capabilities of the involved entities, as well as the potential benefits arising from centralising the OSR function.

- v. All contact details of key personnel listed in the NMPCP, are to be maintained up-to-date. The major benefit of such action is that key personnel, including those pertaining to the ERCC, are contacted at the earliest opportunity. Additionally, such an update is rendered highly important to enable various areas of expertise to be identified at an early stage to ensure that team building and collegiality is established. This is seen as key since the current organisational set-up does not comprise a centralised oil pollution response unit, which houses all the relative OSR specialisations.
- vi. Similarly, the Plan is to reflect the current serviceability status of the OSR assets available to national entities. An updated Plan will prove an invaluable tool in cases of emergency.
- vii. Consideration is to be given to strengthen surveillance for oil spills within the CleanSeaNet Alert Region. This entails that more resources are allocated to complement and better synchronise the various detection mechanisms, such as those related to satellite images and third party reports. A more robust oil spill detection function will permit more expedient confirmation of pollution alerts received by national entities. To this end, Information Technology solutions, which enable the timely sharing of information should be considered.
- viii. Current efforts to determine training needs to further facilitate the launching of an effective oil pollution response in terms of the Plan are to be sustained. The identification of training needs constitutes the first step in developing a national training strategy.
- ix. Initiatives to broaden the scope and the participation levels of the annual oil spill simulation exercise directed by the Competent Authority are to be considered. The scope of this exercise is to be extended to further cater for the risks associated with the specific marine areas. Additionally, funds allocated for this purpose are to be increased to permit a wider deployment of national assets in this exercise. Given its importance, no effort is to be spared in ensuring that all invited players participate in this annual simulation exercise.
- x. Asset management with respect to inventories and stock related to OSR held by national entities is to be strengthened. To this end, maintenance plans are to be developed and enforced through regular monitoring by the Competent Authority. Such an approach will not only provide up-to-date information on the serviceability of OSR assets but will also prove cost-effective in preserving their condition.
- xi. Strategic direction relating to the transfer of equipment held by the former OPRM, is to be expedited. Delays in communicating such a decision will lead to the further deterioration of equipment held and prohibits any effective monitoring of the two OSR vessels leasing contracts, which were entered into and monitored by this Unit.
- xii. An expired stock of dispersants held by the former OPRM and CPD is to be disposed of as soon as possible. This will make available valuable warehouse space to both Entities.

- xiii. Leasing contracts relating to the chartering of nationally held assets are to be entered into following the compilation of a robust business case, which provides assurances that Governments' interests are fully safeguarded in financial and operational terms. To this end, it is advisable that the Competent Authority is continuously kept fully abreast of developments in this regard. This approach is also to be considered when existing leasing agreements are scheduled for renewal. Additionally, national entities managing such contracts are to invoke the appropriate mechanisms to ascertain contractors' compliance with the provisions of these agreements.

- xiv. OSR initiatives undertaken are to consider the further application of the PPP. This is particularly critical in view of illicit discharges of oil at sea as well as the high environmental and clean-up costs incurred following major incidents. Such an approach will entail that all processes and procedures related to oil spill response take into consideration the collation of evidence from incident zones. This will enable robust and comprehensive liability claims to be instituted against polluters.

Chapter 1

Oil pollution threats at sea

Chapter 1 – Oil pollution threats at sea

1.1 Introduction

- 1.1.1 The Mediterranean Sea is subject to various pressures and potential threats. Available studies such as that prepared by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) show that during the period 2000 to 2009, 5.5 thousand tonnes of oil were spilled in the central Mediterranean region. Furthermore, Malta Environment and Planning Authority (MEPA) reported that due to the high levels of maritime traffic, the Mediterranean continues to experience around 200 or more oil spills annually.¹
- 1.1.2 To date, the sea surrounding the Maltese Islands has not been exposed to significant volumes of oil pollution, however, experts rank such risks as high. This is due to the level of oil related activity and the potential large volumes of oil, which may be involved in such incidents.²
- 1.1.3 The Environment Report issued in 2010 by MEPA, identified shipping activities as one of the major pressures at sea.³ These include maritime traffic, bunkering as well as oil exploration and production activities. The effect of oil pollution may impinge on environmental sustainability and the ensuing socio-economic consequences.
- 1.1.4 Unless otherwise stated, for the purpose of this Report, the area at sea under review extends from Malta's coast and its internal waters, up to the high seas falling within Malta's continental shelf. Figure 1 refers. Thus, the scope of this audit includes the internal and territorial waters, the contiguous and fishing zones as well as the continental shelf, as defined by national legislation.⁴ This review also encompasses the CleanSeaNet alert region as agreed by the national Competent Authority, Transport Malta (TM), with the European Maritime Safety Agency (EMSA) with regards to the detection and verification of potential oil spills.

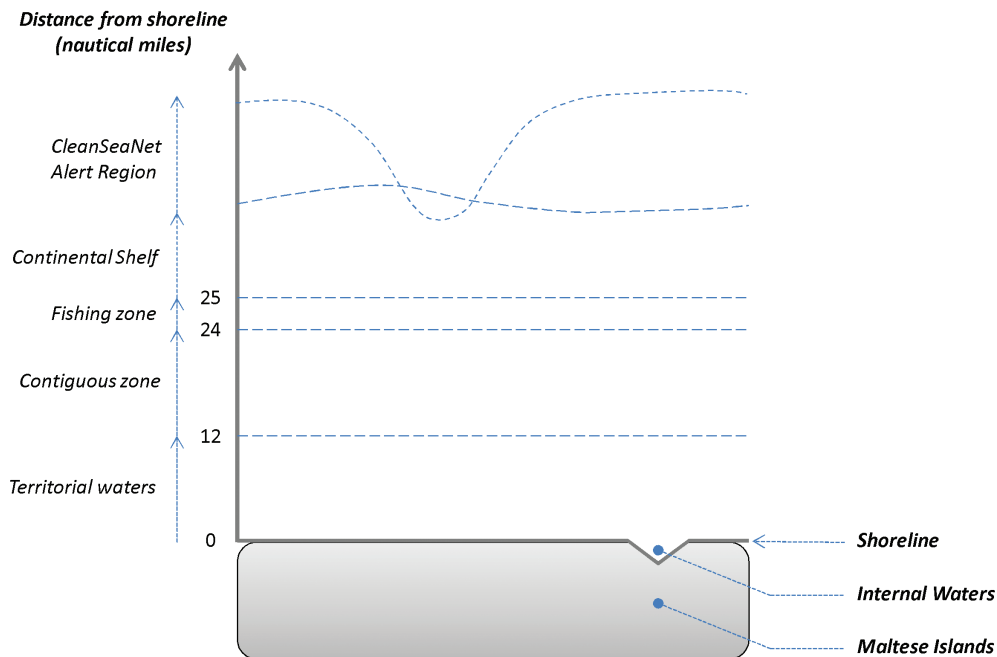
¹ Gesamp, 2007 in MEPA, 2010. The Environment Report 2008, Sub-Report 6, Coastal and marine Environment 2010, p. 15.

² Incident Risk Assessment, p. 99.

³ MEPA, 2010. The Environment Report 2008, Sub-Report 6, Coastal and marine Environment 2010, p. 12.

⁴ Refer to glossary on p. 5.

Figure 1: Area at sea under review



1.1.5 Against this backdrop, the NAO conducted the performance audit: *Malta's level of preparedness to deal with oil pollution at sea*. The primary aim of this audit was to determine the extent to which Malta is prepared to implement effectively its National Marine Pollution Contingency Plan (NMPCP).⁵ Towards this end, the NMPCP is mainly intended to address oil spills of significant size but which have not been declared as national disasters.⁶

1.1.6 All the issues and conclusions presented in this Report relate to the period 2010 to 2013. However, this audit considered past agreements relating to activities under review, such as the leasing of oil pollution response vessels and ancillary equipment to third parties, when these contracts were still in force. A major limitation encountered in this study related to the fragmentation, reliability and completeness of data pertaining to the type and volume of oil spills.

1.1.7 This performance audit was preceded by another study in 2003, by the National Audit Office. The 2003 report: *Preventing and Dealing with Pollution from Ships at Sea and in Ports* observed that Malta's Contingency Plan was not supported by specific funds allocated for its ongoing development and to carry out the necessary training and drills. Moreover, it was noted that formal procedures to appoint personnel in the roles defined in the Plan were not in place. Another major finding reported related to the non-formalisation of a communications network between the key players identified by the Plan.

⁵ Throughout this Report, the terms "NMPCP" and "Plan" will be used interchangeably.

⁶ The Plan and Cabinet Memos, OPM 4076/99 and OPM 4007/08 Pt 4 are considered as Government's policy since they provide direction and guidance on how to address oil pollution at sea.

1.2
Oil pollution
can have
various
repercussions

*Oil pollution will
adversely affect the
environment*

*The dependency of
Malta's economy on
the maritime sector
is significantly
higher than the EU
average*

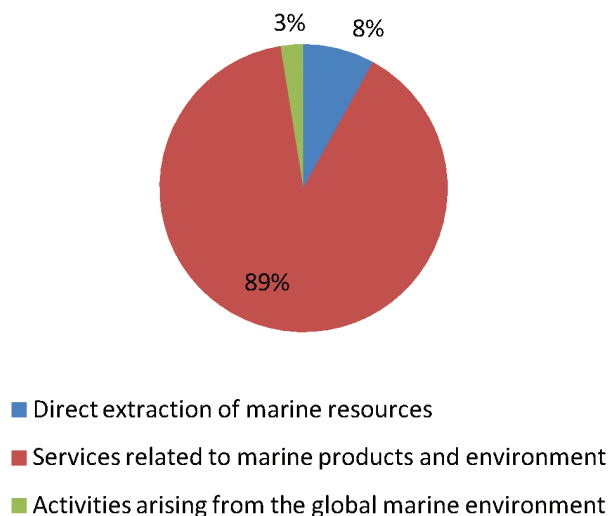
1.2.1 Malta's economy thrives on its marine environment. Large oil spills can have serious repercussions on the Maltese environment, economy and infrastructure. In such incidents, oil can persist for years especially if it comes in contact with the seabed and/or the shoreline.

1.2.2 The effect of oil spills may lead to serious impacts on the smothering of marine flora and fauna, alteration of the physical and chemical characteristics of habitats and a decrease in the supply of drinking water.⁷ Malta's coastline has environmental designations of local, national and international importance. Among the more significant sites are those within Special Areas of Conservation, Special Protection Areas, Ramsar Sites and Important Bird Areas, which have been identified as being greatly vulnerable in cases of oil pollution. These sites include I-Għadira, is-Simar, L'Aħrax tal-Madonna Cliffs, Santa Marija Bay, Rdum Majjiesa to Ras-ir-Raħeb, a stretch of the Rdumijiet ta' Malta (coastal cliffs), Ta' Ċenċ Cliffs to Dwejra Bay, Marsaxlokk and Filfla.

1.2.3 In 2012, the Gross Value Added (GVA)⁸ from the marine sector amounted to 10.8 per cent. This illustrates an increase in the sector's performance, which in 2010 yielded 6.2 per cent of the GVA.⁹ Different key activities contribute towards the aforementioned percentage increase to the Maltese economy. These include:

- Direct extraction of resources from the sea – fishing and fish-farming, the production of potable water from sea-water and the extraction of salt and mineral products;
- Services related to the marine environment and products – tourism, marine transportation including trans-shipment and yachting activities, processing of products derived from the sea; and
- Activities arising from the Global Marine Environment – building and repairing vessels, marinas.

Figure 2: Contribution of the Marine Sector to the Maltese Economy (2012)



Source: NSO.

⁷ MEPA, 2010. The Environment Report 2008, Sub-Report 6, Coastal and Marine Environment 2010, p. 15.

⁸ Refer to Glossary on p. 5.

⁹ Data provided by NSO.

- 1.2.4 Figure 2 illustrates the different marine sector contribution to the Maltese economy.
- 1.2.5 It is to be noted, that the proportion of total economic activity, which depends on the marine sector in Malta is significantly higher than the average in the European Union. This scenario is expected as an economy thrives on its most endowed resource. In Malta's case, the geographical characteristics render the sea a relatively abundant resource. The ensuing paragraphs will discuss a number of the core industries, which contribute to the GVA.
- 1.2.6 The total value of fish landings in 2012 amounted to around €6.3 million. This does not include the value of marine products from aquaculture activities and the value of fish that is exported. According to National Statistics Office (NSO) figures, the value of the fish that was exported amounted to around €88.5 million in 2012. In case of an incident, it is likely that any fishing activity will have to be suspended for a period of time depending on the level and extent of pollution, and to allow the area to recover. Moreover, a severe pollution incident affecting the Eastern side of the Maltese Islands would be detrimental to the majority of fishing ports and aquaculture developments.
- 1.2.7 The local tourism industry, which is highly dependent on clean waters, is one of the core functions of Malta's economy. The impacts from any pollution incident would have wider repercussions throughout the entire industry, which contributes 5.2 per cent to Malta's GVA¹⁰ and is directly responsible for 10 per cent of total employment.¹¹
- 1.2.8 Malta's economy will also be negatively affected if global maritime activities decline as a result of a large-scale oil spill. Such a situation arises due to Malta's geographic position and its role as a maritime hub in the Mediterranean. In 2012, these activities contributed three per cent to Malta's GVA.¹²
- 1.2.9 The main marine based infrastructure in Malta relates to the provision of water and energy supplies through reverse osmosis plants and power stations respectively. The shutdown of these plants would be critical to the Maltese economy, namely because Malta has only a very limited supply of freshwater stocks and currently there are no back-up facilities to provide energy.
- 1.2.10 Scarce water resources render Malta highly dependent on its four reverse osmosis plants. These plants supply around 55 per cent of the island's water needs.¹³ In the event that oil is absorbed into the reverse osmosis systems, the filtered water is likely to be contaminated with hydrocarbons. The level of contamination is dependent on the volume and type of oil spill.
- 1.2.11 Similarly, the energy generation facilities rely on sea-water intake for cooling purposes. These facilities require protection from surface oils or Hazardous and Noxious Substances as pollution may entail that the water intake is temporarily halted forcing the shutdown of operations.¹⁴ Furthermore, if a pollution incident requires the suspension of vessel movements for a prolonged period, it is possible that the energy generators will consume their limited fuel stocks, which will also lead to the shutdown of operations.¹⁵ It is important to note that the shutdown of the energy generation facilities, will also limit the water production at the reverse osmosis plants.

Oil pollution can have adverse impacts on marine based infrastructure

¹⁰ Data provided by NSO during November 2013.

¹¹ MTCE, 2012. Tourism Policy for the Maltese Islands 2012 – 2016, p. 118.

¹² Data provided by NSO.

¹³ NAO, 2012. Safeguarding Malta's Groundwater, p. 15.

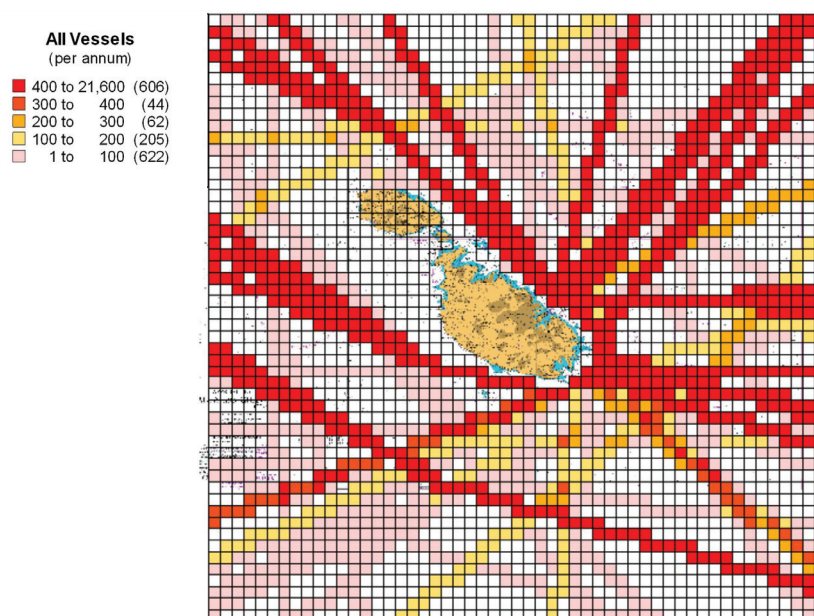
¹⁴ Incident Impact Assessment, p. 50.

¹⁵ Ibid.

1.3 Shipping industry activities constitute oil pollution risks

- 1.3.1 The risks of oil pollution due to shipping industry related activities are evidenced through statistics illustrating that in the last decade a fifth of the accidents leading to oil spills of more than 100 tonnes occurred in the central region of the Mediterranean Sea.¹⁶ The threat of oil pollution is heightened when it is considered that tankers operating in the Mediterranean Sea, collectively carry around 350 million tonnes of crude and refined oil products annually.¹⁷
- 1.3.2 Sea-borne trade in the Mediterranean constitutes around 30 per cent of all international traffic. Furthermore, 25 per cent of oil transported by sea transit the Mediterranean. The United Nations Environment Programme estimated that around 50 per cent of all goods carried are considered dangerous since these include oil and noxious chemical cargos.¹⁸
- 1.3.3 The preceding paragraphs do not consider the risks of oil pollution emanating from the fuel carried to power vessels. Given the increasing gross tonnage of ships, as well as speed and length of journeys, the quantity of fuel on-board to power ships is substantial and is deemed to pose a significant oil pollution threat.
- 1.3.4 REMPEC envisages that the trend of Mediterranean traffic is likely to continue increasing, both in vessels calling at its Ports as well as the number of transits. It is estimated that over the decade comprising the years 2006 to 2016, vessels calling Mediterranean Ports will increase by 16 per cent and vessels in transit will increase by 23 per cent. The most significant increases are estimated to be in the chemical, crude and Liquefied Natural Gas tanker trades.¹⁹
- 1.3.5 Over 65,000 vessels annually pass within 20 nautical miles of Malta's coast.²⁰ The vessels traffic plying in Maltese territorial waters, generally, also increased steadily over the past decade. Figure 3 illustrates the shipping density by volume within 20 nautical miles of the Maltese coast.

Figure 3: Total vessel volume within 20 nautical miles of the Maltese coast



Source: Incident Risk Assessment, p. 76.

¹⁶ Based on REMPEC data - State of the Mediterranean Marine and Coastal Environment, 2012, p. 49.

¹⁷ Calypso, PO – Unit participates in the Maltex 11 available from http://oceania.research.um.edu.mt/cms/calypsoweb/index.php?option=com_content&view=article&id=23:po-unit-participates-in-the-maltex-11&catid=9&Itemid=175&lang=en as at 3 July 2013.

¹⁸ Incident Risk Assessment, p. 73.

¹⁹ Ibid., p. 78.

²⁰ Ibid., p. 8.

- 1.3.6 The density of maritime traffic increases the risk of oil pollution from marine spillages beaching on shores, hitting important infrastructure thereby causing irreversible economic and environmental damage. This threat is a very realistic menace in the stretch of sea between Malta and Sicily.²¹ Studies illustrate that should an oil spill occur through a shipping related incident, the most severely affected areas would include ċ-Ċirkewwa, Kemmuna, d-Dwejra, l-Għadira, Marsalforn, Pembroke, Sliema and San Ġiljan. These locations lie along the most important navigational route on the Maltese coast and are designated as sensitive areas in terms of ecology and water extraction purposes.²²
- 1.3.7 In addition to the risks imposed by the heavy maritime traffic, other oil pollution threats to Maltese waters arise from bunkering and other oil transferring activities. Bunkering in Malta is deemed to be convenient and cost-effective due to Malta's geographical position. During the period, 2010 to 2013, 11,407 vessels were supplied with over five million metric tonnes of petroleum products through bunkering activities. The offshore barges allow for bunkering of differently sized vessels at five different sites, namely North of Qawra Point, Off Żonqor Point, Hurd Bank, Off Delimara Point, and Off Anchor Bay as well as designated ports.²³ Some of these bunkering sites pose additional risks as they are close to aquaculture units and marine protected areas.²⁴
- 1.3.8 The transfer of oils from ships to land based sources also constitutes pollution risks. OilTanking Malta Ltd, which has a storage capacity of 526,600 cubic meters, carries out oil transfer operations at Marsaxlokk.²⁵ Government commissioned reports outlined that in a span of 17 years of this Facility's operations, there were no recorded spills of over 100 litres. Furthermore, this facility has a tiered emergency plan as well as equipment to deal immediately with oil spills.²⁶
- 1.3.9 Additionally, Enemalta imported over 900,000 tonnes of oil related products in 2012. The products handled include gasoil, jet A1,²⁷ unleaded petrol and fuel oil. The latter constituted over 67 per cent of all imports.²⁸ The total imports figure excludes security stocks of petroleum products, held in case of a supply shortage. During these routine operations, despite the control mechanisms in place, the risk of oil spills remain.
- 1.3.10 Cargo transfers take place at the Malta Freeport Terminal. Despite the tightly controlled operations, cargo transfer can potentially result in the release of hydrocarbons through vessel collisions or other incidents. In such cases, hazardous and noxious substance from the actual cargo may be released.²⁹

²¹ Calypso, PO – Unit participates in the Maltex 11 available from http://oceania.research.um.edu.mt/cms/calypsoweb/index.php?option=com_content&view=article&id=23:po-unit-participates-in-the-maltex-11&catid=9&Itemid=175&lang=en as at 3 July 2013.

²² MEPA, 2010. The Environment Report 2008, Sub-Report 6, Coastal and Marine Environment 2010, p. 15.

²³ Incident Risk Assessment, p. 35.

²⁴ MEPA, 2010. The Environment Report 2008, Sub-Report 6, Coastal and Marine Environment 2010, p. 13.

²⁵ Incident Risk Assessment, p. 96.

²⁶ Ibid.

²⁷ Jet A1 is a type of fuel used by aircrafts.

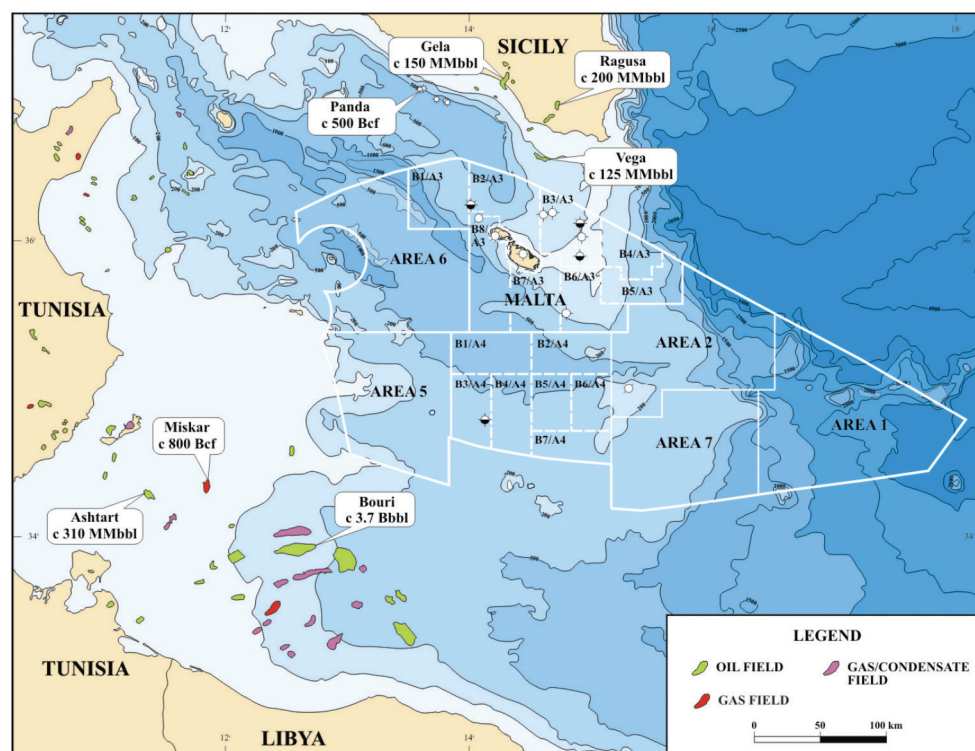
²⁸ NAO, 2013. An Analysis of the Effectiveness of Enemalta Corporation's Fuel Procurement, p. 47.

²⁹ Incident Risk Assessment, p. 52.

1.4
Oil exploration
and exploitation
activities pose
marine pollution
risks

- 1.4.1 The increase in demand for oil products is reflected in an increase in offshore oil exploitation. This implies that the risk of marine oil pollution related to oil production remains a significant threat. Recent incidents on offshore platforms (United States, 2010; China, 2011; Brazil 2012) have raised many important questions of risk prevention and management regarding the deep and ultra-deep offshore oil production, which also highlight the inherent risks associated with this industry.³⁰
- 1.4.2 The nature of offshore drilling can pose certain risks. It is well recognised within the petroleum industry that both the velocity and irregularity of underwater currents as well as extreme pressures and temperatures and prodigious flow rates puts extra stress on subsea equipment.³¹ The oil industry recognises these risks and continually strives to mitigate these threats through stronger regulation and enforcement.
- 1.4.3 During 2014, oil exploration activities commenced in one of the designated areas within the Maltese continental shelf. Exploration drilling activities usually pose a lesser risk than oil production operations in view of the higher volumes of oil that could be released in an incident involving the latter. Although these activities will be taking place around 70 nautical miles away from Malta, unfavourable weather conditions and sea currents may accentuate the movement of potential oil spills, shortening travel times and rendering the margins for response even tighter. Figure 4 shows oil production, which can take place within the Maltese continental shelf as well as other major activities in the North and South West of Malta.

Figure 4: Offshore Malta acreage and major fields in the area



Source: Continental Shelf Department, Ministry for Transport and Infrastructure.

³⁰ According to Webb, chief executive officer of Oil and Gas UK, in the absence of an industry agreed definition of what constitutes deep and ultra-deep different sources are agreeing to take deep water depth as 500 to 1,499 meters and ultra deep water as starting from a depth of 1,500 meters.

³¹ Stefankova, 2013. "International regulation v national regulation on offshore oil exploitation – The USA as an example", p. 128.

1.4.4 Figure 4 shows that currently oil exploration from neighbouring countries is situated closer to Malta than similar activities undertaken within the national continental shelf. When prevailing weather conditions are taken into consideration, this implies that oil industry pollution related risks are presently more prevalent from activities being undertaken in the North-Western side of Malta.

1.4.5 Directive 2013/30/EU on the safety of offshore oil and gas operations of 12 June 2013, mainly deals with major accident prevention and control. Member States are required to transpose the Directive by 19 July 2015. The Directive, which addresses environmental liability and also gives due attention to transboundary pollution is being transposed by Malta. The Continental Shelf Department contends that certain obligations of this Directive, have already been inserted into current oil exploration contracts.³²

1.5.1 Responding to marine oil pollution incidents requires the coordinated input of various Government entities. The role of each entity is defined in a Cabinet Memo dated March 2009 and the NMPCP. TM has been designated as the Competent Authority in matters concerning marine pollution preparedness. For this purpose, TM was to internally direct resources and funds. The other major players identified in the aforementioned documents are the Civil Protection Department (CPD), the Armed Forces of Malta (AFM), and MEPA. In the event of a declared national disaster, the role of the Competent Authority is transferred to the CPD. Table 1 outlines the various roles and responsibilities delegated to the Oil Spill Response (OSR) players.

1.5
The oil spill response function is managed by various Government authorities and entities

Table 1: Responsibilities of key OSR players

Key OSR players	Remit outlined in Cabinet Memo	Jurisdiction outlined in local legislation
TM (National Competent Authority)	Ensure marine pollution preparedness; and Allocate internal funds and resources	Up to 12 nautical miles from Malta's shoreline ³³
CPD	Respond to all levels of oil pollution incidents	Internal waters
AFM	Enforce marine pollution incident; and Receive and disseminate incident reports	Up to 24 nautical miles ³⁴
MEPA	Focal point for coastal zone management; and Prevent land source marine pollution	Up to 12 nautical miles

³² The Continental Shelf Department falls within the remit of the Ministry for Transport and Infrastructure.

³³ Authority For Transport In Malta Act, Chapter 499, ACT XV of 2009, as amended by Legal Notice 336 of 2010 and Acts XI of 2010 and V of 2011, First Schedule, Article 14 (2).

³⁴ Territorial Water and Contiguous Zone Act, Chapter 226, ACT XXXII of 1971, as amended by Acts: XLVI of 1975, XXIV of 1978, XXVIII of 1981, I of 2002 and X of 2005, Article 2(g), 4(1), 4(2).

1.6
Various issues
hamper the
determination of
oil spill liability

1.7
Audit focus and
methodology

1.5.2 The roles and responsibilities listed in Table 1 are not always fully implemented by the entities involved. Such situation materialises due to the lack of resources available to these entities to implement the functions listed in the aforementioned Table as well as additional obligations listed in agreements entered into with third parties.

1.5.3 The NMPCP acknowledges that in large-scale incidents, local resources would be insufficient to launch an appropriate response due to the limited availability of resources, namely equipment.³⁵ In these circumstances, the Plan invokes the mechanisms to communicate the incident and to request assistance from EMSA and nearby countries. Such course of action is generally dependant and rendered more effective if the necessary administrative arrangements and agreements are in place. Towards this end, Malta is currently in the process of drafting a bi-lateral agreement with the Sicilian Coast Guard to facilitate reciprocal support. Currently, prevailing circumstances hinder similar initiatives from being followed-up with North African countries.

1.5.4 In addition to potential bi-lateral agreements, Malta, as an EU Member State can also request assistance through the Solidarity Clause, introduced by Article 222 of the Treaty on the Functioning of the European Union. This provision enables Member States to receive assistance in cases of terrorist attacks or a natural or man-made disaster. However, discussions related to implementation of this Clause are still ongoing. These talks namely relate to the extent of assistance, which could be made available, as well as other related financial matters.

1.6.1 In accordance with the Polluter Pays Principle (PPP) emanating from various legislation including Oil Pollution (Liability and Compensation) Act, Ship Source Pollution Regulations and Merchant Shipping (Liability for Bunker Oil Pollution Damage) Regulations, national entities are to determine liability and initiate procedures to prosecute polluters. However, Maltese entities are in the process of further strengthening their organisational and operational capacity to identify polluters for the purpose of enforcing liability.

1.7.1 The discussion outlined in this Chapter has identified the major risks leading to oil pollution and their impact on the Maltese economy, environment and infrastructure. The level of preparedness is a pivotal factor that will determine the effectiveness by which Malta will deal with oil pollution to mitigate the ensuing effects. Immediate and effective action will help to minimise the respective impacts resulting from an oil spill of significant size. In this regard, the audit aimed to determine the extent to which:

- adequate contingency plans based on robust risk assessments are in place;
- mechanisms to alert authorities as soon as an oil spill is detected are effective;
- Maltese authorities are adequately trained and equipped to respond to oil pollution; and
- mechanisms to assign and enforce liability to polluters.

³⁵ Authority for Transport in Malta, 2013. National Marine Pollution Contingency Plan, p. 66.

1.7.2 These objectives were realised through the undertaking of a number of exercises including meetings with the various stakeholders, namely TM, AFM, CPD and MEPA. Other exercises included the review and analysis of documentation maintained by the stakeholders.

1.8.1 Subsequent to this introductory Chapter, the Report proceeds to discuss the following:

- **Chapter 2** assesses the extent to which the Contingency Plan caters for all risks identified through various Government commissioned studies. This Chapter also evaluates the level of organisational and operational arrangements to enable the effective implementation of the Plan.
- **Chapter 3** discusses the extent to which mechanisms are in place to enable the early detection of oil spills as early as possible.
- **Chapter 4** analysis the availability of fully trained personnel who can be called upon in the eventuality of oil pollution incidents at sea.
- **Chapter 5** evaluates the accessibility to fully functional oil spill response assets to ensure an effective initial response.
- **Chapter 6** reviews the mechanisms in place to invoke effectively the polluter pays principle in cases of oil pollution at sea.

1.8 Report structure

Chapter 2

Contingency Plan

Chapter 2 - Contingency Plan

2.1 Introduction

2.1.1 A national Contingency Plan is a critical instrument, which aims to guide Governmental entities to launch an expedient response in cases of oil pollution incidents. This policy document provides both a strategic and operational framework, considering the various sources of oil pollution and the subsequent impacts. The implementation of the Plan necessitates that the appropriate level of resources is available to national entities.

2.1.2 This Chapter discusses strategic and operational gaps identified during the course of this audit. At the outset, the discussion provides the context leading to Cabinet's approval of the Plan in 2010. Then the Chapter proceeds to present the concerns noted with respect to the scope, operational and organisational limitations as well as the level of resources committed to ensure the effective implementation of the Plan.

2.2 The Contingency Plan aims to fulfill Malta's international obligations

2.2.1 Apart from the national necessity to deal effectively with marine oil pollution, Malta is obliged through various International Conventions and Protocols to have in place a contingency plan to deal with such eventualities. These international obligations mainly arise from the United Nations Convention on the Law of the Sea and the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and the Barcelona Convention. With respect to the latter Convention, signatories are still discussing the action plan related to the implementation of the offshore protocol, which deals with potential spills from the oil production industry.

2.2.2 The Conventions referred to in the preceding paragraph require all signatories to co-operate in the implementation of international regulations to prevent, reduce and control oil pollution of the marine environment, and to take all necessary measures in cases of pollution incidents.

2.3 The NMPCP mainly caters for spills from either shore side operations, or vessels operating in Malta's territorial waters and contiguous zone

- 2.3.1 The drafting of the National Marine Pollution Contingency Plan (NMPCP) has been co-funded (80 per cent) by the EEA Financial Mechanism (European Economic Area comprising Norway, Liechtenstein and Iceland).³⁶ Through tender CT2677/2007, in 2008, a private contractor was awarded the contract to carry out “Studies and Project Management Services for the Setting up of an Oil Spill Response Capability for the Protection of Malta’s Seas at Malta”.
- 2.3.2 This contract related to the compilation of risk assessments in respect of oil pollution of the marine environment. This agreement also entailed the updating and drafting of the Contingency Plan (NMPCP). This Plan sought to provide guidelines relating to organisational and operational set-up, which enables an effective response to the scenarios presented therein. The cost of the contract amounted to €191,000 excluding Value Added Tax.
- 2.3.3 The Plan provides for Malta’s response to oil pollution incidents of up or equivalent to Tier Three. The International Petroleum Industry Environmental and Conservation Association (IPIECA)³⁷ contend that due to the nature of Tier Three spills, the relative plans to address such incidents should form part of National Emergency Plans.³⁸ The NMPCP does not refer to action to be taken in circumstances declared as national disasters. In such incidents, the Plan transfers the overall command from Transport Malta (TM) to the Civil Protection Department (CPD). Additionally, in cases of declared national emergencies, the provisions stipulated in the Emergency Powers Act of 1963, may be triggered.
- 2.3.4 The NMPCP is not activated for incidents of a minor nature (Tier One).³⁹ Generally, these incidents relate to small oil spills, which can be dealt with at source by the polluter, without any external assistance. In these circumstances, the Company or Organisation responsible for the spillage is deemed to have the capacity to launch an effective clean-up operation to the satisfaction of the Competent Authority. These incidents mainly involve spillages relating to land-based sources such as oil terminals and ships as well as bunkering operations. Such pollution mainly occurs in ports and harbours.
- 2.3.5 The Plan defines Tier Two oil spills as typically ranging between 10 to 100 cubic metres. In these scenarios, the clean-up operations are handled by national resources, which may pertain to either Government or the private sector. This includes both personnel and Oil Spill Response (OSR) assets.
- 2.3.6 A Tier Three response is triggered by an oil pollution incident where response necessitates that Maltese resources are supplemented with international assistance.⁴⁰ The latter mainly includes assistance from the European Maritime Safety Agency and/or other Mediterranean countries. The former assists Member States at prevailing rates, while the latter is mainly based on diplomatic efforts.
- 2.3.7 Cabinet’s approval of the Plan in 2010 was subject to a number of conditions. These qualifications mainly related to a Legal Notice being issued to provide legal backing of the Plan, thus giving it an administrative and organisational platform to better facilitate its implementation. The Cabinet Memo also acknowledged that the role of Competent Authority designated to TM, may in the long-term, need to be reassigned. The Memo also refers to the need that the Plan is extended to cater for threats emanating from the offshore oil production industry.

³⁶ Authority for Transport in Malta, National Marine Pollution Contingency Plan, p. 6.

³⁷ IPIECA is the global oil and gas industry association for environmental and social issues.

³⁸ IPIECA (2000). A Guide to Contingency Planning for Oil Spills on Water, Volume Two, p. 4.

³⁹ The NMPCP refers to Tier One as oil spills of up to 10 cubic metres.

⁴⁰ The NMPCP refers to Tier Three as oil spills exceeding 100 cubic metres.

2.4
Risk assessments
are subject to
scope and data
limitations

*The scope of
commissioned
studies extend only
to a maximum of
four nautical miles
from the Maltese
coast*

*Risk assessments
undertaken
highlight the need
for further in-depth
evaluations*

- 2.4.1 As noted in Section 2.3, Government commissioned various risk assessments as part of its preparation and planning for oil spill prevention and response strategies. The assessments aimed to identify the possible hazards, the likelihood of oil spill incidents occurring, as well as their potential impact. These studies would enable Government to plan Malta's response in the event that such incidents occur. To this end, the four commissioned studies related to: Incident Risk Assessment, Incident Impact Assessment, Environmental Sensitivity Report and Hydrographic Data Report.
- 2.4.2 These studies do not encompass the risks related to the offshore oil production industry. They only provide preliminary information and therefore must be supplemented with additional in-depth studies, as noted in the same assessments.
- 2.4.3 The studies finalised in 2009 systematically assessed environmental vulnerabilities by dividing the Maltese coastline into thirty-two manageable zones of approximately four nautical miles squared. The vulnerabilities identified through the environmental assessment, along with those emerging through the socio-economic assessment, are intended to serve as a guide to aid the prioritisation of areas for oil or chemical spill response effort.
- 2.4.4 The scope of these studies does not fully cover Malta's territorial waters, which extend to 12 nautical miles from the shoreline. Thus, these assessments exclude the risks emanating from commercial maritime activities at Hurd Bank. Additionally, these studies do not encompass potential impact on fish stocks and other living organisms within the Maltese fishing zone.
- 2.4.5 In view that these studies only extended to four nautical miles from the shoreline, the Competent Authority is in the process of commissioning additional assessments to address pollution risks beyond the Maltese territorial waters. These include risks from the offshore oil production industry.
- 2.4.6 It should be noted that once the Offshore Safety Directive comes into force in July 2015, the Plan is to take into account risks related to offshore oil production industry. This is currently being addressed through site-specific studies under the Production-Sharing contract between the Continental Shelf Department and the operator awarded oil exploration contracts. To this end, Environment Impact Assessments were undertaken as part of the licensing process to commence oil exploration activities.
- 2.4.7 The findings presented in the studies were subject to a number of limitations mainly due to the non-availability of historical data. The commissioning Authority, TM, was cognisant of the situation concerning the absence of the relative historical environmental data. As contractually agreed, in the absence of historical quantitative data, the studies were mainly based on qualitative risk assessments.
- 2.4.8 To mitigate the effect of limited baseline data, the studies were based on subjective assessments of the current status quo of the Maltese marine environment. Consequently, the findings presented in the studies are considered as foundation research, which will eventually require further quantitative assessments to enable more realistic plans to be drawn up with respect to marine oil pollution. This is particularly relevant to designated environmentally protected areas.

2.4.9 The reports recommended that further studies are required to quantitatively evaluate the current environmental and socio-economic conditions. The assessments highlight that the appropriate timeframes and budgets are to be allocated for the undertaking of baseline studies, contingent valuation method reports, coastal protection plans and economic analysis of various marine areas.⁴¹ Such studies will enable a more accurate projection of the potential negative impacts emanating as a result of an oil spill. Five years have elapsed since these recommendations were proposed, yet none of these studies have yet been commissioned.

2.5.1 Dispersants are a group of chemicals designed to be sprayed onto oil slicks to accelerate the process of natural dispersion. A detailed analysis of the particular spill is required to assess whether the potential benefits of using dispersants through reducing the exposure to spilled oil of shore and near-shore organisms, outweigh the potential risks of exposing marine organisms to the possibility of toxic effects caused by the exposure to elevated oil concentrations in water. Consequently, a rational decision about the use of dispersants or otherwise, can only be made with the relevant information from environmental expert sources.⁴²

2.5.2 Nonetheless, the use of dispersants is considered an important contribution to the ideally rich mix of resources, which should be available to combat oil pollution at sea. The use of dispersants is especially required in bad weather conditions, whereby mechanical recovery through the deployment of booms and skimmers would be almost impossible. Therefore, the timely application of dispersants onto the oil slicks would reduce the exposure to spilled oil of shore and near-shore organisms.

2.5.3 The International Tankers Owners Pollution Federation Limited (ITOPF) contends that due to the complexities related to the use of dispersants, detailed contingency planning is required. In 2011 the same Organisation recommended that Malta is to identify exclusion zones with respect to the use of dispersants. To date, Malta does not have a specific position on the utilisation of these agents despite the development of new generations of dispersants.⁴³ The potential impact of such a situation would be that, in the case of an incident, valuable response time would be lost. The importance of pre-established guidelines can be depicted through the practices adopted by France. Maps have been drawn defining offshore areas where dispersants can be used without major risk. Each approval is granted for a period of five years and then checked every two years. Such a decision-making approach would be less dependent on the human element in real-time, and hence removing the reliance on limited human resources and reducing risks associated with staff movements/changes.

2.5.4 In Malta, the absence of guidelines on the use of dispersants arises mainly from the unavailability of comprehensive baseline studies depicting the current environmental status of Maltese marine environment. Additionally the development of the appropriate guidelines is dependent also on the input of various other stakeholders such as those responsible for fisheries/aquaculture or tourism, in view of potential impacts on these sectors. The Water Services Corporation may also need to be consulted in relation to potential effects on reverse osmosis plants and Enemalta in relation to the power stations cooling water intakes.

2.5
Provisions on the
use of dispersants
and designation
of sacrificial areas
in the NMPCP are
not fully supported
by the required
guidelines

⁴¹ Reference providing a brief outline of what these studies would entail is made in this Report's Glossary on p. 5.

⁴² EMSA, 2010. Manual on the Applicability of Oil Spill Dispersants, p. 3.

⁴³ As at September 2009, in some countries of the 24 maritime nations in the European Union and European Free Trade Association, no dispersant approval scheme was in place because dispersant use was prohibited or it was considered that dispersants will not be used in oil spill response.

- 2.5.5 On a national level, in 2009, the Ministry for Transport and Infrastructure established a Task Force Group, to discuss updates to the Contingency Plan, including the use of dispersants. This Task Force comprised all the major players, namely, TM, CPD, Armed Forces of Malta (AFM) and Malta Environment and Planning Authority (MEPA). The members of the Task Force have not reached an agreement leading to the development of a policy framework. The points of contention relate to baseline studies and remits.
- 2.5.6 MEPA lamented that it does not have the resources to conduct baseline studies, which are considered as a prerequisite to policy development. In the circumstance, MEPA suggested that a dispersant policy should be jointly developed by all entities involved in dealing with national response.
- 2.5.7 MEPA as the regulator responsible for the environment was requested by the Task Force to develop a policy on the use of dispersants. However, such a task may be beyond the Authority's remit since its jurisdiction is limited to the 12 nautical miles designated as Malta's territorial waters.⁴⁴
- 2.5.8 The Authority contended that it is not MEPA's role to make proposals regarding which products should be used and where, as its remit is to authorise the use of these agents on the basis of information provided by the operator regarding the ensuing effects on the environment. Moreover, MEPA noted that it is the contracted operator proposing to make use of dispersants, who should propose the relative strategy for the Authority's and other relevant entities review and approval.
- 2.5.9 In view of these circumstances, the issue on the use of dispersants has remained outstanding for over four years. The lack of a comprehensive policy in this regard, not only precludes Malta from ensuring the local availability of such dispersants, but also prohibits the Competent Authority from making the necessary arrangements to ensure the effective procurement and application when in need. However, the NAO audit noted that efforts were recently being stepped-up as the use of dispersants was an item on the agenda of the Maritime Safety and Pollution Prevention Committee (MSPPC) meeting convened in February 2014.⁴⁵
- 2.5.10 Another point of contention between the major players relates to the designation of zones as sacrificial areas, which may also be referred to as pollution emergency zones, and to the ensuing development of the relevant national policy. These areas may be required to contain the spilled oil within a restricted area at sea to prevent further dispersion and contamination. A detailed policy in this regard would ensure a more timely response in case of an oil spill that is very close to Malta's coast. Similarly, to the issues concerning the use of dispersants, MEPA contends that it is unable to endorse potential zones for such ends, in the absence of comprehensive studies.
- 2.5.11 MEPA contends that 'pollution emergency zones' are not defined in the Plan and that the designation of such areas was originally assigned to the CPD in the draft NMPCP. This task was then allocated to MEPA in the final NMPCP. MEPA had highlighted its reservations on this new task, and requested a clarification as to what such zones constitute, as well as requested the removal/amendment of related task (in the absence of information as to what this entailed); however no clarification was forthcoming and the wording was left unchanged. MEPA's position is also referred to in the Memo to the Ministry for Sustainable Development, the Environment and Climate in July 2013.

⁴⁴ Territorial Water and Contiguous Zone Act, Chapter 226, ACT XXXII of 1971, as amended by Acts: XLVI of 1975, XXIV of 1978, XXVIII of 1981, I of 2002 and X of 2005, Article 3(1).

⁴⁵ Paragraphs 5.3.15 to 5.3.17 of this Report, further elaborates on the management of specific stocks of dispersants, which was donated to Malta in 1992.

- 2.6.1 In addition to the limitations outlined above, legal, organisational and administrative issues may potentially restrain Maltese entities from launching an effective response to oil pollution in accordance with the provisions outlined in the Plan. This Section discusses the impact of delays in allocating legal status to the Plan. The discussion then focuses on the issues influencing the allocation of resources and the commitment of various national authorities towards sustaining the Plan.
- 2.6.2 The Cabinet Memo of 2010 stipulated that the NMPCP was to be given the status of a legal notice. The rationale of this approach was to strengthen the designation of TM as the national Competent Authority responsible to maintain and implement the Plan. However, to date, the Legal Notice referred to in the preceding paragraph has not been issued. In 2012, TM as the National Competent Authority on oil pollution matters, had drafted a Legal Notice entitled Oil and Hazardous and Noxious Substances Pollution Preparedness, Response and Cooperation Regulations, 2012. The Legal Notice was planned to come into force in April 2012.
- 2.6.3 The Competent Authority attributes the delays to issue the legal notice to other Government priorities. The delays in issuing the legal notice deviate from the Government direction expressed through a Cabinet Memo. Additionally, this situation is influencing the level of commitment of various Maltese entities in dealing with oil pollution at sea. Although TM is the designated Competent Authority, the absence of legal provisions supporting this mandate raises a number of administrative lacunae. In the absence of legal backing, the Competent Authority is fully dependant on the cooperation forthcoming by the key players.
- 2.6.4 A major concern arises since TM is not legally empowered to ensure that all key players fully cooperate and accede to the direction provided by the Competent Authority. On occasions, AFM were not in a position to verify oil pollution alerts. Such a situation arises since final decisions on whether to deploy AFM resources depends on prevailing priorities and vests with the latter (refer to paragraph 3.1.3).
- 2.6.5 Additionally, in the absence of a legal mandate, some Governmental entities are not always adhering to the provisions outlined in Government policy, including the participation in the annual oil response simulation exercise organised by TM. In these instances, TM does not have the necessary enforcement powers to ensure the full cooperation towards the implementation of the Plan.
- 2.6.6 The MSPPC is established by the Vessel Traffic Monitoring and Reporting Requirements Regulations (S.L. 499.34). Its remit is to advise and make recommendations to TM with respect to ways of dealing with a ship involved in an accident, incident or pollution event and to determine the ensuing risks.
- 2.6.7 This Committee comprises the main players involved in implementing the Plan. It is chaired by the Permanent Secretary in the Ministry responsible for shipping and ports, Chairman TM, Commander AFM, Commissioner of Police, Director of the CPD and Director General MEPA.
- 2.6.8 Despite its critical role, which aims to secure members' full cooperation, this Committee was not convened during the period February 2011 to November 2013. As a result, there was an absence of top down direction and monitoring to ensure that

2.6
Legal,
organisational
and
administrative
concerns may
potentially hinder
the effective
implementation
of the NMPCP

*The enactment of
the NMPCP into
a legal notice has
been outstanding
since 2010*

*The Maritime
Safety and Pollution
Prevention
Committee did not
meet for over two
years*

the various tasks were executed as agreed by the Committee. These tasks included:

- drafting and issuing of a Legal Notice transposing the Plan into legislation;
- collating of information relating to the available infrastructure to facilitate communication and coordination in the event of major incidents; and
- reviewing and seeking further clarification from Cabinet as to which of the major players would be best-suited to assume the responsibilities of the Competent Authority on a long-term basis.

Over 90 per cent of the Emergency Response Control Centre roles noted in the NMPCP have not yet been identified

2.6.9 The Contingency Plan identifies 169 contacts whose input may be required in cases of Tier Two or Three oil pollution incidents. These contacts are allocated various roles, which include the positions related to the Emergency Response Control Centre (ERCC) team,⁴⁶ spill response contractors, waste disposal companies and international assistance. The Plan necessitates that all positions listed therein are duly assigned together with up-to-date contact details. However, as indicated in Table 2, a substantial number of these positions remain unassigned and in some instances, contact details were not updated. Table 2 refers.

Table 2: Positions listed in the NMPCP contacts directory

Contacts directory	Total contacts (No.)	Available contacts (No.)	Contacts not identified (No.)	Contacts not identified (%)
Contacts for call-out of ERCC team	50	4	46	92
Contacts for statutory notifications	2	2	0	0
Contacts for issue of pollution warnings	14	10	4	29
Contacts for Ports and Harbours	3	3	0	0
Government Ministries, Agencies and Departments	30	4	26	87
Conservation bodies and non-governmental organisations	4	1	3	75
Spill response contractor in Malta	2	1	1	50
International Tier Three Response Contractors	4	4	0	0
Sources of international assistance	6	6	0	0
Waste Disposal Companies	6	2	4	67
Vessel hire companies	16	9	7	44
Bunkering service operators	12	6	6	50
Support Services and Suppliers	20	8	12	60
Total	169	60	109	64

⁴⁶ Appendix I provides an outline of the responsibilities assigned to each position.

2.6.10 Table 2 shows that only 60 out of 169 positions listed in the NMPCP have been identified. The non-identification of key roles may hinder operations, particularly by giving rise to communication and coordination problems. Moreover, the non-assignment of roles potentially results in the unavailability of appropriately prepared and trained personnel in important positions.

2.6.11 The non-assignment of responsibilities outlined in the Plan is particularly prevalent within the ERCC, as 46 out of 50 positions have not been assigned. These positions mainly relate to On-Scene Commander (Shore-line Operations), Salvage Master, Financial Manager and Oil Spill Response advisor. Moreover, with the exception of the Overall Commander role, none of the remaining designated substitutes have been identified.

2.6.12 A similar situation prevails with respect to contact persons representing Government ministries, departments and agencies listed in the Plan. At the time of drafting this Report, only four out of the 30 positions indicated had been assigned. Major unidentified contacts relate to the Ministries responsible for finance, foreign affairs and tourism. Additionally, the Departments responsible for information, weather forecast, fisheries, public health, customs, public works, the Armed Forces and Civil Aviation have not assigned their representative to act as their contact point for Contingency Plan purposes.

2.6.13 This state of affairs is indicative that national entities, for various reasons, are experiencing practical difficulties to implement the NMPCP in accordance with the organisational set-up stipulated therein. This Section has highlighted issues related to jurisdiction, mandate, roles of national entities, which are influencing the level of coordination between them. It is to be noted that Government policy as expressed in Cabinet Memo OPM 4007/08 Pt 4, acknowledged that the administrative and organisational arrangements therein are of an interim nature. Together with the need that the Contingency Plan is regularly updated to reflect current circumstances, funding related issues are indicative that the current set-up is to be revised.

2.6.14 A best-practice measure recommended by International Tankers Owners Pollution Federation Limited (ITOPF) relates to the listing of available OSR assets in the Plan. The rationale of such a measure is the expediting of the national response. To this end, up to date and reliable information on the type, location and condition of assets would facilitate the decision-making process relating to the deployment of equipment to incident scenes.

2.6.15 The NMPCP presents an inventory of OSR assets in line with the ITOPF criteria. However, since its inclusion in the Plan in 2010, the list was not updated. The NAO review revealed the following:

- The serviceability of 101 different pieces of oil spill response equipment, ranging from inshore oil containment booms to oil skimmers, pumps, dispersant spraying equipment and high pressure hot water cleaners, owned by the former Oil Pollution Response Module, is doubtful or unknown.⁴⁷ This circumstance arises since maintenance records and other related documentation certifying this equipment as fit for purpose are not available.

The assets inventory included in the NMPCP is outdated

⁴⁷ Authority for Transport in Malta, NMPCP, pp. 109-114.

National funds to sustain the implementation of the NMPCP are limited

- The Plan still refers to equipment, which was deemed unserviceable and returned to the CPD by the lessee.
- The Plan does not include inventory information with respect to aerial surveillance related equipment.
- The Plan does not include basic details relating to the operational limitations of equipment listed therein. Moreover, the NMPCP does not provide any guidance relating to the transportation of equipment to and from incident locations.

2.6.16 A major contributory factor of this situation is the absence of mechanisms to ascertain that TM is kept updated with the status of oil spill response assets under the responsibility of Government entities and contracted third parties. The potential effect of this situation is that Maltese entities have limited information on the OSR assets at their disposal. In the circumstances, TM is constrained to place heavy reliance on the limited offshore equipment under its charge.

2.6.17 The implementation of the NMPCP is dependent on the availability of financial resources. However, funds allocated for this function are not sufficient to enable the full implementation of the Plan. This situation materialised despite the references to such matters in the Cabinet Memo of 2010. Therein it was stated that Cabinet has taken note of the financial requirements to cater for all operational expenses, including training of personnel, and the maintenance of equipment to ensure prompt response in the case where the polluter is known or not.⁴⁸

2.6.18 A Position Paper drafted by the Competent Authority in August 2010 estimated that an additional budget of €950,000 annually is required to extend national activities in relation to the implementation of the Plan. However, on review, the NAO observed that the Position Paper underestimated the required annual funds due to the following:

- AFM maritime patrol costs were calculated on vessels with the lowest operational cost. While this calculation was based on a vessel costing €3,500 every 24 hours, in practice, the deployment of an AFM vessel can cost up to €13,843 daily.⁴⁹
- Costs relating to clean-up services, which may be engaged to complement the existing arrangements, were not considered.
- The Position Paper also excluded costs related to the disposal of obsolete assets.

2.6.19 The unavailability of sufficient funds to ensure the effective implementation of the Contingency Plan is limiting Maltese entities' ability to ensure that the appropriate level of personnel and OSR assets are readily available.

⁴⁸ Cabinet Memo 2010, OPM 4007/08 Pt 4.

⁴⁹ Minutes of Meeting: Third Working Group – Pollution Preparedness and Incident Response, 26 November 2009.

2.7
 Nearly half of the oil spill contingency plans pertaining to Terminals, Facilities and Yachting Centres have not yet been submitted

- 2.7.1** There are 25 major private and public organisations licensed to carry out various activities within areas in the proximity of Malta’s shoreline. The main business relating to the nine terminals include mooring and berthing of ships to obtain services such as handling of cargo or passengers, repairs, waste removal, bunkering, and any other services related to ships and maritime activities. These include the Malta Freeport Terminal, Valletta Gateway Terminal, oil handling terminals and various Enemalta terminals.
- 2.7.2** Seven other licensed facilities are land-based areas where ships can be moored, berthed or docked to obtain various services. These include activities such as tank-cleaning, slops/residues removal, repairs, bunkers, ship construction and any other services related to ships and maritime activities. Most of these facilities are privately run companies. The remaining nine licensed yachting centres are areas intended, organised and equipped with facilities and used for the berthing as well as mooring of yachts.
- 2.7.3** Operators of the business activities outlined in the preceding paragraph are required to have an oil pollution emergency plan, which must be in line with national systems such as the NMPCP. This obligation emanates from the OPRC and the Dangerous cargo ships, marine terminals and facilities and bunkering regulations. Similarly, yachting centre operators are obliged to establish an emergency response plan as per Yachting Centres Regulations. However, neither of these legislative provisions provides a time-frame for the fulfilling of operators’ obligations in this regard.
- 2.7.4** To this end, TM organised the first meeting with terminal and facilities operators in December 2009. These operators had to submit their Plan by end of February 2010. Furthermore, the Yachting Centres Regulations, which entered into force in January 2011, required these operators to provide an emergency response plan. The latter is to include procedures to be followed in case of pollution incidents. However, as at December 2013, only 14 out of the 25 operators submitted their oil pollution emergency plan as required. Table 3 refers.
- 2.7.5** A factor contributing to the situation depicted in Table 3 relates to as the need to further extend current enforcement mechanisms. Such circumstances mainly arise as the draft Legal Notice entitled Oil and Hazardous and Noxious Substances Pollution Preparedness, Response and Cooperation Regulations, referred to in paragraph 2.6.2 is still a draft version. Through this Legal Notice, marine terminals and facility operators will have to prepare and submit their plans within 12 months from the entry into force of this legislation. Non-compliance to these regulations will make the operators liable to fines.

Table 3: Oil pollution emergency plans submitted by terminals, facilities and marinas’ operators (December 2013)

	Operators (No.)	Plans submitted (No.)	Plans not submitted (No.)
Terminals	9	6	3
Facilities	7	2	5
Yachting Centres	9	6	3
Total	25	14	11

Source: TM.

2.8 Conclusion

- 2.7.6 In view of these lacunae, TM carries inspections to these operators' premises to ensure that they have the required emergency equipment. However, the absence of these contingency plans does not enable the Competent Authority to assess properly the level of preparedness of these operators. This situation could potentially impinge on the effectiveness of clean-up operations, which the polluter is obliged to undertake especially if the spill is of a Tier One level. Furthermore, the impact of a weak preliminary response by operators increase significantly as business activities are conducted from areas within ports or in close proximity to important infrastructures such as the power stations. It is to be noted that notwithstanding the reluctance of some of the operators to comply to the requirements established by national legislation, the Competent Authority has been continuously following these cases.
- 2.8.1 This Chapter concluded that generally, the Plan provides a strategic and an operational framework to deal with cases of oil pollution at sea. However, the NMPCP does not fully consider risks related to the offshore oil production industry. The Plan does not provide clear guidance on the use of dispersants, is not fully updated to reflect current roles and responsibilities, as well as, the condition of available OSR assets.
- 2.8.2 Additionally, the implementation of the Plan has not been supported with the appropriate level of resources. This state of affairs is leading to disputes between entities regarding their designated roles as outlined in the Plan and as was directed by the Cabinet Memo in 2009.
- 2.8.3 National entities, for various reasons, are experiencing practical difficulties to implement the NMPCP in accordance with the organisational set-up stipulated therein. This Chapter has highlighted issues related to jurisdiction, mandate, roles of national entities, which are influencing the level of coordination between them. The foregoing is indicative that the current set-up indicated in Cabinet Memo, OPM 4007/08 Pt 4 and the NMPCP may need to be revisited.

Chapter 3

Detection of oil spills at sea

Chapter 3 - Detection of oil spills at sea

3.1 Introduction

- 3.1.1 Timely detection facilitates an effective response to deal with oil pollution incidents at sea. Continuous monitoring for potential oil spills is a critical element for the identification of polluters as well as to ensure an expedient response. An effective detection function necessitates the allocation of the required level of resources. In practice, the detection function comprises two major tasks, namely the follow-up of incident reports within internal waters as well as surveillance and detection of oil spills within the CleanSeaNet Alert Region.
- 3.1.2 Internal waters constitute any harbour, port, bay, cove, creek or seashore.⁵⁰ The CleanSeaNet Alert Region is defined through the agreement between the Competent Authority, Transport Malta (TM) and the European Maritime Safety Agency (EMSA) dated February 2007. In some areas extends beyond the Maltese continental shelf.
- 3.1.3 In accordance with the provisions of the National Marine Pollution Contingency Plan (NMPCP), the Competent Authority is entrusted to ascertain that the oil pollution detection function is being appropriately carried out by the responsible entities. The Armed Forces of Malta (AFM) is the principal national entity responsible for undertaking surveillance activities within the CleanSeaNet Alert Region. However, the Competent Authority has no jurisdiction over the deployment of AFM assets. Consequently, the current organisational structure necessitates substantial levels of coordination and cooperation.
- 3.1.4 Moreover, TM and Civil Protection Department (CPD) also have oil pollution detection responsibilities within internal waters. This function mainly entails the verification of third party reports with respect to alleged oil spills.
- 3.1.5 This Chapter seeks to determine the extent to which detection mechanisms are in place to alert national entities as soon as an oil spill occurs. For this purpose, the NAO reviewed current practices adopted by the aforementioned entities as well as the relevant documentation pertaining to operations undertaken.

⁵⁰ Authority For Transport In Malta Act, Chapter 499, ACT XV of 2009, as amended by Legal Notice 336 of 2010 and Acts XI of 2010 and V of 2011, First Schedule, Article 2.

3.2.1 Effective surveillance generally entails a combination of approaches and techniques. Given the limited resources available to countries, surveillance is usually planned in accordance to the prevalent risks of specific areas. The various surveillance methods used generally draw on national resources, as well as, international agreements and cooperation as is the case with the Convention on the protection of the marine environment of the Baltic sea area, 1992 and the 1976 RAMOGE Agreement between Italy, France and Monaco.

3.2.2 This Section of the Report evaluates the extent to which the appropriate mechanisms are in place to ascertain that Maltese entities are able to detect oil spills within the CleanSeaNet Alert Region in a timely manner. For this purpose, this Section discusses the inherent limitations of satellite imagery, the timelines with which alleged oil spills are verified and budgetary constraints. Furthermore, this Section of the Report analysis whether national entities are appropriately documenting oil spill reports.

3.2.3 Oil spill detection mechanisms are mainly limited to satellite images provided by the CleanSeaNet services pertaining to EMSA⁵¹ at four-day intervals.⁵² Given the inherent limitations generally associated with satellite imagery, images received by national entities are to be verified through the triangulation with other surveillance mechanisms, prior to launching a clean-up oil spill response.⁵³

3.2.4 The following are the main limitations associated with satellite reports received by Maltese entities:

- satellite imagery is only received on average one in every four days.
- images received pertain only to a limited area based on the path of the satellite at the time of reporting - consequently Maltese entities do not have regular satellite surveillance of high risk zones, such as the Malta Channel.
- satellite images are subject to high incidence of false alarms since reporting is affected by adverse weather and other prevailing conditions.⁵⁴
- the effectiveness of mechanisms employed to verify satellite imagery is significantly diminished unless confirmed within three hours.

3.2.5 The foregoing clearly shows the need of supplementing satellite imagery with additional oil spill detection information. In this context, national entities may deploy resources available and may request the assistance of vessels or aircraft in the vicinity of the incident area to provide additional information. Most of the potential oil spills reported through the CleanSeaNet system and which were deemed by national entities to constitute high risks, were verified at source. Nevertheless, the opportunity exists to supplement the current efforts related to the verification of satellite images with additional surveillance mechanisms.

3.2
The oil pollution detection function within the CleanSeaNet Alert Region is predominantly reactive to satellite imagery reports

Other surveillance mechanisms do not adequately support satellite imagery

⁵¹ EMSA provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security. Furthermore, it is also responsible for oil pollution response, vessel monitoring and in long range identification and tracking of vessels.

⁵² During the period January 2012 to November 2013, 184 reports were forwarded by EMSA to National entities.

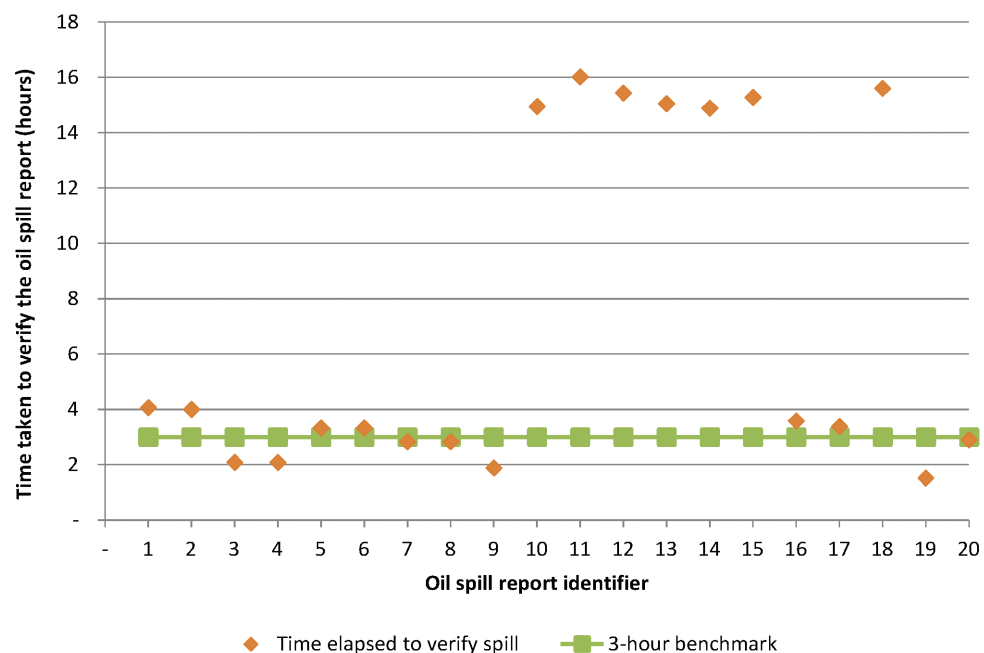
⁵³ <http://emsa.europa.eu/csn-menu/csn-service.html> as at 11 February 2014.

⁵⁴ EMSA, 2013. "Invitation to tender No. EMSA/NEG/61/2013 for the development of a tool for spatial and temporal statistical analysis of the potential oil pollutions detected in Europe", p. 5.

Verification of EMSA's reports was not always carried out within the advised timeframe

- 3.2.6 CleanSeaNet reports generally relate to spills up to the agreed alert region.⁵⁵ EMSA assists Maltese entities in the interpretation of satellite images through ranking in accordance to the potential risk. During the period January 2012 to November 2013, EMSA referred the 54 potential oil spill reports to AFM and TM. The Agency classified 13 of these reports as Class A while the remaining were ranked as Class B. The alert level is based on the anticipated level of pollution risk and the identification of the polluter. To this effect, Class A constitutes the higher threat.⁵⁶ National entities are responsible for confirming the EMSA reports regarding potential oil spills occurring in the area referred to as the alert region of the country.
- 3.2.7 To verify the reports received, AFM utilises either its own assets, that is sea and air craft or contacts vessels navigating in the incident area. National entities verified 31 out of the 54 potential oil spills, probably emanating from illicit discharges, indicated in EMSA's reports. This rate is considered to be significantly higher than the verification rate across the EU states who were utilizing the CleanSeaNet services during 2007 and 2009.⁵⁷ Similarly, the percentage of potential oil spills verified by Maltese entities is slightly higher than the illicit discharges checked (50 per cent), in 2012 by Helcom countries.⁵⁸
- 3.2.8 Mission documentation was only available for 20 of the 31 cases indicated in the preceding paragraph. It transpired that in 13 instances, the AFM air wing squadron exceeded EMSA's three-hour benchmark, which represents the optimal period to verify the latter's report. Figure 5 presents the time elapsed to reach the potential incident location, from the receipt of the EMSA report. The cases in the scatter diagram are plotted in chronological order.

Figure 5: Elapsed time to reach the potential incident location from the receipt of EMSA report (January 2012 – November 2013)



⁵⁵ Refer to paragraph 3.1.2.
⁵⁶ EMSA, 2012. "CleanSeaNet Report to Regional Agreements, Reporting Period: From 01/09/2011 until 31/3/2012", p. 2.
⁵⁷ CleanSeaNet Service accessed from <http://emsa.europa.eu/csn-menu/csn-service.html> on 29 May 2014.
⁵⁸ Baltic Marine Environment Protection Commission. Annual 2012 HELCOM report on illegal discharges observed during aerial surveillance, p.5.

3.2.9 Figure 5 shows that AFM managed to verify only seven reports out of the 20 for which information was available, within the three-hour benchmark. In six cases, the report was verified in up to six hours following the receipt of the EMSA's reports. In the remaining seven cases analysed, the verification time was over 14 hours. These circumstances arise mainly in cases where the EMSA reports were received close to or after-sunset. In such instances, AFM practice is to verify these reports at the earliest opportunity the following morning. AFM contends that it is not appropriately equipped to handle night-time operations of this nature.

3.2.10 AFM verified 57 per cent of the EMSA reports received during the period 2012 to 2013. Most of the 31 reports verified by AFM lie in the Malta Channel, which constitute a high oil pollution risk zone due to heavy traffic in the area and the prevailing weather conditions.

3.2.11 EMSA provides satellite imagery in terms of its obligations under the Ship – Source Pollution and on the Introduction of Penalties for Infringements Directive.⁵⁹ However, national entities are obliged to fund complementary initiatives related to the surveillance of the CleanSeaNet Alert Region.

3.2.12 To this end, a Position Paper submitted in 2010 by the Competent Authority indicated that a minimum of €572,000 annually are required to fund an additional 27 hours of air and sea patrol per week. Table 4 refers.

Table 4: Additional forecasted surveillance costs

Patrol Type	Weekly surveillance (hours)	Weekly cost (€)	Yearly cost (€)
Sea	24	3,500	182,000
Air	3	7,500	390,000
Total	27	11,000	572,000

Source: Position Paper, 2010.

3.2.13 Table 4 shows that surveillance is a costly endeavour. For example, on average, the operational cost for one hour of sea and air patrol totals €145.83 and €2,500 respectively. It is to be noted, that the Position Paper referred to earlier does not provide supporting information to explain the basis of this level of surveillance.

3.2.14 National entities, namely TM and AFM, are recording details of oil spill reports raised from various sources, including the CleanSeaNet system, in separate manual and electronic databases, rather than in a centralised system to which both entities would have access to. This situation gives rise to duplication of record keeping. To an extent, this is understandable due to the different functions and organisational needs of these entities. However, the different approaches to data collation and recording is in some cases resulting in fragmentation of data and inconsistent statistics on the number of oil spills reported and verified. Despite the parallel systems of documentation, the information available at AFM and TM regarding EMSA reports received did not always reconcile. Table 5 refers.

Resource considerations constrain the further extension of oil pollution detection initiatives

The lack of a central oil spill database is resulting in data fragmentation and inconsistencies

⁵⁹ Directive 2005/35/EC of the European Parliament and of the Council of 7 September 2005.

Table 5: Variances between TM and AFM documentation relating to EMSA Class A and B reports received (2012 to November 2013)

Year	TM (No.)	AFM (No.)	Variance (No.)
2012	37	27	10
November 2013	17	12	5
Total	54	39	15

Source: TM and AFM.

3.2.15 AFM contended that this can be mainly attributable to the lack of a dedicated database specifically designed to manage and record oil spill reports. A similar situation relates to the total number of EMSA reports, which have been verified by Maltese entities. Table 6 refers.

Table 6: Variances between TM and AFM documentation relating to the number of verified EMSA Class A and B reports (2012 to November 2013)

Year	Total reports verified at TM and AFM (No.)	TM (No.)	AFM (No.)
2012	22	12	17
November 2013	9	7	3
Total	31	19	20

3.2.16 Table 6 shows that TM and AFM are not maintaining their separate databases updated to record and reflect the actual outcome of the verification process. The variance between both datasets is an indicator of communication concerns between the two entities. Moreover, such inaccuracies may also be reflected in the obligatory reports relating to the verification of Class A and B reports that TM, in its role of the Competent Authority is obliged to submit to EMSA.

3.2.17 The need for a standardised and centralised database was also evident in the way TM records incidents of oil pollution occurring within Maltese ports and harbours (section 3.3 refers). Contrary to the approach adopted with regards EMSA's Class A and B reports, TM only documents details of confirmed oil spills. Consequently, the fragmentation of TM's records is considered to limit information analysis contributing to formal risk assessment of the areas, which may have a higher incidence of oil pollution.

3.2.18 To address record keeping limitations, TM has drafted standard operating procedures outlining the information to be collected and recorded in cases of incidents. However, these procedures are still awaiting formal approval from TM management.

3.3.1 National entities namely TM and CPD also receive reports related to oil pollution within Maltese ports and harbours. These reports are generally raised by commercial entities operating in local ports and harbours as well as other third parties. During the period January 2012 to November 2013, 11 reports were verified and the relevant response action was taken by the Competent Authority. In addition, during the same period, CPD also verified and initiated response action with respect to 23 out of 24 of the reports received. Such situation shows that the national entities are mainly dependent on detection reports by third parties rather than continuously monitoring the Maltese internal waters for potential spills.

3.3 Various other sources furnish Maltese entities with oil spill reports in internal waters

- 3.4.1 This Chapter outlined a number of issues, which are hindering a more expedient response to detect oil spills as well as identifying polluters. While most of the alleged oil spills classified as high risk were verified, the opportunity exists to further extend the monitoring frequency of the alert region. In this regard, financial constraints are considered as the main limiting factor to enable national entities to further extend monitoring frequency. Moreover, budgetary constraints are hindering national entities from taking a more pro-active and systematic approach to detect and verify reports of oil spills.
- 3.4.2 To their credit, Maltese entities aim to deploy available assets to verify satellite images of oil spill reports at sea on the basis of risk – albeit through undocumented criteria which formally defines the inherent risks and action to be taken in different circumstances. However, other national priorities have on various occasions either prohibited the verification of such reports or led to prolonged response times. In the latter scenario, response delays do not always permit an effective situation assessment. Moreover, prolonged response times generally imply that national entities would have forfeited any opportunity to track down illicit polluters and hold them liable for their action.
- 3.4.3 Organisational inefficiencies, to varying degrees, potentially also diminish the effectiveness of the mechanisms in place to detect oil pollution at the earliest opportunity. A major organisational issue relates to the situation whereby the Competent Authority has no legal jurisdiction to deploy assets falling under the responsibility of the AFM. Although there is consultation, it is ultimately up to the AFM to decide on asset deployment rather than the Competent Authority. Other organisational issues relate to the lack of a central database to record oil pollution reports, which limits the availability of information for analysis purposes.
- 3.4.4 The next Chapter discusses the level of training provided to the key players in order to ascertain that Malta is adequately prepared to deal with oil pollution incidents at sea.

Chapter 4

Oil Spill Response training

Chapter 4 – Oil Spill Response training

4.1 Introduction

4.1.1 The quality of response by national entities is dependent on a number of critical elements, including the availability of fully trained personnel who can be called upon in the eventuality of an oil pollution incident at sea. The absence of trained personnel could limit the implementation of the National Marine Pollution Contingency Plan (NMPCP) to the detriment of the marine and coastal environment, which in turn will have a negative impact on various socio-economic aspects. It is important to note that currently Maltese entities have embarked on implementing a number of initiatives to address personnel training gaps.

4.1.2 This Chapter discusses Malta's current capabilities of effectively responding to oil pollution incidents at sea in terms of having appropriately prepared staff. For this purpose, this assessment focuses mainly on the training provided to the key players identified in the NMPCP. The ensuing sections address the following issues:

- the availability or otherwise of trained personnel to deal with oil pollution at sea;
- major stakeholders' commitment towards the implementation of the NMPCP; and
- the effectiveness of the annual oil spill simulation exercises performed.

4.2 A strategic training plan for oil spill response operations is not yet in place

4.2.1 In accordance with the 2009 Cabinet Memo and the NMPCP, the Competent Authority is tasked with setting up and maintaining the national system for preparedness and response to marine pollution incidents. This implies that Transport Malta (TM) is entrusted to ascertain that oil spill response personnel are fully trained.

4.2.2 The Competent Authority currently lacks a detailed inventory of capabilities, listing the ideal personnel to be deployed in case of an oil spill. Such a situation mainly arises as most of the key roles identified for the proper execution of the Plan, have not yet been assigned. Moreover, other personnel who may be required in case of an oil spill, such as volunteers and their respective coordinators, have not yet been identified and listed in the Plan. In the circumstances, training initiatives developed in an ad-hoc and fragmented manner.

4.2.3 In part, this situation materialised since the level of funding available placed severe restrictions on the training, which could be provided to national entities' personnel. Over the years, the resources available for training purpose mainly emanated from

foreign funding, namely the EU programmes, Italian protocols as well as the European Economic Area (EEA) Financial Mechanism 2004 to 2009.

4.2.4 Matters are further complicated since to date Malta has not carried out a training gap analysis which defines the optimal frequency of training sessions and the type of training required depending on the specific roles. The Competent Authority contends that a training gap analysis is scheduled to be completed by September 2014. This training gap analysis is considered as a prerequisite to enable the Competent Authority to develop a strategic training plan.

4.2.5 In the interim, TM, sought to continuously increase its efforts towards ensuring that its own personnel are furnished with the required Oil Spill Response (OSR) related training. This was mainly provided to the Pollution and Incident Response Unit (PIRU) within the Ports and Yachting Directorate, and the Vessel Traffic Service (VTS) section within TM. Table 7 refers.

Table 7: Training delivered to TM employees (2011 to 2013)

Year	Training	TM Employees attending (No.)
2011	Common Emergency Communication and Information System (CECIS) training	2 PIRU Officers
2011	CleanSeaNet Training V2	1 VTS Supervisor
2012	CleanSeaNet Training V2	2 VTS Supervisors
2012	HF Radar theory and CODAR SeaSonde operations	1 PIRU Officer
2012	Use of Oil Spill Dispersants following Deepwater Horizon incident	1 PIRU Officer
2013	CleanSeaNet Training V2	7 VTS Supervisors
2013	Use of Surveillance Systems for Marine Pollution Detection and Assessment	1 PIRU Officer
2013	CleanSeaNet Advanced Training	1 PIRU Officer

Source: TM.

4.2.6 During the period 2011 to 2013, 16 PIRU and/or VTS employees have received training mainly related to the utilisation of the CleanSeaNet platform, and other detection mechanisms. This training enabled the Competent Authority to ascertain that its employees are adequately trained in analyzing European Maritime Safety Agency's reports as well as other potential oil spill alerts.

4.2.7 TM is cognisant that the Armed Forces of Malta personnel have attended training related to the CleanSeaNet service and aerial surveillance. However, TM has not been informed whether the other major players identified in the NMPCP, namely the Civil Protection Department and the Malta Environment and Planning Authority (MEPA), have carried out any oil pollution response related training within their respective organisations.

4.2.8 The Competent Authority is aware of the need to address existing training gaps. To this end, the Authority has recently embarked upon an oil/HNS spill response capacity-building project for the protection of Malta's seas, funded through the EEA

4.3 Insufficient funds and participation levels limit the benefits of simulation exercises

Financial Mechanism 2009 to 2014. The major objectives of this project, which is to be implemented by end 2015, include the following:

- address the training requirements at national level in case of Tier 2 and Tier 3 spills;
- establish a training programme once the training needs have been identified; and
- tackle pollution from offshore drilling operations within and outside Malta’s territorial waters.

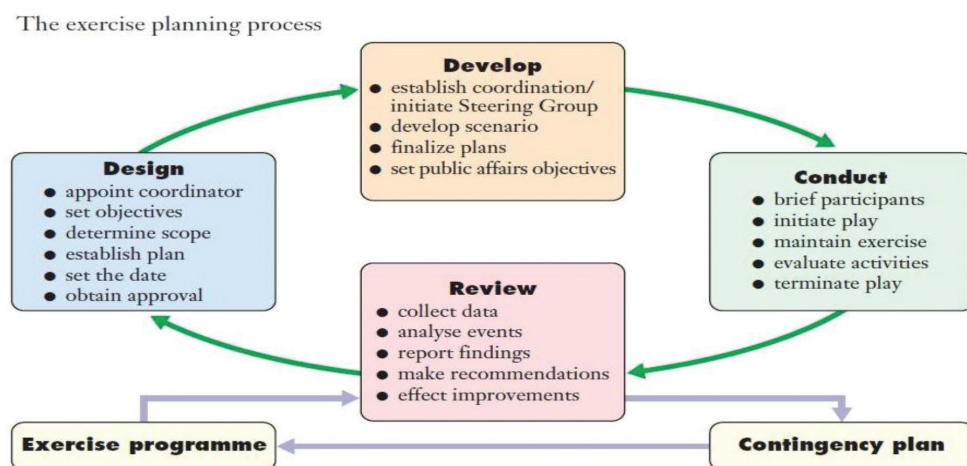
4.3.1 The only exercise, which is intended to bring together all the stakeholders involved, in an effort to test and improve upon the level of coordination and communication between the various entities involved is the annual oil spill simulation exercise, also known as the MALTEX.

4.3.2 The purpose of conducting oil spill simulations is to test the Contingency Plan, verify the upkeep of OSR assets, and evaluate the capabilities of the response team. For the past seven years, TM has carried out oil spill simulation exercises which included various scenarios, namely unattached spills, collisions and grounding, as well as, accidental discharge during operations, aimed to address the various Tier levels. The major constraints with respect to the comprehensiveness of the simulation exercise related to the availability of resources and the level of commitment by some of the players involved.

4.3.3 The International Maritime Organisation (IMO) and the International Petroleum Industry Environmental and Conservation Association (IPIECA) guidelines recommend four different types of oil spill related exercises, namely notification, tabletop, equipment deployment and incident management exercises. In Malta’s case, the annual simulation exercise is designed in such a manner to incorporate all the different aspects normally addressed separately through the former exercises. In addition to the MALTEX, another tabletop exercise was performed in 2013.

4.3.4 Simulation exercise planning is a four-step approach, which involves the design, develop, conduct and review stages, which collectively describe the process required in order to create and run a realistic and successful exercise. Figure 6 provides a snapshot of what constitutes the planning process.

Figure 6: The simulation planning process



Source: IMO/IPIECA (1996), Guide to Oil Spill Exercise Planning, p. 9.

4.3.5 Although the overall guidelines depicted in Figure 6 were mostly adhered to, this Office noted various shortcomings in the execution of oil spill simulation exercises. This review included an analysis of the documentation available with respect to past oil spill simulation exercises, mainly de-briefing reports issued by the Competent Authority for follow-up purposes, and a detailed observation of the MALTEX 2013. Some of the deficiencies noted in previous years have already been addressed, while others remained outstanding at the time of drafting this Report. Table 8 refers.

Table 8: Shortcomings noted during oil spill simulation exercises (2010 to 2013)

Shortcomings	2010	2011	2012	2013
Key players did not attend the yearly simulation exercise	x	x	x	x
NMPCP has not yet been enacted through a Legal Notice	x	x	x	x
Exercise always conducted during the same period of the year i.e. around September	x	x	x	x
Exercise area chosen was not based on a planned and structured risk-based approach	x	x	x	x
Miscommunication with the CECIS		x		x
Entities not acknowledging receipt of messages sent in Marine Pollution Report (POLREP) format		x	x	
Policies on use of dispersants and sacrificial areas not available	x	x	x	x
Policy on disposal of waste oil following an incident not available	x			
Media not involved in simulation exercise	x	x	x	x

Source: NAO and TM.

4.3.6 The Competent Authority is responsible to organise, coordinate and lead the annual national exercise. TM issues an official invitation to all stakeholders involved, usually more than three weeks in advance of the simulation exercise. Additionally, the Competent Authority issues a second invitation for both the briefing and debriefing sessions. The former, is normally held a couple of days before the actual exercise to enable all the stakeholders involved, to meet and discuss any OSR related matters and other logistical issues. Following the actual oil spill simulation exercise, a debriefing session is held in order to assess the outcome of such an exercise and identify any potential improvement opportunities.

4.3.7 Table 9 evaluates the level of participation in recent annual oil spill simulation exercises coordinated by the Competent Authority. During the period under review, the number of key players who were not present at the Emergency Response Control Centre (ERCC) and/or On-Scene ranged between 28.6 and 40 per cent. This level of participation does not reflect positively on the commitment shown by some of the entities involved.

4.3.8 The Competent Authority contends that the diminished participation levels in oil spill simulation exercises are mainly attributable to the availability of resources at the major entities. This state of affairs clearly shows that some of the key players identified in the NMPCP are not in a position to implement the administrative direction provided through Cabinet Memo OPM 4076/99. Appendix II lists the stakeholders who did not attend the oil spill simulation exercises performed since 2010.

Lack of participation diminish the effectiveness of the simulation exercise

Table 9: Stakeholder participation in MALTEX exercises (2010 to 2013)

Year	Planned Participants (No.)	Absent	
		(No.)	(%)
2010	26	8	30.8
2011	20	8	40.0
2012	23	7	30.4
2013	21	6	28.6

Source: TM.

4.3.9 The lack of participation in the annual simulation exercise by key players also implies that the available facilities, such as the ERCC at TM, have not yet been adequately tested for their suitability to meet the needs of real case situations. In accordance to the provisions of the NMPCP, more than 25 key players may need simultaneous access to these facilities.

4.3.10 One of the key players, MEPA, contended that the Authority's role within the ERCC is more focused on preparatory work to ensure that actions taken have limited environmental impacts, rather than providing direct input during the response event itself. The Authority also remarked that based on its experience of MALTEX 2009, the primary focus of these exercises is the deployment of vessels and related pollution contingency equipment. Environmental issues, such as prioritisation of sensitive areas, waste management, dispersants use and clean-up were not factored in to any significant degree in the 2009 exercise.

4.3.11 Over the past years, the Competent Authority has increased its efforts to simulate various scenarios during the annual oil spill exercises. However, as suggested by various stakeholders during the debriefing session of MALTEX 2013 and as noted by this Office, additional variations to the plan may be helpful in simulating the more complex situations and thereby adopting a more risk-based approach. This involves the identification and prioritisation of the various risks involved, to be addressed in order of priority through the yearly simulation exercises.

4.3.12 This audit revealed that the North-West side of the Maltese Islands has not been tested during oil spill simulation exercises, even though being constantly exposed to considerable risks. Such zone is subject to heavy commercial activities. However, the Competent Authority contends that response operations do not differ much from one area to another since communication and coordination capabilities, as well as, the deployment of OSR equipment are still tested. Table 10 shows the areas chosen for the oil spill simulation exercises and details of the scenarios adopted.

4.3.13 The Competent Authority contends that the decision not to make use of the North-West side of the Maltese Islands for simulation exercises was mainly due to the limited resources available. In addition, more efforts would be necessary in order to allocate a relatively busy shipping area for the deployment of OSR assets, thereby diverting typical shipping lanes.

The simulation-planning process does not adopt a comprehensive risk-based approach

Table 10: Scenario simulated during MALTEX exercises (2010 to 2013)

Year	Oil Spill Position	Scenario simulated
2010	Long 35° 51'N Lat 014° 36.4'E	Tanker collision with 250 cubic metres of spilled oil. More oil is leaking out.
2011	Long 35° 54.5'N Lat 014° 37.5'E	Collision between vessels caused MT Oil tank 1 to sink; around 100m depth; ship broken in two; oil leaking to surface; slick of approximately 1 nautical mile above position; Wind speed 6 knots; Wind Direction East South-East; vessel fully loaded with 43,000 tonnes of heavy oil.
2012	Long 36° 01.45'N Lat 014° 26.26'E	Oil slick report (possibly Heavy Fuel Oil [HFO]) of approximately 550 x 600 metres.
2013	Long 35° 47'N Lat 014° 31'E	Unattached spill moving South-East; 10 tonnes HFO 380 CST; Wind North-West Force 4 to 5 (Original scenario changed due to bad weather conditions - unattached oil slick HFO 380 CST; Quantity 350 x 150 metres).

Source: TM.

4.3.14 Various players also raised concerns on the selection of the date and time of the exercise. During MALTEX 2013 it was pointed out that good weather conditions were imperative to enable the deployment of assets at sea. To this end, most of the participants suggested that the exercise is conducted during the early Summer months. Performing the exercise during these months, will also provide the added benefit of testing a more challenging scenario due to the higher number of pleasure crafts at sea during this period.

4.3.15 The Competent Authority contends that the selection of the date for the simulation exercise is mainly constrained by European Maritime Safety Agency, due to the need to plan and schedule the various exercises across all the participating Member States. However, following MALTEX 2013, this Office was informed that the scheduling of future simulation exercises, is to be taken up by the Competent Authority with EMSA.

4.3.16 In addition to the selection of the date when to conduct the simulation exercise, the time chosen for the execution of this exercise is also of particular concern. Situations may arise whereby the proximity of potential oil spills to the coast, particularly near critical infrastructure or even environmentally sensitive areas, would necessitate an immediate response, even during night-time. However, the Competent Authority contends that night-time response is not feasible due to the lack of adequate resources including specialised assets.

4.3.17 The use of dispersants and the identification of pollution emergency zones, still need to be addressed, ideally through the establishment of sound policies (Section 2.5 refers). The former relates to which type of dispersant to use and in which location, depending on the environmental sensitivity of the area in question. Establishing sacrificial area is another matter of equal importance. These areas may be required in order to contain the spilled oil within a restricted area at sea, preventing further dispersion and contamination.

The lack of policies regarding the use of dispersants and pollution emergency zones is affecting the comprehensiveness of the training performed

The simulation exercise highlighted the need for further improvements in Communication

- 4.3.18 A detailed policy in this regard would ensure a more timely response especially in case of an oil spill that is very close to Malta's coast. This situation is precluding the Competent Authority from selecting the most suitable response action to be taken for the specific oil spill scenario chosen. Such circumstance is also hindering the Competent Authority from maximizing the benefits to be reaped through the annual simulation exercise.
- 4.3.19 A major stakeholder and decision-maker in terms of the NMPCP is MEPA. The Authority contends that decisions related to the use of dispersants, and the determination of pollution emergency zones need to be pre-determined through evaluations carried out by experts in emergency response and in consultation with experts in the relevant environmental fields of the risks involved. The Authority also pointed out to the need to develop a decision matrix to be used as reference during an emergency. Furthermore, MEPA remarked that decisions regarding appropriate waste management should be resolved by having standard contracts with approved facilities who would receive the wastes collected.
- 4.3.20 Various communication related problems emerged during oil spill simulation exercises performed in recent years. During the oil spill simulation exercise of 2011, some of the entities involved in the response operation, were not always acknowledging the receipt of messages sent in Marine Pollution Report (POLREP) format. Consequently, the Overall Commander responsible for coordinating the OSR operations was not always in a position to ensure that all the instructions given were effectively communicated to all the stakeholders involved.
- 4.3.21 In 2012, the idea of using satellite imagery during the oil spill simulation exercise, in order to support the operations at sea, proved unsuccessful. This was mainly attributed to a significant delay in receiving the images through the ERCC. Such a communication problem is being addressed by the Competent Authority and EMSA. Moreover, during the same exercise, some of the e-mails that were sent to EMSA's specifically allocated mail for emergencies were being returned to TM. The latter had to make use of another e-mail address in order to forward the respective messages. While such situation did not re-occur during MALTEX 2013, this circumstance is indicative of the need to carry out training frequently to ascertain that all mechanisms in place are fully functional.
- 4.3.22 Additional communication problems emerged during the MALTEX 2013 exercise. One of the response vessels could not be contacted during the initial phase of the equipment deployment exercise at sea. Thus, an alternative means of communication should ideally be in place, to ensure continuous sound communication between the Overall Commander at the national ERCC and the response operations at sea. To this end, this audit noted that no visual communication such as cameras are available on scene in order to help the key players at the national ERCC, to better evaluate the situation at sea, leading to more informed decisions being made.
- 4.3.23 Miscommunication with the CECIS was another problem encountered during 2013. Consequently, the ERCC, which is based at the European Commission in Brussels, was not acknowledging some of the messages and requests for additional OSR related resources to supplement the nationally available assets could not be made. EMSA recognised such a problem during the debriefing session of MALTEX 2013, and noted that it will be addressed as soon as possible since this was a common hitch amongst other countries.

4.3.24 Media involvement during the execution of oil spill simulation exercises is highly important. The IMO and IPIECA guidelines already referred to in this Chapter, suggest that a major step in the development phase of the simulation-planning process is the setting up of the public affairs objectives.

4.3.25 In major oil spill incidents, handling the media may be very time consuming and depends on the expertise of personnel who would otherwise be fully dedicated to the on-scene response. To date, the media was never involved during such oil spill simulations. Consequently, the ensuing scenarios and potential difficulties, have neither been tested nor the relative mitigation measures developed.

4.4.1 This Chapter concluded that the Competent Authority is not in possession of a detailed inventory of capabilities, listing the most adequate personnel to be deployed in case of an oil spill, including volunteers and their respective coordinators. Consequently, training developed in an ad-hoc and fragmented manner. To this end, a training gap analysis and the ensuing training is scheduled to be completed by end 2015.

4.4.2 For the past seven years, TM carried out annual oil spill simulation exercises in order to test the Plan and evaluate the capabilities of the response team. Although the overall procedural guidelines suggested by IMO were mostly adhered to, this Office noted various shortcomings. These mainly included the lack of participation by key players, missing operational policies, the non-adoption of a comprehensive risk-based approach in simulation exercise planning and communication related issues. Over the years, only some of these issues were addressed, whilst a number of concerns remained outstanding as at end 2013.

4.4.3 Around a third of the key players were not present for the simulation exercises held between 2010 and 2013. This lack of participation diminishes the effectiveness of the simulation exercise. In addition, this state of affairs clearly shows that some of the key players and related entities are not in a position to implement the administrative direction provided through Cabinet Memo OPM 4076/99.

4.4.4 Nonetheless, this Office noted that insufficient funds were directed towards the oil spill response training function. Generally, resources made available to local entities for such a purpose mainly emanated from external funding.

4.4.5 The following Chapter of this Report examines the effective management or otherwise of OSR assets, in particular the locally available stock which will ensure an effective initial response.

Chapter 5

Oil Spill Response assets

Chapter 5 - Oil Spill Response assets

5.1 Introduction

- 5.1.1 An effective response to oil pollution incidents at sea is not only dependent on the availability of trained personnel, but also on the accessibility to fully functional Oil Spill Response (OSR) assets. National entities procured the assets under their charge through the EU Third and Fourth Italian Protocols,⁶⁰ as well as through the European Economic Area Financial Mechanism 2004 to 2009.
- 5.1.2 The discussion within this Chapter, mainly focuses on OSR vessels and equipment. The former relates to OSR sea craft while the latter relates to booms, skimmers, pumps, storage tanks and other ancillary apparatus for offshore use. Despite the NAO's enquiries with the responsible entities, the cost of each of these OSR assets could not be derived, with regards the aforementioned protocols. Equipment procured through the European Economic Area (EEA) Financial Mechanism 2004 to 2009 had an original value of €501,426.
- 5.1.3 The Civil Protection Department (CPD) and Transport Malta (TM) are the two main entities responsible for OSR vessels and equipment. Additionally, other vessels and equipment, which were under the charge of the former Oil Pollution Response Module (OPRM), are currently either partly managed through a lease agreement or stored by the Ministry of Tourism. It is to be noted that prior ceasing operations, OPRM fell under the then Ministry for Tourism, Culture and the Environment.
- 5.1.4 In 2008, a review of the local assets procured over the years through the various funding mechanisms concluded that for an effective initial response to a Tier Three level of oil pollution, all vessels and equipment at the disposal of national entities, as listed in the Plan, should be readily available for immediate deployment.⁶¹ Moreover, this stockpile was to be supplemented with additional equipment.⁶² To this end, TM as the Competent Authority purchased the additional equipment indicated by the Government commissioned studies, referred to in Chapter 2. These items mainly consisted of skimmers, booms, pumps and other ancillary equipment for offshore use.

⁶⁰ Launching of commemorative publication "Malta & Italia, Enduring Friendship", 31 October, 2009. Available from <http://www.foreign.gov.mt/PrintNews.aspx?nid=662> as at 25 March 2014.

⁶¹ It is to be noted that this review formed part of the contract awarded through tender CT2677/2007.

⁶² Equipment Compatibility Report, p. 6.

5.1.5 In addition to the locally available stock of OSR vessels and equipment, Malta can also request international assistance to respond to a major oil spill at sea. In the absence of robust regional agreements, Malta, as a European Union Member state may rely on assistance offered by European Maritime Safety Agency (EMSA), at pre-established contractual rates.⁶³

5.1.6 The assistance is requested through the Monitoring and Information Centre, which is based at the European Commission in Brussels. In case of large-scale incidents, EMSA provides a list of available oil recovery vessels and equipment to assist Member States.

5.1.7 However, in line with EMSA Work Programme 2013,⁶⁴ and as noted by Government commissioned studies, national entities cannot rely solely on the assistance provided by EMSA since a maximum of 24 hours may elapse for EMSA's vessels to depart from their home base towards the incident location.⁶⁵ Delays in arriving at the incident site may hinder recovery operations due to the changing physical properties of the oil spill, which diminish the efficiency and effectiveness of equipment. An untimely response also limits the OSR options available such as the use of dispersants, which are to be applied within a specific time-window.

5.1.8 EMSA recommends that national entities consider its vessels and equipment as additional facilities to the national stockpiles. In view of the foregoing, the availability of national stockpiles is rendered as critical resources for launching an effective initial response to oil pollution at sea.

5.1.9 Against this backdrop, this Chapter discusses the extent to which Maltese entities have access to fully serviceable vessels and equipment, which can be deployed in accordance with the National Marine Pollution Contingency Plan (NMPCP) to deal with oil pollution incidents at sea. The scope of this review does not extend to Armed Forces of Malta assets since these are not considered as oil pollution specific. Towards this end, the ensuing discussion focuses on the:

- management of OSR vessels and equipment; and
- contract management relating to the leasing agreements entered into with third parties.

5.2.1 Cabinet Memo OPM 4076/99 and the NMPCP empower the Competent Authority with the responsibility of ascertaining that Malta is prepared to launch a response in terms of the provision indicated in the Contingency Plan. This entails that, inter alia, the Competent Authority is duty bound to ensure that assets maintained by national entities are in an appropriate state of readiness. Additionally, this Section deals with ownership, serviceability and storage of OSR vessels and equipment.

5.2
Asset
management
weaknesses
led to the
deterioration
of oil pollution
response assets

⁶³ Refer to Chapter 1.

⁶⁴ EMSA. Work Programme 2013, p. 60.

⁶⁵ The mobilization time of up to 24 hours is required for the vessel to discharge any cargo and to load OSR equipment.

The appropriate mechanisms are not in place to ensure that the Competent Authority is kept abreast of national OSR inventory status

5.2.2 TM has generally adhered to asset management principles with respect to the upkeep of OSR equipment procured in 2010 under the EEA financial mechanism and to which the Authority is directly responsible for its upkeep. Since its procurement, TM incurred maintenance related expenditure of €54,480 in relation to this equipment, which had an original value of €501,426. This audit revealed that:

- routine monitoring and maintenance of equipment is in place;
- inventory records are up-to-date; and
- equipment operability is ensured through a scheduled deployment or during yearly simulation exercises.

5.2.3 This state of affairs, however, was not replicated with respect to equipment and vessels under the charge of the former OPRM and CPD. The Competent Authority is not in possession of a complete and up-to-date inventory of the locally available OSR vessels and equipment. This is mainly attributed to the absence of mechanisms ensuring continuous monitoring and maintenance of these items held by various national entities. Additionally, inventory records do not feature a unique identification system for all OSR equipment.

5.2.4 The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) in collaboration with the International Tanker Owners Pollution Federation Limited (ITOPF) also referred to inventory management in its review report on the NMPCP of November 2011, submitted to TM in December 2011. To this effect, the report proposed a number of recommendations and strongly supported the intention to audit all stockpiled equipment whilst highlighting the importance of including the operability status of assets.⁶⁶ However, this exercise was not carried out on a continuous basis.

5.2.5 In this context, ITOPF also recommended that there might be additional value in detailing vessels of opportunity, which could be called on during a response, to perform specific tasks such as the transportation of equipment and human resources to/from the site in question. These include fishing, passenger and charter vessels. However, to date, this recommendation also remained outstanding.

5.2.6 The non-implementation of the REMPEC's and ITOPF's recommendations has resulted in national entities, not being fully knowledgeable of the serviceability status of assets under their charge. Although TM is fully cognisant of the status of equipment under its charge, the absence of the relevant administrative mechanisms prohibits the Competent Authority from being fully informed on the condition of the OSR inventory held by other national entities.

5.2.7 In 2004, the OPRM was transferred from the Ministry of Resources and Infrastructure to the Ministry of Tourism. This Unit was mainly responsible to supervise the cleaning up of low to medium level oil spills mainly in ports and harbours and on occasions, its operations extended even further. The clean-up operations undertaken by this Unit, whenever possible, were followed up with action to recoup expenses incurred. There were also instances, where fines were also imposed on polluters.

⁶⁶ Mediterranean Action Plan, REMPEC, 2011. Malta National Marine Pollution Contingency Plan (NMPCP), Review.

Following the dissolution of OPRM, ownership of its OSR equipment is unclear

- 5.2.8 Since its transfer to the Ministry of Tourism, financial and human resources were no longer made available to this Unit. By the end of December 2013, no personnel was employed by the OPRM. Administrative responsibilities pertaining to this Unit such as those related to the management of the lease agreements of OSR vessels with third parties and the storage of equipment were still being undertaken by the Ministry of Tourism.
- 5.2.9 In view of the diminishing resources employed by OPRM over the years, in February 2011, it was decided to transfer the OSR function, which used to be carried out by this Unit to the Cleansing Directorate (CSD) within the Ministry for Resources and Rural Affairs.
- 5.2.10 Despite the clear Cabinet direction, CSD contended that this transfer of duties was not possible due to its own capacity constraints. These related mainly to the lack of financial resources and the required level of expertise to operate as well as maintain OSR assets on OPRM's books.
- 5.2.11 As at end December 2013, the decision to transfer OPRM duties was still outstanding. Consequently, the Ministry for Tourism is still storing OSR equipment while administering and receiving revenue due with respect to the leasing of two vessels.
- 5.2.12 Government commissioned study, namely the "Equipment Compatibility Report", noted that "an educated guess of the percentage of equipment considered serviceable at OPRM will not exceed thirty per cent (30 per cent)".⁶⁷ Furthermore, this study estimated that for the extensive maintenance that was required, an expenditure of €111,650 excluding VAT would be required.
- 5.2.13 As at end December 2013, a cost benefit analysis to ascertain the feasibility of maintaining the then 20-year-old equipment or replacing it was not carried out. Moreover, the amount of funds required to maintain the equipment was not forthcoming. Consequently, since five years elapsed from the study's recommendations, the condition of this equipment probably deteriorated further.
- 5.2.14 In addition, irregular maintenance programmes resulted in the severe deterioration of one of the three response vessels at the former OPRM – M.V. Ambjent. This vessel was designed for harbour cleanup operations. Despite an expenditure of around €13,000 to repair this vessel,⁶⁸ M.V. Ambjent was still declared beyond economic repair within a few months following this expense.⁶⁹ This state of affairs raises concerns about the feasibility of such an expense and why this vessel deteriorated in what is considered to be half the typical lifetime of such a response vessel.
- 5.2.15 In addition to the equipment owned by TM and the former OPRM, the national inventory also comprises vessels and equipment under the charge of the CPD. This equipment was mostly procured in the 1990s through the Italian protocols. Current CPD management contends that inadequate storage conditions and upkeep led to the deterioration of this equipment.

Serviceability of OSR inventory under the charge of the former OPRM is doubtful

The poor storage conditions resulted in the accelerated deterioration of CPD equipment

⁶⁷ Equipment Compatibility Report, p. 6.

⁶⁸ NAO Annual Audit Report of 2009, p. 124.

⁶⁹ Position Paper, 2010. Oil preparedness and response.

5.3
Contract
management
shortcomings
limited the
benefits of leasing
and storage
agreements

*CPD's lease
agreement of
its equipment
is currently
under
litigation*

*Monitoring
mechanisms were
not in place to
ascertain that
contract conditions
were adhered to*

- 5.2.16 Upon the delivery of such equipment, no storage location was made available. Consequently, most of this equipment was left exposed to both weathering conditions and rodents. The poor storage conditions resulted in the accelerated deterioration of equipment including booms, which typically cost around €436 per metre. Moreover, CPD lacked the human and financial resources to maintain the OSR equipment in good condition.
- 5.2.17 To mitigate this state of affairs, in 2007, CPD leased all of its OSR equipment to a private contractor. The lessee was obliged to provide free warehousing, maintenance and any necessary overhaul to the equipment. For similar reasons, the former OPRM also resorted to leasing agreements with third parties. Such agreements pertained to the two response vessels under its responsibility.
- 5.3.1 Both the former OPRM and CPD have leased their equipment and vessels to third parties. During the period under review, there were five contracts between national entities and third parties which were still in force. One of the lease agreements related to equipment, which was under CPD's charge. Another three of these agreements related to three vessels, two of which pertained to the former OPRM. The fifth agreement reviewed for the purpose of this Audit related to the storage of dispersants and the ensuing disposal of this agent.
- 5.3.2 Due to the lack of adequate resources to properly store and maintain the OSR equipment under its charge, CPD, in 2007, entered into a lease agreement with third parties. The lease agreement was for a period of 14 years. This agreement stipulated that the contractor is to make available such equipment to national entities in the eventuality that a national disaster is declared. The lease agreement also stipulates that the equipment is to be adequately maintained and stored to ensure its serviceability at all times.
- 5.3.3 Private legal disputes involving the contractor and another party in 2012 resulted in Maltese courts deciding that equipment leased was to be returned to the CPD. At the time of writing the Report, CPD has not yet recovered this equipment, since legal proceedings were still ongoing.
- 5.3.4 The contract discussed in the preceding paragraphs, stipulated that if the equipment is used outside Maltese territorial waters, 30 per cent of the earned profits will be awarded to the CPD. However, monitoring mechanisms were not in place to determine such instances, and consequently, to this effect, CPD was totally dependent on the Contractor's declarations.

- 5.3.5 CPD and the former OPRM resorted to leasing agreements since these entities expressed reservations that under-funding coupled with the lack of expertise did not enable them to maintain and deploy effectively the vessels under their charge. In this respect, CPD leased the tugboat M.V. Sea Salvor in 2000. The former OPRM followed suit in 2007 through two leasing agreements involving the M.V. Monka and M.V. Pupilla. The relative agreements stipulate that the contractor is to make these vessels freely available to national entities in the eventuality that a national disaster is declared. The ensuing paragraphs discuss the financial feasibility of these contracts.
- 5.3.6 Neither CPD nor the former OPRM conducted comprehensive project appraisals to ascertain the cost-effectiveness of these lease agreements. Draft estimates pertaining to M.V. Sea Salvor, M.V. Pupilla and M.V. Monka, however, do not provide the appropriate level of information to fully substantiate the figures quoted therein.
- 5.3.7 The quest to evaluate the cost effectiveness of the three lease agreements concerning the three OSR vessels was rendered more problematic since the NAO's information requests were not comprehensively answered. For instance, documentation relating to the original cost of the former OPRM held vessel, namely the M.V. Monka, remained unavailable at the time of drafting this Report. Neither was reliable information relating to maintenance and personnel costs made available. While problems of retrieving data associated with the passage of time are acknowledged, it is doubtful whether such information was ever maintained. In the circumstances, only limited evaluations could be carried out.
- 5.3.8 Evaluation criteria relating to the extent to which the leasing agreements constituted value for money are based on the notion that CPD and the former OPRM would break even in circumstances where:
- the lease rate covers all the recurrent costs incurred by these entities to maintain and operate these vessels; and
 - annual depreciation costs are recovered.
- 5.3.9 The first criterion presented above relates to the recovery of upkeep and operational costs through the rates agreed in the respective lease contracts. These oblige the Contractors to maintain the vessels in good condition. Clauses in this respect are an essential feature of the contracts since lessees are to make the vessels available to national entities in cases of oil spill declared as national disasters, at no additional fee.
- 5.3.10 Based on these contractual provisions national entities would be relieved of all maintenance and operating costs as these will be incurred by the lessee. Moreover, such clauses imply that national entities would have to engage third parties for clean-up operations of Tiers 1, 2 and 3 levels where the polluter is unknown – at an additional cost in lieu of deploying the leased vessels. Over the period 2010 to 2013, such costs amounted to around €10,000. Given that in major incidents it is improbable that the polluter remains unidentified, then it is unlikely that Malta would incur significant costs in this regard, as these may be claimed back from the polluter through the various mechanisms. An exception to these circumstances relates to oil pollution incidents caused by uninsured vessels not trading within European Union ports and plying close to Malta.
- 5.3.11 The foregoing shows that for the duration of the lease agreements, national entities would not incur any upkeep costs while the costs incurred to engage third parties for lesser magnitude oil spills is not significant. In these circumstances, the first criterion related to the recovery or avoidance of upkeep and operational costs through the leasing contracts was fulfilled.

5.3.12 The second criterion related to the cost effectiveness of these agreements, which entails the recovery of annual depreciation costs through the agreed leasing rates. Table 11 shows the original costs incurred to purchase the M.V. Sea Salvor and M.V. Pupilla. Due to lack of information, the purchasing cost of M.V. Monka was assumed to be equivalent to half of that of MV Pupilla. This assumption invokes the prudence concept since the former is a smaller type vessel than the latter. However, both vessels were procured in 1998 and carry similar OSR equipment. Table 11, also shows the annual depreciation of these vessels, which was calculated through the straight-line method. This estimation assumed a 25-year vessel lifetime.⁷⁰ The Table also presents the agreed leasing rates for each vessel.

Table 11 : Recovery of annual depreciation of vessels through leasing rates

	M.V. Sea Salvor	M.V. Pupilla	M.V. Monka
Original Capital Cost	€4,192,872	€666,229	€333,114
Annual Depreciation	€167,715	€26,649	€13,325
Annual Leasing Rate	€191,300	€1,282 (as at December 2013)	€1,165

5.3.13 It is clearly evident from the figures presented in Table 11 that it was only the CPD led agreement, namely the lease contract relating to M.V. Sea Salvor, that managed to recover the annual depreciation costs through the leasing rate. In this respect, this agreement also fulfilled the second criterion.

5.3.14 On the other hand, the former OPRM led agreements only managed to secure a very modest rate for the leasing of these two vessels. Admittedly, at the time of leasing both M.V. Monka and M.V. Pupilla were in need of extensive maintenance, estimated at the time at €18,000 and €58,000 respectively. Consequently, the condition of the vessels may have played a part in the agreed leasing rates. Nevertheless, when the above quoted estimated major maintenance expenditure is computed into the annual leasing rate, the agreed charter fees still fall significantly short of the vessels' yearly depreciation costs. Based on the foregoing, the former OPRM led agreements do not satisfy the second criterion related to the recovery of assets' depreciation costs.

5.3.15 The above figures, coupled with chronological order of the signing of these agreements implies that the former OPRM had a preceding case, namely the leasing contract of M.V. Sea Salvor in 2000, upon which it could base its negotiations with third parties for the leasing rates of M.V. Monka and M.V. Pupilla.

5.3.16 The absence of strategic direction relating to the disposal of out of date dispersants under the former OPRM's charge resulted in Government incurring an avoidable expenditure amounting to €118,271.⁷¹ A report commissioned by the Ministry for the Environment in 2001 noted that the dispersants needed to be replaced, due to significant degradation and low efficiency. Another report in 2005, declared that they had exceeded their useful storage life and thus could not be utilised. However, a decision to dispose of this expired stock of dispersants stored at third party premises for €1,549 per month, was not made until 2011.⁷² Figure 7 shows the key stages involved in the handling of the above-mentioned stock of dispersants.

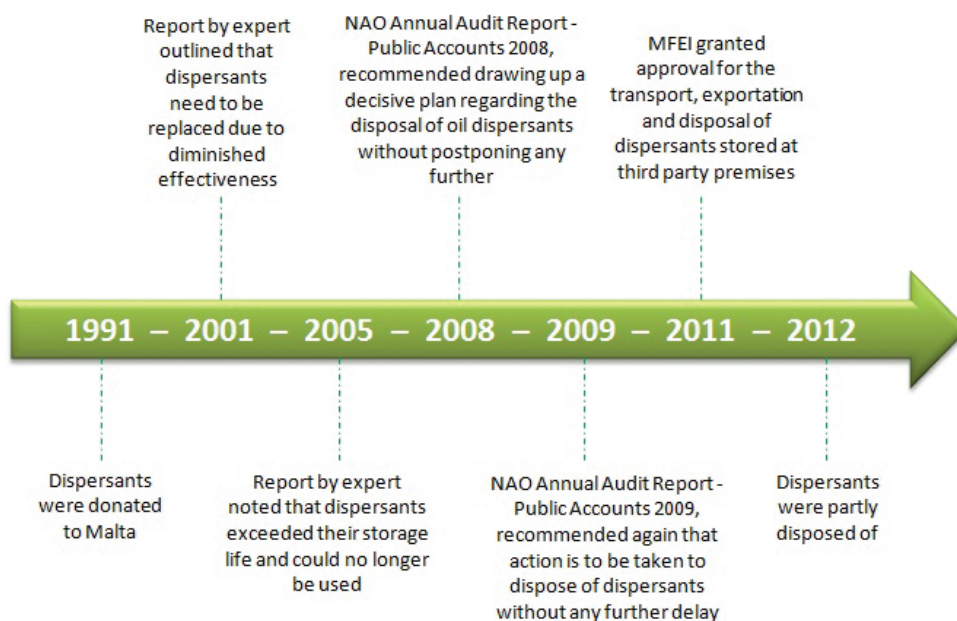
Government incurred an expenditure of over €118,000 in a period of around six years to store an expired stock of dispersants

⁷⁰ Deloitte, 2011. IFRS for Shipping.

⁷¹ This extra cost was incurred as dispersants were stored at a private contractor's warehouse from 2005 to 2012.

⁷² Prior to the commissioning of these reports, there were already indications that this stock of dispersants had already been identified as unusable since 1999.

Figure 7 : Dispersants timeline (1991 to 2012)



5.3.17 In addition to the aforementioned storage costs, a further expenditure of €84,555 was incurred to dispose of the expired stock of dispersants owned by the former OPRM and stored at third party premises. This clearly highlights that costs were unnecessarily incurred due to untimely decision-making and ensuing actions.

5.3.18 It is to be noted that parts of this stockpile remained stored at Government owned premises, namely at former OPRM warehouses and CPD. This expired stock will continue to occupy valuable storage space until such arrangements for the disposal of these agents are made.

5.4.1 This Chapter observed that Malta cannot solely rely on international assistance to launch a response to oil spill at sea. In this context, the availability of fully serviceable nationally available assets are of fundamental importance. Despite national efforts to procure oil spill related assets through various funding mechanisms, over the years, the non-allocation of recurrent funds, opaque ownership of assets as well as asset management weaknesses led to the accelerated deterioration of some of this equipment.

5.4.2 The insufficient allocation of funds and a chronic shortage of personnel prohibited Maltese entities from implementing routine maintenance programmes and/or from providing the appropriate storage conditions for most of these assets. Such a situation led to the leasing of nationally held assets, where Maltese entities now have free access only in incidents declared as national disasters.

5.4.3 The deterioration of assets pertaining to the former OPRM, including a vessel, which was declared beyond economic repair, was in part due to inadequate administrative capacity and the relative financial resources. Asset and stock management weaknesses also contributed to the deterioration of assets held by national entities. Shortcomings noted related to inventory documentation and full cognisance of the serviceability status of all assets listed in the Contingency Plan. Matters were further complicated since mechanisms were not in place to ascertain that the Competent Authority was kept duly informed of all inventory movements and serviceability status of all assets.

5.4 Conclusion

Chapter 6
Implementation of the Polluter
Pays Principle

Chapter 6 – Implementation of the Polluter Pays Principle

6.1 Introduction

6.1.1 A comprehensive Oil Spill Response (OSR) operation does not only comprise an effective clean-up intervention at sea, but also entails the ensuing reinstatement of the site in question and the application of the Polluter Pays Principle (PPP), which constitutes a key element of the European Union’s environment policy. Additionally, according to this policy, polluters are to be held fully responsible, including for environmental damage caused by the incident and any other costs incurred by national entities in relation to the incident. In this context, the PPP aims to shift the full financial burden of pollution incidents from the taxpayer to the polluter.⁷³

6.1.2 The ensuing discussion in this Chapter focuses on the:

- mechanisms in place to enable the effective implementation of the PPP; and
- consideration of environmental and socio-economic costs associated with oil pollution in liability claims.

6.2 The appropriate mechanisms to enforce liability in cases of oil pollution are not fully in place

6.2.1 The PPP has been part of European Law since 1972, and is also included in Article 191(2)⁷⁴ of the Treaty on the Functioning of the European Union. Additionally, the environmental liability regime established by Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004, aims at making the polluter pay for remedying the damage caused.

The national legal framework is not fully supported by the appropriate organisational structure and administrative capacity

6.2.2 Malta generally has the appropriate legal framework, though, this is not fully supported by the appropriate organisational structure and administrative capacity to implement the PPP. In this context, the Competent Authority is still in the process of appointing a Financial Manager and a Claims Coordinator, who constitute two of the 25 ERCC key roles identified in the National Marine Pollution Contingency Plan (NMPCP).

⁷³ EU States Claims Management Guidelines, Claims arising due to maritime pollution incidents, EMSA, p. 14.

⁷⁴ Ex Article 174(2) of the Treaty establishing the European Community.

Detailed incident reports of oil spills at sea are not comprehensively compiled

- 6.2.3 Since 2010, the Competent Authority has been completing and maintaining detailed Incident Report Forms with respect to incidents occurring inside Maltese ports and harbours. Such reports are also compiled in the case of oil spills for records purposes and the pursuit of liability. To this end, the Competent Authority is also the final recipient of oil spill reports within internal waters, which had been dealt with by Civil Protection Department.
- 6.2.4 Similar mechanisms pertaining to incidents beyond Maltese ports and harbours, however, are not employed. Despite Armed Forces of Malta (AFM) confirming four oil spill incidents during the period 2011 to 2013, the relative reports were not drawn-up. This state of affairs could inhibit the Competent Authority, who would be the ultimate recipient of these incident reports, to determine and initiate proceedings related to liability. In the absence of comprehensive incident reports portraying case details together with the necessary evidence, such as photographs and samples of the polluted waters, the Competent Authority endeavours would be rendered more complex to compile a solid case against polluters.
- 6.2.5 Furthermore, the detection mechanisms available to Maltese entities are not coordinated in such a manner as to increase the probability of identifying the polluter in question. Practices adopted by other Mediterranean countries include the timing of aerial oil spill surveillance by dedicated aircrafts, with European Maritime Safety Agency (EMSA) satellite passes. Thus, the chances of identifying the perpetrator who caused the illicit discharge would be much higher.
- 6.2.6 Regulations in various national legislation seek to enforce the polluter pays principle. To this end, such regulations lay out the enforcement measures to deal with polluters through the imposition of fines ranging between €200 and €250,000 or even an imprisonment term, depending on the severity of the damage caused. These regulations apply to Maltese ports and harbours and extend to pollution incidents occurring within high seas. It is to be noted that, at the time of publishing this Report, Parliament was discussing amendments to the Continental Shelf Act, where considerations are being given to significantly increase pollution related fines.
- 6.2.7 During the period 2011 to 2013, Maltese entities were able to arraign only one polluter in case of a confirmed oil spill incidents occurring in ports and harbours. In this case, a fine of €233 was imposed. The foregoing contrasts to the situation of some years ago, when the former Oil Pollution Response Module was still an active unit. During the period, 1991 to 2001, this Unit managed to recoup €504,931 in fines. However, it is to be noted that, in the interim, the shipping industry has imposed stricter self-regulation. Such situation coupled with more rigorous maritime enforcement may have led to a decrease in pollution related incidents involving ships. Moreover, EMSA recently reported that, over the period 2008 to 2011, the average number of illicit discharges detections per 1 million kilometer squared, through the CleanSeaNet service, decreased from 10.77 to 5.08.⁷⁵ It is to be pointed out that in 2013 a European Environment Agency Report classified Malta's bathing waters at the third place when compared with the remaining EU Member States and other countries.⁷⁶

The effective implementation of the polluter pays principle is hindered by the lack of imposition of adequate fines

⁷⁵ EMSA, 2012. CleanSeaNet, p. 13.

⁷⁶ European Environment Agency, 2014. European bathing water quality in 2013, p.15.

6.3
Environmental
and other
socio-economic
impacts of the
polluted area are
not considered
by national
authorities for
liability purposes

- 6.3.1 Best practices published by EMSA, with respect to the application of the PPP in cases of oil pollution, advocate that liability also includes environmental degradation and all other socio-economic costs associated with oil pollution. The European Agency estimates that reasonable claims in this respect may amount to around €149,600 per tonne of spilled oil.⁷⁷ On the other hand, liability claims related to clean-up costs may amount to around €2,400 per tonne.⁷⁸
- 6.3.2 National entities are not implementing the best practices referred to in the preceding paragraph. Current practices, adopted by the Competent Authority, only cater for the recovery of clean-up costs.
- 6.3.3 Consequently, the non-application of EMSA's guidelines implies that local entities are forfeiting the opportunity to fully implement the PPP through the inclusion of expenses related to the various environmental, economic and social impacts. This is mainly attributable to the limited baseline studies available regarding the marine ecosystems.

6.4
Conclusion

- 6.4.1 This Chapter sought to determine the extent to which national entities are effectively implementing the PPP with respect to oil pollution at sea. Ascertaining liability is key to the implementation of PPP as well as to the preparation and submission of claims to third parties, which include the International Oil Pollution Compensation Fund and Protection and Indemnity Insurers.
- 6.4.3 To this end, this Office noted that the appropriate mechanisms are not fully in place to ascertain the effective application of the PPP and to pursue liability claims. Such situation materialised since the Competent Authority is still in the process of appointing both a Financial Manager and a Claims Coordinator, two key roles identified in the NMPCP. Moreover, the implementation of the PPP is rendered more problematic as the relevant processes do not comprise the systematic collection, documentation and analysis of supporting evidence.
- 6.4.3 Furthermore, national entities are not in a position to quantify the various environmental, economic and social impacts caused by the spilled oil. This would ensure that the fines imposed are not only related to the clean-up costs, but cater for all of the damage caused by the oil pollution in question, and for which the polluter is liable.

⁷⁷ EMSA, Interspill 2012. The Integrated European Satellite-Based and Aerial Oil Spill Surveillance and Vessel Detection Services, p. 2.

⁷⁸ Ibid.

Appendices

Appendix I – Emergency Response Control Centre Team Members

Position	Main area of responsibility
Overall commander	Overall management of incident response
On-scene commander (marine operations)	Management of marine response planning
On-scene commander (shoreline operations)	Management of shoreline response planning
Operations manager (marine operations)	Management of marine response at operations level
Operations manager (shoreline operations)	Management of shoreline response at operations level
Salvage master	Management of salvage operations, including cargo transfer
Historian	Ensuring that detailed records of response actions are made throughout the operation and collated to provide a complete history of the event
Financial manager	Ensuring availability of funding and management of systems for recording of all costs incurred
Claims co-ordinator	Liaison with all relevant parties in regard to insurance and claims matters
Procurement team leader	Purchasing of supplies and services
Oil spill response advisor	Provision of expert advice on oil spill response
HNS (Hazardous Noxious Substances) response advisor	Provision of expert advice on HNS incident response
Logistics team leader	Management of all logistics requirements
Aerial support manager	Organisation of aerial surveillance, aircraft for dispersant spraying and other aerial support requirements
Support vessels manager	Organisation of tugs, tank vessels, and other support craft, including chartering and mobilisation
Environmental advisor	Provision of expert advice on environmental matters
Medical advisor	Provision of expert advice on human health issues
Health and safety manager	Overall responsibility for ensuring safe working practices, including personal protective equipment issue
Disposals manager	All arrangements for temporary storage and disposal of recovered oil, oily waste and HNS materials
Human resources manager	In association with the Procurement team, all arrangements concerning extra labour provision, and the organisation of welfare, including feeding, shelter and hygiene
Communications and IT officer	Organisation and support function in regard to in-field and ERCC communication and computer systems
Public affairs officer	Media releases, press conferences, other third party communications
Security manager	Measures for the protection of the public, policing of designated exclusion zones (shoreline and at-sea), security of in-field assets
Legal advisor	Advice and guidance on legal issues
Clerical support	Provided by Transport Malta staff on a call-out rota

Source: Authority for Transport in Malta (2013). NMPCP pp. 36 - 37.

Appendix II – Simulation exercise participants (2010 to 2013)

Year	Present		Absent	
	Emergency Control Centre	Participants on Scene	Without notification	With apologies
18-19 October 2010	MEPA EMSA Falzon Group Tankship Management REMPEC Physical Oceanography Unit - UOM Civil Protection Department TM - Overall Command TM - VTS	Armed Forces of Malta (Patrol Boat) Transport Malta (On Scene Command) Cassar Ship Repair (St Rocco / Sea Lion) Civil Protection Department (Garibaldi) Alpha Briggs (Pupilla) Malta Maritime Pilots (Pilot Boat) Tug Malta Limited (Felica) Tankship Management (Salina Bay)* Falzon Service Station (Santa Maria)*	MET Office Police Fisheries Bezzina Ship Repair Oil Pollution Response Module MEPA	EMSA representatives Civil Protection Department
	TM - Overall Command TM - VTS AFM Control Room Personnel Physical Oceanography Unit - UOM (oil spill modelling)	Armed Forces of Malta (Patrol Boat) Cassar Ship Repair (St Rocco) Falzon Group (Santa Maria)* Malta Maritime Pilots (Pilot Boat OSC) Tankship Management (Balluta Bay)* Transport Malta (On Scene Command) Tug Malta Limited (Spinola / Felica) Police	Civil Protection Department MET Office Fisheries Bezzina Ship Repair Oil Pollution Response Module Alpha Briggs MEPA	EMSA representatives
11-12 September 2012	Health Department Civil Protection Department Falzon Group TM - VTS REMPEC Tankship Management Physical Oceanography Unit - UOM (oil spill modelling) TM - Overall Command	Armed Forces of Malta (Aircraft + P32) Falzon Group (Santa Maria)* Malta Maritime Pilots (Echo / Delta) Police (Delta 5.5 / 5.7) Tankship Management (Balluta Bay)* Transport Malta (On Scene Command) Tug Malta Limited (Spinola / Felica) Cassar Ship Repair (Sea Jaguar)	MET Office Fisheries Bezzina Ship Repair Oil Pollution Response Module Alpha Briggs	MEPA Ministry for Health
	Civil Protection Department TM - VTS REMPEC Tankship Management Health (Environmental Health Unit) Physical Oceanography Unit - UOM (oil spill modelling) TM - Overall Command	Armed Forces of Malta (Patrol Boat) Cassar Ship Repair (St Rocco, Garibaldi) Civil Protection Department (Shoreline Assessment) Tankship Management (Balluta Bay)* Transport Malta (On Scene Command) Tug Malta Limited (Spinola / Felica) EMSA Representative (On Scene)	Fisheries Bezzina Ship Repair MET Office	MEPA Malta Maritime Pilots Health

* EMSA contracted vessels

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