



Performance Audit: A Strategic Overview on the  
Department of Fisheries and Aquaculture's  
Inspectorate Function

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## Performance Audit

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of Fisheries and Aquaculture's  
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## List of Abbreviations

AIS	Automatic identification System
ACDR	Aggregated Catch Data Report
AFM	Armed Forces of Malta
AWL	Automated Weighing and Labeling System
BFT	Blue Fin Tuna
DFA	Department of Fisheries and Aquaculture
DG	Director General
DG Mare	Directorate General for Maritime Affairs and Fisheries
EU	European Union
EFCA	European Fisheries Control Agency
EHD	Environmental Health Directorate
EMFF	European Maritime and Fisheries Fund
FAO	Food and Agriculture Organisation of the United Nations
FIS	Fisheries Information System
FPO	Fisheries Protection Officer
FVR	Fishing Vessel Register
GFCM	General Fisheries Commission for the Mediterranean
GPRS	General Packet Radio Service
ICCAT	International Commission for the Conservation of Atlantic Tunas
LO	Landing Officer
MITA	Malta Information Technology Agency
NAF	North Atlantic Format
NAO	National Audit Office
NEAFC	North East Atlantic Fisheries Commission
RHIB	Rigid-Hulled Inflatable Boat
SFPO	Senior Fisheries Protection Officer
TM	Transport Malta
VHF	Very High Frequency
VMS	Vessel Monitoring System

# Executive Summary

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**DFA needs to consolidate its regulatory function over the fisheries sector by streamlining its structure and processes while strengthening its controls.**

## Why This Study?

The fisheries sector in Malta is of national importance due to its cultural bearing and its recognition as an area of interest in the international thrust towards sustainable economic activities. NAO therefore conducted a performance review on how the DFA, as the national regulator in this industry, carries out its inspectorate function to protect this industry.

## What NAO Recommends

In order for DFA to consolidate its position of a regulator within the fisheries sector, NAO recommends that: an internal HR review is conducted to detect and address staff deployment inefficiencies and training needs; further automation of data management and reporting systems are seen to; the presence of DFA's inspectorate both at sea and on land is increased; inspectorate effort allocation is based on comprehensive risk management systems; administrative measures are considered to safeguard DFA's regulatory role, particularly in view of its operational remit.

## NAO's Key Observations

The Department of Fisheries and Aquaculture (DFA) operates in a challenging environment, which is highly regulated both on a local and supranational level. Though this Office acknowledges that these pose significant stresses on the Department's operations, it still perceives certain inefficiencies and ineffective practices which undermine its visibility and effort allocation in regulating the fisheries sector.

One such area revolves around DFA's HR situation. Specifically DFA asserts that it is severely understaffed as call for applications issued by itself tend to not generate sufficient response and that it is experiencing a relatively high rate of resignations. NAO however observed that if DFA were to streamline its operations, this staff shortage may be well reduced through increased efficiency. The Department also expressed that its workforce could be better trained, though NAO observed how training provided by the former only reached a very limited number of individuals.

Through its review, this Office saw how DFA's IT system is robust, but involved significant laboriousness, rendering it somewhat inefficient. NAO also saw how the voluminous amount of inspection reports generated by DFA officials on the ground are paper based, which adds to the cumbersomeness of its reporting system.

This performance audit found that DFA's visibility on the sector in question is limited and that its effort allocation can be better managed. Specifically, NAO saw how a very small portion of the local registered fishing fleet is equipped with remote tracking devices and that physical inspections at sea are very limited. This Office also observed that the Department's efforts in conducting inspections on land is largely asymmetrical, with a wide range of the Department's inspectorate remit being somewhat neglected in favour of a small number of select areas. NAO also saw how inspections at retail stage (the final level of control for it to detect, and act upon, any irregular fishing activity through traceability review) are severely lacking.

Finally, this Office observed that the DFA encompasses both operational and regulatory functions. NAO opines that, as much as practicality allows, an entity which is primarily considered as a regulatory body should not be burdened with operational functions.

# Chapter 1

## Introduction

This introductory chapter starts off with NAO's reasoning for embarking on this audit exercise and by presenting a contextual backdrop of the subject under review. The audit's scope, objectives and methodology utilised to complete the required analysis are also laid out, together with encountered limitations which had to be managed by the assigned audit team. This part of the report closes off by presenting a synopsis for each Chapter in this publication.

### 1.1. Why this study?

1.1.1. The fisheries sector in Malta is of national importance particularly due to its cultural bearing as well as its recognition as an area of interest in the international thrust towards the ascertainment of sustainable economic activities. To this end, the National Audit Office (NAO) saw fit to carry out a performance review on how the Department of Fisheries and Aquaculture (DFA), as the national regulator in this sector, carries out its inspectorate function to protect this industry.

### 1.2. Background Information

1.2.1. The DFA operates under the Ministry for the Environment, Sustainable Development and Climate Change (MSDEC) and is headed by a Director General. Amongst others, this Department is responsible for the: conservation of naturally occurring fish stocks; assessment of fish stocks and the collection of statistics including details of catches; maintenance of records of fishing vessels, their masters, captains, crew and any other person working on them; and monitoring, control and surveillance of fishing operations.

1.2.2. In order for a vessel to be formally recognised as a fishing vessel, it must be included in the DFA's fishing vessel register. Such vessels are consequently classified into three registration categories, namely MFA, MFB or MFC<sup>1</sup>. Fishing vessels with the registered designation of MFA are those used by full-time professional fishermen, while MFB denotes vessels that are also used by professional fishermen but who work on a part-time basis. These two categories are licensed not only to engage in fishing activity, but to also commercialise their catch. On the other hand, vessels registered as MFC are designated to recreational fishermen, who are licensed to engage in fishing activity but not to commercialise their catch. In total, the local fishing vessel register comprised of 2,933 vessels as at March 2018.

<sup>1</sup> The designation MFD also exists and it represents vessels which are not allowed to engage in fishing activity themselves, but rather act as auxiliaries to fishing vessels. DFA informed NAO that the responsibility of this designation is being phased out from the Department and transferred to Transport Malta's remit as workboats.

1.2.3. The local fisheries sector is subjected to tight regulations both at national and supranational levels. Amongst others, these regulations stipulate which fish stocks are considered as protected species and subsequently subjected to particular catch quotas, fishing seasons and reporting obligations. It is important to note that any fishing vessel registered with the DFA, may apply for licensing enabling it to fish for protected species. While MFAs and MFBs are allocated with the conventional fishing quotas for such species, some MFCs are allocated with the nation's recreational quota of the same protected fish stocks.

### **1.3. Audit Scope and Objectives**

1.3.1. As its name implies, the DFA has remits in both the fisheries as well as the aquaculture sectors. For the purpose of this audit however, NAO focused solely on the fisheries arm of the Department's operations.

1.3.2. This Office acknowledges that the regulation of the fisheries sector is a complex and multifaceted task. To this end, and for practicality's sake, NAO primarily focused its analysis on: the extent of visibility that DFA's inspectorate has on the sector in question; the Department's prioritisation of available effort and resources; and its risk management system. The audit team opines that these areas form the basis into which DFA's fisheries operations are rooted, and consequently were used as the primary gauge through which this Office assessed the Department's overall performance.

1.3.3. This report tapped into a number of functions carried out by the Department's inspectorate section and consequently the scoped audit period of each slightly differs. Unless otherwise stated however, observations presented in this report correspond to the audited period between January 2017 to June 2018.

1.3.4. Through this stated scope, this study assesses whether the DFA's inspectorate arm, through its operations and capacity, is identifying and managing risk as well as allocating the resources at its disposal in an effective and efficient manner.

### **1.4. Methodology**

1.4.1. The NAO conducted this performance audit in accordance with the Standard for Performance Auditing, ISSAI 3000.

1.4.2. In preparing this audit exercise, the audit team made use of various research and analytical tools in order to obtain clear and reliable information on the audited entity and its operations. During the initial stages of this study, the audit team conducted extensive preliminary research by delving into local and foreign reports and publications, media articles, as well as relevant legislation and directives.

- 1.4.3. After acquiring a general overview of the surrounding issues, the audit team carried out an issue-analysis exercise, so as to determine the main audit question. Following this, a number of sub-questions emerged, providing the audit team with a clear direction towards the successful conclusion of this study.
- 1.4.4. The adopted course of action led NAO to opt for a mix of qualitative and quantitative analyses to address this audit's questions. This study is therefore mainly based on a series of semi-structured meetings held with the DFA and the Ministry, as well as analyses carried out by the audit team on information forwarded by the Department.
- 1.4.5. The findings of this study, together with this Office's conclusions and recommendations were presented to the audited entity for its feedback prior to publication of this report.

## 1.5. Audit Limitations

- 1.5.1. While the subject of resignations experienced by DFA will be discussed in section 2.2 of this report, the resignation of the audit team's main contact person for this exercise did present challenges to the smooth progression of this study. In addition, the audit process did experience a setback when a key DFA official who was responsible for gate-keeping information requested by NAO, was on long leave, thereby temporarily negatively affecting the information flow between the Department and this Office.
- 1.5.2. As will be discussed in Chapter 3, the Department primarily generates its documentation (particularly inspection reports) in paper-based format. The sheer volume of this documentation however, rendered it highly impractical for the audit team to carry out a fully-fledged analysis on this information. During the progression of this exercise, DFA informed the audit team that this information is reproduced in Excel Sheets. Deemed more practical, NAO opted to base its analysis on this electronic version. During its analysis however, this Office noted that these Excel Sheets at time featured unclear and non-comprehensive entries, thereby posing challenges on the audit team's analysis.

## 1.6. Report Structure

- 1.6.1. **Chapter 1** - starts off with NAO's reasoning for embarking on this audit exercise and by presenting a contextual backdrop of the subject under review. The audit's scope, objectives and methodology utilised to complete the required analysis are also laid out, together with encountered limitations which had to be managed by the assigned audit team. This part of the report closes off by presenting a synopsis for each Chapter in this publication.
- 1.6.2. **Chapter 2** - comprises of an analysis on the DFA's operational environment with particular focus on the supranational regulations governing this sector, the challenges faced by the Department through human capital and its dual role as a regulator and operator.



- 1.6.3. **Chapter 3** - discusses DFA's Data Management system with specific reference to its Information Management System and other reporting functions concerning the DFA's Inspectorate.
- 1.6.4. **Chapter 4** - analyses the inspectorate's visibility and effort allocation on the local fishing activity by looking into inspections that the DFA carries out (remotely or otherwise) at sea, on land and at retail stage.
- 1.6.5. This Report closes off with a **Concluding Remark** which sums up NAO's overall opinion on the subject matter.

# Chapter 2

## DFA's Operational Environment

This Chapter comprises of an analysis on the DFA's operational environment with particular focus on the supranational regulations governing this sector, the challenges faced by the Department through human capital and its dual role as a regulator and operator.

### 2.1. Supranational regulations heavily influence DFA's operations

- 2.1.1. Regulations on the local fishing activity can be derived from multiple sources. While every country, with Malta being no exception, legislates and regulates this sector on its own national level, other commitments and obligations are set by supranational bodies. While DFA is responsible to safeguard national specific regulations, it is also tasked to regulate and enforce obligations set by the International Commission for the Conservation of Atlantic Tunas (ICCAT), the General Fisheries Commission for the Mediterranean (GFCM) and the European Union (EU), particularly through the European Fisheries Control Agency (EFCA). During meetings with DFA, NAO was informed that, in view of this, the Department needs to streamline these different obligations into one system by which it could then regulate the local industry.
- 2.1.2. The supranational facet on the local fishing sector creates a number of opportunities as well as obligations. While NAO notes that the DFA, as asserted by the latter itself, is heavily assisted by EU funding (specifically through the European Maritime and Fisheries Fund (EMFF)), it was also informed that the obligations set by international bodies do exert a significant toll on the Department's human resources. NAO saw how EU funding assists the DFA to procure certain assets (such as electronic weighing scales) and to run and maintain some of its units (such as the control room and its research unit). As will be discussed better in section 2.2 however, this Department asserts that it is experiencing a shortage of staff, and these reporting requirements at a supranational level are posing significant challenges on an already stretched staff complement in carrying out its monitoring and enforcement functions.
- 2.1.3. **NAO Observation** – While NAO understands that certain reporting obligations are unavoidable and essential for the achievement of a consolidated supranational approach towards sustainable fisheries, it acknowledges DFA's concern on the pressures they may be asserting on its HR.

## 2.2. HR challenges prevail within DFA

### *DFA asserts that a severe staff shortage prevails within the Department*

- 2.2.1. A recurrent concern voiced by the Department during the progression of this exercise was the shortage of staff which, DFA asserts, is having very significant negative repercussions on the Department's operations. Specifically, as at end August 2018, DFA had 64 vacant positions while it employed a staff complement totalling 119 employees. Furthermore, while DFA employed 49 inspectorate staff (42 of whom are assigned with the Fisheries Directorate with the other 7 deployed in the Aquaculture Section) as at August 2018, 30 vacancies prevailed within these same ranks during the same period. The overall staff shortage, DFA asserts, sustains itself through two main causes as will be discussed in the upcoming parts of this section.
- 2.2.2. Firstly, the Department asserted that calls for applications it issues do not seem to generate enough interest. When queried what reasons could be leading to such a situation, the Director General (DG) DFA replied that the Department's role, functions and, consequently, career prospects, are not well known to the public, which situation may be acting as a barrier for prospective applicants to apply. In addition, NAO observed that the nature of the work involved, particularly insofar as the inspectorate staff is concerned, may not appeal to everyone. NAO notes that on-the-ground inspectors may be required to work in shifts (rather than during office hours) and be expected to go out at sea to carry out their functions.
- 2.2.3. It is here important to point out that DFA's inspectorate staff can be classified in two main positions, namely Landing Officers (LOs) and Fisheries Protection Officers (FPOs). NAO was informed that, while officers occupying both of these positions may be delegated with the same enforcement powers, LOs are mainly entrusted to carry out on-the-ground inspections of landings<sup>2</sup> of species other than Blue Fin Tuna (BFT), and other duties which particularly include the assistance to FPOs during the execution of their functions. On the other hand, the responsibilities entrusted to FPOs include, amongst others: inputting and reporting of data; inspections of third country fishing vessels; inspections at caging operations; inspections on transfers of BFT from fishing vessels to containers; inspections on transshipments; import inspections and relative data verifications; export inspections and investigations; assisting in E-log book VMS, GPRS installations; coastal surveillance by the Department's rigid-hulled inflatable boat (RHIB); meetings abroad; and actions regarding potential non-compliances.
- 2.2.4. In view of these assigned responsibilities, DFA asserts that an individual with a basic knowledge of Maltese, English and IT can comfortably occupy the role of an LO while FPOs should be more academically qualified. DG DFA however informed NAO that the lack of

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<sup>2</sup> The term "Landing" is defined as the catches of fish landed in port.

interest in call for applications for the position of FPO has forced the entry requirements down, and the Department is now constrained to ask for an O-Level standard of education in recruiting these latter officers. It is here to be noted that, FPOs are recruited for two years as trainees at a maximum public service salary scale 11 (equivalent to €20,404 in 2018) and offered an annual disturbance allowance of €1,600. The two-year traineeship period is covered by a one year definite contract which is renewable for the second year. Once these two years are satisfactorily completed, an indefinite contract is offered, with the stipulated salary package being retained.

- 2.2.5. Secondly, DG DFA asserted that the Department's HR challenges are also caused by a relatively high resignation rate. DG DFA also informed NAO that this can be directly attributable to the demanding operational environment of the Department. During the progression of this study, NAO observed a number of resignations, amongst which was the audit team's main contact person (holding the grade of Senior Manager) who resigned during the latter stages of this exercise. DG DFA further highlighted that the resignations experienced by the Department are most common in the scientific and technical positions. Specifically, DG DFA asserted that while on assignments abroad, particularly for research purposes, it is not uncommon for these technical officials to be attracted to the prospect of starting a Doctorate Degree there, which consequently leads to their resignation from DFA. NAO reports that between January 2017 and September 2018, there were 30 employees who resigned from their respective positions within the DFA.

*DFA's inspectorate staff could be better trained, particularly in administrative functions*

- 2.2.6. Apart from concerns on the quantity of the HR complement within the DFA, particularly on its inspectorate staff, NAO further enquired on the quality of the same personnel. To this, DG DFA asserted that the knowledge that its inspectors possess on the sector and on various fish species is unquestioned, as most would have already been enthusiasts in this field before seeking engagement with the Department. DG DFA however further asserted that, when it comes to paperwork or attending high-level events, further training would be required as individuals of a higher level of education would be better suited.
- 2.2.7. Notwithstanding the above, DG DFA asserted that the Department offers a number of training opportunities to all staff, with some of these being delivered by supranational entities. A cursory look at the training provided however shows that only 18 employees (from across DFA's various units) out of the Department's 119 attended training during the period between January 2017 to July 2018, and 9 individuals (some of whom also form part of the previously mentioned 18) took part in joint deployment exercises involving foreign patrol vessels and AFM aircraft. This Office further noted that these very few attendees do not all form part of the DFA's inspectorate pool.
- 2.2.8. When enquiring on the integrity of DFA's inspectorate staff, the audit team was informed that measures are being taken to safeguard against potential risks. Specifically and as an

example, DFA's Senior Fisheries Protection Officer (SFPO) asserted that he is instructing DFA's inspectorate staff to substantiate their reporting with photographic evidence, which practice guards against the possibility of misreporting.

**2.2.9. NAO Observation** - The significant number of vacant positions within the DFA is an obvious cause for concern to NAO. If the 64 vacant positions (over a current staff complement of 119) are truly needed and justified, NAO opines that the Department finds itself in a situation of severe understaffing and consequently it cannot be expected to carry out its mandate to its fullest extent. This situation, NAO observes, is further accentuated by the high rate of resignations DFA asserts it is experiencing.

**2.2.10.** Notwithstanding, NAO is significantly concerned on why DFA is finding it difficult to attract potential applicants in its calls for applications. The case of vacant positions relating to the post of FPOs (which number of vacancies comprise half of the Department's total vacancies) particularly refers. In this case, this Office opines that a position currently calling for an O-level standard of education with an attached salary set at maximum scale 11, should (as far as public service salaries are concerned) serve as an attractive proposition for prospective applicants who possess this academic level. Additionally, NAO also notes that being required to work on a shift basis and having specific exigencies (in FPO's case, for example, going out at sea), is not something which is unique to this designation, but can be commonly found in other public service positions in grades at least as high as scale 11.

**2.2.11.** NAO acknowledges DFA's assertion that its inspectorate staff do generally possess knowledge and appreciation of the sector prior to joining the Department, mainly through a variety of previous experiences. Notwithstanding, this Office can understand DFA's concern if it feels it cannot delegate certain tasks (such as report writing and attending high level events) it considers as an essential part of this position. NAO shares the Department's concern that having to resort to recruit individuals with what is considered as a relatively low level of education, may not be assisting in the address of this situation. Nonetheless this Office once again points out that training provided by the DFA within the scoped period did not reach most of the inspectorate staff, which occurrence NAO considers as a missed opportunity to ameliorate this situation.

### **2.3. DFA as a regulator is burdened with operational functions.**

**2.3.1.** During its review, the audit team saw how the DFA carries out both regulatory as well as some operational functions within the MESDC. Specifically, NAO noted how the Control Unit (which encompasses DFA's inspectorate function) is the section that has the main regulatory function within the Fisheries Directorate, while the Strategy Implementation & Revision Unit has regulatory functions within the Aquaculture arm of the DFA. On the other hand, the Department's operational portfolio includes, amongst others, DFA's hard-standing facility and winch rooms. When queried on DFA's remit encompassing these two roles, the Ministry contended that, though DFA has roles in both of these functions, these do not overlap and that no conflict of interest prevails.

**2.3.2. NAO Observation** – While acknowledging the Ministry’s assertion that DFA’s operational and regulatory functions are kept separate, NAO observes that, as much as practicality allows, an entity which is primarily considered as a regulatory body should not be burdened with operational functions.

## 2.4. Recommendations

**2.4.1.** NAO once again acknowledges the unavoidability and importance of DFA’s reporting obligations towards supranational entities and the strain that this may exert on the Department’s resources. Nonetheless this Office encourages DFA to continually seek ways through which it could streamline its internal operations (with particular reference to the considerations tackled in Chapters 3 and 4), thereby relieving its resources from any inefficient practices and directing them to more pressing areas, be it to satisfy DFA’s reporting obligations or to consolidate its core function as a regulator.

**2.4.2.** With respect to DFA’s assertions on the significant staff shortages it is experiencing, NAO firstly recommends that the Department engages in a full scale internal efficiency exercise to determine whether and where inefficiencies prevail. In so doing, it could then pursue a solution for these, thereby relieving potentially underutilised human capital. Any resulting pool of freed resources can be then redeployed efficiently and effectively to other areas. This internal exercise could also aim to identify and address factors that are leading to the resignations highlighted by the Department. In addition, NAO also urges DFA to engage in a comprehensive training needs analysis so that it may then organise a systematic training programme for all its staff, particularly its inspectorate pool. These measures, NAO opines, would be pivotal for DFA to reach a healthier utilisation of its human capital and, consequently, potentially decreasing the overall requirement for further resources.

**2.4.3.** If, following the above exercise, the Department would still determine that it is under resourced, NAO urges it to redouble its efforts in exerting the necessary pressure for more human capital to be allocated to it. This Office however also recommends that DFA carefully examines its human resource requirements, and possibly propose different classifications of positions especially among its inspectorate staff, each assigned with commensurate entry requirements, tasks and salary packages. In so doing, the Department could engage personnel with lower educational background to carry out the more basic of tasks, while other, better qualified officers, could be assigned with more technical responsibilities. Through such categorisation, NAO opines that each position can be better focused, with the prospect of DFA benefitting from eventual specialisation.

**2.4.4.** In addition, this Office further encourages the Department to better project its role and functions to the general public. While this serves as awareness on the importance of sustainable and responsible fishing in itself, NAO opines that it would also showcase DFA as a potential employer.

- 2.4.5. Given that the DFA currently encompasses regulatory and operational facets, NAO recommends the Ministry to consider administrative measures that safeguard the DFA's role as a regulator and eliminate any potentially existent or perceived conflict of interest.

# Chapter 3

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## DFA's Data Management System

Chapter 3 discusses DFA's Data Management system with specific reference to its Information Management System and other reporting functions concerning the DFA's Inspectorate.

### 3.1. DFA's IT system is robust but requires significant human resource intervention

- 3.1.1. As part of this audit exercise, NAO conducted a review on the Department's IT system (Appendix A refers) to determine the robustness of DFA's data management system. Through this study, this Office primarily saw how the DFA depends heavily on its IT system especially insofar as monitoring fishing activity and reporting obligations are concerned. To this end, the Department relies on the Fisheries Information System (FIS) to accommodate the EU's fisheries registry requirements. This system, which was built locally by a third-party service provider, operates through a number of integrated modules. The latter include, amongst others, the Fishing Vessel Register, the Vessel Logbook and the e-Sales modules.
- 3.1.2. During meetings with DFA, NAO was informed that the FIS is automatically fed information through multiple electronic sources. For example, information into this system is received from electronic logbooks installed on fishing vessels measuring above 12 metres in length and from 17 automated weighing and labelling machines installed in designated landing facilities and other strategic locations around Malta. Notwithstanding, NAO noted that the information fed through to the FIS is not all done in such an automated manner. Specifically, this Office observed how a significant portion of DFA's operational processes still rely on a substantial amount of paperwork. Amongst others, NAO noted how the automated electronic logbook mentioned above is not installed on fishing vessels measuring under 12 metres in length. Rather, such vessels are obliged to record all fishing activity in paper logbooks, whilst all sales records (both issued for sales made at the fish market and for sales made directly to the consumer) are currently produced in paper format. As a consequence, all data generated in paper format must then be inputted manually in the FIS by DFA personnel.



3.1.3. In addition, NAO observed that the FIS has some limitations in its validation processes and in the cross checking of data across all the different interacting modules. When queried about this, DFA informed this Office that in order to address this shortcoming the Department established the Data Management Unit and entrusted it with manually retrieving data from this system, as well as carrying out checks for any duplicate information across modules.

3.1.4. **NAO Observation** – While NAO considers DFA's FIS as a relatively robust system which can handle the considerable amount of data generated by the Department, it is nonetheless concerned with the fact that this system is still not fully automated. This Office therefore notes that the identified shortcomings in this IT system are exerting significant, otherwise avoidable, laboriousness on the Department's already stretched human resources to fulfil all expected reporting requirements.

### 3.2. **DFA's relies heavily on laborious handwritten reports in its inspectorate function.**

3.2.1. While visiting DFA's offices, the audit team took note of the voluminous collection of paper based documents which record the Department's activities. Specifically and amongst others, NAO saw how DFA's inspectors carry out a variety of inspection types, each intended to provide visibility and document different parts of the fishing operation. This Office also observed how, during the scoped period, DFA made use of 35 different inspection types (which number includes sub-categories) to carry out its inspectorate function (Table 1 refers).

3.2.2. When examining the templates used for these inspections NAO observed that, whereas these are designed to extract significant amount of detail from inspections carried out, they are filled in by using paper and pen, rather than directly through an electronic medium. This Office observed that the significant number of inspections carried out and this amount of detail generate a vast amount of paper-based documentation. During meetings with DFA, this Office was informed that, in order to keep track of this collection of paper-based information, the Department makes use of Excel Sheets. Both from meetings and through the review of received documentation, NAO observed that these Sheets were mainly intended as an electronic reproduction of the paper based documents generated on the ground. Specifically, this Office saw how each type of inspection carried out by the Department was reproduced electronically in individual sheets and, consequently, NAO could extract significant detail of the inspections carried out during 2017 solely from these electronic databases. This Office however observed that, as from January 2018, significant changes were made to this system. Particularly, the audit team saw how, rather than compiling an individual sheet for every type of inspection, the Department is currently making use of one sheet which collates all inspections. Additionally this Office also noted that the purpose of this sheet appears to have changed. Specifically, the audit team observed how the details of the inspection reports were no longer being inputted in this sheet, but rather it started to serve as a basic index of physical inspection files. From a meeting with the designated

contact person for this audit, NAO was informed that the primary reason for this change was that the full reproduction of handwritten inspection reports into electronic format was proving to be too labour intensive. As a consequence, the Department opted to retain the paper based records as its primary reference, and using the electronic facility solely as an indexing function.

**Table 1: Inspection Types carried out by DFA during Scoped Period**

Ref. No.*	Inspection Type	Sub-Categories
NA	General	NIL
1	Inspection of Fishing Vessels at Sea	NIL
2	Inspection of Fishing Vessels/Transshipment	NIL
3	Inspection of a Fishing Vessel in Port or at Landing and Before First Sale	Inspections – Gear EU, non-Maltese Vessels Local Vessels Inspections Landing Inspections
4	Market and Premises Inspection	Fishmongers and Fish Shops Hawkers Inspections Hotel Inspections Restaurant Inspections Other Inspections
5	Port/Coast/Sea Surveillance Report	NIL
6	Tug Vessel Inspection at Caging	NIL
8	Landing Inspection Sheet	Tartarun Landing Trawler Landing Fishmarket Lampara Landing Lampuki Landing Swordfish Landing Other Landing
9	Recreational Inspection	NIL
10	VMS/GPRS/E-Logbook/Weighing Scales and AIS Technical Inspections	NIL
13	VMS/AIS/GPRS Report (Monitoring)	NIL
15	Inspection of Vessel Details	NIL
19	Hardstanding Port Inspection	NIL
20	Vessels in Port – Swordfish Scheme	NIL
24	Inspection of Fishing Vessel in Port (Gear Inspection)	NIL
25	Import Inspection	NIL
NA	Export Point Inspection	NIL
NA	Additional Reports for Possible Irregularities	NIL
26	E-Logbook Checklist	NIL
NA	Crosscheck for Paper Logbook	NIL
NA	Third Country Fishing Vessels Inspected in Malta Port	NIL
NA	Control Room Reports to Legal Unit	NIL

\*Reference Numbers correspond to official DFA inspectorate templates. NA reference denotes inspection types with no official DFA reference number. Unaccounted numbers indicate deleted or obsolete inspection types.

- 3.2.3. In view of the above, NAO enquired whether the Department would consider using electronic means on the ground during the inspection visits themselves, thereby eliminating the labour intensive data reproduction process, while ensuring digitisation of the same data from the off. To this, DFA responded that a process was underway for the procurement of tablets intended to be used by its inspectors, with the aim of addressing this issue. When this Office however asked for documentation verifying this claim, DFA stated that, though at an advanced stage, this process had to be restarted as the key person in charge of this project no longer worked at the Department. To this end, the audit team was informed that this task has been delegated to another officer who, as at time of writing of this report, was restarting the whole process. No documentation on the procurement of these tablets was forwarded to NAO.
- 3.2.4. **NAO Observations** – While acknowledging DFA's effort to collect a vast amount of detail from its inspections and the pivotal role that these generated inspection reports play in the Department's functions, this Office is concerned with the fact that these are currently largely kept in paper format. Primarily, NAO contends that recording and keeping this significant amount of information in paper-based format creates considerable, otherwise avoidable, laboriousness for the Department to manage any of this information. Specifically, NAO is significantly concerned by DFA's decision to further reduce digitisation of this information as from January 2018, thereby, amongst others, decreasing the Department's faculty of extracting trends and other collated information which may be invaluable for it to take informed decisions on any way forward.
- 3.2.5. While this Office acknowledges the Department's efforts to procure tablets with the aim of addressing the immediately preceding observation, it is concerned about the stalling and restarting of this process. The fact that the attainment of the extensive benefits which these tools may bring to the Department is being prolonged, is subjecting DFA to further unnecessary inefficiencies which possibly contribute to the continued diversion of already limited resources from other functions.

### 3.3. Recommendations

- 3.3.1. NAO opines that the further automation and comprehensive integration of the FIS system, should be placed high among the Department's priorities so that the latter could benefit from the added derived efficiency and effectiveness in its operational processes. In particular, this Office urges DFA to see to a wider spread of electronic logbook installation among the local fishing fleet, and to the incorporation of a number of validations and cross checks across the system's components.

3.3.2. With respect to the management of inspection reports generated by DFA's on-the-ground officials, NAO urges the Department to expedite the process of procuring tablets and making them operational as soon as possible (mainly by integrating them within the FIS), so that this pivotal information is electronically recorded at once and without the need for manual reproduction. NAO notes that this tool could drastically increase the efficiency and effectiveness by which the Department's inspectorate staff operate, primarily by relieving them of cumbersome administrative tasks, therefore leaving them with more time to conduct additional inspections.

## Chapter 4

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### The Inspectorate's visibility and effort allocation on the local fishing activity

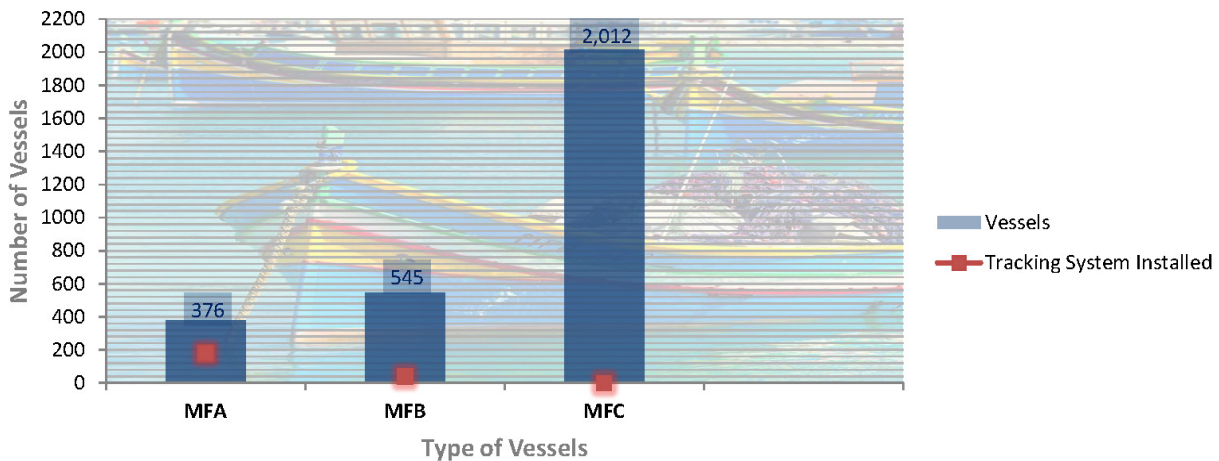
This chapter analyses the inspectorate's visibility and effort allocation on the local fishing activity by looking into inspections that the DFA carries out (remotely or otherwise) at sea, on land and at retail stage.

#### 4.1. DFA's overall visibility on vessel activity at sea is very limited

*The vast majority of registered fishing vessels are not equipped with tracking devices*

- 4.1.1. During meetings with DFA, NAO was informed that the Department makes use of different tracking systems to follow these fishing vessels' movements and activities. Specifically, DFA highlighted that three main systems are used, namely the: Automatic Identification System (AIS) – installed on vessels which are 15 meters in length or more; Vessel Monitoring System (VMS) – installed on vessels which are 12 meters in length or more; and General Packet Radio Service (GPRS) – installed on all vessels (irrespective of size) that are licensed to fish for protected species. Information and transmissions from these tracking systems are fed through to DFA's control room, which actively monitors the registered activity.
- 4.1.2. From the review of forwarded documentation and from meetings held with the DFA, NAO observed that the above requisites mean that the vast majority of Malta's fishing fleet is equipped with none of these tracking systems (figure 1 refers), as they do not fall under any of the abovementioned parameters. Specifically, NAO saw how 196 out of 376 MFAs and 507 out of 545 MFBs do not have any of the mentioned tracking systems installed.
- 4.1.3. In addition, NAO also saw how the 2,012 vessels officially registered for recreational fishing (that is, those falling within the MFC designation) are not equipped with any of the mentioned tracking systems, irrespective of their size and whether they are licensed to fish for protected species or not. It is also important to note that the MFC registration is also designated to vessels previously considered as operating professionally (that is either MFA or MFB) but which would not have met a set catch value threshold to retain this status. In such instances, these vessels are relegated to an MFC registration and have any previously installed tracking equipment removed by the Department. During meetings with NAO, DFA however further stated that it is exploring possibilities to introduce a tracking system requirement for MFC registered vessels as from next year.

Figure 1: Number of Fishing Vessels with Tracking Systems



Source: Department of Fisheries and Aquaculture

4.1.4. Fishing can be considered as an integral part of Maltese culture and is engaged in by more than officially declared professional and recreational fishermen. To this end, NAO queried DFA whether other vessels with other registrations (which amongst other include: the common Small Ships (S) designation which amount to 7,416 registered vessels; vessels with the Valletta designation; and vessels registered on foreign registers but which are berthed and operate regularly within Maltese waters) are monitored for fishing activity. To this, the Department replied that such vessels are permitted to engage in fishing by using only limited equipment (that is, fishing fly and hooks). This Office here, however, notes that such vessels could be capable of engaging in fishing activity on the same scale as registered fishing vessels as, for example, the S registered vessels could reach a length of up to 24 meters. In view of this, NAO enquired if the DFA has visibility on these and whether it actively monitors these vessels for potential irregular fishing activity. In reply, the Department stated that the general monitoring and regulation of such vessels does not fall under its remit but rather under Transport Malta (TM) and consequently no tracking systems on such vessels specifically intended for the monitoring of fishing activity are installed.

#### *Limited inspections are carried out on vessels while at sea*

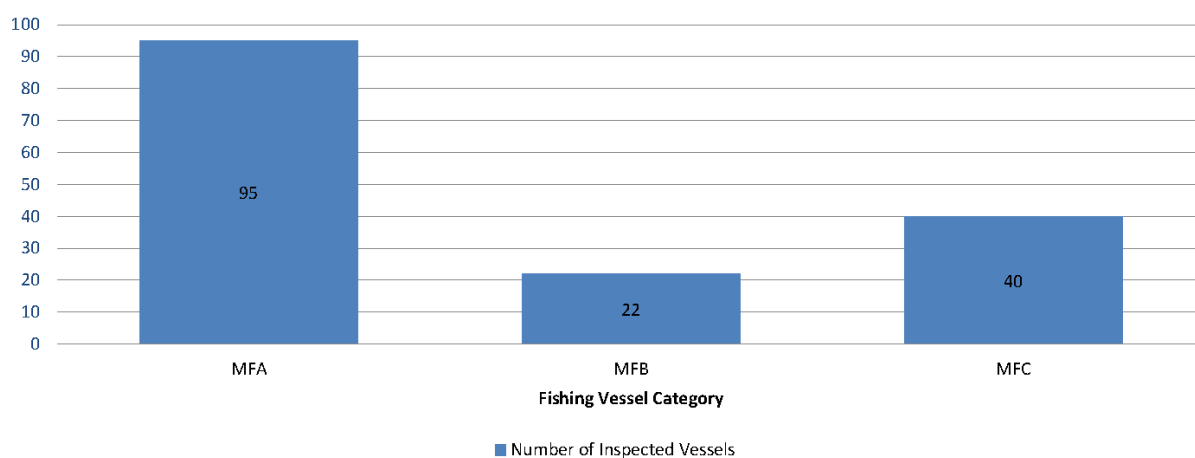
4.1.5. Apart from the tracking systems mentioned in the previous section, fishing activity at sea is also monitored by physical inspections. During meetings with DFA, NAO was informed that these are carried out by two primary means, namely by the Department's own RHIB and through a service contract signed with the Armed Forces of Malta (AFM).

4.1.6. With respect to inspections carried out by DFA's own vessel, NAO however saw that, during the progression of this study, this asset had been largely non-operational due to technical problems. In fact, from its review of forwarded documentation, the audit team observed that only 6 inspections targeting 6 vessels were carried out in 2017, and a single inspection on one vessel was conducted at sea between January and June 2018. Queried whether

DFA intends to rectify this situation, NAO positively noted that the Department had issued and successfully awarded a tender for the procurement of two new RHIBS and was, as at time of writing of this report, awaiting delivery of these assets. Notwithstanding, NAO was also informed that an additional challenge for DFA to carry out its own inspections prevails. Specifically, the Department stated that even with the new equipment it would still find it difficult to operate them as only two of DFA’s inspectorate staff have the necessary licenses to operate such vessels. The Department further informed the audit team that of these two officials, one is not in a position to operate the said vessels, while the other works on a shift basis and, consequently, can operate these RHIBS only during his shifts.

4.1.7. Secondly, and as mentioned earlier, the DFA has entered into a service agreement with the AFM, which stipulates that the latter has to conduct a set number of patrols, against payment (which for the year 2017 amounted to approximately €390,000), specifically intended at monitoring fishing activity and reporting back to DFA. From reviewed documentation, NAO found that, during its patrols (which include instances in which no fishing vessels would have been sighted), the AFM conducted 224 successful inspections on 197 vessels between mid-December 2016 to mid-June 2018. It is important to note that these mentioned 197 inspected vessels consist of a mix of registered professional fishing vessels (that is, MFAs and MFBs), recreational fishing vessels (that is MFCs), small ships (with the S registration) and others (including foreign registered vessels). Filtering down further, NAO observed that, in this same period (Figure 2 refers), the AFM inspected 95 MFAs (in 119 inspections), 22 MFBs (in 23 inspections) and 40 MFCs (in 43 inspections). This essentially means that the AFM conducted inspections on 25%, 4% and 2% of MFA, MFB and MFC registered vessels respectively over a period of one and a half years, at a frequency which slightly exceeds one inspection per vessel. NAO here notes that the remaining 40 inspections were carried out on 39 other vessels which carry registrations other than those under DFA’s remit and which total population runs into thousands.

Figure 2: AFM Inspections on Fisheries between mid-December 2016 and mid-June 2018



Source: Department of Fisheries and Aquaculture

- 4.1.8. Seeing that the service agreement between DFA and AFM carries with it a substantial price tag, NAO enquired if the Department ever carried out a cost assessment to determine whether it would be more cost effective if it bolstered its RHIB fleet significantly rather than delegating this inspection function to the AFM. To this, DFA replied that the agreement with AFM is inevitable as, even if the Department would be better resourced with its own RHIBs, these would not be able to operate effectively and safely at long range. To this end, and given that the AFM's patrol vessels are more capable at sea, these are inevitably required to conduct inspections on fishing vessels which would be operating beyond the safety parameters and practical capabilities of DFA RHIBs. NAO was therefore informed that, ideally, inspections at a shorter range would be carried out by DFA RHIBs while AFM's vessels would patrol areas further out at sea. NAO though noted that, with the current situation of DFA having practically no operational RHIBS, the majority of AFM patrols (and consequently inspections) carried-out between mid-December 2016 to mid-June 2018, were conducted at short-range.
- 4.1.9. **NAO Observations** – While acknowledging that tracking requirements may be emanating directly from supranational obligations and that the installation and running of tracking devices require a significant financial commitment, NAO is concerned that the vast majority of professional fishing vessels (MFAs and MFBs) and all those registered for recreational purposes (MFCs), are not equipped with such systems as they do not fall within the set parameters. Consequently NAO asserts that the DFA has practically no means by which to remotely monitor the movements of a very large portion of the local fishing fleet. This Office contends that a very real risk exists that those vessels which would not fall within the parameters subjecting them to the installation of a tracking system, could still be very capable of engaging in fishing activity which compares, if not exceeds (both in quantity and species) that of their tracked counterparts. Specifically, NAO notes that while tracking systems are installed on vessels which officially declare their intention to target protected species, other (equally or more capable) untracked vessels may still irregularly target these fish stocks. This concern takes on a new dimension in the case of MFC registered vessels, which are still untracked even when declaring their intention to target protected species. In addition, NAO also notes that vessels which are not equipped with tracking devices, pose the risk of them going out at sea and engaging in fishing activity out of the official seasons without being tracked by the Department. Apart from this principle of limited visibility, NAO here also perceives unfair treatment towards fisherman who officially declare their intention to target protected species (and consequently subject themselves to active monitoring through tracking devices), while other equally capable vessels which deceptively fail to declare such intentions are left untracked.
- 4.1.10. NAO acknowledges the fact that the monitoring of vessels other than those registered with the DFA, does not strictly fall within the remit of this Department. Apart from this point of principle, this Office also acknowledges that the vast number of these other vessels operating within Maltese waters makes it impossible and extremely cost-ineffective for DFA to consider actively monitoring their movements remotely. As stated earlier, however, NAO still perceives a real risk that such vessels may very well engage in irregular fishing, and



the lack of adequate controls in this respect makes it impossible for the Department to remotely identify such activity.

**4.1.11.** NAO's concerns emanating from the very limited extent to which tracking solutions are utilised in the local fisheries sector are further compounded by the limited inspections being carried out at sea. While this Office acknowledges DFA's recent efforts to procure two new RHIBs, it remains concerned on the current pronounced absence of its own resources at sea and on the fact that the Department does not have trained officials in sufficient numbers to ensure such a stable and real presence once the new RHIBs are acquired. This Office also notes that the Department is currently resorting to using the somewhat expensive (albeit necessary) service agreement with the AFM to conduct short-range patrols and inspections. These short-range patrols, NAO notes, could be well executed with the technical capabilities of DFA operated RHIBs, at a presumably much lower cost and at a higher frequency than the limited number carried out by AFM. NAO further notes that this present situation is resulting in the forgoing of significant potential of the Army's vessels, to the detriment of the frequency by which patrols and inspections at a longer-range are carried out.

## **4.2. DFA's inspection effort on land can be better managed**

**4.2.1.** As part of this exercise, NAO sought to determine the manner by which DFA allocates its available resources, and consequently its available effort, to shoulder its inspectorate responsibilities. To this, the Department replied that, in its interpretation of EU and ICAAT obligations, it considers certain fish species and fishing activities (which namely include: Bluefin Tuna; Swordfish; Trawling; and Seines - mainly for lampuki, lampara and makku) as high risk, and consequently the Department endeavours to carry out a 100% inspection rate of these landings.

**4.2.2.** In view of this assertion, NAO conducted an analysis on the Excel Sheets (already mentioned in section 3.2) listing all of DFA's inspections carried out in 2017<sup>3</sup>. While this Office is not in a position to ascertain whether all of the mentioned high-risk landings have been inspected by the Department, this analysis showed that the DFA did indeed allocate a very significant portion of its inspectorate effort on landings. Specifically, this Office observed that, out of the total 7,509 inspections<sup>4</sup> which the Department carried out on all fronts in 2017, 3,426 were carried out on landings.

**4.2.3.** Further analysis though showed that these inspections, which constituted of approximately half of the Department's 2017 inspection effort, were targeted at a total of 262 vessels, 243 of which are registered on DFA's fishing vessel register. As already mentioned in Chapter 1, this fishing register was made up of 2,933 registered fishing vessels as at March 2018, which essentially means that the Department carried out inspections on landings of only

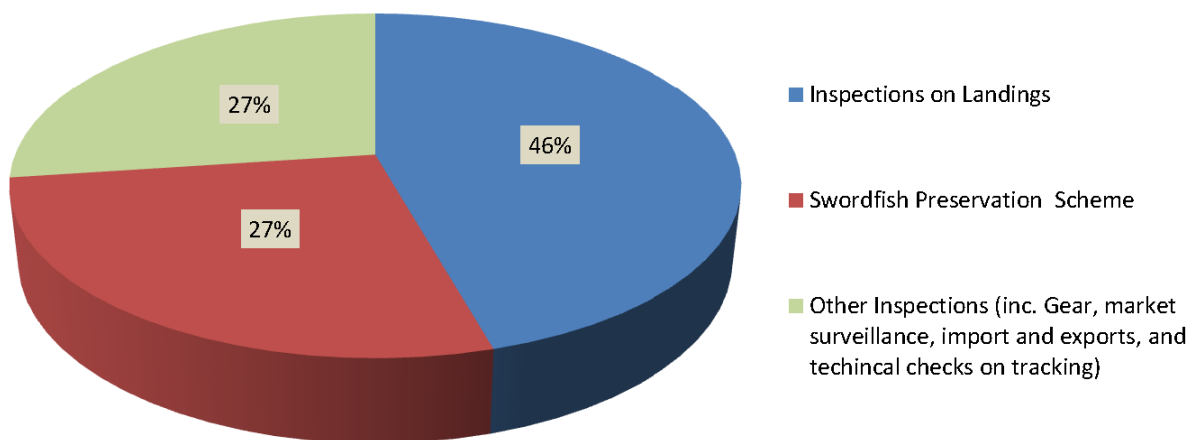
<sup>3</sup> Analysis on this was carried out only on 2017 to capture one full year of fishing operation.

<sup>4</sup> This figure excludes the aforementioned inspection patrols carried out by AFM on DFA's behalf.

8.3% of the registered fishing fleet. Further analysis showed that, of these 243 registered vessels, only a negligible 11 MFC vessels (out of a MFC fleet of totalling 2,012 vessels) were inspected through an equally negligible 17 landings inspections (out of the aforementioned 3,426 inspections). This consideration becomes especially pivotal when one also considers point 4.1.4 above, namely that these vessels can be as capable as their professional counterparts and that they are not equipped with tracking devices. In addition, this Office also observed that, in 2017, while a substantial total of 3,068 inspections were carried out on MFAs, these were targeted at only 192 of such vessels out of the total registered 376. On the other hand, 230 further inspections were carried out on MFBs during the same period, but only on 40 of such vessels out of a total registered population 545.

4.2.4. Through this review, NAO additionally noted that, out of the remaining 4,083 inspections carried out by DFA in 2017, 2,046 were directed on one single swordfish preservation scheme<sup>5</sup>. This therefore means that, apart from this scheme and landings, the Department only allocated 2,037 inspections (that is, 27% of its own total inspection effort) on all the remaining fronts of its inspectorate remit which, amongst others, includes inspections on: fishing gear; market and premises (which will be discussed better in Section 4.3), imports and exports; and the technical issues on tracking systems (Figure 3 refers).

Figure 3: Effort Allocation of the Fisheries Inspectorate by Area during 2017



Source: Department of Fisheries and Aquaculture

4.2.5. NAO queried the DFA on this apparent asymmetrical allocation of the Department’s effort, both among the local fishing fleet and among the different aspects of the fishing operation. DFA acknowledged this situation and informed this Office that, as at time of writing, it was in the process of outsourcing a study intended to create risk profiles across the fisheries operations, thereby enabling the Department to deploy its inspectorate staff more efficiently and effectively.

<sup>5</sup> This refers to the “Compensation Scheme for the Temporary Cessation of Fishing Activities”, as published in the Government Gazette 19,713 on the 17th of January 2018, and originally in the Government Gazette 19,448 on the 3rd July 2015.

**4.2.6. NAO Observation** - This Office acknowledges that it is unrealistic and cost-ineffective to expect that DFA carries out inspections on every vessel registered within the local fishing fleet on all fronts of the fisheries operation. NAO nonetheless perceives real and significant gaps in the Department's inspectorate function as observed during this study. Specifically, this Office is concerned on the low number of inspections with which a significant part of DFA's inspectorate remit was addressed, and on the limited number of vessels upon which physical inspections were actually carried out. Notwithstanding, this Office acknowledges the Department's commitment to see to this issue through its initiative on the aforementioned risk profiling study.

### **4.3. DFA's visibility at retail stage is severely lacking**

**4.3.1.** DFA's inspectorate function at retail stage is especially important as it is a final level of control for it to detect, and act upon, any irregular fishing activity through traceability review. In this regard, NAO noted that the Department's remit therefore also includes on-site inspections at retail-based undertakings which, amongst others, include fishmongers, hawkers, hotels and restaurants.

**4.3.2.** In its analysis however, NAO observed how this area was amongst the least inspected by the DFA. Specifically, this Office saw how, in 2017, the Department conducted 110 inspections in this regard, which only amounts to around 1.5% of the latter's inspectorate effort for that year. Further analysis also showed that, from this already limited number of inspections carried out on retailers, hotels and restaurants were given far less priority than fishmongers and hawkers, with only 9 inspections (on 1 hotel and 8 restaurants) being carried out by the DFA in 2017. When queried on this, DFA acknowledged this shortcoming and cited staff shortage as its primary cause.

**4.3.3.** During its review, NAO observed that, as from December 2017, a significant change in the inspectorate system on retailers came into effect. Specifically, this Office saw how the responsibility of on-site inspections on fishmongers was transferred to the Environmental Health Directorate (EHD) within the Superintendence of Public Health, with hawkers, hotels and restaurants being retained under DFA's portfolio. In endeavouring to understand how this new system is being managed, the audit team held meetings with both entities on this matter. From these meetings NAO gathered that, while EHD is the entity which carries out physical inspections on the ground, DFA still retains the enforcement function should any irregularities be identified. Essentially therefore, in the case of fishmongers, this initiative is intended to capitalise on EHD's powers of entry and DFA's enforcement remit.

**4.3.4.** During meetings with EHD, NAO was informed that on the ground inspections on fishmongers were being carried out by the former, and that their outcomes were being reported to the Business Inspections Unit within the Office of the Prime Minister. DFA however informed NAO that, since the launch of this initiative, it had not received any information on the outcome of inspections carried out by EHD.

- 4.3.5. With regards to retailers which still fall under DFA's inspectorate remit (that is hawkers, hotels and restaurants), NAO once again noted that the Department conducted very limited inspections on this front, with only 6 inspections in this respect being carried out in the first six months of 2018.
- 4.3.6. **NAO Observations** – The very limited effort invested by DFA on the inspections carried out on retailers during the scoped period, is an obvious cause for concern to the NAO. As already asserted, this Office considers the retail stage as the final level of control which the Department's inspectorate has over the local fishing activity. To this end, the very limited number of inspections carried out by the Department on this front greatly dilutes its regulatory image and presence, while allowing for significant gaps in its visibility, thereby hindering it from implementing comprehensive enforcement on potential irregularities. This consideration becomes even more pressing when considering already identified gaps on other fronts of the Department's inspectorate remit. This Office is further concerned with the fact that, even with a significant portion of this inspectorate function being transferred out from DFA as from December 2017, thereby relieving resources, 2018 figures still exhibited a lack of priority being allocated by the Department on the retail oriented inspections which remained under its remit.
- 4.3.7. In addition, this Office is also concerned on the apparent lack of information flow between the EHD and DFA. This situation, NAO opines, is precluding the Department from obtaining a clear overview of this inspected front, thereby possibly hindering it from taking informed decisions on any way forward in this area.

#### 4.4. Recommendations

- 4.4.1. This Office strongly opines that an all-encompassing risk profiling exercise is the main answer to the Department's shortcomings in its allocation of inspectorate effort. Specifically, NAO recommends that this exercise should cover all levels of the Department's inspectorate operations, both vertically in each function (such as risk profiling of each vessel) and horizontally across inspectorate functions (such as allocating effort between inspections at sea, on land and at retailers). To this end, NAO urges DFA to ascertain that the proposed risk profile exercise takes into account all of these factors and that its completion is expedited. Once this is ready, NAO encourages the Department to implement the resulting proposed way forward comprehensively and at the earliest so that it can better streamline the effort allocation in its inspectorate function.
- 4.4.2. NAO strongly recommends to DFA to actively consider adequate and feasible methods by which it could increase its spread of remote monitoring and visibility on the local fishing fleet, especially on those vessels which do not meet the threshold subjecting them to the installation of a tracking system. NAO notes that the risk profiling exercise as mentioned in point 4.4.1 above may come in particularly useful for it to determine which vessels should be subjected to tighter controls.

- 4.4.3. In further strengthening DFA's visibility at sea, this Office also urges the Department to expedite the RHIB acquisition process, thereby securing the necessary assets to conduct inspections at sea. NAO also encourages DFA to design and launch a training programme intended to train and license its officials to operate these RHIBS. Once this is in place, the Department needs to design a comprehensive patrol roster intended at consolidating the DFA's physical presence at sea. In so doing, DFA would be relinquishing AFM's resources from carrying out short-range patrols, so that the latter may focus on more remote areas, therefore capitalising better on their capabilities. This would ensure that better value for money is achieved from the yearly agreements signed between the Department and AFM, while ascertaining that a wider fishing area is covered through these two types of inspections.
- 4.4.4. While this Office once again acknowledges that vessels which are not registered with DFA do not strictly fall under the latter's remit, it nonetheless perceives the possibility and opportunity for DFA to work closer with Transport Malta in this regard. This initiative should be geared towards the intent of creating a more systematic practice by which fisheries oriented inspections could be carried out on vessels other than those strictly registered with DFA.
- 4.4.5. NAO considers inspections at retail stage as an essential final step in the Department's inspectorate cycle. To this end, this Office urges DFA to ascertain that this area is given its due importance, mainly by setting a determined and real presence on the ground through a systematic inspection regime dictated by the results of the aforementioned risk profiling exercise. In addition, NAO strongly urges the Department to strengthen its communication with the EHD so that any information gathered by the latter on the fisheries sector may be effectively and consistently forwarded to DFA.

# Concluding Remark

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The DFA operates in an extremely demanding environment, with pressures being exerted on its operations both by local challenges as well as from supranational obligations. Notwithstanding, this Office still concludes that certain inefficiencies and ineffective practices prevail which undermine the Department's visibility and subsequent effort allocation in regulating the sector in question. In particular, NAO opines that DFA's role as a regulator is being challenged through five main pillars, namely its: HR situation; limited presence on the ground and at sea; cumbersome documentation and reporting system; risk attribution; and its dual role as an operator and regulator. While this Office acknowledges DFA's apparent push towards addressing shortcomings identified throughout this report (with some initiatives being already underway as at time of writing), NAO urges DFA to streamline its structure and processes in order to significantly increase its visibility and presence within the fisheries sector, thereby consolidating its regulatory function.

# Appendices

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## Appendix A - NAO IT Technical Report<sup>6</sup>

### **Fisheries Information System**

#### **Background**

The Fisheries Information System (FIS), which was procured by the Department of Fisheries and Aquaculture (DFA) in 2008, following a tendering process, was developed by a local third-party service provider and built to accommodate the European Union's (EU) fisheries registry requirements. The FIS implemented within the DFA has a number of modules, which are interacted and integrated with each other, including the Fishing Vessel Register, the Vessel Logbook and the e-Sales module amongst others. To date, a number of system enhancements and/or upgrades were made on the FIS to be in line with the EU regulations and Chapter 425 of the Laws of Malta.

The FIS, which has a Microsoft SQL database at the backend, is accessible with a login and a password at the frontend. Every DFA user is assigned specific user roles within the system and provided with a personal login and a password, which must be changed upon first logon. The new password must be set as complex with a minimum password length.

In terms of business continuity, the FIS is hosted at the Malta Information Technology Agency's (MITA) Segregated Hosted Environment and backed up daily. Audit logs are in place at the backend and can be retrieved by the local service provided upon request by the DFA.

#### **Fishing Vessels Register Module**

The main objective of the Fishing Vessel Register (FVR) module is for the registration of fishing vessels through their entire life cycle from entrance to and exit from the fleet. Fishing vessels are registered under the four different classifications issued by the Department. The MFA (full-time vessels) and MFB (part-time vessels) categories are the professional categories or specifically the fishing vessels of which the catch can be marketed. On the other hand, the fishing vessels under the MFC category cannot commercialise their catch and are also restricted in the gears that can be used. Finally, the MFD category are not engaged in the catching of fish and the vessels, which are referred to as work boats, are specifically used in fishing operations such as those involved in the carriage of fish or assistance on fish farms.

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<sup>6</sup> Cut-off dates used for the purpose of this IT audit exercise may vary from those used in the previous parts of this report.

The fishing vessels of all categories in the FVR, which are less than six metres in length, are not allowed to carry out fishing activities or related activities beyond 12 nautical miles. On the other hand, the fishing vessels of six metres or over in length are allowed to fish in all fishing waters as well in international waters as indicated in the licence.

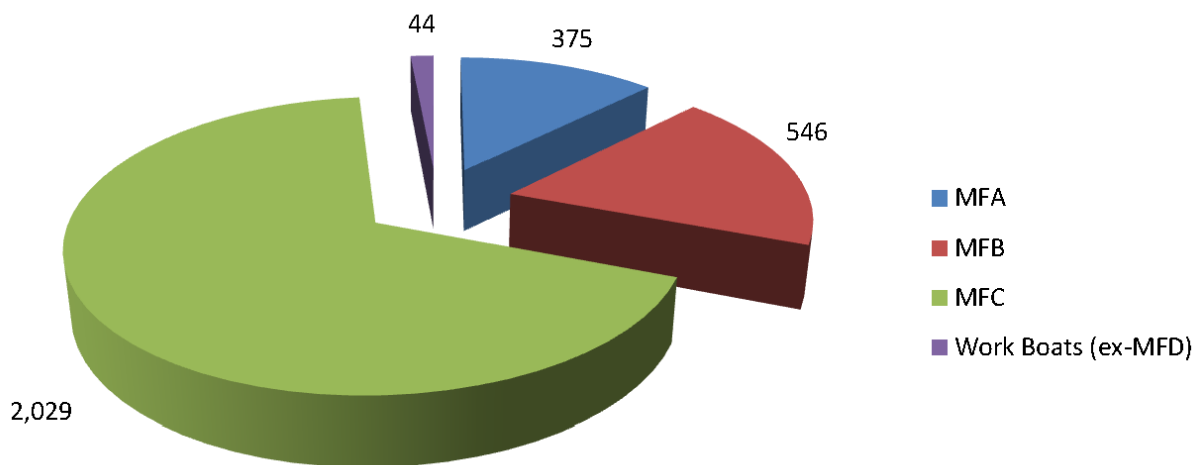
As depicted in Figure 1, the largest number of fishing vessels registered within the DFA fall under the MFC category and amount to 2,029, whilst the MFA (Full-time fishing vessels) and MFB (Part-time fishing vessels) amount to 375 and 546 respectively. Meanwhile, the working boats only amount to 44 vessels.

**Table A: Size of fishing vessels registered within the DFA - August 2018**

Vessels	0m to 9.99m	10m to 11.99m	12m to 14.99m	15m over
MFA	262	49	15	49
MFB	542	4	0	0
MFC	2,004	25	0	0
Work Boats (ex-MFD)	8	5	4	27

Source: Department of Fisheries and Aquaculture

**Figure A: Total number of fishing vessels registered under each category**



Source: Department of Fisheries and Aquaculture

### Registration process

The DFA should only register a fishing vessel upon submission of a formal application accompanied with all the following documents:

- A certificate indicating the tonnage and length of the vessel
- A survey report of the fishing vessel



- The deed or instrument of incorporation of the company or body corporate owning the fishing vessel in the event that ownership belongs to such company or body corporate
- Three photographs of the fishing vessel
- Two photographs and a copy of a valid ID card of the person submitting the application

When the request for registration and the related documentation are presented to the DFA, all the relevant details are inputted in the FVR module within the FIS. The provision of the requisite documentation is recorded by checking tick boxes, and in the case of missing documents or unticked boxes, an error message is returned and the registration process is halted by the system. Upon successful registration in the FVR, all the documentation is then filed in a physical file for every new vessel. Payment upon successful registration is made directly at the DFA offices.

### *Renewal of licence of fishing vessel*

Fishing vessel licences are valid for a period of one year according to the expiry date when the licence was first issued. One month prior to the expiry of the licence, an invoice containing the payment details is sent to the respective owner. The licence can be then renewed within three weeks from the date of the invoice, either through any of the branches of a specific local bank or through the local bank's online payment facility. The FVR is automatically notified of the payment and a new licence is issued and sent by post to the owner in due time before the expiry.

The NAO was informed that since 2017, requests for the renewal of a fishing vessel licence must also be accompanied by a surveyor report. In this way, all licensed fishing vessels' details are reviewed again by the DFA over the renewal period. In the absence of a surveyor report, the fishing vessel licence is still renewed but is issued as 'non-operational' until the surveyor report is presented to the DFA.

Apart from the registration and renewal of fishing vessel licences, transfers are also held between vessel owners and onto heirs in the event of deceased vessels owners. The DFA also accept requests for the removal or addition of engines on fishing vessels. In addition, if the vessel undergoes some changes, which may be related to the colour, name, the captain, the VHF (Very High Frequency) radio and the base port, the fishing vessel owner must inform the DFA immediately. In this scenario, any changes submitted are approved by the DFA, following a formal request, and the corresponding details are then updated in both the FVR and the vessel's physical file.

The NAO was informed that no enforcement action is carried out by the DFA in response to non-payment of fee for renewal of a fishing vessel licence. In this regard, although the majority of the owners renew their fishing vessel licence, there are some individual cases who have a backlog of overdue payments, but these individuals do not exceed more than two years maximum.

Whilst the system maintains a history of all entries recorded and processed in the FVR, including registrations, renewals, transfers, change in details etc., all the documentation processed by the DFA in relation to a fishing vessel (e.g. application forms, surveyor reports, photos, etc.), are filed in the vessel's physical file, such that the latter is a replica of the vessel's data in the FVR.

### *Vessel Logbook Module*

Vessel logbooks can be in paper or electronic format and the requirement for the use of logbooks should be based primarily on the size of the fishing vessel. In this scenario, every fishing vessel registered under Category A and B, which is ten metres or over in length, must keep all the details of its fishing activity and declarations on catches in a logbook, which should be kept on board the fishing vessel at all times.

The use of logbooks may be considered as having two main functions:

- Surveillance-orientated objectives, as a tool in the enforcement of fishing regulations and to ensure compliance with resource management controls
- Data-oriented objectives, as a method of collecting primary fishery statistics and as a principal source of information for fishing inputs and outputs

Fishing vessels above 12 metres in length are equipped with a Vessel Monitoring System (VMS) as per Article 9 of Council Regulation (EC) No. 1224/2009. The VMS collects information in real-time, such as location, speed, direction and even battery status, and the data is transmitted automatically over a satellite connection every two hours. Since the electronic logbook, which takes the form of a 'tablet' is connected to the VMS, the relevant data recorded on the electronic logbook is also transmitted automatically to the DFA where it is analysed. In this regard, all the details recorded on paper or electronic logbooks must then correspond to the same number of landings against the number of sales.

### *Electronic logbooks, paper logbooks and data inputting*

The electronic logbooks, which have been in use since 2014/2015, are installed on fishing vessels above 12 metres in length. In total, there are 64 electronic logbooks installed on fishing vessels, such as trawlers and long liners.

The owner of the fishing vessel is obliged to input details when the fishing vessel left the port, from which port (e.g. Marsaxlokk), type of gear used, the type of fish caught and the quantity. The DFA are able to monitor the fishing vessel catch as inputted in the electronic logbook prior to a pre-notification for landing. In the event that the electronic logbook malfunctions, fishing vessels are also equipped with paper logbooks and thus are obliged to continue recording their catch details manually on these paper logbooks.

Fishing vessels under 12m (between 10m to 12m) must report their catch in paper logbooks. The latter also applies for fishing vessels that have a specialised licence to catch for tuna or swordfish. Similar to the electronic logbooks, the owner of the fishing vessel is obliged to input all the relevant details of the catch and fishing activity on the paper logbook. A copy of the logbook must be then sent to the DFA within forty-eight hours from when the fish is landed.

Upon receipt of the paper logbooks, the DFA inputs all the relevant details in the Vessel Logbook module, using the original paper logbook reference number as the unique reference number in the system for every entry.

Various input fields in this Vessel Logbook module are obligatory, and failing to input/fill-in data in any of these fields stops the DFA user from continuing with the inputting process. In these cases, the DFA users must contact the owner of the fishing vessel linked to the logbook to rectify the paper logbook details.

When inputting and categorising the type of fish caught, the Food and Agriculture Organisation of the United Nations (FAO)'s list of fish codes are used. Regular updating of these fish codes in the system is done by the DFA.

The electronic logbooks are installed on MS Windows based tablets, and whilst the tablets are owned by the DFA, the electronic logbooks were developed and are supported by a local third party service provider. In view of the ageing equipment, and the fact that some of these tablets are giving problems, it is envisaged that the current tablets are replaced with newer ones.

The Vessel Logbook module maintains a hidden archive/log of all the catches and fishing operations inputted by the fishing vessel owner through the electronic logbook. Such logs reside on the MS Windows based tablets and the extraction of these logs is carried out by the DFA through a USB stick. It is to be noted that data recorded on electronic logbooks is considered as commercially sensitive by the DFA and whenever a MS Windows based tablet malfunctions and is replaced, the DFA takes precautionary measures to remove all the data from the 'faulty' tablet.

The NAO was informed that no logbooks (paper or electronic) are required for licensed fishing vessels less than 10m in length, which category comprises the majority (up to 80%) of licensed fishing vessels in Malta.

## Landings module

To help the DFA meet its obligations with regards to the traceability of fish<sup>7</sup>, fishing vessels over 12 metres are nowadays equipped with weighing scales and printing machines in order to weigh and label all the fish caught on board, whilst fishing vessels smaller than 12 metres also have the

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<sup>7</sup> Every country in the EU must comply with the EU regulations that every marketed fish can be identified and can be traced back to its origins.

facility to weigh and label their fish. However, this weighing process is carried out from the 17 Automated Weighing and Labelling machines (AWL) which were installed in 2015 in designated landing facilities and other strategic locations around Malta and Gozo. These AWLs facilitate fishermen to weigh and label their catch before they trade it at the fish market. Meanwhile, fish which is not labelled is not allowed entry at the fish market.

## e-Sales module

The DFA processes all the fish sales notes of both sales notes issued for sales made at the fish market and sales notes that cover the sales made directly by the fisheries to the consumer. All the details recorded on sales notes are inputted in the e-Sales module through which the DFA could generate reports about the catch and sale of fish, including the weight of each species as well as the price and value.

The NAO observed that sales notes are currently issued in paper format. However, the DFA is planning to switch from paper to electronic format since the EU mandates the electronic submission of data that exceeds the sum of €200,000. In this regard, the NAO was informed that it is envisaged that a new stand-alone system is introduced with the intention that this new system is then integrated to the new FIS system<sup>8</sup>.

The fish market operates similarly to a private auction hall, whereby the cashier at the fish market collects money from sales of fish on behalf of the DFA (as the operators of the fish market), which is then passed on to the fishermen/operators after the due commission has been paid to the auctioneer. In this regard, an operator/fisherman may opt to sell the fish caught locally through any of the following methods:

- Selling directly, i.e. the fisherman sells the fish directly to the buyers
- Selling through the local fish market (*'pixkerija'*)
- Selling by auction through an auctioneer (a middleman referred to as *'pitkal'*)
- Selling through an agent (a person liaising in between the fisherman and the middleman)

However, for sales purposes, the operator/fisherman may opt to split a catch/fishing operation, and sell each of these split parts using a mix of the above-mentioned methods.

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<sup>8</sup> It is envisaged that the current FIS is replaced with a new modular FIS system that would incorporate a number of validation and crosschecks, and ensures it adheres to the requirements stipulated by the EU Commission.

Meanwhile, it should be noted that:

- The sale of fish originating from fish farms are treated separately from fish caught in the open sea. In fact, fish farms fall under the responsibility of the Aquaculture Directorate.
- The DFA does not make any profit on the sale of fish, and all money collected from sales is passed on to the operator/fishermen and the auctioneer, respectively
- The requirement to submit data of fish sales to the DFA rests with the buyer, and not on the seller (the operator/fisherman).

## Conclusion

Overall, the FIS is quite robust in handling the considerable amount of data related to the fishing activity, however, it necessitates quite a lot of human resources intervention for the inputting and monitoring of data.

Due to certain limitations in the validation of data inputted in the system and the cross-checking of data across all the different modules within the FIS, the EU highlighted that there were some inconsistencies in the reports that were generated from the FIS and forwarded to Eurostat, the Directorate General for Maritime Affairs and Fisheries, (a.k.a. DG Mare) and the International Commission for the Conservation of Atlantic Tunas (a.k.a. ICCAT). To address this shortcoming, the DFA established a new unit (Data Management Unit) to ensure that the methodology used to retrieve the data from the FIS is centralised and compiled into one single standard .XML report, as per the EU regulations.

Such reports, which are generated monthly, are referred to as the Aggregated Catch Data Reports (ACDR) and are composed of Landing Declaration information where available, and if no information is found, sales data will be taken into account as the last option. The Landing Declaration information is generated from different sources, which include electronic and paper logbooks, AWLs and Sales notes.

As highlighted above, due to certain limitations within the FIS, the Data Management Unit, completes a cross check process to remove all duplicate information between the logbook landing declarations and the AWL landing declarations, taking into consideration the vessel number, landing date and species code. A similar process will follow, whereby the Data Management Unit completes a cross check process to remove all the duplicate information between the AWL landing declarations and sales data, taking into account the vessel number, landing date and species code.

Once the whole cross check process is completed, the Data Management Unit would then compile all the data in a Microsoft Excel worksheet and then be in a position to extract the necessary information by species and weight, to be used for the ACDR reporting. Overall, the whole process is quite laborious and requires quite an amount of human resources effort to finally compile all this

information into a standard .XML report before it is sent by email to the respective authorities, as highlighted above.

In terms of how data is exchanged between EU countries, the NAO was informed that the EU Commission are currently moving towards the implementation of new more secure transmission mode. Currently, the message format used is referred to as NAF (North Atlantic Format<sup>9</sup>) but today, NAF is on its way out and instead the EU Commission is moving towards the implementation of FLUX. Unfortunately, to date, very few countries in the world are familiar or have implemented this mode of transmission. From market research, the DFA found out that another organisation is currently working on the implementation of this type of transmission in the North East Atlantic Fisheries Commission (NEAFC)<sup>10</sup>. Eventually, this type of transmission will also be used for the transmission of data on the VMSs. In this regard, the DFA stated that the existing transport layer on VMSs can be used as a bridge to translate VMS NAF messages to FLUX. However, the DFA is currently experiencing some technical problems (related with digital certificates) with one of the nodes (DG Mare) – apparently, the problem seems to be coming from DG Mare as the DFA can send messages through FLUX but in turn, DG Mare could not send messages through FLUX. Once this problem is resolved, the DFA would be then in a position to start transmitting VMS messages through FLUX.

Apart from the FIS, the DFA utilizes a number of Microsoft Excel Sheets – a case in point is the EU point system for serious fisheries infringements, whereby the EU had formulated a template, referred by the DFA as the National Infringements Register. Member states are obliged to submit the relevant information when requested. It is envisaged that once the module to cater for the infringements register is implemented, the template is discarded and all the data will then be recorded electronically on the FIS.

Additionally, the DFA stated that the data related to inspections and landings are also recorded manually in Microsoft Excel sheets. In mid-2018, a new module called Fishing Activity module was created within the FIS, whereby the DFA could input an Inspections Surveillance report in the system. However, this module is currently being tested for errors and will 'go live' once system testing is finalised. In this context, the DFA stated that ideally the Inspectorate unit within the DFA has access to the FIS through this module while on site, to retrieve and input the relevant data electronically. This could be done if tablets are procured<sup>11</sup> and the FIS is installed on these devices, thus eliminating duplicate work (e.g. inputting of vessel registration and the relevant details on template and then electronically when they return to their offices).

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<sup>9</sup> NAF is used for fisheries related electronic data transmission.

<sup>10</sup> NEAFC is a regional fisheries management organisation that maintains controls over fishing and fishing-related acts in the North East Atlantic Ocean.

<sup>11</sup> An ITT will be published in due course for the procurement of tablets to be used by the Inspectorate unit.

In terms of inspections, the DFA has a memorandum of understanding with the Armed Forces of Malta (AFM) to carry out sea patrols and a number of random inspections on board fishing vessels. On the other hand, the Ministry's Inspectorate unit carry out inspections once the fishing vessel berths at the quay, especially for those fishing vessels licensed to catch tuna and swordfish to ensure that they did not exceed the established quota. The latter is normally recorded on a Microsoft Excel template. Thus, in both scenarios, both the AFM and the Inspectorate unit check the fishing catch and verify whether it corresponds with the data recorded in the logbook or the corresponding template.

In the event that infringements are found (e.g. if the weight of catch reported exceeded the 10% stipulated threshold), the Inspectorate will draft a report and the 'exceeded number of fish' will be seized by the Inspectorate, whilst the quota assigned for that particular vessel is deducted for the forthcoming year. There may be instances whereby the report that is drafted by the Inspectorate is forwarded to the legal department, who in turn may proceed with court procedures.

To conclude, the NAO opines that the DFA should make every effort to implement the necessary upgrades to its existing IT systems, namely:

- The implementation of the FLUX secure mode of data transmission
- The replacement of existing electronic logbook tablets and the procurement of new tablets for the Inspectorate unit
- The rollout of the new Fishing Activity module for the Inspectorate unit
- The implementation of a new modular FIS system that would incorporate a number of validations and crosschecks across modules

All the above, would help to reduce manual input, facilitate efficient retrieval of online data required by the Data Management Unit for the ACDR report, and align the DFA IT systems with the latest EU standards for data transmission modes in this sector.

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